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TECHNICAL MANUAL
OPERATOR'S MANUAL FOR
THE M1083A1 SERIES 5 TON, 6 X 6
MEDIUM TACTICAL VEHICLES (MTV)
VOLUME NO. 2 OF 2

MODEL	NSN	EIC
TRK, CAR., MTV, M1083A1		
W/WN	2320-01-447-3884	BUL
W/O WN	2320-01-447-3890	BT9
TRK., CAR., MTV, W/MHC, M1084A1	2320-01-447-3887	BUB
TRK., CAR., MTV, LWB, M1085A1		
W/WN	2320-01-447-3897	BUR
W/O WN	2320-01-447-3891	BUG
TRK, CAR., MTV, LWB, W/MHC, M1086A1	2320-01-447-3895	BUH
TRK., EX. VAN, MTV, M1087A1		
W/WN	2320-01-530-3842	XXX
W/O WN	2320-01-530-3843	XXX
TRK., TRACTOR, MTV, M1088A1		
W/WN	2320-01-447-3900	BUC
W/O WN	2320-01-447-3893	BUN
TRK., WKR., MTV, M1089A1	2320-01-447-3892	BUD
TRK., DUMP, MTV, M1090A1		
W/WN	2320-01-447-6344	BUP
W/O WN	2320-01-447-3899	BUE
TRK., CHAS., MTV, M1092A1	2320-01-447-3894	BT8
TRK., CHAS., MTV, LWB, M1096A1	2320-01-447-3885	XXX
TRK., LHS, MTV, M1148A1	2330-01-508-8859	XXX

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HEADQUARTERS, DEPARTMENTS OF THE ARMY AND AIR FORCE

JANUARY 2005

WARNING SUMMARY

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 21-11, 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

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.

WARNING SUMMARY - Continued

WARNING

CARBON MONOXIDE (EXHAUST GAS) CAN KILL YOU.

DO NOT operate troopseat heater or engine in an enclosed area without adequate ventilation. NEVER sleep in a vehicle when troopseat heater is operating or the engine is idling. Failure to comply my result in serious injury or death to personnel.

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 3-5 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

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.

WARNING SUMMARY - Continued

WARNING

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

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.

WARNING

Do not pull seat belt more than 1 in. (2.54 cm) away from shoulder. Seat belt will not be effective if accident occurs. Failure to comply may result in serious injury or death to personnel.

WARNING

Vehicle must be secure. Chock wheels when stopped on incline. Vehicle may roll downhill. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Ensure vehicle is parked on level ground before changing flat tire. Vehicle may roll. Failure to comply may result in serious injury or death to personnel.

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

Engine compartment and accessories may be extremely hot when engine is running or has been running recently. Use caution around engine when cab is raised. Failure to comply may result in injury to personnel.

WARNING SUMMARY - Continued

WARNING

Engine compartment contains a partially exposed fan blade. Use extreme caution around front of engine. Failure to comply may result in injury to personnel.

WARNING

Cargo cover weighs approximately 60 lbs (27 kgs). Long Wheel Base (LWB) cargo cover weighs approximately 80 lbs (36 kgs). Arctic cargo cover weighs approximately 100 lbs (45 kgs). An assistant is required to lift cargo cover. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Ensure engine oil is cool before performing any maintenance. Failure to comply may result in serious injury to personnel.

WARNING

Ensure safety strap is fastened across back and front of vehicle before transporting troops. Failure to comply may result in serious injury or death to personnel.

WARNING

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

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

Data and instruction plates given below must be followed at all times to safely operate vehicle. 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 WATER TEMP 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

Tire weighs approximately 350 lbs (159 kgs). If treads of tire catch on tool box during lowering, raise tire and pull tire away from tool box and continue lowering. Use extreme care when lowering or handling tire. Failure to comply may result in injury to personnel.

WARNING

Tire weighs approximately 350 lbs (159 kgs). Use extreme care when handling tire. Failure to comply may result in injury to personnel.

WARNING

Place hydraulic jack on flat surface. Do not allow personnel under vehicle when jacking. Failure to comply may result in serious injury or death to personnel.

WARNING

Handle tire with care. Tire may have exposed broken metal cords or sharp debris in it. Failure to comply may result in injury to personnel.

WARNING

All cleaning procedures must be accomplished in well-ventilated areas. Failure to comply may result in injury to personnel or damage to equipment.

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 SUMMARY - Continued

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

Protective gloves, clothing, and/or respiratory equipment must be worn whenever caustic, toxic, or flammable cleaning solutions are used. Failure to comply may result in injury 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

Manifold operator must stand near hydraulic manifold and observe spare tire. Guide person must stand to the right front of vehicle, well clear of spare tire. Failure to comply may result in serious injury or death to personnel.

WARNING

Ensure tires have correct tire pressure for terrain conditions and driving speed (refer to Table 1 Cold Tire Inflation Pressure and Restrictions). Failure to comply may result in serious injury or death to personnel.

WARNING

Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using Dry Cleaning Solvent; the flashpoint for Type I Dry Cleaning Solvent is 100° F (38° C) and for Type II is 138° F (50° C). Failure to comply may result in serious injury or death to personnel.

WARNING SUMMARY - Continued

WARNING

If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent 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 (MIL-PRF-5606H) 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

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.

WARNING

Do not smoke, have open flame, or make sparks near batteries when slave starting vehicle. Batteries 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.

WARNING SUMMARY - Continued

WARNING

Ensure master power switch 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

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 it up immediately. Failure to comply may result in serious injury or death to personnel.

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.

WARNING

Gasoline is highly flammable. Do not operate swingfire heater while filling gas tank. Do not smoke or have open fires within 25 ft (7.6 m) of area while filling gas tank. Failure to comply may result in serious injury or death to personnel.

WARNING

Allow swingfire heater to cool down before draining gasoline from swingfire heater gas tank. Failure to comply may result in serious injury or death to personnel.

WARNING

Exhaust fumes from swingfire heater are poisonous. Do not operate swingfire heater in a closed room. Ensure adequate ventilation is available. If personnel become dizzy, seek immediate medical attention. Failure to comply may result in serious injury or death to personnel.

WARNING SUMMARY - Continued

WARNING

Diesel fuel or gasoline must never be used for cleaning. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Operating in water or mud causes brake linings to get wet and can impair vehicle braking. Dry brakes 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 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

Notify Field Maintenance that lugnuts need to be tightened to 415-475 lb-ft (563-644 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.

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

Bridges along your route may be marked with a class number. The bridge class number shows the safe capacity of the bridge. If the bridge class number on your vehicle is equal to or less than the bridge class number, the bridge will hold your vehicle. If the bridge class number on your vehicle is greater than the bridge class number, DO NOT CROSS BRIDGE. Failure to comply may result in serious injury or death to personnel 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.

WARNING

Transmission incorporates a hold feature to prohibit upshifting above selected gear 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.

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 SUMMARY - Continued

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 100 lbs (45 kgs) and requires two or more personnel to carry. Failure to comply may result in injury to personnel.

WARNING

Do not place hands near pintle hook when connecting/disconnecting towbar from pintle hook. Failure to comply may result in injury 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

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

Ensure no one is behind tailgate before dump body is raised. Failure to comply may result in serious injury or death to personnel.

WARNING SUMMARY - Continued

WARNING

Set up stifflegs if load is swung around rear of vehicle. Vehicle could turn over if not supported. Failure to comply may result in serious injury or death to personnel.

WARNING

Underlift assembly must be operated with WRECKER REMOTE CONTROL if Operator is not able to keep underlift assembly and disabled vehicle in sight at all times during operation. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Wreckers S/N 11438 to 22005 are equipped with an underlift fold feature. Before folding underlift assembly into its stowed position, stinger cam lock must be locked in first rectangular hole on stinger. Crossbar could shift suddenly. Failure to comply may result in injury to personnel.

WARNING

Goggles must be worn when operating WRECKER CONTROL PANEL. Blowing dust and debris may become airborne while engine is running. Failure to comply may result in injury to personnel.

WARNING

Ensure there are at least five wraps of cable on hoist drum at all times. 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.

WARNING

Sandshoe weighs approximately 70 lbs (32 kgs). Use the aid of an assistant to lower/raise sandshoe. Failure to comply may result in injury to personnel or damage to equipment.

WARNING SUMMARY - Continued

WARNING

Keep hands and feet clear of stifflegs during operation. Failure to comply may result in injury to personnel.

WARNING

Do not raise vehicle tires off ground with stifflegs. Vehicle may roll over. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Stifflegs must be positioned so that vehicle is level from side to side. Vehicle may roll over. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Slowly take out slack in cable before recovering equipment. Failure to comply may result in serious injury or death to personnel.

WARNING

Use extreme caution when disconnecting cable. Cable may spin rapidly to the left approximately 1 1/2 turns when disconnected. 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

M1089A1 and disabled vehicle must have parking brakes applied before connecting/disconnecting towbar. Failure to comply may cause vehicles to roll into each other and may result in serious injury or death to personnel or damage to equipment.

WARNING SUMMARY - Continued

WARNING

M1089A1 should not be operated at speeds over 15 mph (24 km/h) when towing, except on paved roads when Operator determines terrain conditions allow safe operation. The following are maximum speeds for safe operation.

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 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

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

WARNING

Underlift assembly must be operated with WRECKER REMOTE CONTROL if Operator is not able to keep underlift assembly and disabled vehicle in sight at all times during operation. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Keep personnel clear of underlift assembly and disabled vehicle when raising. Disabled vehicle could fall suddenly. Failure to comply may result in serious injury or death to personnel.

WARNING SUMMARY - Continued

WARNING

M1089A1 hydraulic hoses are under 3,000 pounds pressure and must be handled carefully to prevent damage or personal injury. Failure to comply may result in serious injury or death to personnel.

WARNING

MODE SELECTOR SWITCH must be in NORMAL position to relieve pressure before disconnecting hydraulic hoses. Failure to comply may result in serious injury or death to personnel.

WARNING

Keep hands and feet clear of outriggers during operation. Failure to comply may result in injury to personnel.

WARNING

Keep boom clear of all electrical lines and other obstacles while operating Material Handling Crane (MHC). Failure to comply may result in serious injury or death to personnel.

WARNING

Area must be clear of personnel before operating swing 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 Material Handling Crane (MHC) with REMOTE CONTROL UNIT. Failure to comply may result in serious injury or death to personnel.

WARNING

Operator must keep load in sight at all times while operating Material Handling Crane (MHC). Load may unexpectedly shift. Failure to comply may result in serious injury or death to personnel.

WARNING

Do not operate Material Handling Crane (MHC) unless outriggers are set up and MHC is level from side to side. Failure to comply may result in serious injury or death to personnel.

WARNING SUMMARY - Continued

WARNING

Do not operate Material Handling Crane (MHC) and 15K Self-Recovery Winch (SRW) at the same time. Load may unexpectedly shift. Failure to comply may result in serious injury or death to personnel.

WARNING

Material Handling Crane (MHC) must be operated with REMOTE CONTROL UNIT if Operator is not able to keep load in sight at all times during operation. Failure to comply may result in serious injury or death to personnel.

WARNING

Main panel Material Handling Crane (MHC) controls must not be used when WRECKER REMOTE CONTROL is connected. MHC may move inadvertently. Failure to comply may result in serious injury or death to personnel.

WARNING

Wheels must always be chocked before operating Material Handling Crane (MHC). Vehicle may move or load may shift. Failure to comply may result in serious injury to personnel or damage to equipment.

WARNING

Goggles must be worn while operating Material Handling Crane (MHC) controls. Blowing dust and debris may become airborne while engine is running. Failure to comply may result in serious injury to personnel.

WARNING

Outriggers must be positioned so that Material Handling Crane (MHC) is level from side to side. Use of MHC when vehicle is not level can cause vehicle to roll over. Failure to comply may result in serious injury or death to personnel.

WARNING SUMMARY - Continued

WARNING

Attach guide lines to load to keep control of load at all times. An assistant is required to attach guide lines. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Do not raise vehicle tires off ground with outriggers. Vehicle may roll over. Failure to comply may result in serious injury or death 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

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

Cab protector is spring loaded and weighs approximately 180 lbs (82 kgs). Hold cab protector down before removing pins. Slowly allow cab protector to raise to vertical position after pins are removed. Failure to comply may result in injury to personnel.

WARNING

Ensure no one is behind tailgate before dump body is raised. Failure to comply may result in serious injury or death to personnel.

WARNING

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

WARNING SUMMARY - Continued

WARNING

Cab protector is spring loaded and weighs approximately 180 lbs (82 kgs). Keep pressure on cab protector when lowering and when installing pins. Failure to comply may result in injury to personnel.

WARNING

Do not press dump TAILGATE RELEASE switch while tailgate is not connected at the top. Tailgate will fall from dump body. Failure to comply may result in injury to personnel or damage to equipment.

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

Dump cover weighs approximately 60 lbs (27 kgs). Arctic dump cover weighs approximately 100 lbs (45 kgs). An assistant is required to lift dump cover. Failure to comply may result in injury to personnel or damage to equipment.

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

DO NOT attempt to use hydraulic jack on rear axles without jack adapter installed. Failure to comply may result in serious injury or death to personnel.

WARNING

Pressure in coolant reservoir must be released before removing cap. Failure to comply may result in injury to personnel.

WARNING SUMMARY - Continued

WARNING

Trailer wheels must be chocked before coupling/uncoupling with fifth wheel. Trailer wheels may roll if they are not chocked. Failure to comply may result in serious injury or death to personnel or damage to equipment.

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

Do not overfill coolant reservoir. Overfilling coolant reservoir will not allow enough space for coolant to expand during troopseat heater operation. Failure to comply may result in injury to personnel or damage to personnel.

WARNING

Use this procedure only in the event of an emergency. Using the MANUAL OVERRIDE switch to operate the Material Handling Crane (MHC) defeats the overload shutdown circuits and allows the MHC to exceed the rated capacity. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

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

WARNING

Use care when removing debris from engine fan. Engine components will be hot. Failure to comply may result in injury to personnel.

WARNING SUMMARY - Continued

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.

WARNING

Power cable must be connected to Light Material Handling Crane (LMHC) before being connected to circuit breaker box. Failure to comply may result in serious injury or death 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

Determine required Light Material Handling Crane (LMHC) settings prior to raising boom. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Ensure there are at least two wraps of cable on hoist drum at all times. Cable could come off hoist drum while load is being lifted. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Ensure that engine is not running before disconnecting circuit breaker box NATO connector from vehicle NATO connector. Failure to comply may result in serious injury or death to personnel.

WARNING

Power source must be turned off before disconnecting power cable. Failure to comply may result in injury to personnel or damage to equipment.

WARNING SUMMARY - Continued

WARNING

Light Material Handling Crane (LMHC) boom and winch weighs approximately 110 lbs (50 kgs). The aid of an assistant is required to remove LMHC boom and winch. Failure to comply may result in injury to personnel.

WARNING

Light Material Handling Crane (LMHC) mast weighs approximately 110 lbs (50 kgs). Use the aid of an assistant to remove mast from cargo bed pocket. Failure to comply may result in injury to personnel.

WARNING

Light Material Handling Crane (LMHC) mast weighs approximately 110 lbs (50 kgs). Use the aid of an assistant to install mast from cargo bed pocket. Failure to comply may result in injury to personnel.

WARNING

Light Material Handling Crane (LMHC) boom and winch weighs approximately 110 lbs (50 kgs). The aid of an assistant is required to install LMHC boom and winch. Failure to comply may result in injury to personnel.

WARNING

Cargo bed is approximately 5 ft (1.5 m) above ground level. Use care during any Light Material Handling Crane (LMHC) operation. Failure to comply may result in injury or death to personnel.

WARNING

Ensure that wheels are chocked prior to setting up Light Material Handling Crane (LMHC). Failure to comply may result in injury to personnel.

WARNING

Determine required Light Material Handling Crane (LMHC) settings prior to telescoping boom. Failure to comply may result in injury to personnel or damage to equipment.

WARNING SUMMARY - Continued

WARNING

Ensure that service and emergency gladhand connections do not leak. Failure to comply may result in serious injury or death to personnel, or damage to equipment.

WARNING

Keep hands clear of 30K winch during operation. Failure to comply may result in injury to personnel.

WARNING

Operate vehicle 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.

WARNING

Area must be clear on both sides before extending outriggers. Failure to comply may result in serious injury to personnel.

WARNING

When operating the vehicle in snowy or icy conditions, apply the brake pedal 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 drive vehicle until windshield is sufficiently clear of frost/ice. Failure to comply may result in severe injury or death to personnel.

WARNING SUMMARY - Continued

WARNING

Never mix gasoline or JP-4 turbine fuel with other fuels outside vehicle fuel tank. Any mixture should be done by adding fuels to fuel tank. Gasoline and JP-4 turbine fuel are highly combustible and may explode, resulting in injury or death to personnel.

WARNING

Do not place hands near pintle hook when aligning towbar eye with pintle hook or when removing towbar. Failure to comply may result in injury to personnel.

WARNING

Do not place hands near pintle hook when removing towbar. Failure to comply may result in injury to personnel.

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. Attach guide lines to load. An assistant is required to attach guide lines. Failure to comply may result in serious injury or death to personnel.

WARNING

Gasoline is highly flammable. Do not smoke or have open flames within 25 feet of area when draining tank. Failure to comply may result in serious injury or death to personnel.

WARNING SUMMARY - Continued

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 Material Handling Crane (MHC) with REMOTE CONTROL UNIT. Failure to comply may result in serious injury or death to personnel.

WARNING

Vehicle Operator and all crew members must wear properly fitted and approved hearing protection devices when operating any FMTV at speeds of 40 mph (64 km/h) and above. Failure to comply may result in injury to personnel.

WARNING

Operators of the M1084A1, M1086A1, and M1089A1 Material Handling Crane (MHC) must wear properly fitted and approved hearing protection devices during all craning operations. Failure to comply may result in injury to personnel.

WARNING

All personnel working within 12 ft (3.5 m) of an operating M1084A1 or M1085A1 cargo vehicle must wear properly fitted and approved hearing protection devices. Failure to comply may result in injury to personnel.

WARNING

All personnel working within 18 ft (5.5 m) of an operating M1089A1 wrecker must wear properly fitted and approved hearing protection devices. Failure to comply may result in injury to personnel.

WARNING

Personnel firing the M240/M2HB machine gun or Mark 19 grenade launcher from an FMTV vehicle during training exercises must be wearing properly fitted and approved hearing protection devices. Failure to comply may result in injury to personnel.

WARNING SUMMARY - Continued

WARNING

All personnel within 180 ft (55 m) of weapons being fired from an FMTV vehicle during training exercises must be wearing properly fitted and approved hearing devices. Failure to comply may result in injury to personnel.

WARNING

When mission requires the vehicle Operator and crew to remain in a stationary FMTV vehicle with the engine running in outside temperatures above 90° F (32°C) vehicle Operator and crew must observe proper safety precautions to prevent heat stress injury. Refer to FM 21-10 Field Hygiene and Sanitation, and FM 21-11 First Aid for Soldiers for proper precautions and preventive measures. Failure to comply may result in injury to personnel.

WARNING

When mission requires the vehicle Operator and crew to operate the FMTV vehicle in outside temperatures above 90° F (32° C) with the windows closed, vehicle Operator and crew must observe proper safety precautions to prevent heat stress injury. Refer to FM 21-10 Field Hygiene and Sanitation, and FM 21-11 First Aid for Soldiers for proper precautions and preventive measures. Failure to comply may result in injury to personnel.

WARNING

Do not flat tow a fully loaded MTV and trailer combination. The FMTV 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 nonfunctional 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

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

WARNING SUMMARY - Continued

WARNING

Wear heavy leather-palmed work gloves when handling wire rope. Never let moving wire rope slide through hands, even when wearing gloves. Failure to comply may result in serious injury to personnel.

WARNING

Flagged safety pin is only removed for pneumatic operation of tailgate. It will remain installed at all other times. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Tailgate may be hinged from the top or bottom depending on mission requirements. Use care during positioning. Failure to comply may result in injury to personnel.

WARNING

Prior to normal driving, the flagged safety pin must be installed. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Tailgate weighs approximately 270 lbs. (123 kgs). Use care when handling. Two assistants are required to lower or raise tailgate. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Ensure flagged safety pin and manual release handle pin are installed prior to using bottom hinge option. Failure to comply may result in injury to personnel.

WARNING

Tailgate weighs approximately 270 lbs. (123 kgs). Use care when lowering or raising. Failure to comply may result in injury to personnel.

WARNING SUMMARY - Continued

WARNING

Vehicle S/N 18,550 or higher are equipped with a Load and Battery Control Device (LBCD). LBCD have 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.

WARNING

Do not operate vehicle if radiator cap is damaged or missing. Failure to comply will result in injury to personnel or damage to equipment.

WARNING

Heavy objects/loads, such as tool boxes and heavy parts, must always be carried on the floor with the weight distributed as equally as possibly between left and right sides of van. Failure to comply decreases the stability of the 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 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.

Always keep in mind, when placing item inside the van, that heavier items must always be positioned between left and right sides of van. Failure to comply decreases the stability of the van and will increase the likelihood of a rollover.

WARNING SUMMARY - Continued

WARNING

M1089A1 should not be operated at speeds over 15 mph (24 km/h) when towing vehicle except on paves roads when Operator determines that vehicle being towed and terrain 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

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 or 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. If not possible, perform the following seven steps on vehicle chassis. 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 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 SUMMARY - Continued

WARNING

Ensure keys are locked securely within slots of leveling jacks. Failure to comply may result in serious injury or damage to equipment.

WARNING

Both vents must be opened during heater operation. Exhaust and fuel fumes will fill van body if not properly ventilated. Failure to comply may result in injury or death to personnel.

WARNING

Rear rollers are heavy. Use care when attempting to lift rear rollers. Failure to comply may result in injury to personnel.

WARNING

Use caution when removing locking pin from lower roller section. Lower roller section can swing free and injure personnel. Failure to comply may result in injury to personnel.

WARNING

While extending lift frame towards rear of vehicle, ensure to release joystick when lift frame is approximately 8 in. (20.3 cm) from ground. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Guide blocks are heavy. Use care when attempting to lift and rotate guide blocks. Failure to comply may result in injury to personnel.

WARNING

Use caution when installing lock assembly in RH side of ISO container. Auxiliary cooler may still be hot and can cause severe burns. Failure to comply may result in injury to personnel.

WARNING SUMMARY - Continued

WARNING

Driver must always stay in vehicle during unloading of flatrack. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Use caution when removing from RH side of ISO container. Auxiliary cooler may still be hot and can cause severe burns. Failure to comply may result in injury to personnel.

WARNING

Lifting frame is heavy. Use care when pushing, pulling, lifting frame. Failure to comply may result in injury to personnel.

WARNING

Rear rollers are heavy. Use care and stay clear of area under rear rollers. Failure to comply may result in injury to personnel.

WARNING

Driver must always stay in vehicle during loading of ISO container. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Use caution when removing ISO locks. Failure to comply may result in injury to personnel.

WARNING

Ensure ISO container is properly aligned with shuttle on trailer during loading. Stand clear of LHS vehicle and trailer while ISO container is loading. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Stand clear of LHS vehicle and trailer while flatrack is unloading. Failure to comply may result in serious injury or death to personnel.

WARNING SUMMARY - Continued

WARNING

Ensure flatrack runners align with rollers on vehicle. If runners and rollers are not aligned, flatrack can dislodge while vehicle is moving. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Driver must always stay in vehicle during loading of crop. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Ensure crop runners align with rollers on vehicle. If runners and rollers are not aligned, crop can dislodge while vehicle is moving. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Driver must always stay in vehicle during unloading of crop. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Stand clear of LHS vehicle and trailer while crop is unloading. Failure to comply may result in serious injury or death to personnel.

WARNING

Keep body and limbs clear of Load Handling Equipment (LHE). Failure to comply may result in serious injury or death to personnel.

WARNING

Do not over-tighten inner or outer lugs. Failure to comply may result in damage to equipment.

WARNING SUMMARY - Continued

WARNING

Lifting frame must be placed on level ground. Failure to comply may result in serious injury or death to personnel to equipment.

The lift frame is very unstable while on the ground. The lift frame should not be left unattended while standing free on the ground. If the lift frame needs to be left unattended, then it should be stored in a secure fashion. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Trailer wheels must be chocked before coupling, uncoupling, or when trailer is parked. Trailer wheels may roll if they are not chocked. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

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

Do not place hands near pintle towing hook when coupling/uncoupling trailer drawbar assembly and pintle towing hook. Towing vehicle may move suddenly. Failure to comply may result in injury to personnel.

WARNING

Van body weighs approximately 10,000 lbs (4,536 kgs) empty. Attach a suitable lifting device prior to removal. Failure to comply may result in injury or death to personnel.

Guide ropes must be attached at opposite corners of van body to air 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. Attach and adjust lifting device so that van body lifts level. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING SUMMARY - Continued

WARNING

Van body weighs approximately 10,000 lbs (4,536 kgs) empty. Attach a suitable lifting device prior to installation. Failure to comply may result in injury or death to personnel.

Guide ropes must be attached at opposite corners of van body to air 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. Attach and adjust lifting device so that van body lifts level. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Surfaces of Load Handling Equipment (LHE) may be slippery. Wear suitable footwear and step carefully when walking on LHE. Failure to comply may result in serious injury or death to personnel.

WARNING

Keep body and limbs clear of lifting frame, stowage guide, hook arm, and middle frame while operating Load Handling Equipment (LHE). Failure to comply may result in serious injury or death to personnel.

WARNING

Stay clear of area under lifting frame. Failure to comply may result in serious injury or death to personnel.

WARNING

Keep body and limbs clear of area under forward roller section. Failure to comply may result in serious injury to personnel.

WARNING

Keep body and limbs clear from area under transit locks. Support transit locks when disengaging transit locks from ISO container. Failure to comply may result in serious injury to personnel.

WARNING SUMMARY - Continued

WARNING

Keep Load Handling Equipment (LHE) and load clear of all electrical lines and other obstacles while operating (LHE). Failure to comply may result in serious injury or death to personnel.

Keep clear of auxiliary cooler when disengaging transit lock. Auxiliary cooler may be hot and can cause severe burns. Failure to comply may result in serious injury to personnel.

WARNING

Operator must remain in cab during entire unloading procedure. Assisting personnel should operate valves. Failure to comply may result in damage to equipment or serious injury or death to personnel.

Do not touch manifold. Manifold surface can become extremely hot during operation. Failure to comply may result in serious injury or death to personnel.

WARNING

Disabled vehicle will roll forward as load is lowered to ground. Keep body and limbs clear of wheels while lowering load. Ensure the area in front of the vehicle is equivalent to length of cargo container or flat rack and clear of obstacles and people. Failure to comply may result in serious injury or death to personnel.

WARNING

Do not attempt to operate the Load Handling Equipment (LHE) while the lifting frame is strapped down. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Position assisting vehicle parallel with disabled vehicle and facing in the opposite direction. RH front tires of both vehicles should be aligned. Failure to comply may result in serious injury or death to personnel.

WARNING SUMMARY - Continued

WARNING

Manifold becomes extremely hot during operation. Do not touch manifold. Failure to comply may result in serious injury or death to personnel.

WARNING

Engine must be shut down prior to connecting hydraulic hoses to assisting or disabled vehicle. Failure to comply may result in serious injury or death to personnel.

WARNING

Hydraulic fluid is under high pressure. Keep personnel clear of hydraulic hoses. Failure to comply may result in serious injury or death to personnel.

WARNING

Push hose ends toward vehicle when disconnecting hydraulic hoses. Failure to comply may result in serious injury to personnel.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

WARNING

After removal of retaining pin, flatrack lock may automatically release inward. Ensure hands are clear from moving parts. Failure to comply may result in injury to personnel.

WARNING

Vehicles are equipped with a Load and battery Control Device (LBCD). The LBCD has internal capacitors that must be discharged prior to performing maintenance or troubleshooting procedures. Failure to comply may result in damage to equipment and/or injury to personnel.

WARNING SUMMARY - Continued

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

Use care when loading ISO containers with side doors. ISO containers with side doors can slide or slip off rollers. Failure to comply may result in serious injury or death to personnel.

WARNING

Use care when unloading ISO containers with side doors. ISO containers with side doors can slide or slip off rollers. Failure to comply may result in serious injury or death to personnel.

CHANGE NO. 1

**HEADQUARTERS
DEPARTMENTS OF THE ARMY
AND THE AIR FORCE**
Washington, D.C., 14 February 2007

TECHNICAL MANUAL
OPERATOR'S MANUAL
M1083A1 SERIES, 5-TON, 6x6, MEDIUM TACTICAL VEHICLE (MTV)

VOLUME NO. 2 OF 2

TM 9-2320-392-10-2, 3 January 2005, is changed as follows:

1. File this sheet in front of the manual for reference.
2. Remove old pages and insert new pages as indicated below.
3. New or changed material is indicated by a vertical bar in the out margin of the page.
4. Added or revised illustrations are indicated by a vertical bar adjacent to the illustration.

Remove Pages	Insert Pages
a thru aa/bb Blank	a thru bb
None	cc thru jj
None	Change 1 Authentication Sheet/ Blank
None	A/B Blank
Title Page/Blank	Title Page/Blank
i and ii	i and ii
0075 00-1 thru 0075 00-20	0075 00-1 thru 0075 00-20
None	0075 00-21 thru 0075 00-24
0080 00-1 thru 0080 00-149/ 150 blank	0080 00-1 thru 0080 00-150
None	0080 00-151 thru 0080 00-243/ 244 Blank
0085 00-1 thru 0085 00-5/ 6 Blank	0085 00-1 thru 0085 00-6
None	0102 01-1 thru 0102 01-7/ 8 Blank
0103 00-1 thru 0103-239/ 240 Blank	0103 00-1 thru 0103 00-240
None	0103 00-241 thru 0103 00-290
0116 00-1 thru 0116-3/ 4 Blank	0116 00-1 thru 0116 00-4
0117 00-1 thru 0117 00-30	0117 00-1 thru 0117 00-30
None	0117 00-31/32 Blank
0118 00-1 thru 0118 00-6	0118 00-1 thru 0118 00-6
0119 00-1 thru 0119 00-6	0119 00-1 thru 0119 00-6
Index-1 thru Index-59/ 60 Blank	Index-1 thru Index-60
None	Index-61 thru Index-63/ 64 Blank
None	2028 Sample Front thru 2028 Back
Cover/PIN	Cover/PIN

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited."
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TM 9-2320-392-10-2

INSERT LATEST UPDATED PAGES/WORK PACKAGES, DESTROY SUPERSEDED DATA

LIST OF EFFECTIVE PAGES/WORK PACKAGES

Note: The portion of text affected by the updates is indicated by a vertical line in the outer margins of the page. Updates to illustrations are indicated by miniature pointing hands. Updates to wiring diagrams are indicated by shaded areas.

Dates of issue for original and updated pages/work packages are:

Original 0 3 January 2005
Change 1 14 February 2007

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 114 AND TOTAL NUMBER OF WORK PACKAGES IS 47 CONSISTING OF THE FOLLOWING:

Page / WP	*Change No.
Cover (Back Blank)	1
A to aa	0
bb	1
cc to jj	1
Title Page (Back Blank)	0
i	1
ii thru iv	0
Chapter 3 cover (Back Blank)	0
WP 0074 00	0
WP 0075 00	1
WP 0076 00 to WP 0079 00	0
WP 0080 00	1
WP 0081 00 to WP 0084 00	0
WP 0085 00	1
WP 0086 00 to WP 0102 00	0
WP 0102 01 and WP 0103 00	1
WP 0104 00 to WP 0115 00	0
WP 0116 00 to WP 0119 00	1
WP 0120 00	0
Index	1
Metric Chart (Back Blank)	0
Blank/PIN	1

*Zero in this column indicates an original page or work package.

TM 9 2320-392-10-2

HEADQUARTERS
DEPARTMENTS OF THE ARMY AND AIR FORCE
WASHINGTON, D.C., 3 JANUARY 2005

TECHNICAL MANUAL
OPERATOR'S MANUAL FOR THE M1083A1 SERIES 5 TON, 6 X 6 MEDIUM TACTICAL VEHICLES (MTV)
VOLUME NO. 2 OF 2

MODEL	NSN	EIC
TRK, CAR., MTV, M1083A1		
W/WN	2320-01-447-3884	BUL
W/O WN	2320-01-447-3890	BT9
TRK., CAR., MTV, W/MHC, M1084A1	2320-01-447-3887	BUB
TRK., CHAS., MTV, LWB, M1085A1		
W/WN	2320-01-447-3897	BUR
W/O WN	2320-01-447-3891	BUG
TRK, CAR., MTV, LWB		
W/MHC, M1086A1	2320-01-447-3895	BUH
TRK., EX. VAN, MTV, M1087A1		
W/WN	2320-01-530-3842	XXX
W/O WN	2320-01-530-3843	XXX
TRK., TRACTOR, MTV, M1088A1		
W/WN	2320-01-447-3900	BUC
W/O WN	2320-01-447-3893	BUN
TRK., WKR., MTV, M1089A1	2320-01-447-3892	BUD
TRK., DUMP, MTV, M1090A1		
W/WN	2320-01-447-6344	BUP
W/O WN	2320-01-447-3899	BUE
TRK., CHAS., MTV, M1092A1	2320-01-447-3894	BT8
TRK., CHAS., MTV, LWB M1096A1	2320-01-447-3885	XXX
TRK., LHS, MTV, M1148	2320-01-508-8859	XXX

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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

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Supersedes copy dated November 2004.

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Subject Index 1

HOW TO USE THIS MANUAL

OVERVIEW

This Technical Manual (TM) is provided to help you operate and maintain the Medium Tactical Vehicle (MTV). 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 the Chapters, Work Packages, and Alphabetical Index in order of appearance.

Chapter 1, Introductory Information with Theory of Operation for the M1083A1 Series Vehicles. Describes the MTV and provides equipment data.

Chapter 2, Operating Instructions for the M1083A1 Series Vehicles. Describes operator's controls and indicators, and operating instructions.

Chapter 3, Troubleshooting Procedures for the M1083A1 Series Vehicles. Provides instructions for troubleshooting problems with the MTV.

Chapter 4, Preventive Maintenance Checks and Services (PMCS) and Maintenance Instructions for the M1083A1 Series Vehicles. Provides the instructions for Operator maintenance.

Chapter 5, Supporting Information for the M1083A1 Series Vehicles. Contains information about References, Components of End Items (COEI) and Basic Issue Items (BII) lists, Additional Authorization List (AAL), Expendable and Durable Items List, and Stowage Location.

Subject Index. Lists important subjects contained in this TM in alphabetical order. It also gives the work package and page number where each subject is located.

FINDING INFORMATION

There are several ways to find the information you need in this manual. They are as follows:

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

Malfunction Index. Lists malfunctions contained in the Troubleshooting with Work Package numbers in order of appearance.

HOW TO USE THIS MANUAL - Continued

OVERVIEW - Continued

Alphabetical (Subject) Index. Lists all important topics in alphabetical order with Work Package and page numbers.

TROUBLESHOOTING

Troubleshooting is contained in Chapter 3. When you have a problem with the operation of your equipment, look at Malfunction/Symptom Index in WP 0075 00. Find the malfunction in the Index. 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 (Chapter 2, WP 0004 00 through WP 0016 00). Perform your BEFORE preventive maintenance (Chapter 4, WP 0103 00). Read the operating instructions contained in Chapter 2, WP 0017 00 through WP 0073 00. Always follow WARNINGS and CAUTIONS. During operation, perform your DURING preventive maintenance and perform your AFTER preventive maintenance after operation (WP 0103 00).

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

TROUBLESHOOTING PROCEDURES FOR THE M1083A1 SERIES VEHICLES

TROUBLESHOOTING INTRODUCTION 0074 00

MALFUNCTION/SYMPTOM INDEX

The malfunction/symptom index (WP 0075 00) is a quick reference index for finding troubleshooting procedures. Associated with each symptom name is a work package sequence number representing the starting point in a troubleshooting sequence. Should any one symptom require more than one troubleshooting sequence to arrive at the most likely area of investigation, the additional starting point numbers are presented.

As the troubleshooting activity progresses through to the conclusion of a particular sequence, a reference is made to the next logical troubleshooting sequence by work package sequence number, or by referring to the malfunction/symptom index to locate the next failure symptom work package. This type of activity continues until successful fault isolation is achieved.

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.

MALFUNCTION/SYMPTOM INDEX 0075 00

Malfunction/Symptom	Troubleshooting Procedure
ENGINE SYSTEM	
1. Engine Does Not Crank	WP 0076 00
2. Engine Cranks But Does Not Start	WP 0076 00
3. Low Engine Oil Pressure	WP 0076 00
4. Engine Stalls At Low Rpm	WP 0076 00
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AIR TRANSPORT SYSTEM	
1. Cab Tilt, Spare Tire Retainer, And Suspension Compression Do Not Operate	WP 0095 00
2. Suspension Does Not Compress Or Return To Normal Properly	WP 0095 00
3. Cab Leveling Air Springs Do Not Operate Properly	WP 0095 00
DUMP BODY HYDRAULIC SYSTEM	
1. Dump Body Does Not Raise	WP 0096 00
2. Dump Body Does Not Lower	WP 0096 00
3. Dump Body Drifts Down From Raised Position	WP 0096 00

MALFUNCTION/SYMPTOM INDEX - Continued 0075 00

	Malfunction/Symptom	Troubleshooting Procedure
	WRECKER HYDRAULIC SYSTEM	
1.	M1089A1 Material Handling Crane (MHC) Does Not Operate	WP 0097 00
2.	M1089A1 Stifflegs/Left 30K Winch/15K Self-Recovery Winch (SRW) Do Not Operate	WP 0097 00
3.	M1089A1 Stiffleg(s) Does Not Operate Or Operates Slowly	WP 0097 00
4.	M1089A1 Left 30K Winch Does Not Operate Or Operates Slowly	WP 0097 00
5.	M1089A1 Stinger/Telescopic Lift Cylinders/Fold Cylinders/Right 30K Winch Do Not Operate	WP 0097 00
6.	M1089A1 Stinger Does Not Operate	WP 0097 00
7.	M1089A1 Underlift Telescopic Lift Cylinder(S) Does Not Operate	WP 0097 00
8.	M1089A1 Fold Cylinder Does Not Operate	WP 0097 00
9.	M1089A1 Right 30K Winch Does Not Operate	WP 0097 00
10.	M1089A1 Material Handling Crane (MHC) Hand Pump Does Not Operate	WP 0097 00
11.	No Service Or External Hydraulic Power From M1089A1	WP 0097 00
12.	M1089A1 Material Handling Crane (MHC) Left Or Right Outrigger Drifts Or Does Not Operate	WP 0097 00
13.	M1089A1 Material Handling Crane (MHC) Mast Does Not Erect	WP 0097 00
14.	M1089A1 Material Handling Crane (MHC) Outrigger Extension Cylinder Does Not Operate	WP 0097 00
15.	M1089A1 Material Handling Crane (MHC) Boom Swing Does Not Operate	WP 0097 00
16.	M1089A1 Material Handling Crane (MHC) Boom Does Not Lift Up Or Down Or Hold Under Load	WP 0097 00

MALFUNCTION/SYMPTOM INDEX - Continued 0075 00

Malfunction/Symptom	Troubleshooting Procedure
WRECKER HYDRAULIC SYSTEM - Continued	
17. M1089A1 Material Handling Crane (MHC) Boom Does Not Telescope In Or Out	WP 0097 00
18. M1089A1 Material Handling Crane (MHC) Hoist Does Not Operate	WP 0097 00
19. M1089A1 Left Stiffleg Drifts Or Does Not Operate	WP 0097 00
20. M1089A1 Right Stiffleg Drifts Or Does Not Operate	WP 0097 00
21. M1089A1 Pay-Out Hydraulic Motor Assembly Does Not Operate	WP 0097 00
SPECIAL PURPOSE KITS	
1. Cargo Area Arctic Heater Does Not Operate	WP 0098 00
2. Cargo Area Arctic Heater Indicator Lamp Blinks Twice While Heater Is Running	WP 0098 00
3. Cargo Area Arctic Heater Shuts Down Automatically	WP 0098 00
4. Cargo Area Arctic Override Switch Does Not Operate	WP 0098 00
5. Cab Arctic Heater Combustion Starts Immediately When Switched On	WP 0098 00
6. Cab Arctic Heater Does Not Start	WP 0098 00
7. Cab Arctic Heater Switches On And Off Repeatedly	WP 0098 00
8. Cab Arctic Heater Hard To Start	WP 0098 00
9. Cab Arctic Heater Turns Itself Off	WP 0098 00
10. Cab Arctic Heater Emits Black Smoke	WP 0098 00
11. Cab Arctic Heater Emits White Smoke More Than 20 Seconds After Start-Up	WP 0098 00
12. Cab Arctic Heater Cannot Be Switched Off	WP 0098 00

MALFUNCTION/SYMPTOM INDEX - Continued 0075 00

Malfunction/Symptom	Troubleshooting Procedure
SPECIAL PURPOSE KITS - Continued	
13. Light Material Handling Crane (LMHC) Does Not Operate	WP 0098 00
14. Light Material Handling Crane (LMHC) Hoist In Does Not Operate	WP 0098 00
15. Light Material Handling Crane (LMHC) Hoist Out Does Not Operate	WP 0098 00
16. Cab Arctic Heater Does Not Ignite	WP 0098 00
17. Swingfire Does Not Operate	WP 0098 00
18. Arctic Engine Preheat Indicator Does Not Illuminate	WP 0098 00
19. Arctic Engine Preheat Indicator Flashes Special Failure Code for 60 Seconds	WP 0098 00
20. Arctic Engine Preheat Indicator Flashes Slowly Indicating “Ready” When Ignition Is Switched On Although Water Temperature Is Below 77°F (25°C).	WP 0098 00
21. Arctic Engine Preheat Indicator Illuminates Continuously Although Water Temperature Is Above 77°F (25°C).	WP 0098 00
22. Arctic Engine Preheat Indicator Flashes Slowly Indicating “Ready” But Engine Will Not Start Or Is Hard To Start	WP 0098 00
23. Heavy White Smoke After Cold Start	WP 0098 00
24. Engine Block Arctic Heater Does Not Operate	WP 0098 00
25. No Power To Digitization Rack	WP 0098 00
26. No Power To Mobile Tracking System (MTS) Sense	WP 0098 00
27. No Power To Enhanced Position Location Reporting System (EPLRS)	WP 0098 00
28. No Power To Precision Lightweight Global Positioning System Receiver (PLGR)	WP 0098 00

MALFUNCTION/SYMPTOM INDEX - Continued 0075 00

Malfunction/Symptom	Troubleshooting Procedure
SPECIAL PURPOSE KITS - Continued	
29. No Power To Driver Visual Enhancement (DVE)	WP 0098 00
30. No Power To SINGGAR/Force XXI Battle Command Or Below (FBCB)	WP 0098 00
31. No Power To Mobile Tracking System (MTS)	WP 0098 00
M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS	
1. M1084A1/M1086A1 Material Handling Crane (MHC) Hand Pump Does Not Operate	WP 0099 00
2. M1084A1/M1086A1 Material Handling Crane (MHC) Hydraulic Functions Operate Slowly	WP 0099 00
3. M1084A1/M1086A1 Material Handling Crane (MHC) Left Outrigger (Jack) Drifts Or Does Not Operate	WP 0099 00
4. M1084A1/M1086A1 Material Handling Crane (MHC) Right Outrigger (Jack) Drifts Or Does Not Operate	WP 0099 00
5. M1084A1/M1086A1 Material Handling Crane (MHC) Mast Does Not Erect	WP 0099 00
6. M1084A1/M1086A1 Material Handling Crane (MHC) Hoist Does Not Operate	WP 0099 00
7. M1084A1/M1086A1 Material Handling Crane (MHC) Boom Swing Does Not Operate	WP 0099 00
8. M1084A1/M1086A1 Material Handling Crane (MHC) Boom Does Not Telescope In Or Out	WP 0099 00
9. M1084A1/M1086A1 Material Handling Crane (MHC) Swing, Telescope, Boom, And Hoist Do Not Operate	WP 0099 00
10. M1084A1/M1086A1 Material Handling Crane (MHC) Boom Does Not Lift Up Or Down Or Hold Under Load	WP 0099 00

MALFUNCTION/SYMPTOM INDEX - Continued 0075 00

Malfunction/Symptom	Troubleshooting Procedure
CAB TILT AND SPARE TIRE RETAINER	
1. Cab Does Not Raise Or Lower Properly	WP 0100 00
2. Spare Tire Does Not Raise Or Lower Properly	WP 0100 00
M1089A1 AIR SYSTEM TROUBLESHOOTING	
1. One Wrecker Function Does Not Operate From WRECKER REMOTE CONTROL	WP 0101 00
2. Wrecker Left Or Right 30K Winch Freespool Does Not Operate	WP 0101 00
3. Wrecker Left Or Right 30K Winch Cable Drum Tensioner Does Not Operate	WP 0101 00
4. 30K Winch LH or RH Does Not Pay-In	WP 0101 00
FRAME TROUBLESHOOTING	
Tires Continue To Wear After Front End Alignment, And/Or Vehicle Drives Sideways Down Road	WP 0102 00

ENGINE SYSTEM TROUBLESHOOTING 0076 00

INITIAL SETUP:

Maintenance Level
Operator

References
WP 0018 00
WP 0021 00
WP 0077 00
WP 0079 00
WP 0080 00
WP 0103 00
WP 0108 00
WP 0109 00

ENGINE SYSTEM

Table 1. Engine System Troubleshooting Procedures.

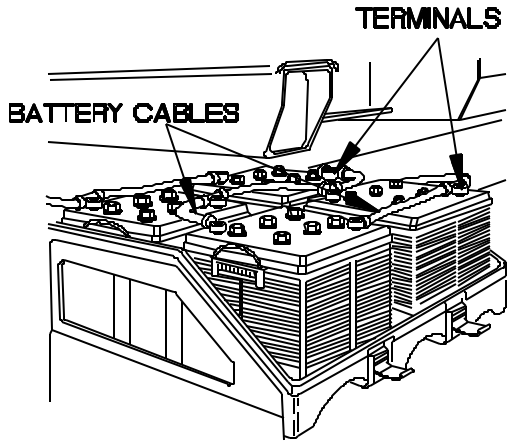
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. ENGINE DOES NOT CRANK	1. Are batteries, battery cables, and terminal post free from damage and corrosion?	1. Remove battery box cover (WP 0108 00).

ENGINE SYSTEM TROUBLESHOOTING - Continued 0076 00

ENGINE SYSTEM - Continued

Table 1. Engine System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. ENGINE DOES NOT CRANK		2. Check batteries, battery cables, and terminal posts for apparent damage and corrosion.
		3. If damage or corrosion is present, notify Field Maintenance.
		4. If no damage or corrosion is present, go to test 2 of this malfunction.
	2. Are battery cells at appropriate fluid levels (WP 0108 00)?	1. If batteries cells are not at appropriate level, notify Field Maintenance.
		2. If batteries cells are at appropriate level, perform Electrical System Troubleshooting (WP 0080 00 Malfunction 1. Engine Does Not Crank).



ENGINE SYSTEM TROUBLESHOOTING - Continued 0076 00

ENGINE SYSTEM - Continued

Table 1. Engine System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. ENGINE CRANKS BUT DOES NOT START	1. Check for restricted air cleaner (WP 0109 00).	1. If restricted, clean air filter element (WP 0109 00).
		2. If air filter element will not clean, notify Field Maintenance.
		3. If engine cranks but still does not start, perform Fuel System Troubleshooting (WP 0077 00, Malfunction 1, Engine Cranks But Does Not Start or Engine Stalls After Starting).
3. LOW ENGINE OIL PRESSURE	1. Check for proper engine oil level.	1. Check engine oil level (WP 0103 00, Table 3, Item 6).
		2. If engine oil level is low, add engine oil (WP 0103 00, Table 3, Item 6).
		3. If engine oil level is high, notify Field Maintenance.
	2. Check engine oil for contamination.	1. If engine oil is contaminated, notify Field Maintenance.
		2. If engine oil pressure is still high or low, notify Field Maintenance.
4. ENGINE STALLS AT LOW RPM	1. Check for restricted air cleaner (WP 0109 00).	1. If restricted, clean air filter element (WP 0109 00).
		2. If air filter element will not clean, notify Field Maintenance.

ENGINE SYSTEM TROUBLESHOOTING - Continued 0076 00

ENGINE SYSTEM - Continued

Table 1. Engine System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
4. ENGINE STALLS AT LOW RPM - Continued	2. Check air cleaner hoses and pipe for kinks and damage.	1. Check air particle restriction hose for kinks and damage. 2. Raise cab (WP 0021 00). 3. Check air cleaner to turbocharger pipe and hose for kinks or damage. 4. If pipe or hose(s) is damaged or kinked, notify Field Maintenance. 5. Lower cab (WP 0021 00). 6. If engine stalls at low rpm, notify Field Maintenance.
5. ENGINE OVERSPEEDS ON START		Notify Field Maintenance.
6. TOO MUCH VIBRATION IN ENGINE	1. Check for restricted air cleaner (WP 0109 00).	1. If restricted, clean air cleaner element (WP 0109 00). 2. If air filter element will not clean, notify Field Maintenance.
	2. Check for loose vibration damper and/or missing bolts and damage.	1. Raise cab (WP 0021 00). 2. Visually check vibration damper for loose and/or missing bolts and damage.

ENGINE SYSTEM TROUBLESHOOTING - Continued 0076 00

ENGINE SYSTEM - Continued

Table 1. Engine System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
6. TOO MUCH VIBRATION IN ENGINE - Continued		3. If vibration damper bolts are loose or missing or vibration damper is damaged, notify Field Maintenance. 4. Lower cab (WP 0021 00). 5. If engine still vibrates too much, notify Field Maintenance.
7. COOLANT IN ENGINE LUBRICATION OIL		Notify Field Maintenance.
8. EXCESSIVE ENGINE OIL CONSUMPTION	1. Check for proper engine oil level.	1. Check engine oil level (WP 0103 00, Table 3, Item 6). 2. If engine oil level is low, add engine oil (WP 0103 00, Table 3, Item 6). 3. If engine oil level is high, notify Field Maintenance.
	2. Check for Class II and Class III oil leaks.	1. Visually check oil lines, engine block, and oil filter for Class II and Class III oil leaks. 2. If Class II and/or Class III oil leaks are found, notify Field Maintenance. 3. If oil consumption is still excessive, notify Field Maintenance.
9. ENGINE OVERHEATS		1. Perform Cooling System Troubleshooting (WP 0079 00, Malfunction 1, Engine Overheats).

ENGINE SYSTEM TROUBLESHOOTING - Continued 0076 00

ENGINE SYSTEM - Continued

Table 1. Engine System Troubleshooting Procedures - Continued.

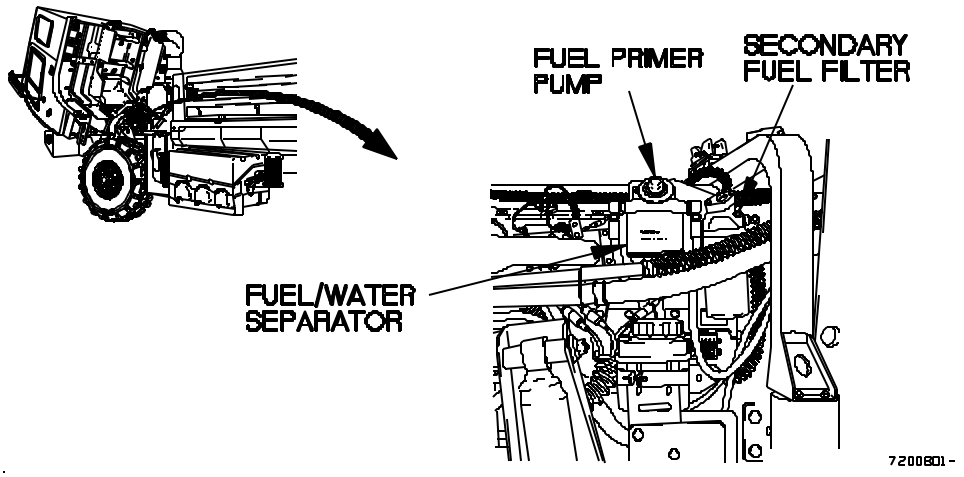
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
10. EXCESSIVE BLACK OR GRAY EXHAUST SMOKE	1. Check for restricted air cleaner (WP 0109 00).	1. If restricted, clean air filter element (WP 0109 00). 2. If air filter element will not clean, notify Field Maintenance.
	2. Check air cleaner hoses and pipe for kinks and damage.	1. Check air particle restriction hose for kinks and damage. 2. Raise cab (WP 0021 00). 3. Check air cleaner to turbocharger pipe and hose for kinks or damage. 4. If pipe or hose(s) is damaged or kinked, notify Field Maintenance. 5. Lower cab (WP 0021 00). 6. If excessive black or gray smoke is still seen from engine, notify Field Maintenance.
11. WHITE EXHAUST SMOKE	Check for restricted air cleaner (WP 0109 00).	1. If restricted, clean air filter element (WP 0109 00). 2. If air filter element will not clean, notify Field Maintenance. 3. If white exhaust smoke is still seen from engine, notify Field Maintenance.

ENGINE SYSTEM TROUBLESHOOTING - Continued 0076 00

ENGINE SYSTEM - Continued

Table 1. Engine System Troubleshooting Procedures - Continued.

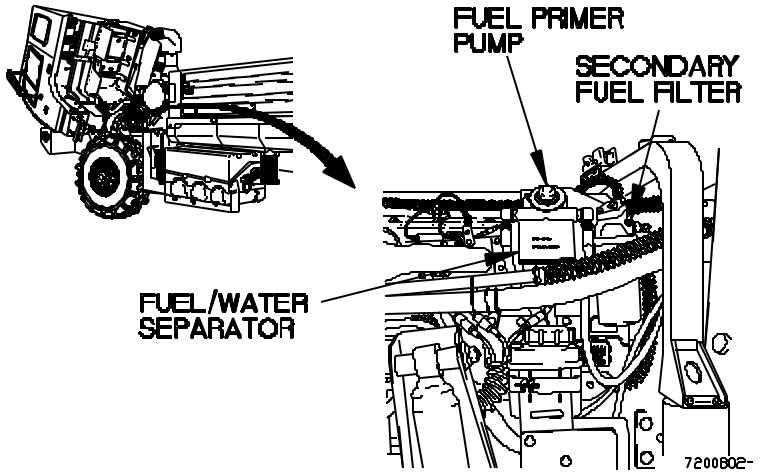
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
12. ENGINE SPEED IS NOT STABLE	1. Check for restricted air cleaner (WP 0109 00).	1. If restricted, clean air filter element (WP 0109 00). 2. If air filter element will not clean, notify Field Maintenance.
	2. Check for fuel leaks.	1. Raise cab (WP 0021 00). 2. Check secondary fuel filter, fuel hoses, fuel fittings, draincocks, fuel tank hoses and tank, and other hoses that hold fuel for leaks. 3. If any fuel leaks are found, notify Field Maintenance. 4. Lower cab (WP 0021 00). 5. If engine speed is still not stable, notify Field Maintenance.



ENGINE SYSTEM TROUBLESHOOTING - Continued 0076 00

ENGINE SYSTEM - Continued

Table 1. Engine System Troubleshooting Procedures - Continued.

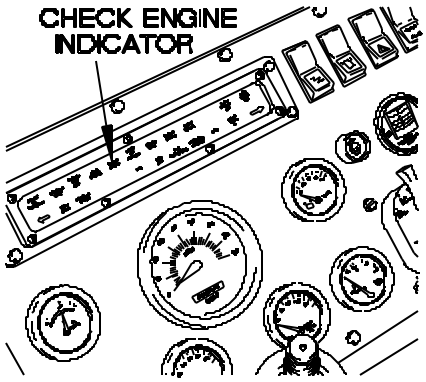
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
13. ENGINE STARTS BUT MISFIRES, RUNS ROUGH, OR LACKS POWER	1. Check for restricted air cleaner (WP 0109 00).	1. If restricted, clean air filter element (WP 0109 00). 2. If air filter element will not clean, notify Field Maintenance.
	2. Check for fuel leaks.	1. Raise cab (WP 0021 00). 2. Check secondary fuel filter, fuel hoses, fuel fittings, draincocks, fuel tank hoses and tank, and other hoses that hold fuel for leaks.  3. If any fuel leaks are found, notify Field Maintenance. 4. Lower cab (WP 0021 00). 5. If engine starts but misfires, runs rough, or lacks power, notify Field Maintenance.

ENGINE SYSTEM TROUBLESHOOTING - Continued 0076 00

ENGINE SYSTEM - Continued

Table 1. Engine System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
14. BLUE EXHAUST SMOKE FROM ENGINE	Check for proper engine oil level.	1. Check engine oil level (WP 0103 00, Table 3, Item 6). 2. If engine oil level is low, add engine oil (WP 0103 00, Table 3, Item 6). 3. If engine oil level is high, notify Field Maintenance. 4. If blue exhaust smoke is still seen from engine, notify Field Maintenance.
15. CHECK ENGINE INDICATOR REMAINS ILLUMINATED	1. Check to see if CHECK ENGINE indicator remains illuminated after test drive.	1. Start engine (WP 0018 00). 2. Test drive vehicle. 3. Check to see if CHECK ENGINE indicator remains illuminated.

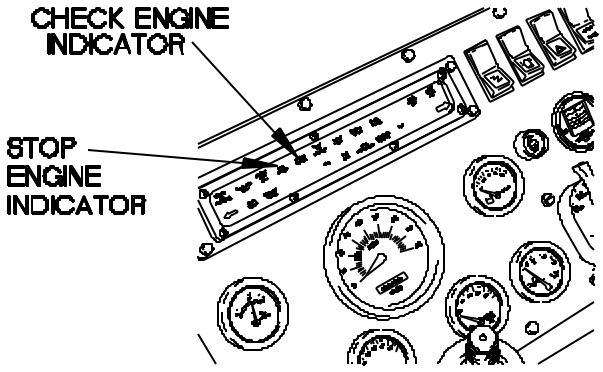


ENGINE SYSTEM TROUBLESHOOTING - Continued 0076 00

ENGINE SYSTEM - Continued

Table 1. Engine System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
15. CHECK ENGINE INDICATOR REMAINS ILLUMINATED - Continued		4. Shut down engine (WP 0018 00). 5. If CHECK ENGINE indicator remains illuminated, notify Field Maintenance.
16. STOP ENGINE INDICATOR REMAINS ILLUMINATED	1. Check to see if STOP ENGINE indicator remains illuminated after test drive.	1. Start engine (WP 0018 00). 2. Test drive vehicle. 3. Check to see if STOP ENGINE indicator remains illuminated.
		4. Shut down engine (WP 0018 00).



ENGINE SYSTEM TROUBLESHOOTING - Continued 0076 00

ENGINE SYSTEM - Continued

Table 1. Engine System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
16. STOP ENGINE INDICATOR REMAINS ILLUMINATED - Continued		5. If STOP ENGINE indicator remains illuminated, notify Field Maintenance.

END OF WORK PACKAGE.

FUEL SYSTEM TROUBLESHOOTING 0077 00

THIS WORK PACKAGE COVERS:

Fuel System

INITIAL SETUP:

Maintenance Level

Operator

References

WP 0017 00
WP 0018 00
WP 0021 00
WP 0076 00
WP 0080 00

FUEL SYSTEM

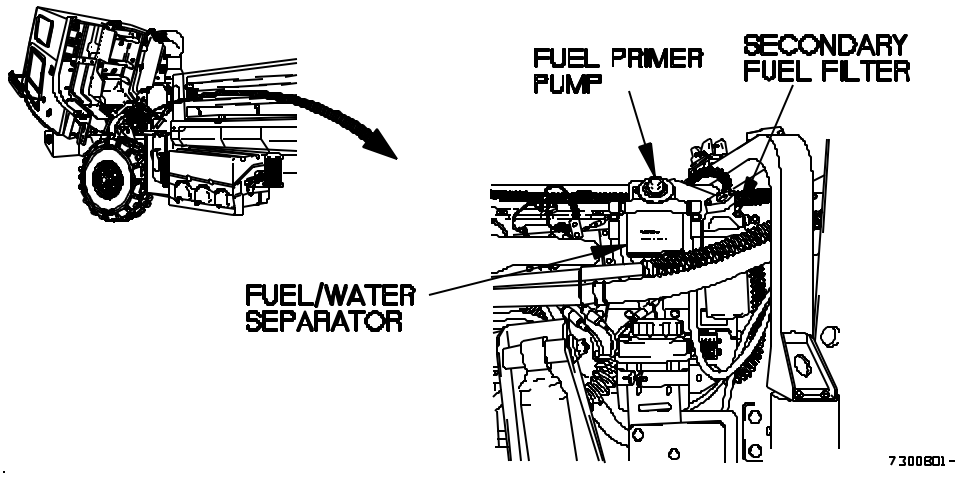
Table 1. Fuel System Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. ENGINE CRANKS BUT DOES NOT START, OR ENGINE STALLS AFTER STARTING	1. Perform Engine System Troubleshooting.	Perform Engine System Troubleshooting (WP 0076 00, Malfunction 2, Engine Cranks But Does Not Start).
	2. Check to see if fuel tank is empty.	1. If fuel tank is empty, fill fuel tank (WP 0017 00). 2. If engine still cranks but does not start, perform Electrical System Troubleshooting (WP 0080 00, Malfunction 2, Engine Cranks But Does Not Start).
2. ETHER STARTING AID DOES NOT OPERATE	Check to see if engine starts using ether starting aid.	1. Attempt to start engine using ether starting aid (WP 0018 00). 2. If ether starting aid does not operate, perform Electrical System Troubleshooting (WP 0080 00, malfunction 101, Ether Starting Aid Does Not Operate).

FUEL SYSTEM TROUBLESHOOTING - Continued 0077 00

FUEL SYSTEM - Continued

Table 1. Fuel System Troubleshooting Procedures - Continued.

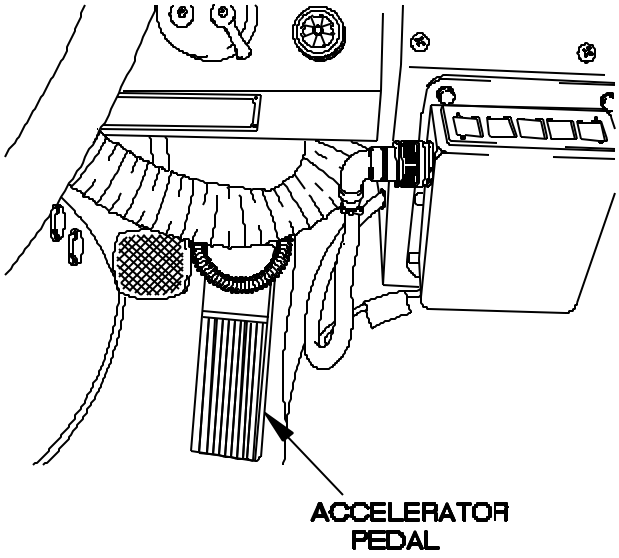
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. FUEL CONSUMPTION TOO HIGH	Check for fuel leaks.	1. Raise cab (WP 0021 00). 2. Check secondary fuel filter, fuel hoses, fuel fittings, draincocks, fuel tank hoses and tank, and other lines that hold fuel for leaks. 3. If any fuel leaks are found, notify Field Maintenance.  4. If fuel consumption is still too high, notify Field Maintenance. 5. Lower cab (WP 0021 00).

FUEL SYSTEM TROUBLESHOOTING - Continued 0077 00

FUEL SYSTEM - Continued

Table 1. Fuel System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
4. ACCELERATOR PEDAL STICKS	Check to see if accelerator pedal sticks.	If accelerator pedal sticks, notify Field Maintenance.



END OF WORK PACKAGE.

EXHAUST SYSTEM TROUBLESHOOTING 0078 00

THIS WORK PACKAGE COVERS:
Exhaust System

INITIAL SETUP:

Maintenance Level
Operator

Reference
FM 21-11

Condition
Engine Running (WP 0018 00).

EXHAUST SYSTEM

Table 1. Exhaust System Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. EXHAUST SYSTEM UNUSUALLY NOISY OR VIBRATES EXCESSIVELY DURING ENGINE OPERATION	1. Listen to hear exhaust system is unusually noisy.	If exhaust system is unusually noisy notify Field Maintenance.
	2. Check exhaust system for excessive vibration.	1. If exhaust system vibrates excessively, notify Field Maintenance. 2. Shut down engine (WP 0018 00).
2. EXHAUST FUMES IN CAB	Check for exhaust fumes in cab.	1. Briefly roll up windows and check for exhaust fumes in cab. 2. If exhaust fumes continue to escape into cab, notify Field Maintenance. 3. Shut down engine (WP 0018 00).

END OF WORK PACKAGE.

COOLING SYSTEM TROUBLESHOOTING 0079 00

THIS WORK PACKAGE COVERS:
Cooling System

INITIAL SETUP:

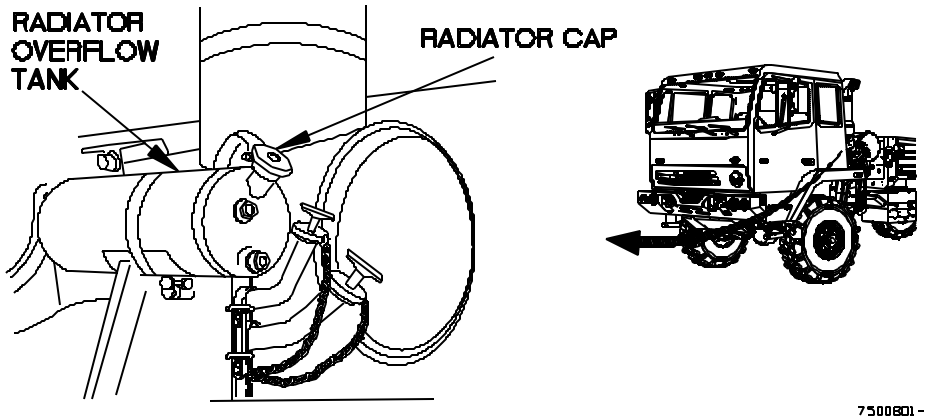
Maintenance Level
Operator

References
WP 0021 00
WP 0103 00

COOLING SYSTEM

Table 1. Cooling System Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
WARNING **Extreme care should be taken when removing radiator cap if WATER TEMP 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. ENGINE OVERHEATS	1. Check coolant level at radiator overflow tank.	If low, add coolant as required (WP 0103 00. Table 1, Item 3).
	2. Check radiator cap for leakage and damage.	If leaking or damaged, notify Field Maintenance.



COOLING SYSTEM TROUBLESHOOTING - Continued 0079 00

COOLING SYSTEM - Continued

Table 1. Cooling System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. ENGINE OVERHEATS - Continued	3. Check radiator overflow tank and hoses for leaks and damage.	If leaking or damaged, notify Field Maintenance.
	4. Check outside of radiator core for obstructions.	1. Raise cab (WP 0021 00).
		2. Check radiator fins for obstructions.
		3. If clogged, remove debris.
	5. Check for leakage from radiator hoses and hose connections.	1. If loose, tighten.
		2. If damaged, notify Field Maintenance.
		3. Lower cab (WP 0021 00).
		4. If engine continues to overheat, notify Field Maintenance.
2. OIL IN COOLING SYSTEM		Notify Field Maintenance.
	WARNING **Extreme care should be taken when removing radiator cap if WATER TEMP 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.**	
3. LOSS OF COOLANT	1. Check radiator cap for leakage and damage.	If leaking or damaged, notify Field Maintenance.

COOLING SYSTEM TROUBLESHOOTING - Continued 0079 00

COOLING SYSTEM - Continued

Table 1. Cooling System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. LOSS OF COOLANT - Continued	2. Check radiator overflow tank and hoses for leaks and damages.	If leaking or damaged, notify Field Maintenance.
	3. Check radiator fins for obstructions.	1. Raise cab (WP 0021 00)
		2. Check radiator fins for obstructions.
		3. If clogged, remove debris.
	4. Check all hoses and connections for visual signs of leakage.	1. If loose, tighten.
		2. If damaged, notify Field Maintenance.
		3. Lower cab (WP 0021 00).
		4. If coolant loss is still seen, notify Field Maintenance.

END OF WORK PACKAGE.

ELECTRICAL SYSTEM TROUBLESHOOTING 0080 00

THIS WORK PACKAGE COVERS:
Electrical System

INITIAL SETUP:

Maintenance Level
Operator

ELECTRICAL SYSTEM

Table 1 identifies circuit breakers for electrical system troubleshooting. Refer to Printed Circuit Board Decal for circuit breaker locations.

* Information for vehicle S/N 100,001 to 199,999
** Information for vehicle S/N 11,438 to 99,999

Table 1. Circuit Breaker Identification for Electrical System Troubleshooting.

REFERENCE DESIGNATOR	FUNCTION	CB AMPS	VOLTAGE	PDM*
CB20	Radio Power	25.0	24	3
CB21	Air Dryer Heater/Inter-Axle Differential Solenoid	15.0	24	2
CB22	Inlet Air Heater, Fan OFF and Ether Starting Aid	10.0	24	4
CB23	Heater Blower	15.0	24	4
CB30	Chemical Detector	10.0	24	3
CB35*	Trailer ABS*	15.0*	24*	4
CB37	Wiper/Washer/Horn	10.0	24	4
CB38	Amber Warning Light	15.0	12	2
CB39	Trailer Blackout Stop	10.0	24	3
CB40	CTIS Power	10.0	24	4
CB41	Trailer Taillight, Blackout Marker	15.0	24	1
CB42	Engine ECM** / Two-Way Intercom*	30.0** / 20.0*	24	3

Table 1. Circuit Breaker Identification for Electrical System Troubleshooting – Continued.

REFERENCE DESIGNATOR	FUNCTION	CB AMPS	VOLTAGE	PDM*
CB43	Transmission ECU	10.0	24	3
CB44	Trailer Taillight	15.0	24	3
CB45	Fuel Preheat Control/Ignition	15.0	24	3
CB48	Arctic Kit / Material Handling Crane (MHC)*	20.0	24	3
CB49	PTO Power, Fuel/Water Separator	15.0	24	4
CB50	Dump / Material Handling Crane (MHC)	15.0	24	4
CB53	M1084A1/M1086A1 Material Handling Crane (MHC)** / Spare*	15.0	12	2
CB54	Blackout Drive Light	10.0	12	1
CB60*	Engine ECM*	40.0*	24*	N/A
CB65	Parking Lights	10.0	12	2
CB66	Blackout Marker	10.0	12	1
CB67	Trailer Taillight, Marker Lights	25.0	12	1
CB68	Auxiliary Transmission Cooler	25.0	24	4
CB70	Blackout Marker, Blackout Drive Light, Blackout Drive (front and rear), Marker Lights, Parking Lights, Accessory Power, Backup Light, Headlights, Auxiliary Panel, Instrument Panel Assembly, and Personnel Heater Illuminations	20.0	12	2
CB71	Trailer Taillight, Rear Composite Lights, Hazard Flasher, Stoplights	15.0	12	2

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

Table 1. Circuit Breaker Identification for Electrical System Troubleshooting – Continued.

REFERENCE DESIGNATOR	FUNCTION	CB AMPS	VOLTAGE	PDM*
CB72	Worklights	15.0	12	1
CB73	Backup Light	10.0	12	2
CB74	Turn Signals	10.0	12	2
CB76	Trailer Blackout Stop, Blackout Stop	15.0	12	2
CB77	Accessory Power, Engine Instruments	10.0** / 15.0*	24	4
CB78	Headlights	15.0	12	1
CB79	Transmission ECU	15.0	24	2
CB80	Rear Composite Lights	25.0** / 20.0*	12	1
CB82	ABS Indicator, ABS Power	10.0	12	1
CB83	ABS Power	10.0	12	2
CB84*	Power Outlet*	20.0*	12*	1
CB85**	12V Power Outlet**	20.0**	12**	N/A
CB88*	Trailer ABS*	15.0*	12*	2

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

Table 2 is used to identify relays for electrical system Troubleshooting. Refer to Printed Circuit Board Decal for Circuit Breaker Locations.

Table 2. Relay Identification.

REFERENCE DESIGNATOR	FUNCTION	VOLTAGE	PDM*
K1	24V Ignition Relay	24 VDC	N/A
K2	12V Ignition Relay	12 VDC	N/A
K4**	Spare Relay**	12 VDC**	N/A
K5	Wiper Delay Relay	12 VDC** / 24 VDC*	4
K7	Headlight Relay	12 VDC	1
K8	Low/High Beam Relay	12 VDC	1
K9	Hazard Flasher Relay	12 VDC	2
K10	Stop Light Relay	12 VDC	2
K11	Alternator Excitation Relay	12 VDC** / 24 VDC *	4
K12	Work Light Relay	12VDC	1
K13	Rotary Warning Relay	12 VDC	2
K15**	Auxiliary Cooler Relay**	12 VDC**	N/A
K15A*	Auxiliary Cooler Relay*	24 VDC*	4
K15B*	Auxiliary Cooler Relay*	24 VDC*	4
K16**	Exhaust Brake Relay**	12 VDC**	N/A
K17	ABS Lamp Relay	12 VDC	1
K19	Start Inhibit Relay	12 VDC** / 24 VDC*	4
K20	Marker Lamps Relay	12 VDC	1
K21	Rear Left Light Relay	12 VDC	3
K22	Rear Right Light Relay	12 VDC	3
K25	Reverse Warning Relay	12 VDC** / 24 VDC*	2
K26	Neutral Start Relay	12 VDC** / 24 VDC*	4

Table 2. Relay Identification.

REFERENCE DESIGNATOR	FUNCTION	VOLTAGE	PDM*
K27	Trailer B.O Stop Light	12 VDC	3
K28	Trailer Marker Light Relay	12 VDC	1
K29	Trailer B.O. Marker Light	12 VDC	1
K30	Trailer Rear Left Light Relay	12 VDC	3
K31	Trailer Rear Right Light Relay	12 VDC	3
K34	Differential Lock Relay	12 VDC** / 24 VDC*	2
K37	PTO Relay	12 VDC** / 24 VDC*	4
K40*	Start Disable*	24 VDC*	3
K42	Engine PTO Relay	12 VDC** / 24 VDC*	3
K53	Radio Power Relay	12 VDC** / 24 VDC*	3
K64*	M1148 PTO Switch Bypass	24 VDC	N/A
K65*	M1148 PTO Switch Bypass	24 VDC	N/A

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

Table 3 describes the malfunctions, tests or inspections, and the corrective actions for the Electrical System Troubleshooting procedures.

Table 3. Electrical System Troubleshooting Procedures.

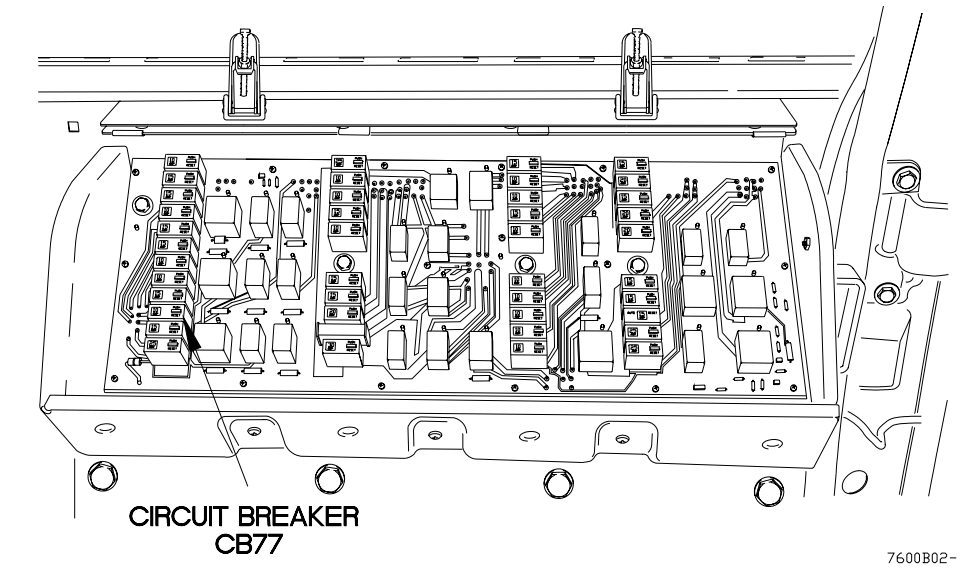
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
NOTE Perform Engine System Troubleshooting (WP 0081 00, Malfunction 1, Engine Does Not Crank) before starting here.		
1. ENGINE DOES NOT CRANK	1. Have Preventive Maintenance Checks and Services (PMCS) Before checks been performed.	1. If PMCS Before checks have not been performed, perform M1083A1 Series Preventive Maintenance Checks and Services (PMCS) (WP 0103 00) Before checks. 2. If PMCS Before Checks have been performed, go to test 2 of this malfunction.
	2. Does audible alarm operate?	1. Position master power switch to on (WP 0004 00). 2. Depress LAMP TEST switch (WP 0018 00). 3. If audible alarm does not operate, perform Electrical System Troubleshooting Malfunction 14 (Audible Alarm Does Not Operate). 4. If audible alarm operates, go to test 3 of this malfunction.
	3. Does WTEC III Transmission Pushbutton Shift Selector (TPSS) illuminate/operate?	1. Position master power switch to on (WP 0004 00). 2. Check to see if WTEC III TPSS display window displays “N” (WP 0004 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. ENGINE DOES NOT CRANK – Continued		3. f WTEC III TPSS does not display “N”, perform Transmission System Troubleshooting (WP 0081 00, Malfunction 3, WTEC III Transmission Pushbutton Shift Selector (TPSS) Does Not Illuminate/Operate). 4. If WTEC III does display “N”, notify Field Maintenance. 5. If WTEC III TPSS does display “N”, go to test 3 of this malfunction.
	3. Check to see if circuit breaker CB77 is tripped.	1. Remove Power Distribution Panel (PDP) cover (WP 0113 00). 2. If circuit breaker CB77 is tripped, push in to reset.
		3. Attempt to start engine (WP 0018 00).



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

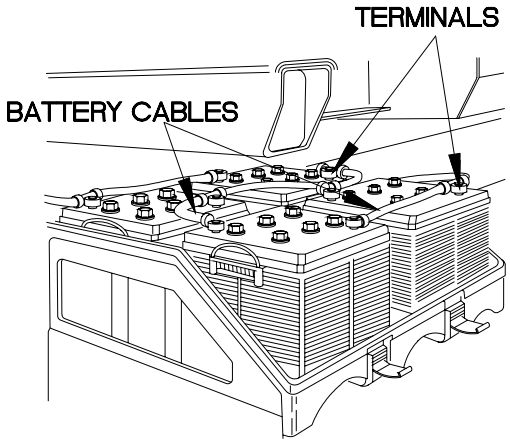
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. ENGINE DOES NOT CRANK – Continued		4. If circuit breaker CB77 trips again, notify Field Maintenance. 5. If vehicle still does not crank and circuit breaker CB77 does not trip, Notify Field Maintenance. 6. Install PDP cover (WP 0113 00).
2. 24 VDC CIRCUITS DO NOT OPERATE	1. Have Preventive Maintenance Check and Services (PMCS) Before checks been performed?	1. If PMCS Before checks have not been performed, perform M1083 A1 Series Preventative Maintenance Checks and Services (PMCS) (WP 0103 00) Before checks. 2. If PMCS Before checks have been performed, go to test 2 of this malfunction.
	2. Are batteries, battery cables, and terminal post free from damage and corrosion?	1. Remove battery box cover (WP 0108 00). 2. Check batteries, battery cables, and terminal posts for apparent damage and corrosion.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. 24 VDC CIRCUITS DO NOT OPERATE - Continued		3. If damage or corrosion is present, notify Field Maintenance.
		4. If no damage or corrosion is present, go to test 3 of this malfunction.
	3. Are batteries cells at appropriate fluid levels (WP 0108 00)?	1. If batteries cells are not at appropriate level, notify Field Maintenance.
		2. If batteries cells are at appropriate level, go to test 4 of this malfunction.
	4. Is vehicle S/N 18,550 to 199,999?	1. If vehicle S/N is not 18,550 to 199,999 go to test 6 of this malfunction.
		2. If vehicle S/N is 18,550 to 199,999 go to test 5 of this malfunction.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. 24 VDC CIRCUITS DO NOT OPERATE – Continued	5. Do service drive lights illuminate?	1. Position main light switch to SER DRIVE (WP 0004 00). 2. Check to see SER DRIVE lights illuminate. 3. If SER DRIVE lights do not illuminate, perform Electrical System Troubleshooting Malfunction 5. 12 and 24 VDC Circuits Do Not Operate (VEHICLE S/N 18,550 OR HIGHER). 4. If SER DRIVE lights illuminate, go to test 6 of this malfunction.
	6. Check to see if circuit breaker CB45 is tripped.	1. Position main light switch to off (WP 0004 00). 2. Remove Power Distribution Panel (PDP) cover (WP 0113 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

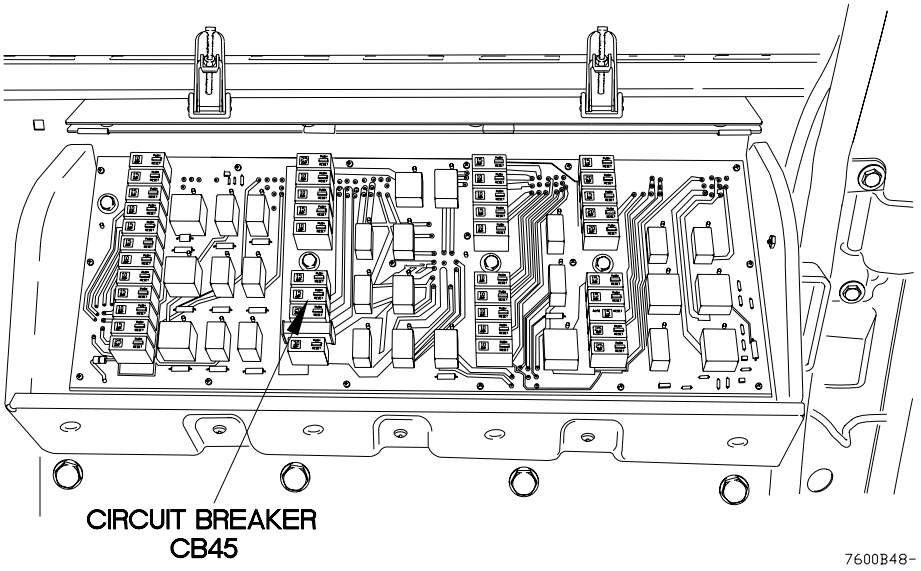
ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. 24 VDC CIRCUITS DO NOT OPERATE – Continued		3. Check to see if circuit breaker CB45 is tripped.

NOTE

Perform the following corrective action on vehicles S/N 11,438 to 99,999.



NOTE

Perform corrective actions 4 and 5 on vehicles S/N 100,001 to 199,999.

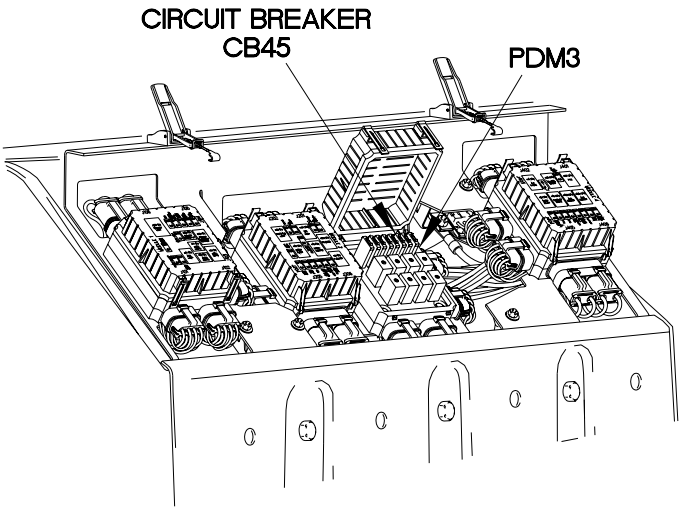
		4. Open Power Distribution Module (PDM) 3.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. 24 VDC CIRCUITS DO NOT OPERATE – Continued		5. Check to see if circuit breaker CB45 is tripped.
		6. If circuit breaker CB45 is tripped, push in to reset. 7. Position master power switch to on (WP 0004 00). 8. If circuit breaker CB45 trips again, notify Field Maintenance. 9. Position master power switch to off (WP 0004 00).



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

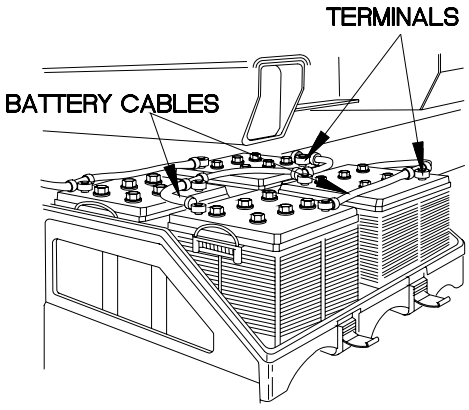
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. 24 VDC CIRCUITS DO NOT OPERATE –Continued.		10. If circuit breaker CB45 was not tripped or does not trip again, got to test 7 of this malfunction.
NOTE Perform corrective action 11 on vehicles S/N 100,001 to 199,999.		
		11. Close PDM 3. 12. Install PDP cover (WP 0113 00).
	7. Do the windshield wipers operate?	1. Position master power switch to on (WP 0004 00). 2. Position windshield wiper switch to position “I” (WP 0007 00). 3. Check to see if windshield wipers operate on low speed. 4. If windshield wipers do not operate, notify Field Maintenance. 5. If windshield wipers operate, fault corrected. 6. Position windshield wiper switch to position “O” (WP 0007 00). 7. Position master power switch to off (WP 0004 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. 12 VDC CIRCUITS DO NOT OPERATE (100 AMP ALTERNATOR)	1. Have Preventive Maintenance Checks and Services (PMCS) Before checks been preformed.	1. Before checks have not been performed, perform M1083 A1 Series Preventative Maintenance Checks and Services (PMCS) (WP 0103 00) Before Checks. 2. If PMCS Before checks have been performed, go to test 2 of this malfunction.
	2. Are batteries, battery cables, and terminal post free from damage and corrosion?	1. Remove battery box cover (WP 0108 00). 2. Check batteries, battery cables, and terminal posts for apparent damage and corrosion.
		3. If damage or corrosion is present, notify Field Maintenance.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

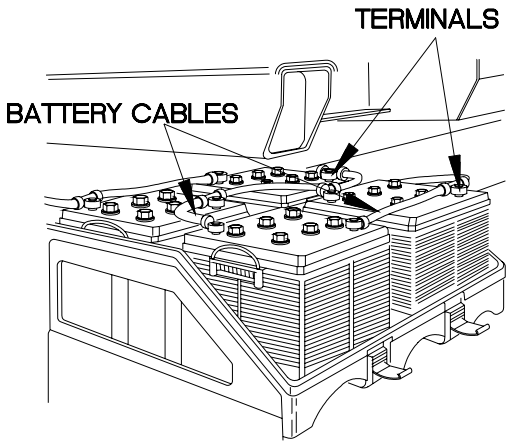
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. 12 VDC CIRCUITS DO NOT OPERATE (100 AMP ALTERNATOR) - Continued		4. If no damage or corrosion is present, go to test 3 of this malfunction.
	3. Are batteries cells at appropriate fluid levels (WP 0108 00)?	1. If batteries cells are not at appropriate level, notify Field Maintenance. 2. If batteries cells are at appropriate level, notify Field Maintenance.
4. 12 VDC CIRCUITS DO NOT OPERATE (200 AMP ALTERNATOR)		Notify Field Maintenance.
5. 12 VDC and 24 VDC CIRCUITS DO NOT OPERATE (VEHICLE S/N 18,550 OR HIGHER)	1. Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?	1. If PMCS Before checks have not been performed, perform M1083 A1 Series Preventative Maintenance Checks and Services (PMCS) (WP 0103 00) Before checks. 2. If PMCS Before checks have been performed, go to test 2 of this malfunction.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
5. 12 VDC and 24 VDC CIRCUITS DO NOT OPERATE (VEHICLE S/N 18,550 OR HIGHER) - Continued	2. Are batteries, battery cables, and terminal post free from damage and corrosion?	1. Remove battery box cover (WP 0108 00). 2. Check batteries, battery cables, and terminal posts for apparent damage and corrosion.
		3. If damage or corrosion is present, notify Field Maintenance. 4. If no damage or corrosion is present, go to test 3 of this malfunction.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

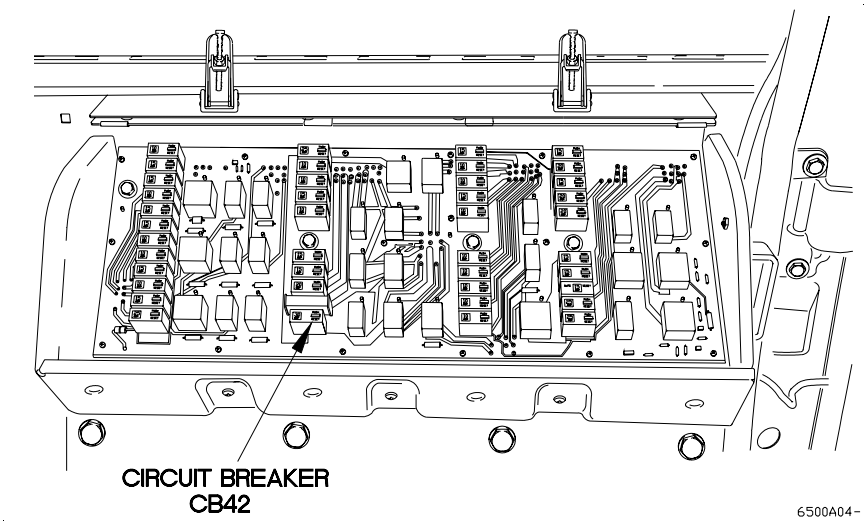
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
5. 12 VDC and 24 VDC CIRCUITS DO NOT OPERATE (VEHICLE S/N 18,550 OR HIGHER) - Continued	3. Are batteries cells at appropriate fluid levels (WP 0108 00)?	1. If batteries cells are not at appropriate level, notify Field Maintenance.
		2. If batteries cells are at appropriate level, notify Field Maintenance.
NOTE Perform Fuel System Troubleshooting(WP 0077 00, Malfunction 1, Engine Cranks But Does Not Start Or Engine Stalls After Starting) before starting here.		
6. ENGINE CRANKS BUT DOES NOT START	1. Is the vehicle an M1089A1?	1. If the vehicle is an M1089A1, go to test 2 of this malfunction.
		2. If the vehicle is not an M1089A1, go to test 3 of this malfunction.
	2. Is the wrecker EMERGENCY SHUTDOWN switch in RUN position?	1. If the wrecker EMERGENCY SHUTDOWN switch is not in RUN position, position wrecker EMERGENCY SHUTDOWN switch to RUN.
		2. If the wrecker EMERGENCY SHUTDOWN switch is in RUN position, go to test 3 of this malfunction.
	3. Is the vehicle S/N 11,438 to 99,999?	1. If the vehicle S/N is 11,438 to 99,999, go to test 4 of this malfunction.
		2. If the vehicle S/N is not 11,438 to 99,999, go to test 5 of this malfunction.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
6. ENGINE CRANKS BUT DOES NOT START - Continued	4. Check circuit breakers CB42 in PCB to see if it is tripped	1. Remove PDP cover (WP 0113 00).
		2. If circuit breaker is tripped, push in to reset.
		3. Attempt to start engine (WP 0018 00).
		4. If engine cranks but does not start, check circuit breakers to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance.
		5. Install PDP cover (WP 0113 00).
		6. If engine cranks but still does not start, notify Field Maintenance.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

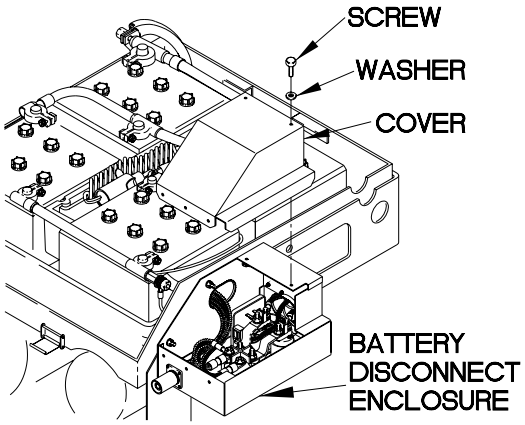
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
	WARNING **Vehicles are equipped with a Load and Battery Control Device (LBCD). The LBCD has internal capacitors that must be discharged prior to performing maintenance or troubleshooting procedures. Failure to comply may result in damage to equipment and/or injury to personnel.**	
6. ENGINE CRANKS BUT DOES NOT START - Continued	5. Is circuit breaker CB60 tripped?	1. Position MBDS to disconnect (OFF) (WP 0011 00). 2. Position master power switch to on for 30 seconds (WP 0004 00). 3. Position master power switch to off (WP 0004 00).
	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.** **Remove rings, bracelets, wristwatches, neck chains, and any other jewelry before working around vehicle. Jewelry may catch on equipment of may short across an electrical circuit or battery terminal. Failure to comply may result in serious injury or death to personnel.**	

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

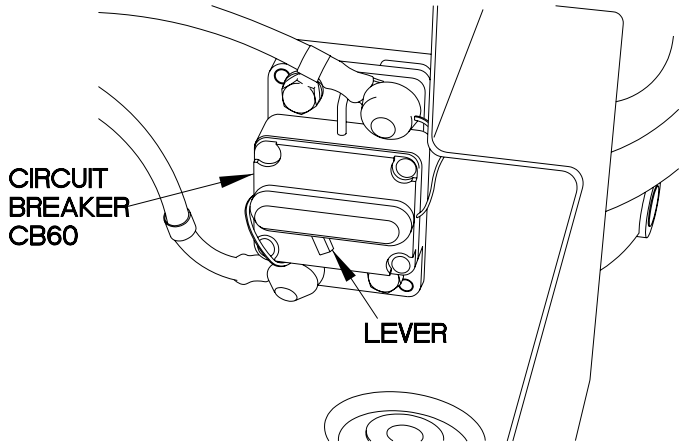
Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
6. ENGINE CRANKS BUT DOES NOT START - Continued		4. Remove six screws, washers, and cover from battery disconnect enclosure.



7600B52-

5. Check to see if circuit breaker CB60 is tripped.
6. If circuit breaker CB60 is tripped, push lever up to reset.



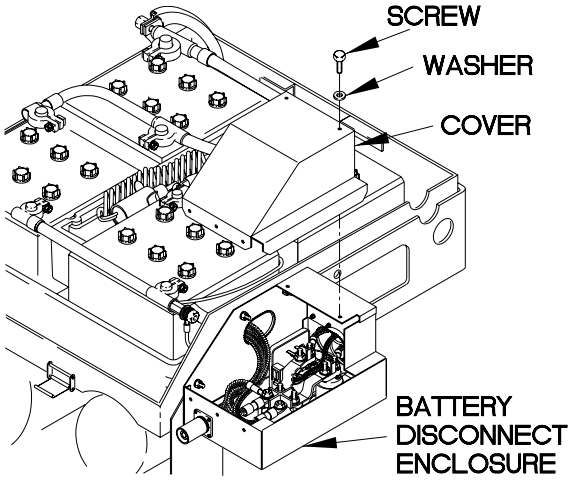
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ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
6. ENGINE CRANKS BUT DOES NOT START - Continued		7. Position MBDS to connect (ON) (WP 0011 00). 8. Attempt to start engine (WP 0018 00). 9. Check to see if circuit breaker CB60 is tripped again. 10. Shut down engine (WP 0018 00). 11. Position MBDS to disconnect (OFF) (WP 0011 00). 12. Position master power switch to on for 30 seconds (WP 0004 00). 13. Position master power switch to off (WP 0004 00). 14. Install cover on battery disconnect enclosure with six washers and screws.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
6. ENGINE CRANKS BUT DOES NOT START - Continued		15. If circuit breaker CB60 tripped again, notify supervisor.
		16. If circuit breaker CB60 is not tripped and the engine still does not start, notify Field Maintenance.
7. FUEL GAGE DOES NOT OPERATE OR IS INACCURATE	1. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 go to test 3 of this malfunction.
		2. If vehicle S/N is not 11,438 to 99,999 go to test 2 of this malfunction.
	2. Has Preventative Maintenance Checks and Services (PMCS) Before checks been performed?	1. If PMCS Before checks have not been performed, perform PMCS Before checks (WP 0103 00).
		2. If PMCS Before checks have been performed, go to test 3 of this malfunction.
	3. Check to see if any instrument panel gages operate.	1. Position master power switch to on (WP 0004 00).
		2. If no instrument panel gages operate, perform Malfunction 163 (All Electrical Gages Do Not Operate).
		3. If fuel gage does not operate or is inaccurate, notify Field Maintenance.
		4. Position master power switch to off (WP 0004 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
8. WATER TEMP GAGE DOES NOT OPERATE OR IS INACCURATE	1. Check to see if any instrument panel gages operate.	1. Position master power switch to on (WP 0004 00). 2. If no instrument panel gages operate, perform Malfunction 163 (All Electrical Gages Do Not Operate). 3. If WATER TEMP gage does not operate or is inaccurate, go to test 2 of this malfunction. 4. Position master power switch to off (WP 0004 00).
	2. Is the vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 notify Field Maintenance. 2. If vehicle S/N is not 11,438 to 99,999 go to test 3 of this malfunction.
	3. Does 24 VOLTS gage operate?	1. Position master power switch to on (WP 0004 00). 2. Check to see if 24 VOLTS gage operates. 3. Position master power switch to off (WP 0004 00). 4. If 24 VOLTS gage does not operate, perform Malfunction 174 (24 VOLTS Gage, OIL PRES Gage, WATER TEMP Gage, and Speedometer Do Not Operate). 5. If 24 VOLTS gage operates, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
9. REAR BRAKE AIR PRESSURE GAGE DOES NOT OPERATE OR IS INACCURATE	1. Check to see if any instrument panel gages operate.	1. Position master power switch to on (WP 0004 00). 2. If no instrument panel gages operate, perform Malfunction 163 (All Electrical Gages Do Not Operate). 3. Position master power switch to off (WP 0004 00).
	2. Check to see if REAR BRAKE AIR pressure gage operates and is accurate.	1. Start engine (WP 0018 00). 2. If REAR BRAKE AIR pressure gage does not operate or is inaccurate notify Field Maintenance. 3. Shut down engine (WP 0018 00).
10. FRONT BRAKE AIR PRESSURE GAGE DOES NOT OPERATE OR IS INACCURATE	1. Check to see if any instrument panel gages operate.	1. Position master power switch to on (WP 0004 00). 2. If no instrument panel gages operate, perform Malfunction 163 (All Electrical Gages Do Not Operate). 3. Position master power switch to off (WP 0004 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

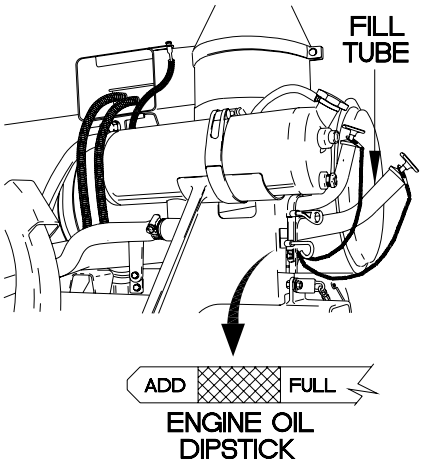
Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
10. FRONT BRAKE AIR PRESSURE GAGE DOES NOT OPERATE OR IS INACCURATE-Continued	2. Check to see if FRONT BRAKE AIR pressure gage operates and is accurate.	1. Start engine (WP 0018 00). 2. If FRONT BRAKE AIR pressure gage does not operate or is inaccurate notify Field Maintenance. 3. Shut down engine (WP 0018 00).
11. OIL PRESS GAGE DOES NOT OPERATE OR IS INACCURATE	1. Is engine oil at proper level?	1. Raise cab (WP 0021 00).
	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 oil dipstick clean. 4. Reinsert oil dipstick in dipstick tube until fully seated. 5. Pull engine oil dipstick from dipstick tube. 6. Reading should be between ADD and FULL markings on dipstick.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
11. OIL PRESS GAGE DOES NOT OPERATE OR IS INACCURATE-Continued		7. If oil is low, add oil to appropriate level (WP 0103 00).
		
		8. Return dipstick to dipstick tube. 9. If oil level was below the ADD mark, adding oil has significantly changed the known information of the vehicle. Verify the fault still exists and restart troubleshooting if necessary. 10. If oil level was already between the ADD and FULL marks, go to test 2 of this malfunction. 11. Lower cab (WP 0021 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
11. OIL PRESS GAGE DOES NOT OPERATE OR IS INACCURATE-Continued	2. Does any other electrical gage operate?	1. Position master power switch to on (WP 0004 00). 2. If no other instrument panel gages operate, perform Malfunction 163 (All Electrical Gages Do Not Operate). 3. If other instrument panel gages operate, go to test 3 of this malfunction.
	3. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 notify Field Maintenance. 2. If vehicle S/N Is not 11,438 to 99,999 got to test 4 of this malfunction.
	4. Does 24 VOLTS gage operate?	1. Position master power switch to on (WP 0004 00). 2. Check to see if 24 VOLTS Gage operates. 3. Position master power switch to off (WP 0004 00). 4. If 24 VOLTS gage does not operate, perform Malfunction 174 (24 VOLTS Gage, OIL PRESS Gage, WATER TEMP Gage, and Speedometer Do Not Operate). 5. If 24 VOLTS gage operates, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
12. SPEEDOMETER DOES NOT OPERATE OR IS INACCURATE	1. Do any instrument panel gages operate?	1. Position master power switch to on (WP 0004 00).
		2. Check to see if any instrument panel gages operate.
		3. Position master power switch to off (WP 0004 00).
		4. If no instrument panel gages operate, perform Malfunction 163 (All Electrical Gages Do Not Operate).
		5. If any instrument panel gages operate, go to test 2 of this malfunction.
	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 got to test 3 of this malfunction.
		2. If vehicle S/N is not 11,438 to 99,999 go to test 4 of this malfunction
	3. Does speedometer illuminate?	Check to see if speedometer illuminates (WP 0018 00).
		If speedometer does not illuminate, perform Malfunction 17 (Instrument Panel Gage Does Not Illuminate).
		If speedometer illuminates, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
12. SPEEDOMETER DOES NOT OPERATE OR IS INACCURATE-Continued	4. Does 24 VOLTS gage operate?	1. Position master power switch to on (WP 0004 00). 2. Check to see if 24 VOLTS gage operates. 3. Position master power switch to off (WP 0004 00). 4. If 24 VOLTS gage does not operate, perform Malfunction 174 (24 VOLTS Gage, OIL PRESS Gage, WATER TEMP Gage, and Speedometer Do Not Operate). 5. If 24 VOLTS gage operates, notify Field Maintenance.
13. VOLTS GAGE DOES NOT OPERATE OR IS INACCURATE	1. Check to see if any instrument panel gages operate.	1. Position master power switch to on (WP 0004 00). 2. If no instrument panel gages operate, perform Malfunction 163 (All Electrical Gages Do Not Operate). 3. Position master power switch to off (WP 0004 00).
	2. Check to see if VOLTS gage operates and is accurate.	1. Start engine (WP 0018 00). 2. If VOLTS gage does not operate or is inaccurate notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
14. AUDIBLE ALARM DOES NOT OPERATE		3. Shut down engine (WP 0018 00).
	1. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is not 11,438 to 99,999 go to test 2 of this malfunction. 2. If vehicle S/N is 11,438 to 99,999 go to test 3 of this malfunction.
	2. Check to see if lamp test switch illuminates lighted indicator display (WP 0018 00).	1. If lamp test switch does not illuminate lighted indicator display, perform Malfunction 173 (Lamp Test Switch Does Not Operate). 2. If lamp test switch illuminates lighted indicator display, notify Field Maintenance.
	3. Check to see if lamp test switch illuminates lighted indicator display (WP 0018 00).	1. If lamp test switch does not illuminate lighted indicator display, perform Malfunction 46 (Lamp Test Ground Does Not Operate). 2. If lamp test switch illuminates lighted indicator display, go to test 4 of this malfunction.
	4. Do radio, electrical gages, and starter pushbutton operate?	1. Check to see if electrical gages and starter pushbutton operate (WP 0018 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
15. AUDIBLE ALARM DOES NOT OPERATE WHEN TROOP TRANSPORT ALARM SWITCH IS TURNED ON		1. If electrical gages and starter pushbutton do not operate, perform Malfunction 164 (Audible Alarm, Radio, Electrical Gages, and Starter Pushbutton Do Not Operate). 2. If electrical gages and starter pushbutton operate, notify Field Maintenance.
	1. Check to see if lamp test switch illuminates lighted indicator display (WP 0018 00).	1. If lamp test switch does not illuminate lighted indicator display, go to test 3 of this malfunction. 2. If lamp test switch illuminates lighted indicator display, go to test 2 of this malfunction.
	2. Check to see if audible alarm sounds from low air pressure.	1. Drain air tanks (WP 0018 00). 2. Position master power switch to on (WP 0004 00). 3. Check to see if audible alarm sounds from low air pressure. 4. Position master power switch to off (WP 0004 00). 5. If audible alarm does not operate from low air pressure, perform Malfunction 14 (Audible Alarm Does Not Operate). 6. If audible alarm operates from low air pressure, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
15. AUDIBLE ALARM DOES NOT OPERATE WHEN TROOP TRANSPORT ALARM SWITCH IS TURNED ON - Continued	3. Check to see if audible alarm operates when troop transport alarm switch is turned on.	1. Start engine (WP 0018 00, Cold Engine Start). 2. Allow engine to run until air tanks are above 75 PSI. 3. Check to see if troop transport alarm is audible (WP 0012 00). 4. If audible alarm does not operate when troop transport alarm switch is turned on, notify Field Maintenance.
16. INSTRUMENT PANEL SWITCH DOES NOT ILLUMINATE		Notify Field Maintenance.
17. INSTRUMENT PANEL GAGE DOES NOT ILLUMINATE	Check to see if any instrument panel gage illuminates (WP 0018 00).	1. If no instrument panel gage illuminates, perform Malfunction 18 (Auxiliary Panel, Personnel Heater, and Instrument Panel Do Not Illuminate). 2. If one instrument panel gage does not illuminate, notify Field Maintenance

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
18. AUXILIARY PANEL, PERSONNEL HEATER, AND INSTRUMENT PANEL DO NOT ILLUMINATE	1. Check to see if headlights illuminate (WP 0018 00).	If headlights do not illuminate, perform Malfunction 162 (All Main Light Switch Functions Do Not Operate).
	2. Check to see if auxiliary panel, personnel heater, and instrument panel (WP 0018 00).	If auxiliary panel, personnel heater, and instrument panel do not illuminate, notify Field Maintenance.
	3. Check to see if headlights illuminate (WP 0016 00).	If headlights do illuminate, Notify Field Maintenance.
19. AUXILIARY PANEL, SWITCH DOES NOT ILLUMINATE	Check to see if any auxiliary panel switch illuminates (WP 0018 00).	1. If other auxiliary panel switches do not illuminate, perform Malfunction 20 (Auxiliary Panel Does Not Illuminate).
		2. If other auxiliary panel switches illuminate, notify Field Maintenance.
20. AUXILIARY PANEL DOES NOT ILLUMINATE	1. Check to see if headlights illuminate (WP 0018 00).	If headlights do not illuminate, perform Malfunction 162 (All Main Light Switch Functions Do Not Operate).
	2. Check to see if auxiliary panel illuminates (WP 0018 00).	If auxiliary panel does not illuminate, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
21. COOLANT TEMP INDICATOR DOES NOT ILLUMINATE	1. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 go to test 2 of this malfunction. 2. If vehicle S/N is not 11,438 to 99,999 go to test 3 of this malfunction.
	2. Check to see if LAMP TEST switch illuminates COOLANT TEMP indicator (WP 0018 00).	1. If COOLANT TEMP indicator on lighted indicator display does not illuminate, perform Malfunction 46 (Lamp Test Ground Does Not Operate). 2. If COOLANT TEMP indicator on lighted indicator display illuminates, notify Field Maintenance.
	3. Check to see if LAMP TEST switch illuminates COOLANT TEMP indicator (WP 0018 00).	1. If COOLANT TEMP indicator on lighted indicator display does not illuminate, perform MALFUNCTION 173 (Lamp Test Switch Does Not Operate). 2. If COOLANT TEMP indicator on lighted indicator display illuminates, go to test 4 of this malfunction.
	4. Does WATER TEMP gage operate?	1. Position master power switch to on (WP 0004 00). 2. Check to see if WATER TEMP gage operates. 3. Position master power switch to off (WP 0004 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
21. COOLANT TEMP INDICATOR DOES NOT ILLUMINATE - Continued		4. If WATER TEMP gage does not operate, perform Malfunction 174 (24 VOLTS Gage, OIL PRESS Gage, WATER TEMP Gage, and Speedometer Do Not Operate). 5. If WATER TEMP gage operates, notify Field Maintenance.
22. COOLANT TEMP INDICATOR ILLUMINATES	Does WATER TEMP gage read below 216°F (102°C) when COOLANT TEMP indicator illuminates?	1. Start engine (WP 0018 00). 2. Check to see if WATER TEMP gage reads below 216°F (102°C) when COOLANT TEMP Indicator illuminates. 3. If WATER TEMP gage reads above 216°F (102°C) when COOLANT TEMP indicator illuminates, perform Cooling System Troubleshooting (WP 0080 00, malfunction 1, Engine Overheats). 4. If WATER TEMP gage reads below 216°F (102°C) when COOLANT TEMP indicator illuminates, notify Field Maintenance. 5. Shut down engine (WP 0016 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

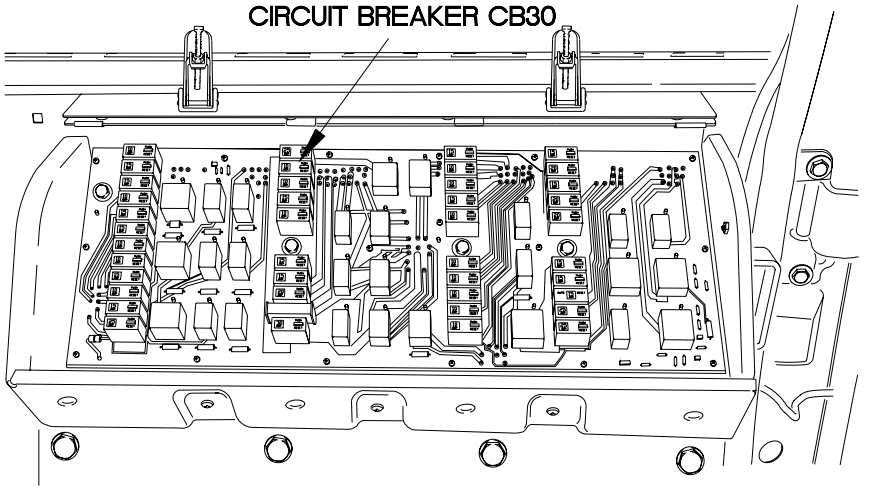
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
23. CTIS OVERSPEED INDICATOR DOES NOT ILLUMINATE	1. Check to see if LAMP TEST switch illuminates CTIS OVERSPEED indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminates CTIS OVERSPEED indicator, go to test 2 of this malfunction. 2. If LAMP TEST switch illuminates CTIS OVERSPEED indicator, notify Field Maintenance.
	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 45 (Lamp Test 24 VDC Does Not Operate). 2. If vehicle S/N is not 11,438 to 99,999 perform malfunction 173 (Lamp Test Switch Does Not Operate).
24. CHEMICAL DETECT INDICATOR DOES NOT ILLUMINATE	1. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 go to test 2 of this malfunction. 2. If vehicle S/N is not 11,438 to 99,999 go to test 4 of this malfunction.
	2. Check to see if LAMP TEST switch illuminates CHEMICAL DETECT indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate CHEMICAL DETECT indicator, perform Malfunction 45 (Lamp Test 24 VDC Does Not Operate). 2. If LAMP TEST switch illuminates CHEMICAL DETECT indicator, go to test 3 of this malfunction.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
24. CHEMICAL DETECT INDICATOR DOES NOT ILLUMINATE - Continued	3. Check circuit breaker CB30 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).
		2. If circuit breaker CB30 has tripped, push in to reset. 3. Position master power switch to on (WP 0004 00). 4. Check to see if circuit breaker CB30 has tripped again. 5. Position master power switch to off (WP 0004 00). 6. If circuit breaker CB30 has tripped again, notify Field Maintenance.

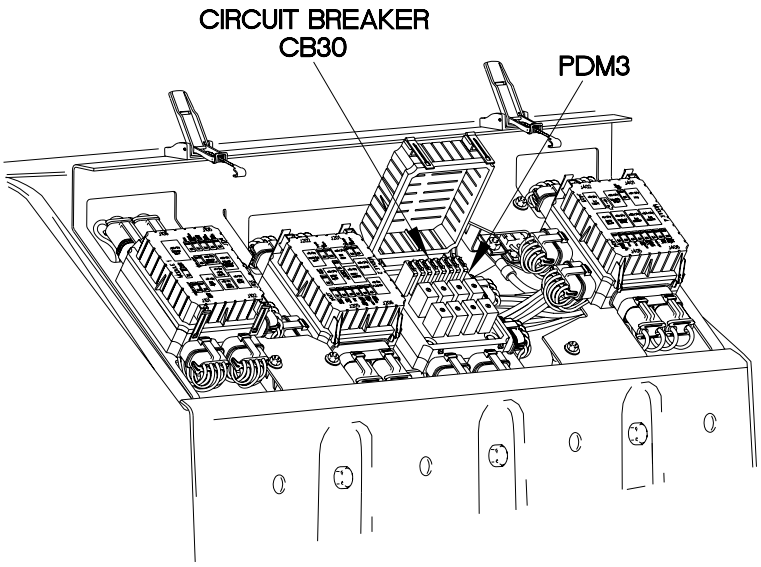


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
24. CHEMICAL DETECT INDICATOR DOES NOT ILLUMINATE - Continued		7. If circuit breaker CB30 did not trip again, go to test 6 of this malfunction.
	4. Check to see if LAMP TEST switch illuminates CHEMICAL DETECT indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate CHEMICAL DETECT indicator, perform Malfunction 173 (Lamp Test Switch Does Not Operate).
		2. If LAMP TEST switch illuminates CHEMICAL DETECT indicator, go to test 5 of this malfunction.
	5. Check circuit breaker CB30 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).
		2. Open PDM 3.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

24. CHEMICAL DETECT INDICATOR DOES NOT ILLUMINATE - Continued		3. If circuit breaker CB30 has tripped, push button to reset. 4. Position master power switch to on (WP 0004 00). 5. Check to see if circuit breaker CB30 has tripped again. 6. Position master power switch to off (WP 0004 00). 7. If circuit breaker CB30 has tripped again, notify Field Maintenance. 8. If circuit breaker CB30 did not trip again, go to test 6 of this malfunction.
	6. Check to see if CHEMICAL DETECT indicator illuminates (WP 0018 00).	If CHEMICAL DETECT indicator does not illuminate, notify Field Maintenance.
25. LEFT TURN SIGNAL INDICATOR DOES NOT ILLUMINATE	1. Check to see if LAMP TEST switch illuminates left turn signal indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate left turn signal indicator, go to test 2 of this malfunction. 2. If LAMP TEST switch illuminates left turn signal indicator, go to test 3 of this malfunction.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
25. LEFT TURN SIGNAL INDICATOR DOES NOT ILLUMINATE - Continued	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 45 (Lamp Test 24 VDC Does Not Operate). 2. If vehicle S/N is not 11,438 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).
	3. Check to see if left turn signal illuminates (WP 0007 00).	1. If left turn signal does not illuminate, perform Malfunction 68 (Front and Rear Turn Signals do Not Illuminate). 2. If left turn signal illuminates, notify Field Maintenance.
26. RIGHT TURN SIGNAL INDICATOR DOES NOT ILLUMINATE	1. Check to see if LAMP TEST switch illuminates right turn signal indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate right turn signal indicator, go to test 2 of this malfunction. 2. If LAMP TEST switch illuminates right turn signal indicator, go to test 3 of this malfunction.
	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 45 (Lamp Test 24 VDC Does Not Operate). 2. If vehicle S/N is not 11,438 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
26. RIGHT TURN SIGNAL INDICATOR DOES NOT ILLUMINATE-Continued	3. Check to see if right turn signal illuminates (WP 0007 00).	1. If right turn signal does not illuminate, perform Malfunction 68 (Front and Rear Turn Signals Do Not Illuminate). 2. If right turn signal illuminates, notify Field Maintenance.
27. HIGH BEAM INDICATOR DOES NOT ILLUMINATE	1. Check to see if LAMP TEST switch illuminates HIGH BEAM indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate HIGH BEAM indicator, go to test 2 of this malfunction. 2. If LAMP TEST switch illuminates HIGH BEAM indicator, go to test 3 of this malfunction.
	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 45 (Lamp Test 24 VDC Does Not Operate). 2. If vehicle S/N is not 11,438 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).
	3. Check to see if headlight high beams illuminate (WP 0007 00).	1. If headlight high beams do not illuminate, perform Malfunction 51 (One or Both Headlight High Beams Do Not Illuminate). 2. If headlight high beams illuminate, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
28. PARK BRAKE INDICATOR DOES NOT ILLUMINATE	1. Check to see if LAMP TEST switch illuminates PARK BRAKE indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate PARK BRAKE indicator, go to test 2 of this malfunction. 2. If LAMP TEST switch illuminates PARK BRAKE indicator, notify Field Maintenance.
	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 46 (Lamp Test Ground Does Not Operate). 2. If vehicle S/N is not 11,438 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).
29. PTO INDICATOR DOES NOT ILLUMINATE	1. Check to see if LAMP TEST switch illuminates PTO indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate PTO indicator, go to test 2 of this malfunction. 2. If LAMP TEST switch illuminates PTO indicator, notify Field Maintenance.
	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 46 (Lamp Test Ground Does Not Operate). 2. If vehicle S/N is not 11,438 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

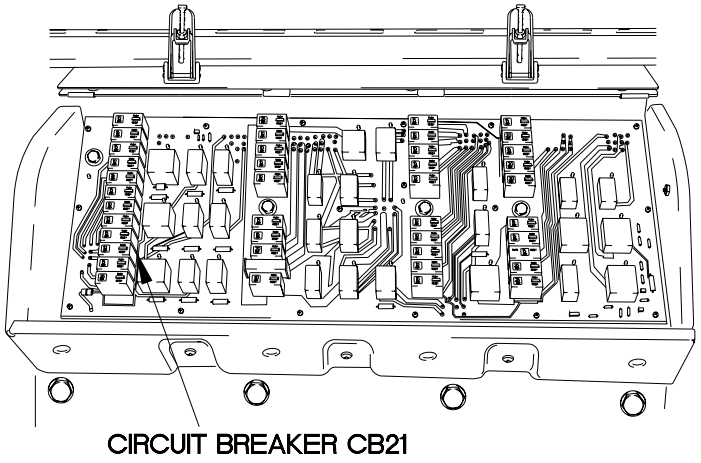
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
30. ENGINE FAN OFF INDICATOR DOES NOT ILLUMINATE	1. Check to see if LAMP TEST switch illuminates FAN OFF indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate FAN OFF indicator, go to test 2 of this malfunction. 2. If LAMP TEST switch illuminates FAN OFF indicator, notify Field Maintenance.
	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 46 (Lamp Test Ground Does Not Operate). 2. If vehicle S/N is not 11,438 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).
31. DUMP BODY UP INDICATOR DOES NOT ILLUMINATE	1. Check to see if LAMP TEST switch illuminates DUMP BODY UP indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate DUMP BODY UP indicator, go to test 2 of this malfunction. 2. If LAMP TEST switch illuminates DUMP BODY UP indicator, go to test 3 of this malfunction.
	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 45 (Lamp Test 24 VDC Does Not Operate). 2. If vehicle S/N is not 11,438 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
31. DUMP BODY UP INDICATOR DOES NOT ILLUMINATE - Continued	3. Is vehicle S/N 100,001 to 199,999?	1. If vehicle S/N is not 100,001 to 199,999 go to test 4 of this malfunction. 2. If vehicle S/N is 100,001 to 199,999 go to test 5 of this malfunction.
	4. Is circuit breaker CB21 tripped?	1. Remove PDP cover (WP 0113 00). 2. If circuit breaker CB21 is tripped, push button to reset. 3. Position master power switch to on (WP 0004 00). 4. Check circuit breaker CB21 to see if it is tripped again. 5. Position master power switch to off (WP 0004 00).

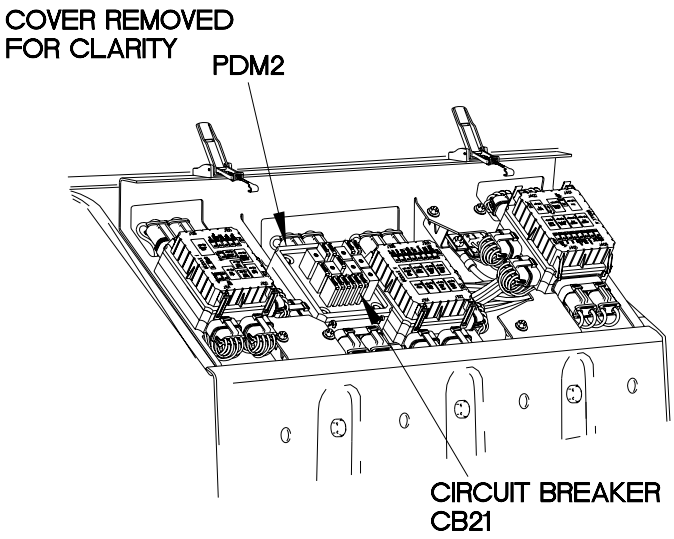


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
31. DUMP BODY UP INDICATOR DOES NOT ILLUMINATE - Continued		6. Install PDP cover (WP 0113 00).
		7. If circuit breaker CB21 is tripped, notify Field Maintenance.
		8. If circuit breaker CB21 is not tripped, go to test 6 of this malfunction.
	5. Is circuit breaker CB21 tripped?	1. Remove PDP cover (WP 0113 00).
		2. Open PDM 2.
		3. If circuit breaker CB21 is tripped, push button to reset.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
31. DUMP BODY UP INDICATOR DOES NOT ILLUMINATE - Continued		4. Position master power switch to on (WP 0004 00). 5. Check circuit breaker CB21 to see if it is tripped again. 6. Position master power switch to off (WP 0004 00). 7. Close PDM 2. 8. Install PDP cover (WP 0113 00). 9. If circuit breaker CB21 is tripped, notify Field Maintenance. 10. If circuit breaker CB21 is not tripped, go to test 6 of this malfunction.
	6. Does DUMP BODY UP indicator illuminate?	1. Raise dump body (WP 0031 00). 2. Check to see if DUMP BODY UP indicator illuminates (WP 0004 00). 3. Lower dump body (WP 0031 00). 4. If DUMP BODY UP indicator does not illuminate, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
32. TRANS TEMP INDICATOR DOES NOT ILLUMINATE	1. Check to see if LAMP TEST switch illuminates TRANS TEMP indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate TRANS TEMP indicator, go to test 2 of this malfunction. 2. If LAMP TEST switch illuminates TRANS TEMP indicator, notify Field Maintenance.
	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 46 (Lamp Test Ground Does Not Operate). 2. If vehicle S/N is not 11,438 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).
33. LOW FRONT AIR INDICATOR DOES NOT ILLUMINATE (VEHICLE S/N 11,438 TO 18,549)	Check to see if LAMP TEST switch illuminates LOW FRONT AIR indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate LOW FRONT AIR indicator, perform Malfunction 46 (Lamp Test Ground Does Not Operate). 2. If LAMP TEST switch illuminates LOW FRONT AIR indicator, notify Field Maintenance.
34. LOW REAR AIR INDICATOR DOES NOT ILLUMINATE (VEHICLE S/N 11,438 TO 18,549)	Check to see if LAMP TEST switch illuminates LOW REAR AIR indicator(WP 0018 00).	1. If LAMP TEST switch does not illuminate LOW REAR AIR indicator, perform Malfunction 46 (Lamp Test Ground Does Not Operate).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
34. LOW REAR AIR INDICATOR DOES NOT ILLUMINATE (VEHICLE S/N 11,438 TO 18,549)-Continued		2. If LAMP TEST switch illuminates LOW REAR AIR indicator, notify Field Maintenance.
35. LOW AIR INDICATOR DOES NOT ILLUMINATE (VEHICLE S/N 18,550 TO 199,999)	1. Check to see if LAMP TEST switch illuminates LOW AIR indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate LOW AIR indicator, go to test 2 of this malfunction.
		2. If LAMP TEST switch illuminates LOW AIR indicator, notify Field Maintenance.
	2. Is vehicle S/N 18,550 to 99,999?	1. If vehicle S/N is 18,550 to 99,999 perform Malfunction 46 (Lamp Test Ground Does Not Operate).
		2. If vehicle S/N is not 18,550 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).
36. ENGINE OIL PRESSURE / LOW OIL PRESSURE INDICATOR DOES NOT ILLUMINATE	1. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 go to test 2 of this malfunction.
		2. If vehicle S/N is not 11,438 to 99,999 go to test 3 of this malfunction.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
36. ENGINE OIL PRESSURE / LOW OIL PRESSURE INDICATOR DOES NOT ILLUMINATE-Continued	2. Check to see if LAMP TEST switch illuminates ENGINE OIL PRESSURE indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate ENGINE OIL PRESSURE indicator, perform Malfunction 46 (Lamp Test Ground Does Not Operate). 2. If LAMP TEST switch illuminates ENGINE OIL PRESSURE indicator, go to test 4 of this malfunction.
	3. Check to see if LAMP TEST switch illuminates LOW OIL PRESSURE indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate LOW OIL PRESSURE indicator, perform Malfunction 173 (Lamp Test Switch Does Not Operate). 2. If LAMP TEST switch illuminates LOW OIL PRESSURE indicator, go to test 4 of this malfunction.
	4. Check to see if OIL PRESS gage operates (WP 0018 00).	1. If OIL PRESS gage does not operate, perform Malfunction 11 (Oil Press Gage Does Not Operate Or Is Inaccurate). 2. If OIL PRESS gage operates, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

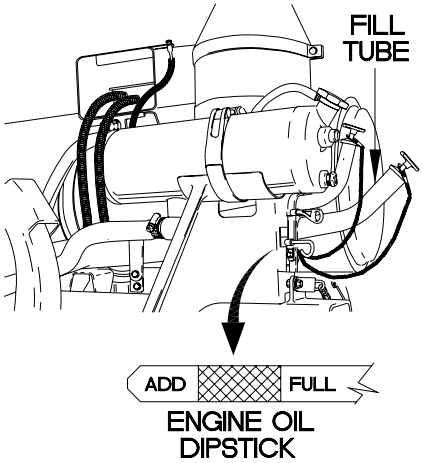
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
37. ENGINE OIL PRESSURE / LOW OIL PRESSURE INDICATOR ILLUMINATES WHILE ENGINE IS RUNNING / REMAINS ILLUMINATED 10 SECONDS AFTER ENGINE STARTS	1. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 go to test 2 of this malfunction. 2. If vehicle S/N is not 11,438 to 99,999 go to test 3 of this malfunction.
	2. Does engine OIL PRESS gage read greater than 12 PSI while engine is running?	1. Start engine (WP 0018 00). 2. Check to see if engine OIL PRESS gage reads greater than 12 PSI while engine is running (WP 0004 00). 3. Shut down engine (WP 0018 00). 4. If engine OIL PRESS gage reads 12 PSI or less, perform Engine System Troubleshooting (WP 0076 00 Malfunction 3. Low Engine Oil Pressure). 5. If engine OIL PRESS gage reads greater than 12 PSI, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
WARNING **Ensure engine oil is cool before performing any maintenance. Failure to comply may result in serious injury to personnel.**		
37. ENGINE OIL PRESSURE / LOW OIL PRESSURE INDICATOR ILLUMINATES WHILE ENGINE IS RUNNING / REMAINS ILLUMINATED 10 SECONDS AFTER ENGINE STARTS - Continued	3. 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.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
37. ENGINE OIL PRESSURE / LOW OIL PRESSURE INDICATOR ILLUMINATES WHILE ENGINE IS RUNNING / REMAINS ILLUMINATED 10 SECONDS AFTER ENGINE STARTS - Continued		5. Reading should be between ADD and FULL markings on dipstick.
		6. If oil is low, add oil to appropriate level (WP 0103 00).
		7. Return dipstick to dipstick tube.
38. STOP ENGINE INDICATOR DOES NOT ILLUMINATE		8. If oil level was below the ADD mark, adding oil has significantly changed the known information of the vehicle. Verify the fault still exists and restart troubleshooting if necessary.
		9. If oil level was already between the ADD and FULL marks, notify Field Maintenance.
	1. Check to see if LAMP TEST switch illuminates STOP ENGINE indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate STOP ENGINE indicator, go to test 2 of this malfunction.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
38. STOP ENGINE INDICATOR DOES NOT ILLUMINATE-Continued		2. If LAMP TEST switch illuminates STOP ENGINE indicator, notify Field Maintenance.
	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 46 (Lamp Test Ground Does Not Operate). 2. If vehicle S/N is not 11,438 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).
39. CHECK ENGINE INDICATOR DOES NOT ILLUMINATE	1. Check to see if LAMP TEST switch illuminates CHECK ENGINE indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate CHECK ENGINE indicator, go to test 2 of this malfunction. 2. If LAMP TEST switch illuminates CHECK ENGINE indicator, notify Field Maintenance.
	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 46 (Lamp Test Ground Does Not Operate). 2. If vehicle S/N is not 11,438 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
40. EXHAUST BRAKE INDICATOR DOES NOT ILLUMINATE	1. Does exhaust brake operate?	1. Position master power switch to on (WP 0004 00). 2. Position WARMUP/ OFF/RETARD switch to WARMUP (WP 0004 00). 3. Start engine (WP 0018 00). 4. Check to hear if exhaust brake operates. 5. Shut down engine (WP 0018 00). 6. Position WARMUP/ OFF/RETARD switch to OFF (WP 0004 00). 7. Position master power switch to off (WP 0004 00). 8. If exhaust brake does not operate, perform Malfunction 110 (Exhaust Brake Does Not Operate).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
40. EXHAUST BRAKE INDICATOR DOES NOT ILLUMINATE - Continued		9. If exhaust brake operates, go to test 2 of this malfunction.
	2. Check to see if LAMP TEST switch illuminates EXHAUST BRAKE indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate EXHAUST BRAKE indicator, go to test 3 of this malfunction.
		2. If LAMP TEST switch illuminates EXHAUST BRAKE indicator, notify Field Maintenance.
	3. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 45 (Lamp Test 24 VDC Does Not Operate).
		2. If vehicle S/N is not 11,438 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).
41. CHECK TRANS INDICATOR DOES NOT ILLUMINATE	1. Check to see if LAMP TEST switch illuminates CHECK TRANS indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate CHECK TRANS indicator, go to test 2 of this malfunction.
		2. If LAMP TEST switch illuminates CHECK TRANS indicator, notify Field Maintenance.
	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 46 (Lamp Test Ground Does Not Operate).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
41. CHECK TRANS INDICATOR DOES NOT ILLUMINATE-Continued		2. If vehicle S/N is not 11,438 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).
42. INLET AIR HEATER INDICATOR DOES NOT ILLUMINATE	1. Check to see if LAMP TEST switch illuminates INLET AIR indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate INLET AIR HEATER indicator, go to test 2 of this malfunction.
		2. If LAMP TEST switch illuminates INLET AIR HEATER indicator, notify Field Maintenance.
	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 46 (Lamp Test Ground Does Not Operate).
		2. If vehicle S/N is not 11,438 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).
43. ABS INDICATOR DOES NOT ILLUMINATE	1. Check to see if LAMP TEST switch illuminates ABS indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate ABS indicator, go to test 2 of this malfunction.
		2. If LAMP TEST switch illuminates ABS indicator, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

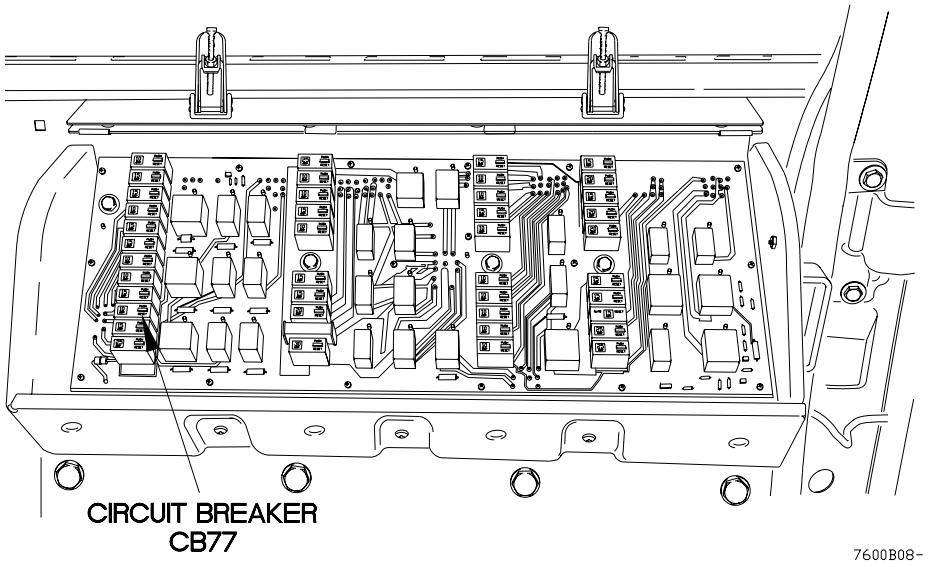
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
43. ABS INDICATOR DOES NOT ILLUMINATE - Continued	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 45 (Lamp Test 24 VDC Does Not Operate). 2. If vehicle S/N is not 11,438 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).
44. CTIS OFF INDICATOR DOES NOT ILLUMINATE	1. Check to see if LAMP TEST switch illuminates CTIS OFF indicator (WP 0018 00).	1. If LAMP TEST switch does not illuminate CTIS OFF indicator, go to test 2 of this malfunction. 2. If LAMP TEST switch illuminates CTIS OFF indicator, notify Field Maintenance.
	2. Is vehicle S/N 11,438 to 99,999?	1. If vehicle S/N is 11,438 to 99,999 perform Malfunction 46 (Lamp Test Ground Does Not Operate). 2. If vehicle S/N is not 11,438 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).
45. LAMP TEST 24 VDC DOES NOT OPERATE	1. Check circuit breaker CB77 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00). 2. If circuit breaker CB77 is tripped, push in to reset.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
45. LAMP TEST 24 VDC DOES NOT OPERATE - Continued		3. Position main light switch to SER DRIVE (WP 0004 00).
		4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance. 5. Position main light switch to OFF (WP 0004 00). 6. Install PDP cover (WP 0113 00).
	2. Check to see if lamp test 24 VDC operates (WP 0018 00).	If lamp test 24 VDC does not operate, notify Field Maintenance.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
46. LAMP TEST GROUND DOES NOT OPERATE (Vehicle S/N 11,438 to 99,999)	1. Do service drive lights illuminate?	1. Position main light switch to SER DRIVE (WP 0004 00). 2. Check to see if service drive lights illuminate. 3. Position main light switch to OFF (WP 0004 00). 4. If service drive lights do not illuminate, perform Malfunction 3 (12 VDC Circuits Do Not Operate (100 AMP Alternator)). 5. If service drive lights illuminate, go to test 2 of this malfunction.
	2. Do stoplights illuminate?	1. Position master power switch to on (WP 0004 00).
	NOTE Lamp test ground and stoplights operate on same circuit.	
		2. Position main light switch to STOPLIGHT (WP 0004 00). 3. Depress brake pedal. 4. Check to see if stoplights illuminate.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
46. LAMP TEST GROUND DOES NOT OPERATE (Vehicle S/N 11,438 to 99,999) - Continued		5. Release brake pedal. 6. Position main light switch to OFF (WP 0004 00). 7. Position master power switch to off (WP 0004 00). 8. If stoplights do not illuminate, perform Malfunction 168 (Stoplights and !2 VDC Indicator Panel Circuits Do Not Operate). 9. If stoplights illuminate, notify Field Maintenance.
47. CHARGING SYSTEM INDICATOR DOES NOT ILLUMINATE (VEHICLE S/N 18,550 OR HIGHER).	1. Is vehicle S/N 18,550 to 99,999?	1. If vehicle S/N is 18,550 to 99,999 go to test 2 of this malfunction. 2. If vehicle S/N is not 18,550 to 99,999 go to test 3 of this malfunction.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
47. CHARGING SYSTEM INDICATOR DOES NOT ILLUMINATE (VEHICLE S/N 18,550 OR HIGHER). - Continued	2. Check to see if LAMP TEST switch illuminates CHARGING SYSTEM indicator (WP 0019 00).	1. If CHARGING SYSTEM indicator does not illuminate, perform Malfunction 46 (Lamp Test Ground Does Not Operate).
		2. If CHARGING SYSTEM indicator illuminates, notify Field Maintenance.
	3. Check to see if LAMP TEST switch illuminates NO CHARGE indicator (WP 0019 00).	1. If NO CHARGE indicator does not illuminate, perform Malfunction 173 (Lamp Test Switch Does Not Illuminate).
		2. If NO CHARGE indicator illuminates, notify field maintenance.
48. BATTERY DISCONN INDICATOR DOES NOT ILLUMINATE (VEHICLE S/N 18,550 OR HIGHER).	1. Check to see if LAMP TEST switch illuminates BATTERY DISCONN indicator (WP 0019 00).	1. If BATTERY DISCONN indicator does not illuminate, go to test 2 of this malfunction.
		2. If BATTERY DISCONN indicator illuminates, notify Field Maintenance.
	2. Is vehicle S/N 18,550 to 99,999?	1. If vehicle is S/N is 18,550 to 99,999 perform Malfunction 46 (Lamp Test Ground Does Not Operate).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

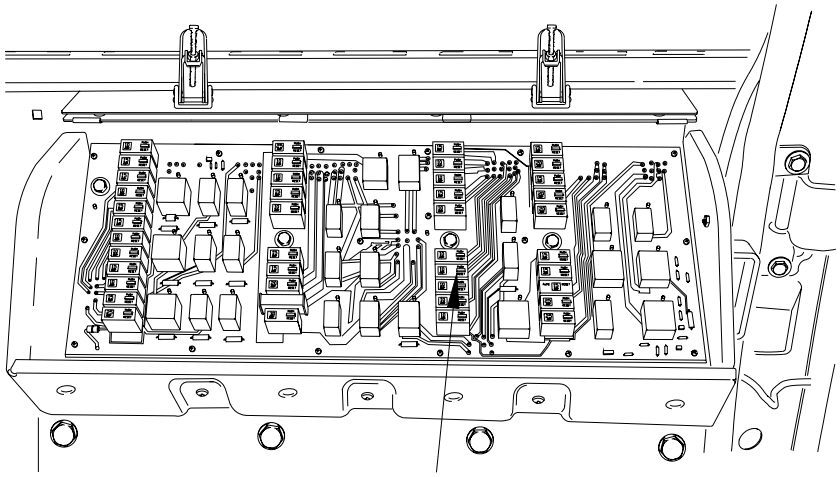
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
48. BATTERY DISCONN INDICATOR DOES NOT ILLUMINATE (VEHICLE S/N 18,550 OR HIGHER).- Continued		2. If vehicle S/N is not 18,550 to 99,999 perform Malfunction 173 (Lamp Test Switch Does Not Operate).
49. ONE OR BOTH HEADLIGHTS (HIGH AND LOW BEAMS) DO NOT ILLUMINATE	Check to see if headlights illuminate (WP 0018 00).	Notify Field Maintenance.
50. ONE OR BOTH HEADLIGHT LOW BEAMS DO NOT ILLUMINATE	1. Check to see if headlight high beams illuminate (WP 0018 00).	If headlight high beams do not illuminate, Malfunction 49 (One Or Both Headlight Beams [High And Low Beams] Do Not Illuminate).
	2. Check to see if one or both headlight low beams illuminate (WP 0018 00)	If headlight low beams do not illuminate, notify Field Maintenance.
51. ONE OR BOTH HEADLIGHT HIGH BEAMS DO NOT ILLUMINATE	1. Check to see if one or both headlight low beams illuminate (WP 0018 00).	If headlight low beams do not illuminate, perform Malfunction 49 (One Or Both Headlight Beams [High And Low Beams] Do Not Illuminate).
	2. Check to see if one or both headlight high beams illuminate (WP 0007 00).	If headlight high beams do not illuminate, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
52. PARKING LIGHTS DO NOT ILLUMINATE	1. Check to see if headlights illuminate (WP 0018 00).	If headlights do not illuminate, perform Malfunction 162 (All Main Light Switch Functions Do Not Operate).
	2. Check to see if turn signals illuminate (WP 0007 00).	If turn signals do not illuminate, perform Malfunction 58 (One Or Both Composite Taillights Do Not Illuminate).
	3. Check circuit breaker CB65 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00). 2. If circuit breaker is tripped, push in to reset.
		3. Position main light switch to SER DRIVE (WP 0004 00).



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
52. PARKING LIGHTS DO NOT ILLUMINATE-Continued		4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance. 5. Position main light switch to OFF (WP 0004 00). 6. Install PDP cover (WP 0113 00).
	4. Check to see if parking lights illuminate (WP 0018 00).	If parking lights do not illuminate, notify Field Maintenance.
53. LH DOOR AND/OR LH FRONT MARKER LIGHTS DO NOT ILLUMINATE	1. Check to see if other marker lights illuminate (WP 0018 00).	If other marker lights do not illuminate, perform Malfunction 57 (All Front and/or Rear Marker Lights Do Not Illuminate In Normal Mode).
	2. Check to see if LH door and/or LH front marker lights illuminate (WP 0018 00).	If LH door and/or LH front marker lights do not illuminate, notify Field Maintenance.
54. RH DOOR AND/OR RH FRONT MARKER LIGHTS DO NOT ILLUMINATE	1. Check to see if other marker lights illuminate (WP 0018 00).	If other marker lights do not illuminate, perform Malfunction 57 (All Front and/or Rear Marker Lights Do Not Illuminate In Normal Mode).
	2. Check to see if RH door and/or RH front marker lights illuminate (WP 0018 00).	If RH door and/or RH front marker lights do not illuminate, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

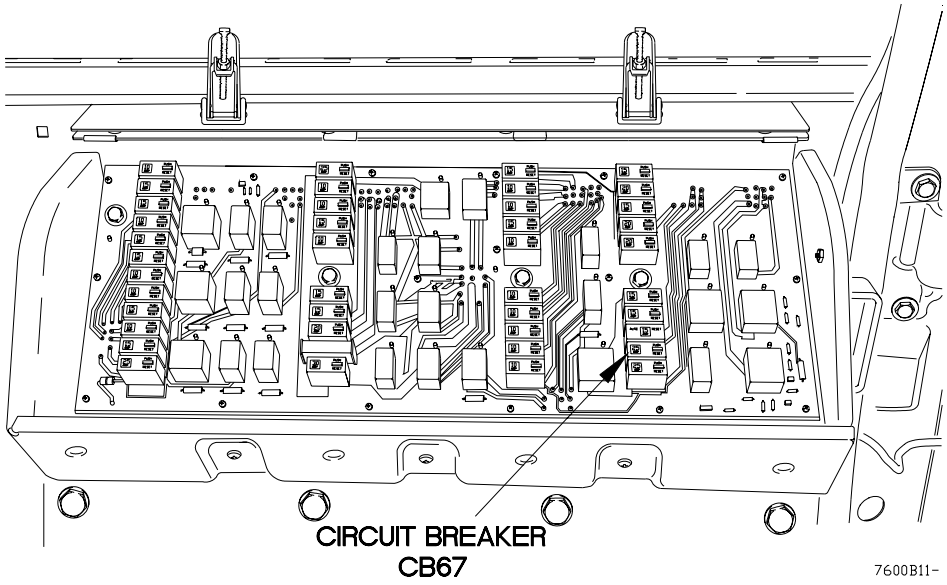
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
55. ONE OR MORE CAB TOP MARKER LIGHTS DO NOT ILLUMINATE	1. Check to see if other marker lights illuminate (WP 0018 00).	If other marker lights do not illuminate, perform Malfunction 57 (All Front and/or Rear Marker Lights Do Not Illuminate In Normal Mode).
	2. Check to see if cab top marker lights illuminate (WP 0018 00).	If cab top marker lights do not illuminate, notify Field Maintenance.
56. SIDE AND/OR REAR MARKER LIGHTS DO NOT ILLUMINATE	1. Check to see if other marker lights illuminate (WP 0018 00).	If other marker lights do not illuminate, Malfunction 57 (All Front and/or Rear Marker Lights Do Not Illuminate In Normal Mode).
	2. Check to see if side and/or rear marker lights illuminate (WP 0018 00).	If side and/or rear marker lights do not illuminate, notify Field Maintenance.
57. ALL FRONT AND/OR REAR MARKER LIGHTS DO NOT ILLUMINATE IN NORMAL MODE	1. Check to see if headlights illuminate (WP 0018 00).	If headlights do not illuminate, perform Malfunction 162 (All Main Light Switch Functions Do Not Operate).
	2. Check to see if rear marker lights illuminate (WP 0018 00).	If rear marker lights do not illuminate, check to see if front marker lights illuminate.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
57. ALL FRONT AND/OR REAR MARKER LIGHTS DO NOT ILLUMINATE IN NORMAL MODE - Continued	3. Check circuit breaker CB67 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).
		2. If circuit breaker is tripped, push in to reset. 3. Position main light switch to SER DRIVE (WP 0004 00). 4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance. 5. Position main light switch to OFF (WP 0004 00).

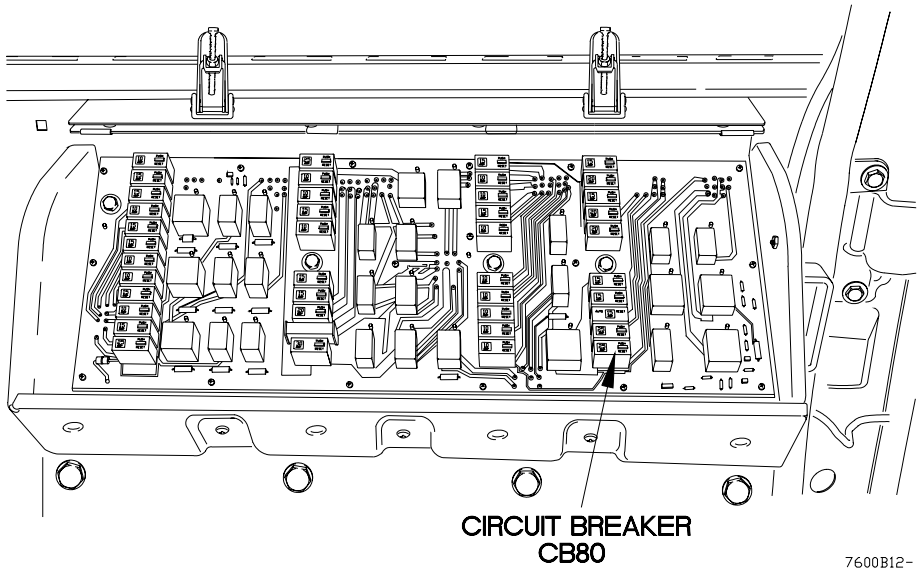


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
57. ALL FRONT AND/OR REAR MARKER LIGHTS DO NOT ILLUMINATE IN NORMAL MODE - Continued		6. Install PDP cover (WP 0113 00).
		7. Perform step 6 of this malfunction to check if the marker lights illuminate.
	4. Check to see if front marker lights illuminate (WP 0018 00, Operating Vehicle Lights).	If front marker lights illuminate, perform step 5 of this malfunction. If rear marker lights do not illuminate, perform step 6 of this malfunction.
	5. Check circuit breaker CB80 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

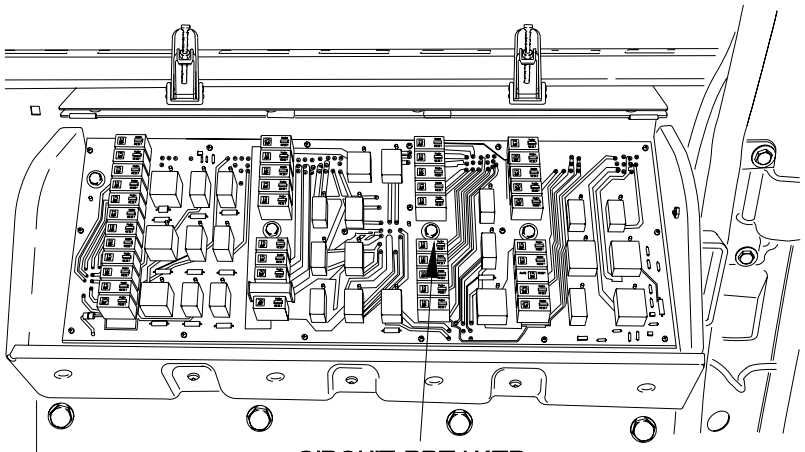
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
57. ALL FRONT AND/OR REAR MARKER LIGHTS DO NOT ILLUMINATE IN NORMAL MODE - Continued		2. If circuit breaker is tripped, push in to reset.
		3. Position main light switch to SER DRIVE (WP 0004 00).
		4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped, notify Field Maintenance.
		5. Position main light switch to OFF (WP 0004 00).
	6. Check to see if marker lights illuminate (WP 0018 00).	If marker lights do not illuminate, notify Field Maintenance.
58. ONE OR BOTH COMPOSITE TAILLIGHTS DO NOT ILLUMINATE	1. Check to see if front marker lights illuminate (WP 0018 00).	If front marker lights do not illuminate, perform Malfunction 57 (All Front and/or Rear Marker Lights Do Not Illuminate In Normal Mode).
	2. Check to see if left and right rear marker lights illuminate (WP 0018 00).	If left and right rear marker lights do not illuminate, perform Malfunction 56 (Side And/Or Rear Marker Lights Do Not Illuminate).
	3. Check to see if one or both composite taillights illuminate (WP 0018 00).	If one or both composite taillights do not illuminate, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
59. ONE OR BOTH FRONT BLACKOUT MARKER LIGHTS DO NOT ILLUMINATE	1. Check to see if rear blackout marker lights illuminate (WP 0018 00).	If rear blackout marker lights do not illuminate, perform Malfunction 62 (All Blackout Drive Lights Do Not Illuminate).
	2. Check to see if front blackout marker lights illuminate (WP 0018 00).	If front blackout marker lights do not illuminate, notify Field Maintenance.
60. BLACKOUT DRIVE LIGHT DOES NOT ILLUMINATE	1. Check to see if blackout marker lights illuminate (WP 0018 00).	If blackout marker lights do not illuminate, perform Malfunction 162 (All Main Light Switch Functions Do Not Operate).
	2. Check circuit breaker CB54 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

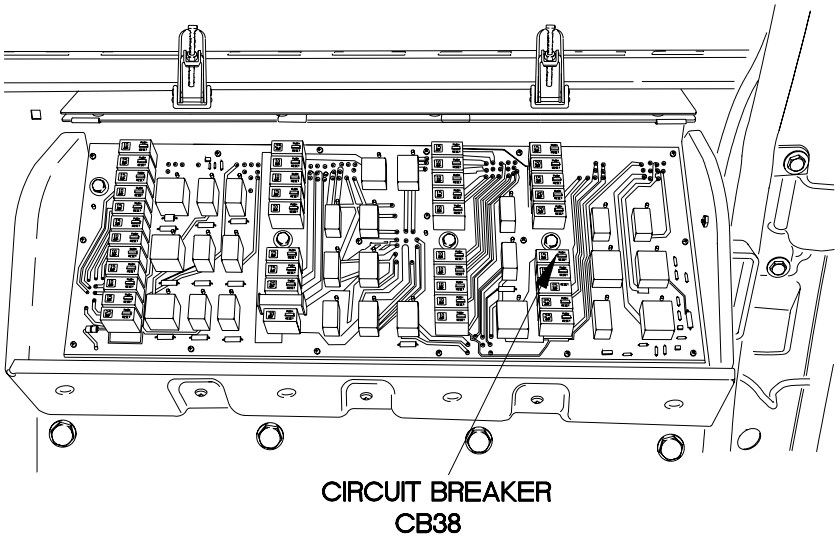
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
60 BLACKOUT DRIVE LIGHT DOES NOT ILLUMINATE - Continued		2. If circuit breaker is tripped, push in to reset. 3. Position main light switch to BO DRIVE (WP 0004 00). 4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance. 5. Position main light switch to OFF (WP 0004 00). 6. Install PDP cover (WP 0113 00).
	3. Check to see if blackout drive light illuminates (WP 0018 00).	If blackout drive light does not illuminate, notify Field Maintenance.
61. ONE OR BOTH REAR BLACKOUT MARKER LIGHTS DO NOT ILLUMINATE	1. Check to see if front blackout marker lights illuminate (WP 0018 00).	If front blackout marker lights do not illuminate, perform Malfunction 62 (All Blackout Marker Lights Do Not Illuminate).
	2. Check to see if rear blackout marker lights illuminate (WP 0018 00).	If rear blackout marker lights do not illuminate, notify Field Maintenance.
62. ALL BLACKOUT MARKER LIGHTS DO NOT ILLUMINATE	1. Check to see if WTEC III TPSS dims in blackout mode (WP 0018 00).	If WTEC III TPSS does not dim in blackout mode, perform Malfunction 65 (Blackout Markers Do Not Illuminate And/Or WTEC III Transmission Pushbutton Shift Selector Does Not Dim).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
63. AMBER WARNING LIGHT DOES NOT ILLUMINATE	2. Check to see if blackout marker lights illuminate (WP 0018 00).	If blackout marker lights do not illuminate, notify Field Maintenance.
	1. Check to see if headlights illuminate (WP 0018 00).	If headlights do not illuminate, perform Malfunction 162 (All Main Light Switch Functions Do Not Operate).
	2. Check circuit breaker CB38 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00). 2. If circuit breaker CB38 is tripped, push in to reset.
		3. Position main light switch to SER DRIVE (WP 0004 00).



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

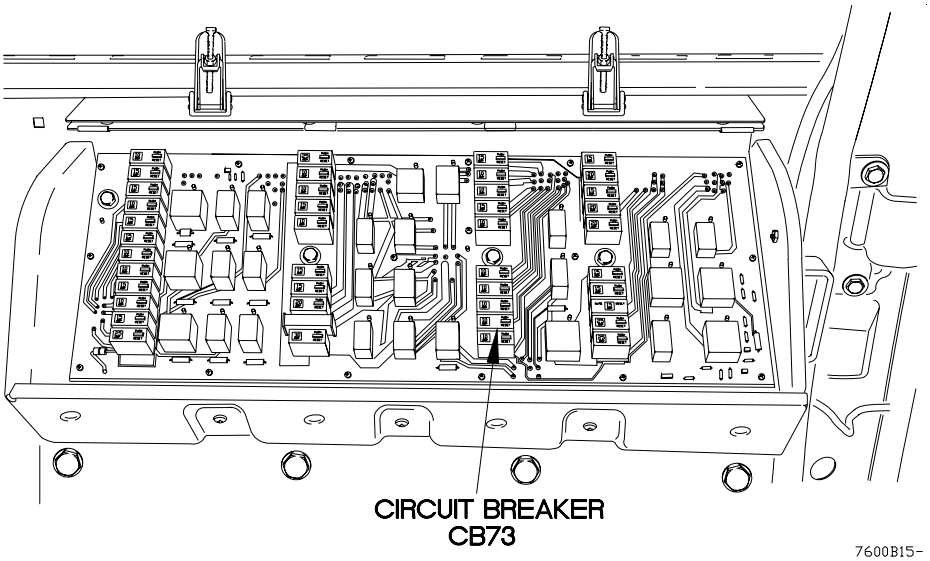
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
63. AMBER WARNING LIGHT DOES NOT ILLUMINATE - Continued		4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance. 5. Position main light switch to OFF (WP 0004 00). 6. Install PDP cover (WP 0113 00).
	3. Check to see if amber warning light illuminates.	1. Position main light switch to SER DRIVE (WP 0004 00). 2. Position warning light switch to on (WP 0004 00). 3. Check to see if amber warning light illuminates. 4. Position amber warning light switch to off (WP 0004 00). 5. Position amber main light switch to OFF (WP 0004 00). 6. If amber warning light does not illuminate, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
64. BACKUP LIGHT DOES NOT ILLUMINATE	1. Check to see if headlights illuminate (WP 0018 00).	1. If headlights do not illuminate, perform Malfunction 162 (All Main Light Switch Functions Do Not Operate). 2. Remove PDP cover (WP 0113 00).
		3. If circuit breaker is tripped, push in to reset. 4. Position main light switch to SER DRIVE (WP 0004 00) 5. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance.

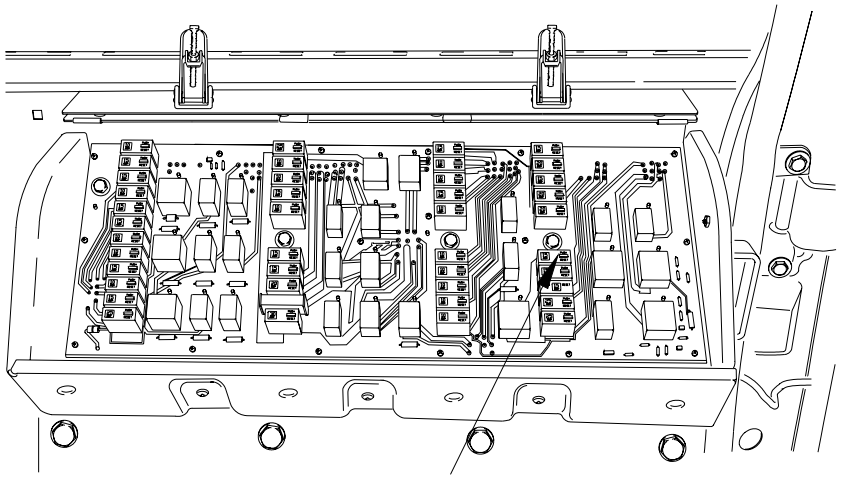


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
64. BACKUP LIGHT DOES NOT ILLUMINATE - Continued		6. Position main light switch to OFF (WP 0004 00).
	2. Check to see if backup light illuminates (WP 0018 00).	If backup light does not illuminate, notify Field Maintenance.
65. BLACKOUT MARKER LIGHTS DO NOT ILLUMINATE AND/OR WTEC III TRANSMISSION PUSHBUTTON SHIFT SELECTOR (TPSS) DOES NOT DIM	1. Check circuit breaker CB66 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).
		2. If circuit breaker is tripped, push in to reset.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
65. BLACKOUT MARKER LIGHTS DO NOT ILLUMINATE AND/OR WTEC III TRANSMISSION PUSHBUTTON SHIFT SELECTOR (TPSS) DOES NOT DIM - Continued	2. Check to see if blackout drive light operates (WP 0018 00).	1. If blackout drive light does not illuminate, perform Malfunction 162 (All Main Light Switch Functions Do Not Operate).
		2. Position main light switch to SER DRIVE (WP 0004 00).
		3. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance.
		4. Position main light switch to OFF (WP 0004 00).
		5. Install PDP cover (WP 0113 00).
	3. Check to see if blackout marker lights illuminate and WTEC III TPSS dims (WP 0018 00).	If blackout marker lights do not illuminate or WTEC III TPSS does not dim, notify Field Maintenance.
66. REAR HAZARD LIGHTS DO NOT ILLUMINATE	1. Check to see if front hazard lights illuminate (WP 0018 00).	If front hazard lights do not illuminate, perform Malfunction 67 (Front And Rear Hazard Lights Do Not Illuminate).
	2. Check to see if stoplights illuminate (WP 0018 00).	If stoplights do not illuminate, perform Malfunction 70 (One Or Both Stoplights Do Not Illuminate).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

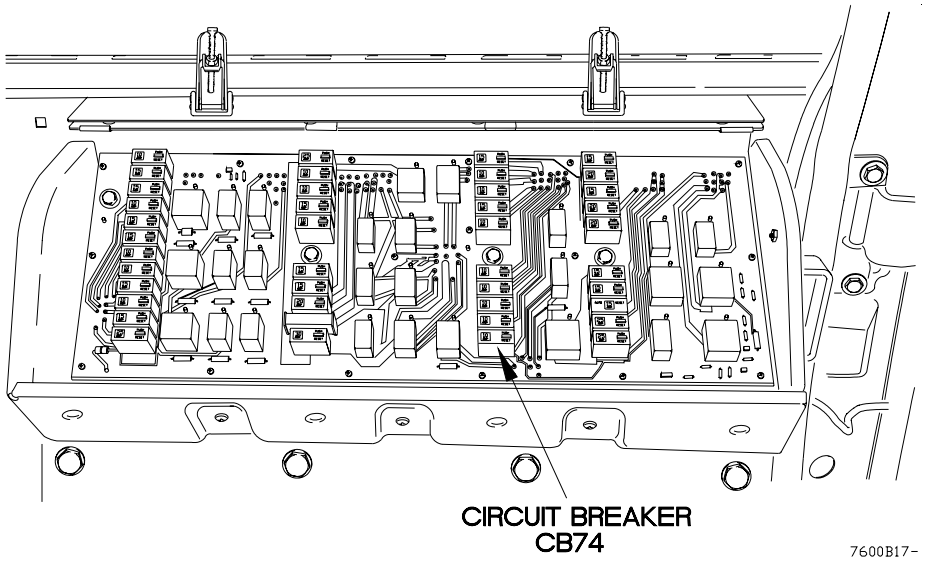
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
66. REAR HAZARD LIGHTS DO NOT ILLUMINATE-Continued	3. Check to see if rear hazard lights operate (WP 0018 00).	If rear hazard lights do not operate, notify Field Maintenance.
67. FRONT AND REAR HAZARD LIGHTS DO NOT ILLUMINATE	1. Check to see if headlights illuminate (WP 0018 00).	If headlights do not illuminate, perform Malfunction 162 (All Main Light Switch Functions Do Not Operate).
	2. Check to see if front turn signals illuminate (WP 0007 00).	If front turn signals do not illuminate, perform Malfunction 69 (Left Or Right Turn Signal Does Not Illuminate).
	3. Check to see if front and rear hazard lights illuminate (WP 0018 00).	If front and rear hazard lights do not illuminate, notify Field Maintenance.
68. FRONT AND REAR TURN SIGNALS DO NOT ILLUMINATE	1. Check to see if headlights illuminate (WP 0018 00).	If headlights do not illuminate, perform Malfunction 162 (All Main Light Switch Functions Do Not Operate).
	2. Check to see if stoplights illuminate (WP 0018 00).	If stoplights do not illuminate, perform Malfunction 70 (One Or Both Stoplights Do Not Illuminate).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
68. FRONT AND REAR TURN SIGNALS DO NOT ILLUMINATE - Continued	3. Check circuit breaker CB74 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).
		2. If circuit breaker is tripped, push in to reset. 3. Position main light switch to SER DRIVE (WP 0004 00) 4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, Notify Field Maintenance. 5. Position main light switch to OFF (WP 0004 00). 6. Install PDP cover (WP 0113 00).



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

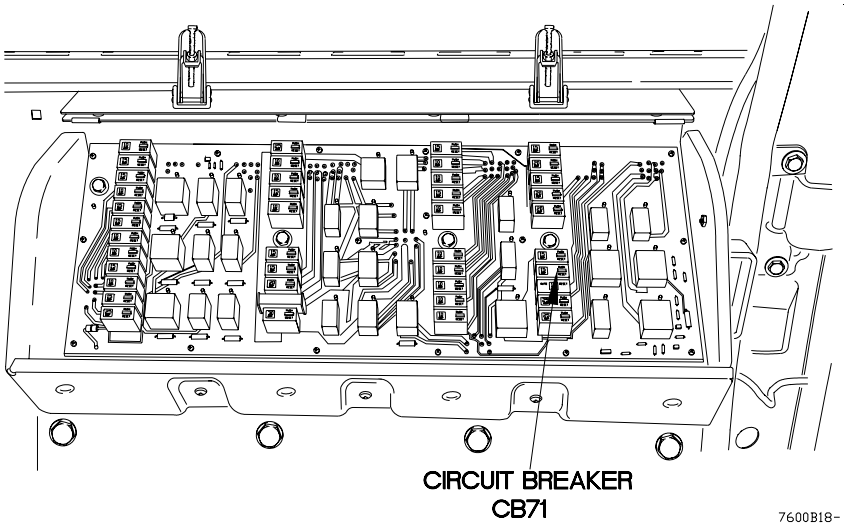
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
68. FRONT AND REAR TURN SIGNALS DO NOT ILLUMINATE - Continued	4. Check to see if front and rear turn signals illuminate (WP 0007 00).	If front and rear turn signals do not illuminate, notify Field Maintenance.
69. LEFT OR RIGHT FRONT TURN SIGNAL DOES NOT ILLUMINATE	1. Check to see if rear turn signals illuminate (WP 0007 00).	If rear turn signals do not illuminate, perform Malfunction 68 (Front And Rear Turn Signals Do Not Illuminate).
	2. Check to see if left and right front turn signals illuminate (WP 0007 00).	If left and right front turn signals do not illuminate, notify Field Maintenance.
70. ONE OR BOTH STOPLIGHTS DO NOT ILLUMINATE	1. Check to see if blackout stoplights illuminate (WP 0018 00).	If blackout stoplights do not illuminate, perform Malfunction 72 (Stoplights And Blackout Stoplights Do Not Illuminate).
	2. Check to see if one stoplight illuminates (WP 0018 00).	If one stoplight illuminates, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
70. ONE OR BOTH STOPLIGHTS DO NOT ILLUMINATE - Continued	3. Check circuit breaker CB71 in PCB to see if it is tripped	1. Remove PDP cover (WP 0113 00).
		2. If circuit breaker is tripped, push in to reset. 3. Position main light switch to SER DRIVE (WP 0004 00). 4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance. 5. Position main light switch to OFF (WP 0004 00). 6. Install PDP cover (WP 0113 00).

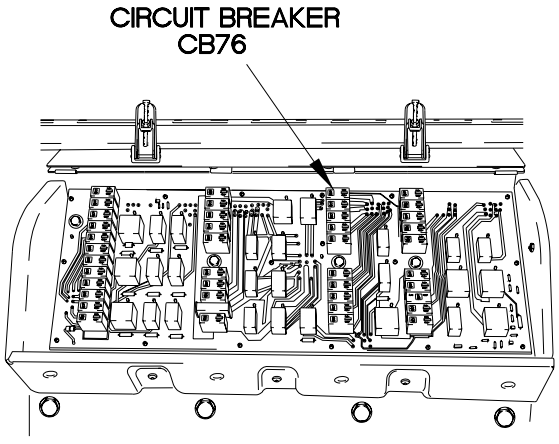


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
70. ONE OR BOTH STOPLIGHTS DO NOT ILLUMINATE - Continued	4. Check to see if stoplights illuminate (WP 0018 00).	If one or both stoplights do not illuminate, notify Field Maintenance.
71. ONE OR BOTH BLACKOUT STOPLIGHTS DO NOT ILLUMINATE	1. Check to see if stoplights illuminate in normal mode (WP 0018 00).	If stoplights do not illuminate in normal mode, perform Malfunction 72 (Stoplights And Blackout Stoplights Do Not Illuminate).
	2. Check to see if one or both blackout stoplights illuminate (WP 0018 00)	If one or both blackout stoplights do not illuminate, notify Field Maintenance.
72. STOPLIGHTS AND BLACKOUT STOPLIGHTS DO NOT ILLUMINATE	1. Check to see if headlights illuminate (WP 0018 00).	If headlights do not illuminate, perform Malfunction 162 (All Main Light Switch Functions Do Not Operate).
	2. Check circuit breaker CB76 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).



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ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

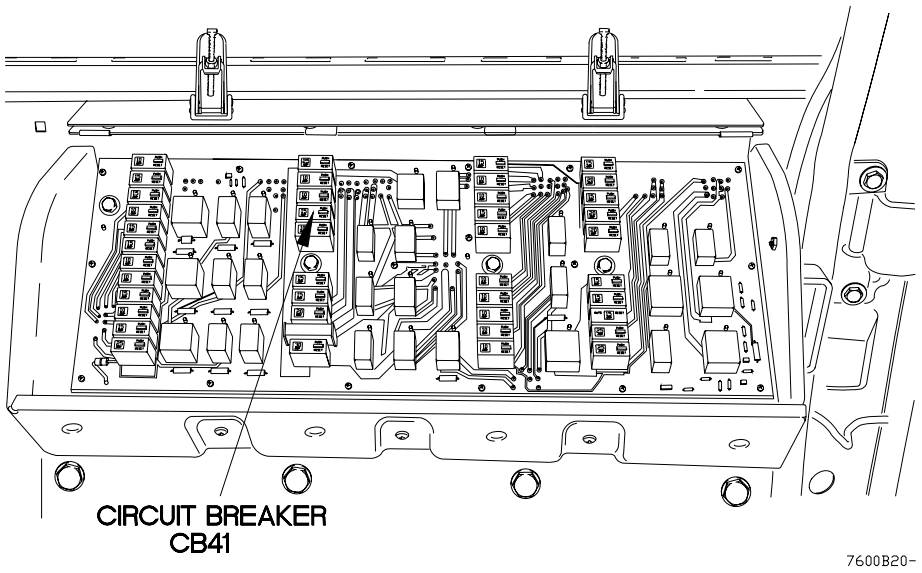
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
72. STOPLIGHTS AND BLACKOUT STOPLIGHTS DO NOT ILLUMINATE - Continued		2. If circuit breaker is tripped, push in to reset. 3. Position main light switch to SER DRIVE (WP 0004 00). 4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance. 5. Position main light switch to OFF (WP 0004 00). 6. Install PDP cover (WP 0113 00).
	3. Check to see if stoplights and blackout stoplights illuminate (WP 0018 00).	If stoplights and blackout stoplights do not operate, notify Field Maintenance.
73. TRAILER MARKER/ TAILLIGHTS DO NOT ILLUMINATE	1. Check to see if towing vehicle marker lights illuminate (WP 0018 00).	If towing vehicle marker lights do not operate, perform Malfunction 57 (All Front and/or Rear Marker Lights Do Not Illuminate In Normal Mode).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
73. TRAILER MARKER/ TAILLIGHTS DO NOT ILLUMINATE - Continued	2. Check circuit breaker CB41 in PCB to see if it is tripped	1. Remove PDP cover (WP 0113 00).
		2. If circuit breaker is tripped, push in to reset. 3. Position master power switch to on (WP 0004 00). 4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, Notify Field Maintenance. 5. Position master power switch to off (WP 0004 00). 6. Install PDP cover (WP 0113 00).



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

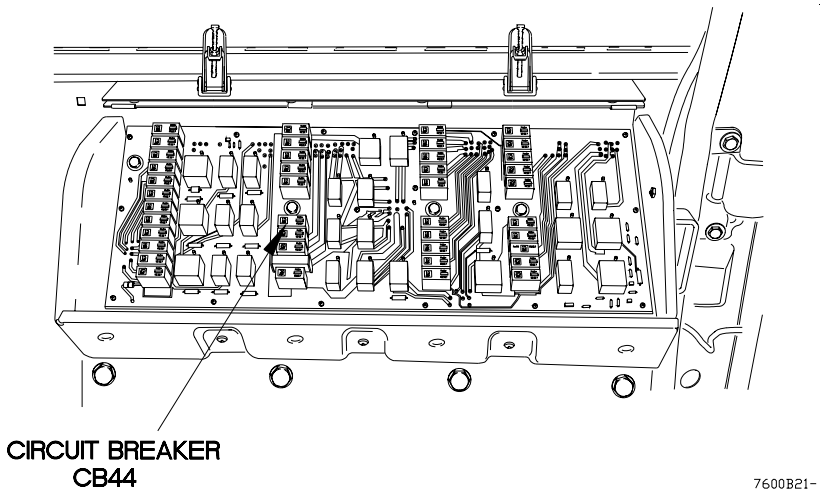
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
73. TRAILER MARKER/ TAILLIGHTS DO NOT ILLUMINATE - Continued	3. Check to see if trailer marker/ taillights operate (WP 0018 00).	If trailer marker/taillights do not operate, notify Field Maintenance.
74. TRAILER RIGHT STOP/TURN LIGHT DOES NOT ILLUMINATE	1. Check to see if towing vehicle right stoplight illuminates (WP 0018 00).	If towing vehicle right stoplight does not operate, perform Malfunction 70 (One Or Both Stoplights Do Not Illuminate).
	2. Check to see if trailer left stop/turn light illuminates (WP 0018 00).	If trailer left stop/turn light does not illuminate, perform Malfunction 76 (Both Trailer Stop/Turn Lights Do Not Illuminate).
	3. Check to see if trailer right stop/turn light illuminates (WP 0018 00).	If trailer right stop/turn light does not illuminate, notify Field Maintenance.
75. TRAILER LEFT STOP/TURN LIGHT DOES NOT ILLUMINATE	1. Check to see if towing vehicle left stoplight illuminates (WP 0018 00).	If towing vehicle left stoplight does not illuminate, perform Malfunction 70 (One Or Both Stoplights Do Not Illuminate).
	2. Check to see if trailer right stop/turn light illuminates (WP 0018 00).	If trailer right stop/turn light does not illuminate, perform Malfunction 76 (Both Trailer Stop/Turn Lights Do Not Illuminate).
	3. Check to see if trailer left stop/turn light illuminates (WP 0018 00).	If trailer left stop/turn light does not illuminate, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
76. BOTH TRAILER STOP/TURN LIGHTS DO NOT ILLUMINATE	1. Check circuit breaker CB44 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).
		2. If circuit breaker is tripped, push in to reset.
		3. Position main light switch to SER DRIVE (WP 0004 00)
		4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance.
		5. Position main light switch to OFF (WP 0004 00).
	2. Check to see if trailer stop/turn lights illuminate (WP 0018 00).	If trailer stop/turn lights do not illuminate, notify Field Maintenance.

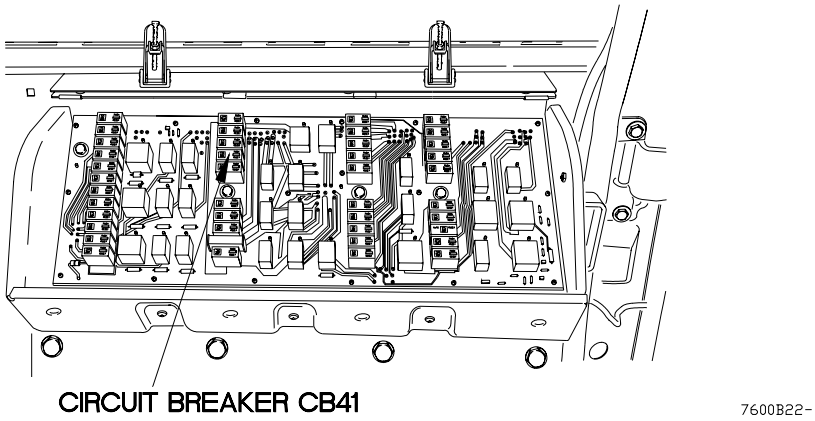


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
77. TRAILER BLACK-OUT MARKER LIGHTS DO NOT ILLUMINATE	1. Check to see if towing vehicle blackout marker lights illuminate (WP 0018 00).	If towing vehicle blackout marker lights do not illuminate, perform Malfunction 62 (All Blackout Marker Lights Do Not Illuminate).
	2. Check circuit breaker CB41 in PCB to see if it is tripped	1. Remove PDP cover (WP 0113 00).
		2. If circuit breaker is tripped, push in to reset.
		3. Position master power switch to on (WP 0004 00).
		4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, Notify Field Maintenance.
		5. Position master power switch to off (WP 0004 00).
		6. Install PDP cover (WP 0113 00).

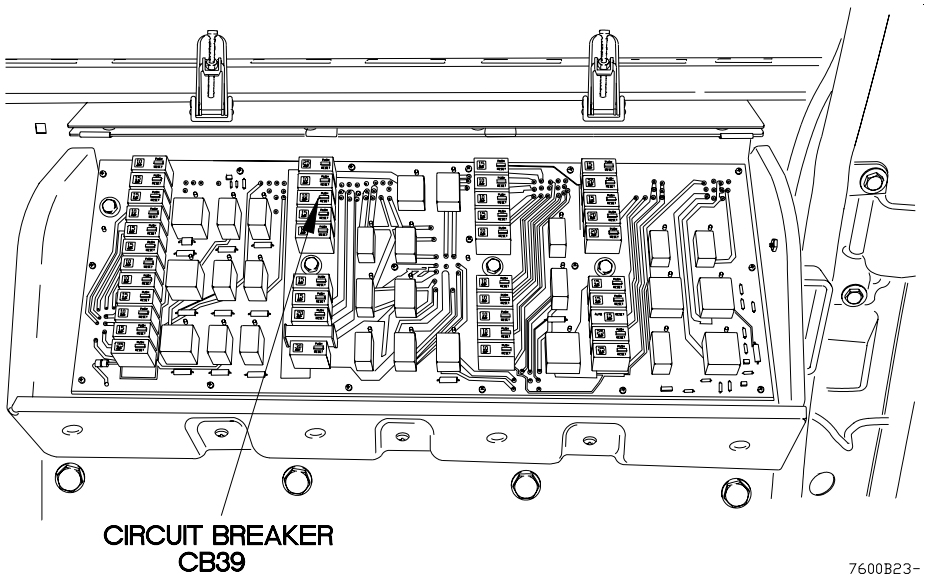


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
78. TRAILER BLACKOUT STOPLIGHTS DO NOT ILLUMINATE	3. Check to see if trailer blackout marker lights illuminate (WP 0018 00).	If trailer blackout marker lights do not illuminate, notify Field Maintenance.
	1. Check to see if towing vehicle blackout stoplights illuminate (WP 0018 00).	If towing vehicle blackout stoplights do not illuminate, perform Malfunction 61 (One Or Both Rear Blackout Stoplights Do Not Illuminate).
	2. Check circuit breaker CB39 in PCB to see if it is tripped	1. Remove PDP cover (WP 0113 00).
		2. If circuit breaker is tripped, push in to reset.
		3. Position master power switch to on (WP 0004 00).



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
78. TRAILER BLACKOUT STOPLIGHTS DO NOT ILLUMINATE - Continued		4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, Notify Field Maintenance. 5. Position master power switch to off (WP 0004 00). 6. Install PDP cover (WP 0113 00).
	3. Check to see if trailer blackout stoplights illuminate (WP 0018 00).	If trailer blackout stoplights do not illuminate, notify Field Maintenance.
79. INTERVEHICULAR CLEARANCE LIGHTS DO NOT ILLUMINATE	1. Check to see if towing vehicle clearance lights illuminate (WP 0018 00).	If towing vehicle clearance lights do not illuminate, perform Malfunction 56 (Side And/Or Rear Marker Lights Do Not Illuminate).
	2. Check to see if intervehicular clearance lights illuminate (WP 0018 00).	If intervehicular clearance lights do not illuminate, notify Field Maintenance.
80. INTERVEHICULAR LEFT TURN SIGNAL DOES NOT ILLUMINATE	1. Check to see if towing vehicle left turn signal illuminates (WP 0007 00).	If towing vehicle left turn signal does not illuminate, perform Malfunction 68 (Front And Rear Turn Signals Do Not Illuminate).
	2. Check to see if intervehicular left turn signal illuminates (WP 0007 00).	If intervehicular left turn signal does not illuminate, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

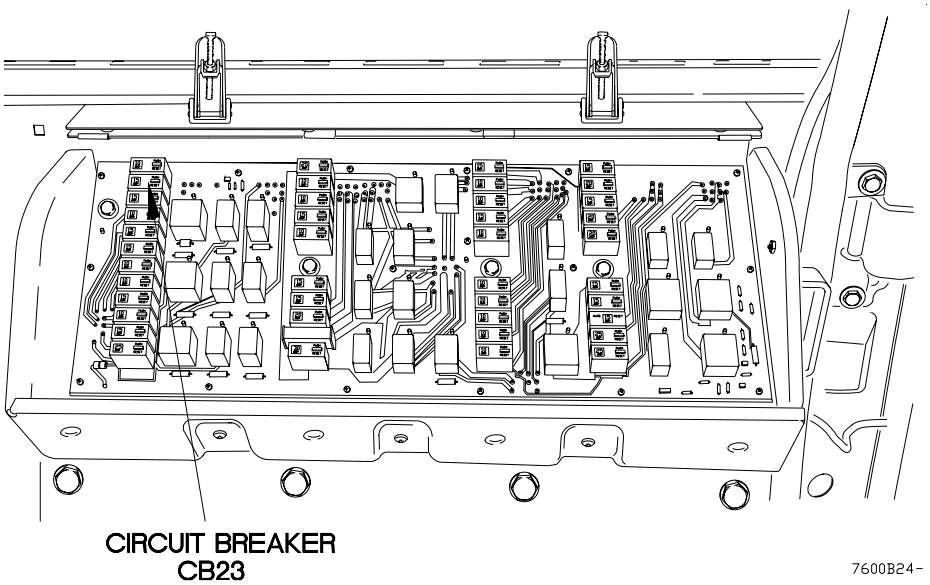
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
81. INTERVEHICULAR RIGHT TURN SIGNAL DOES NOT ILLUMINATE	1. Check to see if towing vehicle right turn signal illuminates (WP 0007 00).	If towing vehicle right turn signal does not illuminate, perform Malfunction 68 (Front And Rear Turn Signals Do Not Illuminate).
	2. Check to see if intervehicular right turn signal illuminates (WP 0007 00).	If intervehicular right turn signal does not illuminate, notify Field Maintenance.
82. INTERVEHICULAR STOPLIGHTS DO NOT ILLUMINATE	1. Check to see if towing vehicle stoplights illuminate (WP 0018 00).	If towing vehicle stoplights do not illuminate, perform Malfunction 70 (One Or Both Stoplights Do Not Illuminate).
	2. Check to see if intervehicular stoplights illuminate (WP 0018 00).	If intervehicular stoplights do not illuminate, notify Field Maintenance.
83. INTERVEHICULAR TAILLIGHTS DO NOT ILLUMINATE	1. Check to see if towing vehicle taillights illuminate (WP 0018 00).	If towing vehicle taillights do not illuminate, perform Malfunction 58 (One Or Both Composite Taillights Do Not Illuminate).
	2. Check to see if intervehicular taillights illuminate (WP 0018 00).	If intervehicular taillights do not illuminate, notify Field Maintenance.
84. PERSONNEL HEATER CONTROL DOES NOT ILLUMINATE	1. Check to see if headlights illuminate (WP 0018 00, Operating Vehicle Lights).	If headlights do not illuminate, perform Malfunction 162 (All Main Light Switch Functions Do Not Operate).
	2. Check to see if personnel heater control illuminates (WP 0006 00).	If personnel heater control does not illuminate, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
85. PERSONNEL HEATER FAN DOES NOT OPERATE	1. Check circuit breaker CB23 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).
		2. If circuit breaker is tripped, push in to reset.
		3. Position master power switch to on (WP 0004 00).
		4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance.
		5. Position master power switch to off (WP 0004 00).
		6. Install PDP cover (WP 0113 00).



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
85. PERSONNEL HEATER FAN DOES NOT OPERATE - Continued	2. Check to see if personnel heater fan operates (WP 0018 00).	If personnel heater fan does not operate, notify Field Maintenance.
86. WINDSHIELD WASHER DOES NOT OPERATE	1. Check to see if horn operates (WP 0007 00).	If horn does not operate, perform Malfunction 92 (Horn, Windshield Wipers, And Windshield Washer Do Not Operate).
	2. Check to see if windshield washer operates (WP 0007 00).	If windshield washer does not operate, notify Field Maintenance.
87. WINDSHIELD WIPER DOES NOT OPERATE ON LOW SPEED	1. Check to see if windshield wiper operates on high speed (WP 0007 00).	If windshield wiper does not operate on high speed, perform Malfunction 82 (All Windshield Wiper Speeds Do Not Operate).
	2. Check to see if windshield wiper operates on low speed (WP 0007 00).	If windshield wiper does not operate on low speed, notify Field Maintenance.
88. ALL WINDSHIELD WIPER SPEEDS DO NOT OPERATE	1. Check to see if horn operates (WP 0007 00).	If horn does not operate, perform Malfunction 92 (Horn, Windshield Wipers, And Windshield Washer Do Not Operate).
	2. Check to see if all windshield wiper speeds operate (WP 0007 00).	If all windshield wiper speeds do not operate, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

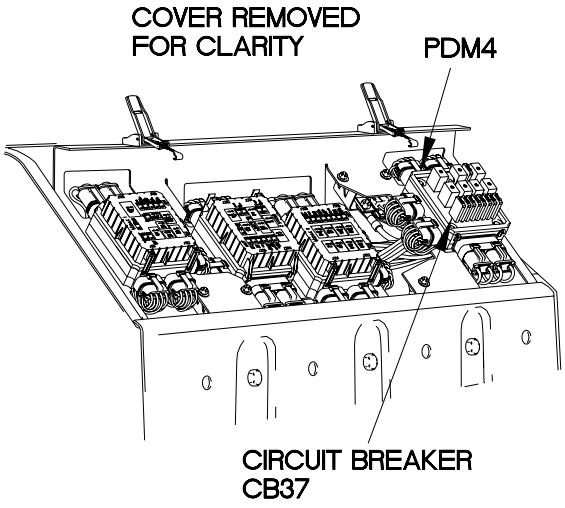
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
89. WINDSHIELD WIPER DOES NOT OPERATE ON INTERMITTENT SPEED	1. Check to see if windshield wiper operates on low speed (WP 0007 00).	If windshield wiper does not operate on low speed, perform Malfunction 87 (All Windshield Wiper Does Not Operate On Low Speed).
	2. Check to see if windshield wiper operates on intermittent speed (WP 0007 00).	If windshield wiper does not operate on intermittent speed, notify Field Maintenance.
90. WINDSHIELD WIPER DOES NOT OPERATE ON HIGH SPEED	1. Check to see if windshield wiper operates on low speed (WP 0007 00).	If windshield wiper does not operate on low speed, perform Malfunction 88 (All Windshield Wiper Speeds Do Not Operate).
	2. Check to see if windshield wiper operates on high speed (WP 0007 00).	If windshield wiper does not operate on high speed, notify Field Maintenance.
91. HORN DOES NOT OPERATE	1. Check to see if windshield washer operates (WP 0007 00).	If windshield washer does not operate, perform Malfunction 92 (Horn, Windshield Wipers, And Windshield Washer Do Not Operate).
	2. Check to see horn operates (WP 0007 00).	If horn does not operate, notify Field Maintenance.
92. HORN, WIND-SHIELD WIPERS, AND WIND-SHIELD WASHER DO NOT OPERATE	1. Does the audible alarm operate?	1. Drain air tanks (WP 0018 00). 2. Position master power switch to on (WP 0004 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
92. HORN, WIND-SHIELD WIPERS, AND WINDSHIELD WASHER DO NOT OPERATE - Continued		3. Check to see if audible alarm operates. 4. Position master power switch to off (WP 0004 00). 5. If audible alarm does not operate, perform malfunction 2 (24 VDC Circuits Do Not Operate). 6. If audible alarm operates, go to test 2 of this malfunction.
	4. Is circuit breaker CB37 tripped?	1. Remove PDP cover (WP 0113 00). 2. Open PDM 4.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

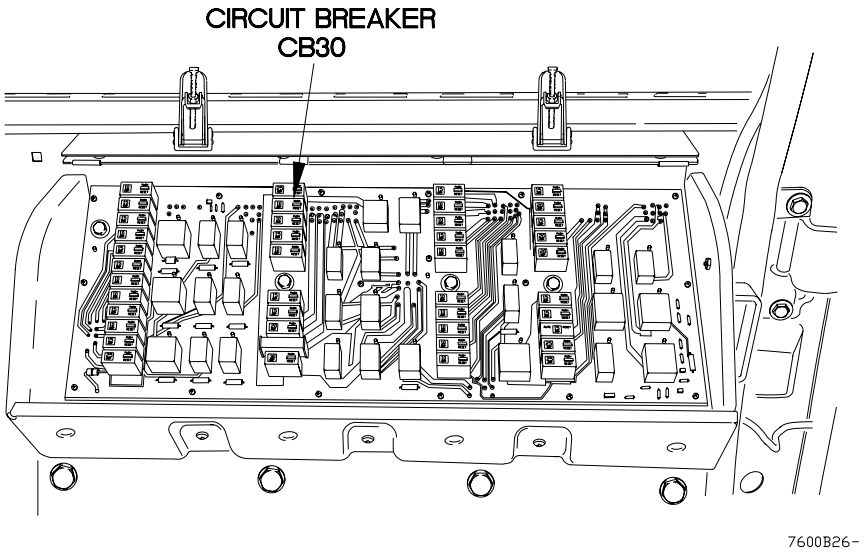
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
92. HORN, WIND-SHIELD WIPERS, AND WINDSHIELD WASHER DO NOT OPERATE - Continued		3. If circuit breaker CB37 is tripped, push button to reset.
		4. Position master power switch to on (WP 0004 00).
		5. Check circuit breaker CB37to see if it is tripped again. If circuit breaker is tripped again, notify Field Maintenance.
		6. Position master power switch to off (WP 0004 00).
		7. Close PDM 4 (WP 0113 00).
		8. Install PDP cover (WP 0113 00).
	5. Check to see if horn, windshield wipers, and windshield washer operate (WP 0007 00).	1. If horn, windshield wipers, and windshield washer do not operate, notify Field Maintenance.
93. CHEMICAL ALARM DOES NOT OPERATE	1. Check to see if CHEMICAL DETECT indicator illuminates (WP 0018 00).	If CHEMICAL DETECT indicator does not illuminate, perform Malfunction 94 (Chemical Detector Does Not Operate).
	2. Check to see if chemical alarm operates.	If chemical alarm does not operate, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
94. CHEMICAL DETECTOR DOES NOT OPERATE	1. Check circuit breaker CB30 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).
	2. Check circuit breaker CB30 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).
		3. Position master power switch to on (WP 0004 00).
		4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance.
		5. Position master power switch to off (WP 0004 00).

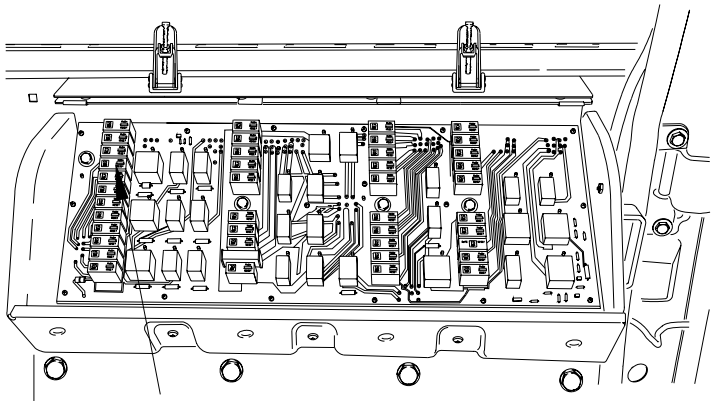


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
94. CHEMICAL DETECTOR DOES NOT OPERATE-Continued		6. Install PDP cover (WP 0113 00).
	3. Check to see if chemical detector operates.	If chemical detector does not operate, notify Field Maintenance.
95. CENTRAL TIRE INFLATION SYSTEM (CTIS) DOES NOT OPERATE	1. Check circuit breaker CB40 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).
	2. Check circuit breaker CB40 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).
		3. Position master power switch to on (WP 0004 00).
		4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

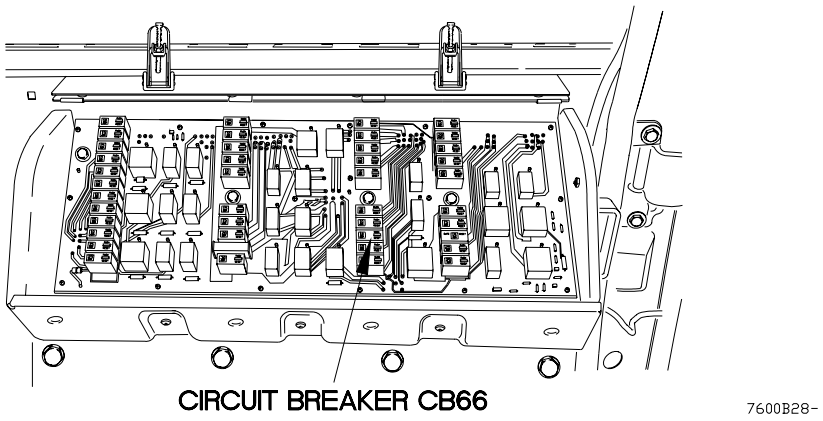
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
		6. Install PDP cover (WP 0113 00).
	3. Check to see if CTIS operates (WP 0020 00).	If CTIS does not operate, notify Field Maintenance.
96. CENTRAL TIRE INFLATION SYSTEM (CTIS) DOES NOT INFLATE TIRES	1. Check to see if CTIS deflates tires (WP 0022 00).	If CTIS does not deflate tires, perform Malfunction 95 (Central Tire Inflation (CTIS) Does Not Operate).
	2. Check to see if CTIS inflates tires (WP 0022 00).	If CTIS does not inflate tires, notify Field Maintenance.
97. CENTRAL TIRE INFLATION SYSTEM (CTIS) DOES NOT DEFLATE TIRES	1. Check to see if CTIS inflates tires (WP 0022 00).	If CTIS does not inflate tires, perform Malfunction 95 (Central Tire Inflation System (CTIS) Does Not Operate).
	2. Check to see if CTIS deflates tires (WP 0020 00).	If CTIS does not deflate tires, notify Field Maintenance.
98. CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU DOES NOT DIM IN BLACKOUT MODE	1. Check circuit breaker CB66 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
98. CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU DOES NOT DIM IN BLACKOUT MODE - Continued		2. If circuit breaker is tripped, push in to reset.
		3. Position master power switch to on (WP 0004 00).
		4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped again, notify Field Maintenance.
		5. Position master power switch to off (WP 0004 00).
		6. Install PDP cover (WP 0113 00).
	2. Check to see if CTIS ECU mode light dims in blackout mode (WP 0018 00	If CTIS ECU does not dim in blackout mode, notify Field Maintenance.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

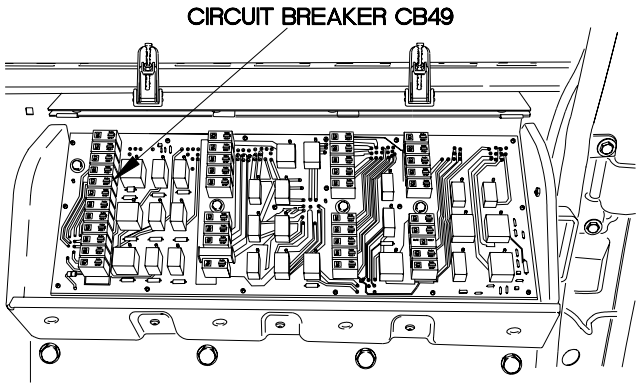
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
99. 15K SELF-RECOVERY WINCH (SRW) DOES NOT REEL IN OR PAY OUT	1. Check to see if PTO operates (WP 0065 00).	If PTO does not operate, perform Malfunction 102 (Power Take-Off {PTO Does Not Operate}).
	2. Check to see if 15K SRW operates (WP 0065 00).	If 15K SRW does not operate, notify Field Maintenance.
100. 15K SELF-RECOVERY WINCH (SRW) DOES NOT REEL IN	1. Check to see if 15K SRW pays out (WP 0065 00).	If 15K SRW does not pay out, perform Malfunction 99 (15K Self-Recovery Winch (SRW) Does Not Reel In Or Pay Out).
	2. Check to see if 15K SRW reels in (WP 0065 00).	If 15K SRW does not reel in, notify Field Maintenance.
101. 15K SELF-RECOVERY WINCH (SRW) DOES NOT PAY OUT	1. Check to see if 15K SRW reels in (WP 0065 00).	If 15K SRW does not reel in, perform Malfunction 99 (15K Self-Recovery Winch (SRW) Does Not Reel In Or Pay Out).
	2. Check to see if 15K SRW pays out (WP 0065 00).	If 15K SRW does not pay out, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
NOTE Perform PTO Troubleshooting (WP 0083 00, Malfunction 1, Power Take-Off (PTO) Does Not Engage) before starting here.		
102. POWER TAKE-OFF (PTO) DOES NOT ENGAGE	1. Check circuit breakers CB43 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).
		2. Position master power switch to on (WP 0004 00).
		3. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance.
		4. Position master power switch to off (WP 0004 00).
		5. Install PDP cover (WP 0113 00).
	2. Check to see if PTO engages (WP 0065 00).	If PTO does not engage, notify Field Maintenance.

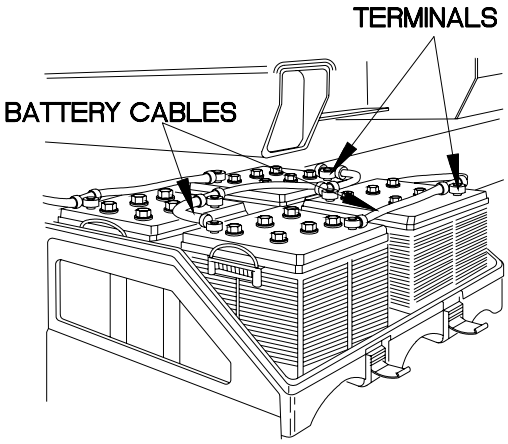


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
103. ELECTRICAL SYSTEM DOES NOT MAINTAIN A CHARGE IN BATTERIES / CHARGING SYSTEM INDICATOR ILLUMINATES	1. Has Preventative Maintenance Checks and Services (PMCS) Before checks been performed?	1. If PMCS Before checks have not been performed, perform M1078 A1 Series Preventative Maintenance Checks and Services (PMCS) (WP 0103 00) Before Checks.
		2. If PMCS Before checks have been performed, go to test 2 of this malfunction.
	2. Are batteries, battery cables, and terminal post free from damage and corrosion?	1. Remove battery box cover (WP 0108 00).
		2 Check batteries, battery cables, and terminal posts for apparent damage and corrosion.



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ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
103. ELECTRICAL SYSTEM DOES NOT MAINTAIN A CHARGE IN BATTERIES / CHARGING SYSTEM INDICATOR ILLUMINATES - Continued		4. If no damage or corrosion is present, go to test 3 of this malfunction.
	3. Are batteries cells at appropriate fluid levels (WP 0108 00)?	1. If batteries cells are not at appropriate level, notify Field Maintenance.
		2. If batteries cells are at appropriate level, go to test 4 of this malfunction.
	4. Is vehicle S/N 18,550 to 199,999?	1. If vehicle S/N is not 18,550 to 199,999 notify Field Maintenance.
		2. If vehicle S/N is 18,550 to 199,999 go to test 5 of this malfunction.
	5. Does BATTERY DISCONX indicator illuminate while vehicle engine is running?	1. Start engine (WP 0018 00).
		2. Allow engine to run for approximately two minutes.
		3. Check to see if BATTERY DISCONX indicator illuminates while engine is running (WP 0004 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
103. ELECTRICAL SYSTEM DOES NOT MAINTAIN A CHARGE IN BATTERIES / CHARGING SYSTEM INDICATOR ILLUMINATES - Continued		4. If BATTERY DISCONX indicator does not illuminate, go to test 6 of this malfunction.
		5. If BATTERY DISCONX indicator illuminates, notify Field Maintenance.
		6. Shut down engine (WP 0018 00).
	6. Is vehicle S/N 100,001 to 199,999?	1. If vehicle S/N is not 100,001 to 199,999 go to test 7 of this malfunction.
		2. If vehicle S/N is 100,001 to 199,999 notify Field Maintenance.
	7. Does ENGINE OIL PRESSURE indicator remain illuminated after engine starts?	1. Start engine (WP 0018 00).
		2. Check to see if ENGINE OIL PRESSURE indicator remains illuminated after engine starts (WP 0004 00).
		3. If ENGINE OIL PRESSURE indicator does not remain illuminated after engine starts, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

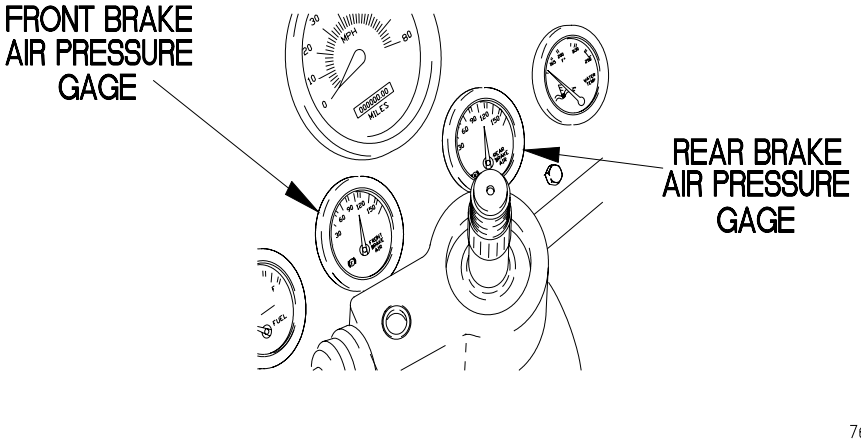
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
103. ELECTRICAL SYSTEM DOES NOT MAINTAIN A CHARGE IN BATTERIES / CHARGING SYSTEM INDICATOR ILLUMINATES - Continued		4. If ENGINE OIL PRESSURE indicator remains illuminated after engine starts, perform Electrical System Troubleshooting Malfunction 37 (ENGINE OIL PRESSURE Indicator Illuminates While Engine is Running/Remains Illuminated 10 Seconds After Engine Starts).
104. DIFFERENTIAL LOCK SOLENOID DOES NOT OPERATE		Notify Field Maintenance.
105. ENGINE FAN RUNS CONSTANTLY	1. Check to see if engine fan turns off using engine fan off switch (WP 0018 00).	If engine fan does not turn off using engine fan off switch, perform Malfunction 106 (Engine Fan Does Not Turn Off Using Engine Fan Off Switch).
	2. Check to see if air tanks are pressurized.	1. Start engine (WP 0018 00).
		2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.
		3. If FRONT BRAKE AIR or REAR BRAKE AIR pressure gage does not register 120 psi, perform Air System Troubleshooting (WP 0085 00, Malfunction 1, Air System Loses Pressure During Operation/Slow Air Pressure Buildup).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
105. ENGINE FAN RUNS CONSTANTLY - Continued	3. Check to see if engine fan runs constantly (WP 0004 00).	If engine fan runs constantly, notify Field Maintenance.
106. ENGINE FAN DOES NOT TURN OFF USING ENGINE FAN OFF SWITCH	1. Check to see if air tanks are pressurized.	1. Start engine (WP 0018 00). 2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.



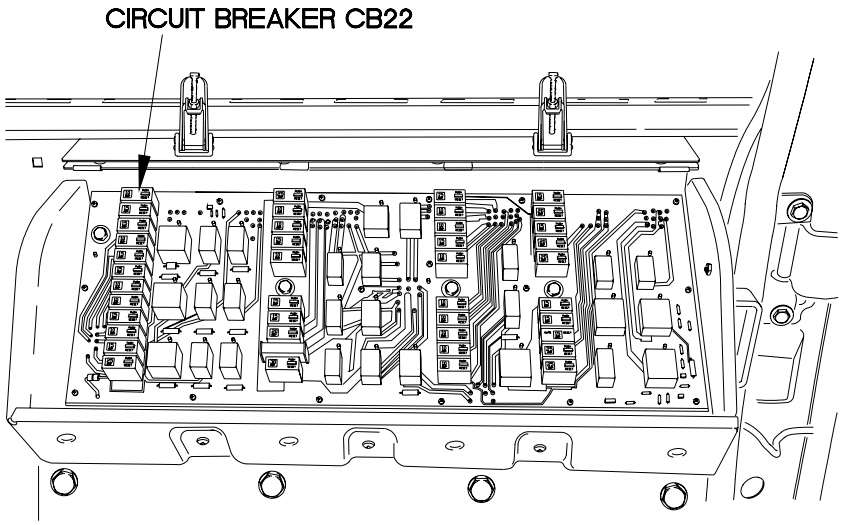
		4. If FRONT BRAKE AIR or REAR BRAKE AIR pressure gage does not register 120 psi, perform WP 0085 00, Malfunction 1, Air System Loses Pressure During Operation/Slow Air Pressure Buildup.)

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
106. ENGINE FAN DOES NOT TURN OFF USING ENGINE FAN OFF SWITCH - Continued	2. Check circuit breaker CB22 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).
		2. If circuit breaker is tripped, push in to reset. 3. Start engine (WP 0018 00). 4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance.

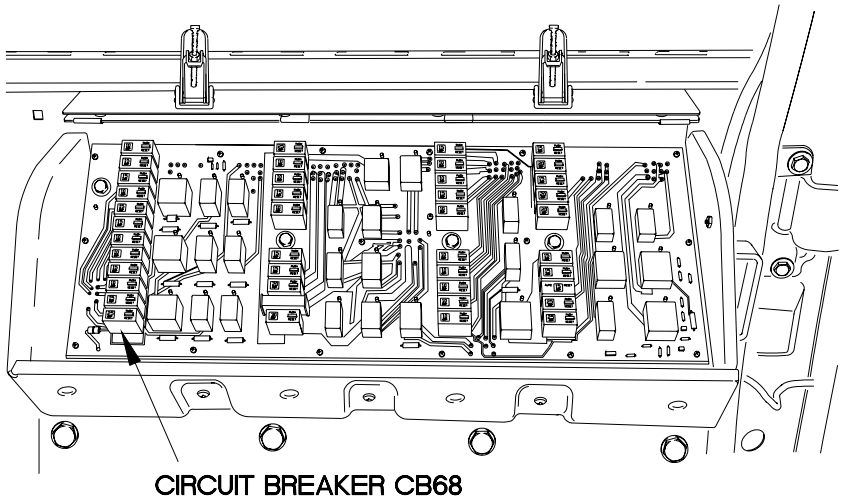


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
106. ENGINE FAN DOES NOT TURN OFF USING ENGINE FAN OFF SWITCH - Continued		5. Shut down engine (WP 0018 00)
		6. Install PDP cover (WP 0113 00).
	3. Check to see if engine fan turns off using engine fan off switch (WP 0018 00).	If engine fan does not turn off using engine fan off switch, notify Field Maintenance.
107. ETHER STARTING AID DOES NOT OPERATE	1. Check circuit breaker CB68 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).
		2. If circuit breaker is tripped, push in to reset.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

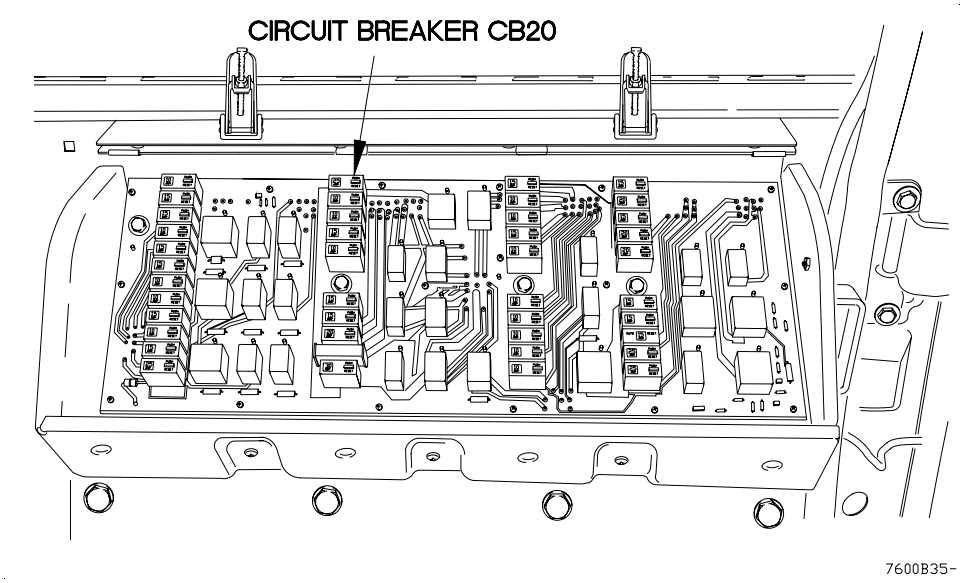
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
107. ETHER STARTING AID DOES NOT OPERATE - Continued		3. Position master power switch to on (WP 0004 00).
		4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance.
		5. Position master power switch to off (WP 0004 00).
		6. Install PDP cover (WP 0113 00).
	2. Check to see if ether cylinder is damaged (WP 0103 00, Table 5, Item 2).	If ether cylinder is damaged, notify Field Maintenance.
	3. Check to see if ether starting aid operates (WP 0051 00).	If ether starting aid does not operate, perform Fuel System Troubleshooting (WP 0076 00, malfunction 2, Ether Starting Aid Does Not Operate).
108. RADIO DOES NOT OPERATE	1. Check circuit breaker CB20 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
108. RADIO DOES NOT OPERATE - Continued		2. If circuit breaker is tripped, push in to reset.
		3. Position master power switch to on (WP 0004 00). 4. Position radio to on. 5. Position radio to off. 6. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance. 7. Position master power switch to off (WP 0004 00). 8. Install PDP cover (WP 0113 00).

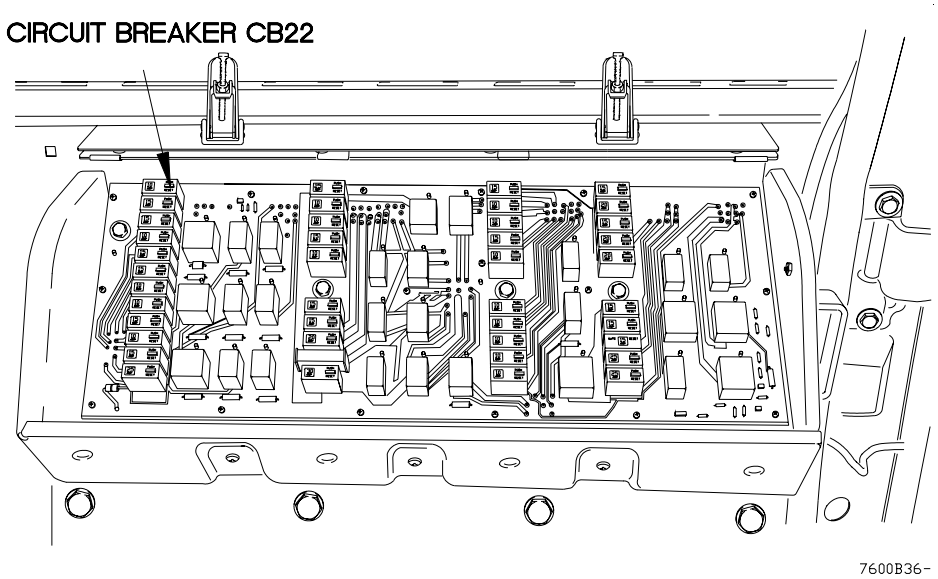


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
108. RADIO DOES NOT OPERATE - Continued	2. Check to see if radio operates.	If radio does not operate, notify Field Maintenance.
109. BATTERY TESTER DOES NOT OPERATE		Notify Field Maintenance.
110. EXHAUST BRAKE DOES NOT OPERATE		Notify Field Maintenance.
111. INLET AIR HEATER DOES NOT OPERATE	1. Check circuit breaker CB22 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00). 2. If circuit breaker is tripped, push in to reset.
		3. Position master power switch to on (WP 0004 00).



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
111. INLET AIR HEATER DOES NOT OPERATE - Continued		4. Check circuit breaker to see if it is tripped. If circuit breaker is tripped or trips again, notify Field Maintenance. 5. Position master power switch to off (WP 0004 00). 6. Install PDP cover (WP 0113 00).
	2. Check to see if inlet air heater operates (WP 0018 00).	If inlet air heater does not operate, notify Field Maintenance.
112. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) DOES NOT OPERATE		Notify Field Maintenance.
113. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.
114. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) HOIST UP DOES NOT OPERATE FROM REMOTE CONTROL UNIT	1. Check to see if MHC boom up operates from REMOTE CONTROL UNIT (WP 0030 00).	If MHC boom does not operate from REMOTE CONTROL UNIT, perform Malfunction 114 (Material Handling Crane [MHC] Does Not Operate from Remote Control Unit).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
114. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) HOIST UP DOES NOT OPERATE FROM REMOTE CONTROL UNIT - Continued	2. Check to see if MHC hoist up operates from REMOTE CONTROL UNIT.	1. Attempt to operate MHC hoist up from REMOTE CONTROL UNIT (WP 0030 00). 2. If MHC hoist up does not operate from REMOTE CONTROL UNIT, notify Field Maintenance.
115. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) HOIST DOWN DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.
116. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) BOOM UP DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
117. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) BOOM DOWN DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.
118 M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) TELESCOPE IN DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.
119. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) TELESCOPE OUT DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.
120. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) SWING CW DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
121. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) SWING CCW DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.
122. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) OVERLOAD SHUTDOWN SYSTEM DOES NOT ACTIVATE		Notify Field Maintenance.
123. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) OVERLOAD SHUTDOWN SYSTEM STAYS ACTIVATED		Notify Field Maintenance.
124. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) HOIST UP LOCKOUT DOES NOT ACTIVATE		Notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

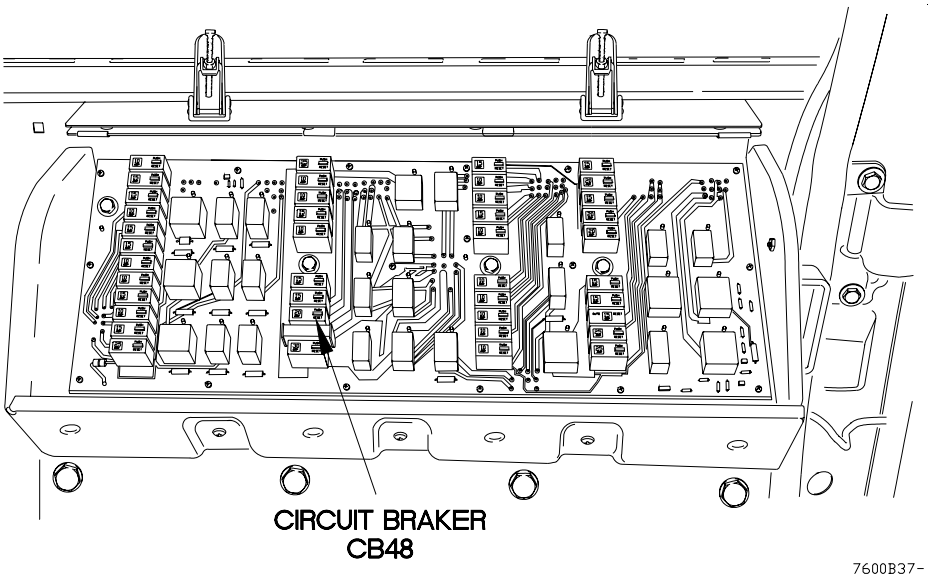
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
125. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) BOOM DOWN LOCKOUT DOES NOT ACTIVATE		Notify Field Maintenance.
126. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) BOOM UP LOCKOUT DOES NOT ACTIVATE		Notify Field Maintenance.
127. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) TELESCOPE OUT LOCKOUT DOES NOT ACTIVATE		Notify Field Maintenance.
128. STOPLIGHTS DO NOT ILLUMINATE WHEN M1088A1 TRAILER BRAKES ARE APPLIED	1. Check to see if stoplights operate when vehicle brake is depressed (WP 0018 00).	If stoplights do not operate when vehicle brake is depressed, perform Malfunction 70 (One Or Both Stoplights Do Not Illuminate.)
	2. Check to see if stoplights illuminate when trailer handbrake is applied (WP 0032 00).	If stoplights do not Illuminate when trailer handbrake is applied, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
129. M1089A1 MATERIAL HANDLING CRANE (MHC) DOES NOT OPERATE	1. Check to see if external remote control cable connections are tight.	1. Check cable connections at MHC fixed station and REMOTE CONTROL UNIT for secure connection (WP 0043 00). 2. Tighten any loose connector found. 3. If loose connector was found, attempt to operate MHC (WP 0043 00).
	2. Check circuit breaker CB48 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00). 2. If circuit breaker is tripped, push in to reset.
		3. Position master power switch to on (WP 0004 00).



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
129. M1089A1 MATERIAL HANDLING CRANE (MHC) DOES NOT OPERATE - Continued		4. If circuit breaker CB48 has tripped again, notify Field Maintenance.
	3. Perform Wrecker Hydraulic System Troubleshooting (WP 0097 00, malfunction 1, Material Handling Crane (MHC) Does Not Operate).	
130. M1089A1 MATERIAL HANDLING CRANE (MHC) DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.
131. M1089A1 MATERIAL HANDLING CRANE (MHC) HOIST UP DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
132. M1089A1 MATERIAL HANDLING CRANE (MHC) HOIST DOWN DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.
133. M1089A1 MATERIAL HANDLING CRANE (MHC) BOOM UP DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.
134. M1089A1 MATERIAL HANDLING CRANE (MHC) BOOM DOWN DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.
135. M1089A1 MATERIAL HANDLING CRANE (MHC) TELESCOPE IN DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
136. M1089A1 MATERIAL HANDLING CRANE (MHC) TELESCOPE OUT DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.
137. M1089A1 MATERIAL HANDLING CRANE (MHC) SWING CW DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.
138. M1089A1 MATERIAL HANDLING CRANE (MHC) SWING CCW DOES NOT OPERATE FROM REMOTE CONTROL UNIT		Notify Field Maintenance.
139. M1089A1 MATERIAL HANDLING CRANE (MHC) HOIST UP LOCKOUT DOES NOT ACTIVATE		Notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

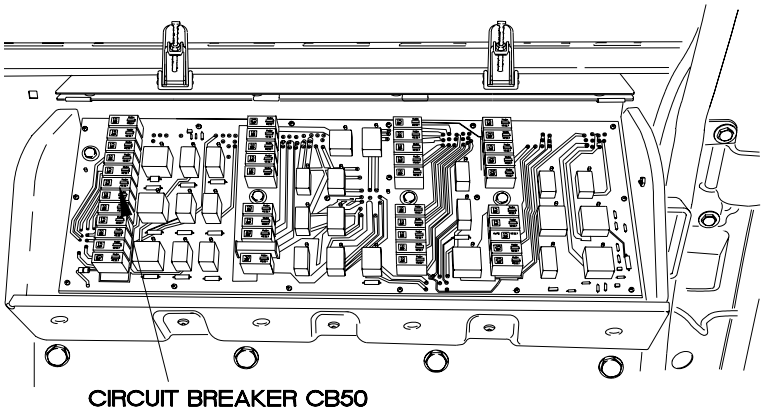
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
140. M1089A1 MATERIAL HANDLING CRANE (MHC) BOOM DOWN LOCKOUT DOES NOT ACTIVATE		Notify Field Maintenance.
141. M1089A1 MATERIAL HANDLING CRANE (MHC) BOOM UP LOCKOUT DOES NOT ACTIVATE		Notify Field Maintenance.
142. M1089A1 MATERIAL HANDLING CRANE (MHC) TELESCOPE OUT LOCKOUT DOES NOT ACTIVATE		Notify Field Maintenance.
143. M1089A1 MATERIAL HANDLING CRANE (MHC) OVERLOAD SHUTDOWN SYSTEM DOES NOT ACTIVATE		Notify Field Maintenance.
144. M1089A1 MATERIAL HANDLING CRANE (MHC) OVERLOAD SHUTDOWN SYSTEM STAYS ACTIVATED		Notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
145. ALL WRECKER FUNCTIONS DO NOT OPERATE FROM WRECKER CONTROL PANEL AND WRECKER REMOTE CONTROL	1. Check circuit breaker CB50 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00). 2. If circuit breaker is tripped, push in to reset.
		3. Position master power switch to on (WP 0004 00). 4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped or trips again, notify Field Maintenance. 5. Position master power switch to off (WP 0004 00). 6. Install PDP cover (WP 0113 00).



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
145. ALL WRECKER FUNCTIONS DO NOT OPERATE FROM WRECKER CONTROL PANEL AND WRECKER REMOTE CONTROL - Continued	2. Check to see if wrecker functions operate from WRECKER CONTROL PANEL and WRECKER REMOTE CONTROL (WP 0037 00).	If wrecker functions do not operate from WRECKER CONTROL PANEL and WRECKER REMOTE CONTROL, notify Field Maintenance.
146. ALL WRECKER FUNCTIONS DO NOT OPERATE FROM WRECKER REMOTE CONTROL	1. Check to see if wrecker functions operate from WRECKER CONTROL PANEL (WP 0037 00).	If wrecker functions do not operate from WRECKER CONTROL PANEL, perform Malfunction 145 (All Wrecker Functions Do Not Operate From WRECKER CONTROL PANEL And WRECKER REMOTE CONTROL).
	2. Check to see if wrecker functions operate from WRECKER REMOTE CONTROL (WP 0037 00).	If wrecker functions do not operate from WRECKER REMOTE CONTROL, notify Field Maintenance.
147. ALL WRECKER FUNCTIONS DO NOT OPERATE FROM WRECKER CONTROL PANEL	1. Check to see if wrecker functions operate from WRECKER REMOTE CONTROL (WP 0037 00).	If wrecker functions do not operate from WRECKER REMOTE CONTROL, perform Malfunction 145 (All Wrecker Functions Do Not Operate From WRECKER CONTROL PANEL And WRECKER REMOTE CONTROL).
	2. Check to see if wrecker functions operate from WRECKER CONTROL PANEL (WP 0037 00).	If wrecker functions do not operate from WRECKER CONTROL PANEL, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
148. 30K WINCH LEFT OR RIGHT SPEED FUNCTION DOES NOT OPERATE FROM WRECKER CONTROL PANEL	1. Check to see if 30K winch left or right speed function operates from WRECKER REMOTE CONTROL (WP 0037 00).	1. If 30K winch left speed function does not operate from WRECKER REMOTE CONTROL, perform Wrecker Hydraulic System Troubleshooting (WP 0097 00, Malfunction 4, Left 30K Winch Does Not Operate).
		2. If 30K winch right speed function does not operate from WRECKER REMOTE CONTROL, perform Wrecker Hydraulic System Troubleshooting (WP 0097 00, Malfunction 9, Right 30K Winch Does Not Operate).
	2. Check to see if other wrecker functions operate from WRECKER REMOTE CONTROL (WP 0037 00).	If other wrecker functions do not operate from WRECKER REMOTE CONTROL, perform Malfunction 146 (All Wrecker Functions Do Not Operate From WRECKER REMOTE CONTROL).
	3. Check to see if 30K winch left or right speed function operates from WRECKER REMOTE CONTROL (WP 0037 00).	If 30K winch left or right speed function does not operate from WRECKER REMOTE CONTROL, notify Field Maintenance.
149. 30K WINCH LEFT OR RIGHT FREESPOOL FUNCTION DOES NOT OPERATE FROM WRECKER CONTROL PANEL	1. Check to see if 30K winch left or right freespool function operates from WRECKER CONTROL PANEL (WP 0037 00).	1. If 30K winch left freespool function does not operate from WRECKER CONTROL PANEL, perform Wrecker Hydraulic System Troubleshooting (WP 0097 00, Malfunction 4, Left 30K Winch Does Not Operate).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
149. 30K WINCH LEFT OR RIGHT FREESPOOL FUNCTION DOES NOT OPERATE FROM WRECKER CONTROL PANEL - Continued		2. If 30K winch right freespool function does not operate from WRECKER CONTROL PANEL, perform Wrecker Hydraulic System Troubleshooting (WP 0097 00, Malfunction 9, Right 30K Winch Does Not Operate).
	2. Check to see if other wrecker functions operate from WRECKER CONTROL PANEL (WP 0037 00).	If other wrecker functions do not operate from WRECKER CONTROL PANEL, perform Malfunction 147 (All Wrecker Functions Do Not Operate From WRECKER CONTROL PANEL).
	3. Check to see if 30K winch left or right freespool function operates from WRECKER CONTROL PANEL (WP 0037 00).	If 30K winch left or right freespool function does not operate from WRECKER CONTROL PANEL, notify Field Maintenance.
150. 30K WINCH DOES NOT PAY-IN	1. Has Preventative Maintenance Checks and Services (PMCS) Before checks been performed?	1. If PMCS Before checks have not been performed, perform M1083 A1 Series Preventative Maintenance Checks and Services (PMCS) (WP 0103 00 Before checks.
		2. If PMCS Before checks have been performed, go to test 2 of this malfunction.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
150. 30K WINCH DOES NOT PAY-IN-Continued	2. Verify the MAIN WINCH LH and RH FREE SPOOL switches are in the OFF position (WP 0016 00).	1. If MAIN WINCH LH and RH FREE SPOOL switches are not in the OFF position, position switches to OFF (WP 0016 00). 2. MAIN WINCH LH and RH FREE SPOOL switches are in the OFF position, notify Field Maintenance.
151. ONE WRECKER FUNCTION DOES NOT OPERATE FROM WRECKER REMOTE CONTROL	1. Check to see if wrecker function operates from WRECKER REMOTE CONTROL (WP 0037 00).	If wrecker function does not operate from WRECKER REMOTE CONTROL, perform Wrecker Hydraulic System Troubleshooting (WP 0097 00, Malfunction 4, Left 30K Winch Does Not Operate Or Malfunction 9, Right 30K Winch Does Not Operate).
	2. Check to see if other wrecker function operate from WRECKER REMOTE CONTROL(WP 0037 00).	If other wrecker functions do not operate from WRECKER REMOTE CONTROL, perform Malfunction 147 (All Wrecker Functions Do Not Operate From WRECKER CONTROL PANEL).
	3. Check to see if wrecker function operates from WRECKER CONTROL PANEL (WP 0037 00).	If wrecker function does not operate from WRECKER CONTROL PANEL, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

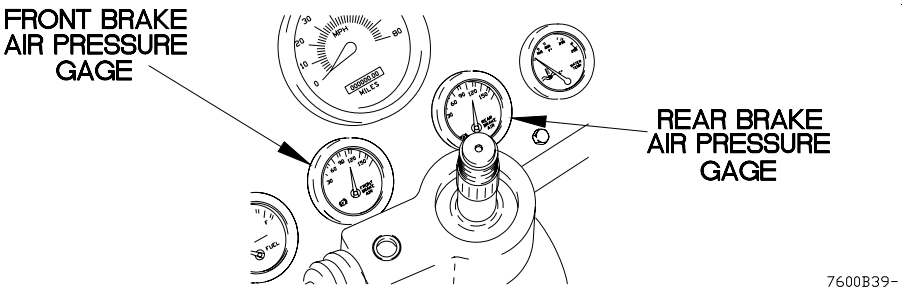
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
152. M1090A1 TAILGATE RELEASE DOES NOT OPERATE	1. Check to see if dump body raises and lowers (WP 0031 00).	If dump body does not operate, perform Malfunction 155 (DUMP BED And TAILGATE RELEASE Do Not Operate).
	2. Check to see if TAILGATE RELEASE operates (WP 0031 00).	If TAILGATE RELEASE does not operate, notify Field Maintenance.
153. DUMP BODY DOES NOT RAISE	1. Check to see if TAILGATE RELEASE operates (WP 0031 00).	If TAILGATE RELEASE does not operate, perform Malfunction 155 (Dump Bed And Tailgate Release Do Not Operate).
	2. Check to see if dump body raises (WP 0031 00).	If dump body does not raise, notify Field Maintenance.
154. DUMP BODY DOES NOT LOWER	1. Check to see if TAILGATE RELEASE operates (WP 0031 00).	If tailgate release does not operate, perform Malfunction 155 (DUMP BED And TAILGATE RELEASE Do Not Operate).
	2. Check to see if dump body lowers (WP 0031 00).	If dump body does not lower, notify Field Maintenance.
155. DUMP BED AND TAILGATE RELEASE DO NOT OPERATE	1. Check to see if air tanks are pressurized.	1. Start engine (WP 0018 00).
		2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.
		3. Shut down engine (WP 0018 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

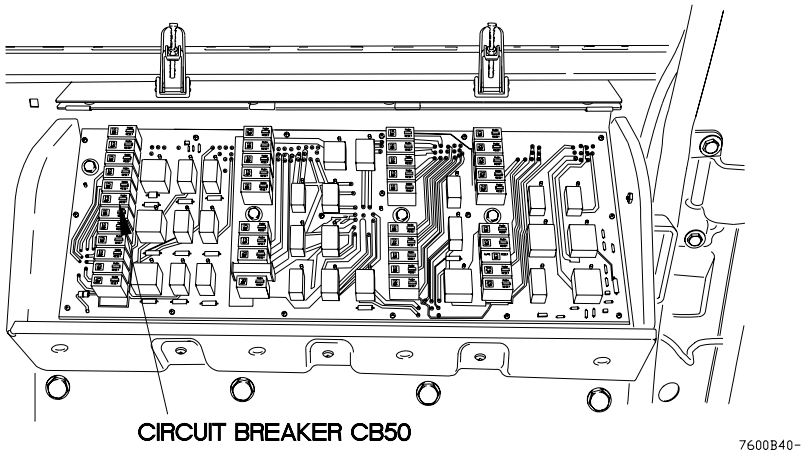
ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
155. DUMP BED AND TAILGATE RELEASE DO NOT OPERATE - Continued		4. If FRONT BRAKE AIR or REAR BRAKE AIR pressure gage does not register 120 PSI, perform Air System Troubleshooting (WP 0085 00, Malfunction 1, Air System Loses Pressure During Operation/Slow Air Pressure Buildup).



	2. Check circuit breaker CB50 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00). 2. If circuit breaker is tripped, push in to reset.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

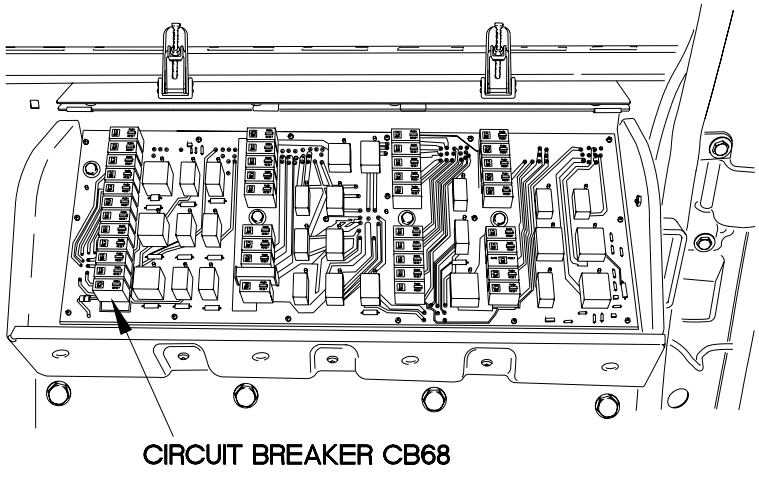
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
155. DUMP BED AND TAILGATE RELEASE DO NOT OPERATE - Continued		3. Position master power switch to on (WP 0004 00).
		4. Check circuit breaker to see if it tripped. If circuit breaker is tripped, notify Field Maintenance.
		5. Position master power switch to off (WP 0004 00).
	3. Check to see if DUMP BED and TAILGATE RELEASE operate (WP 0031 00).	6. Install PDP cover (WP 0113 00).
		7. If DUMP BED and TAILGATE RELEASE do not operate, notify Field Maintenance.
156. TRANSMISSION AUXILIARY OIL COOLER FAN(S) RUN CONSTANTLY	1. Check to see if engine fan turns off (WP 0004 00)	If engine fan does not turn off, perform Malfunction 105 (Engine Fan Runs Constantly).
	2. Check to see if transmission auxiliary oil cooler fan(s) run constantly (WP 0003 00, Cooling System).	If transmission auxiliary oil cooler fan(s) run constantly, notify Field Maintenance.
157. TRANSMISSION AUXILIARY OIL COOLER FAN DOES NOT OPERATE	1. Check circuit breaker CB68 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
157. TRANSMISSION AUXILIARY OIL COOLER FAN DOES NOT OPERATE - Continued		2. If circuit breaker CB68 is tripped, push in to reset. 3. Position master power switch to on (WP 0004 00).



		4. Check circuit breaker to see if it tripped. If circuit breaker is tripped, notify Field Maintenance. 5. Position master power switch to off (WP 0004 00). 6. Install PDP cover (WP 0113 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

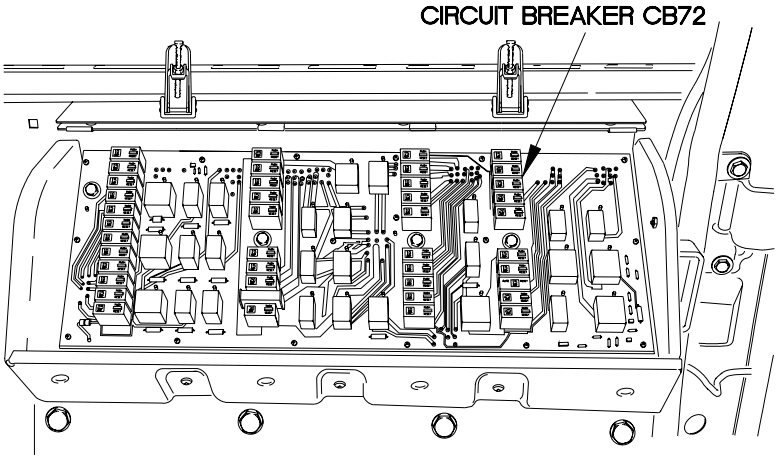
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
157. TRANSMISSION AUXILIARY OIL COOLER FAN DOES NOT OPERATE - Continued	2. Check to see if transmission auxiliary oil cooler fan operates (WP 0018 00).	If transmission auxiliary oil cooler fan does not operate, notify Field Maintenance.
158. WORKLIGHTS DO NOT ILLUMINATE	1. Check to see if hazard lights illuminate.	1. Position main light switch to STOPLIGHT (WP 0004 00). 2. Position hazard lights switch to on (WP 0004 00). 3. Check to see if hazard lights illuminate. 4. Position hazard lights switch to off (WP 0004 00). 5. Position main light switch to off (WP 0004 00). 6. If hazard lights do not illuminate, perform Malfunction 67 (Front And Rear Hazard Lights Do Not Illuminate).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
158. WORKLIGHTS DO NOT ILLUMINATE - Continued	2. Check circuit breaker CB72 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00). 2. If circuit breaker is tripped, push in to reset.
		3. Position master power switch to on (WP 0004 00). 4. Check circuit breaker to see if it tripped. If circuit breaker is tripped, notify Field Maintenance. 5. Position master power switch to off (WP 0004 00). 6. Install PDP cover (WP 0113 00).
	3. Check to see if worklights illuminate (WP 0018 00).	If worklights do not illuminate, notify Field Maintenance.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

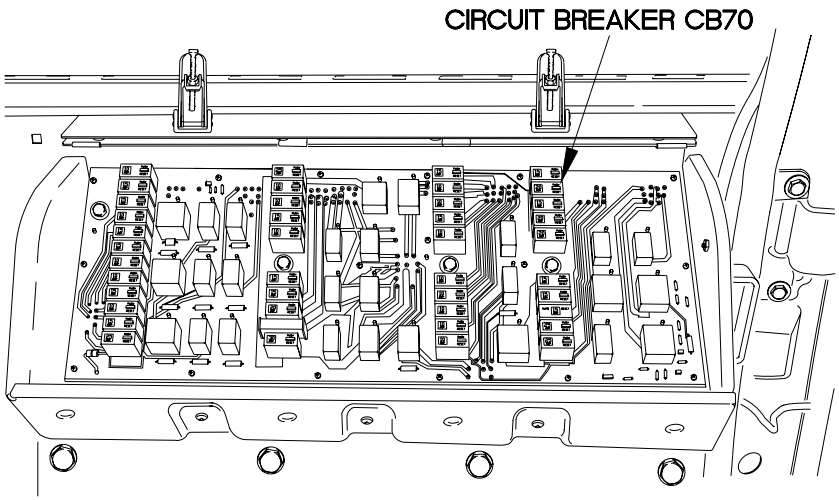
Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
159. M1088A1/ M1089A1 LH WORKLIGHT DOES NOT ILLUMINATE	1. Check to see if RH worklight illuminates (WP 0018 00).	If RH worklight does not illuminate, perform Malfunction 158 (Worklights Do Not Illuminate).
	2. Check to see if LH worklight illuminates (WP 0018 00).	If LH worklight does not illuminate, notify Field Maintenance.
160. M1088A1/ M1089A1 RH WORKLIGHT DOES NOT ILLUMINATE	1. Check to see if LH worklight illuminates (WP 0018 00).	If LH worklight does not illuminate, perform Malfunction 158 (Worklights Do Not Illuminate).
	2. Check to see if RH worklight illuminates (WP 0018 00).	If RH worklight does not illuminate, notify Field Maintenance.
161. M1088A1/ M1089A1 WORKLIGHTS DO NOT ILLUMINATE IN BLACKOUT MODE WITH BLACKOUT OVERRIDE SWITCH ON	1. Check to see if worklights illuminate in normal mode (WP 0018 00).	If worklights do not illuminate in normal mode, perform Malfunction 158 (Worklights Do Not Illuminate).
	2. Check to see if worklights illuminate in blackout mode with blackout override switch on (WP 0018 00).	If worklights do not illuminate in blackout mode with blackout override switch on, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
162. ALL MAIN LIGHT SWITCH FUNCTIONS DO NOT OPERATE	1. Check circuit breaker CB70 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00). 2. If circuit breaker is tripped, push in to reset.  7600B43- 3. Position main light switch to SER DRIVE (WP 0004 00). 4. Check circuit breaker to see if it tripped. If circuit breaker is tripped, notify Field Maintenance. 5. Position main light switch to OFF (WP 0004 00). 6. Install PDP cover (WP 0113 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

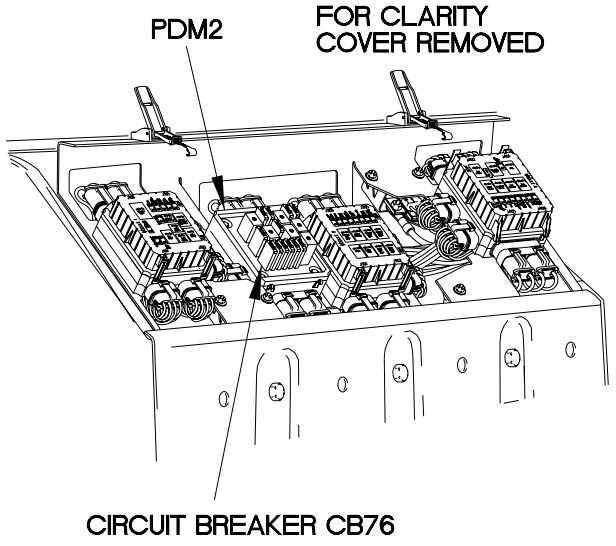
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
162. ALL MAIN LIGHT SWITCH FUNCTIONS DO NOT OPERATE - Continued	2. Check to see if main light switch functions operate.	1. Position main light switch to SER DRIVE (WP 0004 00).
		2. Check to see if headlights illuminate.
		3. Position main light switch to OFF (WP 0004 00).
		4. If main light switch functions do not operate, notify Field Maintenance.
163. ALL ELECTRICAL GAGES DO NOT OPERATE	1. Is vehicle S/N 100,001 to 199,999?	1. If vehicle S/N is not 100,001 to 199,999 go to test 2 of this malfunction.
		2. If vehicle S/N is 100,001 to 199,999 go to test 3 of this malfunction.
	Check to see if starter pushbutton operates (WP 0018 00)	1. If starter pushbutton does not operate, perform Malfunction 164, Audible Alarm, Radio, Starter Pushbutton, And Electrical Gages Do Not Operate).
		2. If starter pushbutton operates, notify Field Maintenance.
	3. Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?	1. If PMCS Before checks have not been performed, perform M1078 A1 Series Preventative Maintenance Checks and Services (PMCS) (WP 0103 00) Before checks.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
163. ALL ELECTRICAL GAGES DO NOT OPERATE - Continued		2. If PMCS Before checks have been performed, go to test 4 of this malfunction
	4. Check to see if circuit breaker CB76 is tripped.	1. Remove PDP cover (WP 0113 00). 2. Open PDM2. 3. If circuit breaker is tripped, push in to reset.
		4. Position master power switch to on (WP 0004 00). 5. Check circuit breaker CB76 to see if it is tripped again.

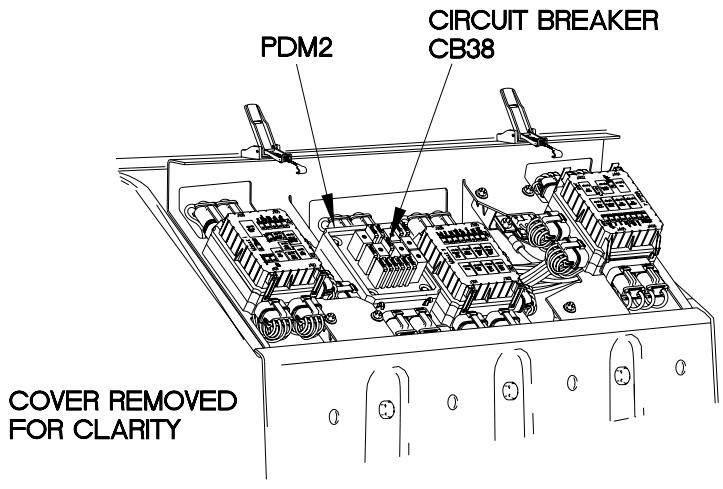


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
163. ALL ELECTRICAL GAGES DO NOT OPERATE - Continued		6. Position master power switch to off (WP 0004 00).
		7. If circuit breaker CB76 is tripped again, contact supervisor.
		8. If circuit breaker is not tripped, go to test 5 of this malfunction
	5. Check to see if circuit breaker CB38 is tripped	1. If circuit breaker CB38 is tripped, push button to reset
		2. Check circuit breaker CB38 to see if it is tripped again.
		3. Close PDM2.
		4. Install PDP cover (WP 0113 00).

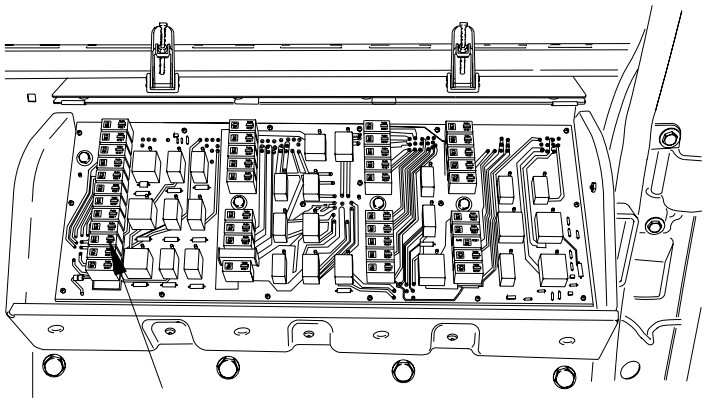


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
163. ALL ELECTRICAL GAGES DO NOT OPERATE - Continued		5. If circuit breaker CB38 is tripped again, contact supervisor. 6. If circuit breaker CB38 is not tripped again, notify Field Maintenance.
164. AUDIBLE ALARM, RADIO, STARTER PUSHBUTTON, AND ELECTRICAL GAGES DO NOT OPERATE	1. Check circuit breaker CB77 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00). 2. If circuit breaker is tripped, push in to reset.
		3. Position master power switch to on (WP 0004 00). 4. Check circuit breaker to see if it is tripped again. If circuit breaker is tripped again, notify Field Maintenance.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
164. AUDIBLE ALARM, RADIO, STARTER PUSHBUTTON, AND ELECTRICAL GAGES DO NOT OPERATE - Continued		5. Position master power switch to off (WP 0004 00).
		6. Install PDP cover (WP 0113 00).
	2. Check to see if audible alarm, radio, starter pushbutton, and electrical gages operate (WP 0018 00).	If audible alarm, radio, starter pushbutton, and electrical gages do not operate, notify Field Maintenance.
165. LO IDLE/HI IDLE SWITCH DOES NOT OPERATE	Check to see if LO IDLE/HI IDLE switch does not operate.	1. Position PTO switch to off (WP 0005 00).
		2. Start engine (WP 0018 00).
		3. Position LO IDLE/HI IDLE switch to HI IDLE (WP 0004 00).
		4. Note if LO IDLE/HI IDLE switch operates.
		5. Shut down engine (WP 0018 00).
		6. If LO IDLE/HI IDLE switch does not operate, notify Field Maintenance.
166. MASTER POWER SWITCH DOES NOT SHUT DOWN ENGINE	1. Is vehicle S/N 18,550 or higher?	1. If vehicle is not S/N 18,550 or higher, go to test 2 of this malfunction.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

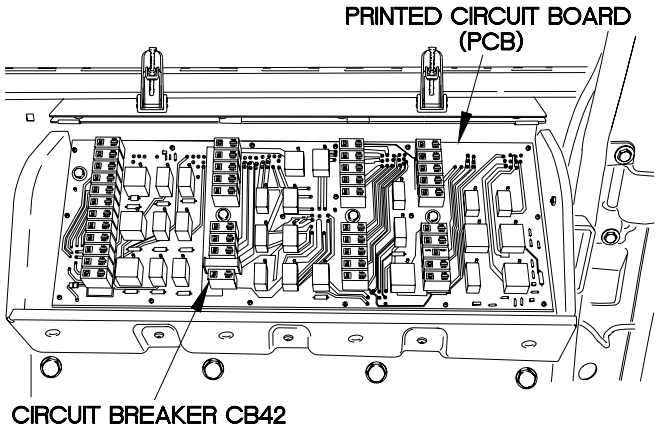
Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
166. MASTER POWER SWITCH DOES NOT SHUT DOWN ENGINE - Continued		2. If vehicle is S/N 18,550 or higher, go to test 3 of this malfunction.
	2. Shut down engine by removing circuit breaker CB42.	1. Position master power switch to off (WP 0004 00). 2. Remove Power Distribution Panel Cover (WP 0113 00)

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 serious injury or death to personnel.

		3. Remove circuit breaker CB42 from Printed Circuit Board (PCB). 4. Remove circuit breaker CB42 from Printed Circuit Board (PCB).

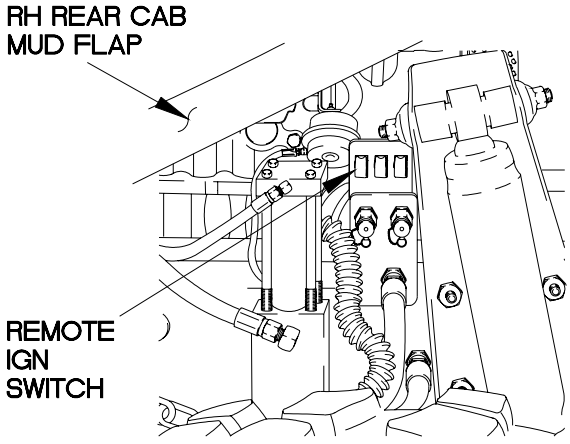


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
166. MASTER POWER SWITCH DOES NOT SHUT DOWN ENGINE - Continued		5. Install PDP cover (WP 0113 00). 6. Notify Field Maintenance.
	4. Verify remote IGN switch is in the OFF position (WP 0011 00).	1. Position master power switch to off (WP 0004 00). 2. Lift RH rear cab mud flap. 3. Position remote IGN switch to OFF (WP 0011 00). 4. Position remote IGN switch to OFF (WP 0011 00).
	5. Shut down engine by positioning Manual Battery Disconnect Switch (MBDS) to disconnect (OFF).	1. Position MBDS to disconnect (OFF) (WP 0011 00).

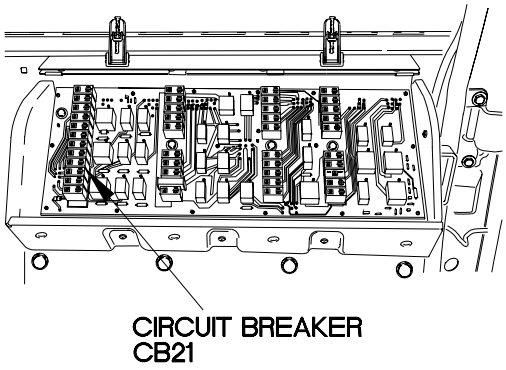


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

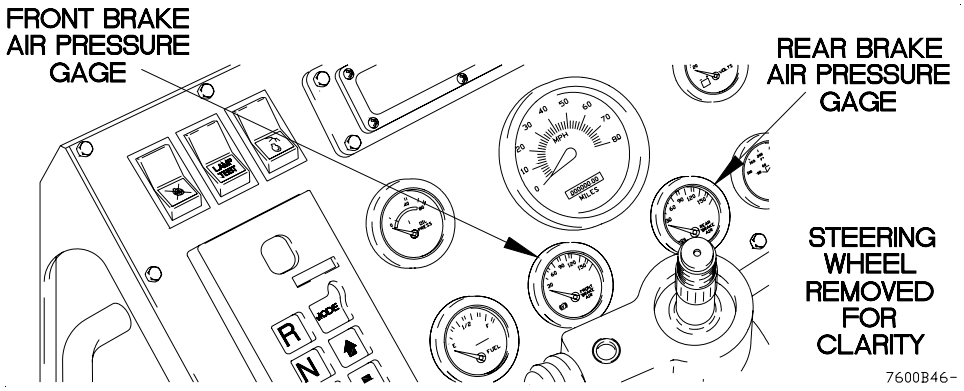
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
166. MASTER POWER SWITCH DOES NOT SHUT DOWN ENGINE - Continued		2. After engine shuts down, position MBDS to connect (ON) (WP 0011 00). 3. Notify Field Maintenance.
167. AIR DRYER HEATER DOES NOT OPERATE	1. Check circuit breaker CB21 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00). 2. If circuit breaker is tripped, push in to reset.
		3. Position master power switch to on (WP 0004 00). 4. If circuit breaker CB21 has tripped again, notify Field Maintenance.
	2. Check to see if air tanks are pressurized.	1. Start engine (WP 0018 00).



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

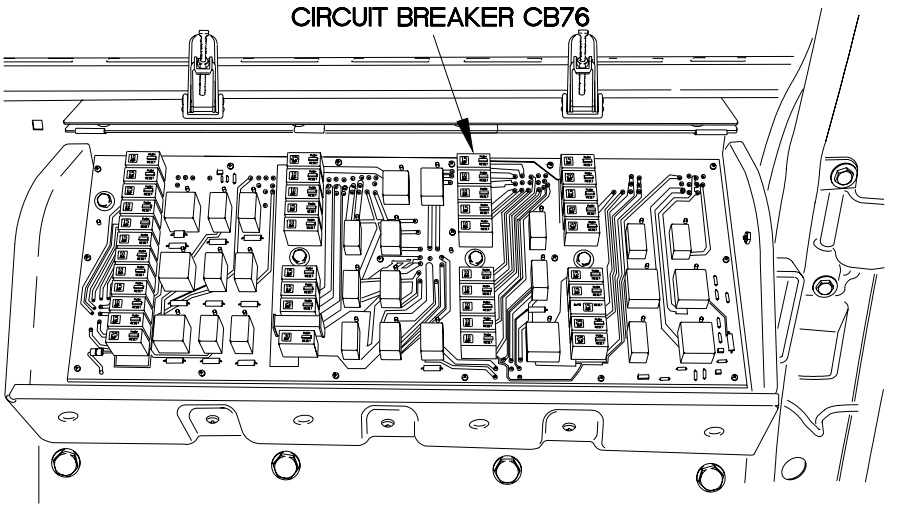
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
167. AIR DRYER HEATER DOES NOT OPERATE - Continued		2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages. 3. Shut down engine (WP 0018 00).
		
		4. If FRONT BRAKE AIR or REAR BRAKE AIR pressure gage does not register 120 psi, perform WP 0085 00, Malfunction 1, Air System Loses Pressure During Operation/Slow Air Pressure Buildup).
	3. Check to see if air hoses and fittings are free from leaks.	If air hoses and fittings are not free from leaks, notify Field Maintenance to repair leaks.
	4. Check to see if air dryer heater operates.	If air dryer heater does not operate, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
168. STOPLIGHTS AND 12 VDC INDICATOR PANEL CIRCUITS DO NOT OPERATE	1. Is vehicle S/N 100,001 to 199,999?	1. If vehicle S/N is not 100,001 to 199,999 got to test 2 of this malfunction. 2. If vehicle S/N is 100,001 to 199,999 go to test 3 of this malfunction.
	2. Check circuit breaker CB76 in PCB to see if it is tripped.	1. Remove PDP cover (WP 0113 00). 2. If circuit breaker is tripped, push in to reset.
		3. Position master power switch to on (WP 0004 00). 4. If circuit breaker CB76 has tripped again, notify Field Maintenance.

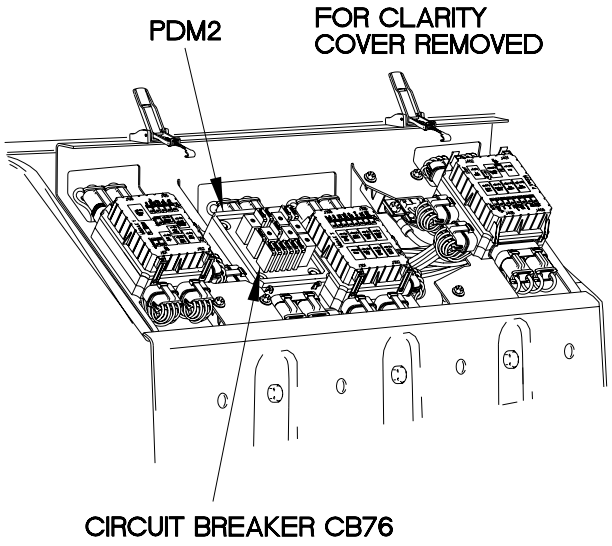


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
168. STOPLIGHTS AND 12 VDC INDICATOR PANEL CIRCUITS DO NOT OPERATE - Continued		5. If circuit breaker CB76 has not tripped again, perform test 4 of this malfunction.
	3. Check circuit breaker CB76 in PCB to see if it is stripped.	1. Remove PDP cover (WP 0113 00). 2. Open PDM 2. 3. If circuit breaker is tripped, push in to reset.
		4. Position master power switch to on (WP 0004 00). 5. If circuit breaker CB76 has tripped again, contact supervisor.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
168. STOPLIGHTS AND 12 VDC INDICATOR PANEL CIRCUITS DO NOT OPERATE - Continued		6. If circuit breaker CB76 has not tripped again, perform test 4 of this malfunction.
	4. Check to see if stoplights and 12 VDC indicator panel illuminate.	1. Position master power switch to on (WP 0004 00). 2. Position main light switch to STOPLIGHT (WP 0004 00). 3. Depress brake pedal. 4. Check to see if stoplights illuminate. 5. Release brake pedal. 6. Position main light switch to OFF (WP 0004 00). 7. Hold LAMP TEST switch in on position (WP 0004 00). 8. Check to see if lighted indicator display illuminates. 9. Release LAMP TEST switch. 10. Position master power switch to off (WP 0004 00). 11. If stoplights and 12 VDC indicator panel do not illuminate, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
169. DUMP BED UP/DOWN SWITCH DOES NOT ILLUMINATE.	1. Check to see if auxiliary panel illuminates (WP 0005 00).	If auxiliary panel does not illuminate, perform Malfunction 20 (Auxiliary Panel Does Not Illuminate).
	2. Check to see if DUMP BED UP/DOWN switch illuminates (WP 0005 00).	If DUMP BED UP/DOWN switch does not illuminate, notify Field Maintenance.
170. DUMP BED TAILGATE RELEASE SWITCH DOES NOT ILLUMINATE	1. Check to see if auxiliary panel illuminates (WP 0005 00).	If auxiliary panel does not illuminate, perform Malfunction 20 (Auxiliary Panel Does Not Illuminate).
	2. Check to see if dump bed tailgate release switch illuminates (WP 0005 00).	If dump bed tailgate release switch does not illuminate, notify Field Maintenance.
171. REMOTE START DOES NOR OPERATE (VEHICLE S/N 18,550 OR HIGHER).	Check to see if engine starts using instrument panel controls.	1. Position master power switch to on (WP 0004 00). 2. Attempt to start engine (WP 0016 00). 3. If engine starts, check to see if any instrument panel gages operate. If engine starts and any gages operate, Notify Field Maintenance. 4. Position master power switch to off (WP 0004 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
172. 24 VOLTS GAGE DOES NOT OPERATE OR IS INACCURATE (VEHICLE S/N 100,001 TO 199,999)	1. Does any other electrical gage operate?	1. Position master power switch to on (WP 0004 00). 2. Check to see if any other electrical gages operate. 3. Position master power switch to off (WP 0004 00). 4. If no other electrical gage operates, perform Malfunction 163 (All Electrical Gages Do Not Operate). 5. If other electrical gages operate, go to test 2 of this malfunction.
	2. Does OIL PRESS gage operate?	1. Start engine (WP 0020 00). 2. Check to see if OIL PRESS gage operates. 3. Shut down engine (WP 0020 00). 4. If OIL PRESS gage does not operate, perform Malfunction 174 (24 VOLTS Gage, OIL PRESS Gage, WATER TEMP Gage, and Speedometer Do Not Operate). 5. If OIL PRESS gage operates, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
173. LAMP TEST SWITCH DOES NOT OPERATE (VEHICLE S/N 100,001 TO 199,999)	1. Does engine crank?	1. Attempt to start engine (WP 0020 00). 2. If engine does not crank, perform Malfunction 1 (Engine Does Not Crank). 3. If engine cranks, go to test 2 of this malfunction.
	2. Do lighted indicator display icons illuminate in chase pattern?	1. Wait until vehicle has been running for 45 seconds and check lighted indicator display for icons illuminating in chase pattern. 2. Shut down engine (WP 0020 00). 3. If lighted indicator display icons illuminate in chase pattern, perform Malfunction 175 (Lighted Indicator Display Icons Illuminate in Chase Pattern). 4. If lighted indicator display icons do not illuminate in chase pattern, go to test 3 of this malfunction.
	3. Do stoplights illuminate?	1. Position master power switch to on (WP 0004 00). 2. Position main light switch to STOPLIGHT (WP 0004 00). 3. Depress brake pedal. 4. Check to see if stoplights illuminate.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
173. LAMP TEST SWITCH DOES NOT OPERATE (VEHICLE S/N 100,001 TO 199,999) - Continued		5. Release brake pedal. 6. Position main light switch to OFF (WP 0004 00). 7. Position master power switch to off (WP 0004 00). 8. If stoplights do not illuminate, perform Malfunction 168 (Stoplights and 12 VDC Indicator Panel Circuits Do Not Operate). 9. If stoplights illuminate, notify Field Maintenance.
174. 24 VOLTS GAGE, OIL PRESS GAGE, WATER TEMP GAGE, AND SPEEDOMETER DO NOT OPERATE (VEHICLE S/N 100,001 TO 199,999)		Notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
175. Lighted Indicator Display Icons Illuminate in Chase Pattern (VEHICLE S/N 100,001 TO 199,999)	1. Do any electrical gages operate?	1. Position master power switch to on (WP 0004 00). 2. Check to see if any electrical gages operate. 3. Position master power switch to off (WP 0004 00). 4. If no electrical gages operate, perform Malfunction 163 (All Electrical Gages Do Not Operate). 5. If electrical gages operate, notify Field Maintenance.
176. 12 VOLTS GAGE DOES NOT OPERATE OR IS INACCURATE (VEHICLE S/N 100,001 TO 199,999)	1. Does any other electrical gage operate?	1. Position master power switch to on (WP 0004 00). 2. Check to see if any other electrical gages operate. 3. Position master power switch to off (WP 0004 00). 4. If no other electrical gage operates, perform Malfunction 163 (All Electrical Gages Do Not Operate). 5. If other electrical gages operate, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

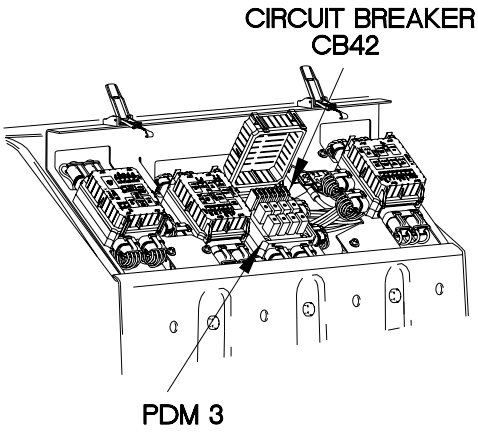
Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
177. Two-Way Troop Intercom Does Not Operate (VEHICLE S/N 100,001 TO 199,999)	1. Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?	1. If PMCS Before checks have not been performed, perform M1078 A1 Series Preventative Maintenance Checks and Services (PMCS) (WP 0103 00) Before checks. 2. If PMCS Before checks have been performed, go to test 2 of this malfunction.
	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) (WP 0011 00). 2. Check cab and cargo two-way intercom LEDs. 3. If either cab or cargo LED is illuminated, notify Field Maintenance. 4. If neither cab nor cargo LED is illuminated, go to test 3 of this malfunction.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
	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.**	
177. Two-Way Troop Intercom Does Not Operate (VEHICLE S/N 100,001 TO 199,999) - Continued		1. Remove PDP cover (WP 0113 00). 2. Open PDM 3.
		
		3. If circuit breaker CB42 is tripped, push button to reset. 4. Check circuit breaker CB42 to see if it is tripped again. 5. If circuit breaker CB42 is tripped, contact supervisor.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
177. Two-Way Troop Intercom Does Not Operate (VEHICLE S/N 100,001 TO 199,999) - Continued		6. If circuit breaker CB42 is not tripped, notify Field Maintenance.
178. TRAILER ABS INDICATOR DOES NOT ILLUMINATE (VEHICLE S/N 100,001 TO 199,999)	1. Check to see if LAMP TEST switch illuminates TRAILER ABS indicator (WP 0016 00).	1. If TRAILER ABS indicator does not illuminate, perform Malfunction 144 (Lamp Test Switch Does Not Operate). 2. If TRAILER ABS indicator illuminates, notify Field Maintenance.
179. LOAD HANDLING EQUIPMENT (LHE) CODE 00: LOW POWER TO MAIN CONTROL BOX.	1. Check to see if 24 volt gage read between 24-30 VDC?	1. Turn engine on (WP 0020 00). 2. Note if 24 volt gage reads between 24-30 vdc (WP 0004 00). 3. If voltage is low, perform electrical system troubleshooting (Electrical System Does Not Maintain Charge in Batteries/CHARGING SYSTEM Indicator Illuminates). 4. If voltage is ok, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

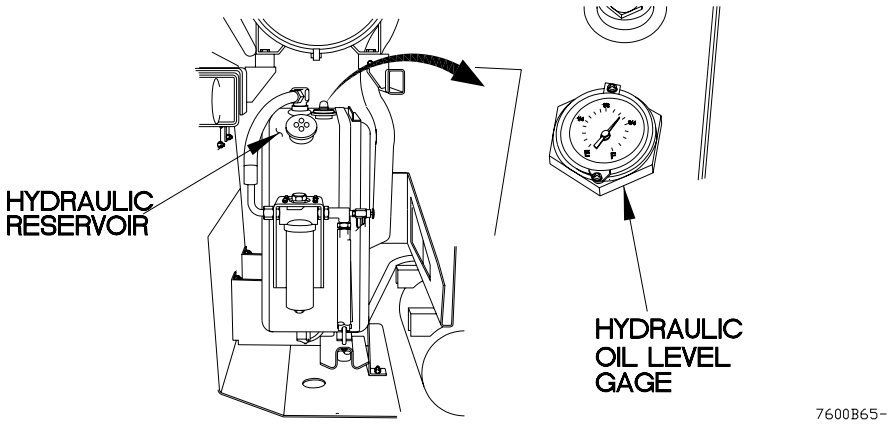
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
180. LOAD HANDLING EQUIPMENT (LHE) CODE 08: INTERNAL ERROR ON MAIN CONTROL BOX.	1. Is code 08 still present after cycling power?	1. Shut down engine (WP 0020 00). 2. Start engine (WP 0020 00). 3. Note if code 08 is present. 4. If code is not present, fault corrected. 5. If code is still present, notify Field Maintenance.
181. LOAD HANDLING EQUIPMENT (LHE) CODE 23: CAN BUS NOT ABLE TO COMMUNICATE WITH ANY BOX.	1. Is code 23 still present after cycling power?	1. Shut down engine (WP 0020 00). 2. Start engine (WP 0020 00). 3. Note if code 23 is present. 4. If code is not present, fault corrected. 5. If code is still present, notify Field Maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
182. Load Handling Equipment (LHE) CODE 25: OIL TEMPERATUR HAS REACHED MAXIMUM LEVEL.	1. Check hydraulic oil level gauge to determine hydraulic oil level.	1. If oil level is low, add oil as required (WP 0103 00). 2. If oil level is ok, Notify Field maintenance.

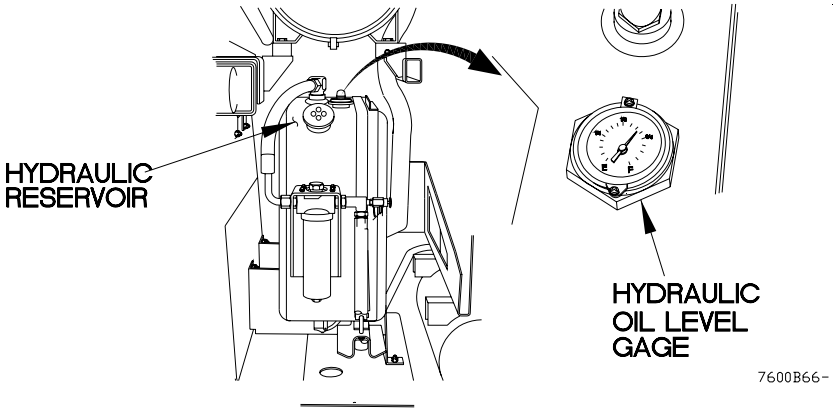


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
183. LOAD HANDLING EQUIPMENT (LHE) CODE 26: OIL FITLER CLOGGED.	1. Is hydraulic reservoir full?	1. Check hydraulic oil level gauge. 2. If oil level is low, add oil as required (WP 0103 00). 3. If reservoir is full, notify Field Maintenance.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

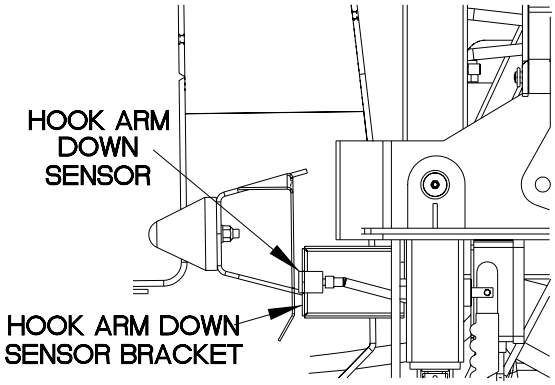
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
184. CODE C2: HOOK POSITION IMPUTS CONFLICT.	1. Is Code C2 still present after cleaning the surfaces of the hook down and the hook up sensors?	1. Shut down engine (WP 0020 00).

NOTE

Code C2 indicates a signal from both the hook down and the hook up sensors.

Sensor surfaces must be free from dirt, grease or any substance that could trap metal against the sensor surface.

		2. Clean surface of hook down sensor (WP 0107 00).

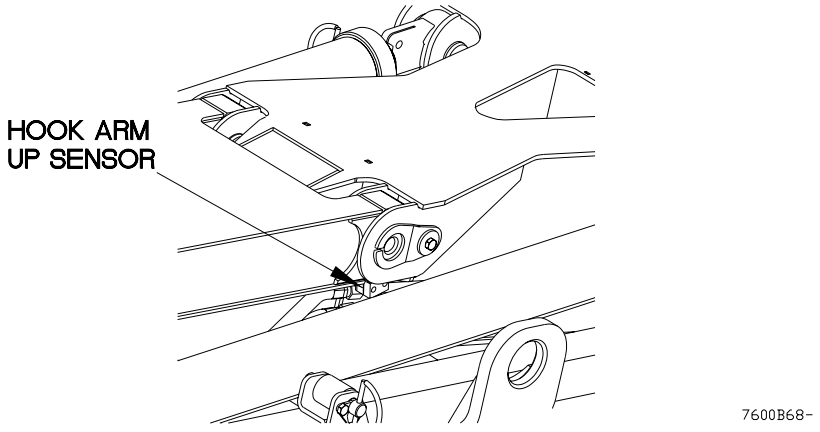


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

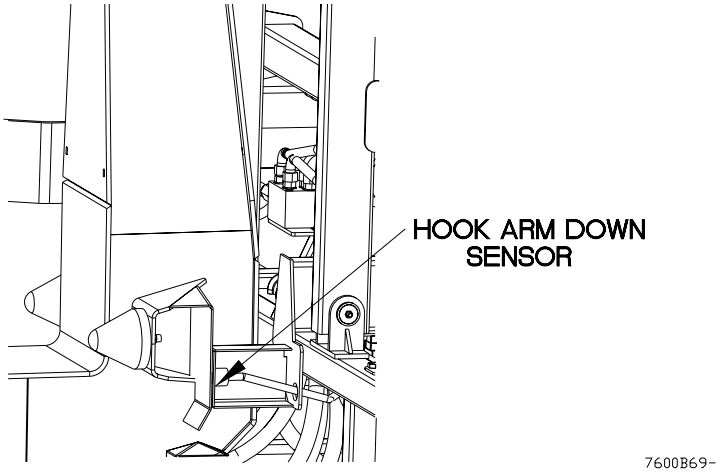
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
184. CODE C2: HOOK POSITION IMPUTS CONFLICT CONTINUED		3. Clean surface of hook up sensor (WP 0107 00).
		4. Start engine (WP 0020 00).
		5. Attempt to operate the Load Handling Equipment (LHE).
		6. Note if Code C2 is still present.
		7. If Code C2 is still present, notify Field Maintenance.
		8. If Code C2 is not present, fault corrected.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
185. CODE C3: HOME POSITION IMPUTS CONFLICT.	1. Is Code C3 still present after cleaning the surface of the hook down sensor?	1. Clean surface of hook arm down sensor (WP 0107 00).
	NOTE Code C3 indicates a signal from the hook arm down sensor and no signal from the middle frame down sensor. Sensor surfaces must be free from dirt and grease.	
		2. Start engine (WP 0020 00).
		
		3. Attempt to operate the Load Handling Equipment (LHE).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
185. CODE C3: HOME POSITION IMPUTS CONFLICT.- Continued		4. Note if Code C3 is present. 5. If Code C3 is still present, notify Field Maintenance. 6. If Code C3 is not present, fault corrected.
186. LOAD HANDLING EQUIPMENT (LHE) CODE D0: NOT HOME POSITION.	1. Are middle frame and hook arm completely down?	1. Note if middle frame and hook arm are completely donw. 2. If middle frame and hook arm are completely down, notify Field Maintenance. 3. If middle frame and hook arm are not completely down, start engine (WP 0020 00). 4. Position mode selection switch to M3 (WP 0016 01). 5. Hold joystick in load position until middle frame is completely down (WP 0016 01). 6. Position mode selection switch to M2 (WP 0016 01). 7. Hold joystick in load position until hook arm is completely down (WP 0016 01).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
186. LOAD HANDLING EQUIPMENT (LHE) CODE D0: NOT HOME POSITION.- Continued		8. Position mode selection switch to 0 (WP 0016 01). 9. Shut down engine (WP 0020 00).
187. LOAD HANDLING EQUIPMENT (LHE) CODE D1: MAX PRESSURE EXCEEDED	1. Does Load Handling Equipment (LHE) operate while code D1 is present?	1. Attempt to operate LHE in mode that it was in when code D1 first appeared.
NOTE Code D1 indicates that a load weight is nearing the maximum capacity of the LHE.		
		2. If there is no operation, lighten load weight.
	2. Is code D1 still present with middle frame and hook arm in the home position?	1. Load middle frame and hook arm until home light illuminates (WP 0016 01). 2. If code is still present, notify Field Maintenance. 3. If code is no longer present, fault corrected.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

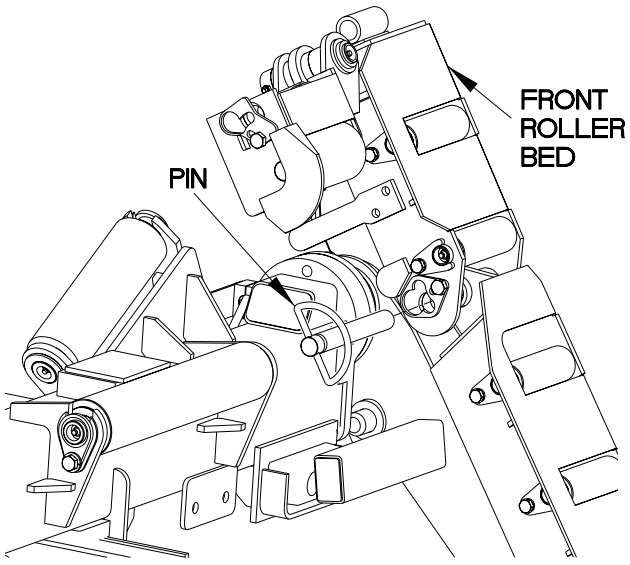
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
188. LOAD HANDLING EQUIPMENT (LHE) CODE D2: ROLLERS IN WRONG POSITION FOR SELECTED MODE.	1. Is code present in mode A1 or A2?	1. Start engine (WP 0020 00). 2. Position mode selection switch to A1. 3. Note if code D2 is present. 4. Position mode selection switch to A2. 5. Note if code D2 is present. 6. Position mode selection switch to 0. 7. Shut down engine (WP 0020 00).
	2. Are the rear rollers in the correct position for mode A1?	1. Note position of rear rollers.
	NOTE Front of roller beds should be lowered.	
		2. If front of roller beds are lowered, notify field maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

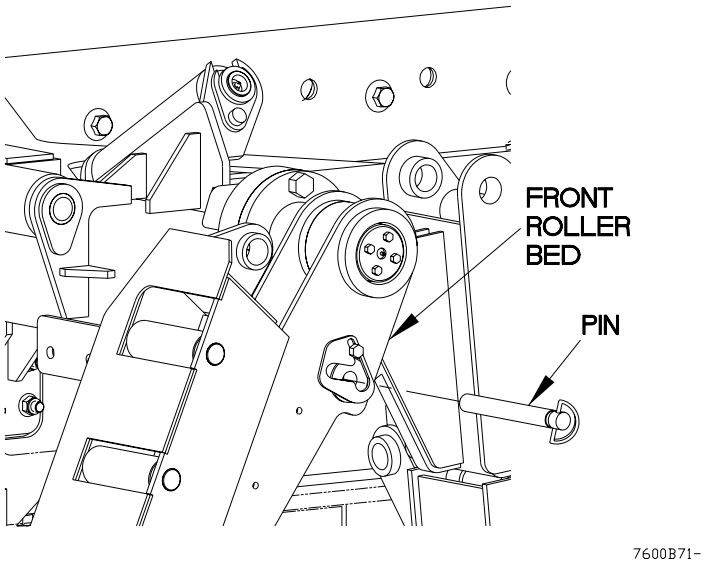
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
NOTE LH and RH roller beds are adjusted the same way. RH shown.		
188. LOAD HANDLING EQUIPMENT (LHE) CODE D2: ROLLERS IN WRONG POSITION FOR SELECTED MODE.-Continued		3. Remove pin from front roller bed.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

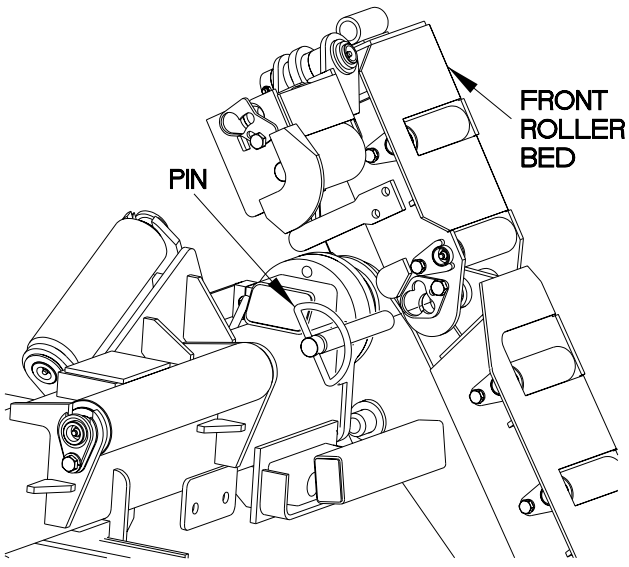
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
188. LOAD HANDLING EQUIPMENT (LHE) CODE D2: ROLLERS IN WRONG POSITION FOR SELECTED MODE.-Continued		4. Lower front roller bed. 5. Install pin in front roller bed.  6. Note if code D2 is present. 7. If code is not present, fault corrected.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

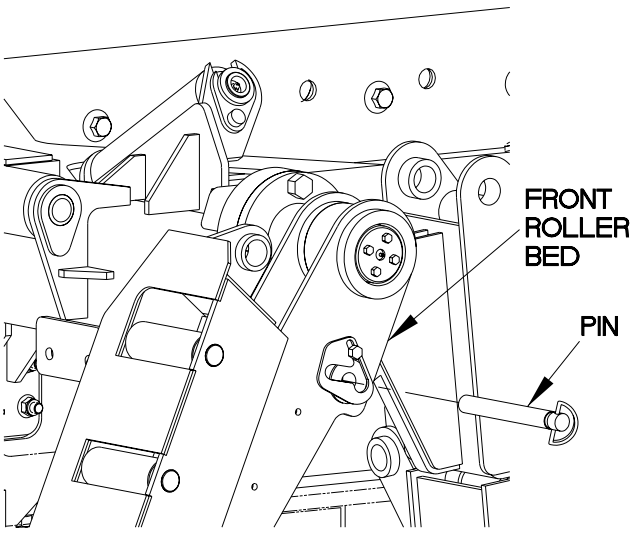
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
188. LOAD HANDLING EQUIPMENT (LHE) CODE D2: ROLLERS IN WRONG POSITION FOR SELECTED MODE.-Continued	3. Are the rear rollers in the correct position for mode A2?	1. Note position of rear rollers.
	NOTE Front of roller beds should be raised.	
		2. If front of rear roller beds are raised, notify field maintenance.
	NOTE LH and RH roller beds are adjusted the same way. RH shown.	
		3. Remove pin from front roller bed.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
188. LOAD HANDLING EQUIPMENT (LHE) CODE D2: ROLLERS IN WRONG POSITION FOR SELECTED MODE.-Continued		4. Raise front roller bed. 5. Install pin in front roller bed.  7600B73- 6. Note if code D2 is still present. 7. If code D2 is not present, fault corrected.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
189. LOAD HANDLING EQUIPMENT (LHE) CODE D3: FRAME IN WRONG POSITION FOR SELECTED MODE.	1. Which mode is code D3 present in?	1. Start engine (WP 0020 00). 2. Position mode select switch to A1 (WP 0016 01) and note if code D3 is present. 3. Position mode select switch to A3 (WP 0016 01) and note if code D3 is present. 4. If code D3 is present in position A1 or A3, note position of lifting frame. 5. If lifting frame not stowed, completely stow lifting frame (WP 0043 22). 6. If lifting frame stowed, notify field maintenance. 7. Position mode select switch to A2 (WP 0016 01) and note if code D3 is present. 8. Position mode select switch to 0 (WP 0016 01). 9. Shut down engine (WP 0020 00).
		10. If code D3 is present in position A2, note position of lifting frame.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
189. LOAD HANDLING EQUIPMENT (LHE) CODE D3: FRAME IN WRONG POSITION FOR SELECTED MODE.-Continued		11. If lifting frame is stowed, unstow lifting frame (WP 0043 22). 12. If lifting frame is unstowed, notify field maintenance.
190. LOAD HANDLING EQUIPMENT (LHE) CODE D4: STOWAGE GUIDE NOT VERTICAL	1. Shut engine down (Vehicle Operations WP 0020 00)	
	2. Which mode is code D4 present in?	1. Start engine (Vehicle Operations WP 0020 00) 2. Position mode selection switch to A1 (Load Handling System (LHS) Controls and Indicators WP 0016 01) 3. Note if code D2 is present 4. Position mode selection switch to A2 (Load Handling System (LHS) Controls and Indicators WP 0016 01) 5. Note if code D2 is present 6. Position mode selection switch to 0n (Load Handling System (LHS) Controls and Indicators WP 0016 01) 7. Shut engine down (Vehicle Operations WP 00200 00)

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

190. LOAD HANDLING EQUIPMENT (LHE) CODE D4: STOAWAGE GUIDE NOT VERTICAL CONTINUED		8. If code D4 is present in mode A2, go to test 4 of this malfunction (Is the lifting frame in the correct position for mode A1?)
		9. If code D4 is present in mode A2, go to test 3 of this malfunction.
	3. Is the lifting frame unstowed and positioned on the hook arm?	1. Note position of lifting frame
		2. If the lifting frame is stowed, unstow lifting frame. (Loading ISO Container on LHS Truck WP 0043 09)
		3. If the lifting frame is unstowed and positioned on the hook arm, perform field level troubleshooting.
	4. Is the lifting frame in the correct position for mode A1?	1. Note position of lifting frame.
		2. If lifting frame is not stowed, stow lifting frame (Loading ISO Container on LHS Truck WP 0043 09)
		3. If lifting frame is stowed, perform field level troubleshooting.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

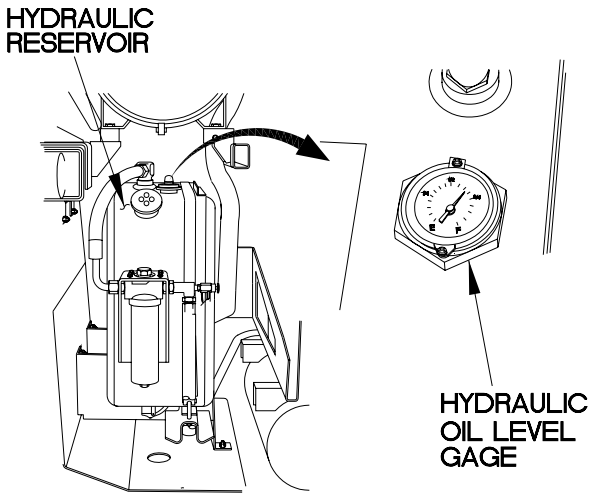
191. LOAD HANDLING EQUIPMENT (LHE) HOME LIGHT DOES NOT ILLUMINATE.	1. Is the Load Handling Equipment (LHE) in the Home position?	1. Note position of middle frame and hook arm.
NOTE Home light only illuminates when middle frame and hook arm are completely down.		
		2. If middle frame and hook arm are completely down, notify field maintenance. 3. If middle frame and hook arm are not completely down, return Load Handling Equipment (LHE) to home position using the proper procedure.
192. LOAD HANDLING EQUIPMENT (LHE) HOME LIGHT FLASHES GREEN.		
NOTE Home light will flash green to alert operator that Load Handling Equipment (LHE) is not stowed and vehicle is not ready to be driven. Continue with operation until loading/unloading is complete and then stow LHE. No troubleshooting is required for this condition.		
193. LOAD HANDLING EQUIPMENT (LHE) CONTROL ON LIGHT DOES NOT ILLUMINATE.	1. Does Load Handling Equipment (LHE) operate normally.	1. Attempt to operate LHE in the mode it was operating in when failure occurred. 2. If the LHS operates ok, notify field maintenance to replace cab control box. 3. If the LHS does not operate ok, notify field maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

194. LOAD HANDLING SYSTEM (LHE) OIL LIGHT ILLUMINATES.	1. Is hydraulic reservoir full?	1. Check hydraulic oil level gage to determine hydraulic oil level.



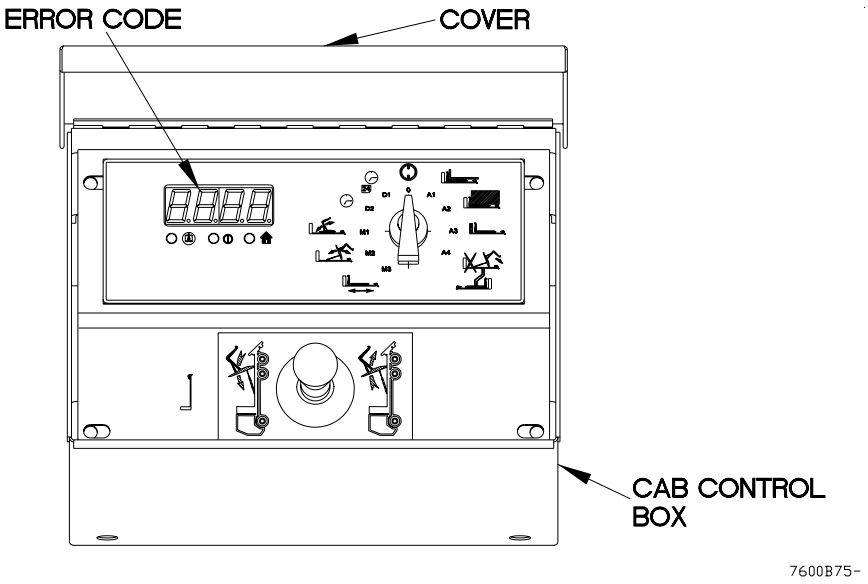
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
		2. If oil level is low, add as required.
	2. Are any Load Handling Equipment (LHE) codes present?	1. Start engine (WP 0020 00).
		2. Open cover on cab control box.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

194. LOAD HANDLING SYSTEM (LHE) OIL LIGHT ILLUMINATES.- Continued		3. Operate LHE in mode the equipment was operating in when diagnostic code/problem occurred.



NOTE

If a code is present, the cab control box display will show two alternating sets of numbers. The first number is the number of error codes present. The number of codes present will appear while the power indicator is illuminated. The second number is the specific code that is present. It will appear as a two digit number and only when the power indicator is not illuminated.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

194. LOAD HANDLING SYSTEM (LHE) OIL LIGHT ILLUMINATES.- Continued		4. Note if error code is displayed.
	NOTE If more than one error code is present, the code with the lowest number will be displayed first. When the fault creating the first error code is repaired the system will display the next error code.	
		5. Return LHE to Home position.
		6. Shut down engine (WP 0020 00).
		7. If no code is present, notify field maintenance.
		8. If code is present, proceed to specific troubleshooting for present code.
195. LOAD HANDLING EQUIPMENT (LHE) DOES NOT OPERATE.	1. Does Load Handling Equipment (LHE) operate in manual modes?	1. Start engine (WP 0020 00).
		2. Position mode selection switch to M1 (WP 0016 01).
		3. Attempt to load or unload hook arm.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

195. LOAD HANDLING EQUIPMENT (LHE) DOES NOT OPERATE.- Continued		4. Position mode select switch to M2 (WP 0016 01).
		5. Attempt to load or unload middle frame.
		6. Position mode select switch to 0n (WP 0016 01).
		7. If Load Handling Equipment operates in manual mode, notify field maintenance.
	2. Does LHE operate using emergency controls?	1. Attempt to operate LHE using emergency controls.
		2. If LHE does not operate using emergency controls, perform operator hydraulic system troubleshooting (LHE Does Not Operate).
		3. If LHE does operate using emergency controls, notify field maintenance.
196. LOAD HANDLING EQUIPMENT (LHE) DOES NOT OPERATE IN AUTOMATIC MODE.	1. Does Load Handling Equipment (LHE) operate in automatic modes after reseting system?	1. Shut down engine (WP 0020 00).
		2. Start engine (WP 0020 00).
		3. Attempt to operate LHE in any automatic modes.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

196. LOAD HANDLING EQUIPMENT (LHE) DOES NOT OPERATE IN AUTOMATIC MODE.-Continued		4. If LHE does not operate, notify field maintenance. 5. If LHE does operate, fault corrected.
197. HOOK ARM DOES NOT LOAD.	1. Had Diagnostic code reading been performed?	1. If code reading has not been performed, proceed to Malfunction 206 (Load Handling Equipment (LHE) Diagnostic Code Reading.
	2. Will hook arm load after resetting system?	1. Start engine (WP 0020 00). 2. Shut down engine (WP 0020 00). 3. Start engine (WP 0020 00). 4. Position mode select switch to M1 (WP 0016 01). 5. Attempt to load hook arm using joystick. 6. If hook arm does not load, notify field maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
198. HOOK ARM DOES NOT UNLOAD.	1. Has diagnostic code reading been performed?	1. If code reading has not been performed, proceed to Malfunction 206 (Load Handling Equipment (LHE) Diagnostic Code Reading).
	2. Will hook arm unload after resetting the system?	1. Start engine (WP 0020 00). 2. Shut down engine (WP 0020 00). 3. Start engine (WP 0020 00). 4. Position mode select switch to position M1 (WP 0016 01). 5. Attempt to unload hook arm using joystick. 6. If hook arm does not unload, notify field maintenance.
199. MIDDLE FRAME DOES NOT LOAD.	1. Has diagnostic code reading been performed?	1. If code reading has not been performed, proceed to Malfunction 206 (Load Handling Equipment (LHE) Diagnostic Code Reading).
	2. Will middle frame load after resetting system?	1. Start engine (WP 0020 00). 2. Shut down engine (WP 0020 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

199. MIDDLE FRAME DOES NOT LOAD.- Continued		3. Start engine (WP 0020 00). 4. Position mode select switch to position M1 (WP 0016 01). 5. Attempt to load middle frame using joystick. 6. If middle frame does not load, notify field maintenance.
200. MIDDLE FRAME DOES NOT UNLOAD.	1. Has diagnostic code reading been performed?	1. If code reading has not been performed, proceed to Malfunction 206 (Load Handling Equipment (LHE) Diagnostic Code Reading).
	2. Will middle frame unload after resetting system?	1. Start engine (WP 0020 00). 2. Shut down engine (WP 0020 00). 3. Start engine (WP 0020 00). 4. Position mode select switch to position M2 (WP 0016 01). 5. Attempt to unload middle frame using joystick. 6. If middle frame does not unload, notify field maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
201.STOWAGE GUIDE DOES NOT LOAD.	1. Has diagnostic code reading been performed?	1. If code reading has not been performed, proceed to Malfunction 206 (Load Handling Equipment (LHE) Diagnostic Code Reading).
	2. Is hook arm down?	1. If hook arm is raised, notify field maintenance.
	NOTE If hook arm is down, stowage guide will not load.	
		2. Start engine (WP 0020 00).
		3. Position mode select switch to A3 (WP 0016 01).
		4. Use stowage control panel to raise hook arm and middle frame (WP 0043 21).
		5. Load stowage guide (WP 0043 21).
		6. Use stowage control panel to lower hook arm and middle frame (WP 0043 21).
		7. Position mode select switch to 0 (WP 0016 010).
		8. Shut down engine (WP 0020 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
202. STOWAGE GUIDE DOES NOT UNLOAD.	1. Has diagnostic code reading been performed?	1. If code reading has not been performed, proceed to Malfunction 206 (Load Handling Equipment (LHE) Diagnostic Code Reading).
	2. Is hook arm down?	1. If hook arm is raised, notify field maintenance.
	NOTE If hook arm is down, stowage guide will not load.	
		2. Start engine (WP 0020 00).
		3. Position mode select switch to A3 (WP 0016 01).
		4. Use stowage control panel to raise hook arm and middle frame (WP 0043 21).
		5. Unload stowage guide (WP 0043 21).
		6. Use stowage control panel to lower hook arm and middle frame (WP 0043 21).
		7. Position mode select switch to 0 (WP 0016 010).
		8. Shut down engine (WP 0020 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

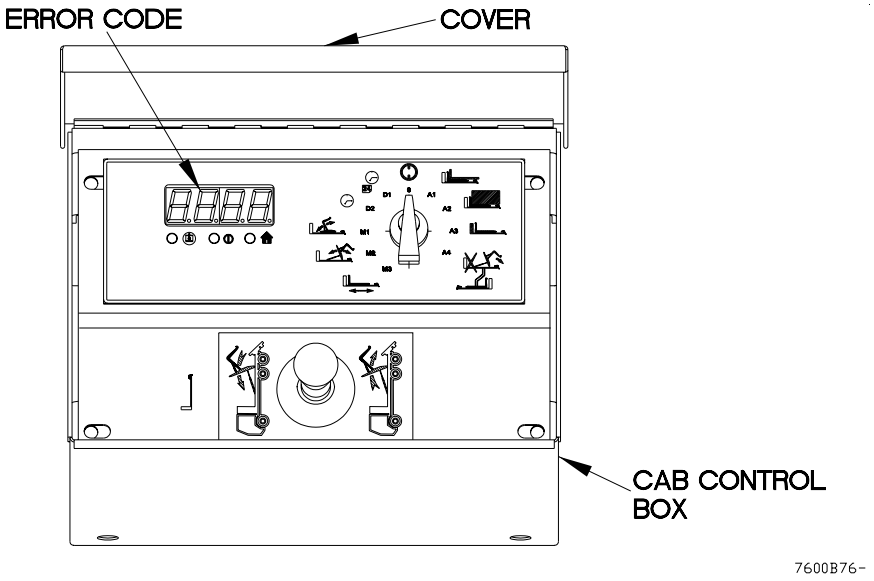
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
203. CAB CONTROL BOX DOES NOT ILLUMINATE.	1. Has diagnostic code reading been performed?	1. If code reading has not been performed, proceed to Malfunction 206 (Load Handling Equipment (LHE) Diagnostic Code Reading). 2. If code reading has been performed, notify field maintenance.
204. STOWAGE LATCH DOES NOT OPERATE.	1. Has diagnostic code reading been performed?	1. If code reading has not been performed, proceed to Malfunction 206 (Load Handling Equipment (LHE) Diagnostic Code Reading). 2. If code reading has been performed, notify field maintenance.
205. HOME LIGHT ILLUMINATES WHILE WORKING LOAD HANDLING EQUIPMENT (LHE).	1. Does home light remain illuminated after cleaning hook down sensor?	1. Shut down engine (WP 0020 00).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
	NOTE Sensor surface must be free of dirt, grease, or any substance that could trap metal against the sensor face.	
205. HOME LIGHT ILLUMINATES WHILE WORKING LOAD HANDLING EQUIPMENT (LHE).-Continued		2. Clean surface of hook arm down sensor.
		3. Start engine (WP 0020 00).
		4. Attempt to operate Load Handling Equipment (LHE) in mode it was operating in when fault occurred.
		5. If the home light illuminates, notify field maintenance.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

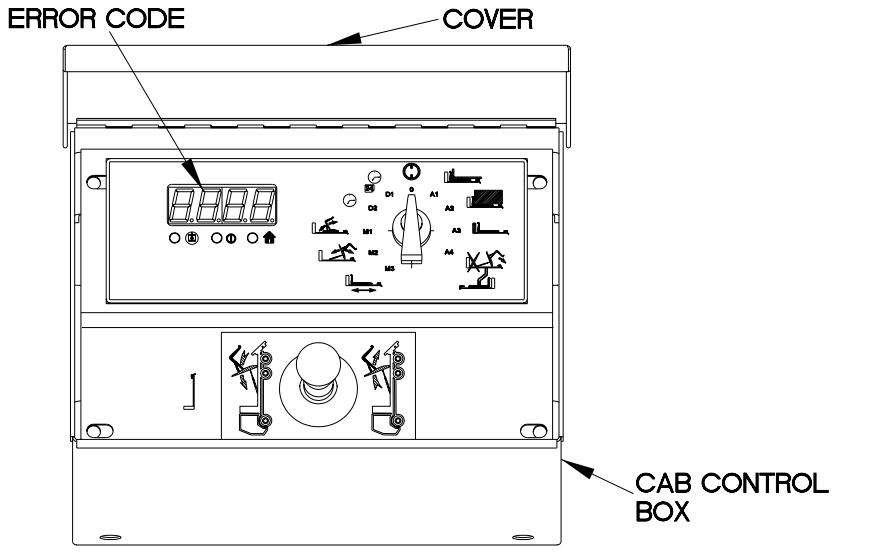
ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
206. LOAD HANDLING EQUIPMENT (LHE) DIAGNOSTIC CODE READING.	1. Are any Load Handling Equipment (LHE) codes present?	1. Start engine (WP 0020 00). 2. Open cover on cab control box. 3. Operate LHE in mode the equipment was operating in when diagnostic code/problem occurred.

NOTE

If a code is present, the cab control box display will show two alternating sets of numbers. The first number is the number of error codes present. The number of codes present will appear while the power indicator is illuminated. The second number is the specific code that is present. It will appear as a two digit number and only when the power indicator is not illuminated.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
NOTE If more than one error code is present, the code with the lowest number will be displayed first. When the fault creating the first error code is repaired the system will display the next error code.		
206. LOAD HANDLING EQUIPMENT (LHE) DIAGNOSTIC CODE READING.- Continued		4. Note if error code is displayed.
		5. Return LHE to Home position.
		6. Shut down engine (WP 0020 00).
	2. If a code is present, proceed to the following:	1. Code C0: notify field maintenance.
		2. Code C1: notify field maintenance.
		3. Code C2: Perform Electrical System Troubleshooting (LHE Code C2: Hook Position Inputs Conflict) (Malfunction 184).
		4. Code C3: Perform Electrical System Troubleshooting (LHE Code C3: Home Position Inputs Conflict) (Malfunction 185).
		5. Code D0: Perform Electrical System LHE Troubleshooting (LHE Code D0: Not Home Position) (Malfunction 186).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
206. LOAD HANDLING EQUIPMENT (LHE) DIAGNOSTIC CODE READING.- Continued		6. Code D1: Perform Electrical System LHE Troubleshooting (LHE Code D1: Maximum Pressure Exceeded (Overload Active)) (Malfunction 187). 7. Code D2: Perform Electrical System LHE Troubleshooting (LHE Code D2: Rollers in Wrong Position for Selected Mode) (Malfunction 188). 8. Code D3: Perform Electrical System LHE Troubleshooting (LHE Code D3: Frame in Wrong Position for Selected Mode) (Malfunction 189). 9. Code 00: Perform Electrical System LHE Troubleshooting (LHE Code 00: Low Power to Main Control Box) (Malfunction 179.). 10. Code 01: notify field maintenance. 11. Code 02: notify field maintenance. 12. Code 05: notify field maintenance. 13. Code 06: notify field maintenance. 14. Code 07: notify field maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
206. LOAD HANDLING EQUIPMENT (LHE) DIAGNOSTIC CODE READING.- Continued		15. Code 08: Perform Electrical System LHE troubleshooting (LHE Code 08: Internal Error on Main Control Box) (Malfunction 180). 16. Code 09: notify field maintenance. 17. Code 10: notify field maintenance. 18. Code 11: notify field maintenance. 19. Code 12: notify field maintenance. 20. Code 14: notify field maintenance. 21. Code 16: notify field maintenance. 22. Code 17: notify field maintenance. 23. Code 18: notify field maintenance. 24. Code 20: notify field maintenance. 25. Code 22: notify field maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

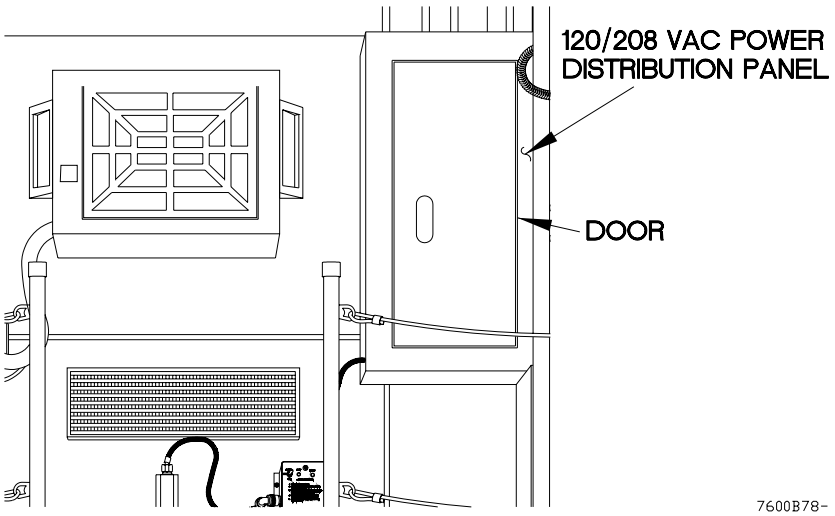
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
206. LOAD HANDLING EQUIPMENT (LHE) DIAGNOSTIC CODE READING.- Continued		26. Code 23: Perform Electrical System LHE Troubleshooting (LHE Code 23: CAN Bus Unable to Communicate With Any Box) (Malfunction 181). 27. Code 24: notify field maintenance. 28. Code 25: Perform Electrical System LHE Troubleshooting (LHE Code 25: Oil Temperature Has Reached Maximum Level) (Malfunction 182). 29. Code 26: Perform Electrical System LHE Troubleshooting (LHE Code 26: Oil Filter Clogged) (Malfunction 183). 30. Code 28: notify field maintenance. 31. Code 30: notify field maintenance. 32. Code 31: notify field maintenance. 33. Code 32: notify field maintenance. 34. Code 33: notify field maintenance. 35. Code 34: notify field maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
206. LOAD HANDLING EQUIPMENT (LHE) DIAGNOSTIC CODE READING.- Continued		36. Code 35: notify field maintenance. 37. Code 36: notify field maintenance. 38. Code 37: notify field maintenance.
207. 120 VAC OUTLET(S) J505 AND/OR J506 DO NOT OPERATE	1. Is circuit breaker CB103 tripped?	1. Open door on 120/208 VAC Power Distribution Panel.

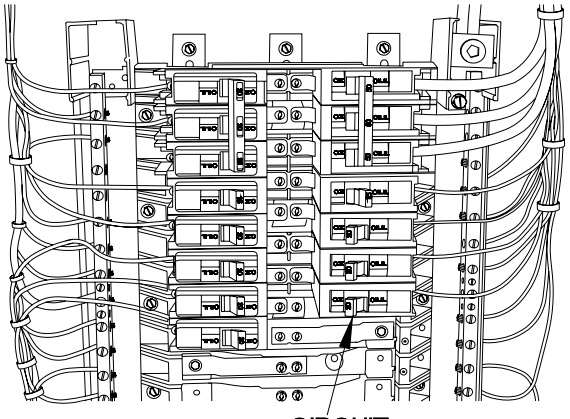


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
207. 120 VAC OUTLET(S) J505 AND/OR J505 DO NOT OPERATE CONTINUED		2. Position master power switch to off (Instrument Panel Assembly Controls and Indicators WP 0004 00). 3. If circuit breaker CB103 is tripped, position circuit breaker CB103 to ON.
		4. Position master power switch to on (Instrument Panel Assembly Controls and Indicators WP 00004 00). 5. Check circuit breaker CB103 to see if it is tripped again. 6. Position master power switch to off (Instrument Panel Assembly Controls and Indicators WP 00004 00).

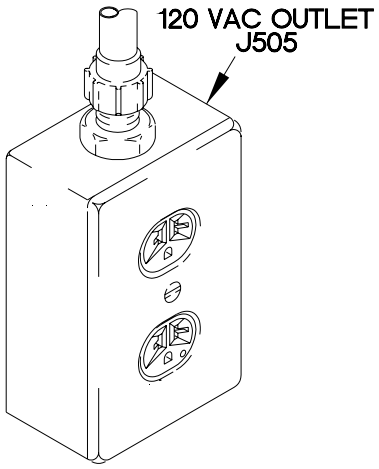


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
207. 120 VAC OUTLET(S) J505 AND/OR J505 DO NOT OPERATE CONTINUED		7. Close door on 120 VAC Power Distribution Panel.
		8. If circuit breaker CB103 is tripped, contact supervisor.
		9. If circuit breaker CB103 is not tripped, go to test 2 of this malfunction.
	2. Do either 120 VAC outlets J505 and/or J506 operate?	1. Connect any 120 VAC appliance to 120 VAC oulet J505.
		2. Check for 120 VAC appliance operation.
		3. Disconnect 120 VAC appliance from 120 VAC outlet J505.

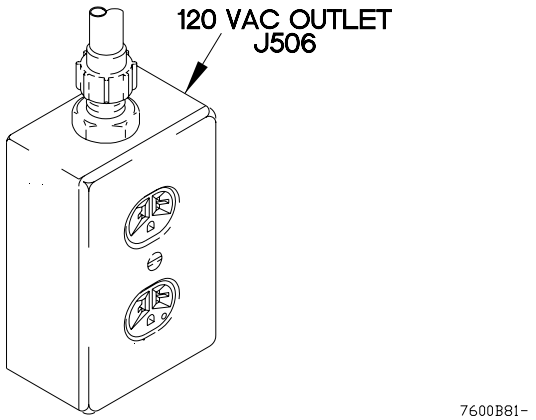


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ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

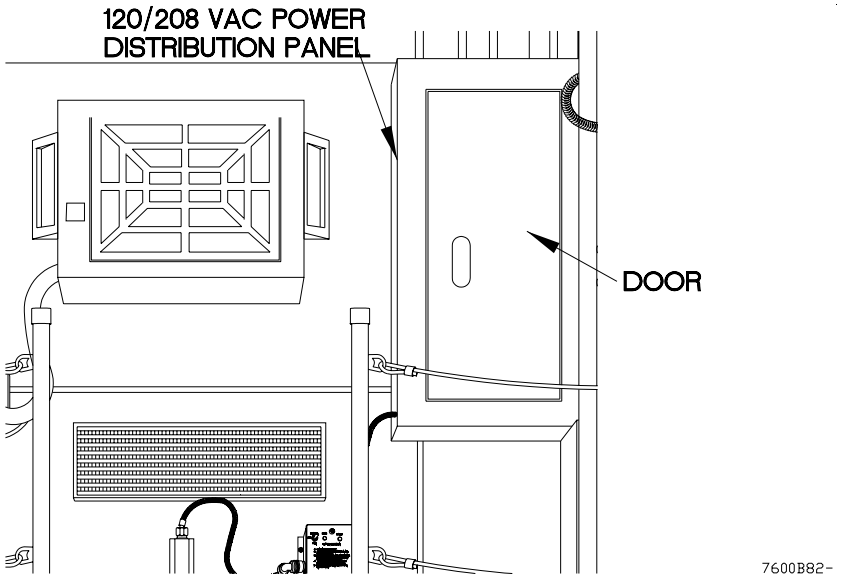
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
207. 120 VAC OUTLET(S) J505 AND/OR J505 DO NOT OPERATE CONTINUED		4. Connect any 120 VAC appliance to 120 VAC outlet J506.
		
		5. Check for 120 VAC appliance operation 6. Disconnect 120 VAC application from 120 VAC outlet J506. 7. If 120 VAC outlet(s) do not operate notify field level maintenance.
208. 120 VAC OUTLET(S) J507 AND/OR J508 DO NOT OPERATE	1. Is circuit breaker CB101 tripped?	1. Open door on 120/208 VAC Power Distribution Panel.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
208. 120 VAC OUTLET(S) J507 AND/OR J508 DO NOT OPERATE CONTINUED		
		2. Position master power switch to off.

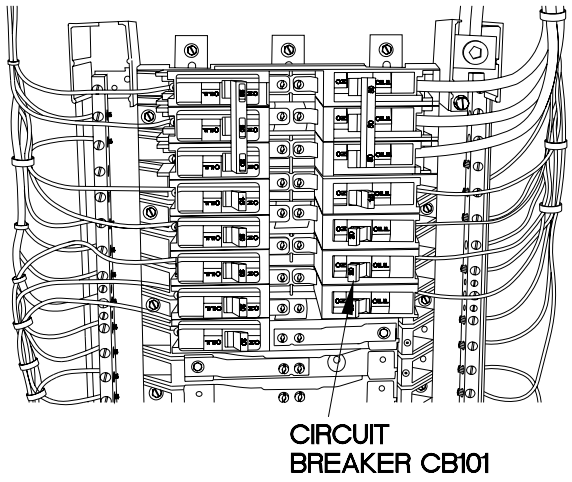


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

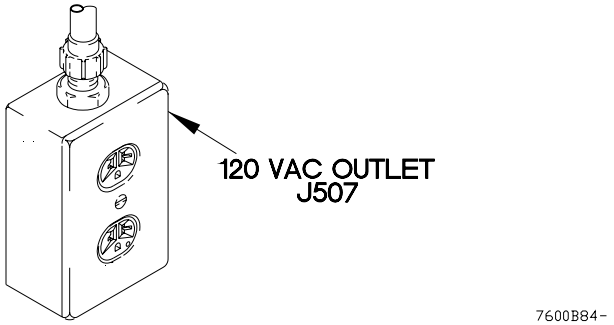
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
208. 120 VAC OUTLET(S) J507 AND/OR J508 DO NOT OPERATE CONTINUED		3. If circuit breaker CB101 is tripped, position circuit breaker CB101 to ON.
		4. Position master power switch to on.
		5. Check circuit breaker CB101 to see if it is tripped again.
		6. Position master power switch to off.
		7. Close door on 120 VAC Power Distribution Panel.
		8. If circuit breaker CB101 is tripped go to test 2 of this malfunction.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

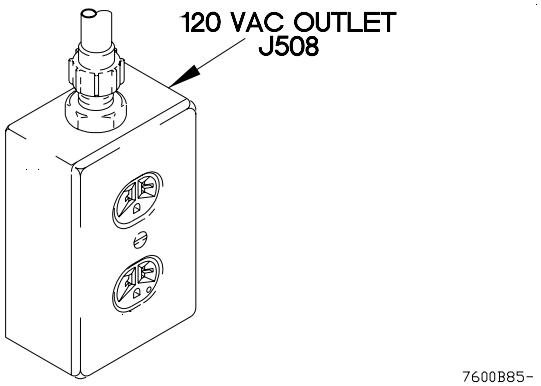
Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
208. 120 VAC OUTLET(S) J507 AND/OR J508 DO NOT OPERATE CONTINUED		9. If circuit breaker CB101 is not tripped go to test 2 of this malfunction.
	2. Do either 120 VAC outlets J507 and/or J508 operate?	1. Connect any 120 VAC appliance to 120 VAC outlet J507.
		
		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.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

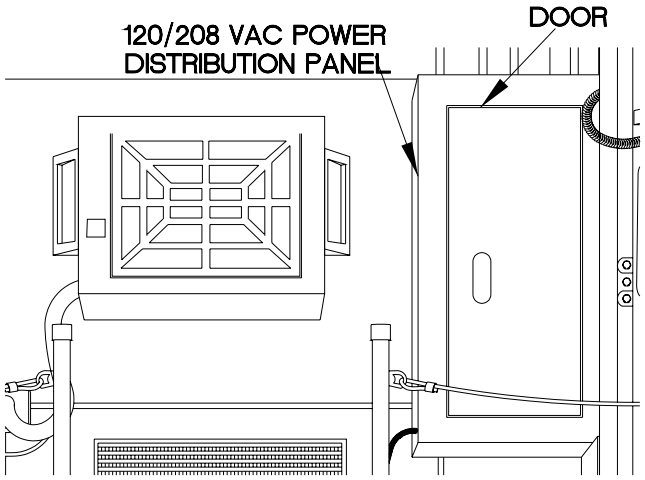
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
		
208. 120 VAC OUTLET(S) J507 AND/OR J508 DO NOT OPERATE CONTINUED		5. Check for 120 VAC appliance operation. 6. Disconnect 120 VAC application from 120 VAC outlet J508. 7. If 120 VAC outlets J507 and/or J508 do not operate notify field level maintenance.
209. 120 VAC OUTLET(S) J509 AND/OR J510 DO NOT OPERATE IN BLACKOUT MODE	1. Do interior van body blackout lights illuminate?	1. Turn on blackout lights (Van Lighting WP 0043 05) 2. Note if any blackout lights fail to illuminate. 3. Turn off blackout lights (Van Lighting WP 0043 05) 4. If blackout lights do not illuminate perform malfunction 213 (Blackout Lights Do Not Illuminate)

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
209. 120 VAC OUTLET(S) J509 AND/OR J510 DO NOT OPERATE IN BLACKOUT MODE CONTINUED		5. If blackout lights do illuminate go to test 2 of this malfunction.
	2. Do interior van body emergency lights illuminate?	1. Check to see if emergency lights illuminate (Van Lighting WP 0043 05) 2. If emergency lights do not illuminate notify field level maintenance. 3. If emergency lights do illuminate go to test 3 of this malfunction.
	3. Is circuit breaker CB99 tripped?	1. Open door on 120/208 VAC Power Distribution Panel.
		2. Position master power switch to off (Instrument Panel Assembly Controls and Indicators WP 0004.00)

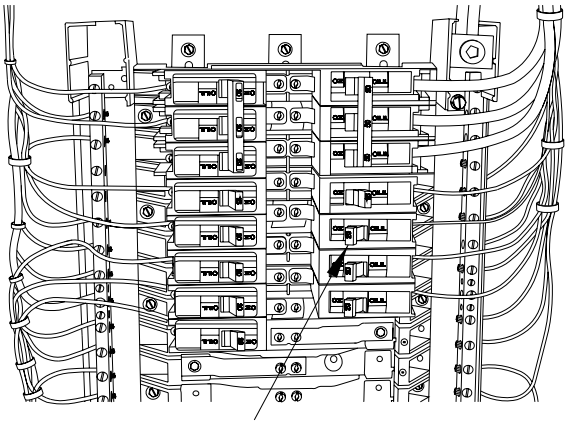


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
209. 120 VAC OUTLET(S) J509 AND/OR J510 DO NOT OPERATE IN BLACKOUT MODE CONTINUED		3. If circuit breaker CB99 is tripped, position circuit breaker CB99 to ON.
		4. Position master switch to on (Instrument Panel Assembly Controls and Indicators WP 0004.00) 5. Check circuit breaker CB99 to see if it is tripped again.

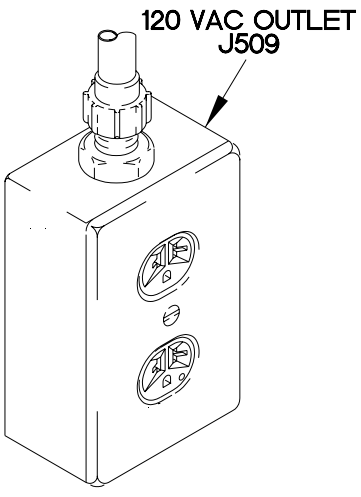


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
209. 120 VAC OUTLET(S) J509 AND/OR J510 DO NOT OPERATE IN BLACKOUT MODE CONTINUED		6. Position master power switch to off (Instrument Panel Assembly Controls and Indicators WP 0004.00)
		7. Close door on 120 VAC Power Distribution Panel.
		8. If circuit breaker CB99 is tripped contact supervisor
		9. If circuit breaker CB99 is not tripped go to test 4 of this malfunction.
	4. Do either 120 VAC outlets J509 and/or J510 operate?	1. Connect any 120 VAC appliance to 120 VAC outlet J509.
		2. Check for 120 VAC appliance operation.

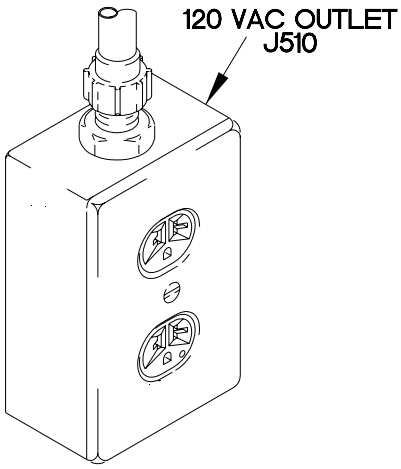


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ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

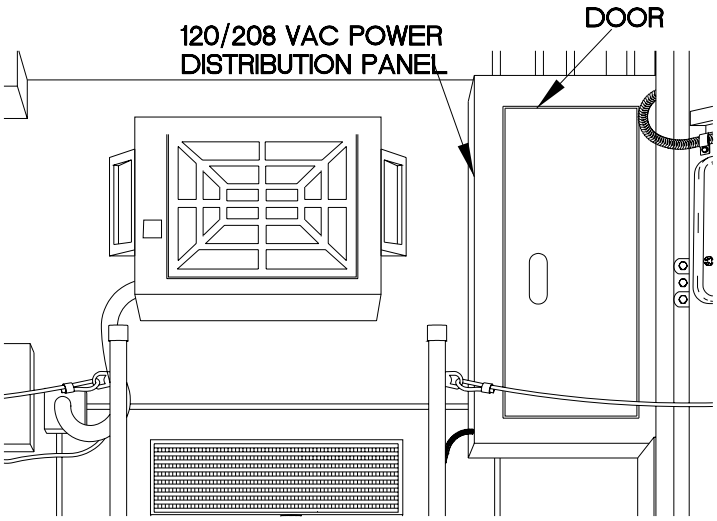
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
209. 120 VAC OUTLET(S) J509 AND/OR J510 DO NOT OPERATE IN BLACKOUT MODE CONTINUED		3. Disconnect 120 VAC appliance from 120 VAC outlet J509. 4. Connect any 120 VAC appliance to 120 VAC outlet J510. 5. Check for 120 VAC appliance operation. 6. Disconnect 120 VAC application from 120 VAC outlet J510.
		
		7. If 120 VAC outlet J509 does not operate notify field level maintenance. 8. If 120 VAC outlets J510 does not operate notify field level maintenance.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
209. 120 VAC OUTLET(S) J509 AND/OR J510 DO NOT OPERATE IN BLACKOUT MODE CONTINUED		9. If 120 VAC outlets J509 and J510 both do not operate notify field level maintenance.
210. 120 VAC OUTLET J515 DOES NOT OPERATE	1. Shut engine down (Instrument Panel Assembly Controls and Indicators WP 0004.00)	
	2. Connect AC power (Connecting/Disconnecting AC Power WP 0043 03)	
	3. Is circuit breaker CB102 tripped?	1. Open door on 120/208 VAC Power Distribution Panel.

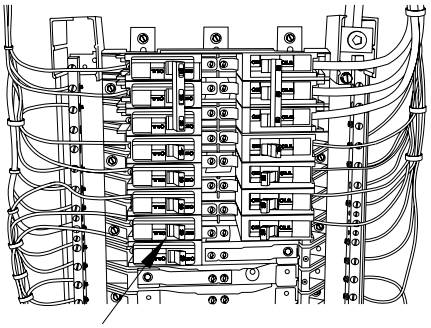


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

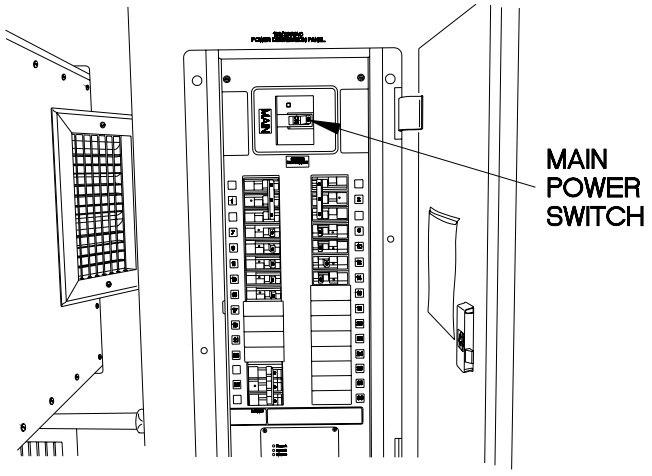
Table 3. Electrical System Troubleshooting Procedures - Continued.

210. 120 VAC OUTLET J515 DOES NOT OPERATE CONTINUED		2. If circuit breaker CB102 is tripped, position circuit breaker CB102 to on.



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	3. Position MAIN power switch to OFF (Van Lighting WP 0043 05) 4. Position MAIN power switch to ON (Van Lighting WP 0043 05)



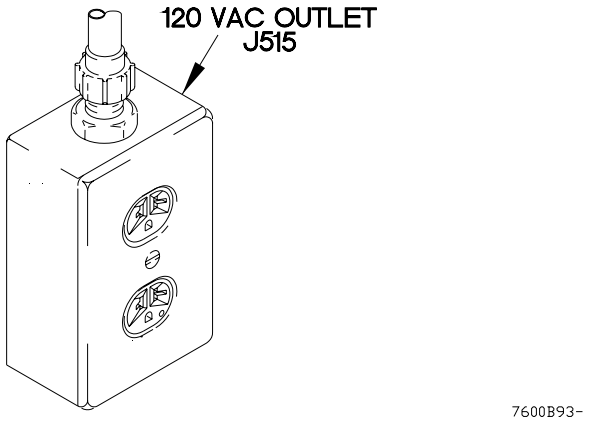
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ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

210. 120 VAC OUTLET J515 DOES NOT OPERATE CONTINUED		5. Check circuit breaker CB102 to see if it is tripped again. 6. Close door on 120/208 VAC Power Distribution Panel. 7. If circuit breaker CB102 trips again contact supervisor. 8. If circuit breaker CB102 is not tripped go to test 2 of this malfunction.
	2. Does 120 VAC outlet J515 operate?	1. Connect 120 VAC appliance to 120 VAC outlet J515.
		2. Check for 120 VAC appliance operation

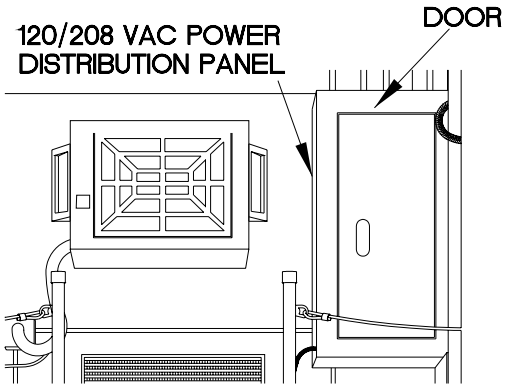


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

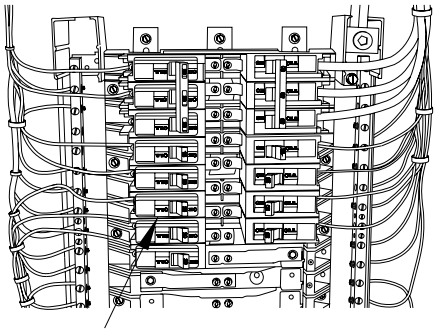
210. 120 VAC OUTLET J515 DOES NOT OPERATE CONTINUED		3. Disconnect 120 VAC appliance from 120 VAC outlet J515. 4. If 120 VAC outlet J515 does not operate contact supervisor. 5. If 120 VAC outlet J515 does operate fault has been corrected.
211. M1078A1 120 VAC OUTLET J516 DOES NOT OPERATE	1. Shut engine down (Instrument Panel Assembly Controls and Indicators WP 0004.00) 2. Connect AC power (Connecting/Disconnecting AC Power WP 0043 03)	
	3. Is circuit breaker CB100 tripped?	1. Open door on 120/208 VAC Power Distribution Panel.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

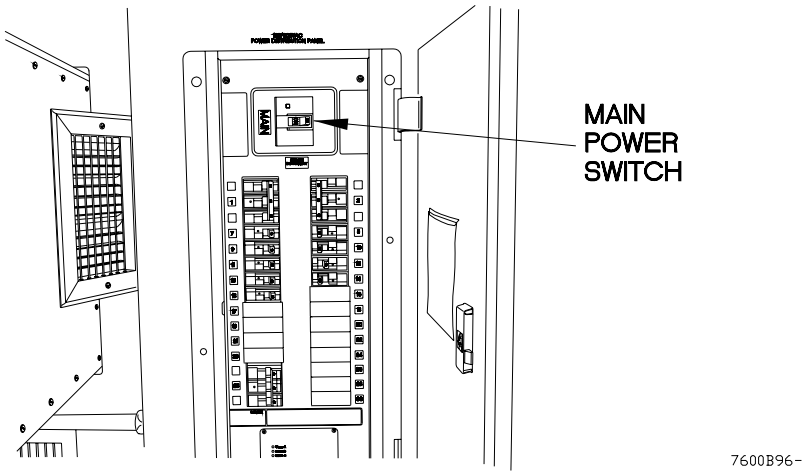
211. M1087A1 120 VAC OUTLET J516 DOES NOT OPERATE CONTINUED		2. If circuit breaker CB100 is tripped, position circuit breaker CB100 to ON
	 7600B95-	
		3. Position MAIN power switch OFF (Van Lighting WP 0043 05)
		4. Position MAIN power switch to ON (Van Lighting WP 0043 05)

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
211. M1087A1 120 VAC OUTLET J516 DOES NOT OPERATE CONTINUED		
		5. Check circuit breaker CB100 to see if it is tripped again
		6. Close door on 120 VAC Power Distribution Panel. 7. If circuit breaker CB100 is tripped contact supervisor.

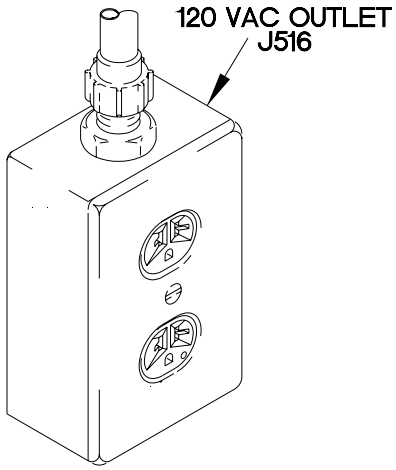


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
211. M1087A1 120 VAC OUTLET J516 DOES NOT OPERATE CONTINUED		8. If circuit breaker CB100 is not tripped go to test 2 of this malfunction.
	2. Does 120 VAC outlet J516 operate?	1. Connect any 120 VAC appliance to 120 VAC outlet J516.
		2. Check for 120 VAC appliance operation.
		3. Disconnect 120 VAC appliance from 120 VAC outlet J516.
		4. If 120 VAC outlet J516 does not operate contact supervisor.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

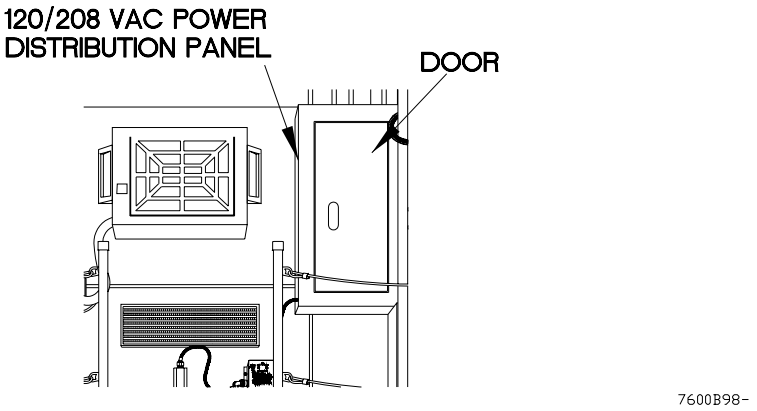
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
211. M1087A1 120 VAC OUTLET J516 DOES NOT OPERATE CONTINUED		5. If 120 VAC outlet J516 does operate Fault Corrected.
212. M1087A1 CONNECTOR J511 DOES NOT OPERATE	1. Shut engine down(Instrument Panel Assembly Controls and Indicators WP 0004.00) 2. Van walls expanded (Van Sides Expansion/Compression Operation WP 0043 06) 3. Ladder and platform mounted (Van Ladder and Platform mounting/Stowing WP0043 01) 4. Connect AC power (Connecting/Disconnecting AC Power WP 0043 03)	
	5. Is circuit breaker CB105 tripped?	1. Open door on 120/208 VAC Power Distribution Panel.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
212. M1087A1 CONNECTOR J511 DOES NOT OPERATE CONTINUED		
		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.

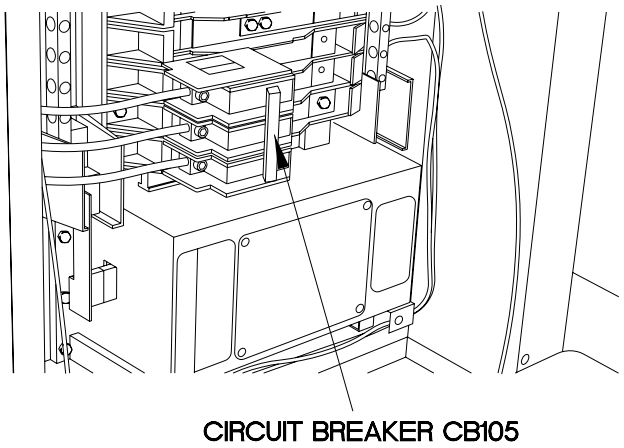


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
212.M1087A1 CONNECTOR J511 DOES NOT OPERATE CONTINUED		
		5. If air conditioner operates Fault Corrected.
		6. If circuit breaker CB105 trips again notify supervisor.
		7. If circuit breaker CB105 was not tripped, or does not trip again, and the air conditioner still does not operate, contact field level maintenance.
213. M1087A1 BLACKOUT LIGHT(S) DOES NOT ILLUMINATE	1. Shut engine down (Instrument Panel Assembly Controls and Indicators WP 0004.00)	

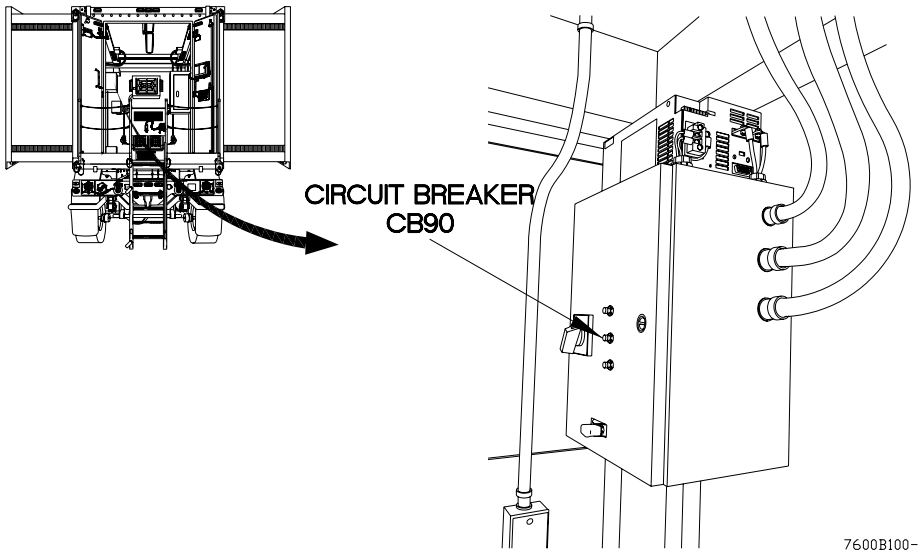


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
213. M1087A1 BLACKOUT LIGHT(S) DOES NOT ILLUMINATE CONTINUED	2. Van walls expanded (Van Sides Expansion/Compression Operation WP 0043 06)	
	3. Ladder and platform mounted (Van Ladder and Platform mounting/Stowing WP0043 01)	
	4. Is circuit breaker CB90 tripped?	1. Check circuit breaker CB90 on relay box to see it is tripped.
		2. If circuit breaker CB90 is tripped, push in to reset.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

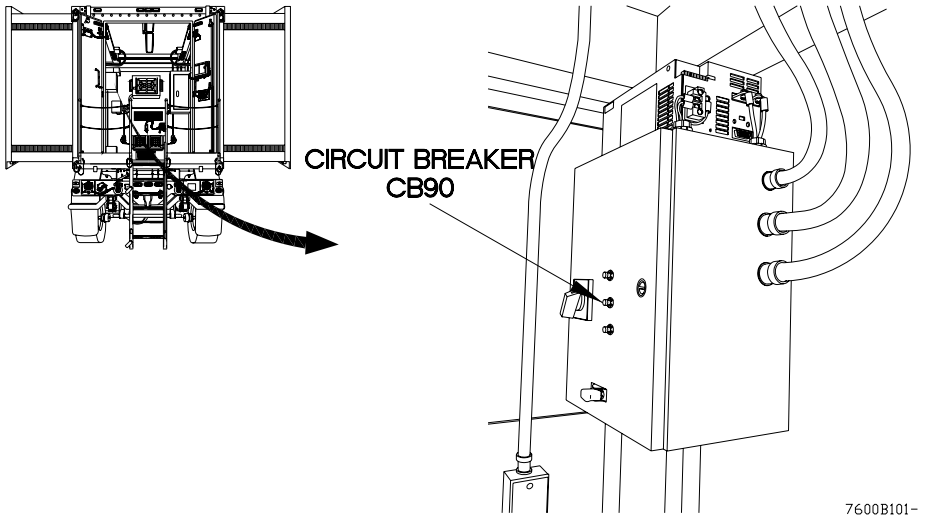
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
213. M1087A1 BLACKOUT LIGHT(S) DOES NOT ILLUMINATE CONTINUED		3. Check to see if blackout lights illuminate (Vehicle Operation – Usual Conditions (Vehicle S/N 100,001 to 199,999 WP 0020 00) 4. If blackout light(s) does not illuminate go to step 5 of this malfunction. 5. If blackout light(s) illuminates Fault Corrected. 6. If circuit breaker CB10 or CB11 trips again contact supervisor.
	5. Does Curbside 24 VDG binding post operate?	1. Connect any 24 VDC appliance to curbside 24 VDC binding post. (Van 24 VDC Power Connection/Disconnection WP 0043 07) 2. If 24 VDC binding post does not operate go to Malfunction 227 24 VDC Binding Post(s) Do Not Operate. 3. If 24 VDC binding post operates, contact supervisor.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
214. M1087A1 EMERGENCY LIGHT(S) DOES NOT ILLUMINATE	1. Shut engine down (Instrument Panel Assembly Controls and Indicators WP 0004.00) 2. Van walls expanded (Van Sides Expansion/Compression Operation WP 0043 06) 3. Ladder and platform mounted (Van Ladder and Platform mounting/Stowing WP0043 01) 4. Is circuit breaker CB10 or CB11 tripped?	1. Check circuit breaker CB90 on relay box to see if it is tripped.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

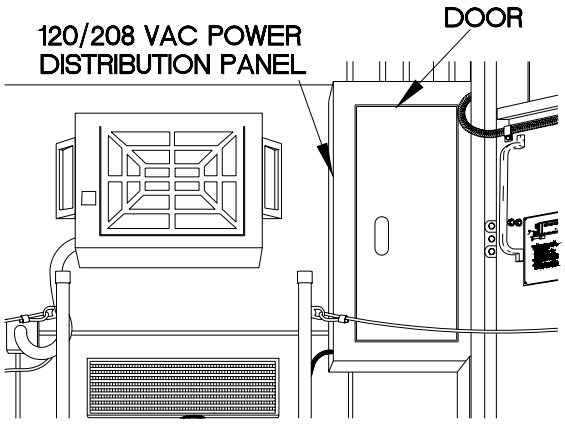
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
214. M1087A1 EMERGENCY LIGHT(S) DOES NOT ILLUMINATE CONTINUED		2. If circuit breaker CB90 is tripped, push in to reset. 3. Check to see if emergency light illuminate (Van Lighting WP 0043 05) 4. If emergency light(s) does not illuminate go to step 2 of this malfunction. 5. If emergency light(s) illuminates Fault Correcter. 6. If circuit breaker CB10 or CB11 trips again, contact supervisor.
	4. Do blackout lights illuminate?	1. Check to see if blackout lights illuminate (Vehicle Operation – Usual Conditions (Vehicle S/N 100,001 to 199,999 WP 0020 00) 2. If blackout lights do not illuminate go to Malfunction 213 (Blackout Light(s) Does Not Illuminate). 3. If blackout lights illuminate, contact supervisor.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
215. M1087A1 FAN DOES NOT OPERATE	1. Shut engine down (Instrument Panel Assembly Controls and Indicators WP 0004.00) 2. Expand van walls (Van Sides Expansion/Compression Operation WP 0043 06) 3. Ladder and platform mounted (Van Ladder and Platform mounting/Stowing WP0043 01) 4. Connect AC power (Connecting/Disconnecting AC Power WP0043 03)	
	5. Is circuit breaker CB96 tripped?	1. Open door on 120/208 VAC Power Distribution Panel.

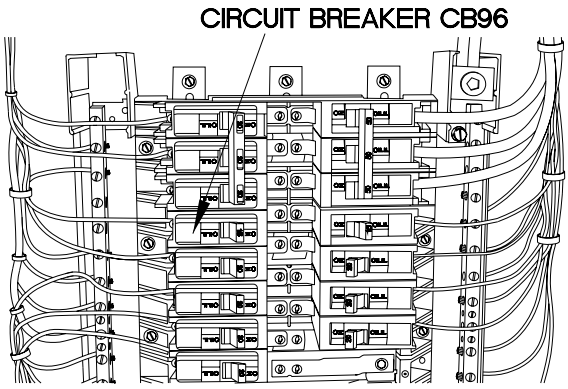


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
215. M1087A1 FAN DOES NOT OPERATE CONTINUED		2. Check to see if circuit breaker CB96 is tripped. 3. If circuit breaker CBi96 is tripped, position switch on circuit breaker CB96 to ON to reset. 4. Check to see if circuit breaker CB96 trips again.
		5. If fan operates, Fault Corrected 6. If circuit breaker CB96 trips again, contact supervisor.

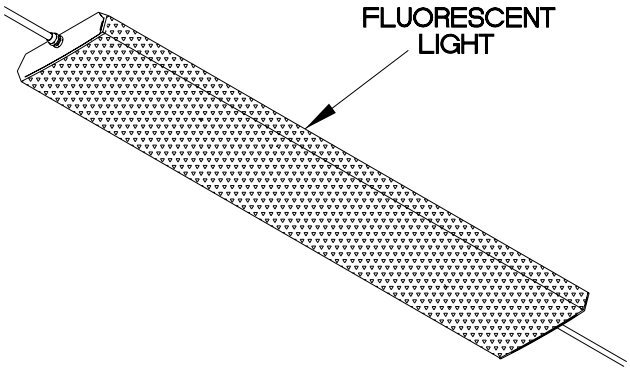


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
215. M1087A1 FAN DOES NOT OPERATE CONTINUED		7. If circuit breaker CB96 was not tripped, or does not trip again, and the fan still does not operate, contact supervisor.
216. M1087A1 FLUORESCENT LIGHT(S) DS120 AND/OR DS121 DO NOT ILLUMINATE	1. Shut engine down(Instrument Panel Assembly Controls and Indicators WP 0004.00)	
	2. Connect AC power (Connecting/Disconnecting AC Power WP0043 03)	
	3. Do fluorescent lights DS122, DS123, DS124, DS125, DS126, DS127, and DS156 illuminate?	1. Position master power switch to on (Instrument Panel Assembly Controls and Indicators WP 0004 00)



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

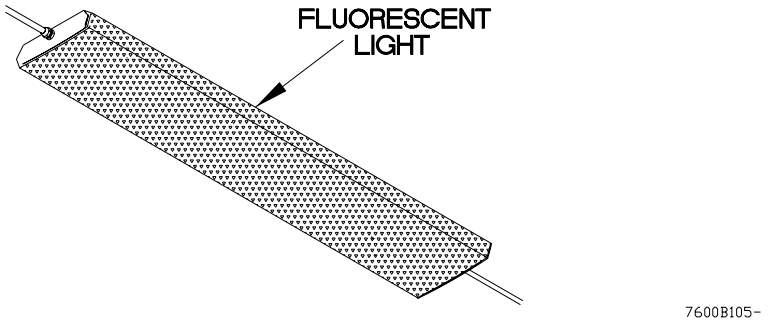
Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
216. M1087A1 FLUORESCENT LIGHT(S) DS120 AND/OR DS121 DO NOT ILLUMINATE CONTINUED		2. Check to see if fluorescent light(s) DS122, DS123, DS124, DS125, DS126, DS127, and/or DS156 illuminate (Van Lighting WP 0043 05). 3. Position master power switch to off (Instrument Panel Assembly Controls and Indicators WP 0004 00) 4. If fluorescent light(s) DS122, DS123, DS124, DS125, DS126, DS127 and/or DS156 do not illuminate, go to Malfunction 228 (All Fluorescent Lights Do Not Illuminate) 5. If fluorescent lights DS122, DS123, DS124, DS125, DS126, DS127, and DS156 illuminate go to test 4 of this malfunction.
	4. Do fluorescent light(s) DS120 and/or DS121 illuminate?	1. Position master power switch to on (Instrument Panel Assembly Controls and Indicators WP 0004 00)

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
		
216. M1087A1 FLUORESCENT LIGHT(S) DS120 AND/OR DS121 DO NOT ILLUMINATE CONTINUED		2. Check to see if fluorescent light(s) DS120 and/or DS121 illuminate (Van Lighting WP 0043 05). 3. Position master power switch to off (Instrument Panel Assembly Controls and Indicators WP 0004 00) 4. If fluorescent light(s) DS120 and/or DS121 do not illuminate, contact supervisor. 5. If fluorescent lights DS120 and DS121 illuminate, Fault Corrected.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

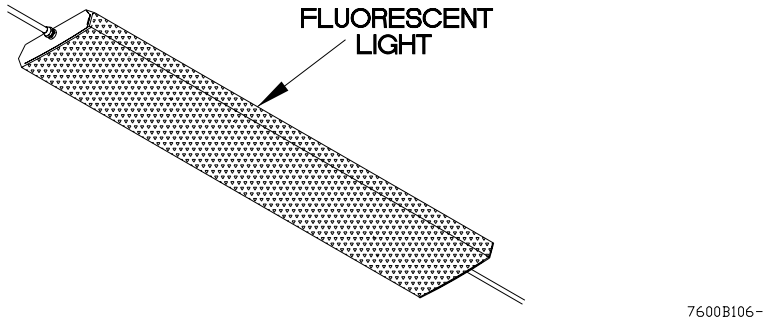
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
217. M1087A1 FLUORESCENT LIGHT(S) DS122, DS123, DS124, DS125, AND/OR DS156 DO NOT ILLUMINATE	1. Shut engine down(Instrument Panel Assembly Controls and Indicators WP 0004.00)	
	2. Connect AC Power(Connecting/Disconnecting AC Power WP0043 03)	
	3. Do fluorescent lights DS120, DS121, DS126 and DS127 illuminate?	1. Position master power switch to on (Instrument Panel Assembly Controls and Indicators WP 0004 00) 2. Check to see if fluorescent light(s) DS120, DS121, DS126, and/or DS127 illuminate (Van Lighting WP 0043 05). 3. Position master power switch to on (Instrument Panel Assembly Controls and Indicators WP 0004 00). 4. If fluorescent light(s) DS120, DS121, DS126 and/or DS127 do not illuminate go to Malfunction228 (All Fluorescent Lights Do Not Illuminate) 5. If fluorescent lights DS120, DS121, DS126, and/or DS127 illuminate, go to test 4 of this malfunction.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
217. M1087A1 FLUORESCENT LIGHT(S) DS122, DS123, DS124, DS125, AND/OR DS156 DO NOT ILLUMINATE CONTINUED	4. Do fluorescent light(s) DS122, DS123, DS124, DS125, and/or DS156 illuminate?	1. Position master power switch to on (Instrument Panel Assembly Controls and Indicators WP 0004 00).
		2. Check to see if fluorescent light(s) DS122, DS123, DS124, DS125, and/or DS156 illuminate (Van Lighting WP 0043 05). 3. Position master power switch to off (Instrument Panel Assembly Controls and Indicators WP 0004 00). 4. If fluorescent light(s) DS122, DS123, DS124, DS125, and/or DS156 do not illuminate, contact supervisor. 5. If fluorescent lights DS122, DS123, DS124, DS125, and/or DS156 illuminate, Fault Corrected.

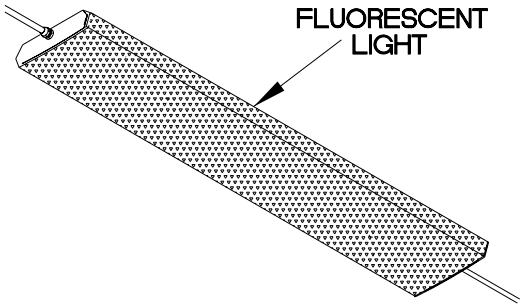


ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
218. M1087A1 FLUORESCENT LIGHT(S) DS126, AND/OR DS 127 DO NOT ILLUMINATE	1. Shut engine down (Instrument Panel Assembly Controls and Indicators WP 0004.00)	
	2. Connect AC Power (Connecting/Disconnecting AC Power WP0043 03)	
	3. Do fluorescent lights DS120, DS121, DS122, DS123, DS124, DS125 and DS156 illuminate?	1. Position master power switch to on (Instrument Panel Assembly Controls and Indicators WP 0004.00)
		2. Check to see if fluorescent light(s) DS120, DS121, DS122, DS123, DS124, DS125 and/or DS156 illuminate (Van Lighting WP 0043 05)..
		3. If fluorescent light(s) DS120, DS121, DS122, DS123, DS124, DS125 and/or DS156 do not illuminate, go to Malfunction 228 (All Fluorescent Lights Do Not Illuminate)



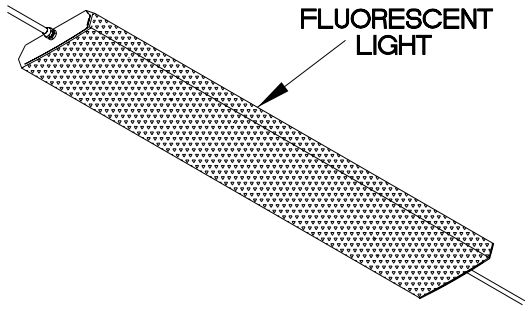
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ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
218. M1087A1 FLUORESCENT LIGHT(S) DS126, AND/OR DS 127 DO NOT ILLUMINATE CONTINUED		4. If fluorescent lights DS120, DS121, DS122, DS123, DS124, DS125 and DS156 illuminate, go to test 4 of this malfunction.
	4. Do fluorescent light(s) DS126 and/or DS127 illuminate?	1. Position master power switch to on (Instrument Panel Assembly Controls and Indicators WP 0004.00)
		2. Check to see if fluorescent light(s) DS126 and/or DS127 illuminate (Van Lighting WP 0043 05).
		3. Position master power switch to off (Instrument Panel Assembly Controls and Indicators WP 0004.00)
		4. If fluorescent light(s) DS126 and/or DS127 do not illuminate contact supervisor.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

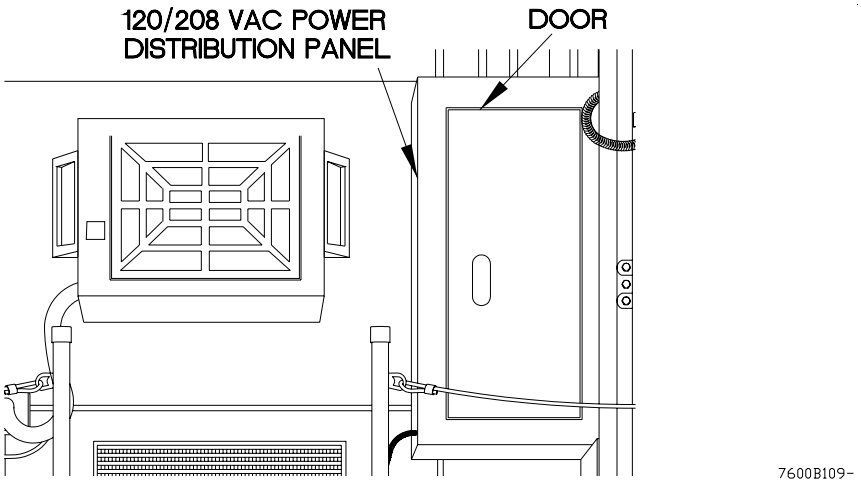
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
218. M1087A1 FLUORESCENT LIGHT(S) DS126, AND/OR DS 127 DO NOT ILLUMINATE CONTINUED		5. If fluorescent lights DS126 and DS127 illuminate, Fault Corrected.
219. M1087A1 HEATER DOES NOT OPERATE	1. Shut engine down (Instrument Panel Assembly Controls and Indicators WP 0004.00) 2. Van walls expanded (Van Sides Expansion/Compression Operation WP 0043 06) 3. Ladder and platform mounted (Van Ladder and Platform mounting/Stowing WP 0043 01) 4. Connect AC power (Connecting/Disconnecting AC Power WP0043 03) 5. Is circuit breaker CB104 tripped?	1. Open door on 120/208 VAC Power Distribution Panel.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

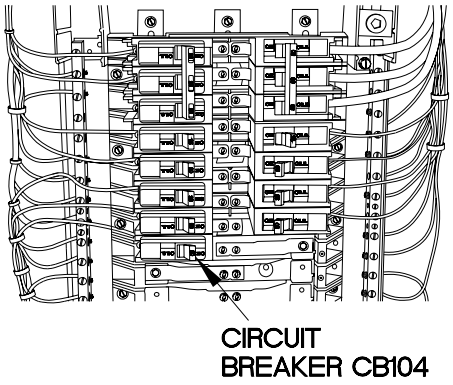
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
219. M1087A1 HEATER DOES NOT OPERATE CONTINUED		
		2. Check to see if circuit breaker CB104 is tripped.
		3. If circuit breaker CB104 is tripped, position switch on circuit breaker CB104 to ON to reset.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
219. M1087A1 HEATER DOES NOT OPERATE CONTINUED		4. Check to see if circuit breaker CB104 trips again
	 7600B110-	
		5. If heater operates, Fault Corrected
		6. If circuit breaker CB104 trips again, contact supervisor.
		7. If circuit breaker CB104 was not tripped, or does not trip again, and the heater still does no operate, contact supervisor.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
220. VAN DOOR INDICATOR BLINKS WITH VAN DOORS CLOSED AND WALLS STOWED.	1. Shut engine down (Instrument Panel Assembly Controls and Indicators WP 0004.00) 2. Stow van walls (Van Sides Expansion/Compression Operation WP 0043 06) 3. Close Van doors (Van Door Opening/Closing WP 0043 02) 4. Are van walls stowed and doors closed?	1. Verify van walls are stowed (Van Sides Expansion/Compression Operation WP 0043 06) 2. Verify all van doors are closed (Van Door Opening/Closing WP 0043 02) 3. Position master power switch to on (Instrument Panel Assembly Controls and Indicators WP 0004.00) 4. Check to see if VAN DOOR indicator is blinking

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
220. VAN DOOR INDICATOR BLINKS WITH VAN DOORS CLOSED AND WALLS STOWED CONTINUED		5. If VAN DOOR indicator is not blinking, Fault Corrected 6. If VAN DOOR indicator is blinking, contact supervisor.
221. ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE IN AC/DC CONVERTER MODE	1. Shut engine down (Instrument Panel Assembly Controls and Indicators WP 0004.00) 2. Expand van walls(Van Sides Expansion/Compression Operation WP 0043 06) 3. Do any interior van lights operate in vehicle mode?	1. Position 24VDC SOURCE switch to VEHICLE (Van 24 VDC Power Connection/Disconnection WP 0043 07) 2. Attempt to operate van lighting (Van Lighting WP 0043 05)

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

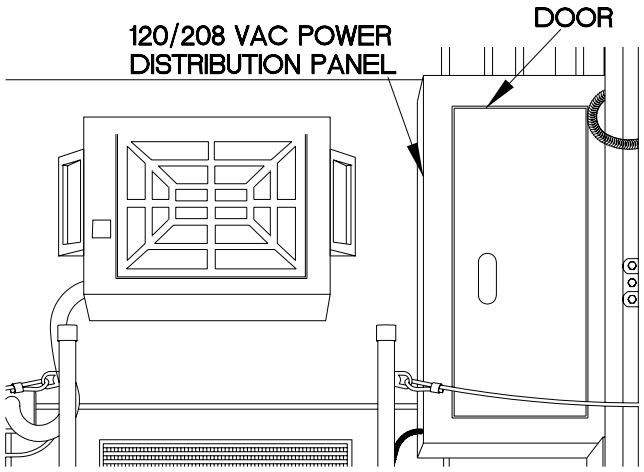
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
221. ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE IN AC/DC CONVERTER MODE CONTINUED		3. Check to see if any interior van lights operate. 4. Turn off van lights (Van Lighting WP 0043 05) 5. Position 24 VDC SOURCE switch to AC/DC CONVERTER (Van 24 VDC Power Connection/Disconnection WP 0043 07) 6. If no interior van lights operate in vehicle mode go to Malfunction 224 (All Interior Van Lights Do Not Illuminate). 7. If interior van lights operate in vehicle mode , go to malfunction test 4.
	4. Is circuit breaker CB94 tripped?	1. Open door on 120/208 VAC Power Distribution Panel

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

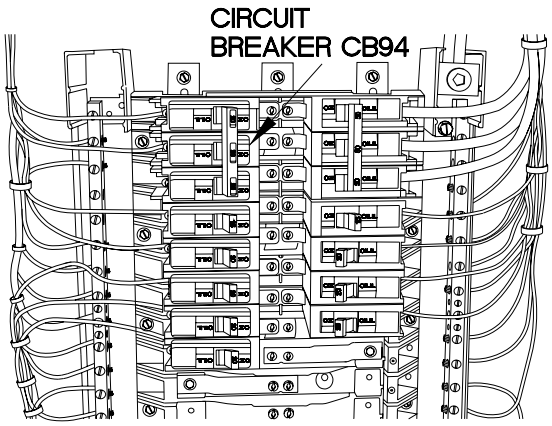
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
221. ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE IN AC/DC CONVERTER MODE CONTINUED		
		3. Check to see if circuit breaker CB94 is tripped 4. If circuit breaker CB94 is tripped, position switch on circuit breaker CB94 to ON to reset.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
221. ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE IN AC/DC CONVERTER MODE CONTINUED		5. Attempt to operate van lighting (Van Lighting WP 0043 05). 6. Check to see if circuit breaker CB94 is tripped.  7600B112- 7. Turn off van lights (Van Lighting WP 0043 05) 8. If van lights illuminate, Fault Corrected.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

221. ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE IN AC/DC CONVERTER MODE CONTINUED		9. If circuit breaker CB94 trips again, notify supervisor.
		10. If circuit breaker CB94 was not tripped, or does not trip again, and the van lights do not illuminate, go to test 5 of this malfunction
	5. Does ventilation fan operate?	1. Check to see if ventilation fan is operating.
		2. If ventilation fan is not operating, go to Malfunction 226 (120 VAC Power Does Not Operate)
		3. If ventilation fan is operating, go to test 6 of this malfunction.
	6. Does primary heater operate?	1. Check to see if primary heater operates (Van Air Conditioner/Heater Operation WP 0043 08)
		2. Turn primary heater switch to off (Van Air Conditioner/Heater Operation WP 0043 08)

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

221. ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE IN AC/DC CONVERTER MODE CONTINUED		3. If primary heater is not operating go to Malfunction 226 (120 VAC Power Does Not Operate) 4. If primary heater is operating, contact supervisor.
222. VAN DOOR INDICATOR ILLUMINATES BUT DOES NOT BLINK	There is no troubleshooting available at this level maintenance for this fault	Go to VAN DOOR Indicator Illuminates But Does Not Blink.
223. ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE IN VEHICLE MODE	1. Shut engine down (Instrument Panel Assembly Controls and Indicators WP 0004.00) 2. Connect AC Power to van body (if available) (Connecting/Disconnecting AC Power WP 0043 03) 3. Is circuit breaker CB48 tripped?	1. Position battery disconnect switch to disconnect (up). (Instrument Panel Assembly Controls and Indicators WP 0004.00) 2. Remove Power Distribution Panel (PDP) cover. (WP 0113 00)

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

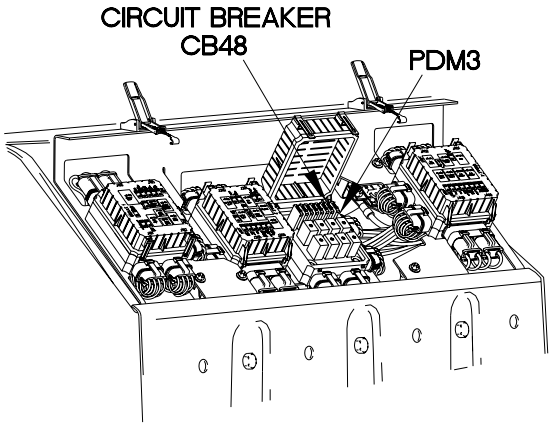
Table 3. Electrical System Troubleshooting Procedures - Continued.

223. ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE IN VEHICLE MODE CONTINUED		3. Open Power Distribution Module (PDM) (WP 0113 00) 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). (Instrument Panel Assembly Controls and Indicators WP 0004.00) 7. Position 24 VDC SOURCE switch to VEHICLE(Van 24 VDC Power Connection/Disconnection WP 0043 07) 8. Attempt to operate van lighting. (Van Lighting WP 0043 05). 9. Check to see if circuit breaker CB48 is tripped

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.



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223. ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE IN VEHICLE MODE CONTINUED		10. Turn off van lights. (Van Lighting WP 0043 05)
		11. If van lights illuminate, Fault Corrected
		12. If circuit breaker CB48 trips again, notify supervisor
		13. If circuit breaker CB48 was not tripped, or does not trip again, and the van lights do not illuminate, go to test 4 of this malfunction.
	4. Is an AC power source available for the vehicle?	1. Position battery disconnect switch to disconnect (up) (Instrument Panel Assembly Controls and Indicators WP 0004.00)

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

223. ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE IN VEHICLE MODE CONTINUED		2. Install PDP cover (WP 0113 00) 3. Position battery disconnect switch to connect (down) (Instrument Panel Assembly Controls and Indicators WP 0004.00) 4. If AC Power is not available, there is no troubleshooting available at this level without AC Power. Perform All Interior Van Lights Do Not Illuminate in Vehicle Mode, and AC Power Is Not Available. 5. If AC Power is available, go to test 5 of this malfunctions.
	5. Do any interior van lights operate in AC/DC CONVERTER mode?	1. Connect AC Power to van body. (Connecting/Disconnecting AC Power WP0043 03) 2. Position 24 VDC SOURCE switch to AC/DC CONVERTER mode (Van 24 VDC Power Connection/Disconnection WP 0043 07) 3. Check to see if any interior van lights operate (Van Lighting WP 0043 05).

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

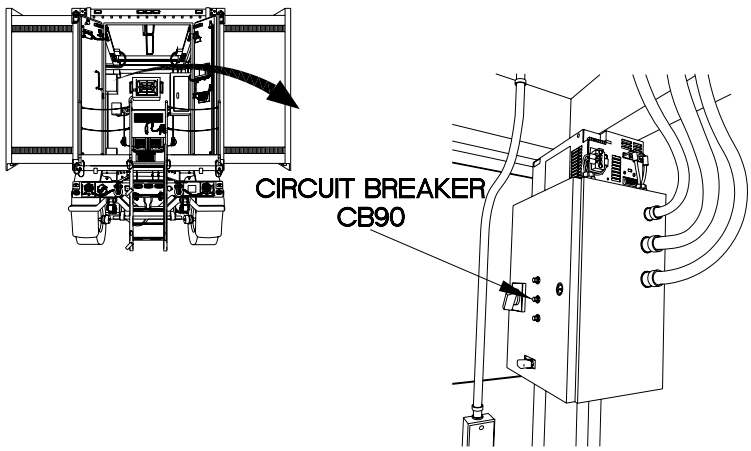
223. ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE IN VEHICLE MODE CONTINUED		4. If no interior van lights operate in vehicle mode, perform Malfunction 224 (All Interior Van Lights Do Not Operate) 5 If interior van lights operate in vehicle mode, contact supervisor.
224.ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE	1. Shut engine down (Instrument Panel Assembly Controls and Indicators WP 0004.00) 2. Expand van walls (Van Sides Expansion/Compression Operation WP 0043 06)	
	3. Which position is the 24 VDC SOURCE switch in?	1. If 24 VDC SOURCE switch is in AC/DC CONVERTER position perform Malfunction 221 (All Interior Van Lights Do Not Operate in AC/DC Converter Mode) 2. If 24 VDC SOURCE switch is in VEHICLE position, perform 223 Malfunction (All Interior Van Lights Do Not Operate in Vehicle Mode).
	4. Is 24 VDC LIGHTING circuit breaker CB90 tripped?	1. Position battery disconnect switch to disconnect (up). (Instrument Panel Assembly Controls and Indicators WP 0004.00)

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

224.ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE CONTINUED		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) (Instrument Panel Assembly Controls and Indicators WP 0004.00) 5. Attempt to operate van lighting (Van Lighting WP 0043 05) 6. Check to see if 24 VDC LIGHTING circuit breaker CB90 is tripped.



7600B114-

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

224. ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE CONTINUED		7. Turn off van lights (Van Lighting WP 0043 05) 8. If van lights illuminate, Fault Corrected. 9. If circuit breaker CB90 trips again, Notify Supervisor. 10. If circuit breaker CB90 was not tripped, or does not trip again, and the van lights do not illuminate, Contact Supervisor.
225. ALL INTERIOR VAN LIGHTS DO NOT OPERATE IN VEHICLE MODE WITH AC POWER UNAVAILABLE.	Perform Malfunction 223 All Interior Van Lights Do Not Operate In Vehicle Mode.	
226. M1087A1 24 VDC BINDING POST(S) DOES NOT OPERATE	1. Shut engine down (Instrument Panel Assembly Controls and Indicators WP 0004.00) 2. Expand Van Walls (Van Sides Expansion/Compression Operation WP 0043 06)	

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

226. M1087A1 24 VDC BINDING POST(S) DOES NOT OPERATE CONTINUED	3. Mount ladder and platform (Van Ladder and Platform mounting/Stowing WP 0043 01)	
	4. Do interior van lights operate in VEHICLE mode?	1. Check to see if interior van lights illuminate in VEHICLE mode (Van Lighting WP 0043 05) 2. If interior van lights do not illuminate, perform Malfunction 222 (All Interior Van Lights Do Not Operate In Vehicle Mode). 3. If interior van lights illuminate, continue to test 5 of this malfunction.
	5. Do interior van lights operate in AC/DC CONVERTER mode?	1. Check to see if interior van lights illuminate in VEHICLE mode. (Van Lighting WP 0043 05) 2. If interior van lights do not illuminate, perform test 6 of this malfunction. 3. If interior van lights illuminate, contact supervisor.
	6. Is circuit breaker CB94 tripped?	1. Open door to 120/208 VAC Power Distribution Panel

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

226. M1087A1 24 VDC BINDING POST(S) DOES NOT OPERATE CONTINUED		2. Check circuit breaker CB94 in circuit breaker box to see it is tripped. 3. If circuit breaker CB94 is tripped, reset. 4. Check to see if binding post(s) operate (TM 9-2320-391-10 WP0033 00) 5. If binding post does not illuminate, contact supervisor. 6. If binding post operate, Fault Corrected. 7. If circuit breaker CB94 trips again, contact supervisor.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

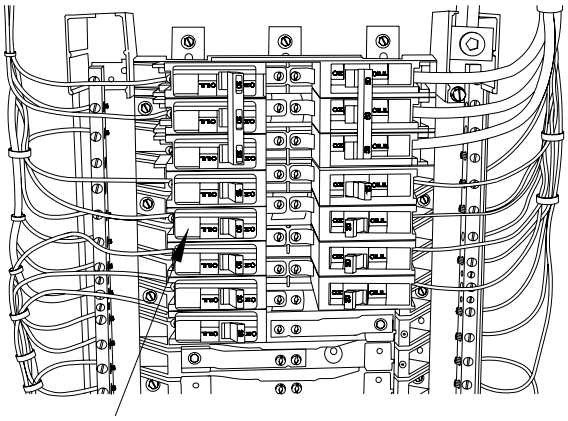
Table 3. Electrical System Troubleshooting Procedures - Continued.

227.M1087A1 ALL FLUORESCENT LIGHTS DO NOT ILLUMINATE	1. Shut engine down (Instrument Panel Assembly Controls and Indicators WP 0004.00) 2. Van walls expanded (Van Sides Expansion/Compression Operation WP 0043 06) 3. Mount ladder and platform (Van Ladder and Platform mounting/Stowing WP 0043 01) 4. Connect AC power (Connecting/Disconnecting AC Power WP0043 03) 5. Is circuit breaker CB98 tripped?	1. Open door on 120/208 VAC Power Distribution Panel. 2. If circuit breaker CB98 is tripped, position circuit breaker CB98 on ON

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

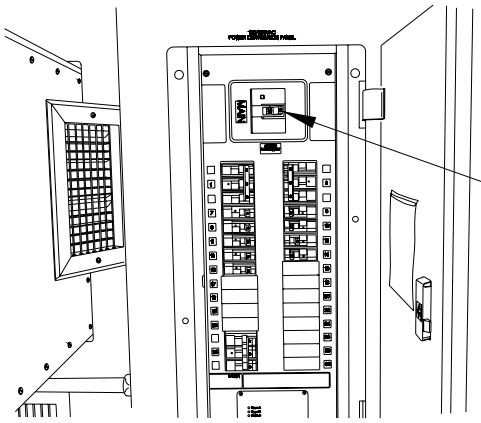
ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.



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227.M1087A1 ALL FLUORESCENT LIGHTS DO NOT ILLUMINATE CONTINUED		3. Position MAIN power switch to OFF 4. Position MAIN power switch to ON



7600B116-

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

227.M1087A1 ALL FLUORESCENT LIGHTS DO NOT ILLUMINATE CONTINUED		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 (Vehicle Operation – Usual Conditions (Vehicle S/N 100,001 to 199,999 WP 0020 00) 8. If circuit breaker CB98 trips again, contact supervisor. 9. If circuit breaker CB98 is OK, go to step 6 of this malfunction. 10. If fluorescent lights all work, Fault Corrected.
	6. Do blackout lights illuminate?	1. Check to see if blackout lights illuminate (Vehicle Operation – Usual Conditions (Vehicle S/N 100,001 to 199,999 WP 0020 00) 2. If blackout lights do not illuminate, go to Malfunction 213 Blackout Lights Do Not Illuminate.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

227.M1087A1 ALL FLUORESCENT LIGHTS DO NOT ILLUMINATE CONTINUED		3. If blackout lights illuminate, go to step 7 of this malfunction.
	7. Do emergency lights illuminate?	1. Check to see if emergency lights illuminate (Van Lighting WP 0043 05)
		2. If emergency lights do not illuminate go to Malfunction 213, Emergency Lights Do Not Illuminate
		3. If emergency lights illuminate, contact Field supervisor.
228.ALL VAN BODY CLEARANCE AND MARKER LIGHTS DO NOT ILLUMINATE	1. Do cab and/or chassis marker lights illuminate?	1. Check to see if cab and/or chassis marker lights illuminate (WP 0004 00).
		2. If all cab and/or chassis marker lights do not illuminate, perform Malfunction 57 (All Front and/or Rear Marker Lights Do Not Illuminate In Normal Mode).
		3. If all cab and/or chassis marker lights illuminate, go to step 2. of this malfunction.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued 0080 00

ELECTRICAL SYSTEM – Continued

Table 3. Electrical System Troubleshooting Procedures - Continued.

228.ALL VAN BODY CLEARANCE AND MARKER LIGHTS DO NOT ILLUMINATE CONTINUED	2. Do van body blackout lights illuminate?	1. Check to see if van body blackout lights illuminate (Van Lighting WP 0043 05) 2. If van body blackout lights do not illuminate, perform malfunction 212 (Blackout Lights Do Not Illuminate). 3. If van body blackout lights do illuminate, contact field maintenance.
229.M1087A1 FIELD TELEPHONE(S) DOES NOT OPERATE	1. Which field telephone binding post does not operate?	1. Connect field telephone to roadside and curbside field telephone binding post (Van Field Phone Binding Post Operation WP 0042 02) and note which field telephone binding post does not operate. Notify field maintenance.
230.VAN BODY CLEARANCE OR MARKER LIGHT DOES NOT ILLUMINATE	1. Do other van body clearance and marker lights illuminate?	1. Check to see if other van body clearance and marker lights illuminate (WP 0004 00). 2. If other van body clearance and marker lights do not illuminate, perform malfunction 228 (All Van Body Clearance and Marker Lights Do Not Illuminate). 3. If other van body clearance and marker lights illuminate, notify field maintenance.

END OF WORK PACKAGE.

TRANSMISSION SYSTEM TROUBLESHOOTING 0081 00

THIS WORK PACKAGE COVERS:

Transmission System

INITIAL SETUP:

Maintenance Level
Operator

References
WP 0103 00

TRANSMISSION SYSTEM

Table 1. Transmission System Troubleshooting Procedures.

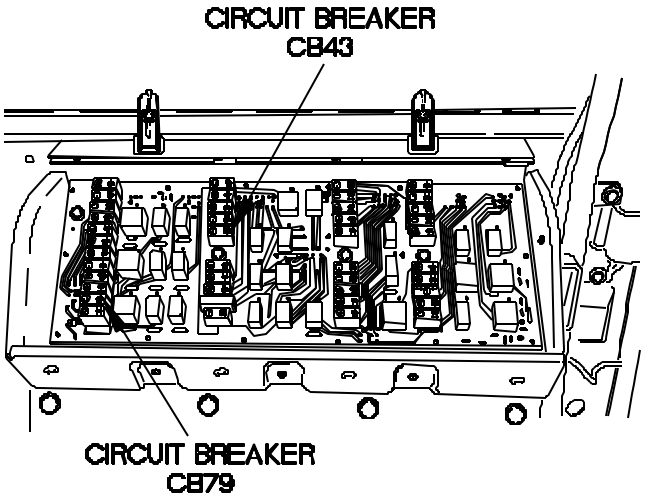
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. WTEC III TRANSMISSION PUSHBUTTON SHIFT SELECTOR (TPSS) LED FLASHES SELECTED GEAR AND/OR TRANSMISSION DOES NOT SHIFT GEARS	1. Check transmission oil level (WP 0103 00, Table 3, Item 7).	1. If transmission oil level is low, add transmission oil (WP 0103 00, Table 3, Item 7).
		2. If transmission oil level is high, notify Field Maintenance.
	2. Check transmission oil for contamination.	1. If transmission oil is contaminated, notify Field Maintenance.
		2. If TPSS display window still flashes selected gear and/or transmission still does not shift gears, notify Field Maintenance.
2. TRANSMISSION UNUSUALLY NOISY WHEN OPERATING	1. Check transmission oil level (WP 0103 00, Table 3, Item 7).	1. If transmission oil level is low, add transmission oil (WP 0103 00, Table 3, Item 7).

TRANSMISSION SYSTEM TROUBLESHOOTING - Continued 0081 00

TRANSMISSION SYSTEM - Continued

Table 1. Transmission System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. TRANSMISSION UNUSUALLY NOISY WHEN OPERATING - Continued	2. Check transmission oil for contamination.	2. If transmission oil level is high, notify Field Maintenance. 1. If transmission oil is contaminated, notify Field Maintenance. 2. If transmission is still unusually noisy when operating, notify Field Maintenance.
3. WTEC III TRANSMISSION PUSHBUTTON SHIFT SELECTOR (TPSS) DOES NOT ILLUMINATE/ OPERATE	1. Check to see if circuit breakers CB43 and CB79 are tripped.	1. Remove PDP cover (WP 0114 00). 2. If circuit breaker(s) CB43 or CB79 is tripped, push button to reset.



TRANSMISSION SYSTEM

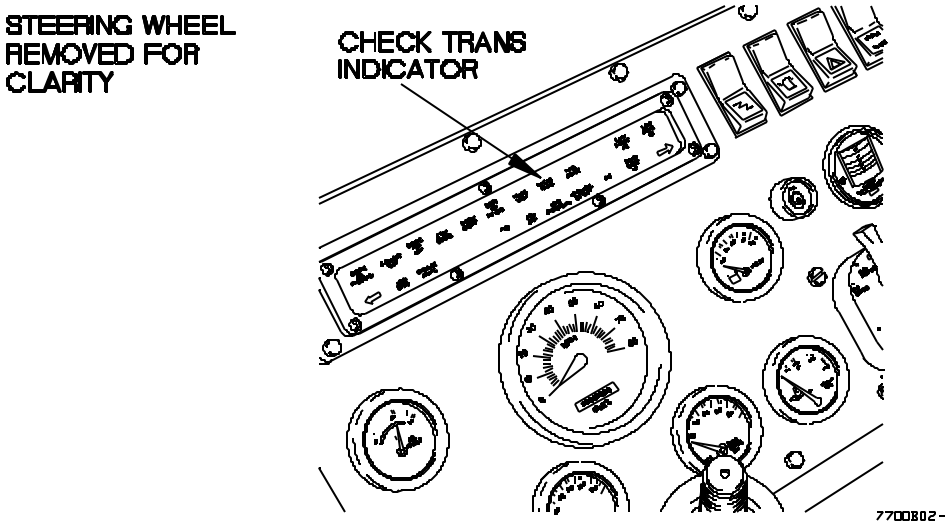
Table 1. Transmission System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. WTEC III TRANSMISSION PUSHBUTTON SHIFT SELECTOR (TPSS) DOES NOT ILLUMINATE/ OPERATE - Continued		3. Position master power switch to on (WP 0004 00). 4. Check circuit breaker(s) to see if it is tripped again. 5. Position master power switch to off (WP 0004 00). 6. If circuit breaker(s) is tripped, notify Field Maintenance. 7. Install PDP cover (WP 0113 00).
	2. Check to see if WTEC III TPSS illuminates and operates.	1. Position master power switch to on (WP 0004 00). 2. Position main light switch to SER DRIVE (WP 0004 00). 3. Position dimmer switch to maximum brightness (WP 0004 00). 4. Check to see if WTEC III TPSS illuminates. 5. Position main light switch to off (WP 0004 00). 6. Position master power switch to off (WP 0004 00). 7. If WTEC III TPSS does not illuminate, notify Field Maintenance.

TRANSMISSION SYSTEM - Continued

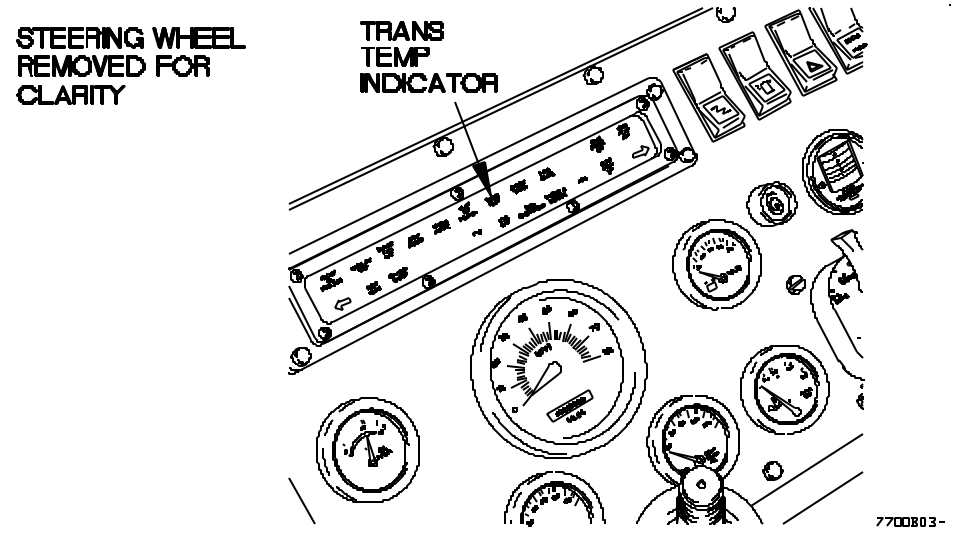
Table 1. Transmission System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
4. CHECK TRANS INDICATOR REMAINS ILLUMINATED	1. Check to see if CHECK TRANS indicator remains illuminated after test drive.	1. Start engine (WP 0018 00). 2. Test drive vehicle. 3. Check to see if CHECK TRANS indicator remains illuminated. 4. Shut down engine (WP 0018 00). 5. If CHECK TRANS indicator remains illuminated, notify Field Maintenance.



TRANSMISSION SYSTEM - Continued

Table 1. Transmission System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
5. TRANS TEMP INDICATOR REMAINS ILLUMINATED	1. Check to see if TRANS TEMP indicator remains illuminated after test drive.	1. Start engine (WP 0018 00). 2. Test drive vehicle. 3. Check to see if TRANS TEMP indicator remains illuminated.  4. Shut down engine (WP 0018 00). 5. If TRANS TEMP indicator remains illuminated, notify Field Maintenance.

END OF WORK PACKAGE.

DRIVE SHAFT TROUBLESHOOTING 0082 00

THIS WORK PACKAGE COVERS:
Drive Shaft

INITIAL SETUP:

Maintenance Level
Operator

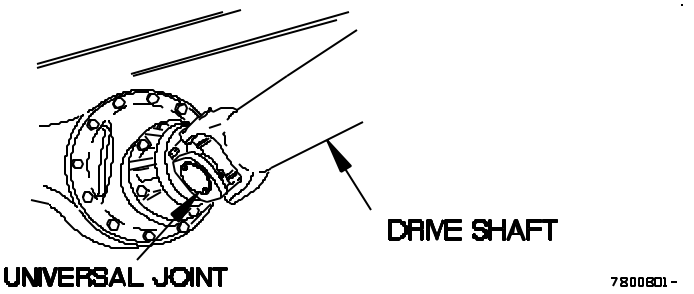
Personnel
Two

Equipment Conditions
Engine running (WP 0018 00).

DRIVE SHAFT

Table 1. Drive Shaft Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
DRIVE SHAFT OR UNIVERSAL JOINTS UNUSUALLY NOISY WHEN OPERATING	Verify that drive shaft or universal joint is unusually noisy.	1. Road test vehicle. 2. Listen for unusually loud noise from drive shaft or universal joint. 3. If drive shaft or universal joint is unusually noisy notify Field Maintenance.



END OF WORK PACKAGE.

POWER TAKE-OFF (PTO) TROUBLESHOOTING 0083 00

THIS WORK PACKAGE COVERS:
Power Take-Off (PTO)

INITIAL SETUP:

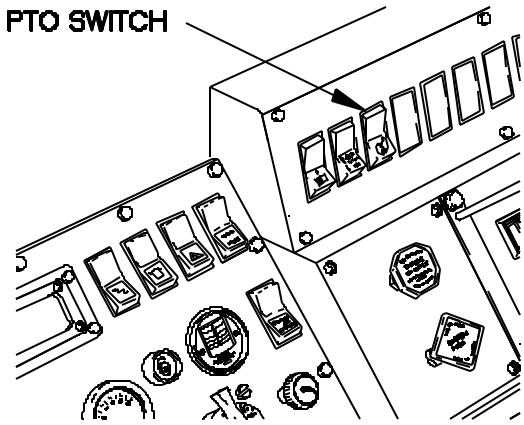
Maintenance Level
Operator

Conditions
Engine running (WP 0018 00).
Engine at low idle (WP 0018 00).

POWER TAKE-OFF (PTO)

Table 1. Power Take-Off (PTO) Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. POWER TAKE-OFF (PTO) DOES NOT ENGAGE	Check to see if PTO engages.	1. Position PTO switch to on. 2. Check to see if PTO engages.
		3. Position PTO switch to off. 4. Shut down engine (WP 0018 00).



POWER TAKE-OFF (PTO) TROUBLESHOOTING - Continued 0083 00

Table 1. Power Take-Off (PTO) Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. POWER TAKE-OFF (PTO) DOES NOT ENGAGE - Continued		5. If PTO does not engage, perform Electrical System Troubleshooting (WP 0075 00, Malfunction 96, Power Take-Off (PTO) Does Not Engage).

END OF WORK PACKAGE.

BRAKE SYSTEM TROUBLESHOOTING 0084 00

THIS WORK PACKAGE COVERS:
Brake System

INITIAL SETUP:

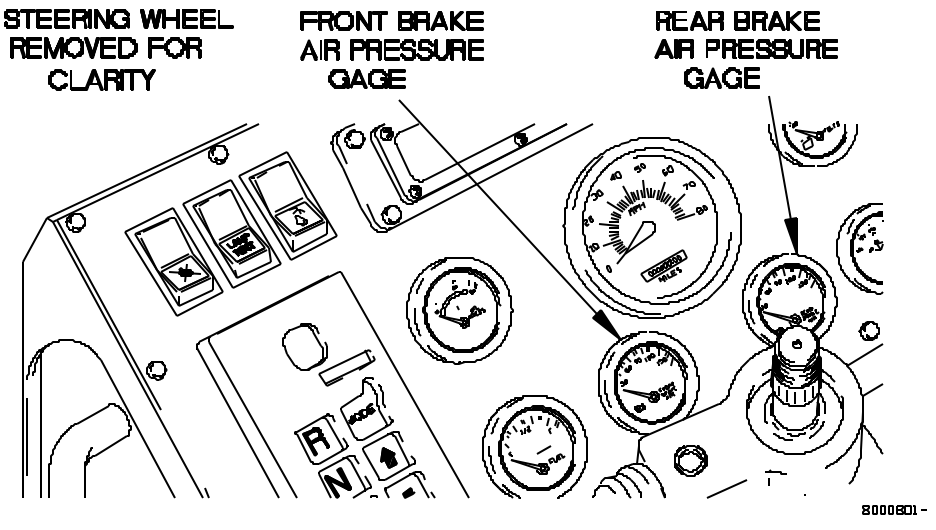
Maintenance Level
Operator

References
WP 0018 00

BRAKE SYSTEM

Table 1. Brake System Troubleshooting Procedures.

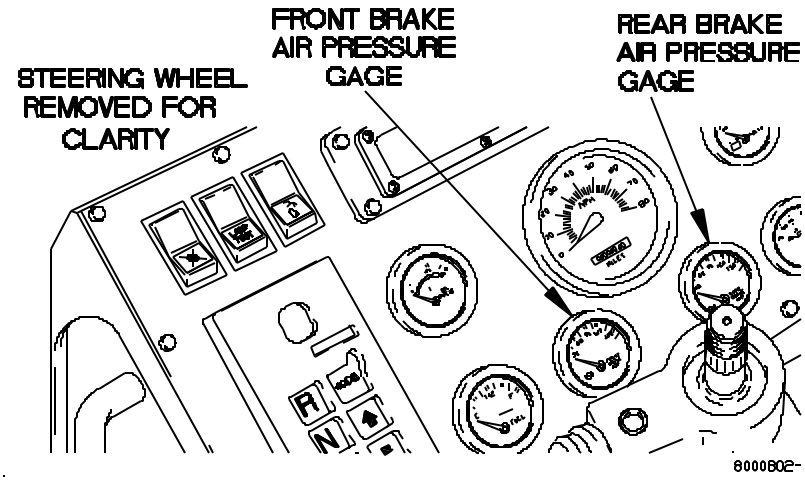
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. EXCESSIVE BRAKING DISTANCE	1. Check to see if air tanks are pressurized	1. Start engine (WP 0018 00). 2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages. 3. Shut down engine (WP 0018 00).



BRAKE SYSTEM TROUBLESHOOTING - Continued 0084 00

BRAKE SYSTEM - Continued

Table 1. Brake System Troubleshooting Procedures - Continued.

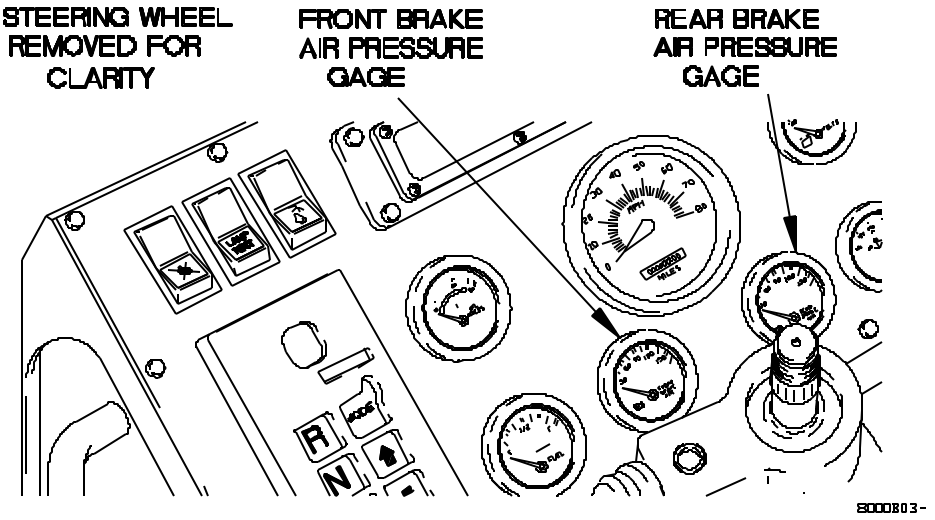
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. EXCESSIVE BRAKING DISTANCE - Continued		4. If either FRONT BRAKE AIR or REAR BRAKE AIR pressure gages do not register 120 psi, notify Field Maintenance.
		
	2. Check braking distance.	1. Start engine (WP 0018 00). 2. Road test vehicle. 3. If braking distance is still excessive, notify Field Maintenance. 4. Shut down engine (WP 0018 00).
2. REAR BRAKES DO NOT APPLY	1. Check to see if front brakes apply.	1. Start engine (WP 0018 00).

BRAKE SYSTEM TROUBLESHOOTING - Continued 0084 00

BRAKE SYSTEM - Continued

Table 1. Brake System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. REAR BRAKES DO NOT APPLY - Continued		2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages. 3. Shut down engine (WP 0018 00).
		4. Check to see if front brakes apply. 5. If front brakes do not apply, perform Brake System troubleshooting (WP 0083 00, Malfunction 1, Excessive Braking Distance).
	2. Check to see if rear brakes apply.	If rear brakes still do not apply, notify Field Maintenance.

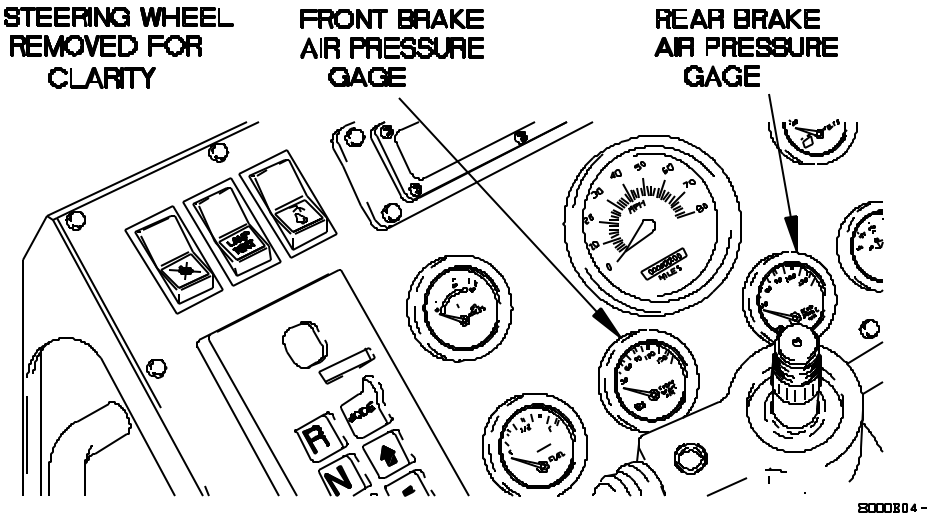


BRAKE SYSTEM TROUBLESHOOTING - Continued 0084 00

BRAKE SYSTEM - Continued

Table 1. Brake System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. PARKING BRAKE DOES NOT RELEASE	1. Check to see if air tanks are pressurized.	1. Start engine (WP 0018 00). 2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages. 3. Shut down engine (WP 0018 00).
		4. If either FRONT BRAKE AIR or REAR BRAKE AIR pressure gages do not register 120 psi, notify Field Maintenance.
	2. Check to see if parking brake releases.	If parking brake will not release, notify Field Maintenance.
4. FRONT BRAKES OVERHEAT	1. Check to see if air tanks are pressurized.	1. Start engine (WP 0018 00).

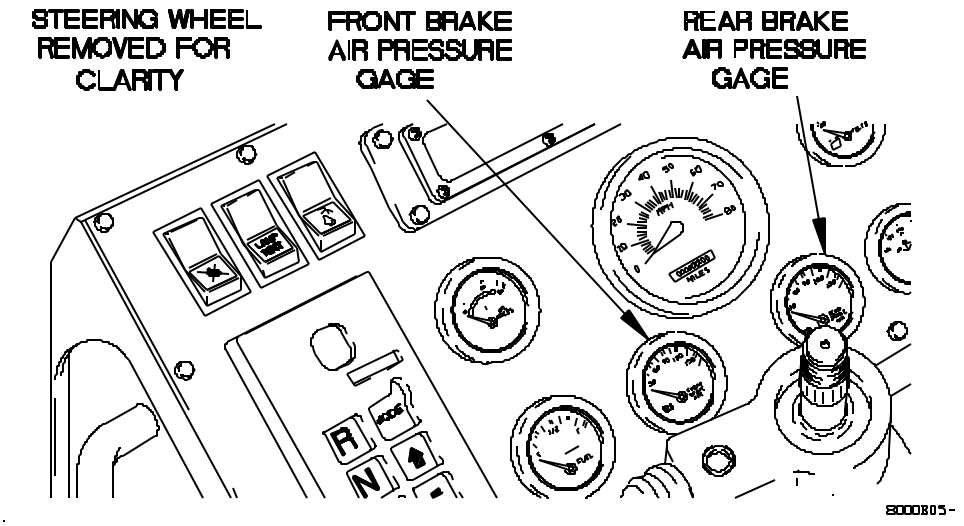


BRAKE SYSTEM TROUBLESHOOTING - Continued 0084 00

BRAKE SYSTEM - Continued

Table 1. Brake System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
4. FRONT BRAKES OVERHEAT - Continued		2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages. 3. Shut down engine (WP 0018 00). 4. If either FRONT BRAKE AIR or REAR BRAKE AIR pressure gages do not register 120 psi, notify Field Maintenance.
	2. Check to see if front brakes over heat.	If front brakes overheat, notify Field Maintenance.
5. VEHICLE BRAKES UNEVENLY, OR BRAKES PULL TO ONE SIDE OR GRAB	1. Check to see if air tanks are pressurized.	1. Start engine (WP 0018 00).

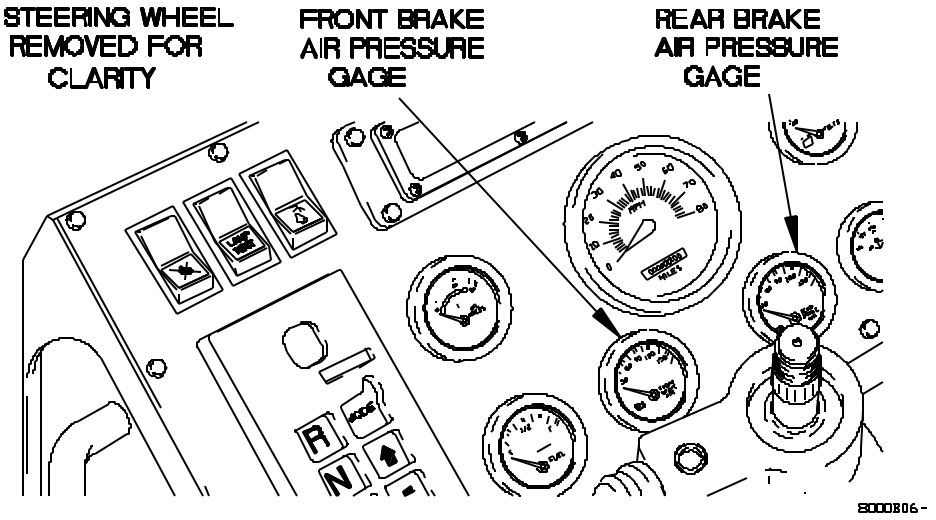


BRAKE SYSTEM TROUBLESHOOTING - Continued 0084 00

BRAKE SYSTEM - Continued

Table 1. Brake System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
5. VEHICLE BRAKES UNEVENLY, OR BRAKES PULL TO ONE SIDE OR GRAB - Continued		2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages. 3. Shut down engine (WP 0018 00) 4. If either FRONT BRAKE AIR or REAR BRAKE AIR pressure gages do not register 120 psi, notify Field Maintenance.
	2. Check to see if vehicle brakes properly.	1. Start engine (WP 0018 00). 2. Road test vehicle.

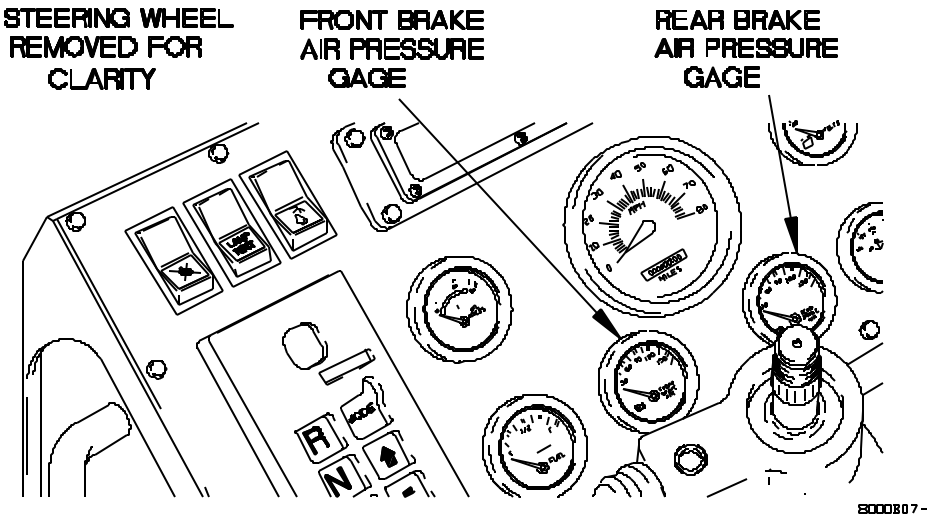


BRAKE SYSTEM TROUBLESHOOTING - Continued 0084 00

BRAKE SYSTEM - Continued

Table 1. Brake System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
5. VEHICLE BRAKES UNEVENLY, OR BRAKES PULL TO ONE SIDE, OR GRAB - Continued		3. If vehicle brakes unevenly, brakes pull to one side or grab, perform Steering System Troubleshooting (WP 0090 00, Malfunction 2, Wanders, Pulls to One Side, or Shimmies).. 4. Shut down engine (WP 0018 00)
6. FRONT BRAKES DO NOT APPLY	1. Check to see if rear breaks apply.	1. Start engine (WP 0018 00). 2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.
		3. Shut down engine (WP 0018 00). 4. Check to see if rear brakes apply.

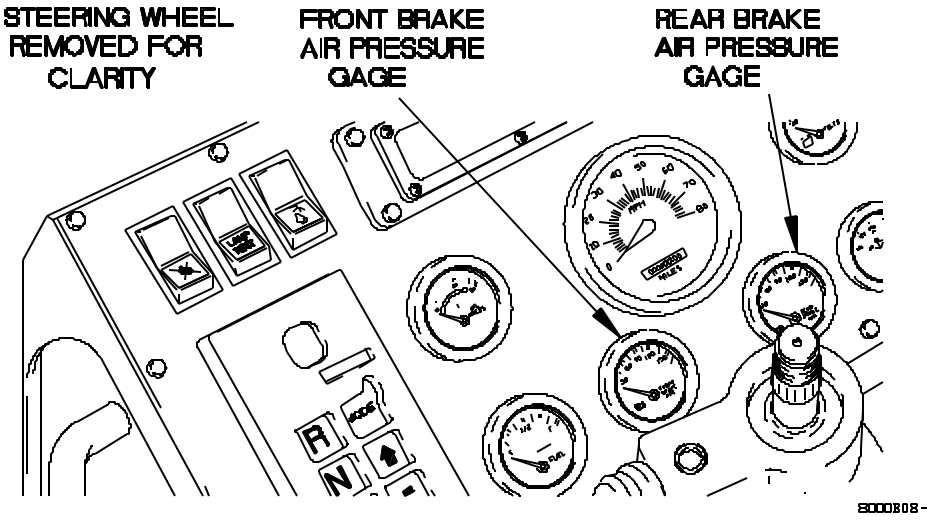


BRAKE SYSTEM TROUBLESHOOTING - Continued 0084 00

BRAKE SYSTEM - Continued

Table 1. Brake System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
6. FRONT BRAKES DO NOT APPLY - Continued		5. If rear brakes do not apply perform Brake System, troubleshooting (WP 0083 00 Malfunction 1, Excessive Braking Distance).
	2. Check to see if front brakes apply.	If front brakes do not apply, notify Field Maintenance.
7. REAR BRAKES OVERHEAT	1. Check to see if air tanks are pressurized.	1. Start engine (WP 0018 00).
		2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.
		3. Shut down engine (WP 0018 00).

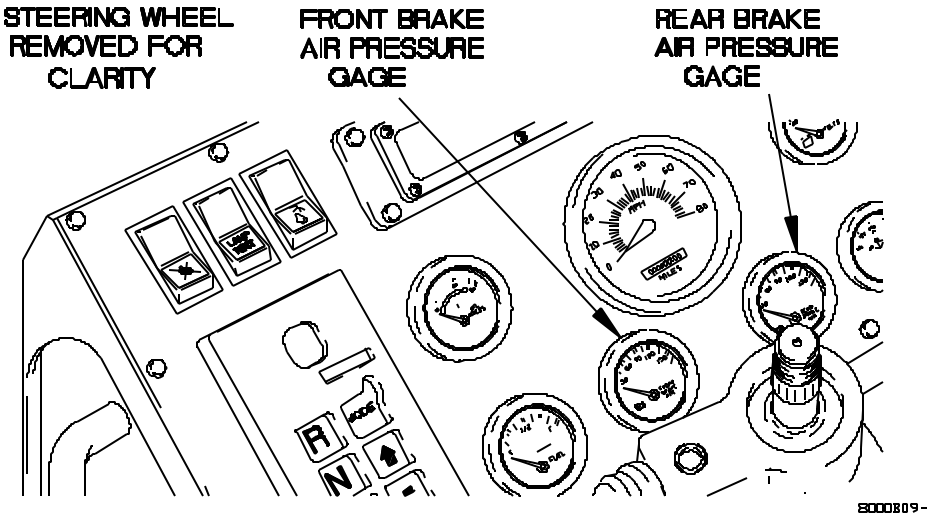


BRAKE SYSTEM TROUBLESHOOTING - Continued 0084 00

BRAKE SYSTEM - Continued

Table 1. Brake System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
7. REAR BRAKES OVERHEAT - Continued		4. If either FRONT BRAKE AIR or REAR BRAKE AIR pressure gages do not register 120 psi, notify Field Maintenance.
	2. Check to see if rear brakes overheat.	If rear brakes overheat, notify Field Maintenance.
8. PARKING BRAKE DOES NOT APPLY	1. Check to see if rear brakes apply.	1. Start engine (WP 0018 00).
		2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.
		3. Shut down engine (WP 0018 00).
		4. Check to see if rear brakes apply.

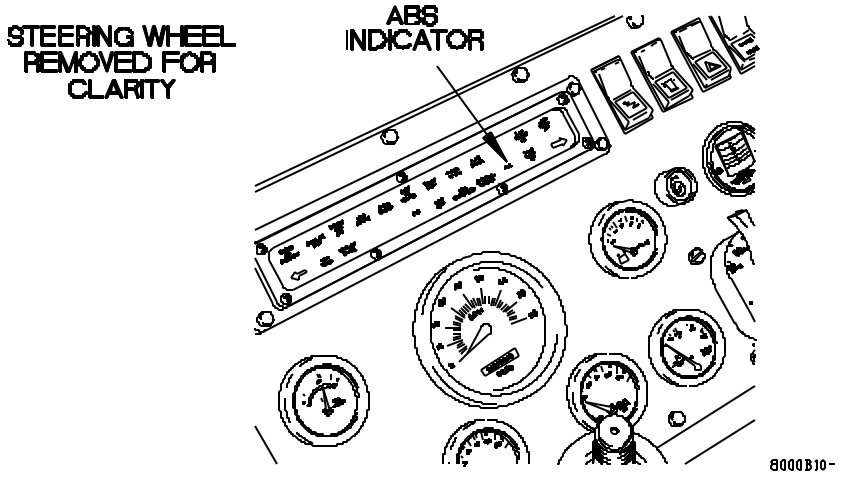


BRAKE SYSTEM TROUBLESHOOTING - Continued 0084 00

BRAKE SYSTEM - Continued

Table 1. Brake System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
8. PARKING BRAKE DOES NOT APPLY - Continued		5. If rear brakes do not apply, perform Brake System troubleshooting (WP 0083 00 Malfunction 2, Rear Brakes Do Not Apply).
	2. Check to see if parking brake applies.	If parking brake does not apply, notify Field Maintenance.
9. BRAKE SYSTEM LOSES AIR WHEN SERVICE BRAKES ARE APPLIED		Notify Field Maintenance.
10. ABS INDICATOR REMAINS ILLUMINATED	1. Check to see if ABS indicator remains illuminated after test drive.	1. Start engine (WP 0018 00). 2. Test drive vehicle. 3. Check to see if ABS indicator remains illuminated.



BRAKE SYSTEM TROUBLESHOOTING - Continued 0084 00

BRAKE SYSTEM - Continued

Table 1. Brake System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
10. ABS INDICATOR REMAINS ILLUMINATED - Continued		4. Shut down engine (WP 0018 00). 5. If ABS indicator remains illuminated, notify Field Maintenance.

END OF WORK PACKAGE.

AIR SYSTEM TROUBLESHOOTING 0085 00

THIS WORK PACKAGE COVERS:
Air System

INITIAL SETUP:

Maintenance Level
Operator

References
WP 0018 00
WP 0021 00

AIR SYSTEM

Table 1. Air System Troubleshooting Procedures.

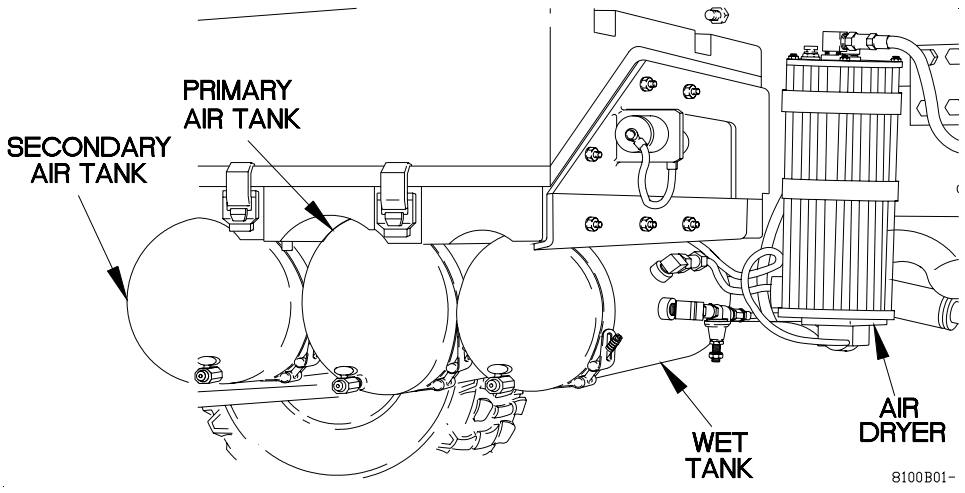
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. AIR SYSTEM LOSES PRESSURE DURING OPERATION/ SLOW AIR PRESSURE BUILDUP	Check to see if air system loses pressure during operation or has slow air pressure buildup.	1. Start engine (WP 0018 00). 2. Note readings on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages (WP 0018 00). 3. If air system loses pressure during operation or has slow air pressure buildup, notify Field Maintenance. 4. Shut down engine (WP 0018 00).
2. LARGE QUANTITY OF MOISTURE EXPELLED FROM AIR RESERVOIRS	Check to see if air tanks expel large quantity of moisture.	1. Start engine (WP 0018 00).

AIR SYSTEM TROUBLESHOOTING - Continued 0085 00

AIR SYSTEM - Continued

Table 1. Air System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. LARGE QUANTITY OF MOISTURE EXPELLED FROM AIR RESERVOIR - Continued		2. Open drain cock on bottom of air tanks and check for large quantities of moisture being expelled from air tanks. 3. If air tanks expel large quantity of moisture, notify Field Maintenance. 4. Shut down engine (WP 0018 00).
3. AIR DRYER PURGES CONSTANTLY	Check to see if air dryer constantly purges.	1. Start engine (WP 0018 00). 2. Check air dryer for continual purging. 3. If air dryer constantly purges, notify Field Maintenance. 4. Shut down engine (WP 0018 00).

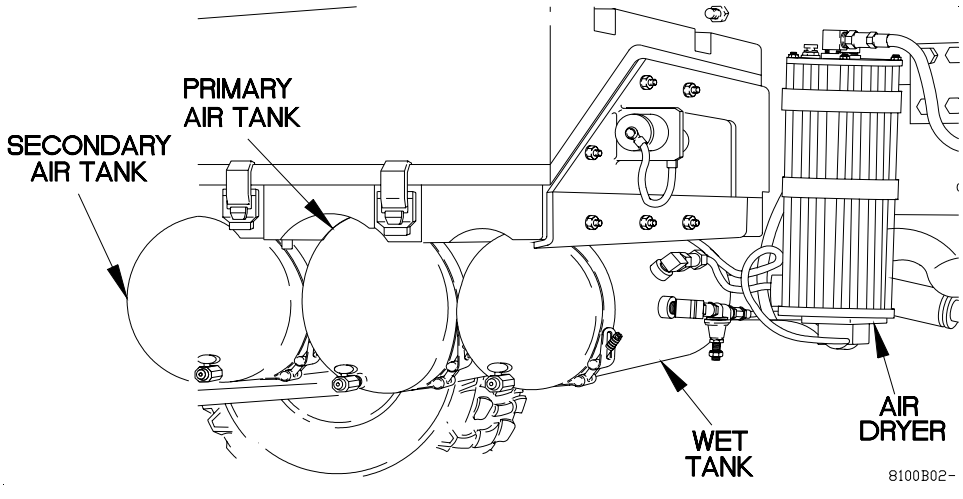


AIR SYSTEM TROUBLESHOOTING - Continued 0085 00

AIR SYSTEM - Continued

Table 1. Air System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
4. NO AIR PRESSURE OR LOW AIR PRESSURE PRESENT AT REAR GLADHANDS	Check to see if no air pressure or low air pressure is present at rear gladhands.	1. Start engine (WP 0018 00). 2. Check air pressure at rear gladhands. 3. If no air pressure or low air pressure is present at rear gladhands, notify Field Maintenance. 4. Shut down engine (WP 0018 00).

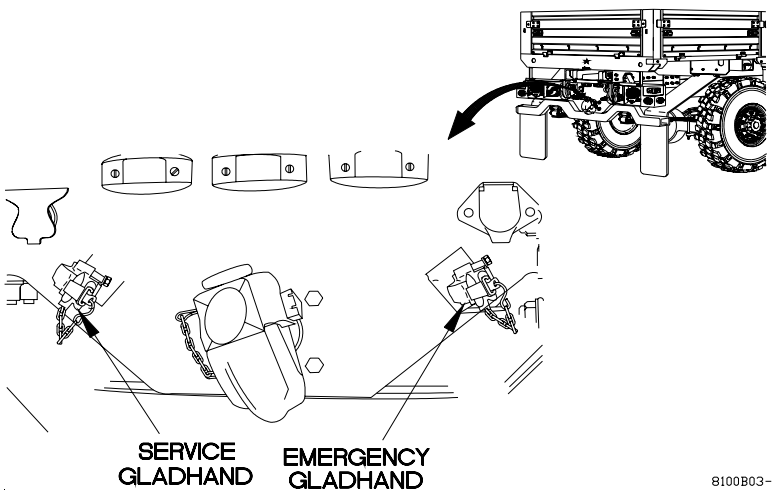


AIR SYSTEM TROUBLESHOOTING - Continued 0085 00

AIR SYSTEM - Continued

Table 1. Air System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
5. AIR SYSTEM PRESSURE BUILDS UP MORE THAN 120 PSI (827 kPa) (COMPRESSOR FAILS TO UNLOAD)	Check to see if air compressor fails to unload.	1. Start engine (WP 0018 00). 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. If air system pressure builds to more than 120 psi (827 kPa), notify Field Maintenance. 4. Shut down engine (WP 0018 00).

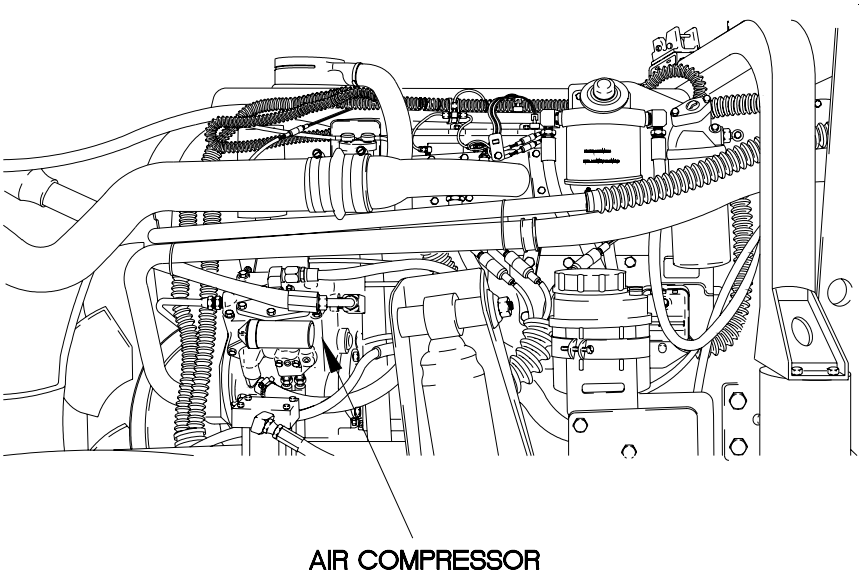


AIR SYSTEM TROUBLESHOOTING - Continued 0085 00

AIR SYSTEM - Continued

Table 1. Air System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
6. NOISY AIR COMPRESSOR OPERATION	Listen to see if air compressor operates noisily.	1. Start engine (WP 0018 00). 2. Raise cab (WP 0021 00). 3. Listen to see if air compressor operates noisily. 4. If air compressor operates noisily, notify Field Maintenance. 5. Lower cab (WP 0021 00). 6. Shut down engine (WP 0018 00).

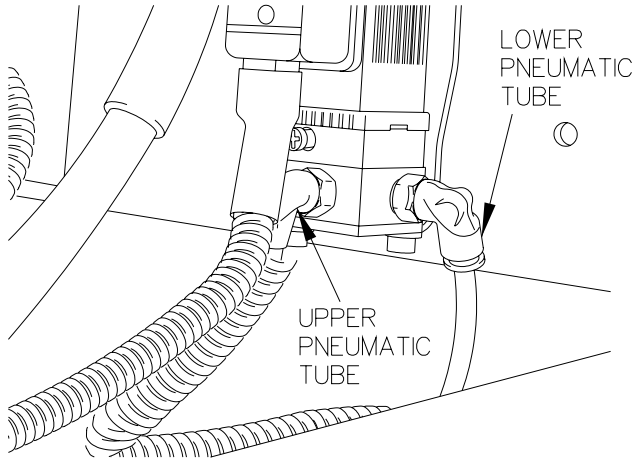


AIR SYSTEM TROUBLESHOOTING - Continued 0085 00

AIR SYSTEM - Continued

Table 1. Air System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
7. STOWAGE LATCH DOES NOT OPERATE.	1. Are upper and lower pneumatic tubes free of leaks, kinks, and damage?	1. Inspect upper pneumatic tube for leaks, kinks and damage. 2. Inspect lower pneumatic tube for leaks, kinks and damage. 3. Notify field maintenance.



8500b01-

END OF WORK PACKAGE.

WHEEL TROUBLESHOOTING 0086 00

THIS WORK PACKAGE COVERS:
Wheel

INITIAL SETUP:

Maintenance Level
Operator

Tools/Specials Tools
Inflator-gage, Tire (Item 30, Table 2, WP 0117 00)

References
WP 0018 00
WP 0022 00
WP 0088 00
WP 0090 00

WHEEL

Table 1. Wheel Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. TIRES WEAR UNEVENLY OR EXCESSIVELY	1. Check to see if steering operates properly.	1. Start engine (WP 0018 00). 2. Road test vehicle to check if steering operates properly. 3. If steering does not operate properly, perform Steering System Troubleshooting (WP 0091 00, Malfunction 1, Hard to Steer)
	2. Check if tire pressure is sufficient in CTIS HWY Mode.	1. Set CTIS to HWY mode (WP 0022 00). 2. Check pressures of each tire with tire inflator-gage.

WHEEL TROUBLESHOOTING - Continued 0086 00

WHEEL - Continued

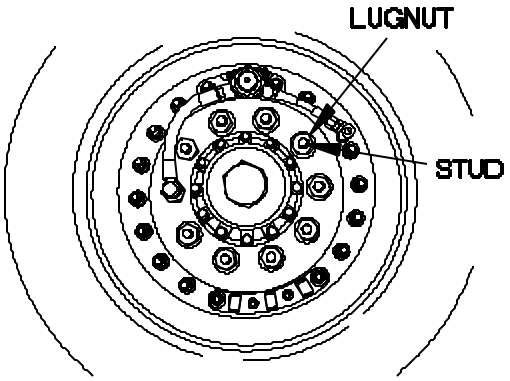
Table 1. Wheel Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. TIRES WEAR UNEVENLY OR EXCESSIVELY - Continued		3. If tire pressures are greater or less than those given below, perform CTIS Troubleshooting (WP 0083 00, Malfunction 5, Central Tire Inflation System (CTIS) ECU Lights Operate but CTIS Fails to Inflate or Deflate). All models except M1088A1 and M1089A1: HWY Mode 60 psi (414 kPa) Models M1088A1 and M1089A1: HWY Mode 81 psi (558 kPa) 4. Shut down Engine (WP 0018 00). 5. If tires still wear unevenly or excessively, notify Field Maintenance.

WHEEL - Continued

Table 1. Wheel Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. WHEEL WOBBLES OR SHIMMIES		
	WARNING **Notify Field Maintenance that lugnuts need to be tightened to 415-475 lb-ft (563-644 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 wheel studs and lugnuts for obvious looseness.	If loose, tighten.
	2. Check for bent or broken studs and missing or loose lugnuts.	1. Notify Field Maintenance if two or more lugnuts or studs on the same wheel are missing, broken, or bent. 2. If wheel still wobbles or shimmies, notify Field Maintenance.



END OF WORK PACKAGE.

HYDRAULIC SYSTEM TROUBLESHOOTING 0087 00

THIS WORK PACKAGE COVERS:
Hydraulic System

INITIAL SETUP:

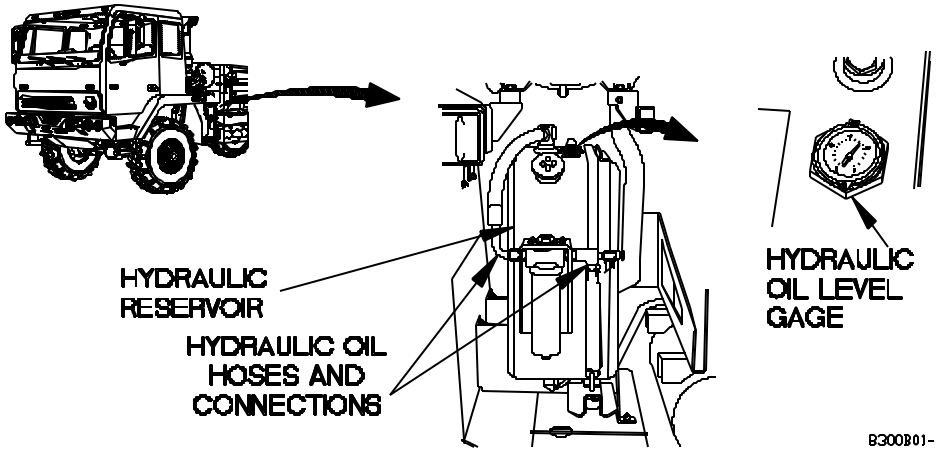
Maintenance Level
Operator

References
WP 0103 00

HYDRAULIC SYSTEM

Table 1. Hydraulic System Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
NOTE Hydraulic reservoir is considered full when oil level gage reads above 3/4 mark.		
1. LOSS OF HYDRAULIC PRESSURE (SINGLE STAGE PUMP)	Check hydraulic oil level gage to determine hydraulic oil level (WP 0103 00, Table 3, Item 8).	1. If oil level is low, add hydraulic oil (WP 0103 00, Table 3, Item 8).

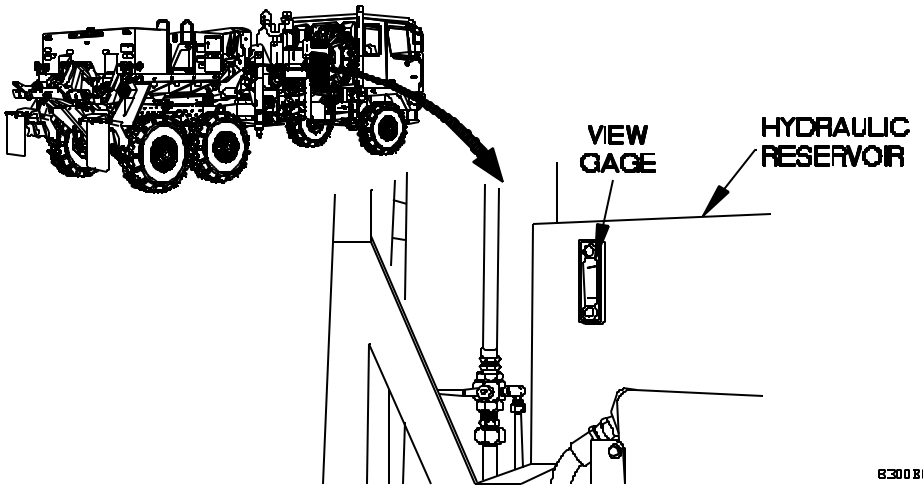


HYDRAULIC SYSTEM TROUBLESHOOTING - Continued 0087 00

HYDRAULIC SYSTEM - Continued

Table 1. Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. LOSS OF HYDRAULIC PRESSURE (SINGLE STAGE PUMP) - Continued		2. If loss of hydraulic pressure continues, notify Field Maintenance.
CAUTION Hydraulic oil level must not be above, or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may cause damage to hydraulic system.		
2. LOSS OF HYDRAULIC PRESSURE (THREE STAGE PUMP)	Check hydraulic oil level at hydraulic oil view gage.	1. If hydraulic oil view gage registers below black line, remove reservoir cap and fill hydraulic oil to appropriate level (WP 0099 00, Table 15, Item 9). 2. Install reservoir cap. 3. If loss of hydraulic pressure continues, notify Field Maintenance.



END OF WORK PACKAGE.

CENTRAL TIRE INFLATION SYSTEM (CTIS) TROUBLESHOOTING 0088 00

THIS WORK PACKAGE COVERS:

Central Tire Inflation System (CTIS)

INITIAL SETUP:

Maintenance Level	References
Operator	WP 0018 00
	WP 0080 00

CENTRAL TIRE INFLATION SYSTEM (CTIS)

Table 1. Central Tire Inflation System (CTIS) Troubleshooting Procedures

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. TWO STEADY MODE LIGHTS ILLUMINATE ON CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU		Notify Field Maintenance.
2. FOUR FLASHING LIGHTS ON CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU		Notify Field Maintenance.
3. FIVE FLASHING LIGHTS ON CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU		Notify Field Maintenance.
4. CENTRAL TIRE INFLATION SYSTEM (CTIS) REPEATEDLY RESUMES CYCLING 30 SECONDS AFTER INDICATOR LIGHTS STOP FLASHING		Notify Field Maintenance.

CENTRAL TIRE INFLATION SYSTEM (CTIS) TROUBLESHOOTING 0088 00

CENTRAL TIRE INFLATION SYSTEM (CTIS) - Continued

Table 1. Central Tire Inflation System (CTIS)

Troubleshooting Procedures- Continued.

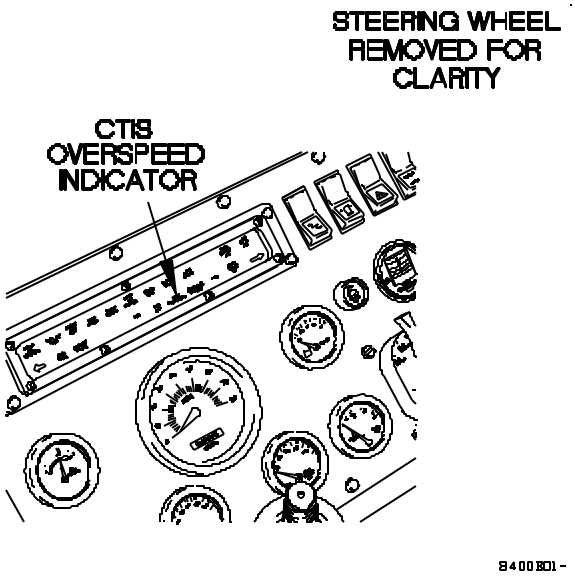
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
5. CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU LIGHTS ILLUMINATE, BUT CTIS FAILS TO INFLATE OR DEFLATE TIRES		Notify Field Maintenance.
6. CTIS OVERSPEED PRESSURE CHANGE DOES NOT OPERATE		Notify Field Maintenance.
7. CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU DOES NOT ILLUMINATE		Perform Electrical System Troubleshooting (WP 0080 00, malfunction 89, Central Tire Inflation System (CTIS) Does Not Operate).
8. CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU INDICATOR LIGHTS SEQUENTIALLY FLASHING		Notify Field Maintenance.
9. CTIS OVERSPEED INDICATOR ILLUMINATES SOLIDLY		Notify Field Maintenance.

CENTRAL TIRE INFLATION SYSTEM (CTIS) TROUBLESHOOTING 0088 00

CENTRAL TIRE INFLATION SYSTEM (CTIS) - Continued

Table 1. Central Tire Inflation System (CTIS)

Troubleshooting Procedures- Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
10. CTIS OVERSPEED INDICATOR REMAINS ILLUMINATED	1. Check to see if CTIS OVERSPEED indicator remains illuminated after test drive.	1. Start engine (WP 0018 00). 2. Test drive vehicle. 3. Check to see if CTIS OVERSPEED indicator remains illuminated.  4. Shut down engine (WP 0018 00). 5. If CTIS OVERSPEED indicator remains illuminated, notify Field Maintenance.

END OF WORK PACKAGE.

AXLE TROUBLESHOOTING 0089 00

THIS WORK PACKAGE COVERS:
Axle

INITIAL SETUP:

Maintenance Level
Operator

AXLE

Table 1. Axle Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
AXLE DIFFERENTIAL(S) NOISY		Notify Field Maintenance.

END OF WORK PACKAGE.

STEERING SYSTEM TROUBLESHOOTING 0090 00

THIS WORK PACKAGE COVERS:
Steering System

INITIAL SETUP:

Maintenance Level
Operator

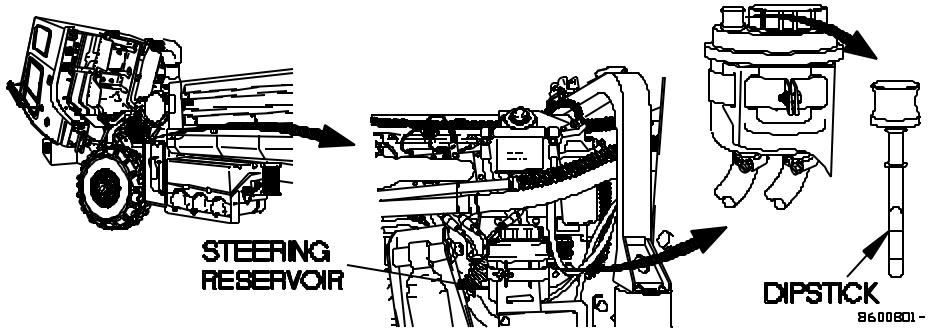
Tools/Special Tools
Inflator-Gage, Tire (Item 31, Table 2, WP 0117 00)

References
WP 0018 00
WP 0021 00
WP 0022 00
WP 0088 00
WP 0092 00
WP 0103 00

STEERING SYSTEM

Table 1. Steering System Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. HARD TO STEER	1. Check that steering reservoir is filled to proper level.	1. Raise cab (WP 0021 00).
		CAUTION Do not overfill power steering reservoir. Failure to comply may result in damage to equipment.
		2. Oil should be level with full mark on dipstick. Add oil as required (WP 0103 00, Table 4, Item 23).



STEERING SYSTEM TROUBLESHOOTING - Continued 0090 00

STEERING SYSTEM - Continued

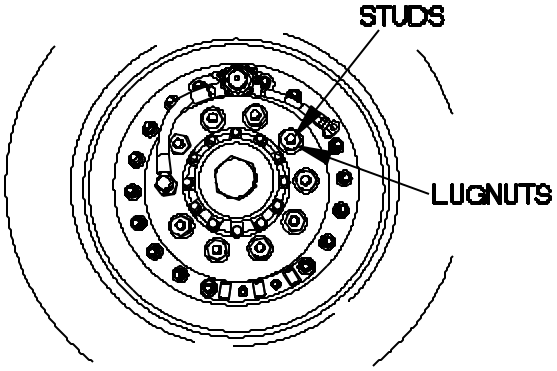
Table 1. Steering System Troubleshooting Procedure - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. HARD TO STEER - Continued		3. If oil level is over full mark, notify Field Maintenance. 4. Lower cab (WP 0021 00).
	2. Check if tire pressures is sufficient in CTIS HWY mode.	1. Set CTIS to HWY mode WP 0022 00, Normal CTIS Operation). 2. Check pressure of each tire with tire inflator-gage. 3. If tire pressures are greater than or less than those given below, perform CTIS troubleshooting (WP 0088 00, Malfunction 5, CTIS ECU Lights Illuminate but CTIS Fails to Inflate or Deflate). <u>All Models Except M1088A1 and M1089A1:</u> HWY Mode 60 psi (414 kPa) <u>Models M1088A1 and M1089A1:</u> HWY Mode 81 psi (558 kPa) 4. Shut down engine (WP 0018 00).
	3. Check to see if vehicle is hard to steer.	1. Start engine. 2. Road test vehicle. 3. If vehicle is still hard to steer, notify Field Maintenance. 4. Shut down engine.

STEERING SYSTEM TROUBLESHOOTING - Continued 0090 00

STEERING SYSTEM - Continued

Table 1. Steering System Troubleshooting Procedure - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
	NOTE Perform Brake System Troubleshooting (WP 0085 00, Malfunction 5, Vehicle Brakes Unevenly, or Brakes Pull to One Side or Grab), before starting here.	
2. WANDERS, PULLS TO ONE SIDE, OR SHIMMIES	1. Check wheel studs and lugnuts for obvious looseness.	**WARNING** **Notify Field Maintenance that lugnuts need to be tightened to 415-475 lb-ft (563-644 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.** If loose, tighten.
	2. Check for bent or broken studs and missing or loose lugnuts.	Notify Field Maintenance if two or more lugnuts or studs on the same wheel are missing, broken, or bent.
	 86D0802-	
	3. Check if tire pressures is sufficient in CTIS HWY mode.	1. Set CTIS to HWY mode (WP 0022, Normal CTIS Operation).

STEERING SYSTEM TROUBLESHOOTING - Continued 0090 00

STEERING SYSTEM - Continued

Table 1. Steering System Troubleshooting Procedure - Continued.

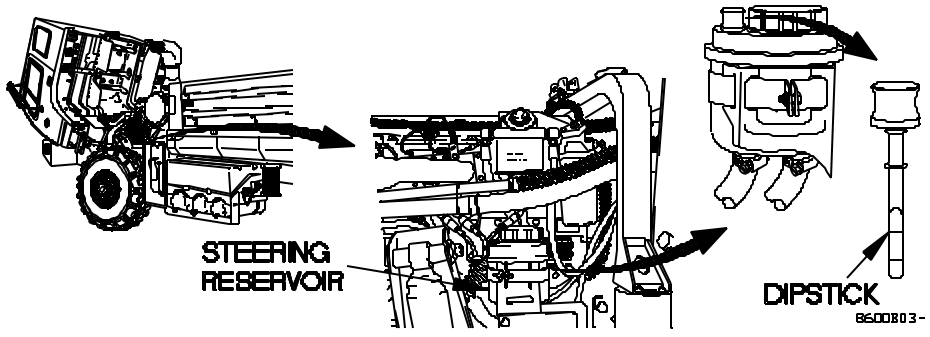
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. WANDERS, PULLS TO ONE SIDE, OR SHIMMIES - Continued		2. Check pressure of each tire with tire inflator-gage. 3. If tire pressures are greater than or less than those given below, perform CTIS troubleshooting (WP 0088 00, Malfunction 5, CTIS ECU Lights Illuminate but CTIS Fails to Inflate or Deflate). All Models Except M1088A1 and M1089A1: HWY Mode 60 psi (414 kPa) Models M1088A1 and M1089A1: HWY Mode 81 psi (558 kPa) 4. Shut down engine (WP 0018 00).
	4. Check if vehicle wanders, pulls to one side, or shimmies.	1. Start engine. 2. Road test vehicle. 3. If vehicle still wanders, pulls to one side, or shimmies, notify Field Maintenance. 4. Shut down engine (WP 0018 00).

STEERING SYSTEM TROUBLESHOOTING - Continued 0090 00

STEERING SYSTEM - Continued

Table 1. Steering System Troubleshooting Procedure - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. EXCESSIVE PLAY WHEN TURNING STEERING WHEEL	Check to see if vehicle has excessive play when turning steering wheel.	1. Start engine (WP 0018 00,). 2. Road test vehicle. 3. If vehicle still has excessive play when turning steering wheel, notify Field Maintenance. 4. Shut down engine (WP 0018 00).
4. NO RESPONSE WHEN TURNING STEERING WHEEL	1. Check that steering reservoir is filled to proper level.	1. Raise cab (WP 0021 00). **CAUTION** Do not overfill power steering reservoir. Failure to comply may result in damage to equipment. 2. Oil should be level with full mark on dipstick. Add oil as required (WP 0103 00, Table 4, Item 23)



STEERING SYSTEM TROUBLESHOOTING - Continued 0090 00

STEERING SYSTEM - Continued

Table 1. Steering System Troubleshooting Procedure - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
4. NO RESPONSE WHEN TURNING STEERING WHEEL - Continued		3. If oil level is over full mark, notify Field Maintenance. 4. Lower cab (WP 0021 00).
	2. Check to see if vehicle responds when turning steering wheel.	1. Start engine (WP 0018 00). 2. Turn steering wheel all the way to left and right. 3. If vehicle does not respond when turning steering wheel, notify Field Maintenance. 4. Shut down engine (WP 0018 00).

END OF WORK PACKAGE.

FIFTH WHEEL TROUBLESHOOTING 0091 00

THIS WORK PACKAGE COVERS:
Fifth Wheel

INITIAL SETUP:

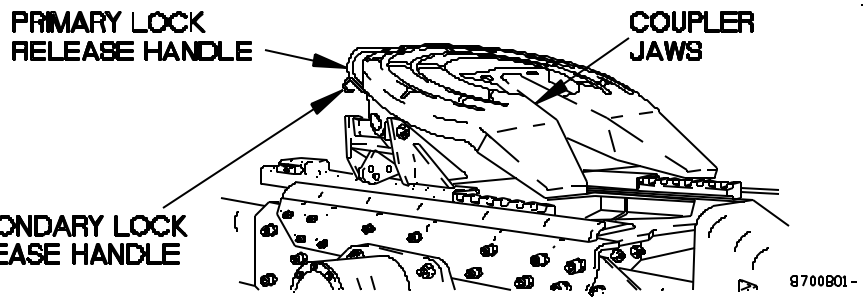
Maintenance Level
Operator

References
WP 0103 00

FIFTH WHEEL

Table 1. Fifth Wheel Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. FIFTH WHEEL DOES NOT LOCK WHEN COUPLING TRAILER TO TRACTOR	1. Check fifth wheel for proper lubrication (WP 0103 00, Table 12, Item 1).	Lubricate fifth wheel (WP 0103 00, Table 12, Item 1).
	2. Check that coupler jaws lock open.	1. Pull out secondary lock release handle and latch in position. 2. Pull out primary lock release two times. 3. Put primary lock release handle in locked position. 4. Check that coupler jaws stay open with primary lock release handle in locked position.

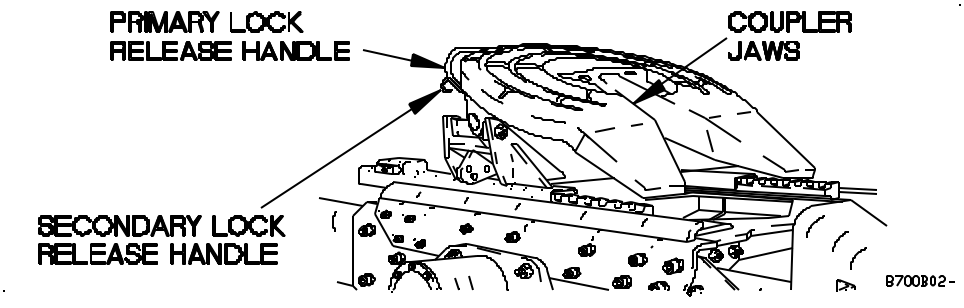


FIFTH WHEEL TROUBLESHOOTING - Continued 0091 00

FIFTH WHEEL TROUBLESHOOTING - Continued

Table 1. Fifth Wheel Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. FIFTH WHEEL DOES NOT LOCK WHEN COUPLING TRAILER TO TRACTOR - Continued		5. If fifth wheel still does not lock when coupling trailer to tractor, notify Field Maintenance.
2. EXCESSIVE MOVEMENT OF TRAILER KING PIN IN FIFTH WHEEL		Notify Field Maintenance.
3. FIFTH WHEEL DOES NOT UNLOCK WHEN DISCONNECTING TRAILER FROM TRACTOR	1. Check fifth wheel for proper lubrication (WP 0103 00, Table 12, Item 1).	Lubricate fifth wheel (WP 0103 00, Table 12, Item 1).
	2. Check that coupler jaws lock open.	1. Pull out secondary lock release handle and latch in position. 2. Pull out primary lock release two times. 3. Put primary lock release handle in locked position. 4. Check that coupler jaws stay open with primary lock release handle in locked position.



FIFTH WHEEL TROUBLESHOOTING - Continued 0091 00

FIFTH WHEEL TROUBLESHOOTING - Continued

Table 1. Fifth Wheel Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. FIFTH WHEEL DOES NOT UNLOCK WHEN DISCONNECTING TRAILER FROM TRACTOR - Continued		5. If fifth wheel still does not lock when coupling trailer to tractor, notify Field Maintenance.
4. FIFTH WHEEL SLIDING MECHANISM DOES NOT OPERATE		Notify Field Maintenance.

END OF WORK PACKAGE.

SUSPENSION SYSTEM TROUBLESHOOTING 0092 00

THIS WORK PACKAGE COVERS:
Suspension System

INITIAL SETUP:

Maintenance Level
Operator

References
WP 0084 00
WP 0090 00

SUSPENSION SYSTEM

Table 1. Suspension System Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
NOTE Perform (WP 0090 00, Malfunction 2, Wanders, Pulls to One Side, or Shimmies), before starting here.		
1. WANDERS, PULLS TO ONE SIDE, OR SHIMMIES		If vehicle wanders, pulls to one side, or shimmies, notify Field Maintenance.
2. LEANS TO ONE SIDE, OR REAR OF VEHICLE SAGS	Check to see if vehicle leans to one side or rear of vehicle sags.	If vehicle leans to one side or rear of vehicle sags, notify Field Maintenance.

END OF WORK PACKAGE.

15K SELF-RECOVERY WINCH (SRW) TROUBLESHOOTING

0093 00

THIS WORK PACKAGE COVERS:

15K Self-Recovery Winch (SRW)

INITIAL SETUP:

Maintenance Level

Operator

References

WP 0065 00
WP 0083 00
WP 0103 00

15K SELF-RECOVERY WINCH (SRW)

Table 1. 15K Self-Recovery Winch (SRW) System Troubleshooting Procedures.

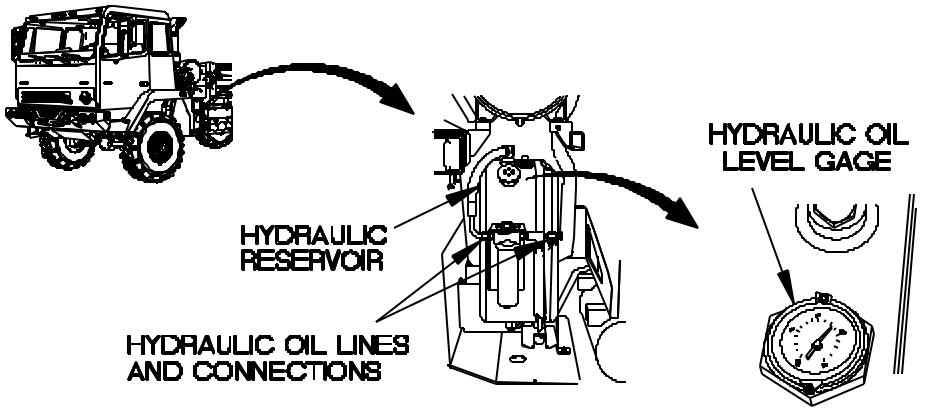
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. 15K SELF-RECOVERY WINCH (SRW) DOES NOT OPERATE	1. Check to see if PTO engages (WP 0065 00).	If PTO does not engage, perform PTO troubleshooting (WP 0083 00, Malfunction 1, Power Take-Off (PTO) Does Not Engage).

15K SELF-RECOVERY WINCH (SRW) TROUBLESHOOTING - Continued

15K SELF-RECOVERY WINCH (SRW) - Continued

Table 1. 15K Self-Recovery Winch (SRW) System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. 15K SELF-RECOVERY WINCH (SRW) DOES NOT OPERATE - Continued		
NOTE Perform step 2 on all models except M1089A1. Hydraulic reservoir is considered full when oil level gage reads above 3/4 mark.		
	2. Check hydraulic oil level gage to determine hydraulic oil level (WP 0103 00, Table 3, Item 8).	If oil level is low, add hydraulic oil (WP 0103 00, Table 3, Item 8).

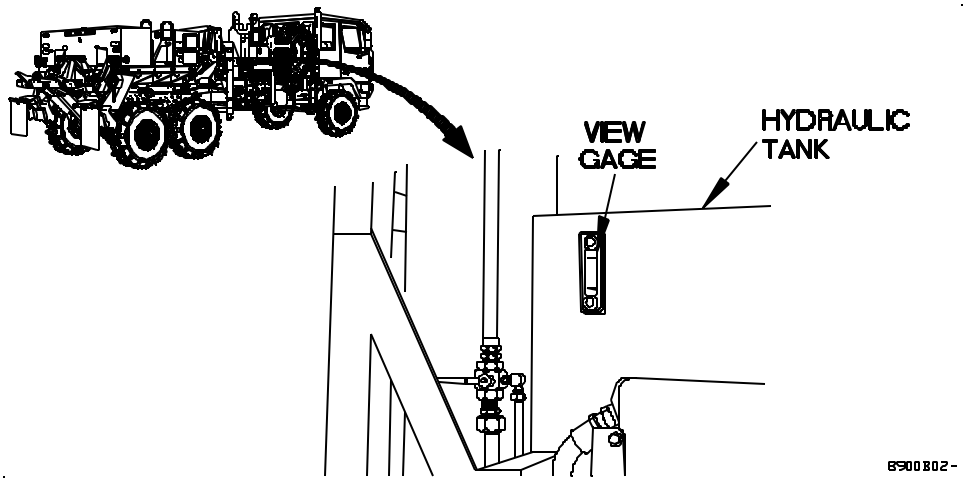


15K SELF-RECOVERY WINCH (SRW) TROUBLESHOOTING - Continued

15K SELF-RECOVERY WINCH (SRW) - Continued

Table 1. 15K Self-Recovery Winch (SRW) System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment. **NOTE** Perform step 3 on M1089A1.		
1. 15K SELF-RECOVERY WINCH (SRW) DOES NOT OPERATE - Continued	3. Check hydraulic oil level at hydraulic oil view gage (WP 0103 00, Table 14, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0103 00, Table 14, Item 9). 2. Install hydraulic tank cap.



15K SELF-RECOVERY WINCH (SRW) TROUBLESHOOTING - Continued

0093 00

15K SELF-RECOVERY WINCH (SRW) - Continued

Table 1. 15K Self-Recovery Winch (SRW) System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. 15K SELF-RECOVERY WINCH (SRW) DOES NOT OPERATE - Continued	4. Check hydraulic lines and fittings for class III leaks (WP 0103 00, Table 14, Item 3).	If class III leaks are found, notify Field Maintenance.
	5. Check to see if 15K SRW operates (WP 0065 00).	If 15K SRW does not operate, notify Field Maintenance.

END OF WORK PACKAGE.

STEERING HYDRAULIC SYSTEM TROUBLESHOOTING 0094 00

THIS WORK PACKAGE COVERS:
Steering Hydraulic System

INITIAL SETUP:

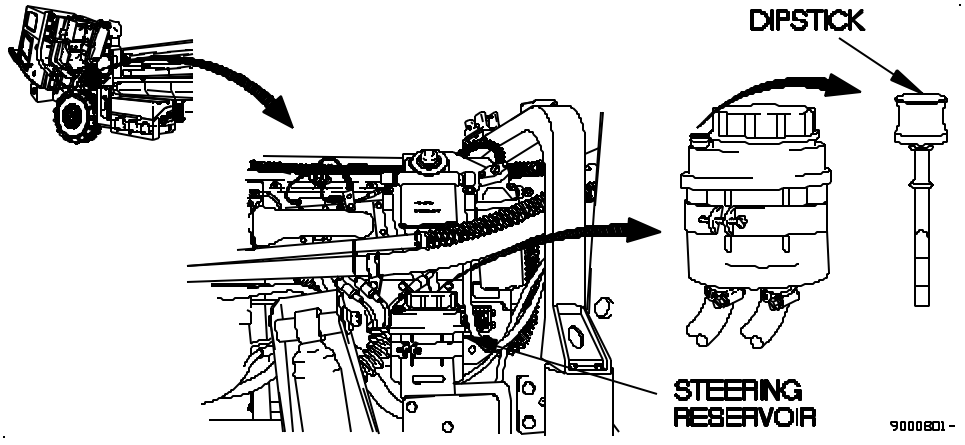
Maintenance Level
Operator

References
WP 0021 00
WP 0103 00

STEERING HYDRAULIC SYSTEM

Table 1. Steering Hydraulic System Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
CAUTION Do not overfill power steering reservoir. Failure to comply may result in damage to equipment.		
1. STEERING HARD OR DOES NOT OPERATE	1. Check that steering reservoir is filled to proper level. Oil should be level with full mark on dipstick.	1. Raise cab (WP 0021 00). 2. Add oil as required (WP 0103 00, Table 4, Item 23).



STEERING HYDRAULIC SYSTEM TROUBLESHOOTING - 0094 00 Continued

STEERING HYDRAULIC SYSTEM - Continued

Table 1. Steering Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. STEERING HARD OR DOES NOT OPERATE - Continued		3. If oil is over full mark, notify Field Maintenance.
	2. Check hydraulic hoses and fittings for Class III leaks.	1. If Class III leaks are found or steering is still hard or does not work, notify Field Maintenance. 2. Lower cab (WP 0021 00).

END OF WORK PACKAGE.

AIR TRANSPORT SYSTEM TROUBLESHOOTING 0095 00

THIS WORK PACKAGE COVERS:

Air Transport System

INITIAL SETUP:

Equipment Conditions

Engine Shutdown (WP 0018 00)
PMCS Performed (WP 0103 00)

References

WP 0018 00
WP 0021 00
WP 0044 00
WP 0059 00
WP 0085 00
WP 0087 00
WP 0103 00
WP 0105 00

AIR TRANSPORT SYSTEM

Table 1. Air Transport Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. CAB TILT, SPARE TIRE RETAINER, AND SUSPENSION COMPRESSION DO NOT OPERATE	1. Check hydraulic hoses, air hoses, and fittings for Class III leaks.	If Class III leaks are found or cab tilt, spare tire retainer, and suspension compression still do not work, notify Field Maintenance.

AIR TRANSPORT SYSTEM TROUBLESHOOTING - Continued 0095 00

AIR TRANSPORT SYSTEM - Continued

Table 1. Air Transport Troubleshooting Procedures - Continued.

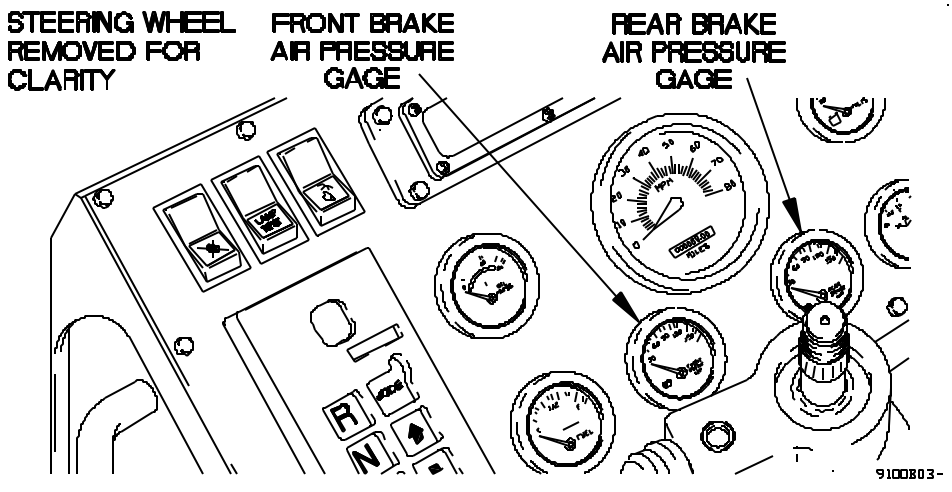
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. SUSPENSION DOES NOT COMPRESS OR RETURN TO NORMAL PROPERLY	1. Check to see if cab tilt operates (WP 0021 00).	If cab tilt does not operate, perform Air Transport troubleshooting (WP 0094 00, Malfunction 1, Cab Tilt, Spare Tire Retainer, and Suspension Compression do Not Operate).
	2. Check hydraulic hoses, air lines, and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.
	3. Check to see if suspension compresses and returns to normal properly (WP 0059 00).	If suspension does not compress and returns to normal properly, notify Field Maintenance.
3. CAB LEVELING AIR SPRINGS DO NOT OPERATE PROPERLY	1. Check to see if suspension compresses and returns to normal properly (WP 0059 00).	If suspension compression does not compress and return to normal properly, perform Air Transport Troubleshooting (WP 0094 00, Malfunction 1, Cab Tilt, Spare Tire Retainer, And Suspension Compression Do Not Operate).
	2. Check to see if air tanks are pressurized.	1. Start engine (WP 0018 00).

AIR TRANSPORT SYSTEM TROUBLESHOOTING - Continued 0095 00

AIR TRANSPORT SYSTEM - Continued

Table 1. Air Transport Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. CAB LEVELING AIR SPRINGS DO NOT OPERATE PROPERLY - Continued		2. Allow engine to idle until 120 psi registers on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages. 3. Shut down engine (WP 0018 00). 4. Check FRONT BRAKE AIR and REAR BRAKE AIR pressure gages. 5. If FRONT BRAKE AIR and REAR BRAKE AIR do not register 120 psi, perform Air System Troubleshooting (WP 0085 00, Malfunction 1, Air System Looses Pressure During Operation/Slow Air Buildup).



AIR TRANSPORT SYSTEM TROUBLESHOOTING - Continued 0095 00

AIR TRANSPORT SYSTEM - Continued

Table 1. Air Transport Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. CAB LEVELING AIR SPRINGS DO NOT OPERATE PROPERLY - Continued	3. Check air lines and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.
	4. Check to see if cab air springs deflate and inflate properly (WP 0059 00).	If cab air springs do not deflate and inflate properly, notify Field Maintenance.

END OF WORK PACKAGE.

DUMP BODY HYDRAULIC SYSTEM TROUBLESHOOTING

0096 00

THIS WORK PACKAGE COVERS:

Dump Body Hydraulic System

INITIAL SETUP:

Maintenance Level

Operator

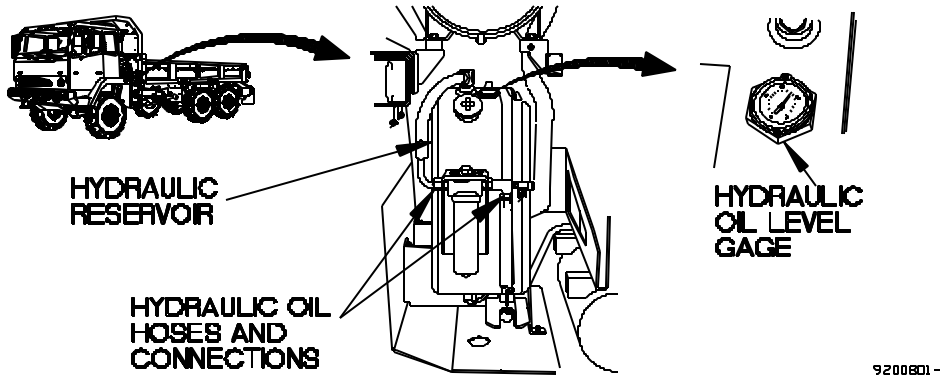
References

WP 0018 00
WP 0031 00
WP 0087 00
WP 0103 00

DUMP BODY HYDRAULIC SYSTEM

Table 1. Dump Body Hydraulic System Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
NOTE Hydraulic reservoir is considered full when oil level gage reads above 3/4 mark.		
1. DUMP BODY DOES NOT RAISE	1. Check hydraulic oil level gage to determine hydraulic oil level (WP 0103 00, Table 3, Item 8).	If oil level is low, add hydraulic oil (WP 0103 00, Table 3, Item 8).



DUMP BODY HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

0096 00

DUMP BODY HYDRAULIC SYSTEM - Continued

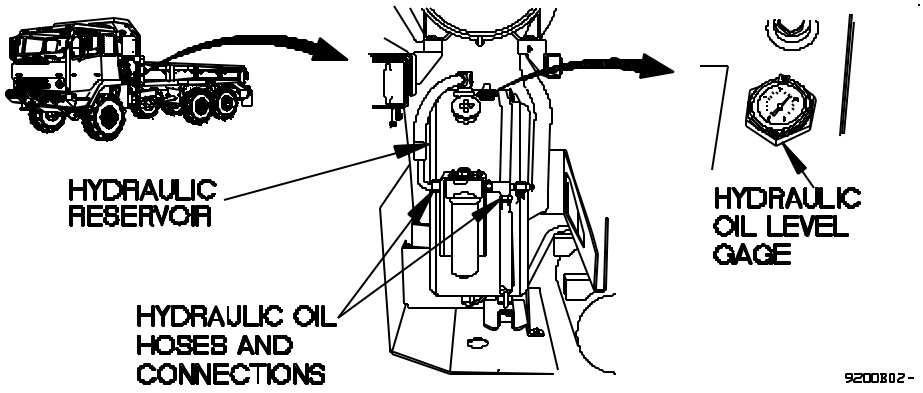
Table 1. Dump Body Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. DUMP BODY DOES NOT RAISE - Continued	2. Check to see if PTO engages.	1. Start engine (WP 0018 00). 2. Position PTO switch to on (WP 0031 00). 3. Check to see if PTO engages. 4. Position PTO to off (WP 0031 00). 5. Shut down engine (WP 0018 00). 6. If PTO does not engage, perform Hydraulic System troubleshooting (WP 0087 00, Malfunction 1, Loss of Hydraulic Pressure [Single Stage Pump]).
	3. Check to see if dump body raises (WP 0031 00).	If dump body does not raise, notify Field Maintenance.

DUMP BODY HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

DUMP BODY HYDRAULIC SYSTEM - Continued

Table 1. Dump Body Hydraulic System Troubleshooting Procedures - Continued.

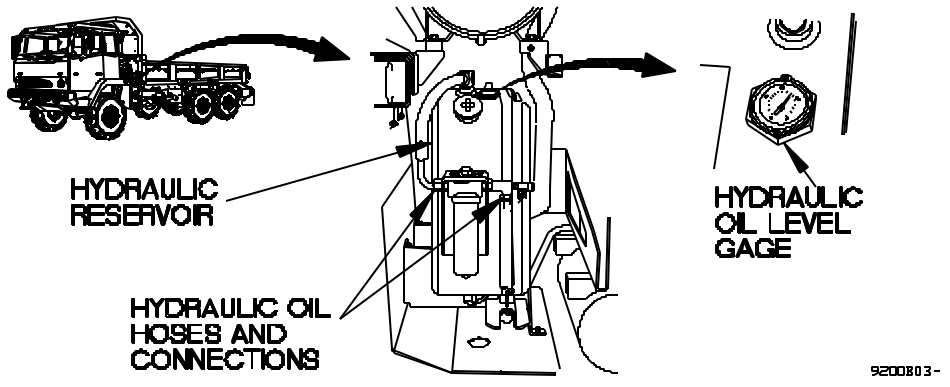
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
	NOTE Hydraulic reservoir is considered full when oil level gage reads above 3/4 mark.	
2. DUMP BODY DOES NOT LOWER	1. Check hydraulic oil level gage to determine hydraulic oil level (WP 0103 00, Table 3, Item 8).	If oil level is low, add hydraulic oil (WP 0103 00, Table 3, Item 8).
		
	2. Check to see if PTO engages.	1. Start engine (WP 0018 00). 2. Position PTO switch to on (WP 0031 00). 3. Check to see if PTO engages. 4. Position PTO to off (WP 0031 00). 5. Shut down engine (WP 0018 00).

DUMP BODY HYDRAULIC SYSTEM TROUBLESHOOTING - Continued 0096 00

DUMP BODY HYDRAULIC SYSTEM - Continued

Table 1. Dump Body Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. DUMP BODY DOES NOT LOWER - Continued		6. If PTO does not engage, perform Hydraulic System troubleshooting (WP 0087 00, Malfunction 1, Loss of Hydraulic Pressure [Single Stage Pump]).
	3. Check to see if dump body lowers (WP 0031 00).	If dump body does not lower, notify Field Maintenance.
NOTE Hydraulic reservoir is considered full when oil level gage reads above 3/4 mark.		
3. DUMP BODY DRIFTS DOWN FROM RAISED POSITION	1. Check hydraulic oil level gage to determine hydraulic oil level (WP 0103 00, Table 3, Item 8).	If oil level is low, add hydraulic oil (WP 0103 00, Table 3, Item 8).



DUMP BODY HYDRAULIC SYSTEM TROUBLESHOOTING 0096 00

DUMP BODY HYDRAULIC SYSTEM

Table 1. Dump Body Hydraulic System Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. DUMP BODY DRIFTS DOWN FROM RAISED POSITION - Continued	2. Check to see if dump body drifts down from raised position (WP 0031 00).	If dump body drifts down from raised position, notify Field Maintenance.

END OF WORK PACKAGE.

WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING 0097 00

THIS WORK PACKAGE COVERS:
Wrecker Hydraulic System

INITIAL SETUP:

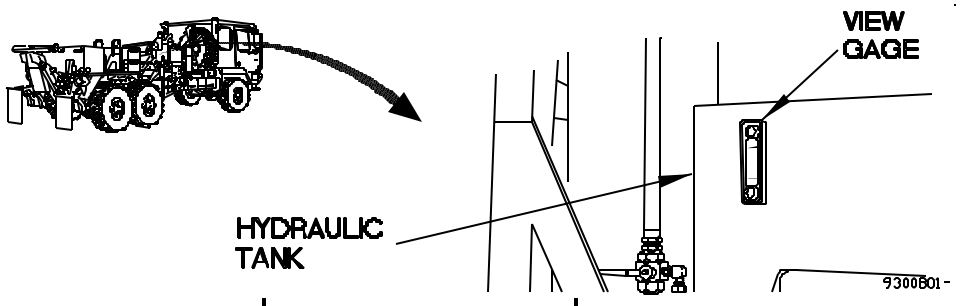
Maintenance Level
Operator

References
WP 0018 00
WP 0034 00
WP 0035 00

References - Continued
WP 0037 00
WP 0043 00
WP 0065 00
WP 0068 00
WP 0083 00
WP 0087 00
WP 0103 00

WRECKER HYDRAULIC SYSTEM

Table 1. Wrecker Hydraulic System Troubleshooting Procedures.

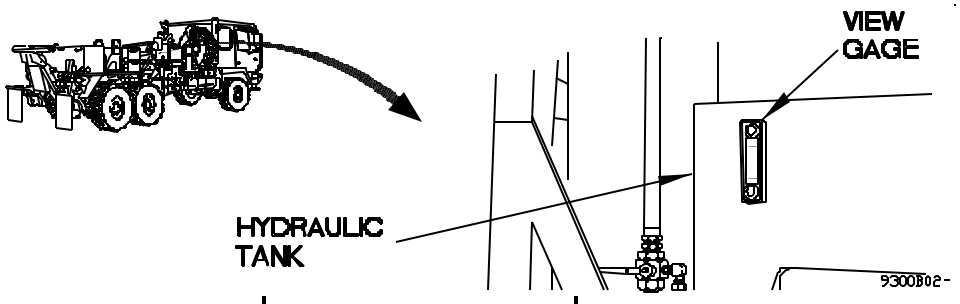
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.		
1. M1089A1 MATERIAL HANDLING CRANE (MHC) DOES NOT OPERATE	1. Check hydraulic oil level at hydraulic oil view gage (WP 0103 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0103 00, Table 15, Item 9).
		
		2. Install hydraulic tank cap.

WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

0097 00

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

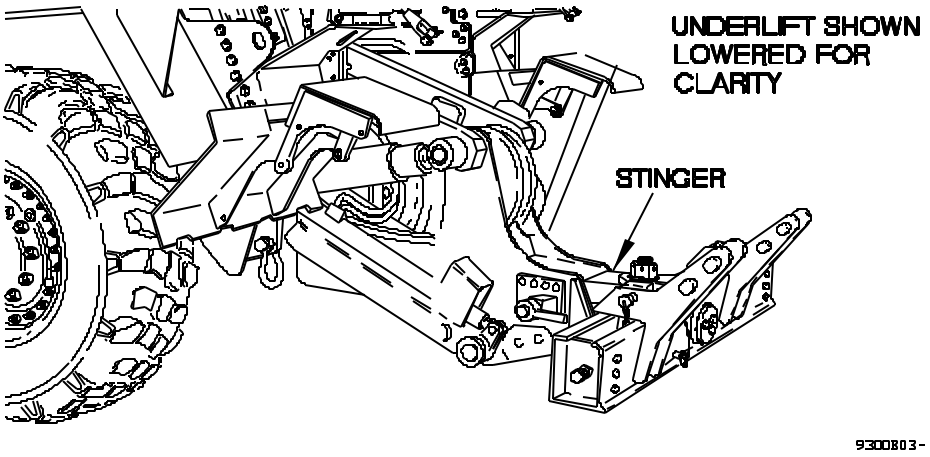
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. M1089A1 MATERIAL HANDLING CRANE (MHC) DOES NOT OPERATE - Continued	2. Check to see if right 30K winch operates (WP 0037 00).	If 30K winch does not operate, perform Wrecker Hydraulic System Trouble-shooting (WP 0097 00, Malfunction 5, M1089A1 Stinger/Telescopic Lift Cylinders/Fold Cylinders/Right 30K Main Winch do Not Operate).
	3. Check to see if MHC operates (WP 0043 00).	If M1089A1 MHC does not operate, notify Field Maintenance.
CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.		
2. M1089A1 STIFFLEGS/LEFT 30K WINCH/15K SELF-RECOVERY WINCH (SRW) DO NOT OPERATE	1. Check hydraulic oil level at hydraulic oil view gage (WP 0103 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0103 00, Table 15, Item 9).  2. Install hydraulic tank cap.

WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. M1089A1 STIFFLEGS/LEFT 30K WINCH/15K SELF-RECOVERY WINCH (SRW) DO NOT OPERATE - Continued	2. Check to see if stinger operates (WP 0037 00).	If stinger does not operate, perform Hydraulic System Troubleshooting (WP 0087 00, Malfunction 2, Loss of Hydraulic Pressure).
	3. Check to see if stifflegs (WP 0034 00), left 30K winch (WP 0035 00), and 15K SRW operate (WP 0060 00).	If stifflegs, left 30K winch, and 15K SRW do not operate, notify Field Maintenance.



CAUTION

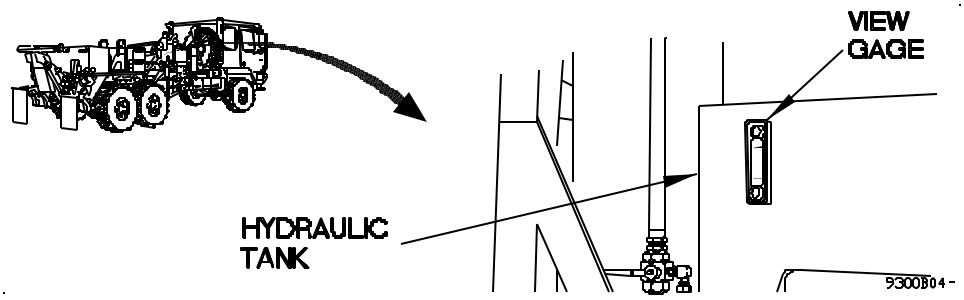
Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.

WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. M1089A1 STIFFLEG(S) DOES NOT OPERATE OR OPERATES SLOWLY	1. Check hydraulic oil level at hydraulic oil view gage (WP 0103 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0103 00, Table 15, Item 9).
		2. Install hydraulic tank cap.
	2. Check to see if PTO engages (WP 0034 00).	If PTO does not engage, perform Power Take-Off Troubleshooting (WP 0083 00, Malfunction 1, PTO Does Not Engage).
	3. Check to see if stifflegs operate (WP 0034 00).	If stifflegs do not operate or operate slowly, notify Field Maintenance.
4. M1089A1 LEFT 30K WINCH DOES NOT OPERATE OR OPERATES SLOWLY	1. Check to see if left 30K winch will pay out (WP 0035 00)?	1. If left 30K winch will not pay-out, go to test 2 of this malfunction.
		2. If left 30K winch will pay-out, perform Electrical System Troubleshooting (WP 0080 00, Malfunction 166, 30K Winch Does Not Pay-In).



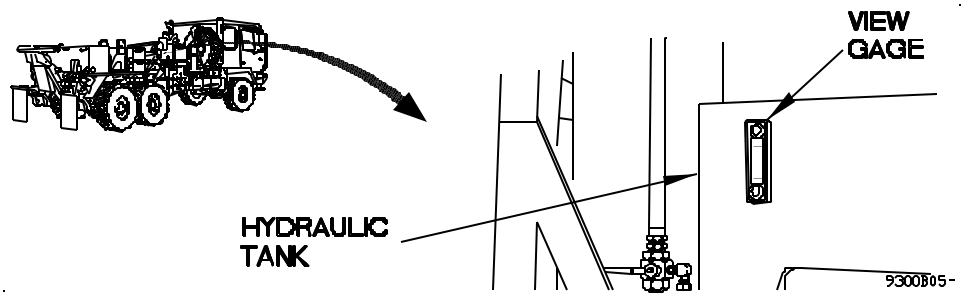
WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

0097 00

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
	CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.	
4. M1089A1 LEFT 30K WINCH DOES NOT OPERATE OR OPERATES SLOWLY - Continued	2. Check hydraulic oil level at hydraulic oil view gage (WP 0103 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0103 00, Table 15, Item 9).
		2. Install hydraulic tank cap.
	3. Check to see if 15K SRW operates (WP 0065 00).	If 15K SRW does not operate, perform Wrecker Hydraulic System Troubleshooting (WP 0096 00, Malfunction 2, M1089A1 Stifflegs/Left 30K Winch/15K Self-Recovery Winch Do Not Operate).
	4. Check to see if left 30K Winch operates (WP 0035 00).	If left 30K Winch does not operate, notify Field Maintenance.



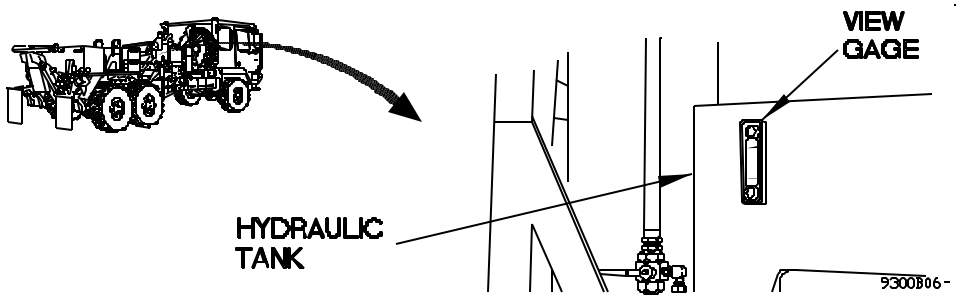
WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

0097 00

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.		
5. M1089A1 STINGER /TELESCOPIC LIFT CYLINDERS/FOLD CYLINDERS/RIGHT 30K WINCH DO NOT OPERATE	1. Check hydraulic oil level at hydraulic oil view gage (WP 0103 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0103 00, Table 15, Item 9).
		2. Install hydraulic tank cap.
	2. Check to see if 15K SRW operates (WP 0065 00).	If 15K SRW does not operate, perform Hydraulic System Troubleshooting (WP 0082 00, Malfunction 2, Loss of Hydraulic Pressure [Three Stage Pump]).
	3. Check to see if stinger, telescopic lift cylinders, fold cylinders, and right 30K winch operate (WP 0035 00).	If stinger, telescopic lift cylinders, fold cylinders, and right 30K operate do not operate, notify Field Maintenance.

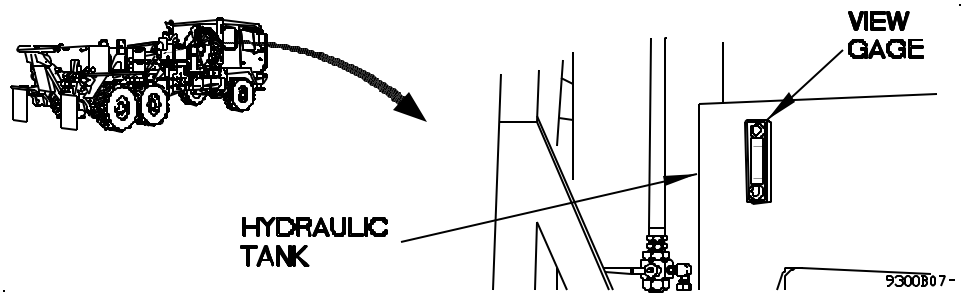


WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

0097 00

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

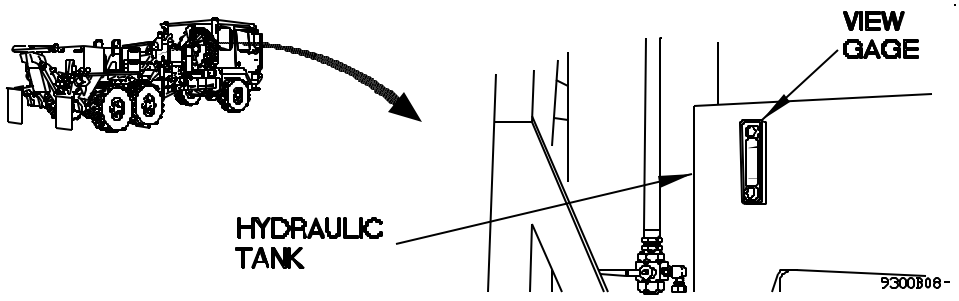
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
5. M1089A1 STINGER /TELESCOPIC LIFT CYLINDERS/FOLD CYLINDERS/RIGHT 30K WINCH DO NOT OPERATE - Continued	3. Check to see if stinger, telescopic lift cylinders, fold cylinders, and right 30K winch operate (WP 0035 00).	If stinger, telescopic lift cylinders, fold cylinders, and right 30K operate do not operate, notify Field Maintenance.
	CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.	
6. M1089A1 STINGER DOES NOT OPERATE	1. Check hydraulic oil level at hydraulic oil view gage.	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0103 00, Table 15, Item 9).
		
		2. Install hydraulic tank cap.

WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

0097 00

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
6. M1089A1 STINGER DOES NOT OPERATE - Continued	2. Check to see if right 30K Winch operates (WP 0035 00).	If right 30K winch does not operate, perform Wrecker Hydraulic System Troubleshooting (WP 0096 00, Malfunction 5, M1089A1 Stinger/Telescopic Lift Cylinders/Fold Cylinders/Right 30K Winch Do Not Operate).
	3. Check to see if stinger operates (WP 0035 00).	If stinger does not operate, notify Field Maintenance.
CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.		
7. M1089A1 UNDERLIFT TELESCOPIC LIFT CYLINDER(S) DOES NOT OPERATE	1. Check hydraulic oil level at hydraulic oil view gage (WP 0103 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0103 00, Table 15, Item 9).
		
		2. Install hydraulic tank cap.

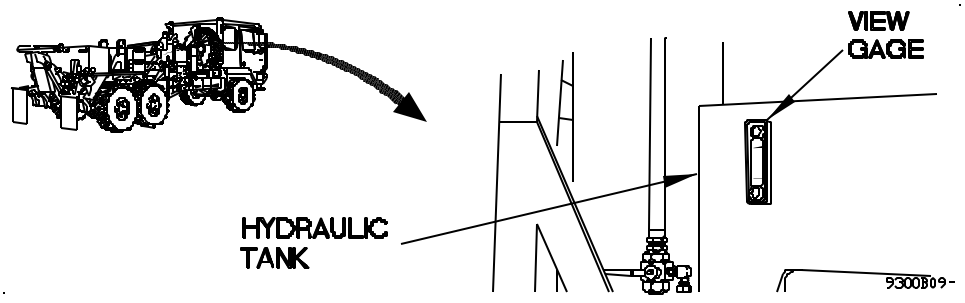
WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

0097 00

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
7. M1089A1 UNDERLIFT TELESCOPIC LIFT CYLINDER(S) DOES NOT OPERATE - Continued	2. Check to see if stinger operates (WP 0035 00).	If stinger does not operate, perform Wrecker Hydraulic System Troubleshooting (WP 0096 00, Malfunction 5, M1089A1 Stinger/Telescopic Lift Cylinders/Right 30K Winch Do Not Operate).
	3. Check to see if underlift telescopic lift cylinder operates (WP 0035 00).	If underlift telescopic lift cylinder does not operate, notify Field Maintenance.
CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.		
8. M1089A1 FOLD CYLINDER DOES NOT OPERATE	1. Check hydraulic oil level at hydraulic oil view gage (WP 0103 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0103 00, Table 15, Item 9).
		2. Install hydraulic tank cap.



WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued 0097 00

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
8. M1089A1 FOLD CYLINDER DOES NOT OPERATE - Continued	2. Check to see if stinger operates (WP 0035 00).	If stinger does not operate, perform Wrecker Hydraulic System Troubleshooting (WP 0096 00, Malfunction 5, M1089A1 Stinger/Telescopic Lift Cylinders/Right 30K Winch Do Not Operate).
	3. Check to see if fold cylinder operates (WP 0035 00).	If fold cylinder does not operate, notify Field Maintenance.
9. M1089A1 RIGHT 30K WINCH DOES NOT OPERATE	1. Check to see if right 30K winch will pay out (WP 0035 00)?	1. If right 30K winch will not pay-out, go to test 2 of this malfunction.
		2. If right 30K winch will pay-out, perform Electrical System Troubleshooting (WP 0080 00, Malfunction 166, 30K Winch Does Not Pay In).

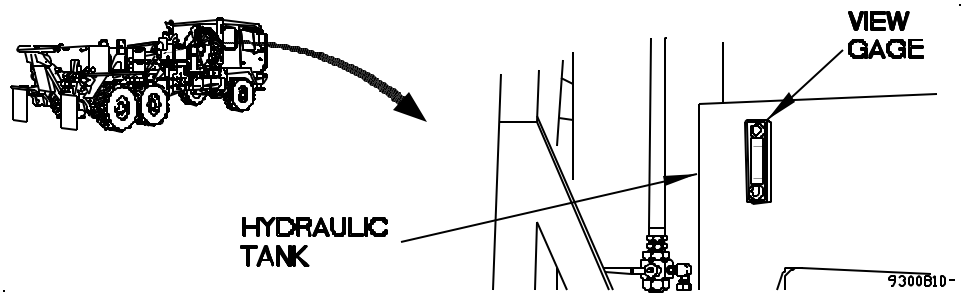
WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

0097 00

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
	CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.	
9. M1089A1 RIGHT 30K WINCH DOES NOT OPERATE - Continued	2. Check hydraulic oil level at hydraulic oil view gage (WP 0103 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0103 00, Table 15, Item 9).
		2. Install hydraulic tank cap.
	3. Check to see if stinger operates (WP 0035 00).	If stinger does not operate, perform Wrecker Hydraulic System Troubleshooting (WP 0096 00, Malfunction 5, M1089A1 Stinger/Telescopic Lift Cylinders/Right 30K Winch Do Not Operate).
	4. Check to see if right 30K winch operates (WP 0035 00).	If right 30K winch does not operate, notify Field Maintenance.



WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

WRECKER HYDRAULIC SYSTEM - Continued

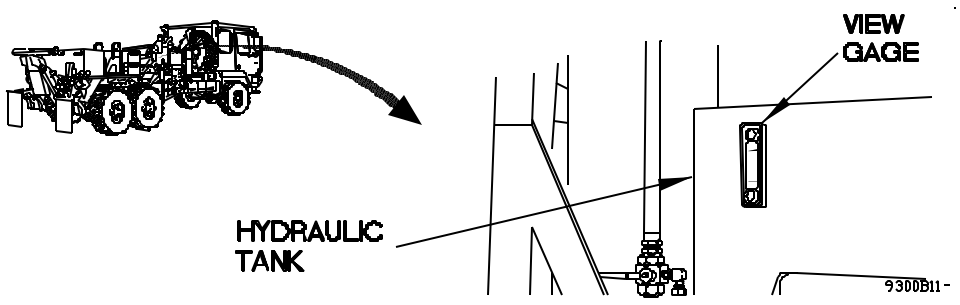
Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
10. M1089A1 MATERIAL HANDLING CRANE (MHC) HAND PUMP DOES NOT OPERATE	1. Check to see if MHC functions operate with PTO engaged.	1. Start engine (WP 0018 00). 2. Position PTO switch to on (WP 0041 00). 3. Position LO IDLE/HI IDLE switch to HI IDLE (WP 0041 00). 4. Attempt to operate MHC (WP 0041 00). 5. If MHC does not operate with PTO engaged, perform Hydraulic System Troubleshooting (WP 0082 00, Malfunction 2, Loss of Hydraulic Pressure). 6. Position LO IDLE/HI IDLE switch to LO IDLE (WP 0004 00). 7. Position PTO switch to off (WP 0041 00). 8. Shut down engine (WP 0018 00).
	2. Check hydraulic tubes and fittings for Class III leaks.	If Class III leaks are found or wrecker crane hand pump still does not operate, notify Field Maintenance.

WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

WRECKER HYDRAULIC SYSTEM - Continued

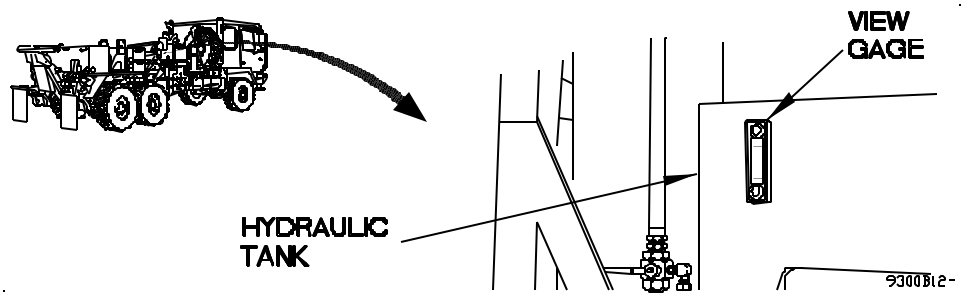
Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
11. NO SERVICE OR EXTERNAL HYDRAULIC POWER FROM M1089A1	Check to see if service hydraulic power is present from M1089A1 (WP 0063 00).	If service hydraulic power is not present from M1089A1, notify Field Maintenance.
CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.		
12. M1089A1 MATERIAL HANDLING CRANE (MHC) LEFT OR RIGHT OUTRIG-GER DRIFTS OR DOES NOT OPERATE	1. Check hydraulic oil level at hydraulic oil view gage (WP 0098 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0098 00, Table 15, Item 9).
		
		2. Install hydraulic tank cap.
	2. Check hydraulic tubes and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.

WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

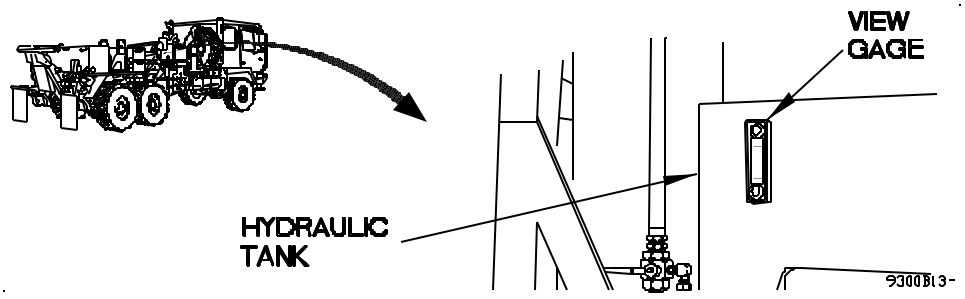
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
12. M1089A1 MATERIAL HANDLING CRANE (MHC) LEFT OR RIGHT OUTRIG-GER DRIFTS OR DOES NOT OPERATE - Continued	3. Check to see if MHC left or right outriggers drift or operate (WP 0041 00).	If MHC left or right outrigger drift or does not operate, notify Field Maintenance.
CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.		
13. M1089A1 MATERIAL HANDLING CRANE (MHC) MAST DOES NOT ERECT	1. Check hydraulic oil level at hydraulic oil view gage (WP 0098 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0098 00, Table 15, Item 9).
		
	2. Check hydraulic tubes and fittings for Class III leaks.	2. Install hydraulic tank cap. If Class III leaks are found, notify Field Maintenance.

WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

0097 00

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

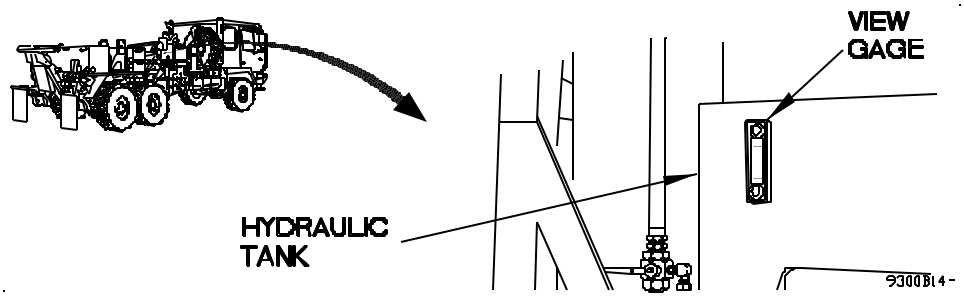
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
13. M1089A1 MATERIAL HANDLING CRANE (MHC) MAST DOES NOT ERECT - Continued	3. Check to see if MHC mast will erect(WP 0041 00).	If MHC mast does not erect, notify Field Maintenance.
CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.		
14. M1089A1 MATERIAL HANDLING CRANE (MHC) OUTRIGGER EXTENSION CYLINDER DOES NOT OPERATE	1. Check hydraulic oil level at hydraulic oil view gage (WP 0098 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0098 00, Table 15, Item 9).
		
		2. Install hydraulic tank cap.
	2. Check hydraulic tubes and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.

WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

0097 00

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
14. M1089A1 MATERIAL HANDLING CRANE (MHC) OUTRIGGER EXTENSION CYLINDER DOES NOT OPERATE - Continued	3. Check to see if left and right outriggers (jack) operate (WP 0041 00).	If left or right outrigger does not operate, perform Wrecker Hydraulic System Troubleshooting (WP 0096 00, Malfunction 12, M1089A1 Material Handling Crane (MHC) Left or Right Outrigger (Jack) Drifts or Does Not Operate).
	4. Check to see if MHC outrigger extension operates (WP 0041 00).	If MHC outrigger extension cylinder does not operate, notify Field Maintenance.
CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.		
15. M1089A1 MATERIAL HANDLING CRANE (MHC) BOOM SWING DOES NOT OPERATE	1. Check hydraulic oil level at hydraulic oil view gage (WP 0098 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0098 00, Table 15, Item 9).
		
		2. Install hydraulic tank cap.

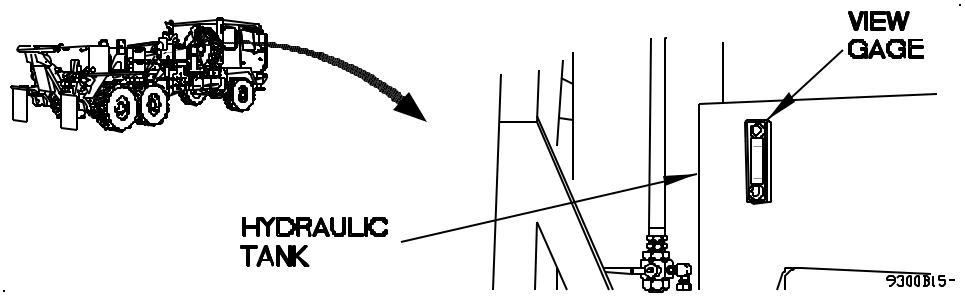
WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

0097 00

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
15. M1089A1 MATERIAL HANDLING CRANE (MHC) BOOM SWING DOES NOT OPERATE - Continued	2. Check hydraulic tubes and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.
	3. Check to see if MHC boom swing operates (WP 0041 00).	If MHC boom swing does not operate, notify Field Maintenance.
CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.		
16. M1089A1 MATERIAL HANDLING CRANE (MHC) BOOM DOES NOT LIFT UP OR DOWN OR HOLD UNDER LOAD	1. Check hydraulic oil level at hydraulic oil view gage.	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0098 00, Table 15, Item 9).
		2. Install hydraulic tank cap.



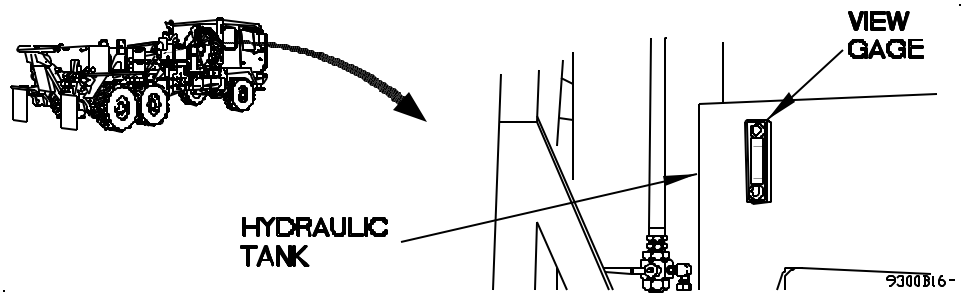
WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

0097 00

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
16. M1089A1 MATERIAL HANDLING CRANE (MHC) BOOM DOES NOT LIFT UP OR DOWN OR HOLD UNDER LOAD - Continued	2. Check hydraulic tubes and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.
	3. Check to see if MHC boom lifts up or down or holds under load (WP 0041 00).	If MHC boom does not lift up or down, or hold under load, notify Field Maintenance.
CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.		
17. M1089A1 MATERIAL HANDLING CRANE (MHC) BOOM DOES NOT TELESCOPE IN OR OUT	1. Check hydraulic oil level at hydraulic oil view gage (WP 0098 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0098 00, Table 15, Item 9).
		2. Install hydraulic tank cap.

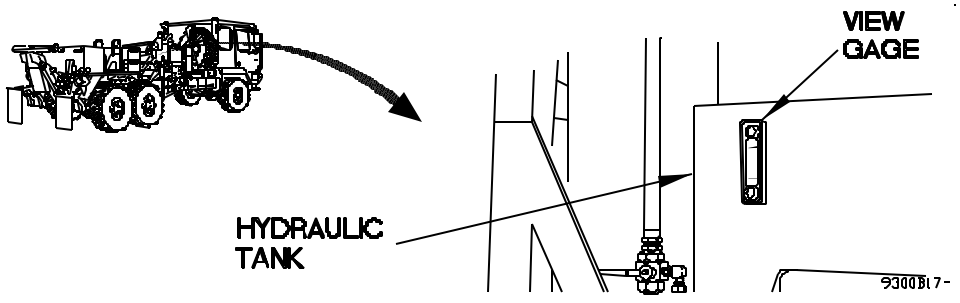


WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

0097 00

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

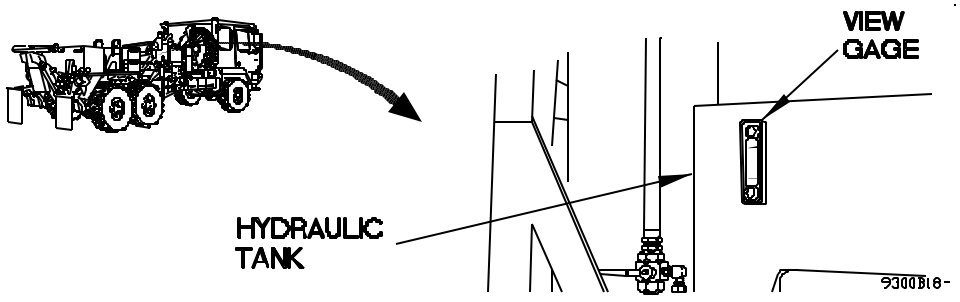
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
17. M1089A1 MATERIAL HANDLING CRANE (MHC) BOOM DOES NOT TELESCOPE IN OR OUT - Continued	2. Check hydraulic tubes and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.
	3. Check to see if MHC boom telescopes in and out (WP 0041 00).	If MHC boom does not telescope in or out notify Field Maintenance.
	CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.	
18. M1089A1 MATERIAL HANDLING CRANE (MHC) HOIST DOES NOT OPERATE	1. Check hydraulic oil level at hydraulic oil view gage (WP 0098 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0098 00, Table 15, Item 9).
		
		2. Install hydraulic tank cap.

WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

0097 00

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
18. M1089A1 MATERIAL HANDLING CRANE (MHC) HOIST DOES NOT OPERATE - Continued	2. Check hydraulic tubes and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.
	3. Check to see if MHC hoist operates (WP 0041 00).	If MHC hoist does not operate, notify Field Maintenance.
CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.		
19. M1089A1 LEFT STIFFLEG DRIFTS OR DOES NOT OPERATE	1. Check hydraulic oil level at hydraulic oil view gage (WP 0098 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0098 00, Table 15, Item 9).
		
	2. Check hydraulic tubes and fittings for Class III leaks.	2. Install hydraulic tank cap. If Class III leaks are found, notify Field Maintenance.

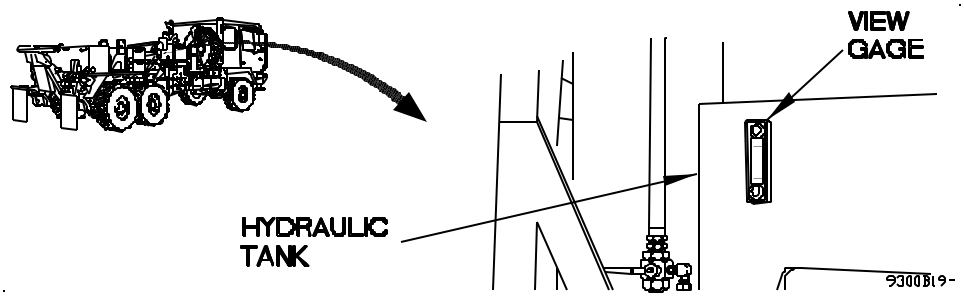
WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

0097 00

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
19. M1089A1 LEFT STIFFLEG DRIFTS OR DOES NOT OPERATE - Continued	3. Check to see if 15K SRW operates (WP 0060 00).	If 15K SRW does not operate, perform Wrecker Hydraulic System Troubleshooting (WP 0096 00, Malfunction 2, M1089A1 Stifflegs/Left Main Winch/Self-Recovery Winch Do Not Operate).
	4. Check to see if left stiffleg drifts or does not operate (WP 0034 00).	If left stiffleg drifts or does not operate, notify Field Maintenance.
CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.		
20. M1089A1 RIGHT STIFFLEG DRIFTS OR DOES NOT OPERATE	1. Check hydraulic oil level at hydraulic oil view gage (WP 0098 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0098 00, Table 15, Item 9).
		2. Install hydraulic tank cap.



WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

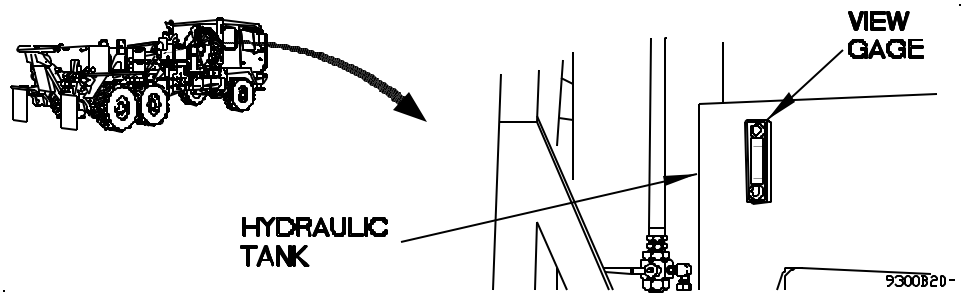
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
20. M1089A1 RIGHT STIFFLEG DRIFTS OR DOES NOT OPERATE - Continued	2. Check hydraulic tubes and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.
	3. Check to see if 15K SRW operates (WP 0060 00).	If 15K SRW does not operate, perform Wrecker Hydraulic System Troubleshooting (WP 0096 00, Malfunction 2, M1089A1 Stifflegs/Left 30K Winch/15 K Self-Recovery Winch (SRW) Do Not Operate)
	4. Check to see if right stiffleg drifts or does not operate (WP 0034 00).	If right stiffleg drifts or does not operate, notify Field Maintenance.

WRECKER HYDRAULIC SYSTEM TROUBLESHOOTING - Continued

WRECKER HYDRAULIC SYSTEM - Continued

Table 1. Wrecker Hydraulic System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
	CAUTION Hydraulic oil level must not be above or more than 0.75 in. (1.9 cm) below black line on hydraulic oil view gage. Failure to comply may result in damage to equipment.	
21. M1089A1 PAY-OUT HYDRAULIC MOTOR ASSEMBLY DOES NOT OPERATE	1. Check hydraulic oil level at hydraulic oil view gage (WP 0098 00, Table 15, Item 9).	1. If hydraulic oil view gage registers below black line, remove hydraulic tank cap and fill hydraulic oil to appropriate level (WP 0098 00, Table 15, Item 9).
		2. Install hydraulic tank cap.
	2. Check hydraulic tubes and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.
	3. Check to see if M1089A1 pay-out hydraulic motor assembly operates (WP 0035 00).	If M1089A1 pay-out hydraulic motor assembly does not operate, notify Field Maintenance.



END OF WORK PACKAGE.

SPECIAL PURPOSE KITS TROUBLESHOOTING 0098 00

THIS WORK PACKAGE COVERS:
Special Purpose Kits

INITIAL SETUP:

Maintenance Level
Operator

References
WP 0004 00
WP 0018 00
WP 0023 00
WP 0057 00
WP 0058 00
WP 0103 00
WP 0113 00

SPECIAL PURPOSE KITS

Table 1. Special Purpose Kits Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. CARGO AREA ARCTIC HEATER DOES NOT OPERATE	1. Start engine (WP 0018 00).	
	2. Attempt to start cargo area arctic heater (WP 0058 00).	
	3. Shut down engine (WP 0018 00).	If cargo area arctic heater does not operate or control panel indicator light is flashing, notify Field Maintenance.
2. CARGO AREA ARCTIC HEATER INDICATOR LAMP BLINKS TWICE WHILE HEATER IS RUNNING		Notify Field Maintenance.

SPECIAL PURPOSE KITS TROUBLESHOOTING - Continued 0098 00

SPECIAL PURPOSE KITS - Continued

Table 1. Special Purpose Kits Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. CARGO AREA HEATER SHUTS DOWN AUTOMATICALLY		Notify Field Maintenance.
4. CARGO AREA ARCTIC OVERRIDE SWITCH DOES NOT OPERATE	1. Start engine (WP 0018 00)	
	2. Attempt to start cargo area arctic heater (WP 0058 00)	If cargo area arctic heater does not start, notify Field Maintenance.
	3. Shut down engine (WP 0018 00)	If cargo area arctic heater does start, notify Field Maintenance.
5. CAB ARCTIC HEATER COMBUSTION STARTS IMMEDIATELY WHEN SWITCHED ON		Notify Field Maintenance.
6. CAB ARCTIC HEATER DOES NOT START	1. Check vehicle fuel level (WP 0017 00).	If fuel level is low, fill vehicle fuel tank.
	2. Check to see if cab arctic heater starts.	If cab arctic heater does not start, notify Field Maintenance.
7. CAB ARCTIC HEATER SWITCHES ON AND OFF REPEATEDLY	1. Attempt to start cab arctic heater (WP 0057 00).	If cab arctic heater will not start, perform Special Purpose Kits Troubleshooting (WP 0097 00, Malfunction 3, Cab Arctic Heater Does Not Start).

SPECIAL PURPOSE KITS TROUBLESHOOTING - Continued 0098 00

SPECIAL PURPOSE KITS - Continued

Table 1. Special Purpose Kits Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
7. CAB ARCTIC HEATER SWITCHES ON AND OFF REPEATEDLY - Continued	2. Check to see if cab arctic heater switches on and off repeatedly.	1. Start cab arctic heater (WP 0057 00). 2. Shut down cab arctic heater (WP 0057 00). 3. If cab arctic heater switches on and off repeatedly, notify Field Maintenance.
8. CAB ARCTIC HEATER HARD TO START	1. Attempt to start cab arctic heater (WP 0057 00).	1. If cab arctic heater will not start, perform Special Purpose Kits Troubleshooting (WP 0097 00, Malfunction 3, Cab Arctic Heater Does Not Start). 2. Shut down cab arctic heater (WP 0057 00).
	2. Check to see if troopseat furnace fails to start without producing white smoke.	1. Attempt to start cab arctic heater (WP 0057 00). 2. Check for smoke at exhaust port. 3. Shut down cab arctic heater (WP 0057 00).

SPECIAL PURPOSE KITS TROUBLESHOOTING - Continued 0098 00

SPECIAL PURPOSE KITS - Continued

Table 1. Special Purpose Kits Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
8. CAB ARCTIC HEATER HARD TO START - Continued		4. If heater fails to start and emits white smoke, perform Special Purpose Kits Troubleshooting (WP 0097 00, Malfunction 8, Cab Arctic Heater Emits White Smoke More Than 20 Seconds).
	3. Check to see if cab arctic heater is hard to start.	1. Start cab arctic heater (WP 0057 00).
		2. Shut down cab arctic heater (WP 0057 00).
		3. If cab arctic heater is hard to start, notify Field Maintenance.
9. CAB ARCTIC HEATER TURNS ITSELF OFF	1. Attempt to start cab arctic heater (WP 0057 00).	1. If cab arctic heater will not start, perform Special Purpose Kits Troubleshooting (WP 0097 00, Malfunction 3, Cab Arctic Heater Does Not Start).
		2. Shut down cab arctic heater (WP 0057 00).
	2. Check vehicle fuel level.	If vehicle fuel level is low, fill vehicle fuel tank (WP 0017 00).
	3. Check to see if cab arctic heater turns itself off.	1. Start cab arctic heater (WP 0057 00).
		2. If cab arctic heater turns itself off, notify Field Maintenance.

SPECIAL PURPOSE KITS TROUBLESHOOTING - Continued 0098 00

SPECIAL PURPOSE KITS - Continued

Table 1. Special Purpose Kits Troubleshooting Procedures - Continued.

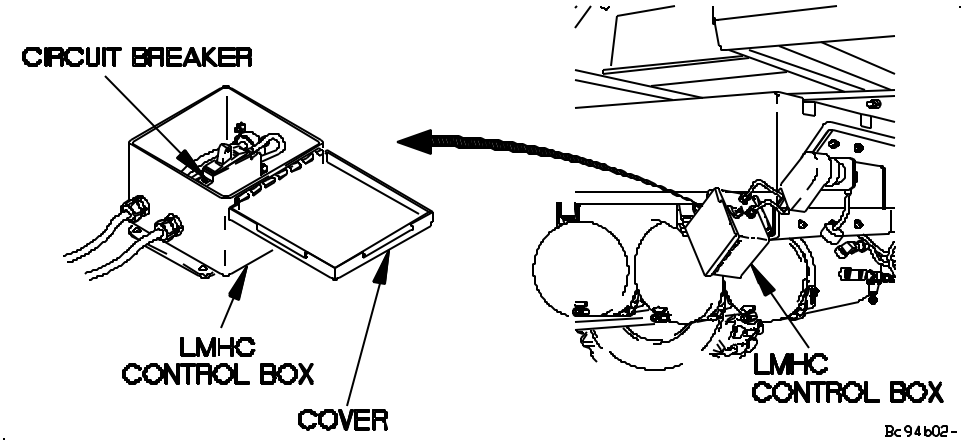
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
9. CAB ARCTIC HEATER TURNS ITSELF OFF - Continued		3. Shut down cab arctic heater (WP 0057 00).
10. CAB ARCTIC HEATER EMITS BLACK SMOKE	1. Attempt to start cab arctic heater (WP 0057 00)	If cab arctic heater will not start, perform Special Purpose Kits Troubleshooting (WP 0097 00, Malfunction 3, Cab Arctic Heater Does Not Start).
	2. Check to see if cab arctic heater emits black smoke.	1. If cab arctic heater emits black smoke, notify Field Maintenance. 2. Shut down cab arctic heater (WP 0057 00).
11. CAB ARCTIC HEATER EMITS WHITE SMOKE MORE THAN 20 SECONDS AFTER START-UP	1. Attempt to start cab arctic heater (WP 0057 00)	If cab arctic heater will not start, perform Special Purpose Kits Troubleshooting (WP 0097 00, Malfunction 3, Cab Arctic Heater Does Not Start).
	2. Check to see if cab arctic heater emits white smoke more than 20 seconds after starting.	1. If cab arctic heater emits white smoke more than 20 seconds after starting, notify Field Maintenance. 2. Shut down cab arctic heater (WP 0057 00).
12. CAB ARCTIC HEATER CANNOT BE SWITCHED OFF		Notify Field Maintenance.

SPECIAL PURPOSE KITS TROUBLESHOOTING - Continued 0098 00

SPECIAL PURPOSE KITS - Continued

Table 1. Special Purpose Kits Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
13. LIGHT MATERIAL HANDLING CRANE (LMHC) DOES NOT OPERATE	1. Check to see if LMHC control box circuit breaker tripped.	1. Disconnect NATO cable. 2. Open cover on LMHC control box (WP 0023 00). 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.
	2. Check to see if LMHC operates.	1. If LMHC does not operate, notify Field Maintenance.



SPECIAL PURPOSE KITS TROUBLESHOOTING - Continued 0098 00

SPECIAL PURPOSE KITS - Continued

Table 1. Special Purpose Kits Troubleshooting Procedures - Continued.

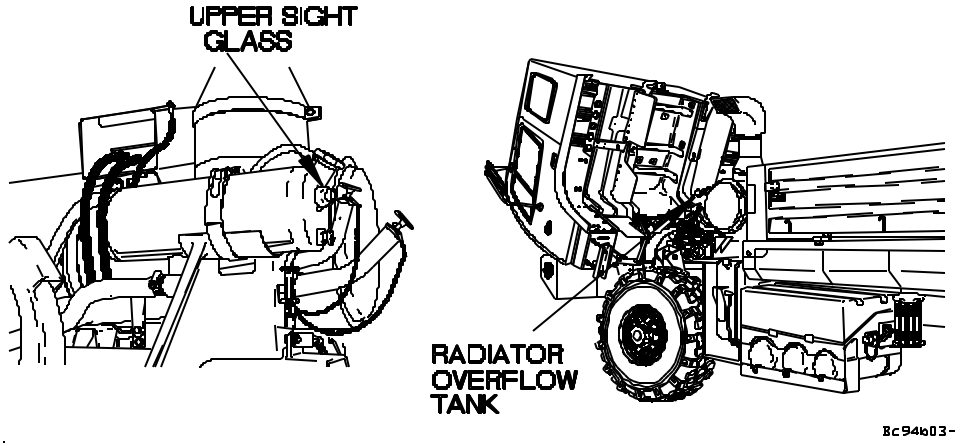
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
14. LIGHT MATERIAL HANDLING CRANE (LMHC) HOIST IN DOES NOT OPERATE	1. Check to see if LMHC hoist in operates.	If LMHC hoist out does not operate, perform Special Purpose Kits Troubleshooting (WP 0097 00 Malfunction 10, Light Material Handling Crane [LMHC] Does Not Operate).
	2. Check to see if LMHC hoist in operates.	If LMHC hoist in does not operate, notify Field Maintenance.
15. LIGHT MATERIAL HANDLING CRANE (LMHC) HOIST OUT DOES NOT OPERATE	1. Check to see if LMHC hoist in operates.	If LMHC hoist in does not operate, perform Special Purpose Kits Troubleshooting (WP 0097 00 Malfunction 10, Light Material Handling Crane [LMHC] Does Not Operate).
	2. Check to see if LMHC hoist out operates.	If LMHC hoist out does not operate, notify Field Maintenance.
16. CAB ARCTIC HEATER DOES NOT IGNITE		Notify Field Maintenance.

SPECIAL PURPOSE KITS TROUBLESHOOTING - Continued 0098 00

SPECIAL PURPOSE KITS - Continued

Table 1. Special Purpose Kits Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
17. SWINGFIRE DOES NOT OPERATE	1. Check top radiator overflow tank sight glass for proper level of coolant.	If upper sight glass indicates low coolant level, fill radiator overflow tank with coolant (WP 0103 00, Table 1, Item 3).
	2. Check to see if circuit breaker CB50 is tripped.	1. Remove PDP cover (WP 0113 00).

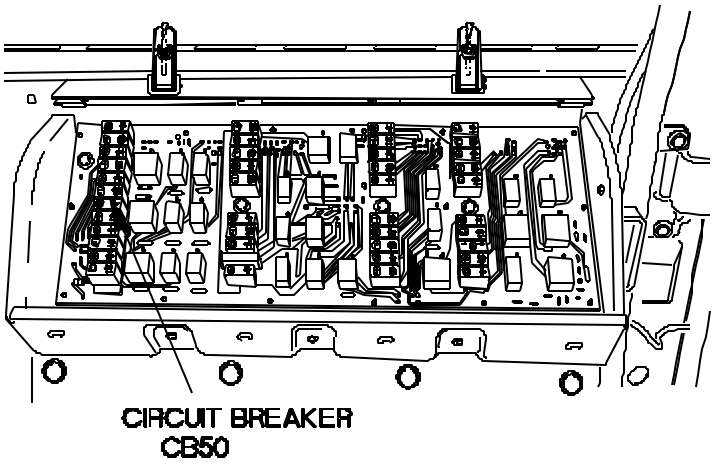


SPECIAL PURPOSE KITS TROUBLESHOOTING - Continued 0098 00

SPECIAL PURPOSE KITS - Continued

Table 1. Special Purpose Kits Troubleshooting Procedures - Continued.

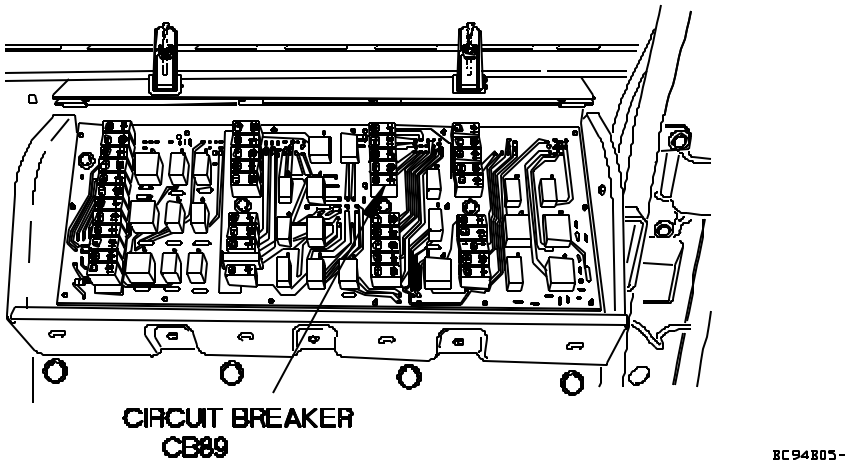
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
17. SWINGFIRE DOES NOT OPERATE - Continued		2. If circuit breaker CB50 is tripped, push button to reset. 3. Position master power switch to on (WP 0004 00). 4. Check circuit breaker CB50 to see if it is tripped again.
		5. Position master power switch to off (WP 0004 00). 6. Install PDP cover (WP 0113 00).



SPECIAL PURPOSE KITS TROUBLESHOOTING - Continued 0098 00

SPECIAL PURPOSE KITS - Continued

Table 1. Special Purpose Kits Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
18. ARCTIC ENGINE PREHEAT INDICATOR DOES NOT OPERATE	1. Check to see if circuit breaker CB89 is tripped	1. Remove PDP cover (WP 0113 00). 2. If circuit breaker CB89 is tripped, push button to reset. 3. Position master power switch to on (WP 0004 00). 4. If circuit breaker CB89 is tripped again, notify Field Maintenance.  5. Position master power switch to off (WP 0004 00). 6. Install PDP cover (WP 0113 00).

SPECIAL PURPOSE KITS TROUBLESHOOTING - Continued 0098 00

SPECIAL PURPOSE KITS - Continued

Table 1. Special Purpose Kits Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
18. ARCTIC ENGINE PREHEAT INDICATOR DOES NOT OPERATE - Continued	2. Visual inspection.	1. Position master power switch to on (WP 0004 00). 2. If arctic engine preheat indicator does not illuminate, notify Field Maintenance. 3. Position master power switch to off (WP 0004 00).
19. ARCTIC ENGINE PREHEAT INDICATOR FLASHES SPECIAL FAILURE CODE FOR 60 SECONDS		Notify Field Maintenance.
20. ARCTIC ENGINE PREHEAT INDICATOR FLASHES SLOWLY INDICATING “READY” WHEN IGNITION IS SWITCHED ON ALTHOUGH WATER TEMPERATURE IS BELOW 77°F (25°C).		Notify Field Maintenance.

SPECIAL PURPOSE KITS TROUBLESHOOTING - Continued 0098 00

SPECIAL PURPOSE KITS - Continued

Table 1. Special Purpose Kits Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
21. ARCTIC ENGINE PREHEAT INDICATOR ILLUMINATES CONTINUOUSLY ALTHOUGH WATER TEMPERATURE IS ABOVE 77°F (25°C).		Notify Field Maintenance.
22. ARCTIC ENGINE PREHEAT INDICATOR FLASHES SLOWLY INDICATING “READY” BUT ENGINE WILL NOT START OR IS HARD TO START		Notify Field Maintenance.
23. HEAVY WHITE SMOKE AFTER COLD START.		Notify Field Maintenance.
24. ENGINE BLOCK ARCTIC HEATER DOES NOT OPERATE.		Notify Field Maintenance.

END OF WORK PACKAGE.

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS TROUBLESHOOTING 0099 00

THIS OPERATE PACKAGE COVERS:

M1084A1/M1086A1 Material Handling Crane (MHC) Hydraulics

INITIAL SETUP:

Maintenance Level

Operator

References

WP 0018 00
WP 0030 00
WP 0087 00
WP 0103 00

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS

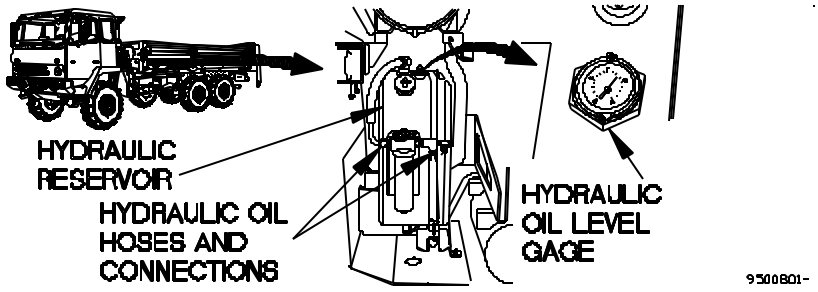
Table 1. M1084A1/M1086A1 Material Handling Crane (MHC) Hydraulics Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) HAND PUMP DOES NOT OPERATE	1. Check to see if MHC functions operate with PTO engaged.	1. Start engine (WP 0018 00). 2. Position PTO switch to on (WP 0030 00). 3. Attempt to operate MHC (WP 0030 00). 4. If MHC does not operate with PTO engaged, perform Hydraulic System troubleshooting (WP 0087 00, Malfunction 2, Loss of Hydraulic Pressure). 5. Position PTO switch to off (WP 0030 00). 6. Shut down engine (WP 0018 00).

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS TROUBLESHOOTING - Continued 0099 00

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS - Continued

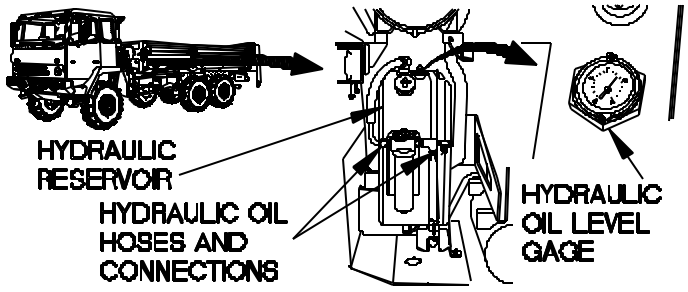
Table 1. M1084A1/M1086A1 Material Handling Crane (MHC) Hydraulics Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) HAND PUMP DOES NOT OPERATE - Continued	2. Check to see if MHC hand pump operates.	If MHC hand pump still does not operate, notify Field Maintenance.
NOTE Hydraulic reservoir is considered full when oil level gage reads above 3/4 mark.		
2. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULIC FUNCTIONS OPERATE SLOWLY	1. Check hydraulic oil level gage to determine hydraulic oil level.	If oil level is low, add hydraulic oil (WP 0103 00, Table 3, Item 8).
		
	2. Check hydraulic hoses and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS TROUBLESHOOTING - Continued 0099 00

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS - Continued

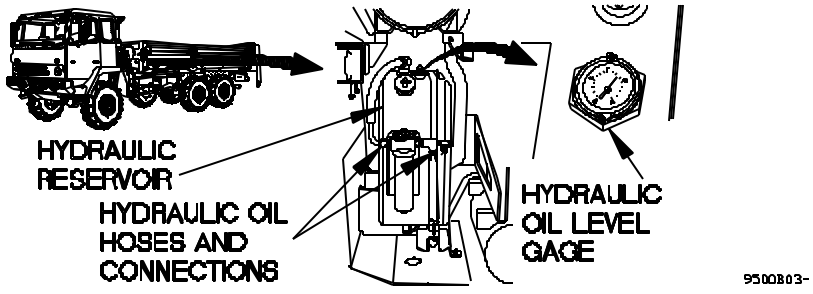
Table 1. M1084A1/M1086A1 Material Handling Crane (MHC) Hydraulics Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAU-LIC FUNCTIONS OPERATE SLOWLY - Continued	3. Check to see if MHC hydraulic functions operate normally (WP 0030 00).	If MHC hydraulic functions operate slowly, notify Field Maintenance.
NOTE Hydraulic reservoir is considered full when oil level gage reads above 3/4 mark.		
3. M1084A1/ M1086A1 MATERIAL HAND-LING CRANE (MHC) LEFT OUT-RIGGER (JACK) DRIFTS OR DOES NOT OPERATE	1. Check hydraulic oil level gage to determine hydraulic oil level.	If oil level is low, add hydraulic oil (WP 0103 00, Table 3, Item 8).
		
	2. Check hydraulic hoses and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS TROUBLESHOOTING - Continued 0099 00

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS - Continued

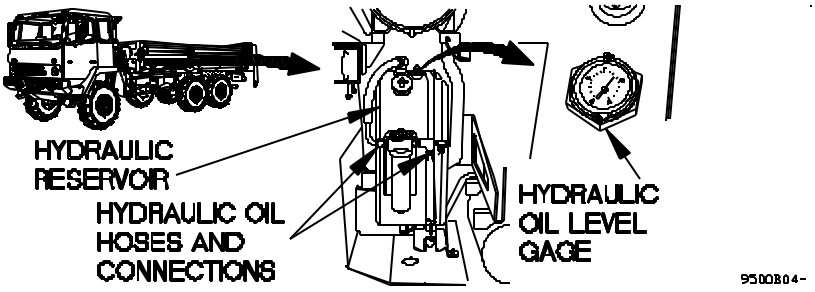
Table 1. M1084A1/M1086A1 Material Handling Crane (MHC) Hydraulics Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) LEFT OUT-RIGGER (JACK) DRIFTS OR DOES NOT OPERATE - Continued	3. Check to see if MHC left outrigger (jack) operates and does not drift (WP 0030 00).	If MHC left outrigger (jack) drifts or does not operate, notify Field Maintenance.
NOTE Hydraulic reservoir is considered full when oil level gage reads above 3/4 mark.		
4. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) RIGHT OUTRIGGER (JACK) DRIFTS OR DOES NOT OPERATE	1. Check hydraulic oil level gage to determine hydraulic oil level.	If oil level is low, add hydraulic oil (WP 0103 00, Table 3, Item 8).
		
	2. Check hydraulic hoses and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS TROUBLESHOOTING - Continued 0099 00

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS - Continued

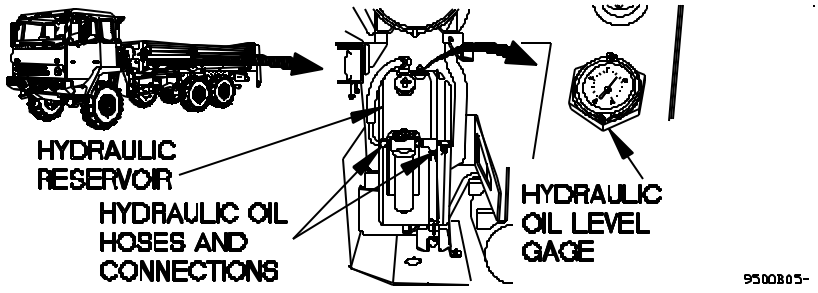
Table 1. M1084A1/M1086A1 Material Handling Crane (MHC) Hydraulics Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
4. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) RIGHT OUTRIGGER (JACK) DRIFTS OR DOES NOT OPERATE - Continued	3. Check to see if MHC right outrigger (jack) operates and does not drift (WP 0030 00).	If MHC right outrigger (jack) drifts or does not operate, notify Field Maintenance.
NOTE Hydraulic reservoir is considered full when oil level gage reads above 3/4 mark.		
5. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) MAST DOES NOT ERECT	1. Check hydraulic oil level gage to determine hydraulic oil level.	If oil level is low, add hydraulic oil (WP 0103 00, Table 3, Item 8).
		
	2. Check hydraulic hoses and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS TROUBLESHOOTING - Continued 0099 00

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS - Continued

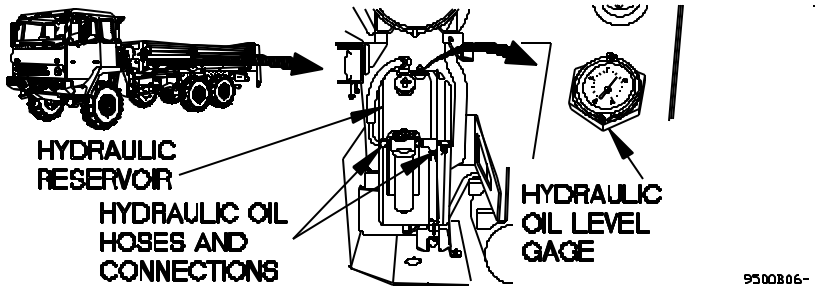
Table 1. M1084A1/M1086A1 Material Handling Crane (MHC) Hydraulics Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
5. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) MAST DOES NOT ERECT - Continued	3. Check to see if MHC mast erects (WP 0030 00).	If MHC mast does not erect, notify Field Maintenance.
NOTE Hydraulic reservoir is considered full when oil level gage reads above 3/4 mark.		
6. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) HOIST DOES NOT OPERATE	1. Check hydraulic oil level gage to determine hydraulic oil level.	If oil level is low, add hydraulic oil (WP 0103 00, Table 3, Item 8).
		
	2. Check hydraulic hoses and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS TROUBLESHOOTING - Continued 0099 00

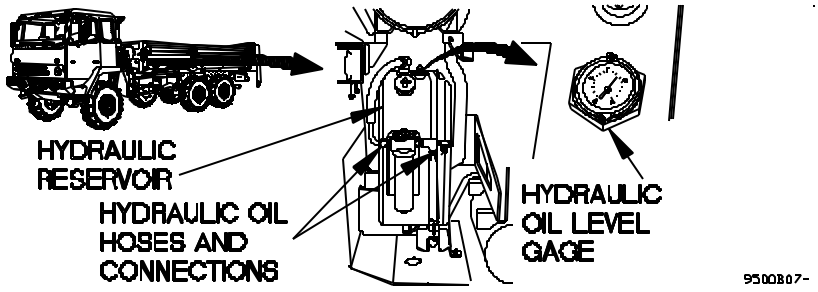
M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS - Continued

Table 1. M1084A1/M1086A1 Material Handling Crane (MHC) Hydraulics Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
6. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) HOIST DOES NOT OPERATE - Continued	3. Check to see if MHC hoist operates (WP 0030 00).	If MHC hoist does not operate, notify Field Maintenance.
NOTE Hydraulic reservoir is considered full when oil level gage reads above 3/4 mark.		
7. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) BOOM SWING DOES NOT OPERATE	1. Check hydraulic oil level gage to determine hydraulic oil level.	If oil level is low, add hydraulic oil (WP 0103 00, Table 3, Item 8).
		
	2. Check hydraulic hoses and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS - Continued

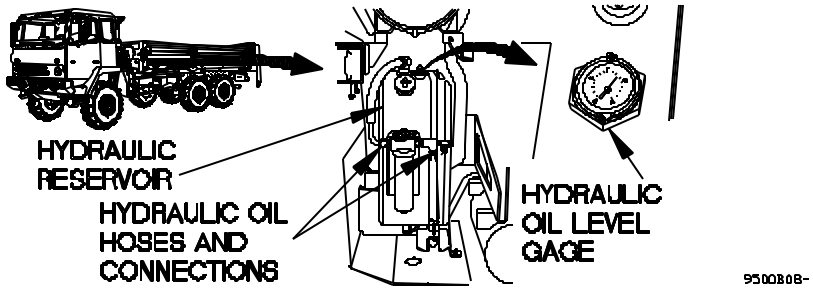
Table 1. M1084A1/M1086A1 Material Handling Crane (MHC) Hydraulics Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
7. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) BOOM SWING DOES NOT OPERATE - Continued	3. Check to see if MHC swing operates (WP 0030 00).	If MHC swing does not operate, notify Field Maintenance.
NOTE Hydraulic reservoir is considered full when oil level gage reads above 3/4 mark.		
8. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) BOOM DOES NOT TELESCOPE IN OR OUT	1. Check hydraulic oil level gage to determine hydraulic oil level.	If oil level is low, add hydraulic oil (WP 0103 00, Table 3, Item 8).
		
	2. Check hydraulic hoses and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS TROUBLESHOOTING - Continued

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS - Continued

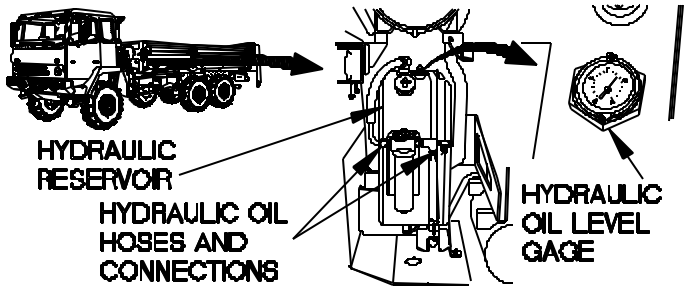
Table 1. M1084A1/M1086A1 Material Handling Crane (MHC) Hydraulics Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
8. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) BOOM DOES NOT TELESCOPE IN OR OUT - Continued	3. Check to see if MHC boom telescopes in and out (WP 0030 00).	If MHC boom does not telescope in or out, notify Field Maintenance.
NOTE Hydraulic reservoir is considered full when oil level gage reads above 3/4 mark.		
9. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) SWING, TELESCOPE, BOOM, AND HOIST DO NOT OPERATE	1. Check hydraulic oil level gage to determine hydraulic oil level.	If oil level is low, add hydraulic oil (WP 0103 00, Table 3, Item 8).
		
	2. Check hydraulic hoses and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS TROUBLESHOOTING - Continued 0099 00

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS - Continued

Table 1. M1084A1/M1086A1 Material Handling Crane (MHC) Hydraulics Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
9. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) SWING, TELESCOPE, BOOM, AND HOIST DO NOT OPERATE - Continued	3. Check to see if MHC swing, telescope, boom, and hoist operate (WP 0030 00).	If MHC swing, telescope, boom, and hoist do not operate, notify Field Maintenance.
NOTE Hydraulic reservoir is considered full when oil level gage reads above 3/4 mark.		
10. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) BOOM DOES NOT LIFT UP OR DOWN OR HOLD UNDER LOAD	1. Check hydraulic oil level gage to determine hydraulic oil level.	If oil level is low, add hydraulic oil (WP 0103 00, Table 3, Item 8).
		
	2. Check hydraulic hoses and fittings for Class III leaks.	If Class III leaks are found, notify Field Maintenance.

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS TROUBLESHOOTING - Continued

M1084A1/M1086A1 MATERIAL HANDLING CRANE (MHC) HYDRAULICS - Continued

Table 1. M1084A1/M1086A1 Material Handling Crane (MHC) Hydraulics Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
10. M1084A1/ M1086A1 MATERIAL HANDLING CRANE (MHC) BOOM DOES NOT LIFT UP OR DOWN OR HOLD UNDER LOAD - Continued	3. Check to see if MHC boom operates (WP 0030 00).	If MHC boom does not lift up or down or hold under load, notify Field Maintenance.

END OF WORK PACKAGE.

CAB TILT AND SPARE TIRE RETAINER TROUBLESHOOTING 0100 00

THIS WORK PACKAGE COVERS:
Cab Tilt and Spare Tire Retainer

INITIAL SETUP:

Maintenance Level	Reference
Operator	WP 0103 00

CAB TILT AND SPARE TIRE RETAINER

Table 1. Cab Tilt and Spare Tire Retainer Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. CAB DOES NOT RAISE OR LOWER PROPERLY	1. Check hydraulic oil level in air/hydraulic power unit (WP 0103 00, Table 1, Item 7).	If hydraulic oil level is low, add hydraulic oil (WP 0103 00, Table 1, Item 7).
	2. Check hydraulic hoses, air lines, and fittings for Class III leaks.	If Class III leaks are found or cab tilt still does not raise or lower properly, notify Field Maintenance.
2. SPARE TIRE RETAINER DOES NOT RAISE OR LOWER PROPERLY	1. Check hydraulic oil level in air/hydraulic power unit (WP 0103 00, Table 1, Item 7).	If hydraulic oil level is low, add hydraulic oil (WP 0103 00, Table 1, Item 7).
	2. Check hydraulic hoses, air lines, and fittings for Class III leaks.	If Class III leaks are found or spare tire retainer still does not raise or lower properly, notify Field Maintenance.

END OF WORK PACKAGE.

M1089A1 AIR SYSTEM TROUBLESHOOTING 0101 00

THIS WORK PACKAGE COVERS:
M1089A1 Air System

INITIAL SETUP:

Maintenance Level
Operator

References
WP 0018 00

References - Continued
WP 0035 00
WP 0037 00
WP 0080 00
WP 0089 00
WP 0103 00

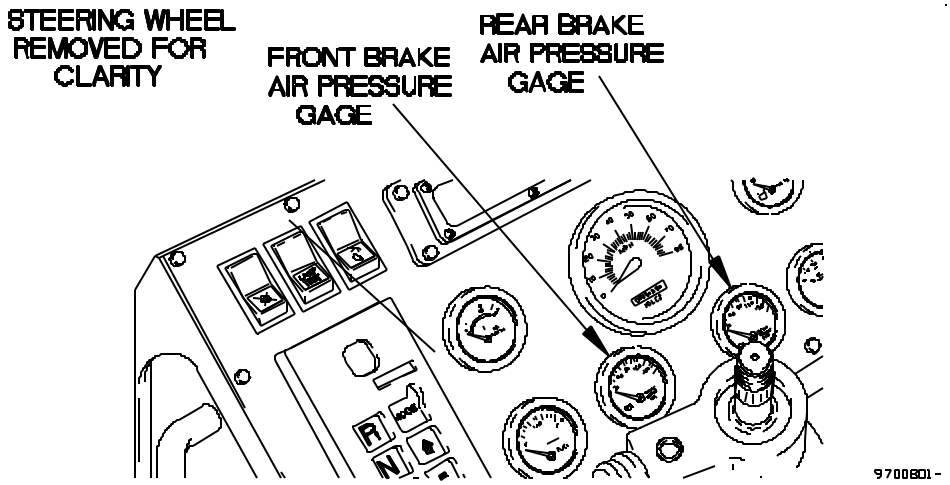
M1089A1 AIR SYSTEM

Table 1. M1089A1 Air System Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. ONE WRECKER FUNCTION DOES NOT OPERATE FROM WRECKER REMOTE CONTROL	Check to see if any wrecker function operates from WRECKER REMOTE CONTROL (WP 0037 00).	1. If all wrecker functions do not operate from WRECKER REMOTE CONTROL, perform Electrical System Troubleshooting (WP 0080 00, Malfunction 140, All Wrecker Functions Do Not Operate From WRECKER REMOTE CONTROL). 2. If one wrecker function does not operate from WRECKER REMOTE CONTROL, notify Field Maintenance.
NOTE Perform Electrical System Troubleshooting (WP 0080 00, Malfunction 142, 30K Winch Left Or Right Speed Function Does Not Operate From Wrecker Control Panel), before starting here.		

M1089A1 AIR SYSTEM - Continued

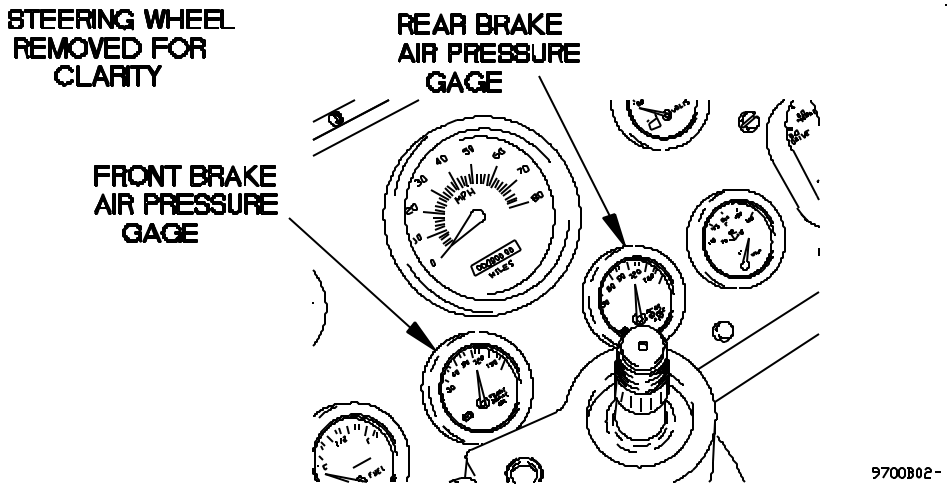
Table 1. M1089A1 Air System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. WRECKER LEFT OR RIGHT 30K WINCH FREESPOOL DOES NOT OPERATE	1. Check to see if air tanks are pressurized.	1. Start engine (WP 0018 00). 2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.  3. Shut down engine (WP 0018 00). 4. If FRONT BRAKE AIR or REAR BRAKE AIR pressure gage does not register 120 PSI, perform Air System Troubleshooting (WP 0085 00, Malfunction 1, Air System Loses Pressure During Operation/Slow Air Buildup).

M1089A1 AIR SYSTEM - Continued

Table 1. M1089A1 Air System Troubleshooting Procedures - Continued.

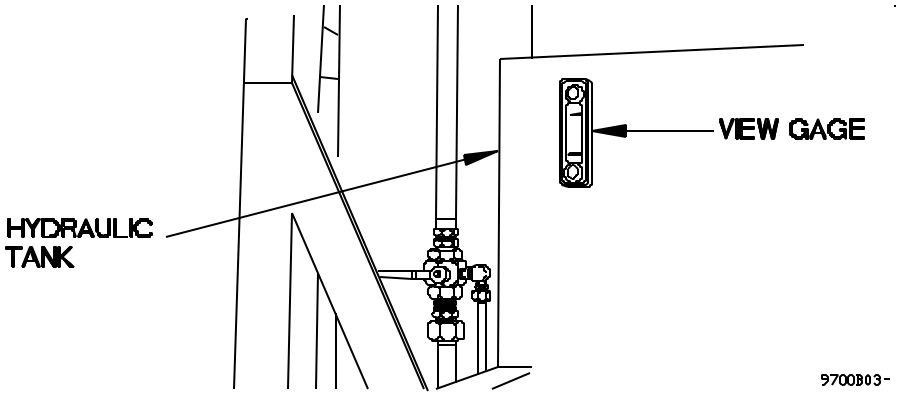
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. WRECKER LEFT OR RIGHT 30K WINCH FREESPOOL DOES NOT OPERATE - Continued	2. Attempt to operate wrecker left or right 30K winch freespool (WP 0035 00).	If wrecker left or right 30K winch freespool does not operate, notify Field Maintenance.
3. WRECKER LEFT OR RIGHT 30K WINCH CABLE DRUM TENSIONER DOES NOT OPERATE	1. Check to see if air tanks are pressurized.	1. Start engine (WP 0018 00). 2. Allow engine to idle until 120 PSI is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.
		3. Shut down engine (WP 0018 00).



M1089A1 AIR SYSTEM - Continued

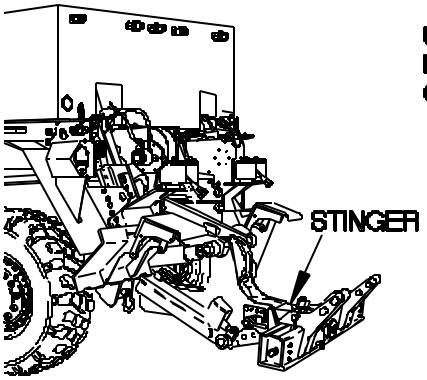
Table 1. M1089A1 Air System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. WRECKER LEFT OR RIGHT 30K WINCH CABLE DRUM TENSIONER DOES NOT OPERATE - Continued		4. If FRONT BRAKE AIR or REAR BRAKE AIR pressure gage does not register 120 psi, perform Air System Troubleshooting (WP 0085 00, Malfunction 1, Air System Loses Pressure During Operation/Slow Air Buildup).
	2. Check hydraulic oil level (WP 0103 00, Table 15, Item 9).	If hydraulic oil level is low, fill hydraulic oil (WP 0103 00, Table 15, Item 9).



M1089A1 AIR SYSTEM - Continued

Table 1. M1089A1 Air System Troubleshooting Procedures - Continued.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. WRECKER LEFT OR RIGHT 30K WINCH CABLE DRUM TENSIONER DOES NOT OPERATE - Continued	3. Check to see if stinger operates (WP 0037 00).	If stinger does not operate, perform Hydraulic System Troubleshooting (WP 0082 00, Malfunction 2, Loss of Hydraulic Pressure [Three Stage Pump]).
		
	4. Attempt to operate wrecker left or right 30K winch cable drum tensioner (WP 0035 00).	If wrecker left or right 30K winch cable drum tensioner does not operate, notify Field Maintenance.
	NOTE Perform Electrical System Troubleshooting (WP 0080 00, Malfunction 167., 30K Winch Does Not Pay-In).	
4. 30K WINCH LH OR RH DOES NOT PAY-IN		1. Notify Field Maintenance.

END OF WORK PACKAGE.

FRAME TROUBLESHOOTING 0102 00

THIS WORK PACKAGE COVERS:
Frame

INITIAL SETUP:

Maintenance Level
Operator

FRAME

Table 1. Frame Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
TIRES CONTINUE TO WEAR AFTER FRONT END ALIGNMENT, AND/OR VEHICLE DRIVES SIDEWAYS DOWN ROAD		Notify Field Maintenance.

END OF WORK PACKAGE.

M1148 LOAD HANDLING EQUIPMENT (LHE) HYDRAULICS TROUBLESHOOTING

0102 01

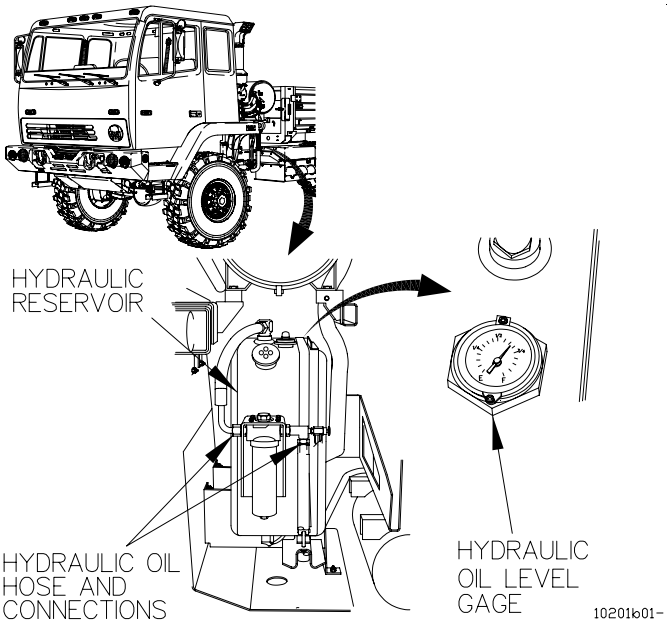
INITIAL SETUP:

Maintenance Level
Operator

HYDRAULICS

Table 1. LHE Hydraulic Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. LOAD HANDLING EQUIPMENT (LHE) DOES NOT OPERATE.	1. Is hydraulic reservoir full?	1. Check hydraulic oil level gage to determine hydraulic oil level. 2. If reservoir is full, notify field maintenance. 3. If reservoir is low, add oil as necessary (WP 0103 00).



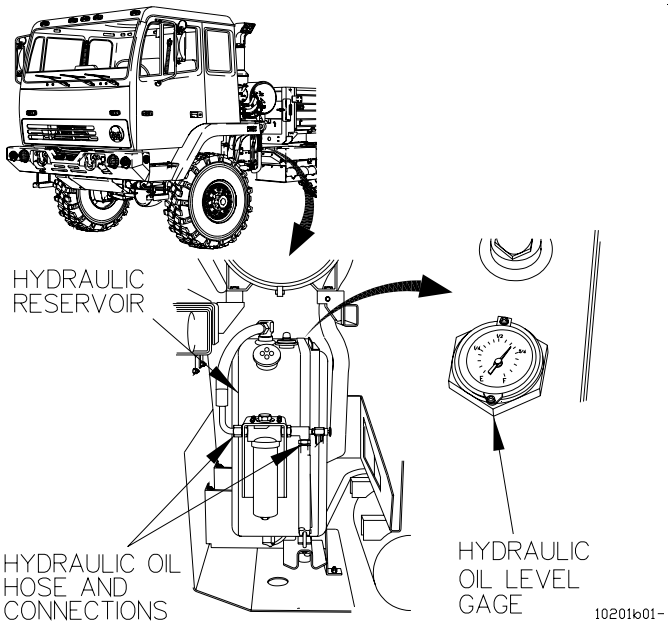
M1148 LOAD HANDLING EQUIPMENT (LHE) HYDRAULICS TROUBLESHOOTING - CONTINUED

0102 01

THIS WORK PACKAGE COVERS:

Hydraulic Troubleshooting

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
2. HOOK ARM DOES NOT LOAD.	1. Is hydraulic reservoir full?	1. Check hydraulic oil level gage to determine hydraulic oil level. 2. If reservoir is low, add oil as necessary (WP 0103 00).
	2. Do hydraulic hoses and fittings have leaks?	1. Check hydraulic hoses and fittings for Class III leaks (WP 0103 00). 2. Notify field maintenance.

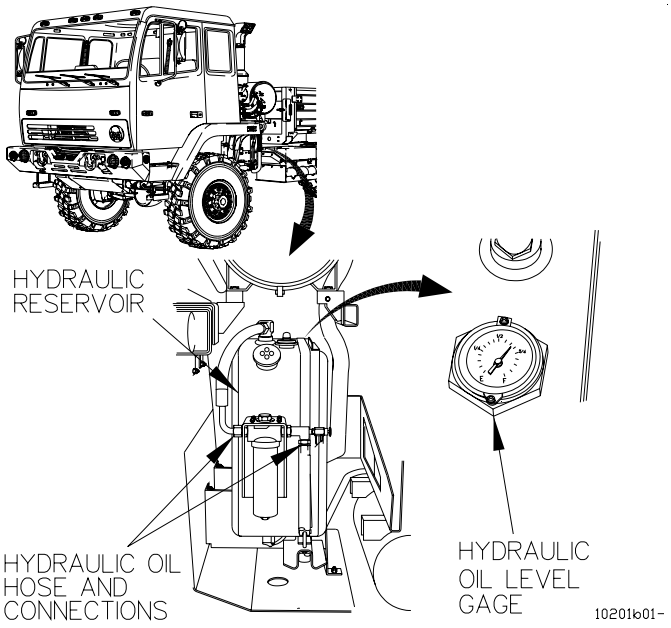


M1148 LOAD HANDLING EQUIPMENT (LHE) HYDRAULICS TROUBLESHOOTING - CONTINUED 0102 01

THIS WORK PACKAGE COVERS:

Hydraulic Troubleshooting

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. HOOK ARM DOES NOT UNLOAD.	1. Is hydraulic reservoir full?	1. Check hydraulic oil level gage to determine hydraulic oil level. 2. If reservoir is low, add oil as necessary (WP 0103 00).
	2. Do hydraulic hoses and fittings have leaks?	1. Check hydraulic hoses and fittings for Class III leaks (WP 0103 00). 2. Notify field maintenance.

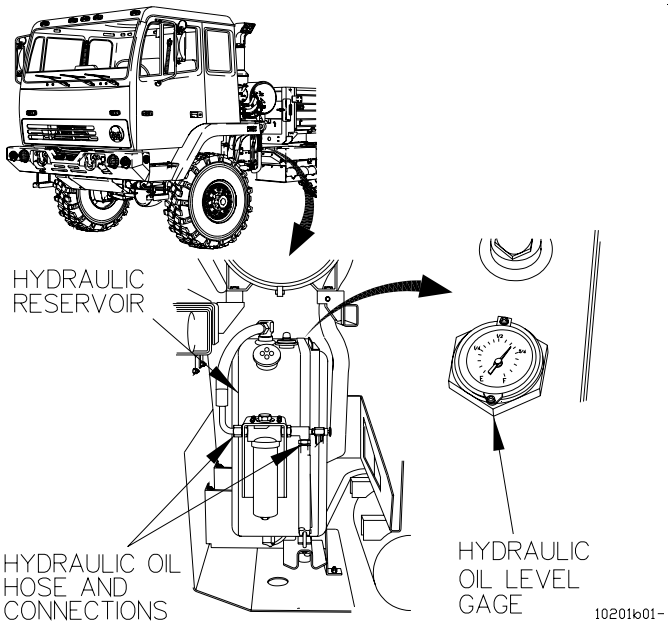


M1148 LOAD HANDLING EQUIPMENT (LHE) HYDRAULICS TROUBLESHOOTING - CONTINUED 0102 01

THIS WORK PACKAGE COVERS:

Hydraulic Troubleshooting

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
4. MIDDLE FRAME DOES NOT LOAD.	1. Is hydraulic reservoir full?	1. Check hydraulic oil level gage to determine hydraulic oil level. 2. If reservoir is low, add oil as necessary (WP 0103 00).
	2. Do hydraulic hoses and fittings have leaks?	1. Check hydraulic hoses and fittings for Class III leaks (WP 0103 00). 2. Notify field maintenance.

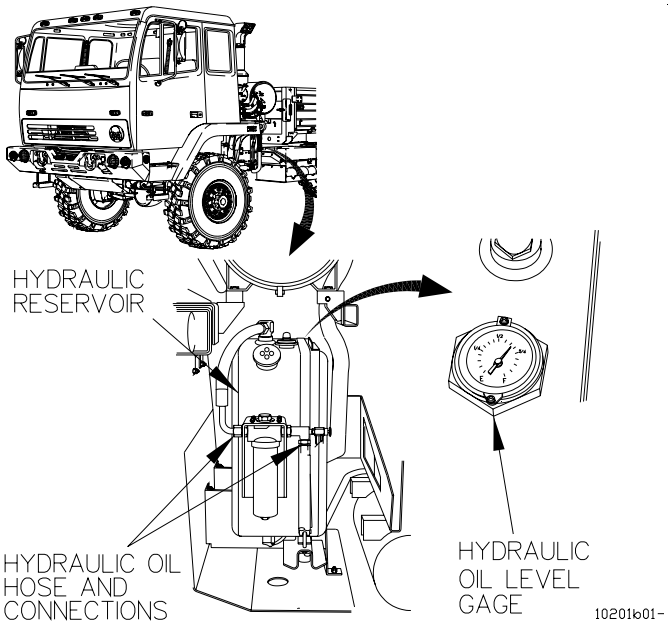


M1148 LOAD HANDLING EQUIPMENT (LHE) HYDRAULICS TROUBLESHOOTING - CONTINUED 0102 01

THIS WORK PACKAGE COVERS:

Hydraulic Troubleshooting

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
5. MIDDLE FRAME DOES NOT UNLOAD.	1. Is hydraulic reservoir full?	1. Check hydraulic oil level gage to determine hydraulic oil level. 2. If reservoir is low, add oil as necessary (WP 0103 00).
	2. Do hydraulic hoses and fittings have leaks?	1. Check hydraulic hoses and fittings for Class III leaks (WP 0103 00). 2. Notify field maintenance.

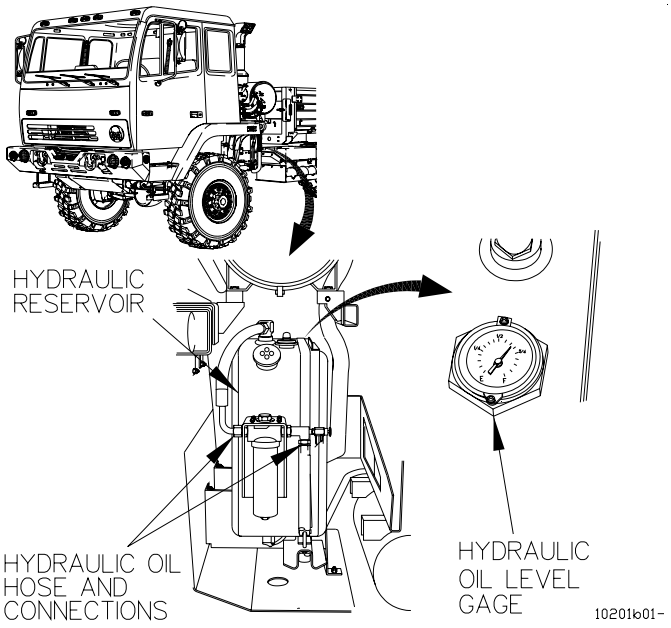


M1148 LOAD HANDLING EQUIPMENT (LHE) HYDRAULICS TROUBLESHOOTING - CONTINUED 0102 01

THIS WORK PACKAGE COVERS:

Hydraulic Troubleshooting

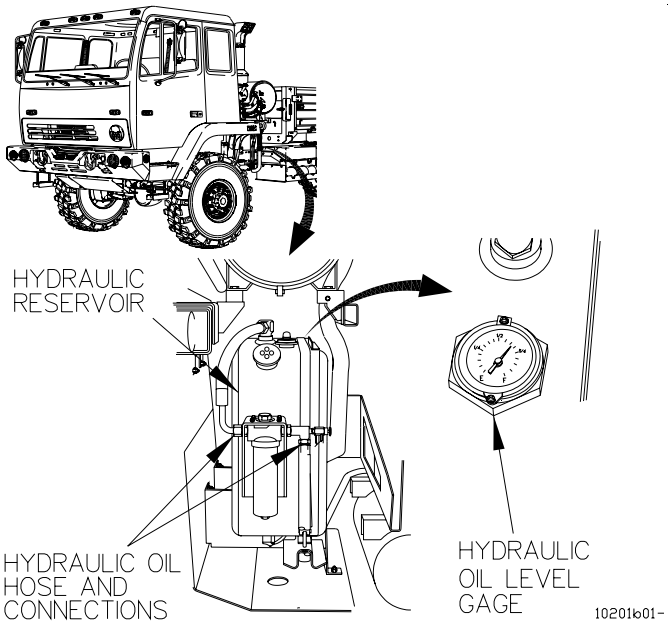
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
6. STOWAGE GUIDE DOES NOT LOAD.	1. Is hydraulic reservoir full?	1. Check hydraulic oil level gage to determine hydraulic oil level. 2. If reservoir is low, add oil as necessary (WP 0103 00).



	2. Do hydraulic hoses and fittings have leaks?	1. Check hydraulic hoses and fittings for Class III leaks (WP 0103 00). 2. Notify field maintenance.

M1148 LOAD HANDLING EQUIPMENT (LHE) 0102 01
HYDRAULICS TROUBLESHOOTING - CONTINUED

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
7. STOWAGE GUIDE DOES NOT UNLOAD.	1. Is hydraulic reservoir full?	1. Check hydraulic oil level gage to determine hydraulic oil level. 2. If reservoir is low, add oil as necessary (WP 0103 00).
	2. Do hydraulic hoses and fittings have leaks?	1. Check hydraulic hoses and fittings for Class III leaks (WP 0103 00). 2. Notify field maintenance.



END OF WORK PACKAGE.

CHAPTER 4

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) AND MAINTENANCE INSTRUCTIONS FOR THE M1083A1 SERIES VEHICLES

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) 0103 00

THIS WORK PACKAGE COVERS:

Introduction, Leakage Definition, Inspection Lubrication Service Intervals - Normal Conditions, Lubrication Service Intervals - Unusual Conditions, Cleaning and Lubrication, PMCS Procedures

INITIAL SETUP:

Maintenance Level
Operator

Tools/Special Tools
- Bar, Socket Wrench Handle (Item 4, Table 2, WP 0117 00)
- Gloves, Leather (NSN 8415-00-634-4658, WP 0117 00)
- Goggles, Industrial (Item 25, Table 2 WP 0117 00)
- Inflator-Gage, Tire W/Hose (Item 31, Table 2, WP 0117 00)
- Jack, Adapter Assembly (Item 32, Table 2, WP 0117 00)
- Jack, Hydraulic, Hand Operated (Item 33, Table 2, WP 0117 00)
- Pliers, Slip Joint (Item 36, Table 2, WP 0117 00)
- Screwdriver, Crosstip (Item 37, Table 2, WP 0117 00)
- Screwdriver, Crosstip (Item 38, Table 2, WP 0117 00)
- Screwdriver, Flattip (Item 39, Table 2, WP 0117 00)
- Wrench, Adjustable, 8 In. (Item 52, Table 2, WP 0117 00)
- Wrench, Adjustable, 12 In. (Item 51, Table 2, WP 0117 00)
- Wrench, Plier (Item 53, Table 2, WP 0117 00)
- Wrench, Plier (Item 54, Table 2 WP 0117 00)
- Wrench, Socket (Item 55, Table 2 WP 0117 00)

Materials/Parts
- Antifreeze (Item 1, WP 0119 00)
- Grease, Automotive and Artillery (GAA) (Item 11, WP 0119 00)
- Hydraulic Fluid (Item 12, 12.1, or 12.2, WP 0119 00)
- Oil, Lubricating, OE/HD, Arctic (Item 22, WP 0119 00)
- Oil, Lubricating, OE/HDO 10 (Item 17, WP 0119 00)
- Oil, Lubricating, OE/HDO 15W-40 (Item 19, WP 0119 00)
- Oil, Lubricating, OE/HDO 30 (SAE 30) (Item 20, WP 0119 00)
- Rag, Wiping (Item 25, WP 0119 00)
- Soap, Laundry (Item 26, WP 0119 00)
- Solvent, Dry Cleaning (Item 27, WP 0119 00)

Personnel
Two

References
AR 385-55
DA PAM 738-750
FM 9-207
WP 0001 00

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

INTRODUCTION

General

Preventive Maintenance Checks and Services (PMCS) are performed to keep the vehicle in operating condition. The checks are used to find, correct, or report problems. Crewmembers are to do the PMCS jobs as shown in the PMCS tables. PMCS is done every day the vehicle is operated using the PMCS tables. Pay attention to WARNING and CAUTION statements. A WARNING means someone could be hurt. A CAUTION means equipment could be damaged.

Explanation of Table Entries

Item Number Column. Numbers in this column are for reference. When completing DA Form 2404 (Equipment Inspection and Maintenance Worksheet), include the Item Number for the Check/Service indicating a fault. Item Numbers also appear in the order that you must perform Checks and Services for the intervals listed.

Interval Column. This column tells you when you must perform the procedure in the procedure column. BEFORE procedures must be performed before you operate or use the vehicle. DURING procedures must be performed during operation of the vehicle. AFTER procedures must be performed immediately after you have operated the vehicle. WEEKLY procedures must be performed every seven days. MONTHLY procedures must be performed approximately every 30 days.

Man-hour Column. This column describes the number of man-hours required to complete all prescribed lubrication service. It is stated to the nearest tenth of an hour.

Item to Check/Service Column. This column provides the location and the Item(s) to be checked or serviced.

Procedure Column. This column provides the procedure to check or to service the Item(s) listed in the check/service column.

Equipment Not Ready/Available If: Column. This column tells you what faults will keep your vehicle from being capable of performing the primary mission. If you perform check and service procedures that show faults listed in this column, do not operate the vehicle. Follow standard operating procedures for maintaining the vehicle or reporting equipment failure.

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued 0103 00

INTRODUCTION - Continued

LEAKAGE DEFINITION

CAUTION

Equipment operation is allowable with minor leakages (Class I or II) except for fuel leaks. Consideration must be given to the fluid capacity of the item or system being checked. When in doubt, ask your supervisor.

When operating with Class I or II leaks, continue to check fluid levels as required in your PMCS.

Class III leaks must be reported to Field Maintenance. Failure to comply may result in damage to equipment.

It is necessary to know how fluid leakage affects the status of the vehicle. The following are definitions of the classes of leakage an operator or crewmember needs to know to be able to determine the condition of the leak. Learn and then be familiar with them, and REMEMBER - WHEN IN DOUBT, ASK YOUR SUPERVISOR.

Leakage Definitions for Crew/Operator PMCS

CLASS I - Seepage of fluid (as indicated by wetness or discoloration) not great enough to form drops.

CLASS II - Leakage of fluid great enough to form drops but not enough to cause drops to drip from item being checked.

CLASS III - Leakage of fluid great enough to form drops that fall from the item being checked.

INSPECTION

Look for signs of a problem or trouble. Senses help here. You can feel, smell, hear, or see many problems. Be alert when on the vehicle.

Inspect to see if items are in good condition. Are they correctly assembled, stowed, secured, excessive worn, leaking, corroded, or properly lubricated? Correct any problems found or notify Field Maintenance.

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued 0103 00

INSPECTION - Continued

There are some common items to check all over the vehicle. These include the followinw:

1. Bolts, clamps, nuts, and screws: Continuously check for looseness. Look for chipped paint, rust, or corrosion around bolt and screw heads and nuts. Tighten them when you find them loose. If tools are not available, notify Field Maintenance.

2. Welds: Many items on the vehicle are welded. to check these welds, look for chipped paint, rust corrosion, or gaps. When these conditions exist, notify Field Maintenance on DA Form 2404.

3. Electrical wires, connectors, and harnesses: Tighten loose connectors. Look for cracked or broken insulation, bare wires, and broken connectors. If any are found, notify Field Maintenance.

4. Hoses and fluid lines: Look for wear, damage and leaks, and make sure clamps and fittings are tight. Wet spots mean a leak. A stain by a fitting or connector can also meant a leak. When you find a leak, notify Field Maintenance.

LUBRICATION SERVICE INTERVALS - NORMAL CONDITIONS

General

For safer, more trouble-free operations, make sure that your vehicle is serviced when it needs it. Proper lubrication and service intervals which are the responsibility of the Operator/Crew are found in this work package.

Adherence. Intervals (hard time) and the related man-hour times are based on normal operation. The man-hour time specified is the time needed to do all the services prescribed for a particular interval. The calendar interval may be extended during periods of low activity. If extended, adequate preservation precautions must be taken. Hard time intervals must be applied during the warranty period.

Intervals shown in this work package are based on mileage/calendar times. The lubrication for the vehicle is to be performed at whichever interval occurs first.

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued 0103 00

LUBRICATION SERVICE INTERVALS - NORMAL CONDITIONS - Continued

WARNING

Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes; and do not breath vapors. Keep away from heat or flame. Never smoke when using Dry Cleaning Solvent; the flashpoint for Type l Dry Cleaning Solvent is 100° F (38° C) and for Type II is 138° F (50° C). Failure to comply may result in serious injury or death to personnel.

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

Cleaning Fittings Before Lubrication. Clean parts with Dry Cleaning Solvent (SD ll, P-D-680) or equivalent. Dry before lubricating. Dashed arrows indicate lubrication on both sides of equipment.

Lubrication After Fording. If a fording operation occurs, lubricate all fittings below fording depth and check submerged gear boxes for presence of water.

Lubrication After High-Pressure Washing. After a through washing, lubricate all grease fittings and oil can points outside and underneath vehicle.

Lubrication Local Views. A reference to the appropriate localized view is given after most lubrication entries.

Corrosion Control

Refer to WP 0001 00 for appropriate corrosion control procedures.

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued 0103 00

LUBRICATION SERVICE INTERVALS - NORMAL CONDITIONS - Continued

Hard Time Lubrication Intervals

For equipment under manufacturer's warranty, hard time oil service intervals shall be followed. Intervals shall be shortened if lubricants are known to be contaminated or if operation is under adverse conditions (e.g. longer than usual operating hours, extending idling periods, extreme dust, etc.).

Lubrication Intervals

INTERVALS

D ..... Daily
W ..... Weekly
M ..... Monthly

VEHICLES	Total Man-hours for Each Interval		
	D	W	M
Truck, Cargo, MTV, M1083A1	0.3	N/A	0.2
Truck, Cargo, MTV, W/MHC, M1084A1	0.3	N/A	0.3
Truck, Cargo, MTV, LWB, M1085A1	0.3	N/A	0.2
Truck, Cargo, MTV, W/MHC, LWB, M1086A1	0.3	N/A	0.3
Truck, Tractor, MTV, M1088A1	0.3	0.3	0.4
Truck, Wrecker, MTV, M1089A1	0.3	0.3	0.4
Truck, Dump, MTV, M1090A1	0.3	N/A	0.4
Truck, Chassis, MTV, M1092A1	0.3	N/A	0.2
Truck, Chassis, MTV, LWB, M1096A1	0.3	N/A	0.2

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued 0103 00

LUBRICATION SERVICE INTERVALS - NORMAL CONDITIONS - Continued

Lubrication Key

LUBRICANTS	
Specification	**Type**
MIL-L-2104 (OE/HDO)	Lubricating Oil, Internal Combustion Engine, Combat/Tactical Service
MIL-PRF-46167C (OEA)	Lubricating Oil, Internal Combustion Engine, Arctic
MIL-PRF-5606H (OHA)	Hydraulic Fluid, Petroleum Base, Aircraft, Missile, and Ordnance
RYCO 783	Hydraulic Fluid, Petroleum Base
RYCO 756	Hydraulic Fluid, Petroleum Base
MIL-G-10924 (GAA)	Grease, Automotive and Artillery
VV-D-1078	Damping Fluid
MIL-L-23398	Dry Film Lubricant
SHC630	Lubricating Oil, -30°F to 15° F
600 W Super Cylinder	Lubricating Oil, 16°F to 95°F
SHC636	Lubricating Oil, Drive Gear 96°F to 131°F

COOLANT	
Specification	**Type**
A-A-52624A	Antifreeze, Multi-Engine Type
MIL-A-11755	Antifreeze, Arctic Type[1]

[1] For Arctic Operation, refer to FM 9-207.

CLEANING AGENT	
Specification	**Type**
P-D-680	Dry Cleaning Solvent, SD II
O-C-1901	Cleaning Compound Window

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued 0103 00

LUBRICATION SERVICE INTERVALS - UNUSUAL CONDITIONS

Your vehicle will require extra service and care when you operate under unusual conditions. High or low temperatures, long periods of hard use, or continued use in sand, water, mud, or snow will break down the lubricant requiring you to add or change lubricant more often.

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

CLEANING AND LUBRICATION

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 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 or death to personnel.

Cleanliness

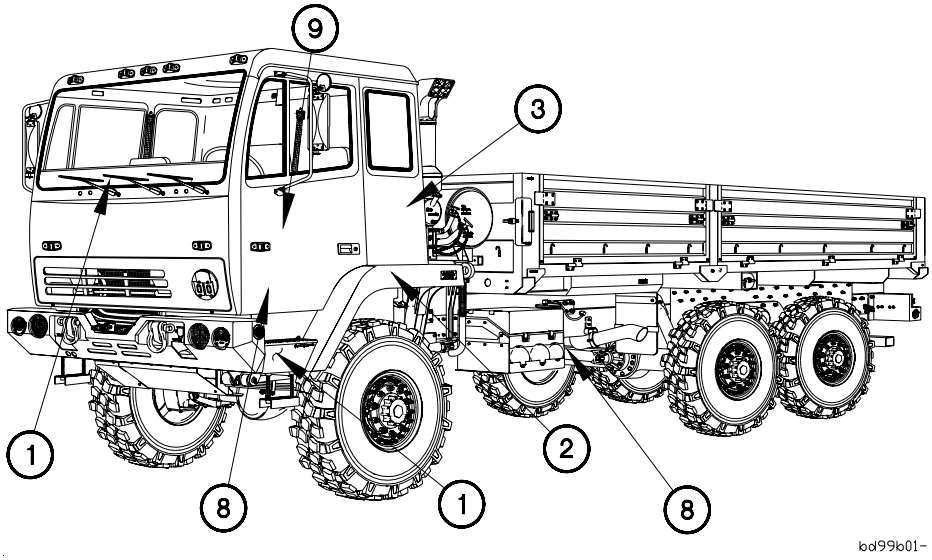
Dirt, grease, oil, and debris only get in the way and may cover up a serious problem. Use Dry Cleaning Solvent on metal surfaces where directed.

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

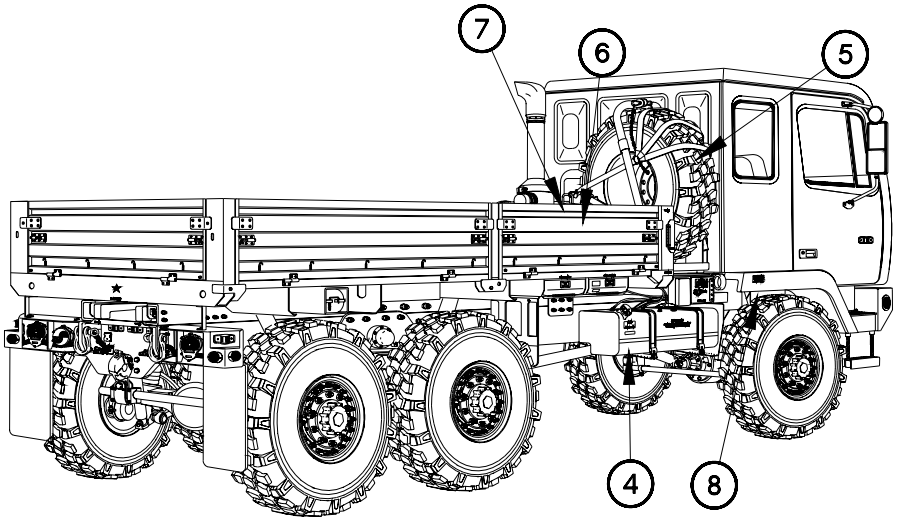
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Before PMCS Procedures for All Models

These illustrations will help you perform BEFORE vehicle PMCS. The callouts match PMCS item number/procedures.



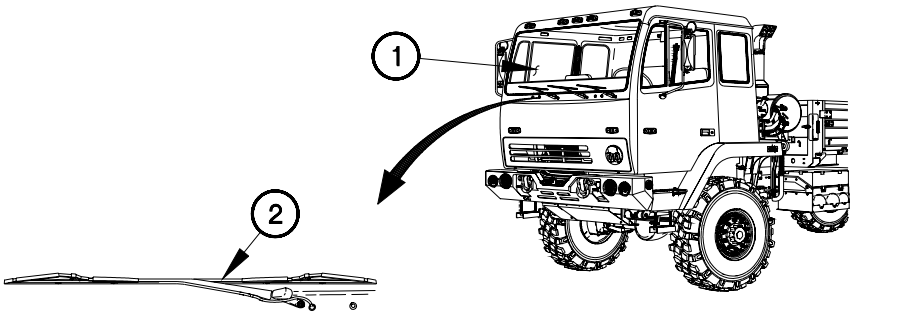
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bd99b02-

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models.

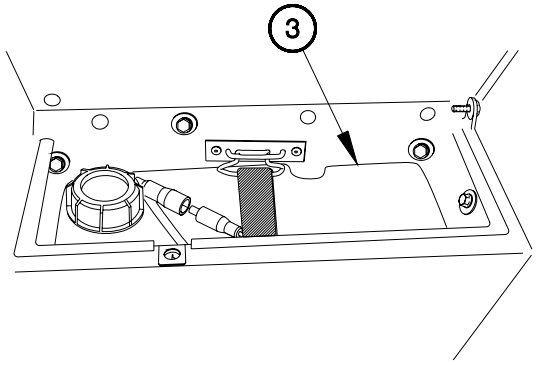
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before		Windshield Wipers, and Washer Reservoir		
				NOTE Operating the vehicle with damaged windshield may violate AR 385-55.	
				1. Check windshield (1) for damage that would impair Operator's vision.	Windshield is cracked sufficiently to impair Operator's vision.
				2. Check for missing or damaged windshield wiper blade (2). Notify Field Maintenance if windshield wiper blade is missing or unserviceable.	



BD99B03-

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before	0.1	Windshield, Windshield Wipers, and Washer Reservoir - Continued	3. Check windshield washer reservoir (3). Check windshield washer fluid level. Add windshield washer fluid as required.	



Bd99b04-

DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Windshield Washer Reservoir	7.5 qt (7.1L)	2/3 water to 1/3 O-C-1901	1/2 water to 1/2 O-C-1901	1/3 water to 2/3 O-C-1901

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Before		Exterior of Vehicle	1. Look under vehicle for signs of fluid leakage (fuel, oil, and coolant). 2. Check front and rear shackles are secure. 3. Verify cab air springs are unpinned and pin is stowed in stowage bracket.	Class III leak is evident.

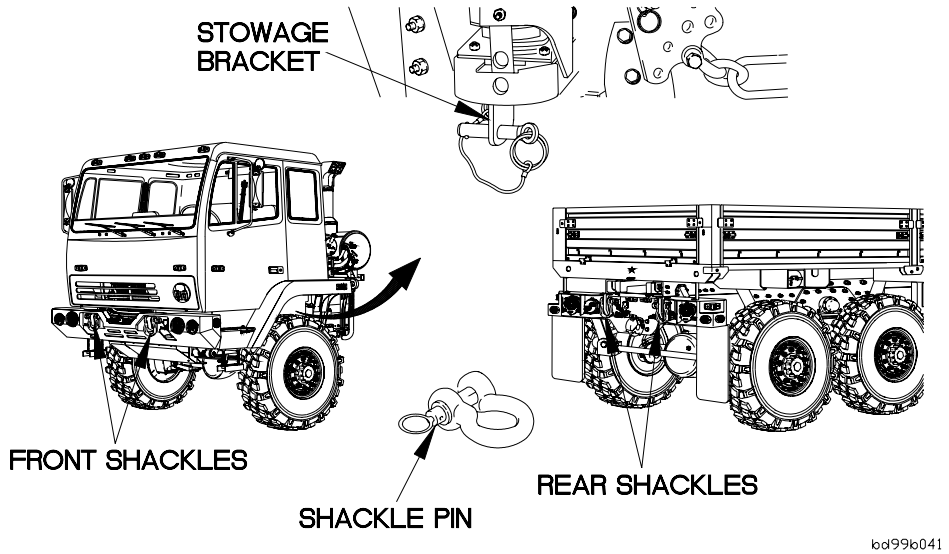


Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Before		Coolant		

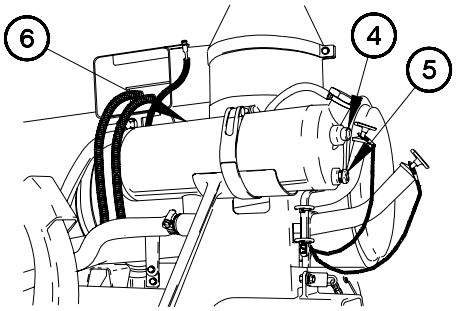
WARNING

Extreme care should be taken when removing radiator cap if WATER TEMP 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.

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

Do not operate vehicle if radiator cap is damaged or missing. Failure to comply will result in injury to personnel or damage to equipment.

	0.1		1. Verify coolant level is between upper sight glass (4) and lower sight glass (5) on radiator overflow tank (6) with engine not running. Add coolant as required.	1. Coolant level below lower sight glass.



bd99b05-

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Before		Coolant - Continued	2. Check for oil in coolant. 3. Check radiator cap.	2. If engine oil is present, notify Field Maintenance. 3. Radiator cap damaged or missing, notify Field Maintenance.

DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Cooling System Engine Only	14 qt (13 L)	A-A-52624A	A-A-52624A	N/A
Cooling System (Total System except M1088A1 and M1089A1)	50.3 qt (47.6 L)	A-A-52624A	A-A-52624A	N/A
Cooling System (Total System M1088A1 and M089A1)	52.8 qt (49.9 L)	A-A-52624A	A-A-52624A	N/A
Cooling System - Arctic (Total System except M1088A1 and M1089A1)	64.8 qt (61.3 L)	N/A	N/A	MIL-A-11755
Cooling System - Arctic (Total System, M1088A1 and M1089A1)	76.5 qt (72.4 L)	N/A	N/A	MIL-A-11755

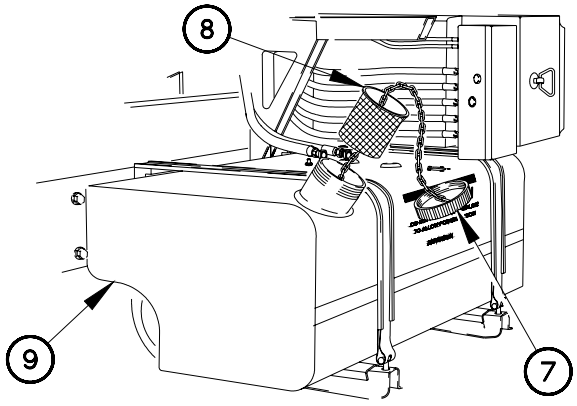
Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before		Fuel Tank	-	

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 it up immediately. Failure to comply may result in serious injury or death to personnel.

				1. Remove fuel cap (7) and fuel strainer (8). 2. Check for presence of fuel in fuel tank (9). 3. Install fuel strainer (8) and fuel cap (7).	



BD99B06-

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5	Before		Spare Tire Strap	1. Check that spare tire strap (10) is tight. 2. Check that spare tire strap (10) is not torn, frayed, or damaged. 3. Check that SPARE TIRE knob (11) is in RAISE position. 4. Check that CAB knob (12) is pushed in. If not, push knob in and turn to right.	

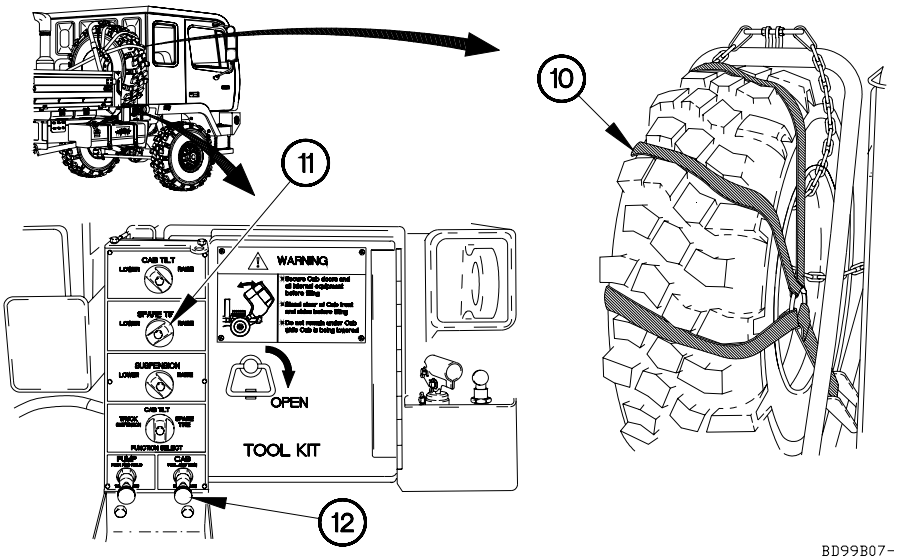
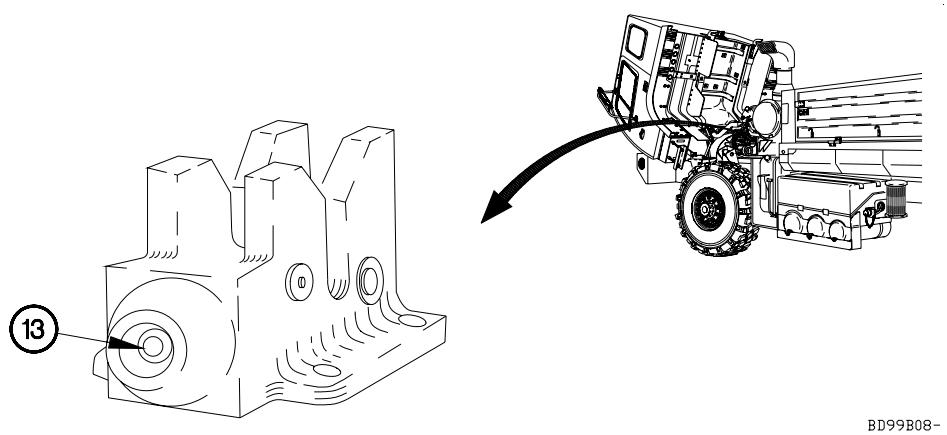


Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
6	Before		Cab Hydraulic Latch	Check that cab latch indicator button is in the latched position (13).	If cab will not securely latch.



M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued 0103 00

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
7	Before	0.1	Air/Hydraulic Power Unit		

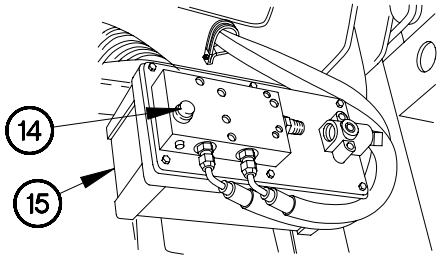
WARNING

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 serious injury to personnel.

NOTE

ROYCO 783 IS 100% compatible and can be used in place of, or mixed with, MIL-H-5606 or ROYCO 756.

				Check oil level on dipstick (14). Add oil as required to air/hydraulic power unit (15).	



BD99B09-

DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to-26°C)	-15° to -50°F (-26° to-46°C)
Air/Hydraulic Unit	3 qt (2.8L)	OHA	OHA	OHA

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			NOTE CREWMEMBER PROCEDURE. Steps 1 through 4 apply to vehicle S/N 18,550 or higher.		
8.	Before		Remote Battery Disconnect Switch, Manual Battery Disconnect Switch (MBDS), and Battery Disconnect Switch/	1. Lift RH cab mud flap. 2. Check that remote battery disconnect switch (16) is off (down and guarded) (WP 0016 00).	

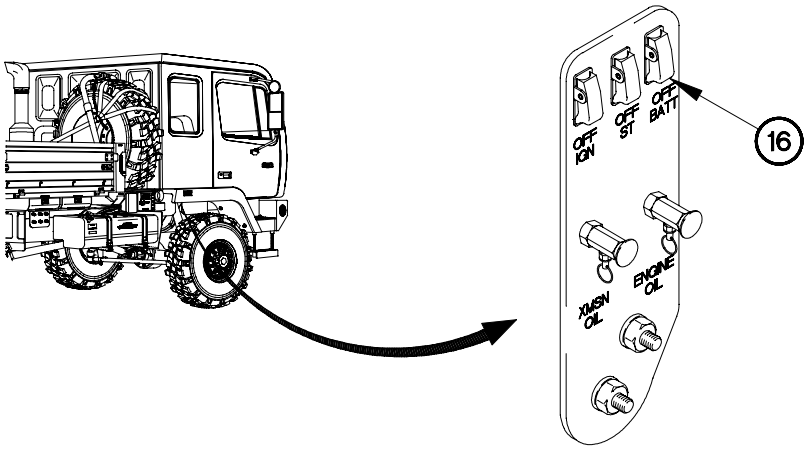


Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8	Before		Remote Battery Disconnect Switch, Manual Battery Disconnect Switch (MBDS), and Battery Disconnect Switch. (Continued)	3. Check that Manual Battery Disconnect Switch (MBDS) (17) is on. (WP 0016 00).	

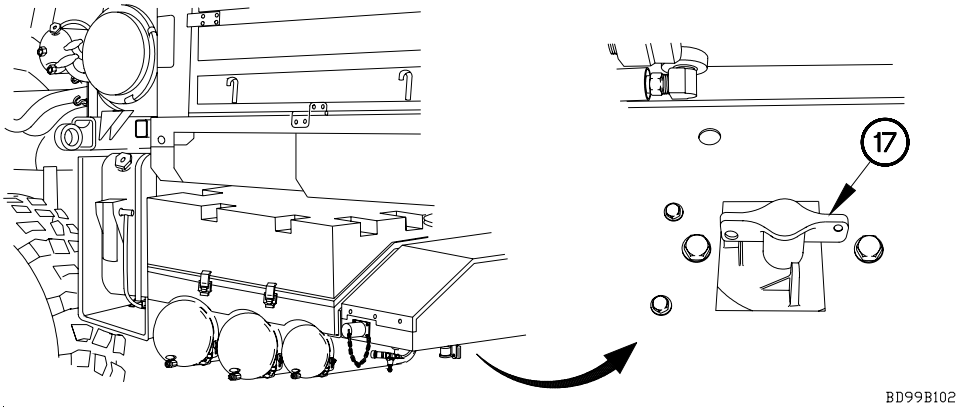


Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8	Before		Remote Battery Disconnect Switch, Manual Battery Disconnect Switch (MBDS), and Battery Disconnect Switch. (Continued)	4. Check that Battery Disconnect Switch (18) switch is off (down and guarded). (WP 0016 00).	

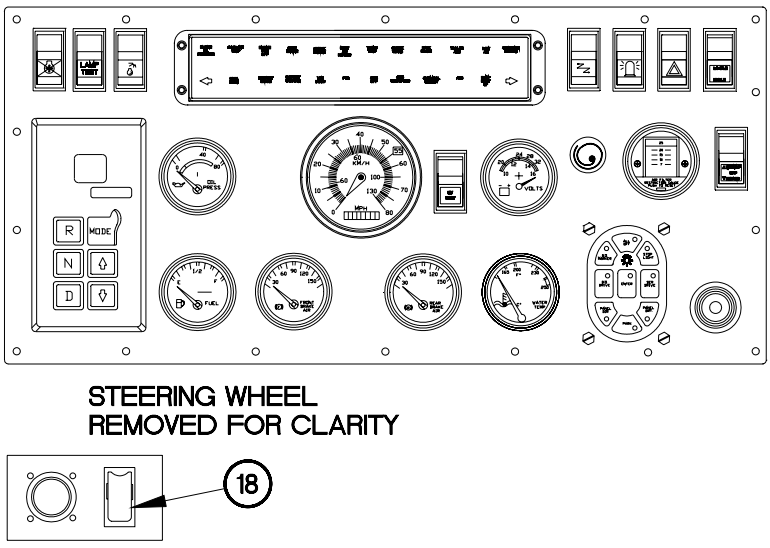


Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

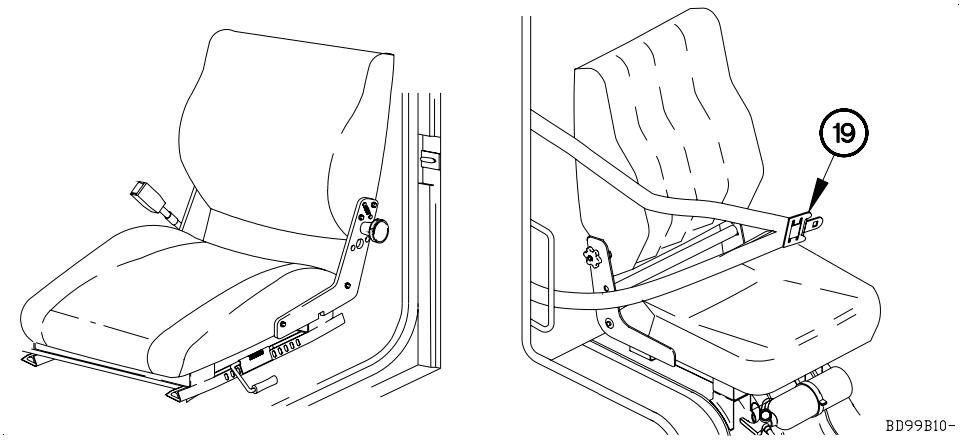
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Interior Cab Components		

NOTE

Operating the vehicle with inoperative seat belts may violate AR 385-55.

If vehicle mission requires three personnel, all three seat belts are required to be in working condition.

				1. Check all three seat belts (19) for security, damage, and proper operation.	Driver's Seat belt and at least one other seat belt not in good working condition.



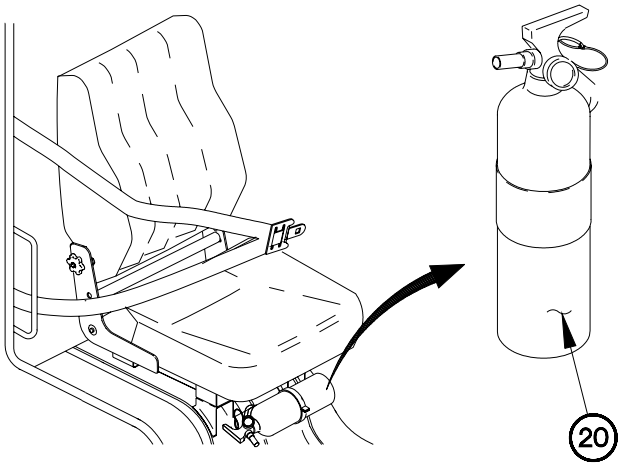
				2. Check operation of driver's seat forward/backward adjustment control (WP 0017 00).	Forward/ backward adjustment control is broken or missing.

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

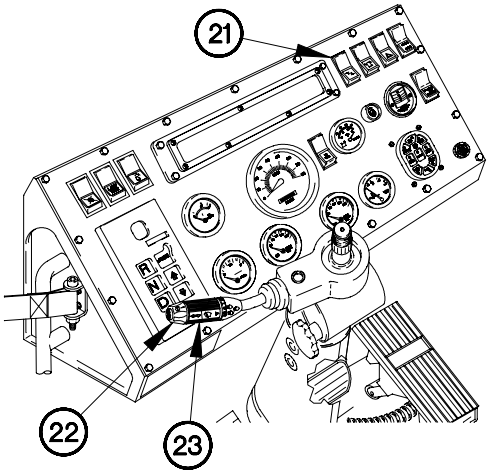
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Interior Cab Components - Continued	3. Check for missing or damaged fire extinguisher (20). 4. Check that fire extinguisher (20) pressure is approximately 150 psi (1,034 kPa).	Fire extinguisher is damaged or missing. Fire extinguisher pressure gage needle is within discharge band. Seal is missing.



BD99B11-

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Interior Cab Components –Continued	5. Position Master Power Switch (21) to On. 6. Check windshield washer switch (22) for proper operation (WP 0007 00). 7. Check windshield wiper switch (23) for proper operation (WP 0007 00).	Notify Field Maintenance if windshield washer switch is inoperative. Notify Field Maintenance if windshield wiper switch is inoperative.



BD99B104

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

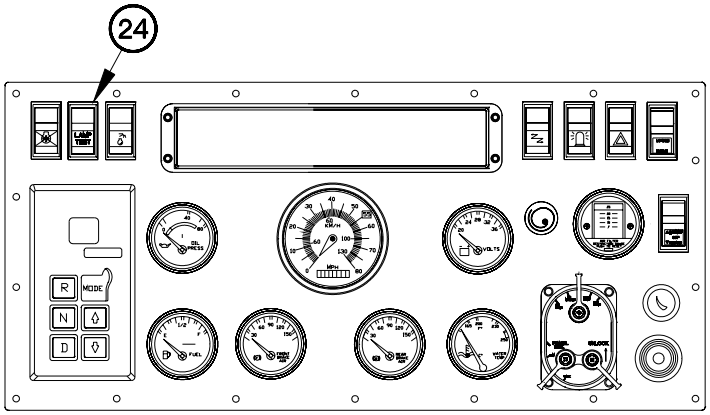
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Interior Cab Components - Continued		

NOTE

PARK BRAKE indicator will not illuminate if SYSTEM PARK control is not pulled out. LOW REAR AIR and LOW FRONT AIR indicators will not illuminate if air system pressure exceeds 75 psi (Vehicle S/N 18,549 or lower).

PARK BRAKE indicator will not illuminate if SYSTEM PARK control is not pulled out. LOW AIR indicator will not illuminate if air system pressure exceeds 75 psi (Vehicle S/N 18,550 or higher).

				8. Position LAMP TEST switch (24) to on.

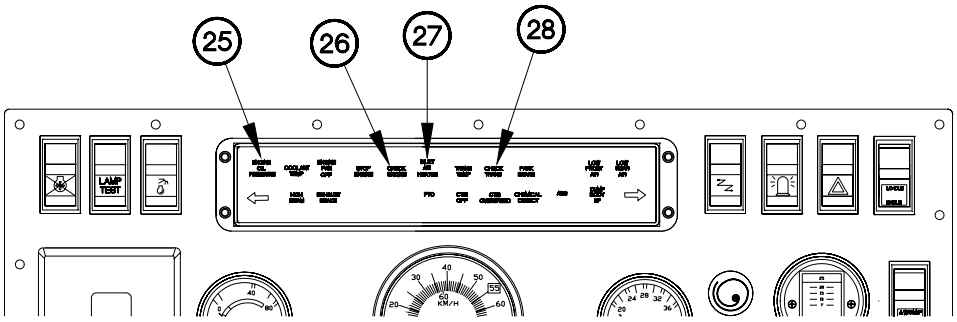


STEERING WHEEL REMOVED FOR CLARITY

BD99B13-

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Interior Cab Components - Continued	9. Check that the following indicator lights are illuminated: a. ENGINE OIL PRESSURE (25) b. CHECK ENGINE (26) c. INLET AIR HEATER (27) d. CHECK TRANS (28)	Any of the listed indicator lights is not illuminated.



BD99B14-

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Interior Cab Components - Continued	e. PARK BRAKE (29)	
				NOTE Perform steps f. and g. on vehicles s/n 18,549 or lower.	
				f. LOW FRONT AIR (30) g. LOW REAR AIR (31)	
				NOTE Perform step h on vehicle s/n 18,550 or higher.	
				h. ABS (32) i. LOW AIR (33)	

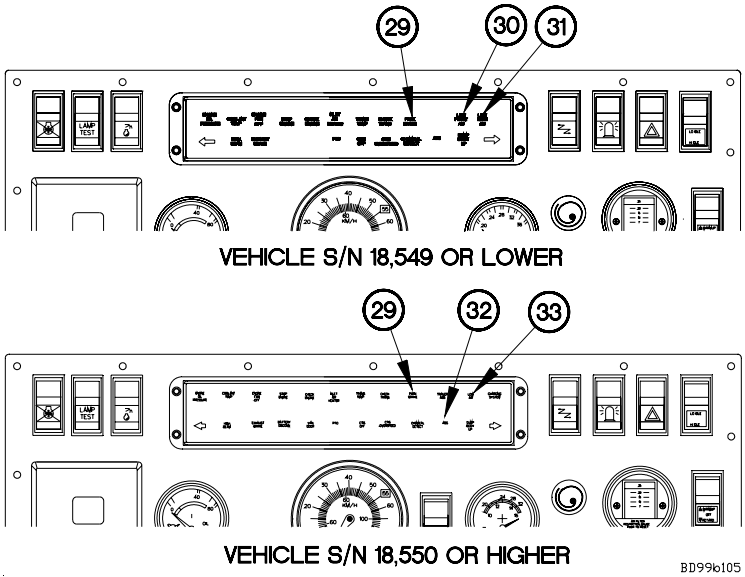


Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Interior Cab Components - Continued		

CAUTION

If ENGINE OIL PRESSURE indicator does not illuminate momentarily, or illuminates and stays on, vehicle is not fully mission capable. Failure to comply may result in damage to equipment.

NOTE

If OIL PRESS gage reads in red zone (0-7 psi) and ENGINE OIL PRESSURE indicator is not illuminated, shut down engine, then restart engine. Indicator should illuminate momentarily to indicate proper function. If ENGINE OIL PRESSURE indicator illuminates and then goes out, continue with the mission.

				10. Start engine (WP 0018 00).	Engine will not start.

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Interior Cab Components - Continued		
				NOTE Oil pressure will increase when engine speed increases and will decrease when engine speed decreases. Engine oil pressure will be lower when engine is at maximum operating temperature (WATER TEMP gage reads 250°F).	
				11. Check that engine OIL PRESS gage (34) indicates between 15-80 psi.	Engine OIL PRESS Gage (34) indicates in red zone and ENGINE OIL PRESSURE indicator (25) is illuminated. Engine OIL PRESSURE gage indicates less than 15 psi (WP 0076 00).

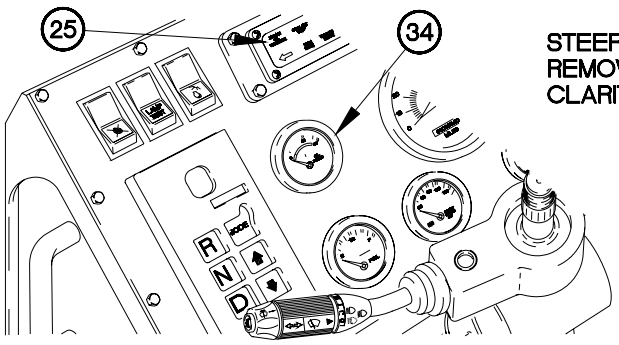


Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Interior Cab Components –Continued		

NOTE

At idle, WATER TEMP gage may not reach 165°F (71° C).

If COOLANT TEMP indicator is illuminated and WATER TEMP gage reads 165° - 230° F (71° - 110° C) and engine fan is NOT running continuously, continue with the mission.

			12. Check that WATER TEMP gage (35) indicates between 165° - 230° F (71° - 110°C).	WATER TEMP gage indicates in red zone and COOLANT TEMP indicator (36) is illuminated (WP 0079 00).

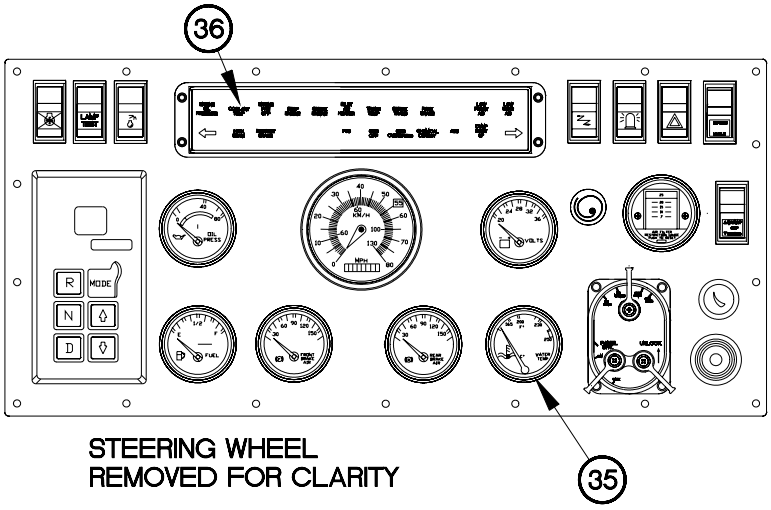


Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Interior Cab Components - Continued	13. Check AIR FILTER RESTRICTION GAUGE (37). Press reset button (38) if gauge reads greater than 25 in. (in red area). If gauge still reads in red area after reset button is pressed, shut down engine and service air cleaner (WP 0103 00). Start engine (WP 0018 00). Notify Field Maintenance if gauge still reads in red area.	AIR FILTER RESTRICTION GAUGE (37) reads greater than 25 in. (in red area) (WP 0085 00).

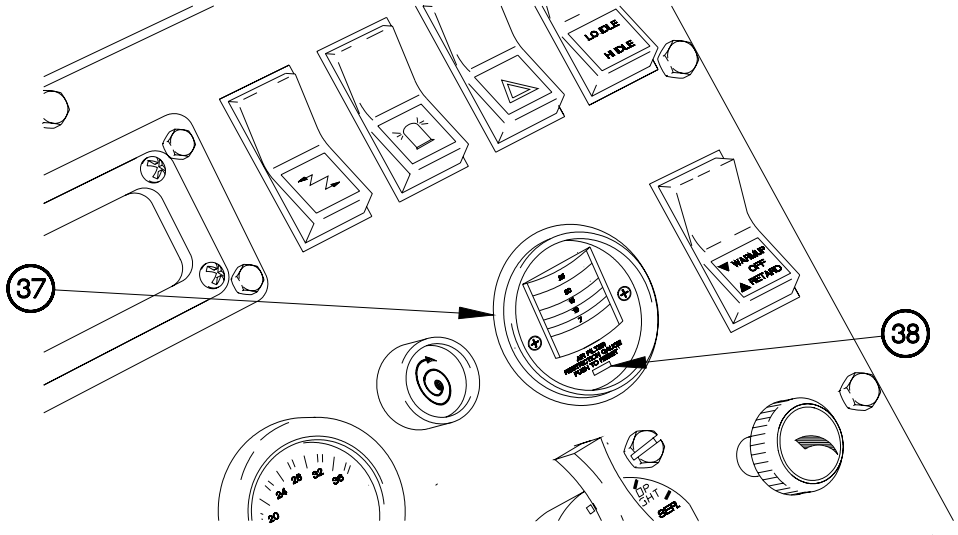


Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			NOTE CREWMEMBER PROCEDURE 14 applies to vehicle S/N 18,549 or lower.		
9	Before		Interior Cab Components - Continued	14. Check that FRONT BRAKE AIR (39) and REAR BRAKE AIR (40) gages read between 75-120 psi.	Either gage indicates less than 75 psi, LOW FRONT AIR (30) or LOW REAR AIR (31) indicators illuminate, audible alarm sounds (WP 0084 00).

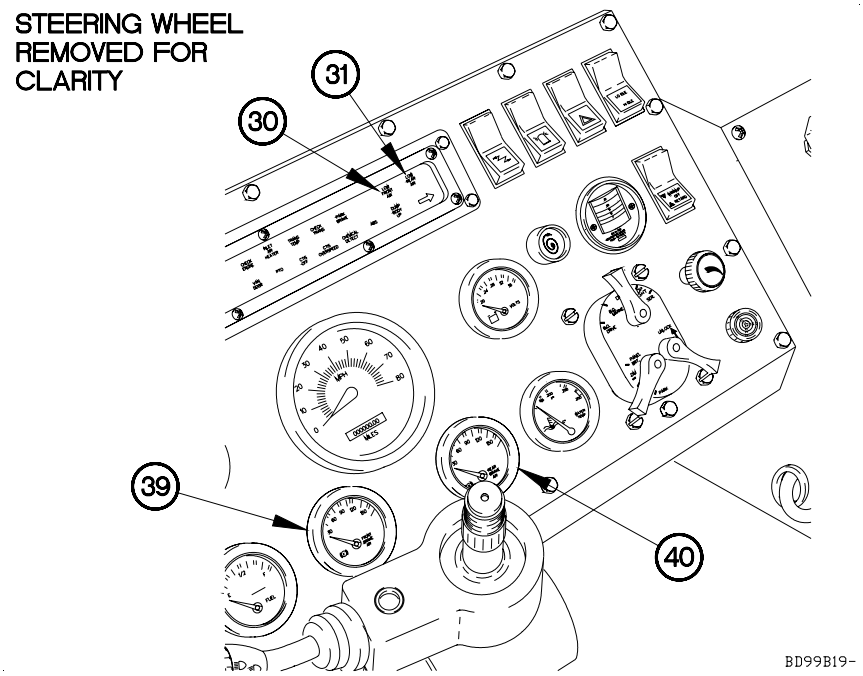


Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			NOTE		
			CREWMEMBER PROCEDURE 15 applies to vehicle S/N 18,550 or higher.		
9	Before		Interior Cab Components - Continued	15. Check that FRONT BRAKE AIR (39) and REAR BRAKE AIR (40) gage reads between 75-120 psi.	Either gage indicates less than 75 psi, LOW AIR indicator (33) illuminates or audible alarm sounds (WP 0084 00).

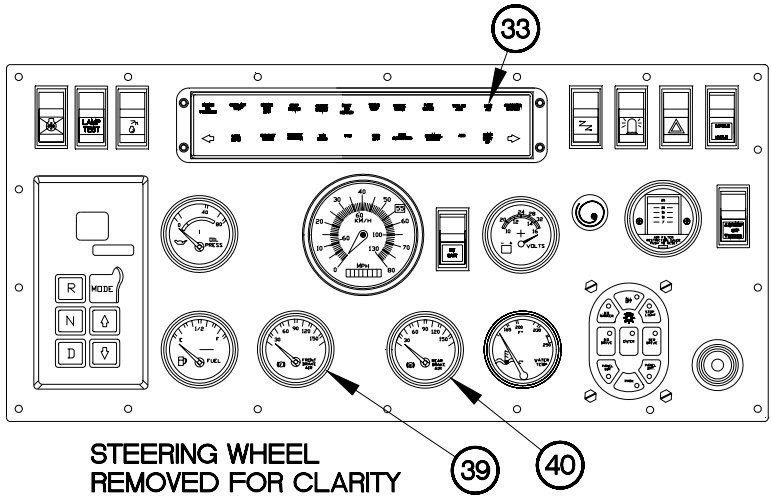


Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			NOTE		
	CREWMEMBER PROCEDURE 16 applies to vehicle S/N 18,549 or lower.				
9	Before		Interior Cab Components - Continued	16. Check that VOLTS gage (41) reads between 26 and 30 volts.	VOLTS gage indicates more than 30 volts or less than 26 volts (WP 0080 00).

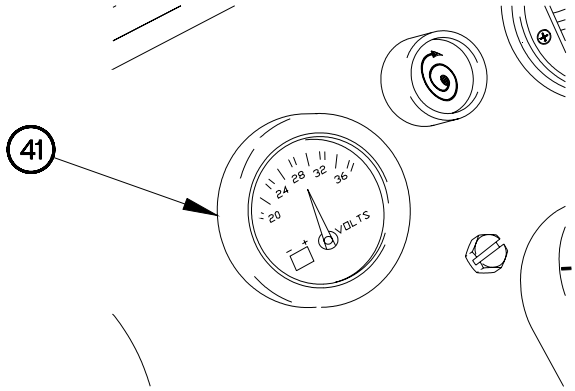
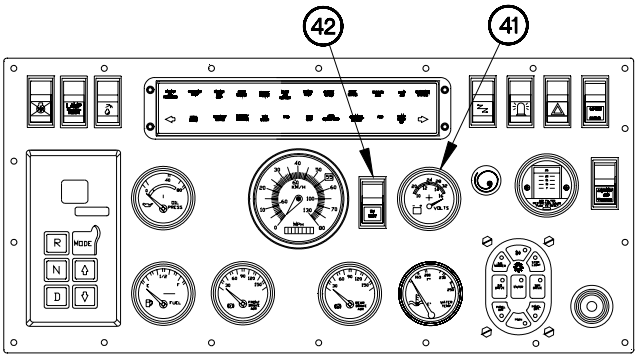


Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

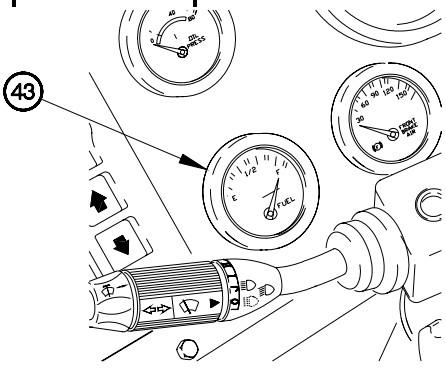
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
				NOTE CREWMEMBER PROCEDURE 17 applies to vehicle S/N 18,550 or higher.	
				17. Press 12 V BAT switch (42). Check that VOLTS gage (41) reads between 12 and 14 bolts.	VOLTS gage indicates more than 14 volts or less than 12 volts (WP 0080 00).



STEERING WHEEL REMOVED FOR CLARITY

BD99B107

				Check that FUEL gage (43) indicates Full (F).	



STEERING WHEEL REMOVED FOR CLARITY

BD99B21-

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Interior Cab Components - Continued		
				CAUTION Check SYSTEM PARK control while vehicle is stopped. Failure to comply may result in damage to equipment.	
				19. Pull out SYSTEM PARK control (44). 20. Set WTEC III TPSS (45) to any forward gear (WP 0018 00) while engine is at idle speed (700 rpm). Vehicle should not move.	Vehicle moves with SYSTEM PARK control on or transmission slips or will not shift into all gears.

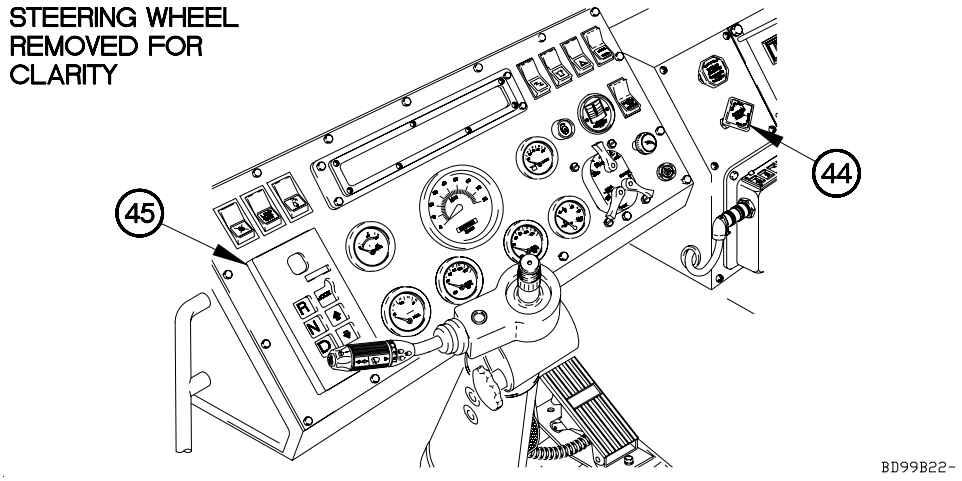
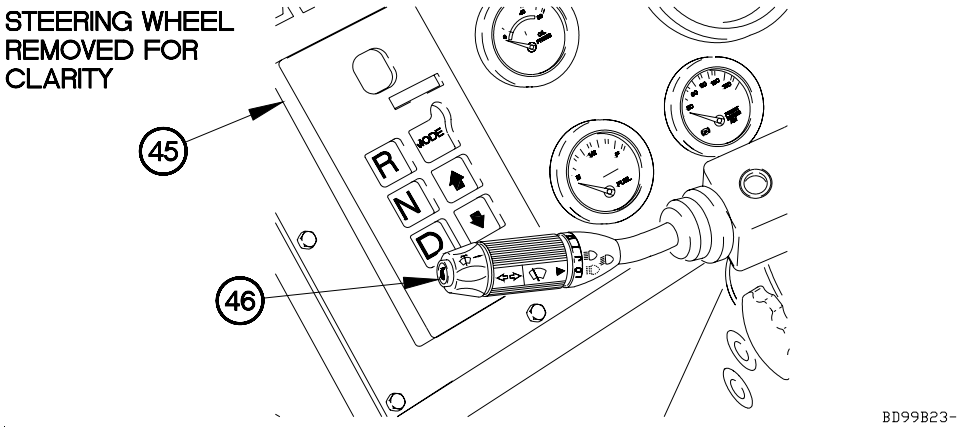


Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Interior Cab Components - Continued	21. Check that WTEC III TPSS (45) operates properly in all gears (WP 0018 00).	Notify Field Maintenance if one gear range does not operate properly, or if LED display window does not illuminate or is flashing. Notify Field Maintenance.
				NOTE Turn signal switch will not work unless the main selector lever on the main light switch is in the SER DRIVE position.	
				22. Check turn signal switch (46) and indicators for proper operation (WP 0007 00).	

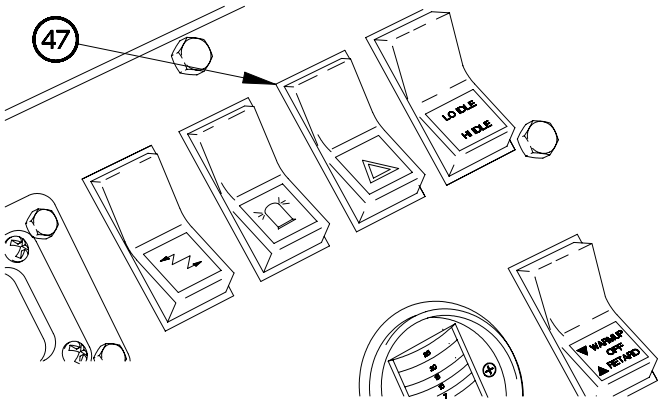


M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Interior Cab Components - Continued	23. Check hazard lights switch (47) for proper operation (WP 0004 00).	

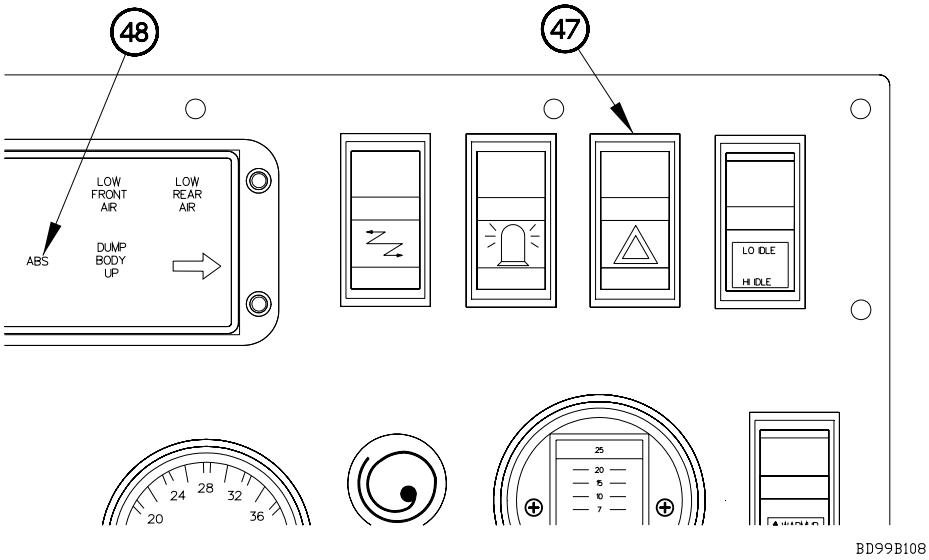


M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Table 1. Preventive Maintenance Checks and Services (PMCS) - Before - All Models - Continued.

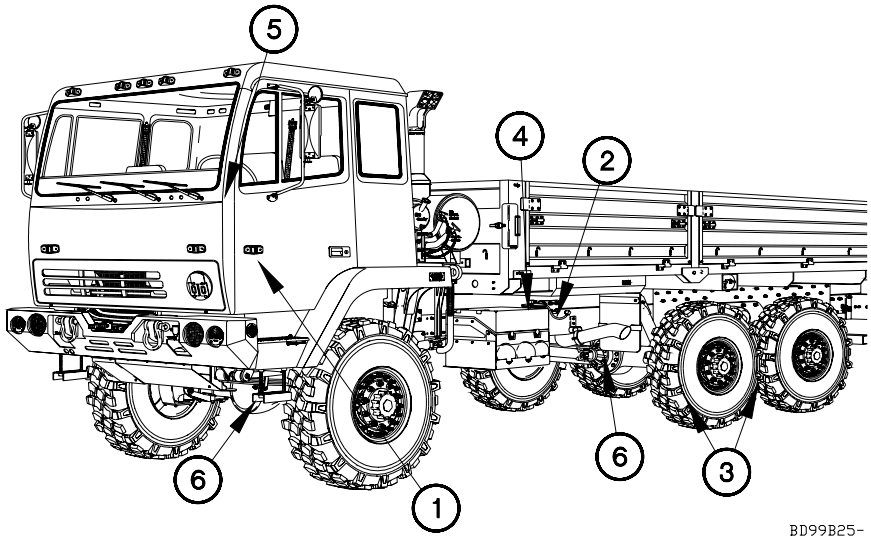
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Interior Cab Components - Continued	24. Check that ABS light (48) is illuminated.	ABS light is illuminated, proceed to ABS troub-leshooting WP 0084 00.



M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued 0103 00

DURING PMCS Procedures for All Models

These illustrations will help you perform DURING vehicle PMCS. The callouts match PMCS item number/procedures.



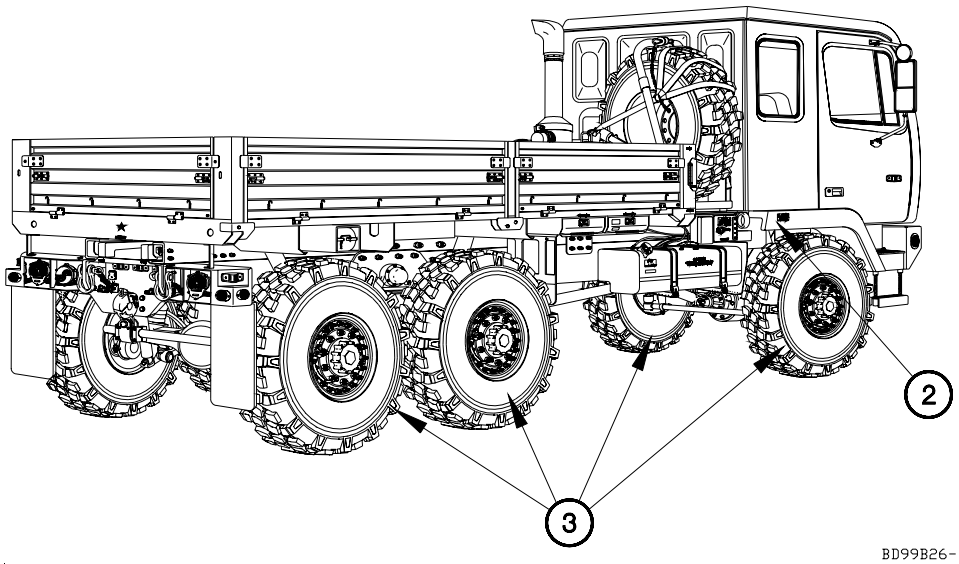


Table 2. Preventive Maintenance Checks and Services (PMCS) - During - All Models.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Controls and Indicators		Gages do not read properly or indicator or audible alarms indicate malfunction and immediate corrective action by the Operator does not correct the problem.
				CAUTION All gages must maintain normal readings as listed in BEFORE checks during vehicle operation. Operating the vehicle for an extended period of time with any of the gages reading outside of normal limits may result in damage to equipment.	
				Monitor all gages, warning lights, and audible alarms during operation.	Warning lights or audible alarms indicate a malfunction and immediate corrective action by the Operator will not correct the problem.
2	During		Engine Operation	Check for excessive exhaust smoke, unusual engine noise, rough running, or misfiring engine.	Any of these conditions are found.
3	During		CTIS	Check operation of CTIS (WP 0022 00).	

Table 2. Preventive Maintenance Checks and Services (PMCS) - During - All Models - Continued.

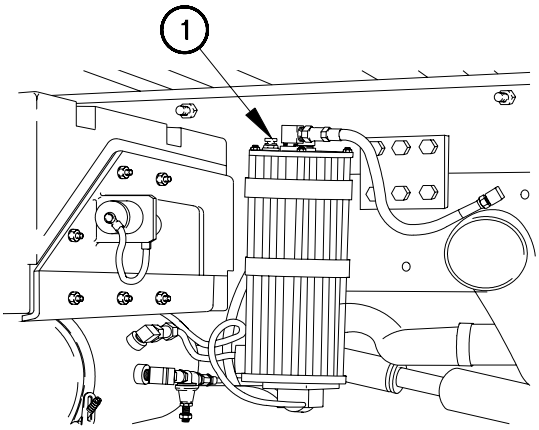
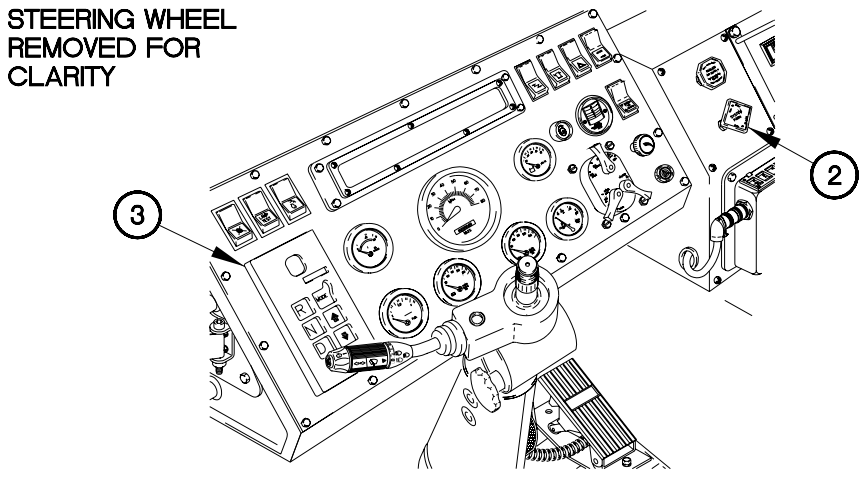
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	During		Air Dryer		
			NOTE Sound of air dryer discharging is normal.		
				Listen for air dryer (1) discharge when system air pressure reaches approximately 120 psi.	
			 BD99B27-		
5	During		Steering	Check for any unusual steering noise, binding, or difficulty in turning during operation.	Steering binds or is unresponsive.
6	During		Service Brakes	1. Check to see if service brakes stop vehicle.	Service brakes do not stop vehicle.

Table 2. Preventive Maintenance Checks and Services (PMCS) - During - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
6	During		Service Brakes - Continued	2. Check if service brakes pull vehicle to one side when applied. 3. Listen for unusual noises (chattering, grinding, groaning, or excessive squealing) during braking. Notify Field Maintenance if unusual noises are present.	Vehicle pulls to one side when service brakes are applied.

Table 2. Preventive Maintenance Checks and Services (PMCS) - During - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
7	During		Interior Cab Components		
				CAUTION Check SYSTEM PARK control while vehicle is stopped. Failure to comply may result in damage to equipment.	
				4. Pull out SYSTEM PARK control (2). 5. Set WTEC III TPSS (30 to any forward gear (WP 0018 00) while engine is at idle speed (700 rpm). Vehicle should not move.	Vehicle moves with SYSTEM PARK control on or transmission slips or will not shift into all gears.

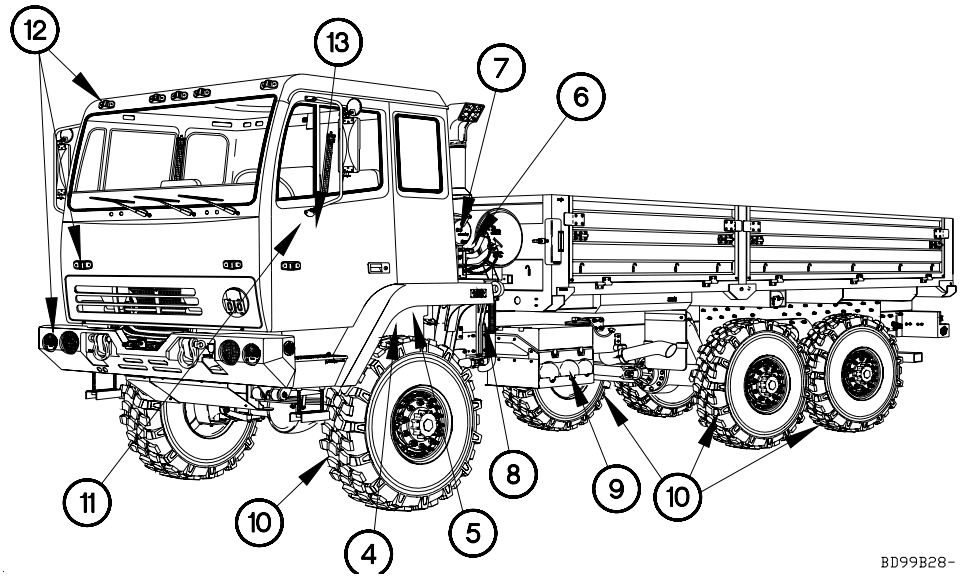


M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

AFTER PMCS Procedures for All Models

These illustrations will help you perform AFTER vehicle PMCS. The callouts match PMCS item number/procedures.



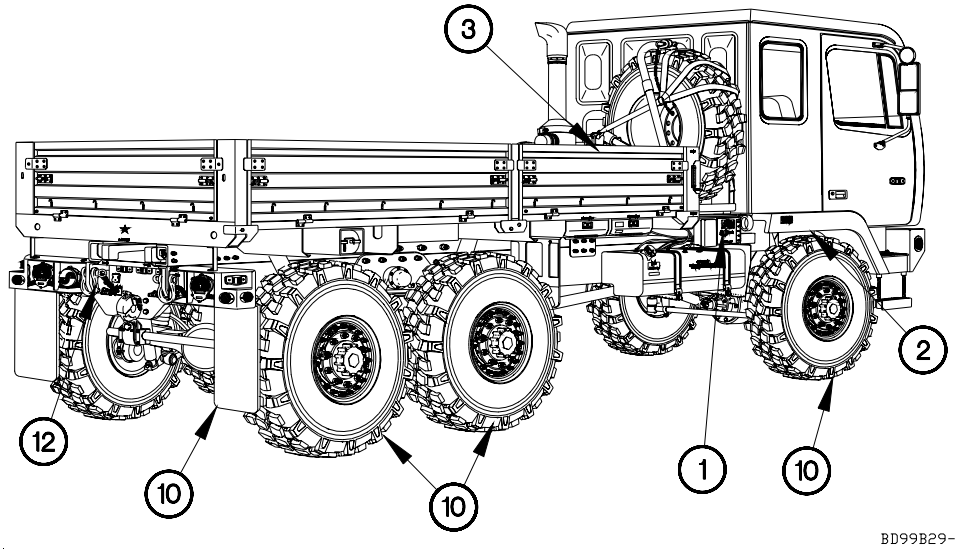


Table 3. Preventive Maintenance Checks and Services (PMCS) - After - All Models.

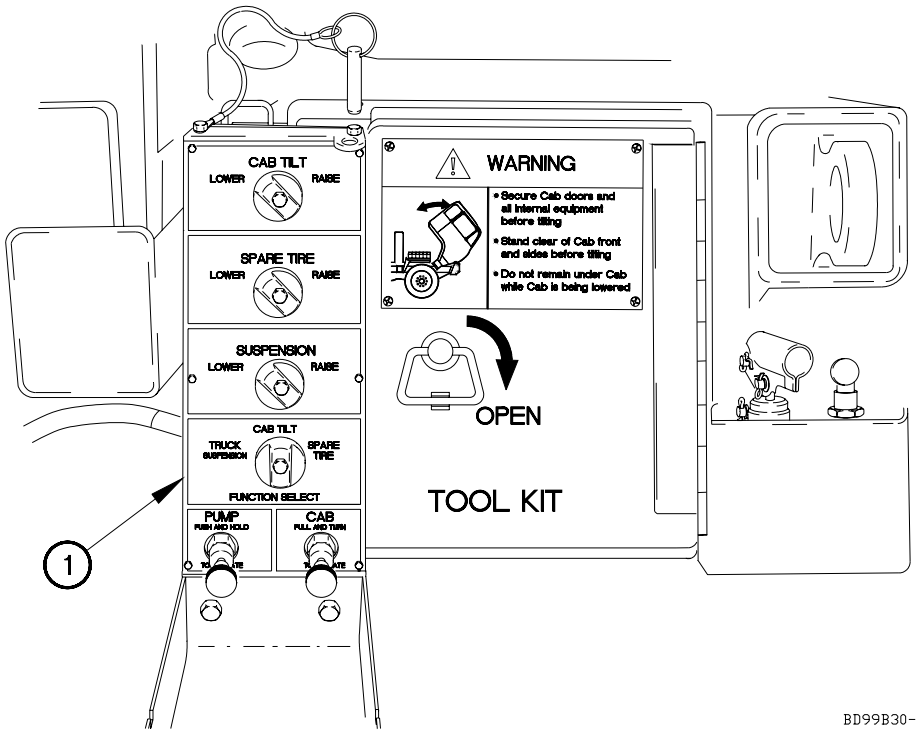
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	After		Hydraulic Manifold	Inspect hydraulic manifold (1) for leakage.	Class III leak is evident.
					
2	After		Cab Hydraulic Cylinder	1. Raise cab (WP 0021 00).	

Table 3. Preventive Maintenance Checks and Services (PMCS) - After - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	After		Cab Hydraulic Cylinder - Continued	2. Check cab hydraulic cylinder (2) for oil leaks or damage. 3. Check linkage (3) for damage and missing hardware.	Class III leak is evident or cab will not raise or lower. Linkage is damaged or missing hardware.
3	After		Cab Hydraulic Latch	Check cab hydraulic latch (4) for damage and hoses for oil leaks.	Class III leak is evident or cab will not lock. Notify Field Maintenance.

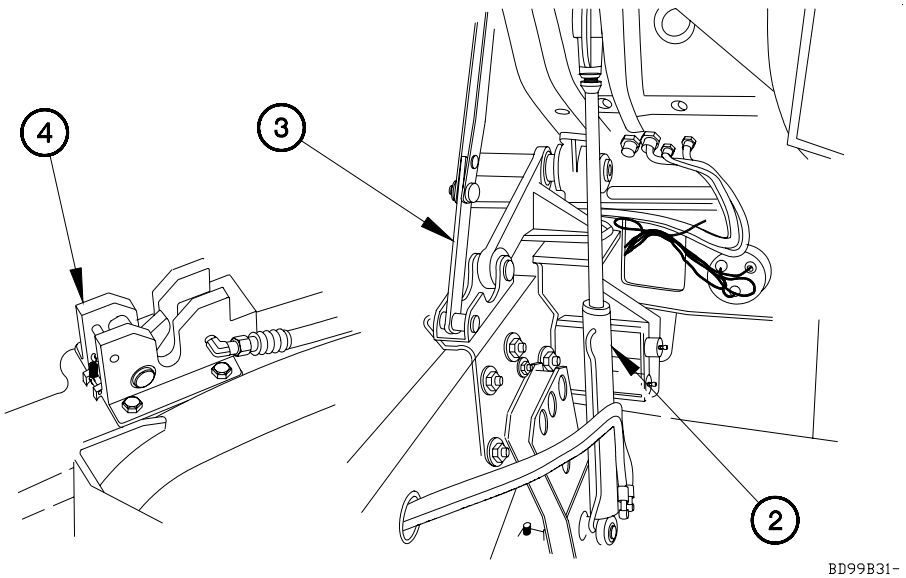


Table 3. Preventive Maintenance Checks and Services (PMCS) - After - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	After		Fuel/Water Separator		

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.

NOTE

Operating the vehicle with damaged fuel/water separator may violate AR 385-55.

				1. Check fuel/water separator (5) for leaks or damage.	Class III leak is evident.

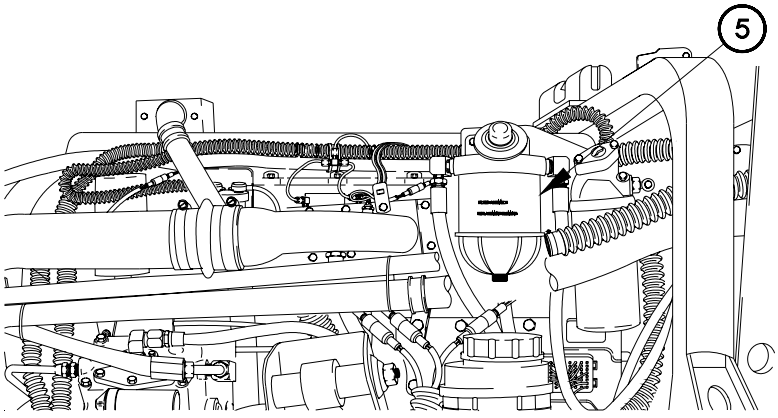
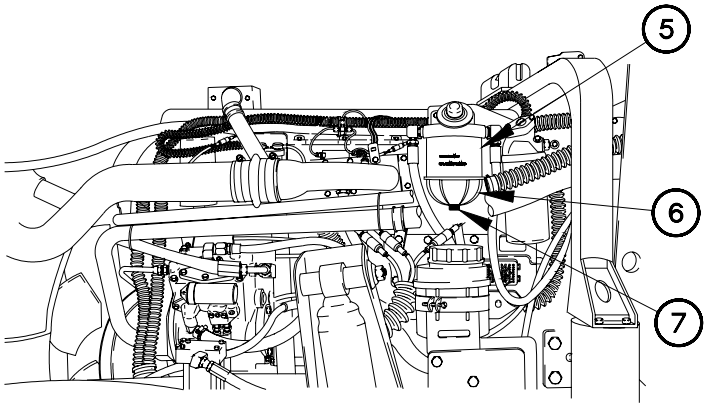


Table 3. Preventive Maintenance Checks and Services (PMCS) - After - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	After		Fuel/Water Separator - Continued	2. Check for presence of water in bowl (6) of fuel/water separator (5). If there is water in bowl, perform the following steps: a. Turn knurled nut (7) to the left to open drain valve.	
				b. Keep draining until pure fuel is coming out. c. Close drain valve by turning knurled nut to the right.	



BD99B33-

Table 3. Preventive Maintenance Checks and Services (PMCS) - After - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5	After		Engine Compart-ment	Visually inspect engine compartment for obvious damage that would impair operation.	Class III leak is evident. Notify Field Maintenance.
6	After		Engine Oil		

CAUTION

Do not overfill engine with oil. Failure to comply may result in damage to equipment

	0.1		1. Check engine oil dipstick (8) for oil level. Level should be between ADD line and OPERATING RANGE line.	If engine oil is over OPERATING RANGE line, discolored, or milky, notify Field Maintenance.

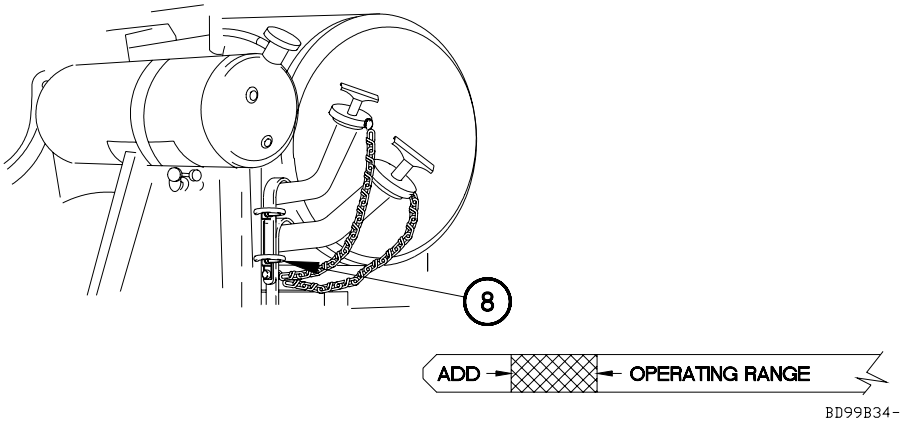


Table 3. Preventive Maintenance Checks and Services (PMCS) - After - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
6	After		Engine Oil - Continued	2. Add oil as required.	

DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES	
		122° to 5° F (50° to -15° C)	50° to -50° F (10° to -46° C)
Engine Crank Case	25 qt (24 L)	15W-40	OEA

				3. Lower cab (WP 0021 00).	
7	After		Transmission Oil	1. Start engine (WP 0018 00).	

Table 3. Preventive Maintenance Checks and Services (PMCS) - After - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
7	After		Transmis-sion Oil - Continued		

NOTE

Perform transmission oil check when engine is at normal operating temperature (160° - 230° F[71° - 110° C]).

Perform transmission oil check with vehicle parked on level surface.

			2. Check TRANSMISSION OIL DIPSTICK (9) for transmission oil level. Level should be between HOT ADD line and HOT FULL line.	If Transmission oil is over HOT FULL line, discolored, or milky, notify Field Maintenance.

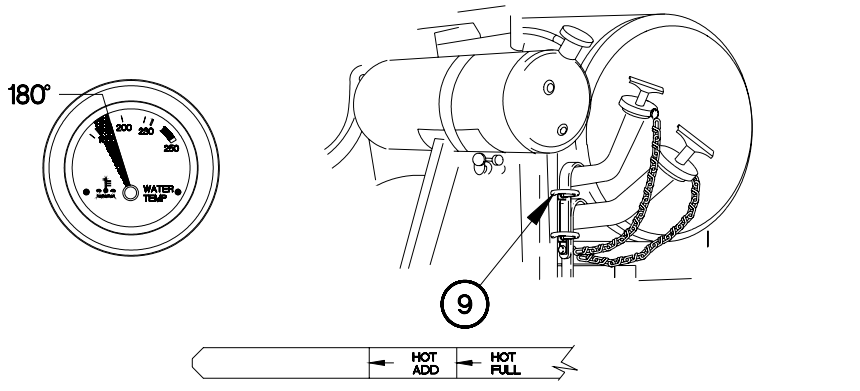


Table 3. Preventive Maintenance Checks and Services (PMCS) - After - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
7	After		Transmis-sion Oil - Continued	3. Add oil, 1 quart at a time, until transmission oil level is between HOT FULL and HOT ADD lines.	

DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Transmission (Total System, All Models Except M1088A1 and M1089A1)	44.3 qt (46.7 L)	OE/HDO-15W40	OE/HDO-10	OEA
Transmission (At Oil Change, All Models Except M1088A1 and M1089A1)	36.8 qt (36.8 L)	OE/HDO-15W40	OE/HDO-10	OEA
Transmission (Total System, M1088A1 and M1089A1)	58.6 qt (55.5 L)	OE/HDO-15W40	OE/HDO-10	OEA
Transmission (At Oil Change M1088A1 and M1089A1)	31.8 qt (30.0 L)	OE/HDO-15W40	OE/HDO-10	OEA

				4. Shut down engine (WP 0018 00).	

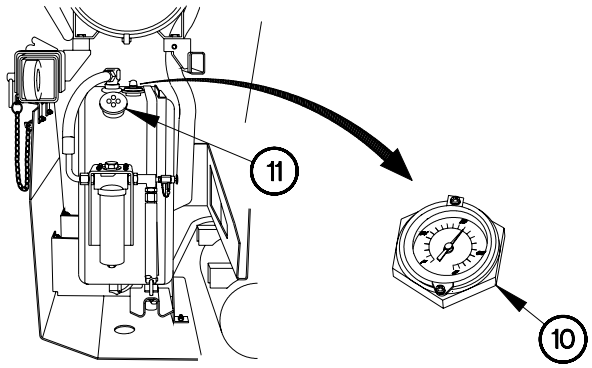
Table 3. Preventive Maintenance Checks and Services (PMCS) - After - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8	After		Hydraulic Reservoir (If Equipped)		

NOTE

Hydraulic reservoir is considered full when oil level gage reads about 3/4 mark.

				1. Check oil level gage (10) to determine oil level. 2. Remove hydraulic reservoir cap (11) to visually inspect oil level. Fluid level should be visible in fill port. Add oil as required. 3. Install hydraulic reservoir cap (11).	



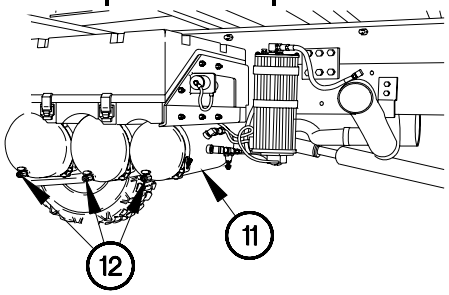
BD99B36-

Table 3. Preventive Maintenance Checks and Services (PMCS) - After - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8	After	0.1	Hydraulic Reservoir (If Equipped) - Continued		

DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Hydraulic Reservoir	27 gal (102.2 L)	OE/HDO-10	OE/HDO-10	OEA

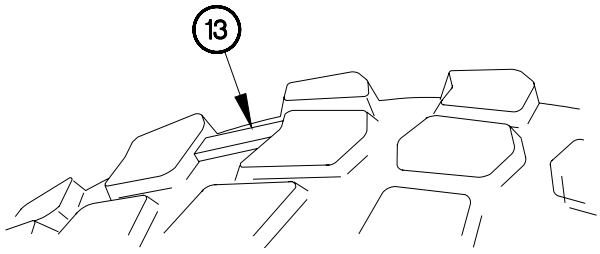
9	After		Air Tanks	1. With vehicle parked and engine shut down, listen for sound of air leaks around air tanks (11). 2. Open air tank drain valves (12) and drain moisture.	Air leak(s) heard around air tanks.



BD99B37-

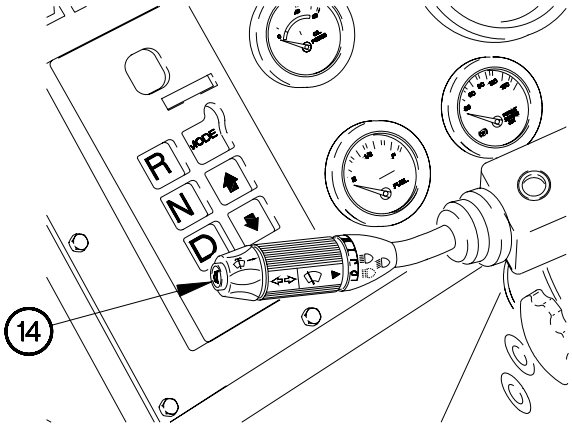
Table 3. Preventive Maintenance Checks and Services (PMCS) - After - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
10	After		Tires	Check for missing tire treads or improperly inflated tires. Check tires for cuts, gouges, cracks, and unusual bulges. Remove any object that could penetrate tire(s).	Tire tread missing. Tire deflated or worn to wear bar (13).



BD99B38-

Table 3. Preventive Maintenance Checks and Services (PMCS) - After - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
11	After		Horn Button	Check horn button (14) for proper operation.	
				 BD99B39-	
12	After		Lights		

NOTE

Operating vehicle with damaged or inoperable headlights may violate AR 385-55.

Checking lights is a safety task that would not be performed in a tactical mission. See AR 385-55.

				Check headlights, turn signals, taillights, stoplights, marker lights, blackout drive, and blackout marker lights for damage and proper operation (WP 0018 00).	

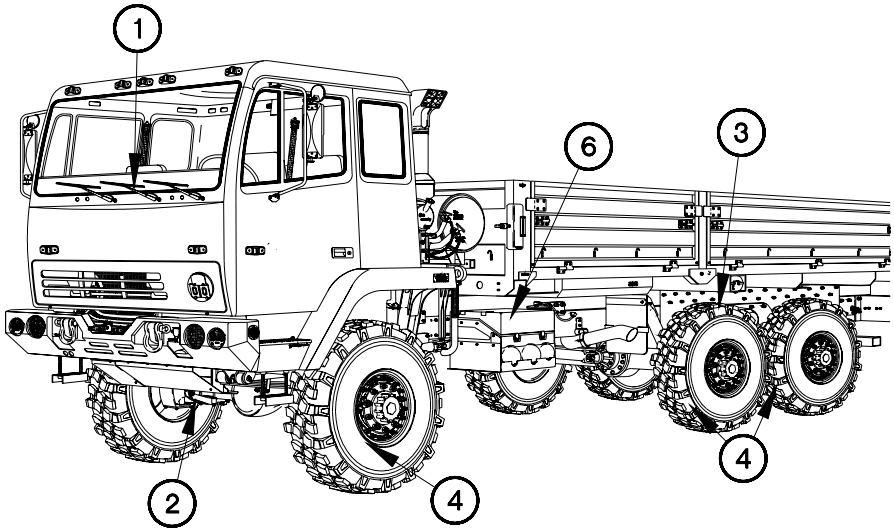
Table 3. Preventive Maintenance Checks and Services (PMCS) - After - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
13	After		Light Switches		
				CAUTION Ensure all switches are placed in the OFF position. Batteries could discharge. Failure to comply may result in damage to equipment.	
				Position all light switches to off (WP 0004 00).	

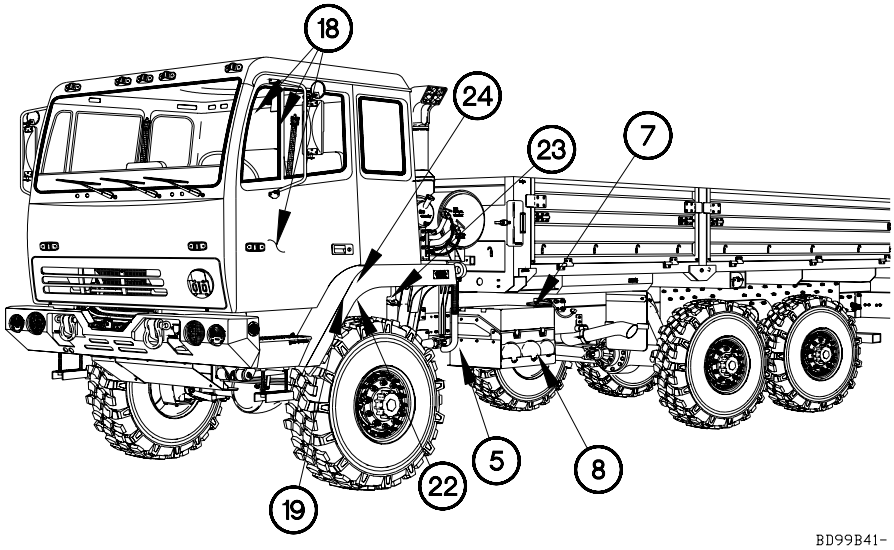
M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued 0103 00

WEEKLY PMCS Procedures for All Models

These illustrations will help you perform WEEKLY vehicle PMCS. The callouts match PMCS item number/procedures.



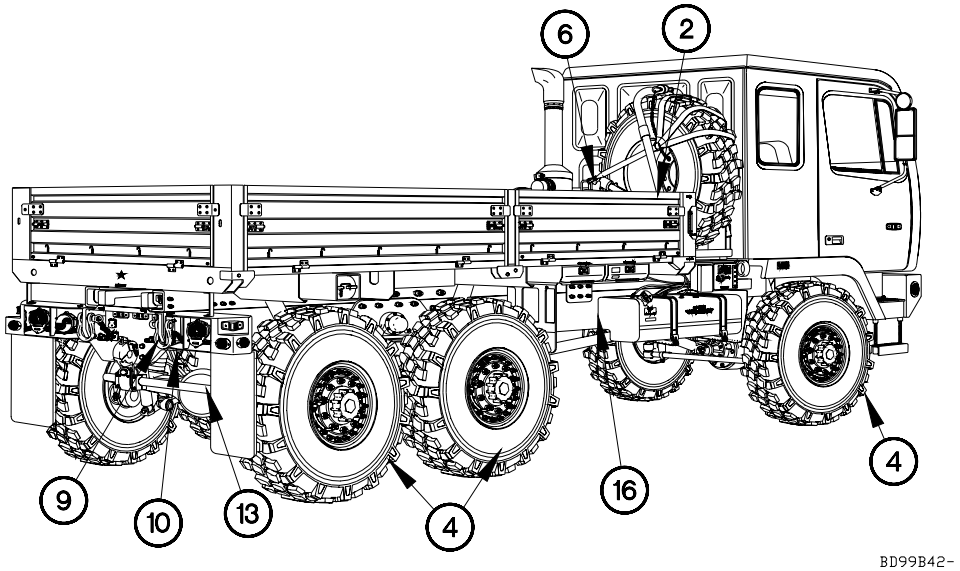
BD99B40-



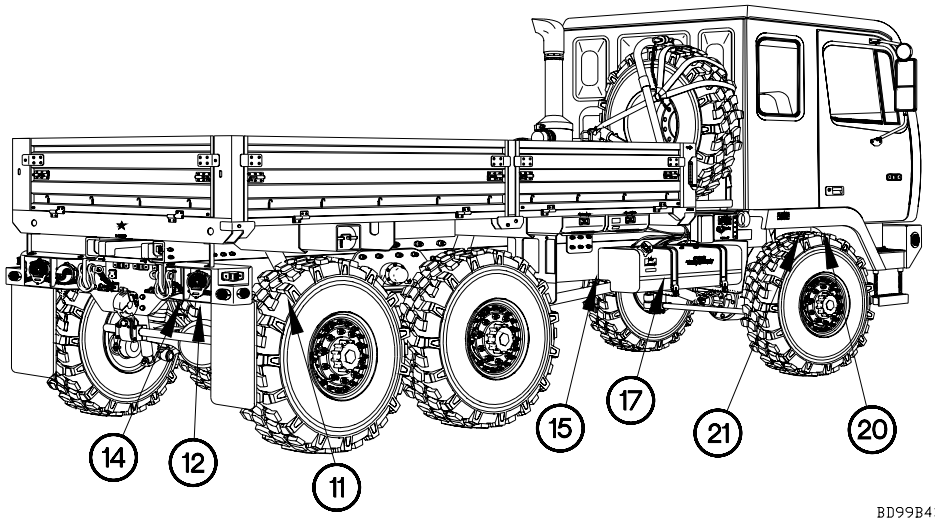
BD99B41-

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00



BD99B42-



BD99B43-

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Weekly		Heater/ Defrost Controls	Check FAN switch (1), HEAT control (2), VENT control (3), and DEFR (defrost) control (4) for proper operation (WP 0024 00).	

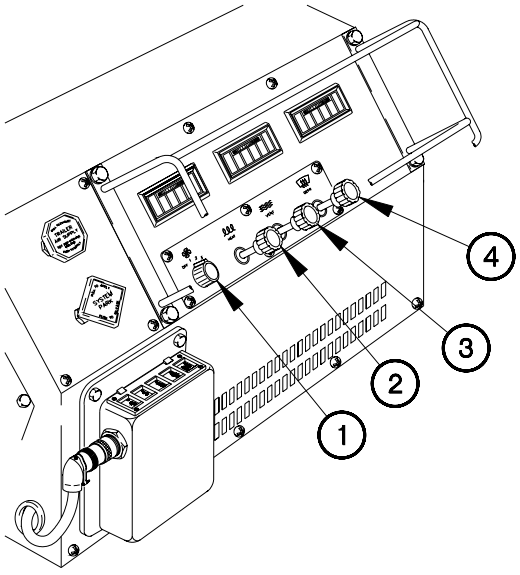
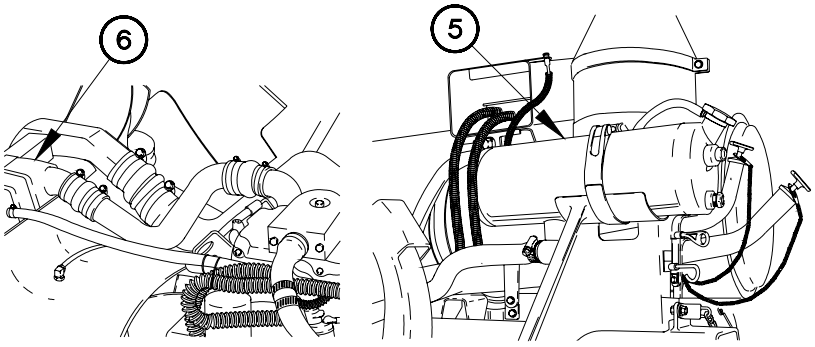


Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Weekly		Mounting/ Coupling Hardware and Hoses/ Tubes	Check bolts, nuts, clamps, hoses, and tubes for looseness and missing, broken, or leaking conditions. Tighten loose bolts, nuts, and clamps. If bolts, nuts, clamps, hoses, or tubes are missing, broken, cannot be tightened, or are damaged to the point of leaking, notify Field Maintenance. The following should be checked: 1. Coolant, including radiator overflow tank (5) and radiator (6).	



BD99B45-

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Weekly		Mounting/ Coupling Hardware and Hoses/ Tubes - Continued	2. Transmission oil cooler (7).	

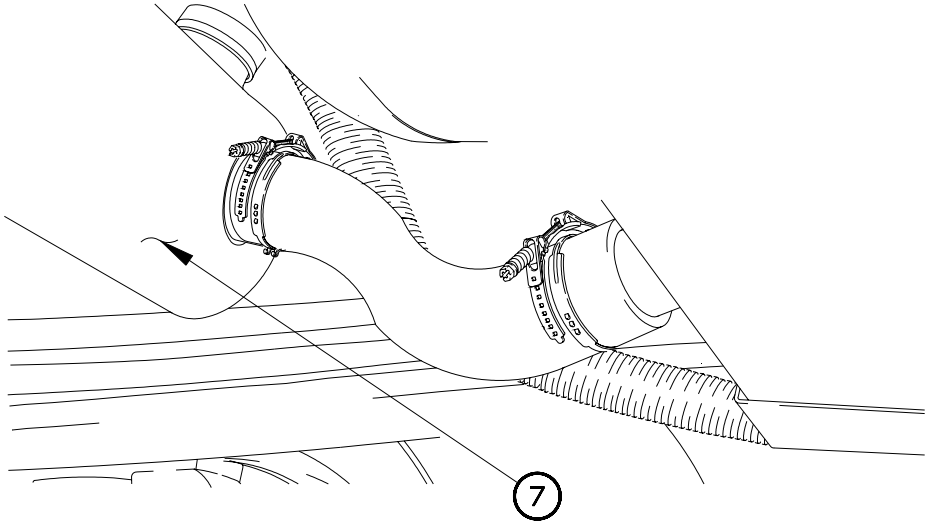


Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Weekly		Mounting/ Coupling Hardware and Hoses/ Tubes - Continued	3. Air intake system, including air cleaner (8), particle extraction hose (9), charge air cooler tubes/hoses (10), and air compressor (11).	

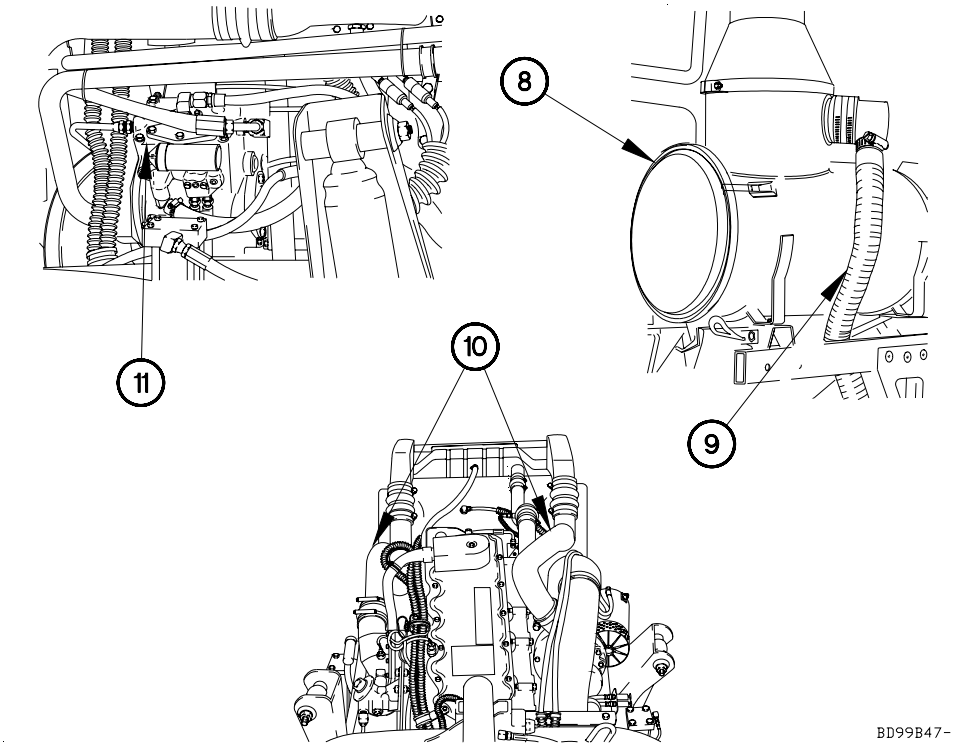
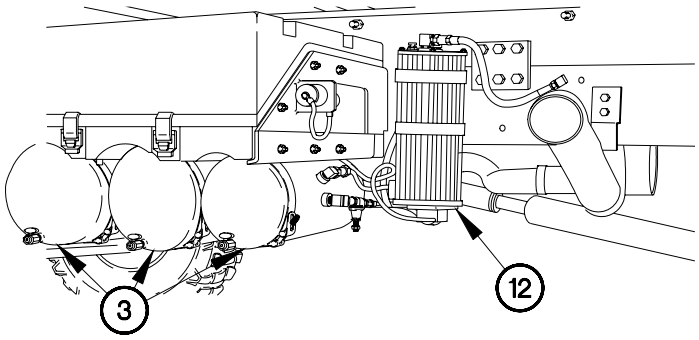
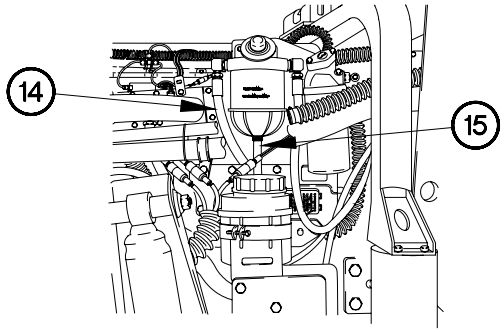


Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Weekly		Mounting/ Coupling Hardware and Hoses/ Tubes - Continued	4. Air system, including air dryer (12) and air tanks (13).	
				5. Fuel system including fuel hoses (14) and fuel/water separator drain hose (15).	



BD99B48-



BD99B49-

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Weekly		Mounting/ Coupling Hardware and Hoses/ Tubes	Check nuts, bolts, clamps, hoses, and tubes for looseness and missing, broken, or leaking conditions. If damage is found, notify Field Maintenance. The following should be checked: 1. Suspension, including springs, and U-bolts (16).	

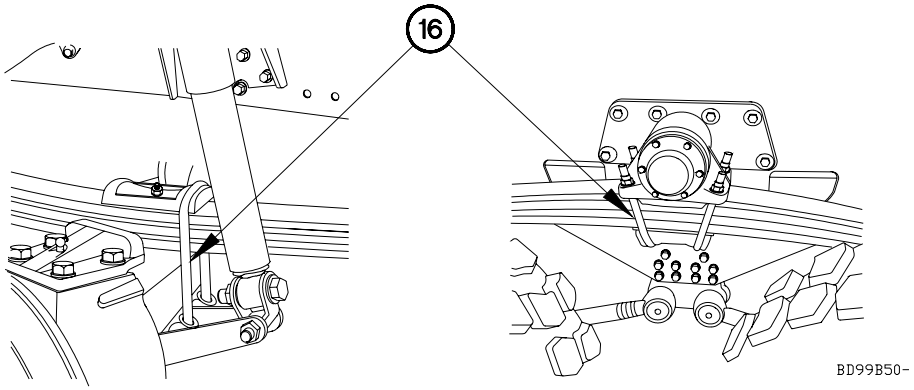
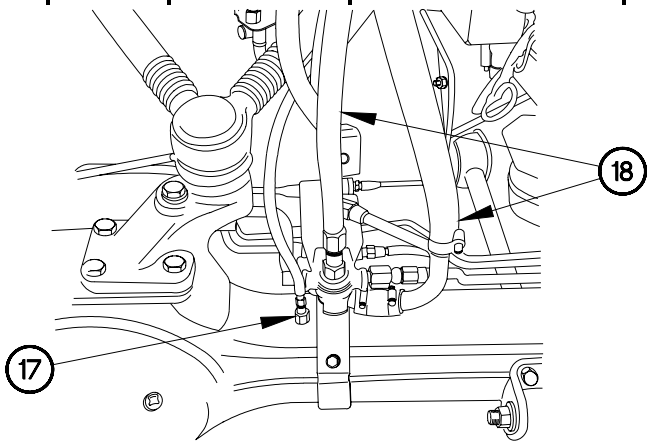


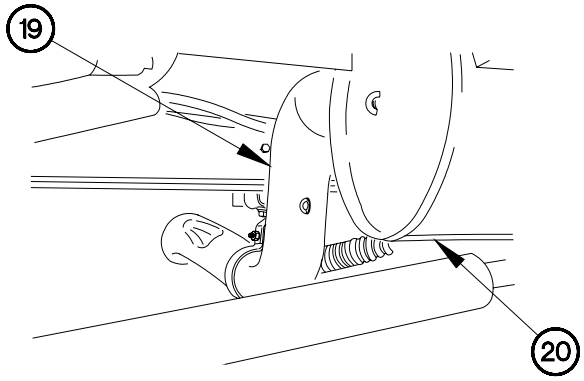
Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Weekly		Mounting/ Coupling Hardware and Hoses/ Tubes - Continued	2. Axles, including vent hoses (17), CTIS hoses (18), and clamps.	



BD99B51-

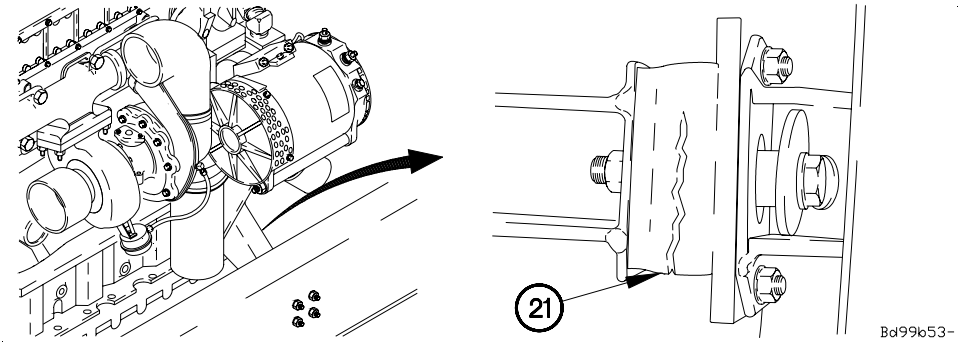
				3. Exhaust system, including muffler (19) and tailpipe (20).	



BD99B52-

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Weekly		Mounting/ Coupling Hardware and Hoses/ Tubes - Continued	4. Check engine mount (21) for loose or missing mounting bolts. Check center bolt is not rubbing bracket. Cracks greater than 50% or more on any side of rubber mount.	4. Engine mounts are loose or damaged. Missing bolts, cracks greater than 50% or more on any side of rubber mount.
				5. Engine/trans-mission supports (cradle mounts) (22).	



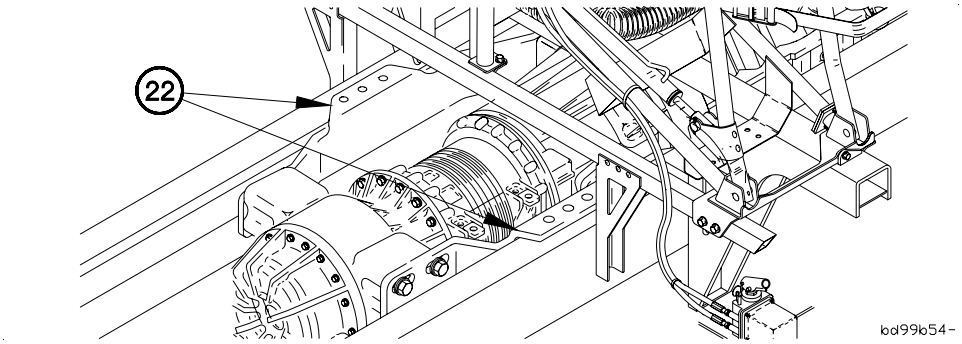


Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

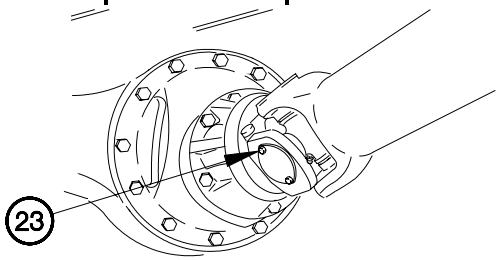
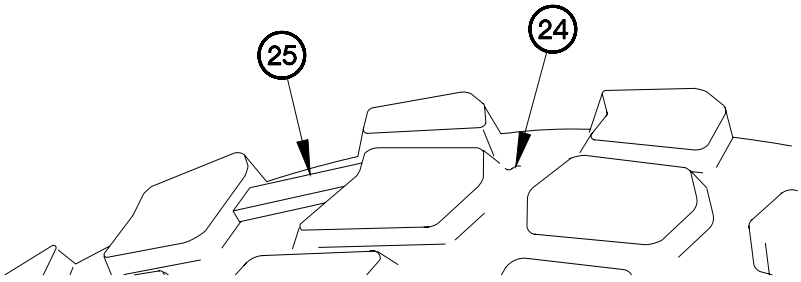
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Weekly		Mounting/ Coupling Hardware and Hoses/ Tubes - Continued	6. Drive shaft U-joint bolts (23).	
				 BD99B55-	
4	Weekly		Wheels and Tires	1. Check tire tread depth (24). Tread depth should not be worn beyond level of wear bar (25).	Tire tread is worn even to height of wear bar (depth is 1/8 in. (0.8 cm) or less). Any cut, gouge, or crack that extends to cord body or any unusual bulges.
				 BD99B56-	

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Weekly		Wheels and Tires - Continued	2. Check wheel assembly for damage. If damaged, remove wheel and check wheel for cracked, broken, or bent surfaces	Wheel is cracked, broken, or bent.
				3. Check wheel studs (26) and lug nuts (27) for obvious loose-ness. Check for bent or broken studs and missing or loose nuts. Notify Field Maintenance if any nuts are loose or missing or if any studs are broken or bent.	Two or more lug nuts or studs on same wheel are missing, loose, or broken.

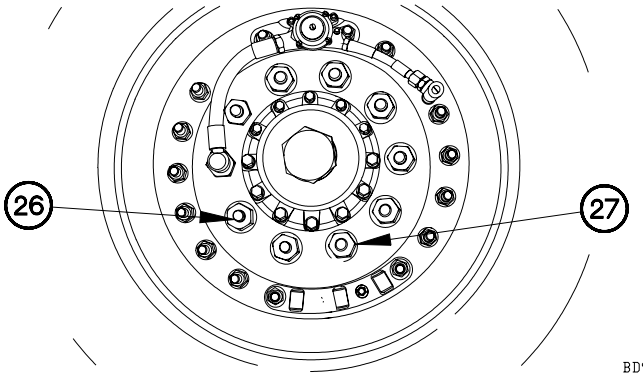


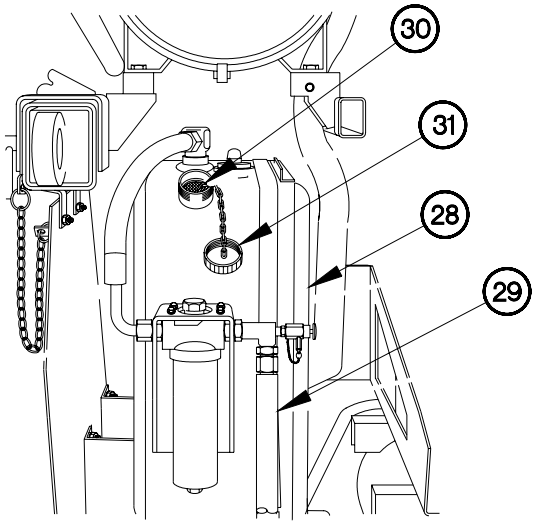
Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Weekly		Wheels and Tires - Continued	4. Check tire pressures with tire gage for each CTIS setting. Notify Field Maintenance if tire pressures do not match those values given:	

DESCRIPTION	TIRE PRESSURES FOR CTIS MODES			
	HWY	X-C	SAND	EMER
ALL MODELS EXCEPT M1088A1/ M1089A1	60 psi (414 kPa)	37 psi (255 kPa)	22 psi (152 kPa)	16 psi (110 kPa)
MODELS M1088A1/ M1089A1	81 psi (558 kPa)	54 psi (372 kPa)	32 psi (221 kPa)	24 psi (165 kPa)

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5	Weekly		Hydraulic Reservoir (If Equipped)	1. Check hydraulic reservoir (28), oil hose (29), and connections for leaks and/or damage. 2. Check for clogged, damaged, or missing hydraulic reservoir strainer (30). a. Remove hydraulic reservoir cap (31) from hydraulic reservoir (28).	Class III leak is evident.



BD99B58-

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

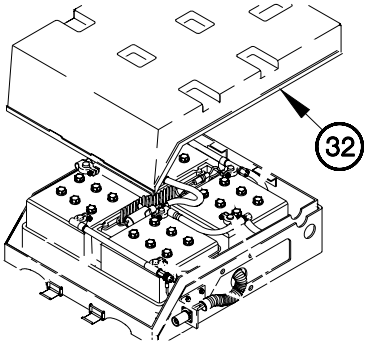
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5	Weekly		Hydraulic Reservoir (If Equipped) - Continued	b. Wipe out inside of hydraulic reservoir strainer with clean rag. c. Install cap on hydraulic reservoir.	
6	Weekly		Batteries		

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.

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.

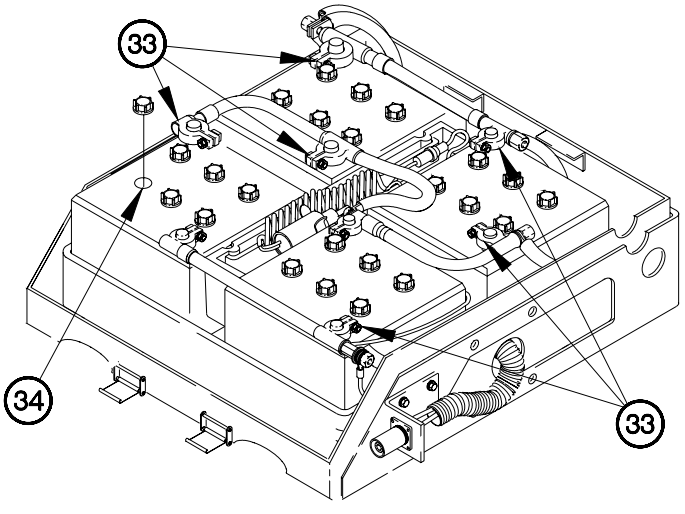
1. Open battery cover (32)(WP 0109 00).



BD99B59-

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

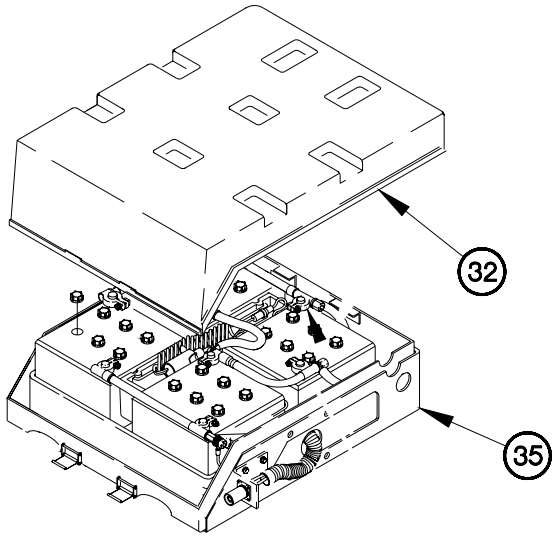
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
6	Weekly		Batteries - Continued	2. Check for damaged casing, terminal posts (33), and security of mounting. Check that cable clamps are secure. Notify Field Maintenance if defects are found. 3. Check battery fluid level (34) (WP 0108 00). If fluid level is low, fill with distilled water. If fluid is gassing (to boiling), notify Field Maintenance.	One or more batteries are missing, unserviceable, or leaking. Battery cable clamps are loose. Notify Field Maintenance.



BD99B60-

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
6	Weekly		Batteries - Continued	4. Check battery box (35) for corrosion. Clean debris from battery box drain holes. 5. Close battery cover (32) (WP 0108 00)	



BD99B61-

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

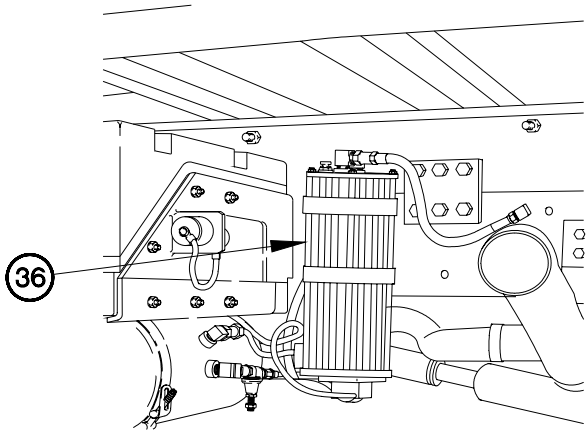
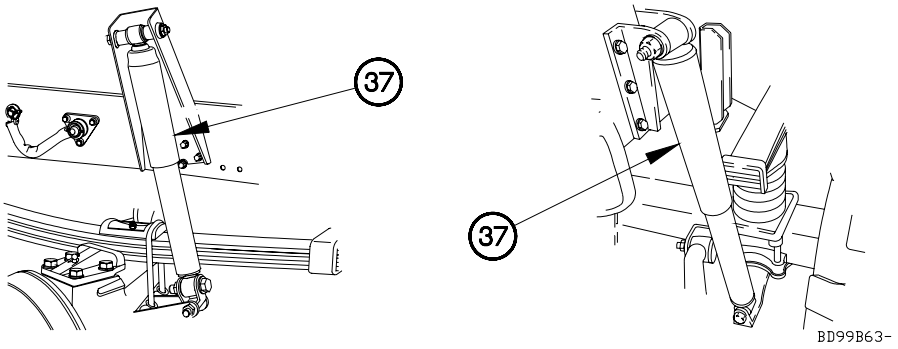
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
7	Weekly		Air Dryer	Check air dryer (36) for damage and loose mounting.	
				 BD99B62-	
8	Weekly		Underneath Vehicle	1. Check underneath vehicle for obvious damage to leaf springs, engine, transmission, frame rails, and crossmembers. 2. Check air hoses and fittings underneath vehicle for obvious damage and leakage.	Any loose or broken frame rails, crossmembers, broken welds, or broken screws are found. Any air leaks or damage to hoses or fittings are found.

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8	Weekly		Underneath Vehicle - Continued	3. Check shock absorbers (37) for leaks, missing or loose hardware, and loose shock absorber.	Shock absorber(s) have more than class I leak, missing or loose hardware, or loose shock absorbers are found.
				4. Check drive shafts (38) for loose hardware.	Any loose hardware is found.



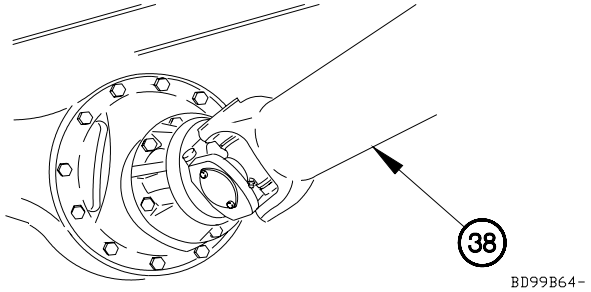
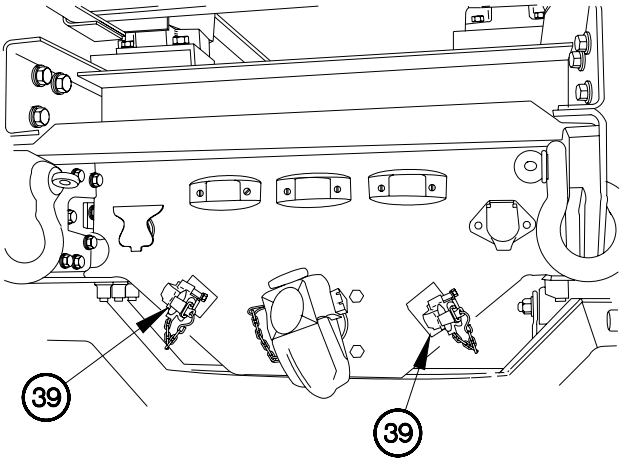


Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Weekly		Electrical Connectors	Check electrical connectors for damage.	
10	Weekly	0.1	Gladhands	1. Check gladhands (39) for damage and air leaks 2. Lubricate coupler seals	Air leaks are heard.

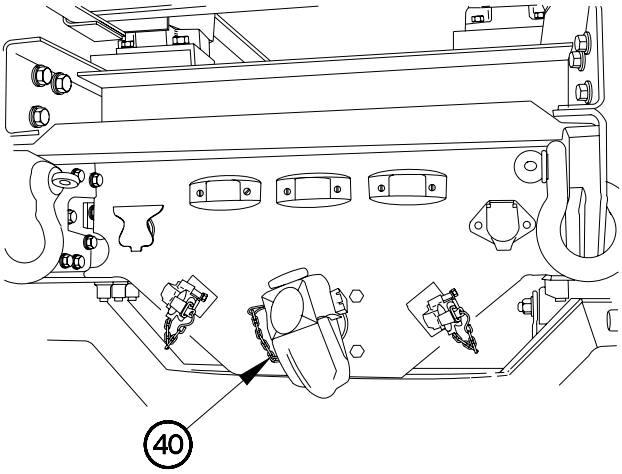
DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Gladhand Coupler Seals	As Needed	VV-D-1078	VV-D-1078	VV-D-1078



BD99B65-

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
11	Weekly		Reflectors	Check for missing or damaged reflectors.	
12	Weekly		Pintle Hook	Check pintle hook (40) for looseness and/or damaged locking mechanism.	



BD99B66-

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

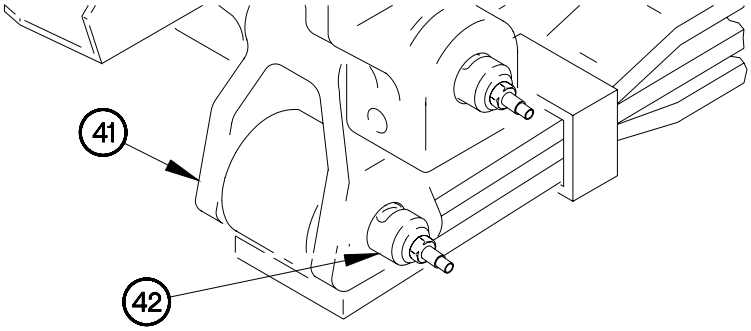
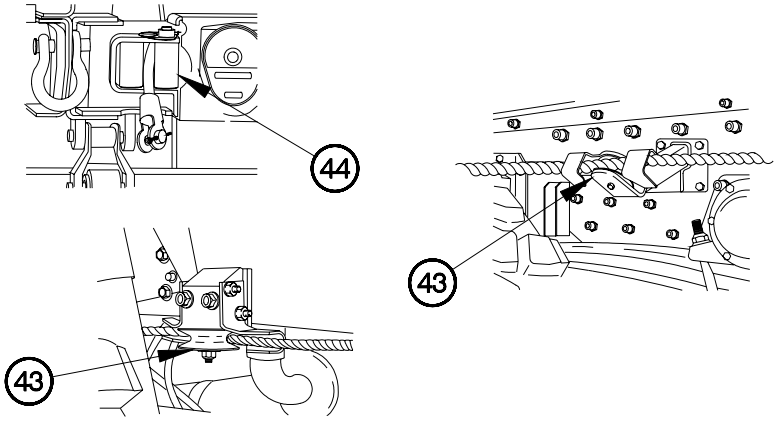
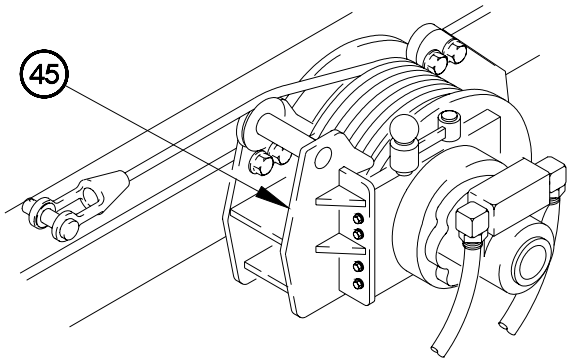
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
13	Weekly		Shackles	Check shackles (41) for damage. Check mounting pin (42) for damage.	
				 BD99B67-	
14	Weekly		15K SRW Rollers (If Equipped)	Check that cable guides (43) and roller fairleads (44) are mounted securely and rotate smoothly.	
				 BD99B68-	

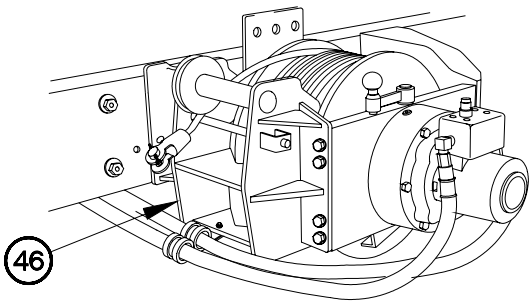
Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
15	Weekly		15K SRW (If Equipped)	Inspect 15K SRW (45) for loose parts, oil leaks, and obvious external damage.	



BD99B69-

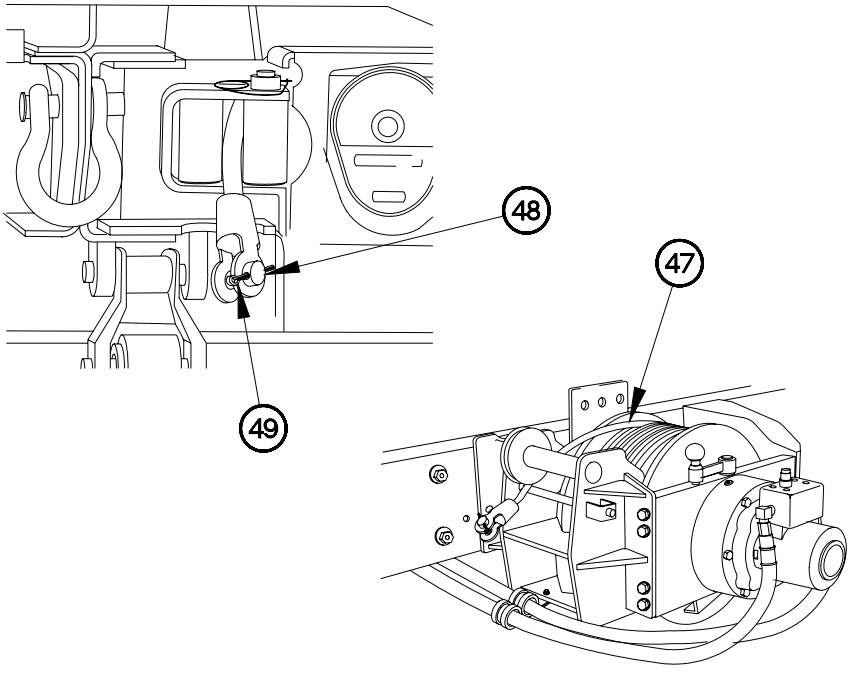
16	Weekly		15K Self-Recovery Winch (SRW) Operation (If Equipped)	1. Check 15K SRW (46) for proper operation in both directions (WP 0065 00).	



BD99B70-

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
16	Weekly		15K Self-Recovery Winch (SRW) Operation (If Equipped) - Continued	2. Check cable (47) for kinks, frays, and breaks. 3. Check cable end for missing or damaged pin (48) or cotter pin (49).	



BD99B71-

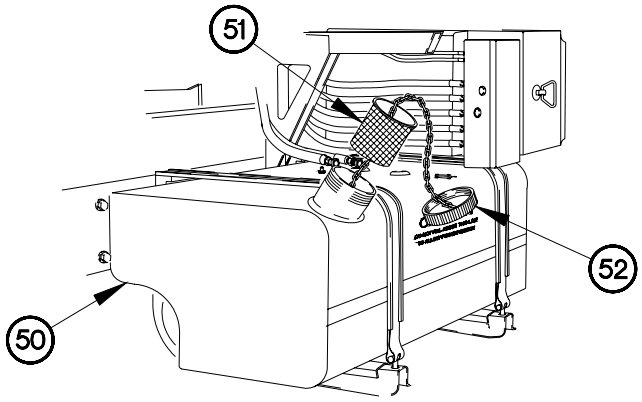
Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
17	Weekly		Fuel Tank		

WARNING

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

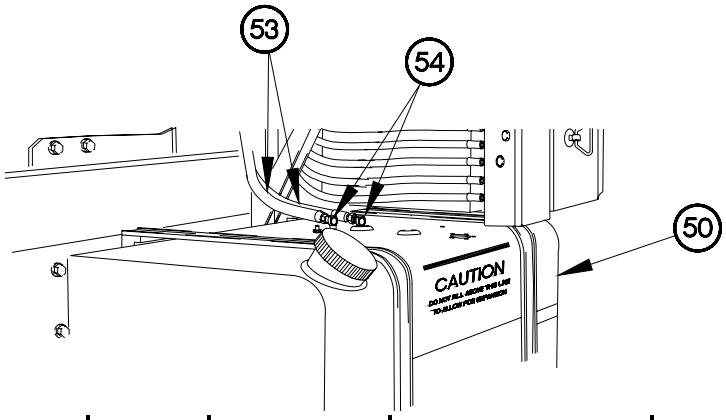
			1. Check fuel tank (50) for clogged, damaged, or missing fuel strainer (51). 2. Check that fuel cap (52) is not loose or damaged.	



BD99B73-

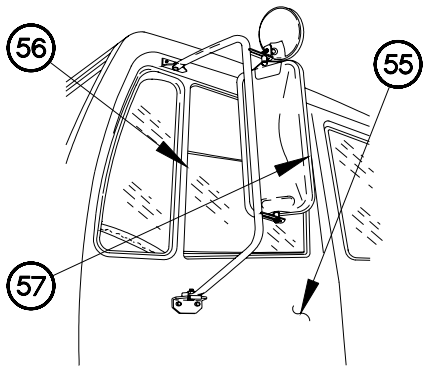
Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
17	Weekly		Fuel Tank - Continued	3. Check fuel tank (50), fuel hoses (53), and connections (54) for leaks and damage.	Class III leak is evident.



BD99B74-

18	Weekly		Door, Window, and Mirror	Check condition and operation of doors (55), windows (56), and mirrors (57).	



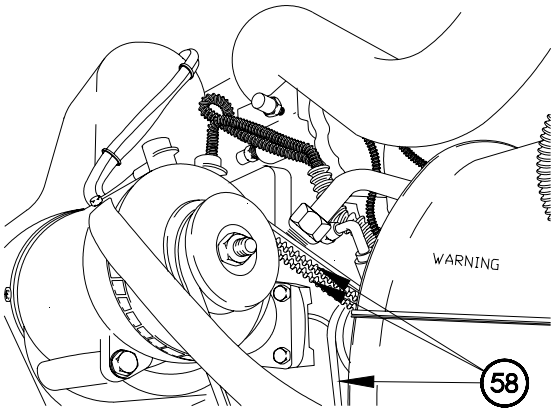
BD99B75-

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
19	Weekly		Drive Belts, Fan, and Pulleys		
				WARNING **Ensure engine oil is cool before performing any maintenance. Failure to comply may result in injury or death to personnel.** **Engine compartment and accessories may be extremely hot when engine is running or has been running recently. Use caution around engine when cab us raised. Failure to comply may result in injury to personnel.** **Engine compartment contains a partially exposed fan blade. Use extreme caution around front of engine. Failure to comply may result in injury to personnel.**	
				1. Raise cab (WP 0021 00).	

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

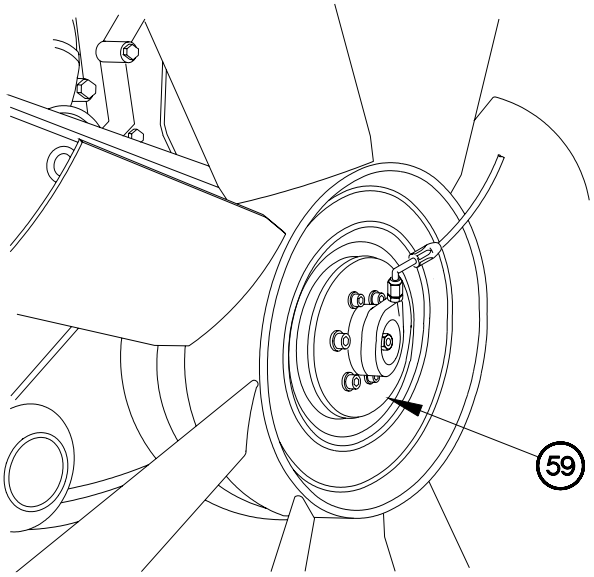
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
19	Weekly		Drive Belts, Fan, and Pulleys - Continued	2. Check drive belts (58) for cracking, fraying, and breaks.	Any of the follow conditions are present: Any drive belt has more than one crack 1/8 in. (0.3 cm) in depth or 50 percent of belt thickness. Notify Field Maintenance. Any drive belt has frays more than 2 in. (5.1 cm) long. Notify Field Maintenance.



BD99B76-

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
19	Weekly		Drive Belts, Fan, and Pulleys - Continued	3. Check tightness of drive belts. Play should be about ½ in. (1.3 cm). Notify Field Maintenance to tighten drive belts.	Any drive belt has excessive play. Notify Field Maintenance.
20	Weekly		Fan Clutch	Check fan clutch (59) for missing or loose mounting hardware	Missing or loose mounting hardware is found. Notify Field Maintenance.



BD99B77-

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
21	Weekly		Radiator Hoses	1. Check radiator hoses (60) for cracks and excessive wear which may cause leakage. Check radiator hoses for loose hose clamps.	Class III leak is evident. Notify Field Maintenance.
				2. Check radiator (2) for leaks and damaged fins.	Class III leak is evident. Notify Field Maintenance.

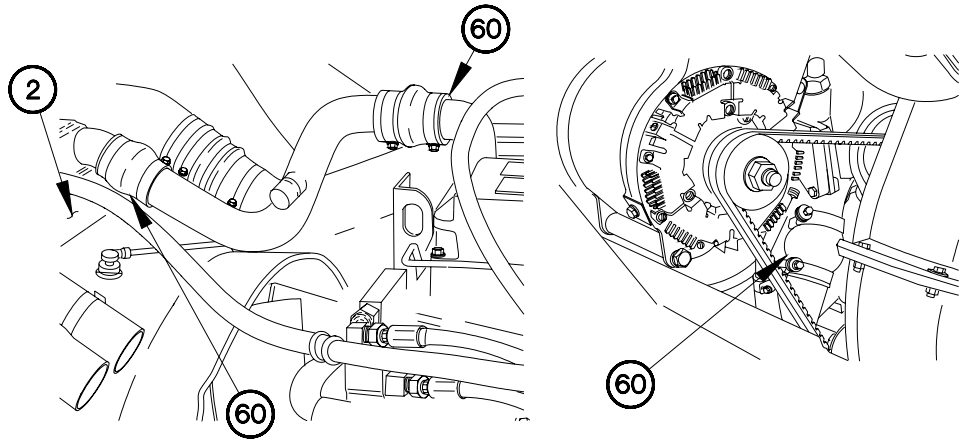


Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
22	Weekly		Fuel Filter	Check fuel filter (61) for leaks or damage.	Class III leak is evident. Notify Field Maintenance.
23	Weekly		Power Steering Reservoir		

CAUTION

Do not overfill power steering reservoir. Failure to comply may result in damage to equipment.

				1. Check power steering reservoir (62) for leaks or obvious damage.	Class III leak is evident.

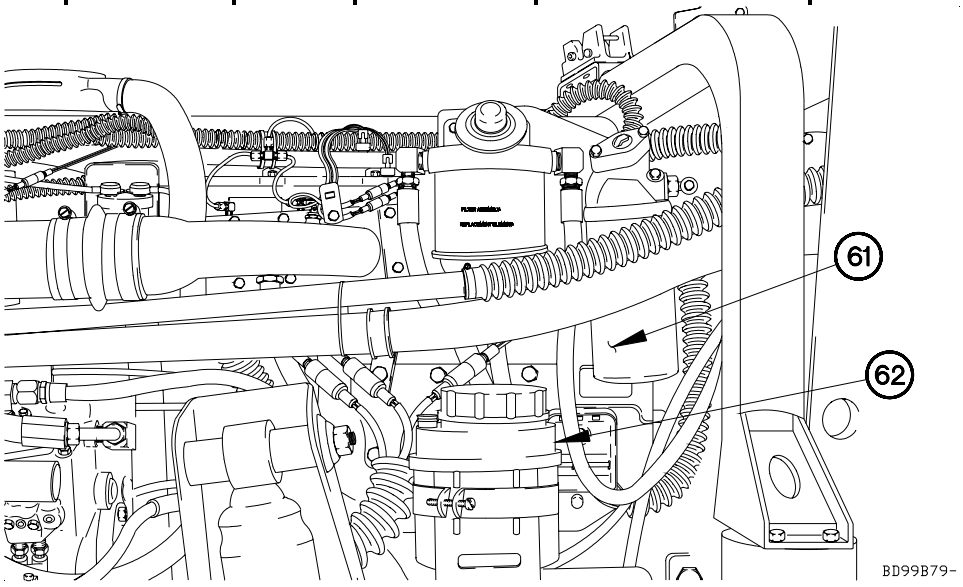
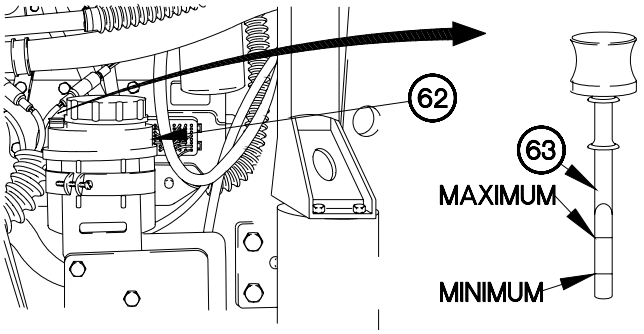


Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
23	Weekly		Power Steering Reservoir - Continued	2. Check that power steering reservoir (62) is filled to proper level. Oil should be between maximum and minimum level as marked on dipstick (63). Add oil as required. If oil level is over maximum level, notify Field Maintenance.	



DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Power Steering System	5 qt (4.8 L)	OE/HDO-10	OE/HDO-10	OEA

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
24	Weekly		Charge Air	1. Check for missing or loose clamps at: a. Intake air filter (4). b. Turbocharger inlet coupling (64).	Any clamp missing or unable to be tightened.

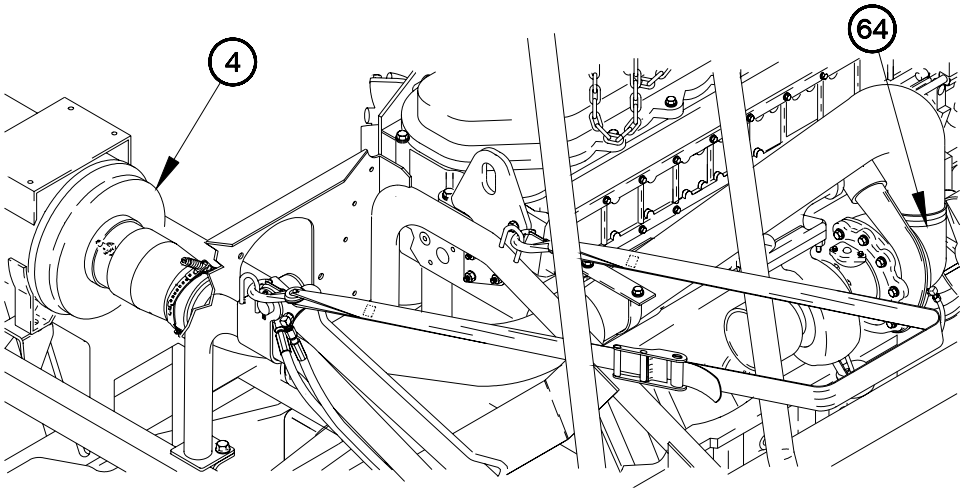
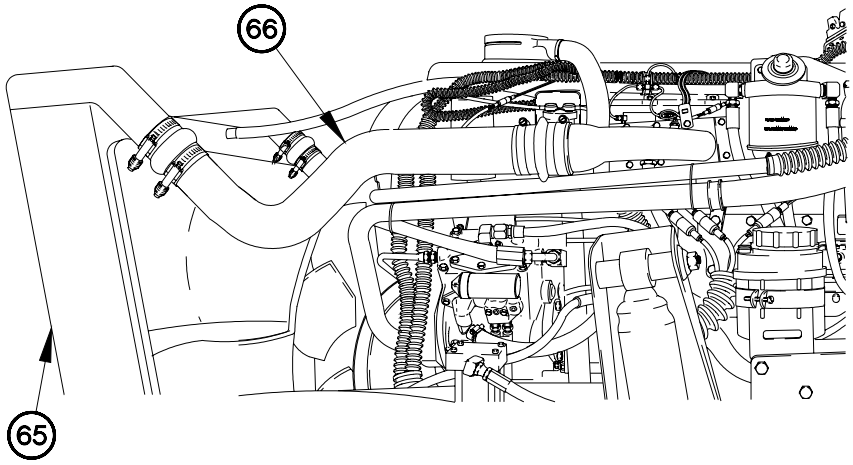


Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

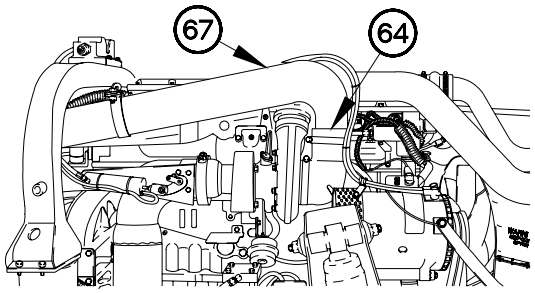
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
24	Weekly		Charge Air - Continued	c. Charge air cooler (65). d. Charge air cooler to air inlet elbow tubes (66).	



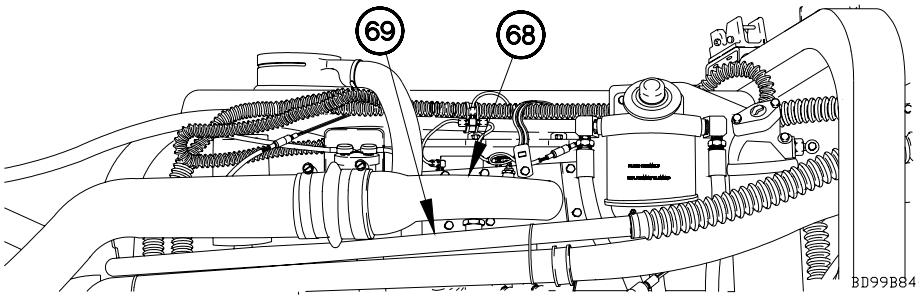
BD99B82-

Table 4. Preventive Maintenance Checks and Services (PMCS) - Weekly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
24	Weekly		Charge Air - Continued	2. Check intake air hoses at: a. Intake air filter to turbocharger inlet (64). b. Turbocharger to charge air cooler inlet (67).	Any hose with damage.
				c. Charge air cooler to air inlet elbow (68). d. Air compressor to air inlet elbow (69).	



BD99B83-

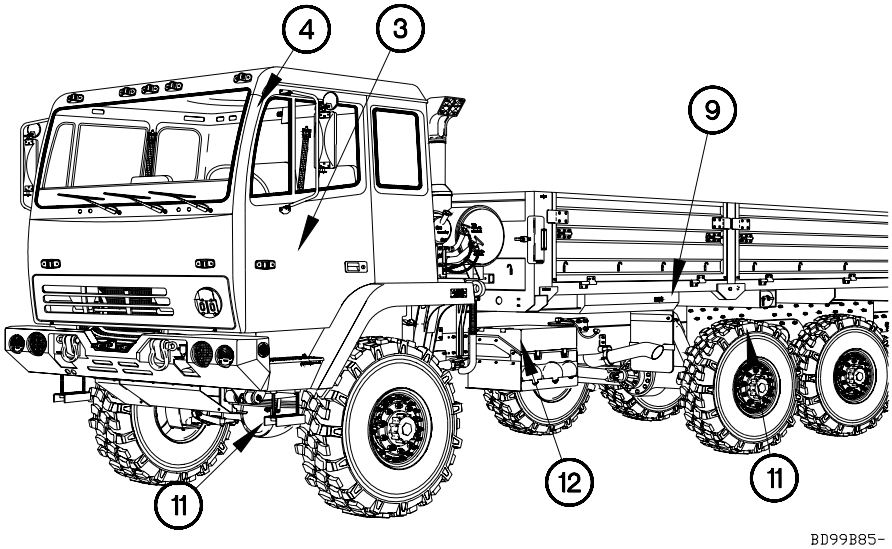


BD99B84-

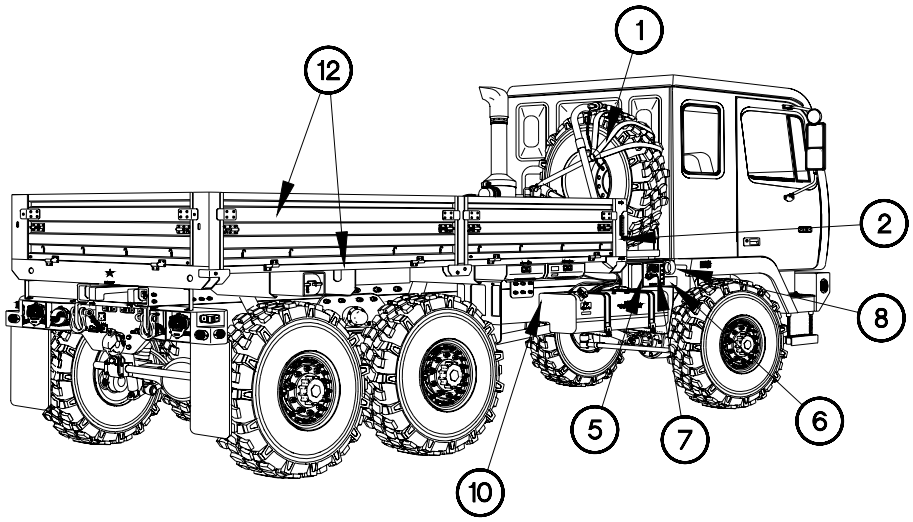
M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued 0103 00

MONTHLY PMCS Procedures for All Models

These illustrations will help you perform MONTHLY vehicle PMCS. The callouts match PMCS item number/procedures.



BD99B85-



BD99B86-

Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly		Spare Tire	1. Check that spare tire (1) lowers properly (para 3-5). 2. Check spare tire (1) for cuts, gouges, and cracks. Remove any objects that could penetrate tire. 3. Check that spare tire (1) has not worn beyond wear bar (3). Replace spare tire (WP 0105 00) if tire has worn beyond bar.	Tire treads (2) are worn even to height of wear bar (3) (depth is 1/8 in. (3 m) or less). Any cut, gouge, or crack that extends to cord body or any unusual bulges.

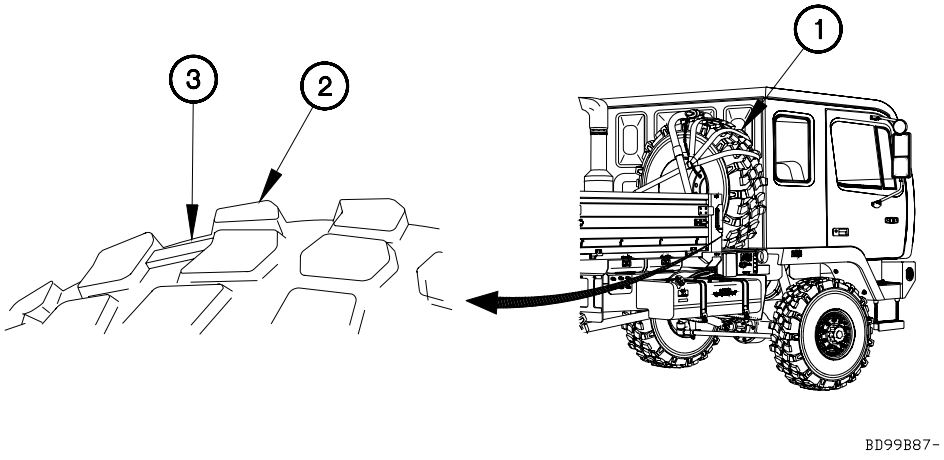
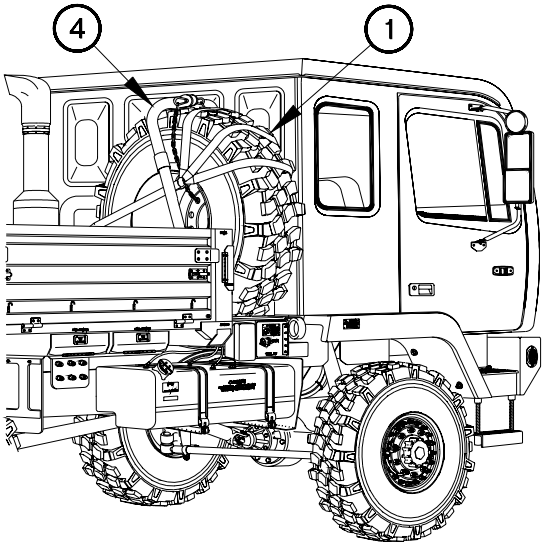


Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

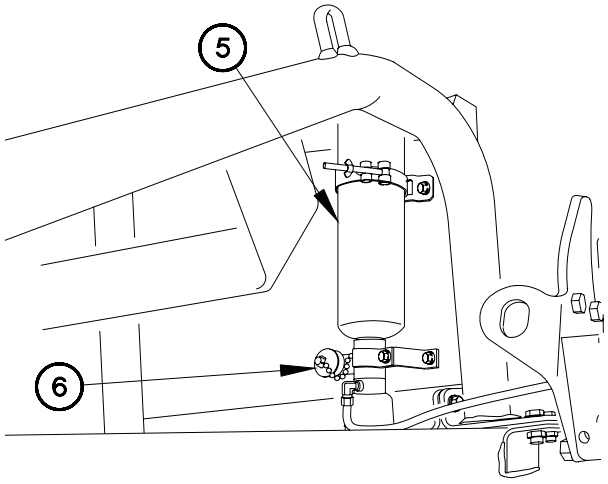
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly		Spare Tire - Continued	4. Check that spare tire (1) is properly secured to spare tire retainer (4). Ensure spare tire retainer is securely stowed in up position. 5. Check spare tire (1) for correct air pressure. Inflate tire to 60 psi (414 kPa) if air pressure is low.	Spare tire retainer cannot be secured in its up position.



BD99B88-

Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Monthly		Ether Starting Aid	Check ether cylinder (5) for loose or damaged mounts and hardware. Check ether cylinder and injection valve (6) for damage.	



BD99B89-

Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Monthly		Rifle Stowage Mount	1. Check that rifle stowage top mount and lower mount (7) bolts are not broken or missing. 2. Check rifle stowage mount latches (8) for excessive looseness or binding.	

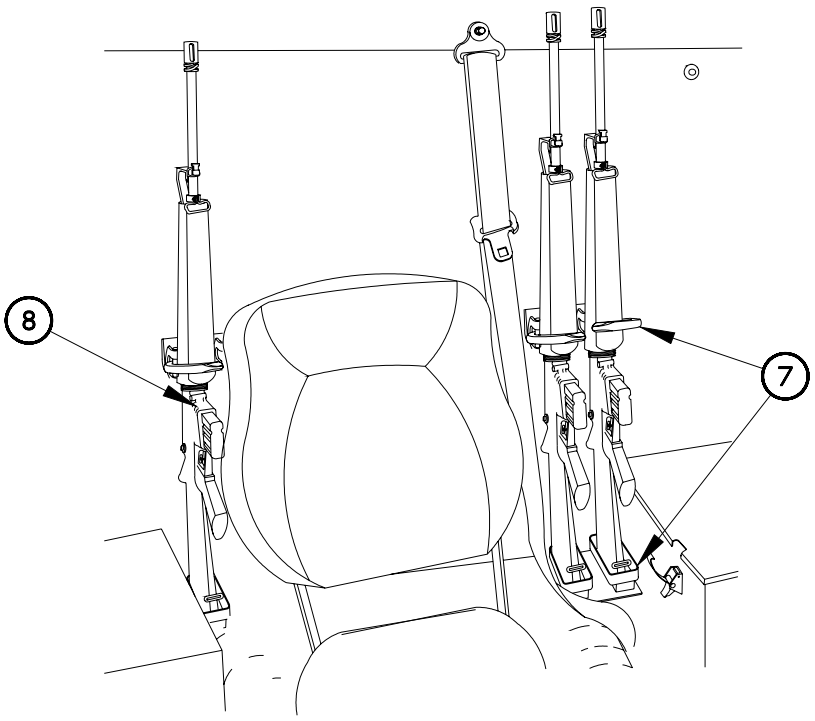
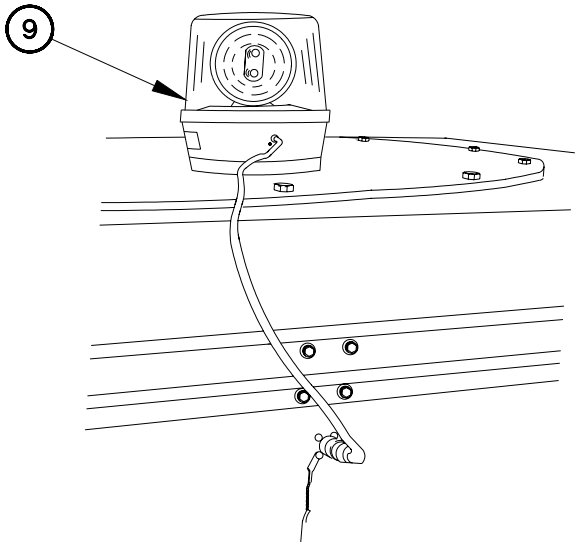


Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Monthly		Amber Warning Light (If Equipped)		
				NOTE Checking amber warning light is a safety task that would not be performed in a tactical mission. See AR 385-55.	
				Check vehicle amber warning light (9) for proper operation (WP 0018 00).	



BD99B91-

Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5	Monthly		Hydraulic Manifold	Inspect hydraulic manifold (10) for leakage.	Class III leak is evident.
6	Monthly		Back-up Hydraulic Pump	1. Remove handle (11) from tool box and install in back-up hydraulic pump (12). 2. Pump back-up hydraulic pump 5-8 cycles (to lubricate seals).	
7	Monthly		Tool Kit	Check inside tool box for water in bottom of tool kit or other obvious damage. Clean inside too kit with rag as necessary.	

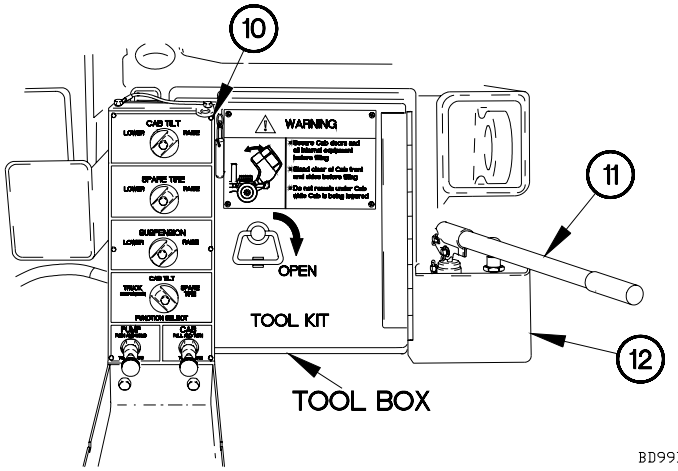
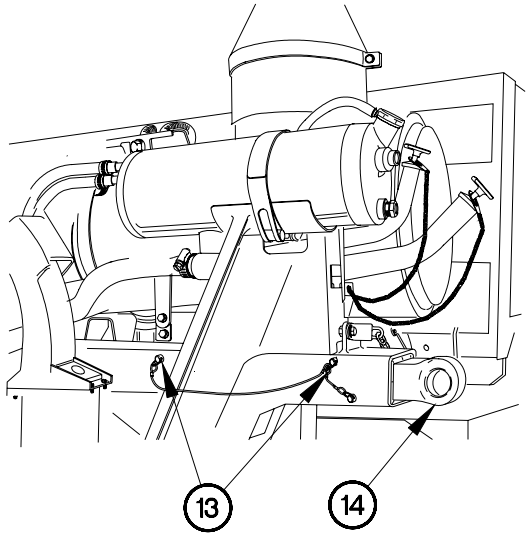


Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8	Monthly		Front Lifting Beams	1. Remove two retaining pins (13) from front lifting beam (14). 2. Pull front lifting beam (14) out as far as it will go.	



BD99B93-

Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

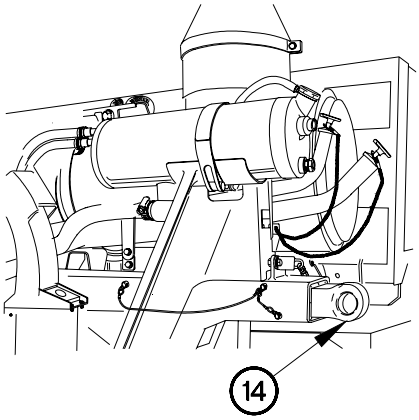
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8	Monthly		Front Lifting Beams - Continued		

WARNING

Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes and clothes; and do not breath vapors. Keep away from heat or flame. Never smoke when using Dry Cleaning Solvent; the flashpoint for Type I Dry Cleaning Solvent is 100° F (38° C) and for Type II is 138° F (50° C). Failure to comply may result in serious injury or death to personnel.

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

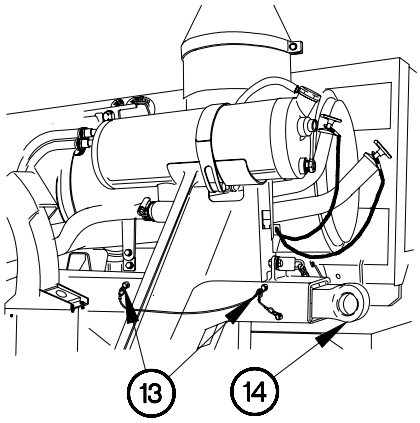
				3. Clean front lifting beam (14) with Dry Cleaning Solvent.



BD99B94-

Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8	Monthly		Front Lifting Beams - Continued	4. Lubricate top, bottom, and sides of front lifting beam (14). 5. Push front lifting beam (14) back into place. 6. Install two retaining pins (13) on front lifting beam (14).	

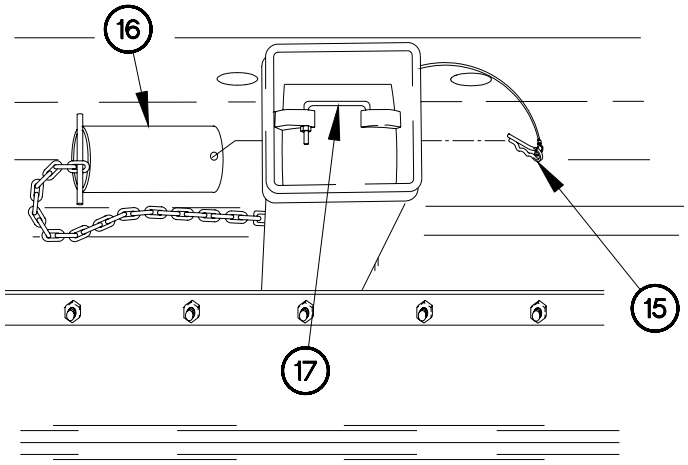


BD99B95-

DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Front Lifting Beam	As required	GAA	GAA	GAA

Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Monthly		Spreader Bar	1. Remove retaining pin (15) and hitch pin (16) from spreader bar (17). 2. Pull spreader bar (17) out as far as it will go.	



BD99B96-

Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

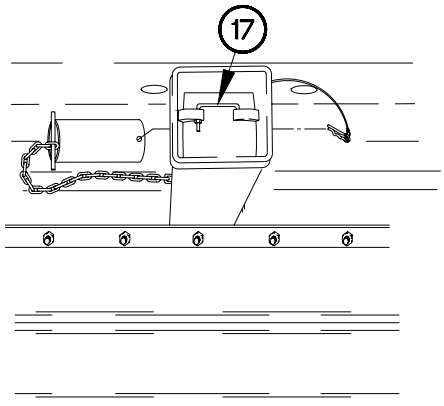
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Monthly		Spreader Bar - Continued		

WARNING

Dry Cleaning Solvent (P-D-680 is TOXIC and flammable. Wear protective goggles and gloves; use only in well- ventilated area; avoid contact with skin, eyes and clothes; and do not breath vapors. Keep away from heat or flame. Never smoke when using Dry Cleaning Solvent; the flashpoint for Type l Dry Cleaning Solvent is 100° F (38° C) and for Type ll is 138° F (50° C). Failure to comply may result in serious injury or death to personnel.

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

			3. Clean spreader bar (17) with Dry Cleaning Solvent.	



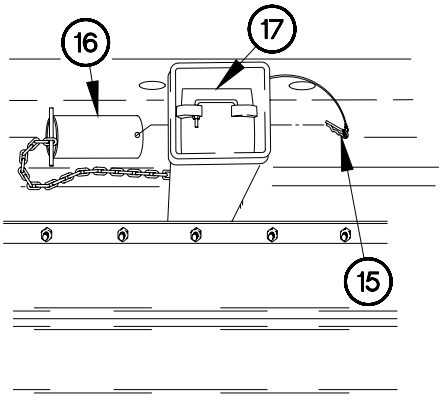
BD99B97-

Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Monthly		Spreader Bar - Continued	4. Lubricate top, bottom, and sides of spreader bar (17).	

DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Spreader Bar	As required	GAA	GAA	GAA

				5. Push spreader bar (17) into place. 6. Install hitch pin (16) on spreader bar (17). 7. Install retaining pin (15) on hitch pin (16).	



BD99B98-

Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
10	Monthly		15K Self-Recovery Winch (SRW) Cable (If Equip-ped)		

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.

				1. Pay out 15K SRW cable (18) completely and inspect for kinks, sharp bends, abrasion, and broken wires (WP 0065 00).	Six randomly distributed broken wires in any 6 in. (15 cm) section of cable or three broken wires in one bundle (breaks 3, 4, 5) in a 6 in. (15 cm) section.

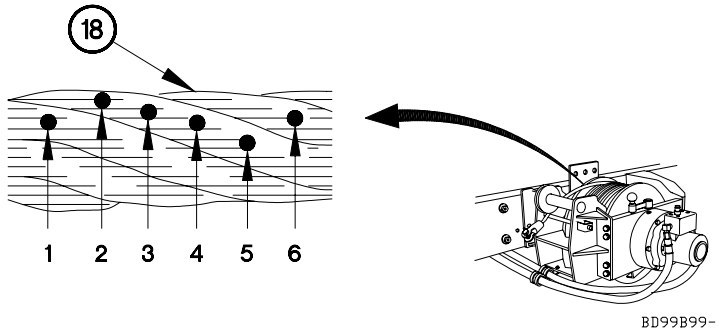
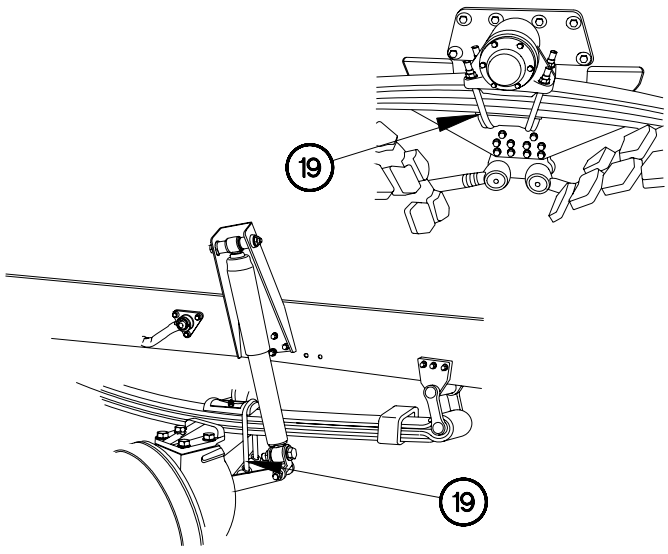


Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
10	Monthly		15K Self-Recovery Winch (SRW) Cable (If Equip-ped) - Continued	2. Inspect for kinking, crushing, or any other damage resulting in distortion of cable structure. 3. Check security of 15K SRW mounting hardware.	
11	Monthly		Springs	After initial 1000 mi. (1609 km), notify Field Maintenance to tighten U-bolts (19) to 390-510 lb-ft (529-692 n•m).	



BD99BK0-

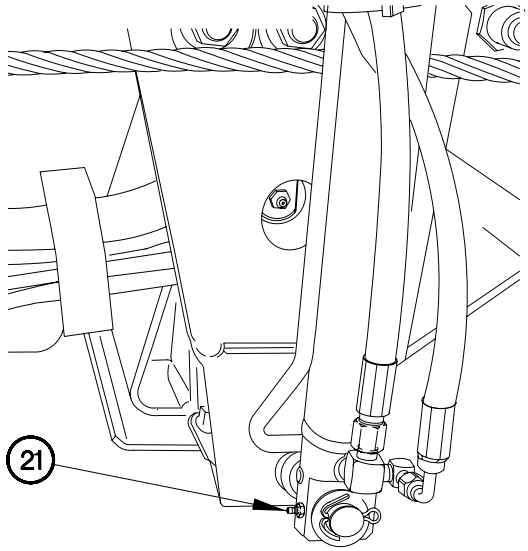
Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
12	Monthly	0.1	Oil Can Points	Lubricate all oil can points with OE/HDO specified for ambient temperature. The operator/crew is responsible for lubricating the following points: 1. Door latches and hinges 2. Battery box cover latches 3. Cab hydraulic lift cylinder	

DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Oil Can Points	As required	OE/HDO-10	OE/HDO-10	OEA

Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

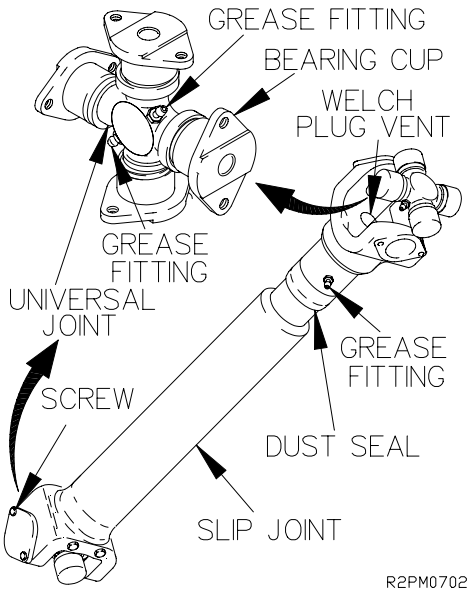
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
13	Monthly	0.1	Cab Hydraulic Lift Cylinder (If Equipped)	Lubricate cab hydraulic lift cylinder grease fitting (21) with GAA using low-pressure lubricating gun	



8300ap7-

Table 5. Preventive Maintenance Checks and Services (PMCS) - Monthly - All Models - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
14	Monthly/ 1000 miles	0.2	Drive shaft lubrication	1. Apply GAA to both universal joint grease fittings until new grease purges from all four bearing cups.	If grease does not purge from bearing cups, notify field maint-enance.
	Monthly			2. Apply grease to slip joint until grease appears at vent in welch plug.	If grease does not purge from welch plug notify field maint-enance.
	Monthly			3. Place your finger over welch plug vent and add grease until grease purges from dust seal.	If grease does not purge from dust seal, notify field maintenance.

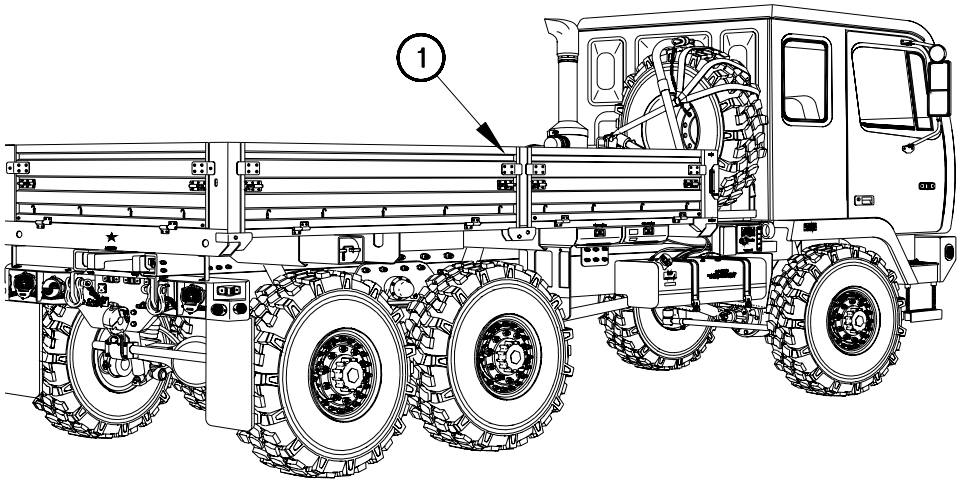


M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Before PMCS Procedures for Models M1083A1, M1084A1, M1085A1, and M1086A1.

This illustration will help you perform BEFORE vehicle PMCS. The callout matches PMCS item number/procedures.



BD99BK1-

Table 6. Preventive Maintenance Checks and Services (PMCS) - Before - Models M1083A1, M1084A1, M1085A1, and M1086A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before		Troop Transport Alarm Switch (If Equipped)	1. Check that attaching knobs (1) are tight. 2. Position master power switch to on (WP 0004 00). 3. Position troop transport alarm switch (2) to ON (WP 0012 00). 4. Verify that audible alarm (3) sounds in cab.	

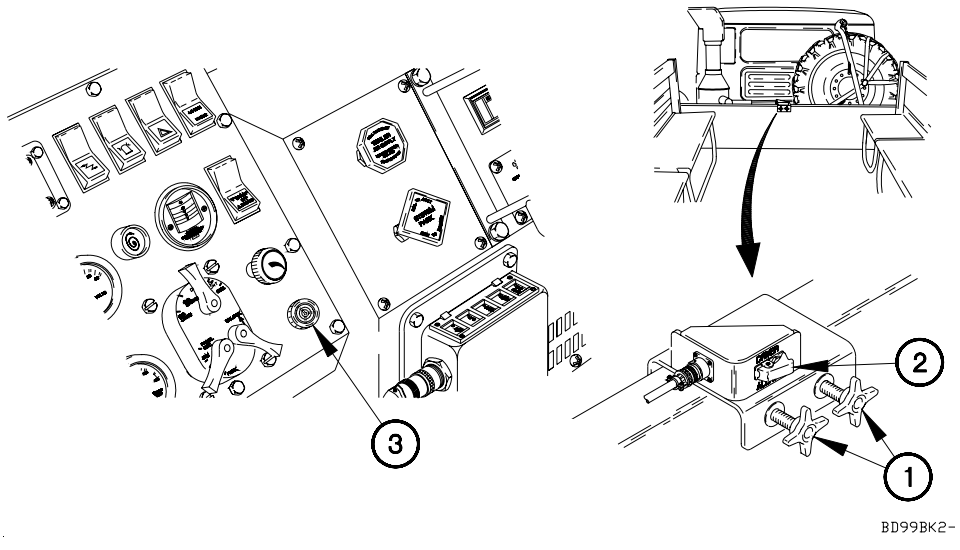


Table 6. Preventive Maintenance Checks and Services (PMCS) - Before - Models M1083A1, M1084A1, M1085A1, and M1086A1 - Continued.

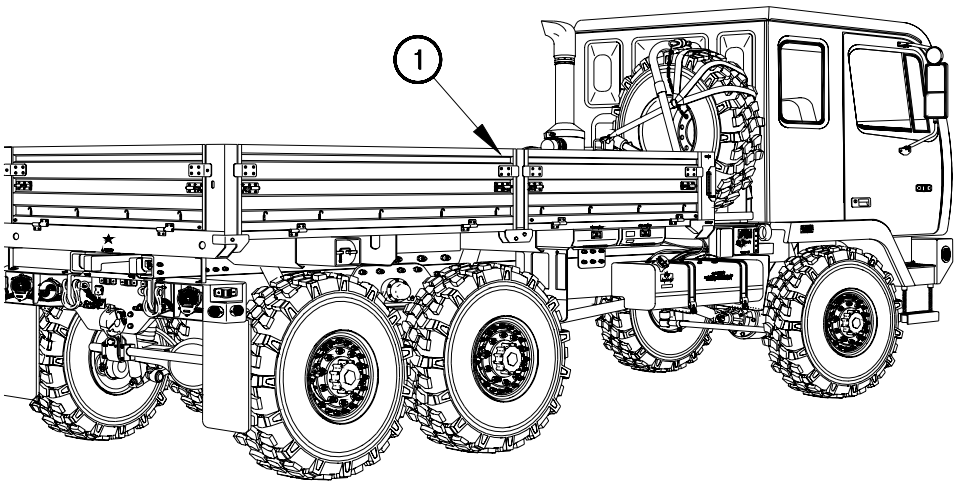
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before		Troop Transport Alarm Switch (If Equipped) - Continued	5. Position troop transport alarm switch to OFF (WP 0012 00). 6. Position master power switch to off (WP 0004 00).	

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

During PMCS Procedures for Models M1083A1, M1084A1, M1085A1, and M1086A1

This illustration will help you perform DURING vehicle PMCS. The callout matches PMCS item number/procedures.



BD99BK3-

Table 7. Preventive Maintenance Checks and Services (PMCS) -During - Models M1083A1, M1084A1, M1085A1, and M1086A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Light Material Handling Crane (LMHC) (If Equipped		

NOTE

LMHC is checked during operation when required as part of vehicle mission.

			1. Check for loose, missing, or damaged drive motor (1) mounting bolts. Tighten loose bolts. If bolts are missing, damaged, or can not be tightened, notify Field Maintenance.	

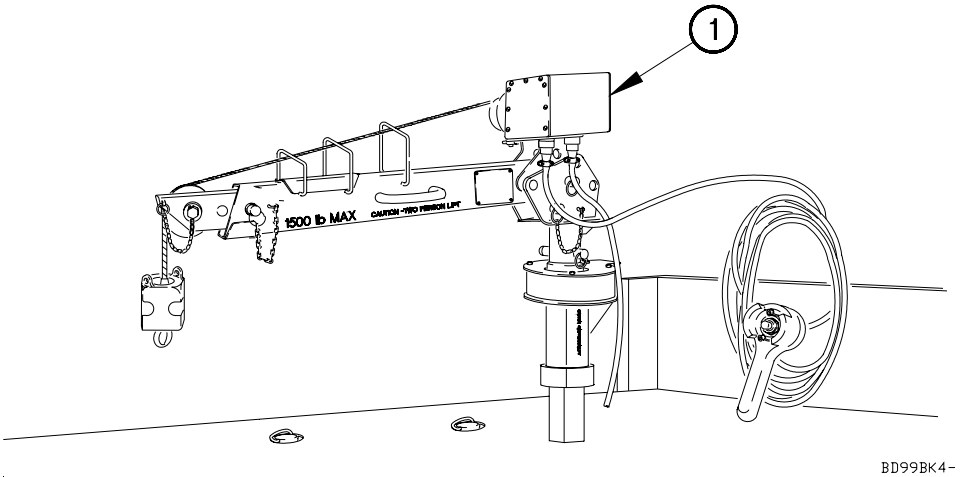
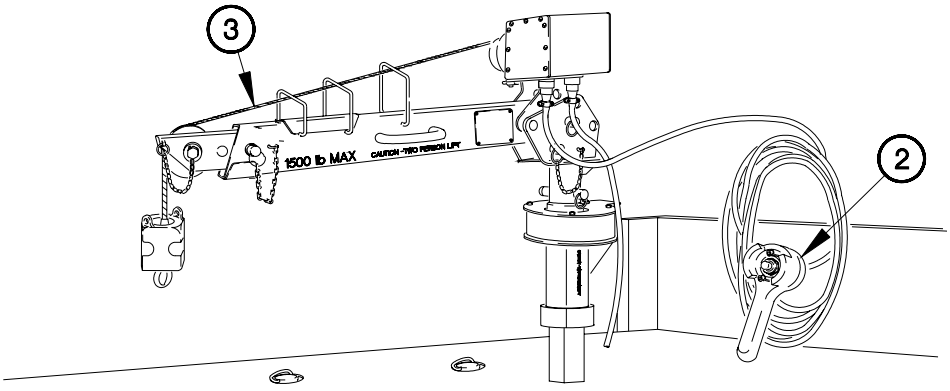


Table 7. Preventive Maintenance Checks and Services (PMCS) - During - Models M1083A1, M1084A1, M1085A1, and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Light Material Handling Crane (LMHC) (If Equipped - Continued	2. Using LMHC remote control (2), check that LMHC cable (3) pays out and reels in properly (WP 0023 00). 3. Rotate LMHC to right and to left, checking for binding or any restriction to movement of all LMHC components (WP 0023 00).	



BD99BK5-

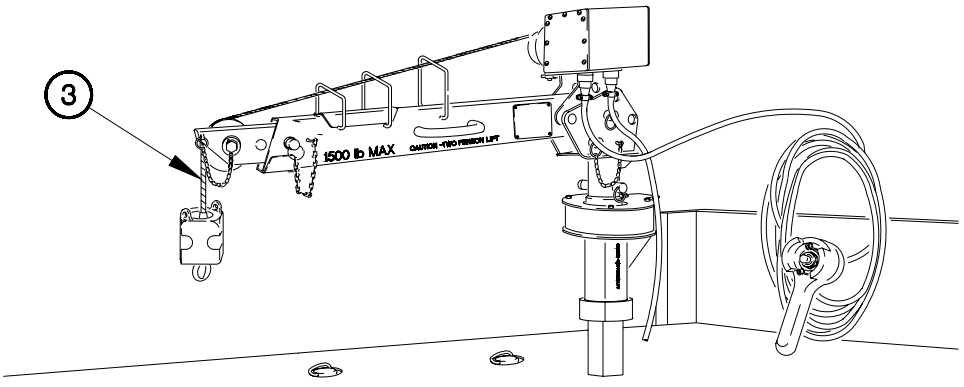
Table 7. Preventive Maintenance Checks and Services (PMCS) - During - Models M1083A1, M1084A1, M1085A1, and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		LMHC (If Equipped - Continued		

WARNING

Wear heavy leather-palmed work gloves when handling wire rope. Never let moving wire rope slide through hands, even when wearing gloves. Failure to comply may result in serious injury to personnel.

			4. Check cable (3) for kinks, frays, and breaks.	Evidence of kinks, frays, or breaks.

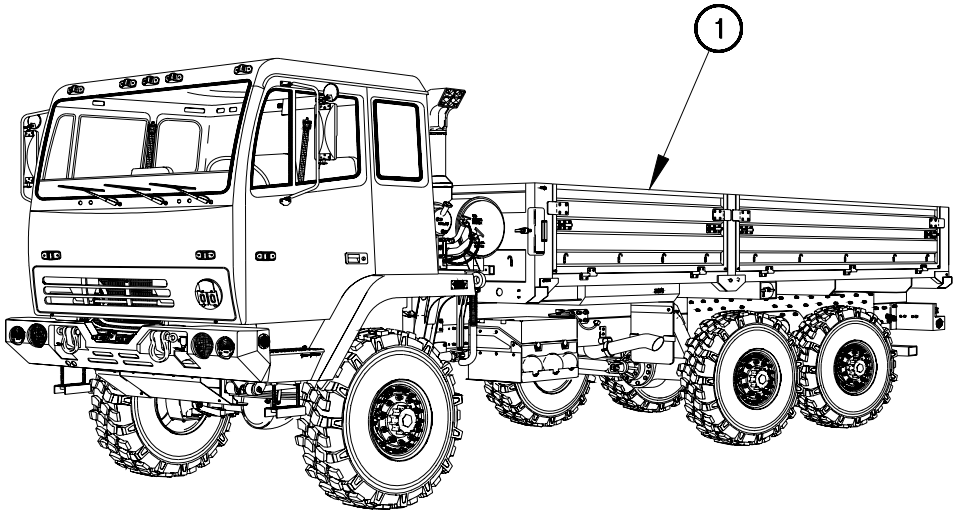


BD99BK6-

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued 0103 00

AFTER PMCS Procedures for Models M1083A1, M1084A1, M1085A1, and M1086A1.

These illustrations will help you perform AFTER vehicle PMCS. The callouts match PMCS item number/procedures.

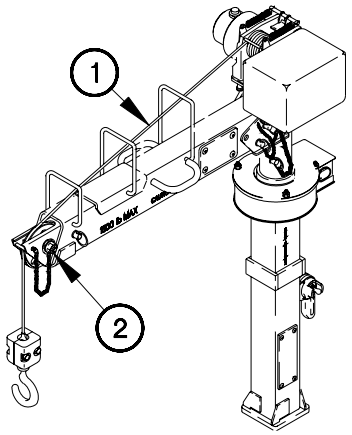


BD99BK7-

Table 8. Preventive Maintenance Checks and Services (PMCS) - After - Models M1083A1, M1084A1, M1085A1, and M1086A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	After		Light Material Handling Crane (LMHC) (If Equipped)	1. Lubricate cable (1). 2. Lubricate boom sheave (2).	

DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
LMHC Cable	As required	OE/HDO-10	OE/HDO-10	OEA
LMHC Boom Sheave	As required	GAA	GAA	GAA



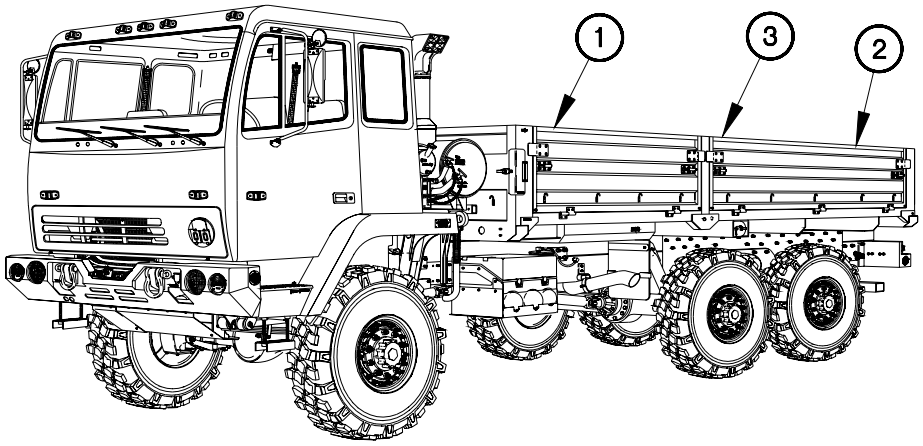
BD99BK8-

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Weekly PMCS Procedures for Models M1083A1, M1084A1, M1085A1, AND M1086A1

These illustrations will help you perform WEEKLY vehicle PMCS. The callouts match PMCS item number/procedures.



BD99BK9-

Table 9. Preventive Maintenance Checks and Services (PMCS) - Weekly - Models M1083A1, M1084A1, M1085A1, AND M1086A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Weekly		Light Material Handling Crane (LMHC) (If Equipped)		
			NOTE LMHC is checked before vehicle operation when required as part of mission.		
				1. Check boom assembly (1), turret (2), winch assembly (3), and mast assembly (4) for damage or broken welds.	Boom assembly, turret, winch assembly, or mast assembly are damaged or broken welds are found.
				2. Check LMHC power cord (5) for damage or cracks in insulation.	Any damage or cracks in insulation which expose bare wire.

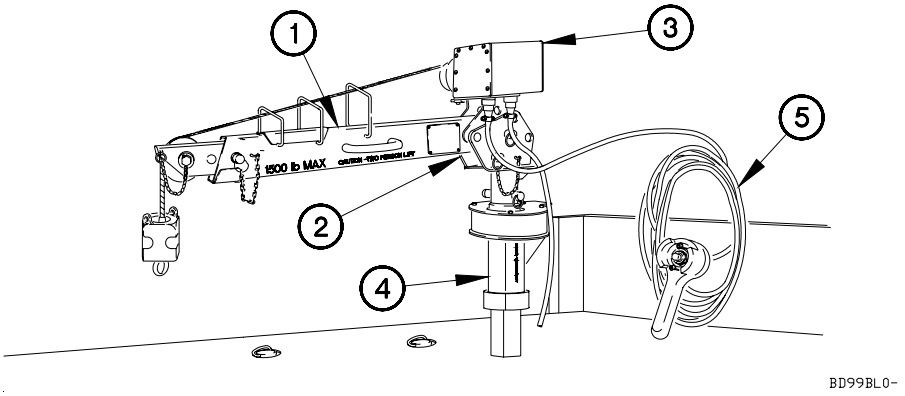


Table 9. Preventive Maintenance Checks and Services (PMCS) - Weekly - Models M1083A1, M1084A1, M1085A1, AND M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Weekly		Light Material Handling Crane (LMHC) (If Equipped) - Continued	3. Check that the following pins are present and not damaged: a. Pin securing mast (4) to cargo bed. b. Pin securing boom (1) in raised and lowered positions. c. Pin securing boom (1) in extended and retracted positions.	One or more pins are missing or damaged.

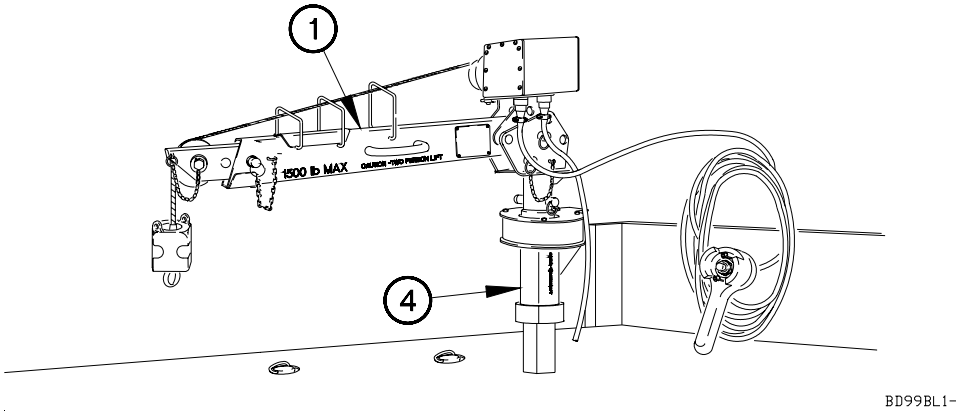


Table 9. Preventive Maintenance Checks and Services (PMCS) - Weekly - Models M1083A1, M1084A1, M1085A1, AND M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Weekly		Cargo Area Arctic Heater (if equipped)		
				NOTE Cargo area arctic heater is checked before vehicle operation if it will be operated as part of vehicle mission.	
				1. Check cargo area arctic heater Start/Off/Run switch (6), LO/HI switch (7), and override switch (8) for proper operation (WP 0058 00). 2. Remove four pins (9) and cover (10) from heater bracket (11).	Cargo area arctic heater is inoperable.

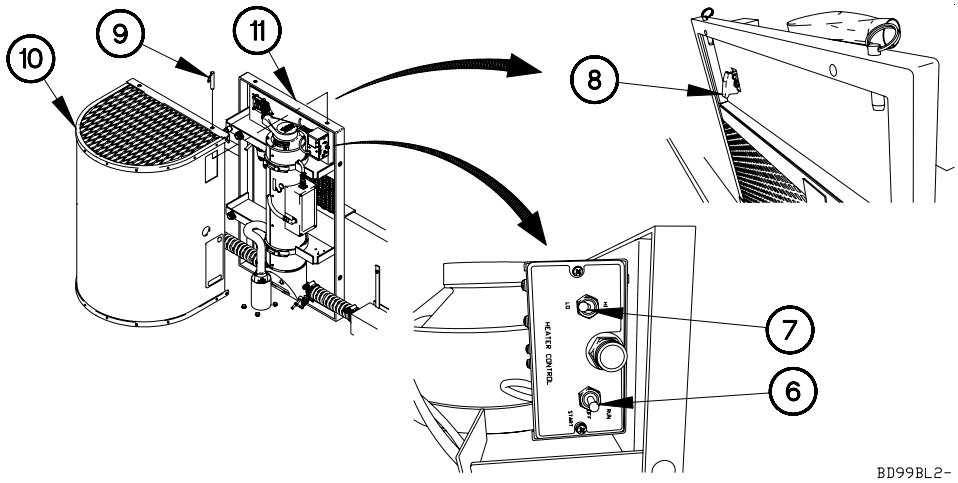
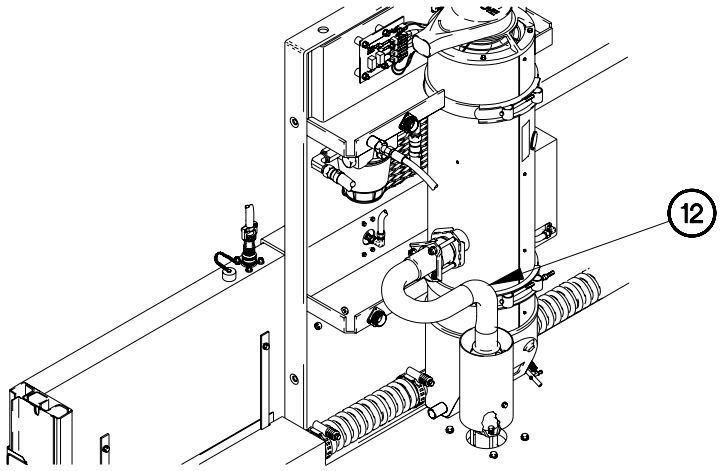


Table 9. Preventive Maintenance Checks and Services (PMCS) - Weekly - Models M1083A1, M1084A1, M1085A1, and M1086A1- Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Weekly		Cargo Area Arctic Heater (if equipped) - Continued	3. Check fuel lines and fittings for leaks.	Any fuel leak is evident.
				4. Check electrical cables for secure connections and for frayed or broken wires.	Cable connections cannot be secured or bare or broken wires are found.
				5. Check Cargo area arctic heater header (12) for exhaust leaks, security of mounting, and missing components.	Cargo area arctic heater header leaks or mounting hardware cannot be secured.



BD99BL3-

Table 9. Preventive Maintenance Checks and Services (PMCS) - Weekly - Models M1083A1, M1084A1, M1085A1, AND M1086A1- Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Weekly		Cargo Area Arctic Heater (if equipped) - Continued	6. Check cargo area arctic heater fuel filter (13) for leaks or damage. 7. Install cover (10) on heater bracket (11) with four pins (9).	Any fuel leak is evident.

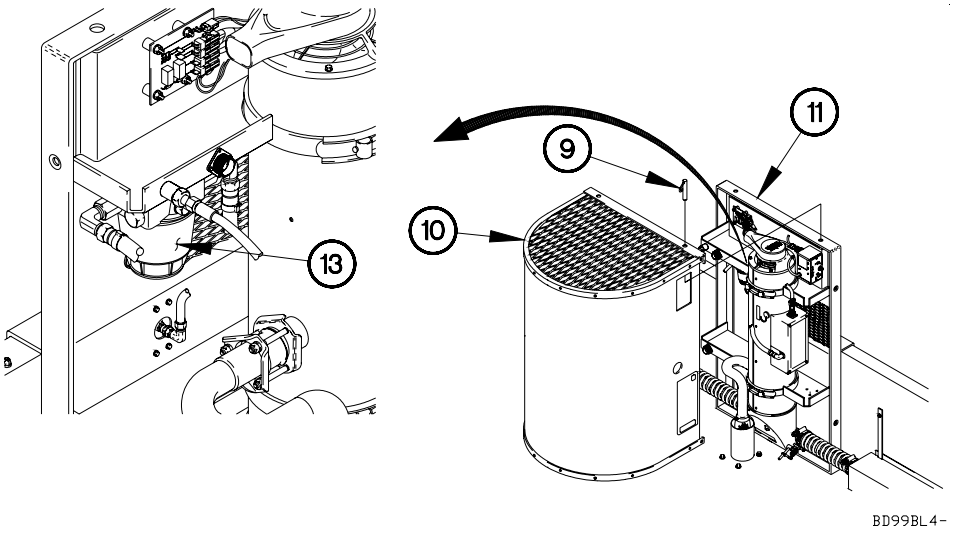
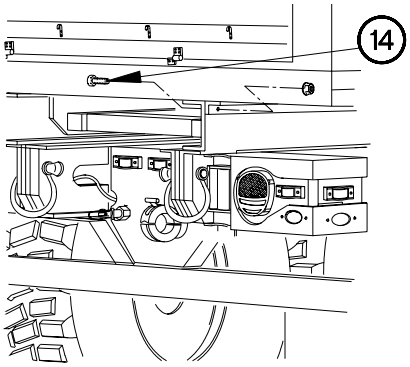
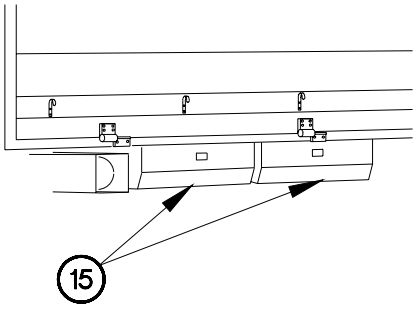


Table 9. Preventive Maintenance Checks and Services (PMCS) - Weekly - Models M1083A1, M1084A1, M1085A1, AND M1086A1- Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Weekly		Cargo Bed	1. Check that cargo bed mounting screws (14) on both sides of vehicle are not broken or missing.	One or more cargo bed mounting screws are broken or missing.
				2. Check inside panel stowage compartments (15) underneath cargo bed for obvious damage.	



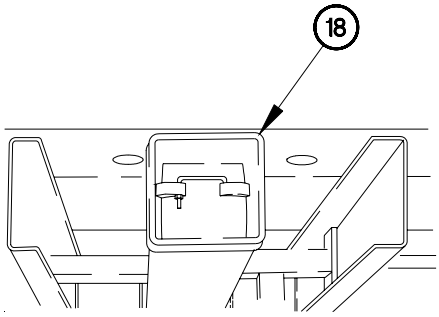
BD99BL5-

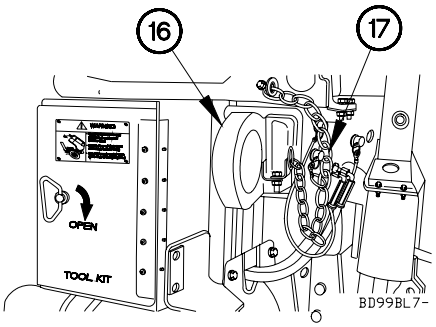


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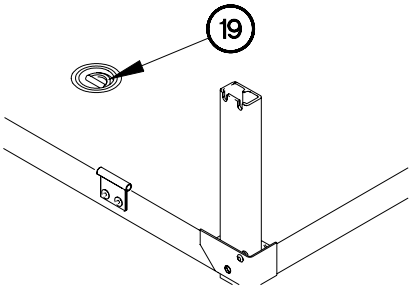
Table 9. Preventive Maintenance Checks and Services (PMCS) - Weekly - Models M1083A1, M1084A1, M1085A1, AND M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Weekly		Cargo Bed - Continued	3. Check lift beam (16) on both sides of vehicle for damage. Check that lift beam lock pin (17) is not missing or damaged. 4. Check spreader bar (18) on both sides for damage.	Lift beam is damaged, or lock pin is missing or damaged, and lift beam is required for vehicle mission.





				5. Check for missing or damaged cargo bed tiedown rings (19).	



M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued 0103 00

Monthly PMCS Procedures for Models M1083A1, M1084A1, M1085A1, AND M1086A1

This illustration will help you perform MONTHLY vehicle PMCS. The callouts match PMCS item number/procedures.

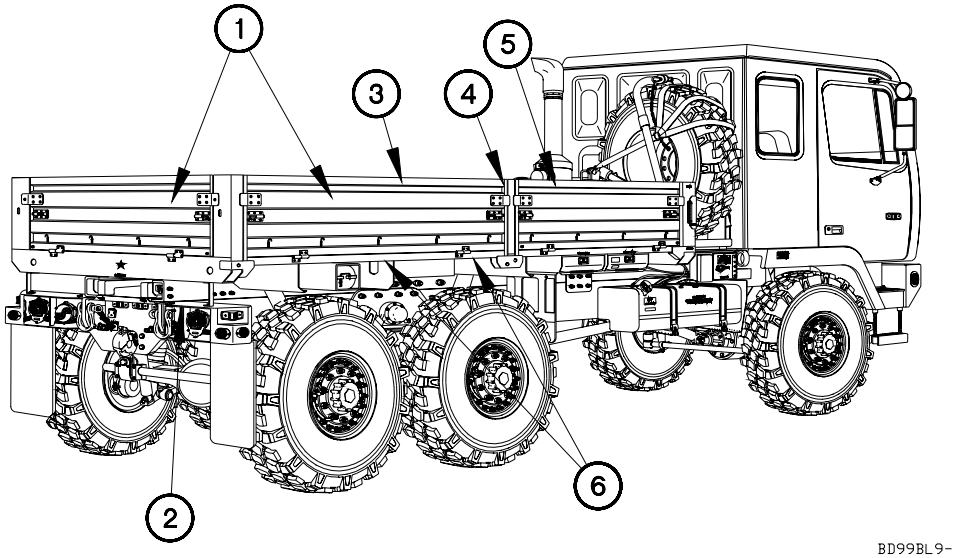


Table 10. Preventive Maintenance Checks and Services (PMCS) - Monthly - Models M1083A1, M1084A1, M1085A1, and M1086A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly		Cargo Bed Side Panels and Tailgate	1. Check that cargo bed side panels (1) and tailgate (2) are not bent or damaged.	
				NOTE Hinges and latches on cargo bed side panels and tailgate are the same.	
				2. Check cargo bed side panel and tailgate hinges (3) for damage and broken welds.	Cargo bed side panel or tailgate hinge is damaged, or weld is broken.

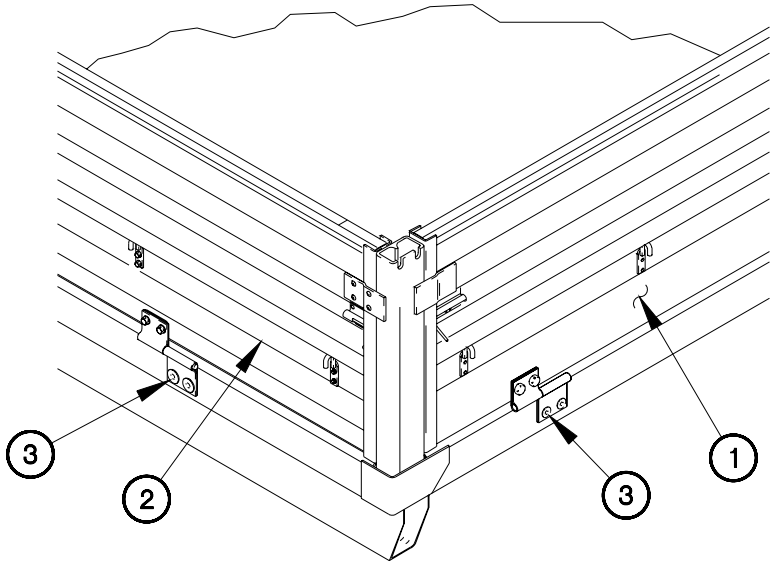


Table 10. Preventive Maintenance Checks and Services (PMCS) - Monthly - Models M1083A1, M1084A1, M1085A1, and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly		Cargo Bed Side Panels and Tailgate - Continued	3. Check cargo bed side panels (1) and tailgate (2) for missing or damaged latches (4). Ensure that latches securely lock cargo bed side panels and tailgate in raised position.	Latch is missing, damaged, or does not securely lock cargo bed side panel or tailgate in raised position.

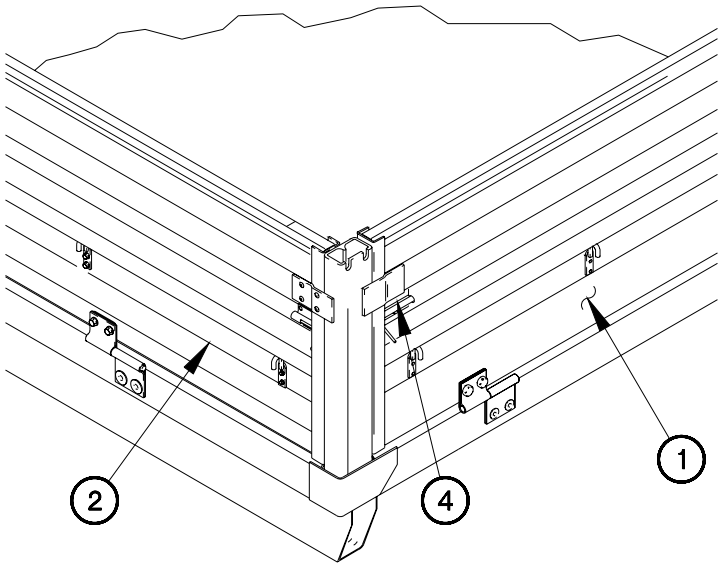


Table 10. Preventive Maintenance Checks and Services (PMCS) - Monthly - Models M1083A1, M1084A1, M1085A1, and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Monthly		Ladder	1. Remove ladder (5) from stowage compartment (WP 0025 00). 2. Check ladder (5) for cracked or broken welds. 3. Stow ladder (5) in stowage compartment (WP 0025 00).	

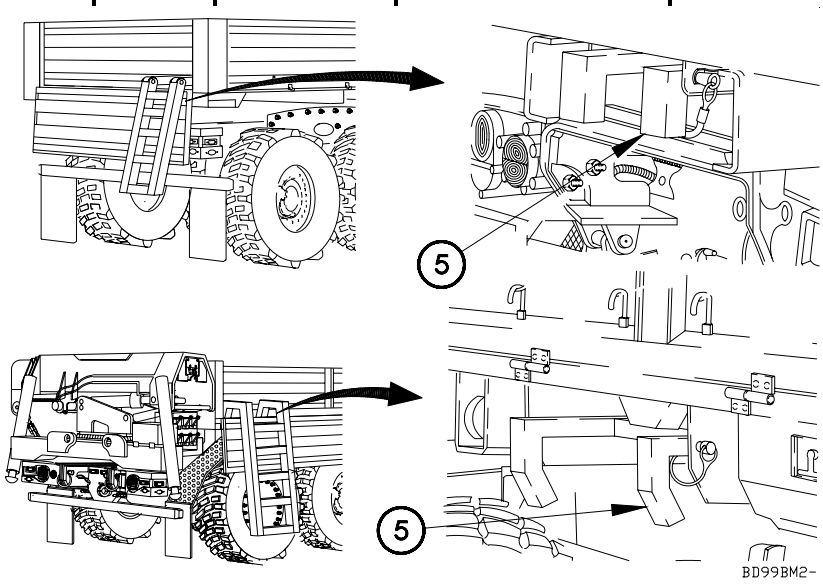


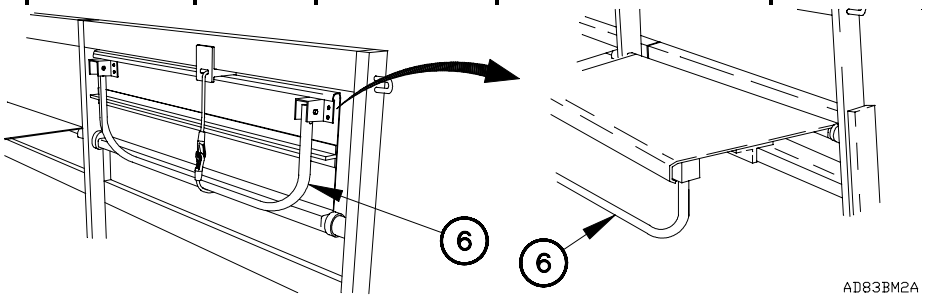
Table 10. Preventive Maintenance Checks and Services (PMCS) - Monthly - Models M1083A1, M1084A1, M1085A1, and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Monthly		Troopseats (if equipped)		

NOTE

Troopseats are checked before vehicle operation only as required to perform mission.

				1. Check that troopseat drop legs (6) are not bent or damaged.	Drop leg(s) is bent or damaged.



				2. Check that drop leg hinge pins (7) are not missing or damaged.	One or more drop leg hinge pins are missing or damaged.

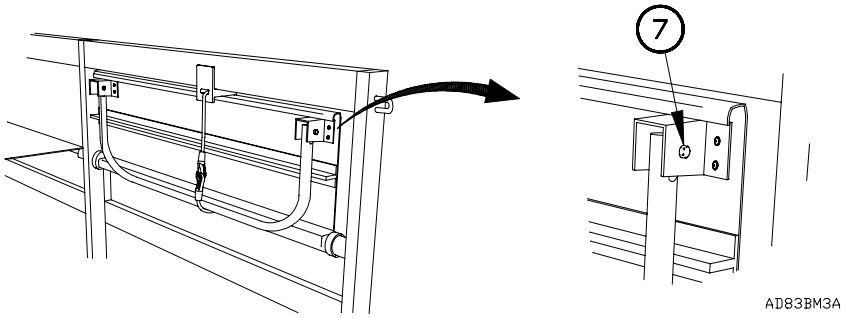
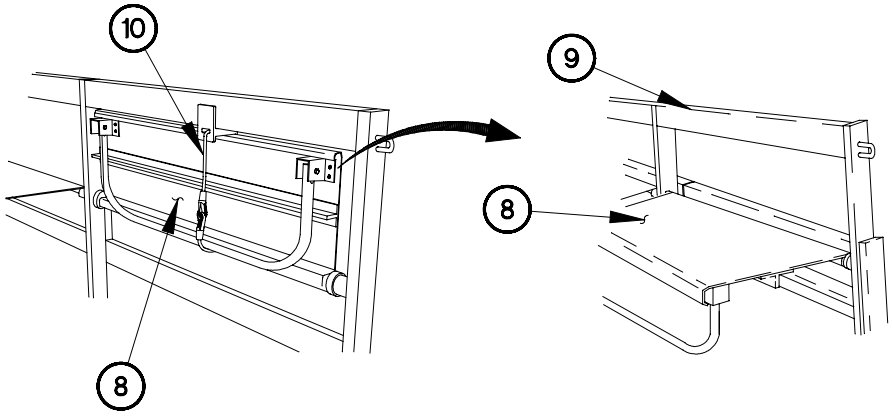


Table 10. Preventive Maintenance Checks and Services (PMCS) - Monthly - Models M1083A1, M1084A1, M1085A1, and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Monthly		Troopseats (if equipped) - Continued	3. Check that seat assembly (8) and/or backrest (9) are not damaged. 4. Check that bungee cords (10) are not missing or damaged. 5. Check that bungee cord (10) keeps seat assembly (8) secure in raised and lowered positions.	Seat assembly and/or backrest are damaged.



AD83BM4A

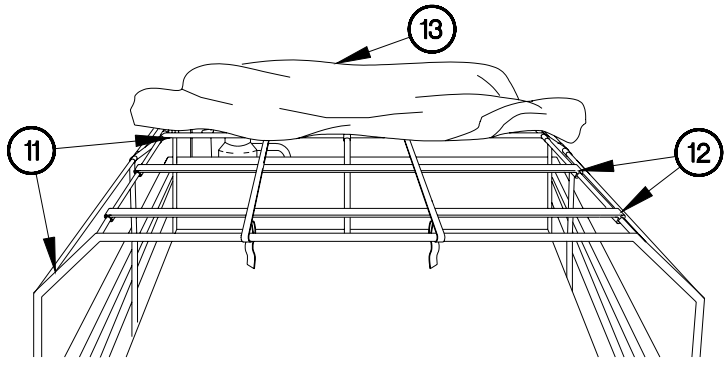
Table 10. Preventive Maintenance Checks and Services (PMCS) - Monthly - Models M1083A1, M1084A1, M1085A1, and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Monthly		Cargo Cover		

NOTE

Cargo cover is checked before vehicle operation only if required to perform vehicle mission.

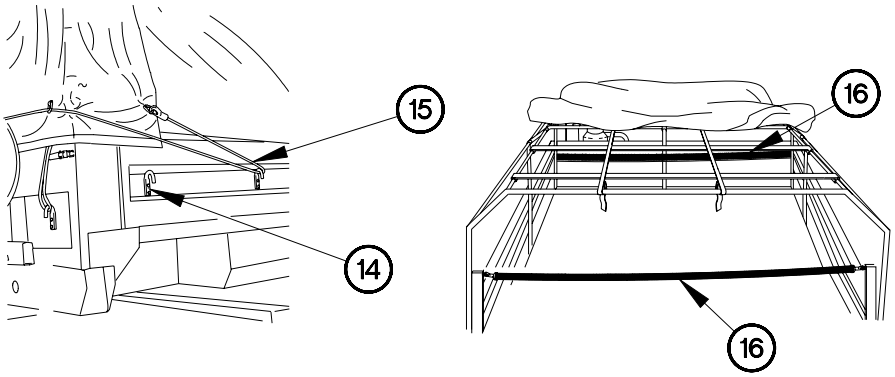
			1. Check for missing, damaged, or bent bows (11). 2. Check for missing, damaged, or bent braces (12). 3. Check cargo cover (13) for tears, punctures, and ripped seams that would interfere with proper operation.	



BD99BM6-

Table 10. Preventive Maintenance Checks and Services (PMCS) - Monthly - Models M1083A1, M1084A1, M1085A1, and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Monthly		Cargo Cover - Continued	4. Check that hook assemblies (14) used to secure cargo cover shock cords (15) are secure and not damaged.	
				5. Check that safety straps (16) are not missing or damaged.	Any strap is missing or damaged.



BD99BM7-

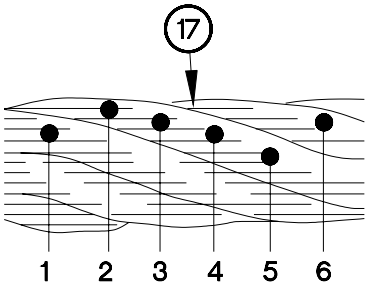
Table 10. Preventive Maintenance Checks and Services (PMCS) - Monthly - Models M1083A1, M1084A1, M1085A1, and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5	Monthly		Light Material Handling Crane (LMHC) (If Equipped)	1. Check LMHC for corrosion, cracks, and security of mounting hardware.	LMHC is damaged or not securely mounted.

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.

			2. Pay out cable (17) completely and inspect for kinks, sharp bends, and broken wires (WP 0023 00).	Cable is damaged or excessively worn. Six, randomly-distributed, broken wires in any 6 in. (15 CM) section or three broken wires on bundle (breaks 3, 4, 5) in a 6 in. (15 cm) section.



BD99BM8-

Table 10. Preventive Maintenance Checks and Services (PMCS) - Monthly - Models M1083A1, M1084A1, M1085A1, and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5	Monthly		Light Material Handling Crane (LMHC) (If Equipped) - Continued	3. Check for kinking, crushing, or any other damage resulting in distortion of the cable structure. 4. Check security of electrical connectors on overload shutdown box. 5. Inspect electrical cable for cracking, fraying, and chaffing.	Wiring is frayed, cracked, or excessively worn.
6	Monthly	0.1	Oil Can Points	Lubricate all oil can points with OE/HDO specified for ambient temperature. The operator/crew is responsible for lubricating the following points: 1. Tailgate hinge pins 2. Intermediate hinge pins 3. Side hinge pins	

Table 10. Preventive Maintenance Checks and Services (PMCS) - Monthly - Models M1083A1, M1084A1, M1085A1, and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
6	Monthly	0.1	Oil Can Points - Continued	4. Cargo bed tiedown rings. 5. Cab Hydraulic Lift Cylinder.	

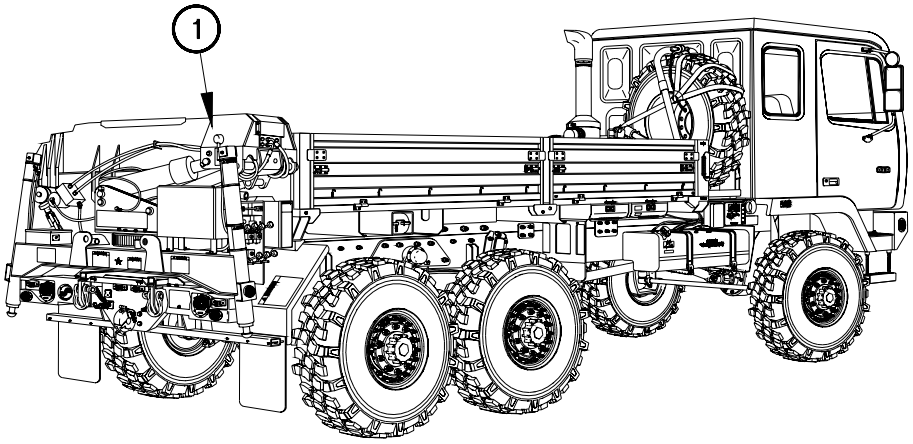
DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Oil Can Points	As required	OE/HDO-10	OE/HDO-10	OEA

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Before PMCS Procedures for Models M1084A1 and M1086A1

These illustrations will help you perform BEFORE vehicle PMCS. The callouts match PMCS item number/procedures.



BD99BM9-

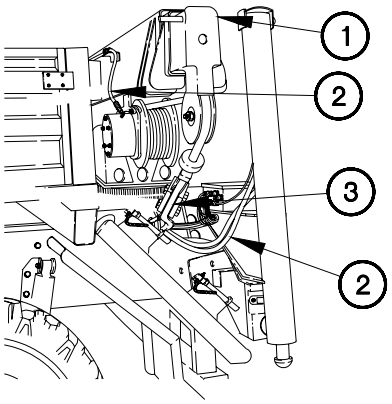
Table 11. Preventive Maintenance Checks and Services (PMCS) - Before - Models M1084A1 and M1086A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before		Material Handling Crane (MHC)		

NOTE

M1084A1/M1086A1 Material Handling Crane (MHC) is checked before vehicle operation if it will be operated as part of vehicle mission.

				1. Check M1084A1/M1086A1 MHC (1) for loose parts, oil leaks, damage to hydraulic hoses (2) and tubes, and other obvious damage.	Class III leak is evident.
				2. Check hook assembly (3) for presence of safety latch and retaining pin.	Safety latch or retaining pin is missing or inoperable.

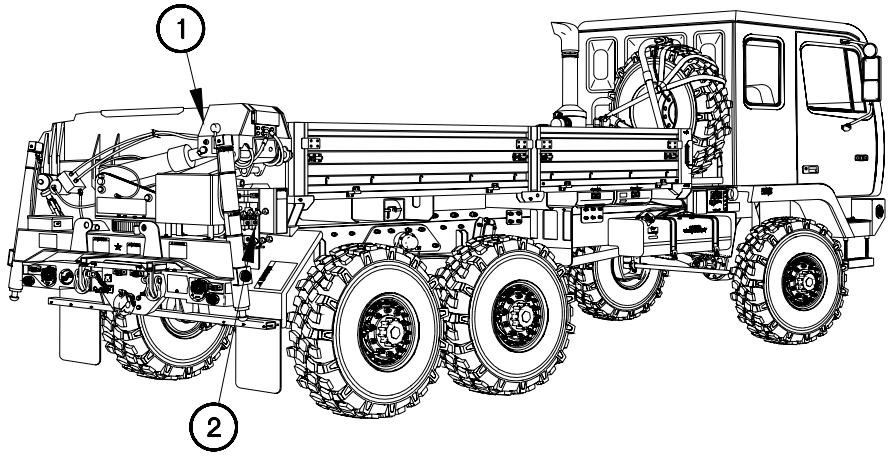


M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

During PMCS Procedures for Models M1084A1 and M1086A1

These illustrations will help you perform DURING vehicle PMCS. The callouts match PMCS item number/procedures.



BD99BN1-

Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Material Handling Crane (MHC) Operation		

WARNING

Keep hands and feet clear of outriggers during operation. Failure to comply may result in injury to personnel.

NOTE

Position outrigger pads as required so that ends of outriggers lower to outrigger pad sockets.

			1. Prepare M1084A1/ M1086A1 MHC for use (WP 0030 00). 2. Set up outrigger pads (1) (WP 0030 00).	

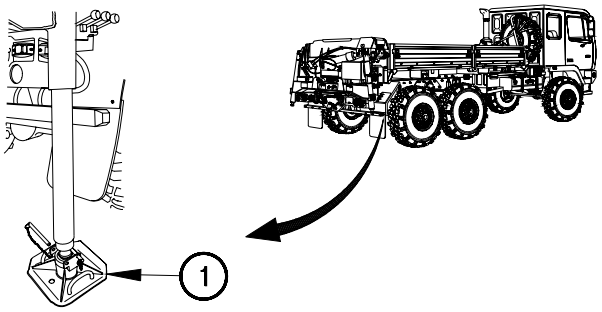


Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Material Handling Crane (MHC) Operation - Continued	3. Check that two pins (2) are attached to each pad.	Pin(s) is damaged or missing.
				4. Place LH (3) and RH (4) O/R JACK lever in down position until outrigger (5) lowers to ground.	Outrigger cylinder will not lower completely to ground.

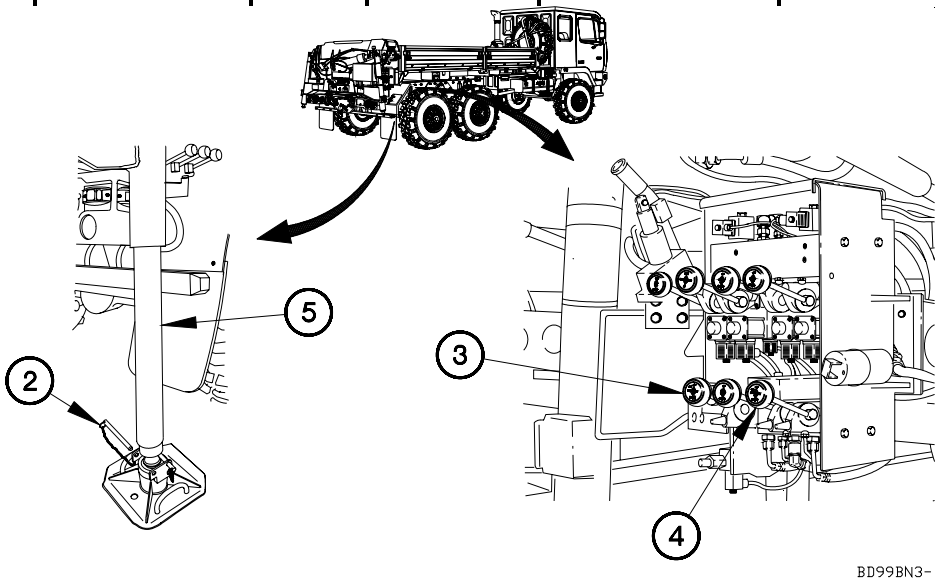


Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Material Handling Crane (MHC) Operation - Continued	5. Check boom angle indicator (6) for damage.	Boom angle indicator is damaged and does not give proper reading.

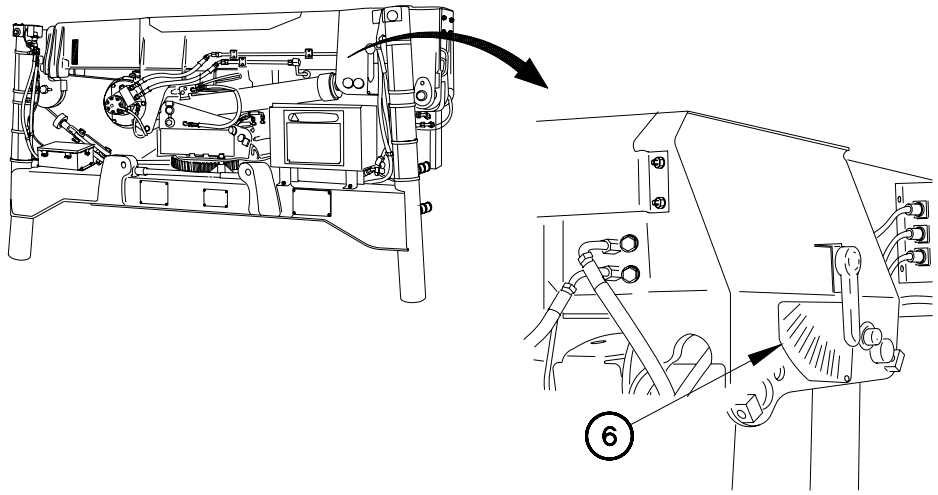
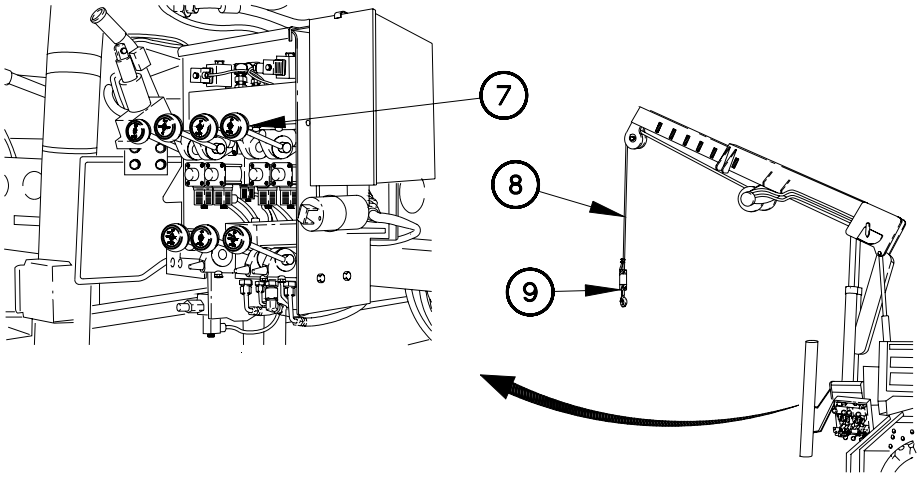


Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Material Handling Crane (MHC) Operation - Continued	6. Move HOIST lever (7) to DOWN position and pay out cable (8) approximately 12 in. (31 cm). 7. Disconnect load hook (9).	Cable drum will not pay out.



BD99BN5-

Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Material Handling Crane (MHC) Operation - Continued		

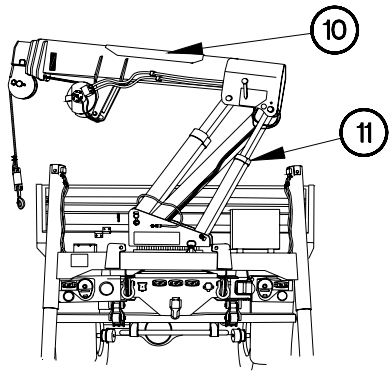
WARNING

Do not operate Material Handling Crane (MHC) unless outriggers are set up and MHC is level from side to side. Failure to comply may result in serious injury or death to personnel.

NOTE

MHC will not operate if vehicle is not level or outriggers are not extended to the ground.

				8. Raise boom (10) and mast (11) to operating position (WP 0030 00).	Lift and erection cylinders do not raise mast and boom completely before stopping.



BD99BN6-

Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Material Handling Crane (MHC) Operation - Continued	9. Check that turntable bearing retaining pin (12) is not missing or damaged.	

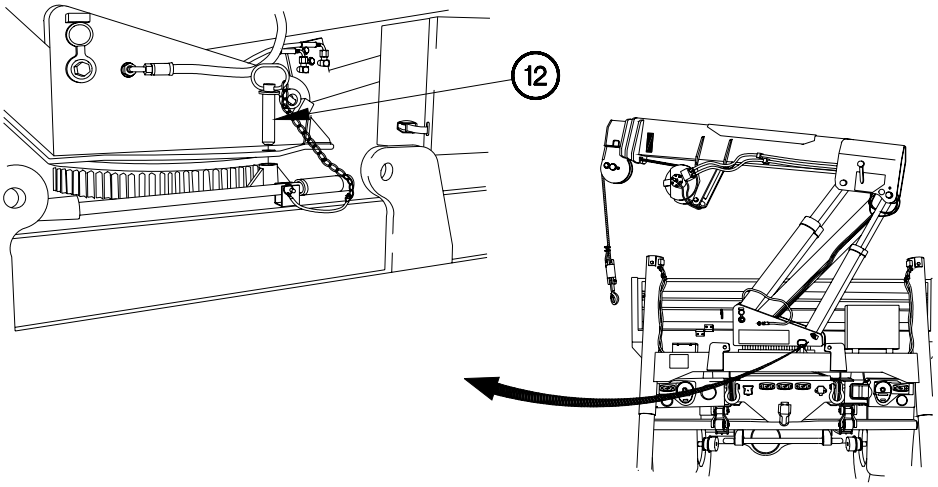


Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Material Handling Crane (MHC) Operation - Continued	10. Place SWING lever (13) to CW position (WP 0030 00) to move boom (10) to right.	Boom does not rotate to right.
				11. Place SWING lever (13) to CCW position (WP 0030 00) to move boom (10) to left.	Boom does not rotate to left.

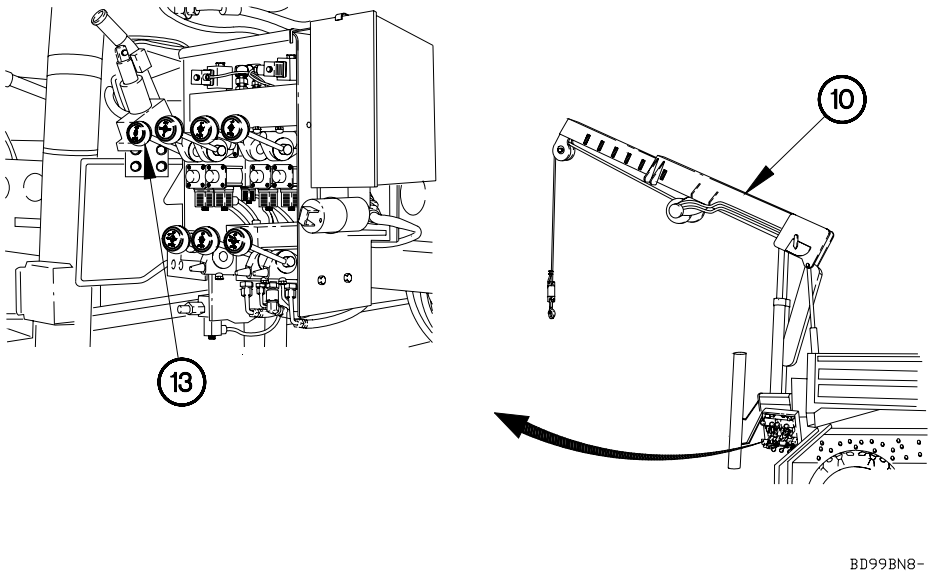


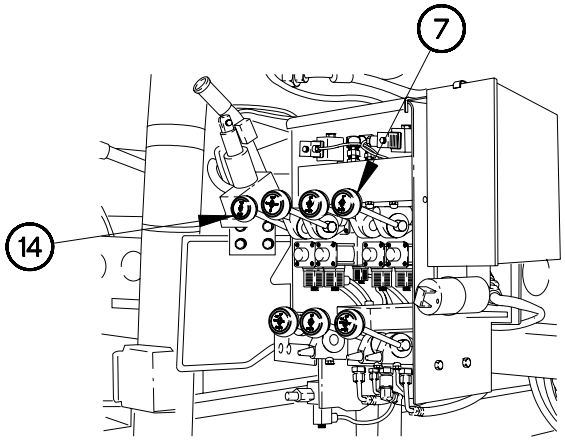
Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Material Handling Crane (MHC) Operation - Continued		

CAUTION

Keep hook assembly at least 2 ft (0.6 m) from end of boom. If hook assembly hits end of boom, Material Handling Crane (MCH) will lose power for several seconds. Failure to comply will result in damage to equipment.

				12. Place TELESCOPE lever (14) to OUT position and HOIST lever (7) to DOWN position (WP 0030 00) to extend boom.	Boom does not extend or cable does not pay out.



BD99BN9-

Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Material Handling Crane (MHC) Operation - Continued	13. Check all three sections of boom extension (15) for broken welds and other obvious damage. 14. Place TELESCOPE lever (14) to IN position and HOIST lever (7) to UP position (WP 0030 00) to retract boom.	Any broken welds or other obvious damage are found. Boom does not retract or cable does not pay in.

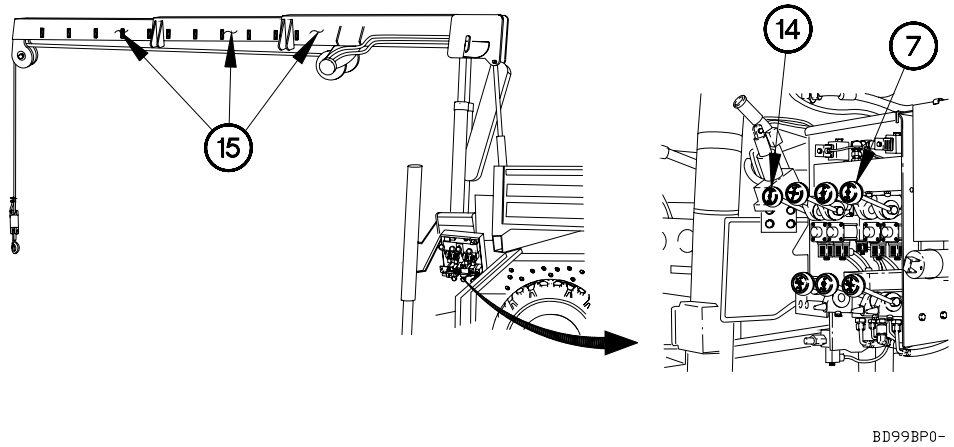


Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Material Handline Crane (MHC) Operation - Continued	15. Place BOOM lever (16) to UP position (WP 0030 00) to increase boom (10) angle.	Boom angle does not increase.
				16. Place BOOM lever (16) to DOWN position (WP 0030 00) to decrease boom (10) angle.	Boom angle does not decrease.

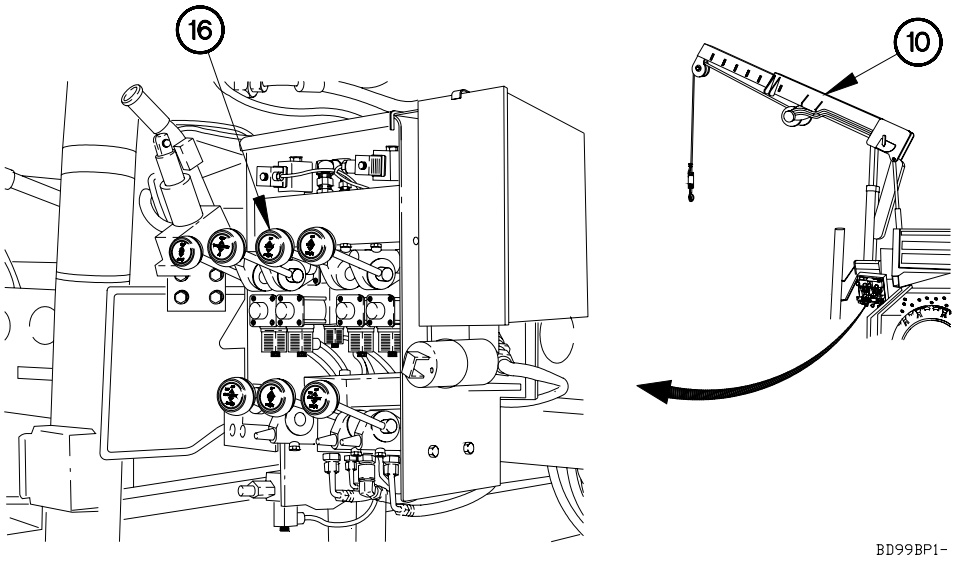


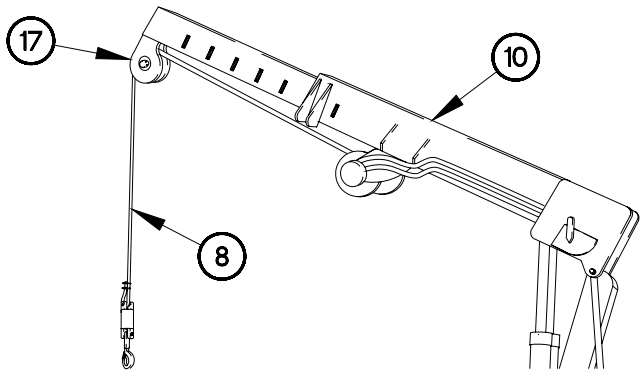
Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Material Handling Crane (MHC) Operation - Continued		

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.

				17. Check that part of cable (8) which is visible for kinks, frays, or breaks.	Kinks, frays, or breaks in cable are found.
				18. Check that pulley (17) at end of boom (10) is mounted securely, turns smoothly, and is not damaged.	Pulley is damaged, not mounted securely, or does not turn smoothly.



BD99BP2-

Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

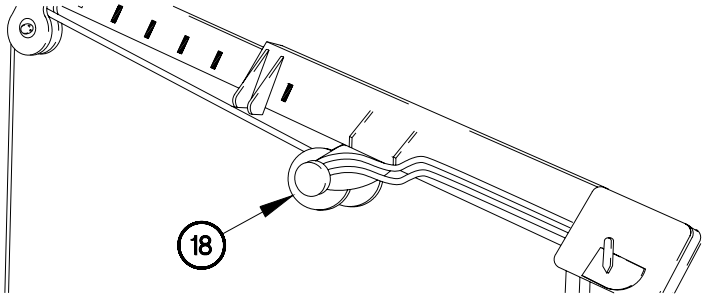
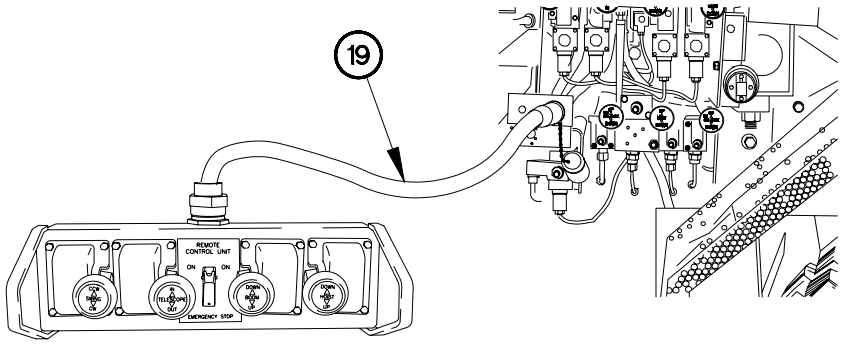
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Material Handling Crane (MHC) Operation - Continued	19. Check that hoist (18) is mounted securely and is not damaged.	Hoist is not mounted securely or is damaged.
				 BD99BP3-	
2	During		Material Handling Crane (MHC) Remote Controls	1. Check remote control cable (19) for cracked insulation and damage to plugs on cable ends.	Insulation is cracked and bare wire is exposed or cable plugs are damaged.
				 BD99BP4-	

Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Remote Controls - Continued	2. Check REMOTE CONTROL UNIT (20) for broken controls or other obvious damage.	
				3. Check receptacle (21) on REMOTE CONTROL UNIT (21) for damaged or missing pins.	Damaged or missing pins are found.

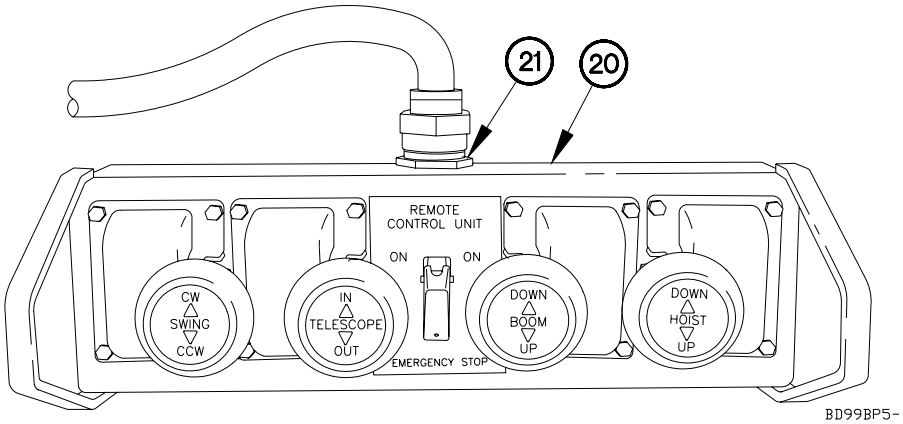
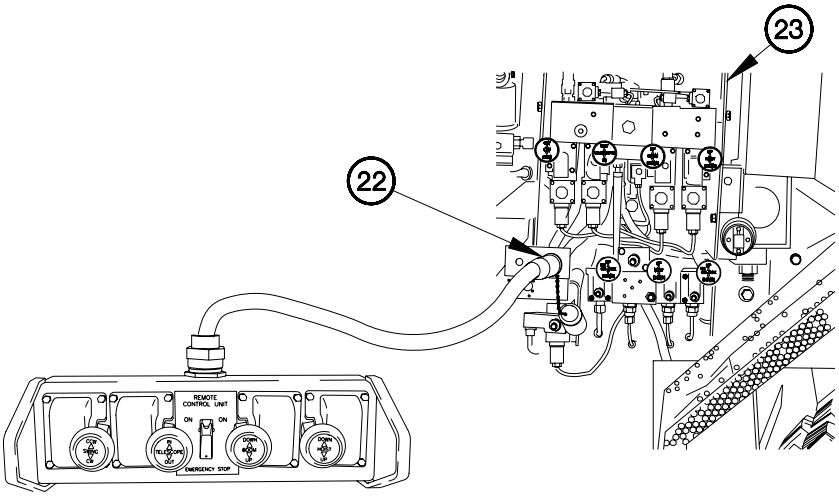


Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Remote Controls - Continued	4. Check remote control receptacle (22) on MHC control panel for damaged or missing pins (23).	Damaged or missing pins are found.



BD99BP6-

Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Remote Controls - Continued		

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 Material Handling Crane (MHC) with REMOTE CONTROL UNIT. Failure to comply may result in serious injury or death to personnel.

Keep boom clear of all electrical lines and other obstacles while operating Material Handling Crane (MHC). Failure to comply may result in serious injury or death to personnel.

				5. Connect REMOTE CONTROL UNIT (20) (WP 0030 00).

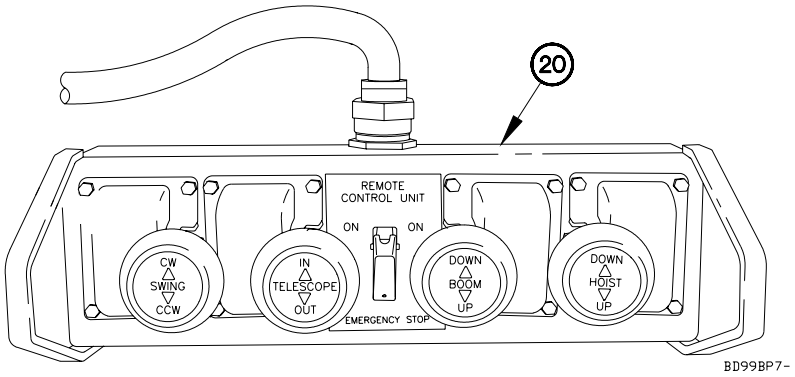


Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Remote Controls - Continued	6. Place SWING lever (24) to CW position to move boom to right.	Boom does not rotate to right.
				7. Place SWING lever (24) to CCW position to move boom to left.	Boom does not rotate to left.

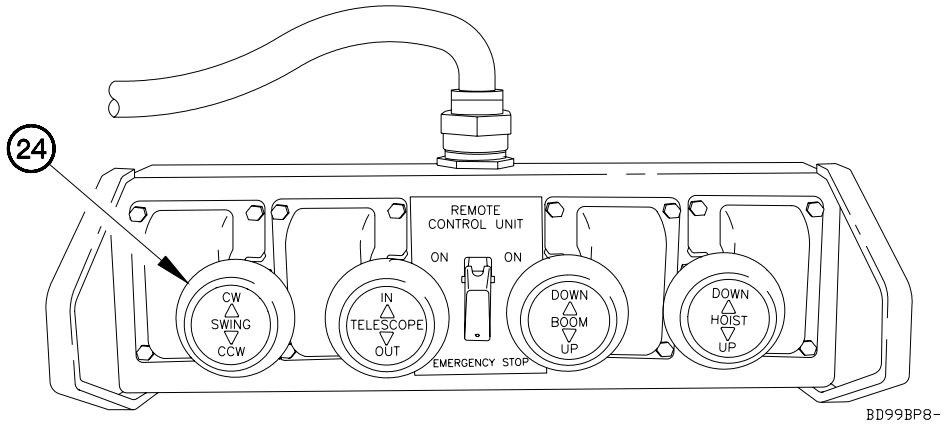


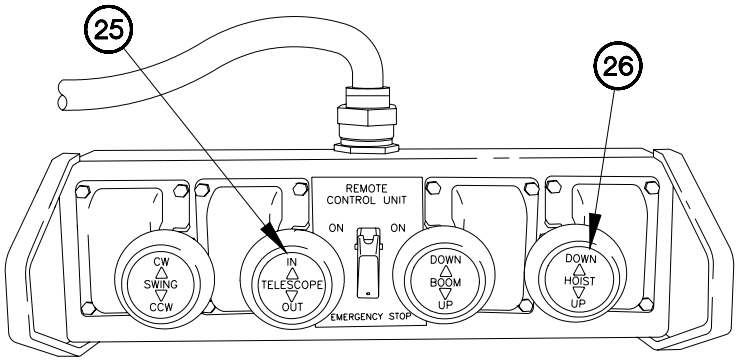
Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Remote Controls - Continued		

CAUTION

Keep hook assembly at least 2 ft (0.6 m) from end of boom. If hook assembly hits end of boom, Material Handling Crane (MHC) will lose power for several seconds. Failure to comply may result in damage to equipment.

				8. Place TELESCOPE lever (25) to OUT position and HOIST lever (26) to DOWN position to extend boom.	Boom does not extend or cable does not pay out.



BD99BP9-

Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Remote Controls - Continued	9. Place TELESCOPE lever (25) to IN position and HOIST lever (26) to UP position to retract boom.	Boom does not retract or hoist does not reel in cable.
				10. Place BOOM lever (27) to UP position to increase boom angle.	Boom angle does not increase.

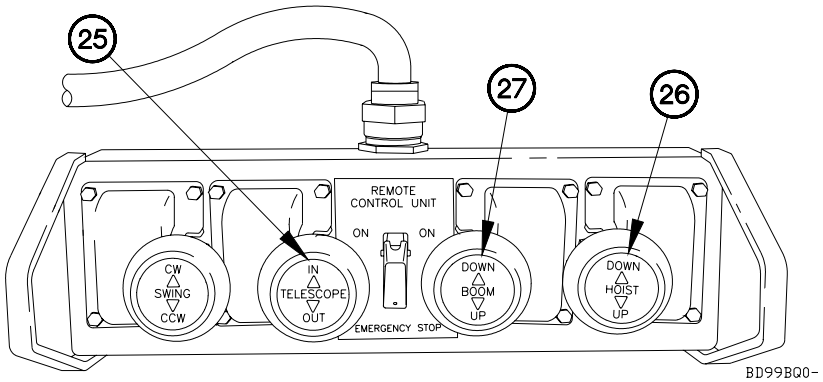
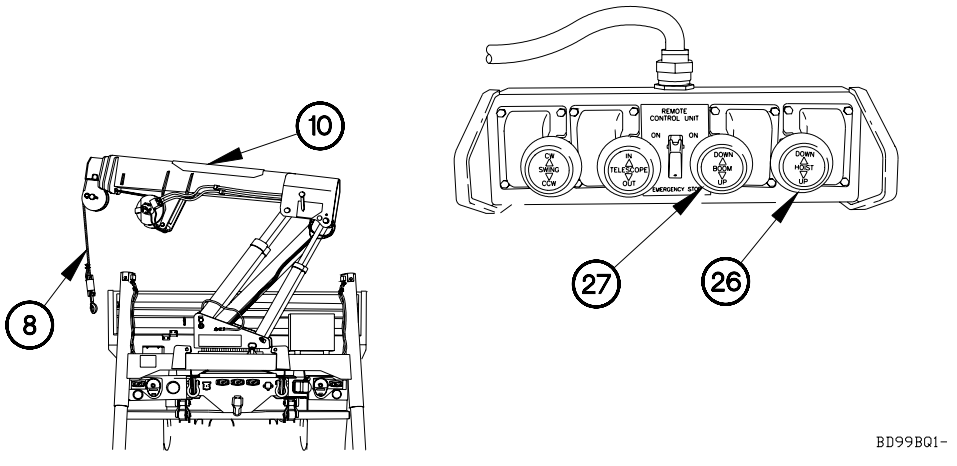


Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Remote Controls - Continued	11. Place BOOM lever (27) to DOWN position to decrease boom (10) angle.	Boom angle does not decrease.
				12. Place HOIST lever (26) to DOWN position to pay out cable (8).	Hoist does not pay out cable.
				13. Place HOIST lever (26) to UP position to reel in cable (8).	Hoist does not reel in cable.



M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued 0103 00

Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Remote Controls - Continued	14. Operate SWING lever (24) to align holes in turntable (28) bearing and install turntable bearing retaining pin (12).	

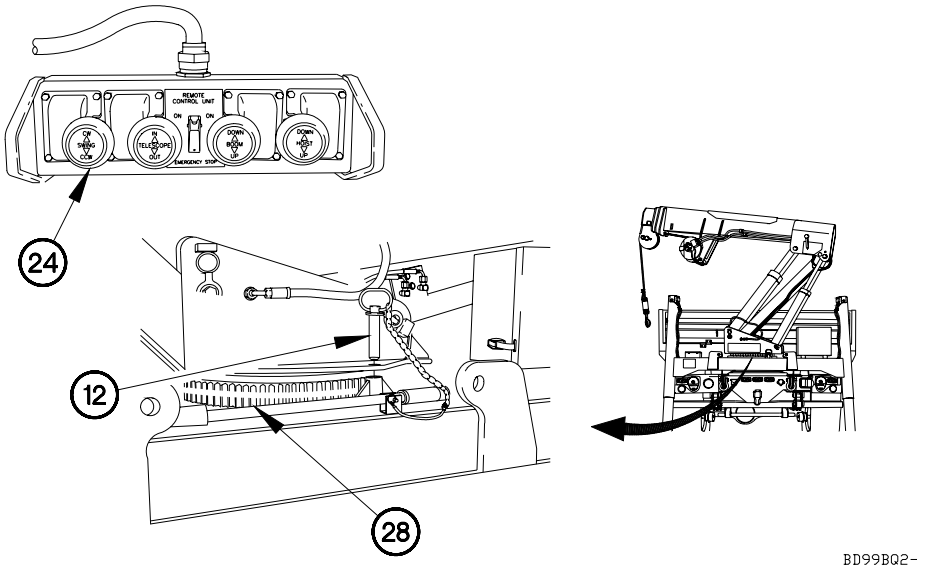
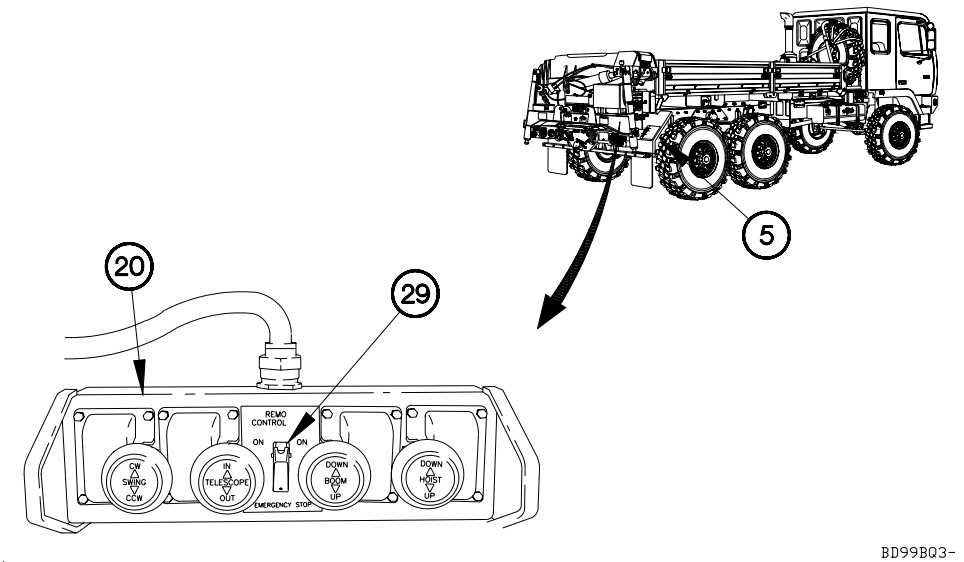


Table 12. Preventive Maintenance Checks and Services (PMCS) - During - Models M1084A1 and M1086A1 - Continued.

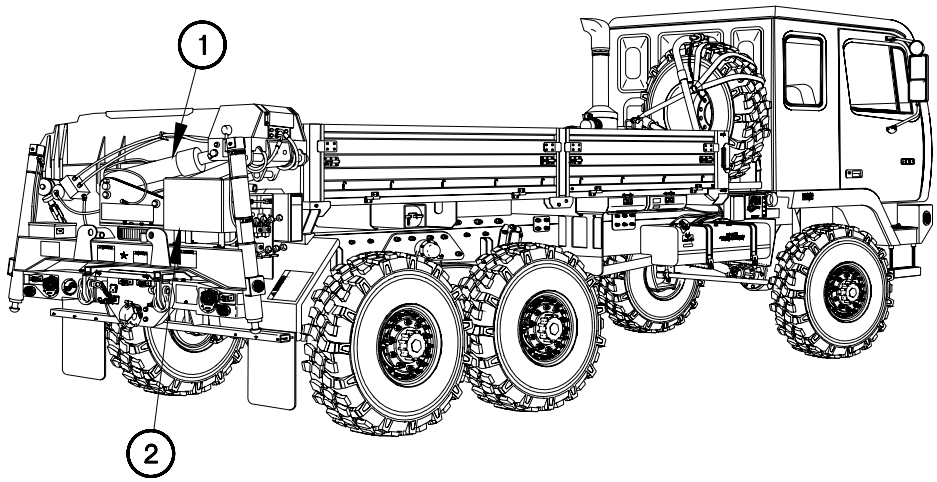
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Remote Controls - Continued	15. Position REMOTE CONTROL UNIT switch (29) to OFF. 16. Disconnect REMOTE CONTROL UNIT (20) (WP 0030 00). 17. Stow MHC (WP 0030 00). 18. Stow outriggers (5) (WP 0030 00).	



M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued 0103 00

Monthly PMCS Procedures for Models M1084A1 and M1086A1

These illustrations will help you perform MONTHLY vehicle PMCS. The callouts match PMCS item number/procedures.



BD99BQ4-

Table 13. Preventive Maintenance Checks and Services (PMCS) - Monthly - Models M1084A1 and M1086A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly		Material Handling Crane (MHC)	1. Check MHC (1) for corrosion, cracks, and security of mounting hardware (2).	MHC is damaged or not securely mounted.

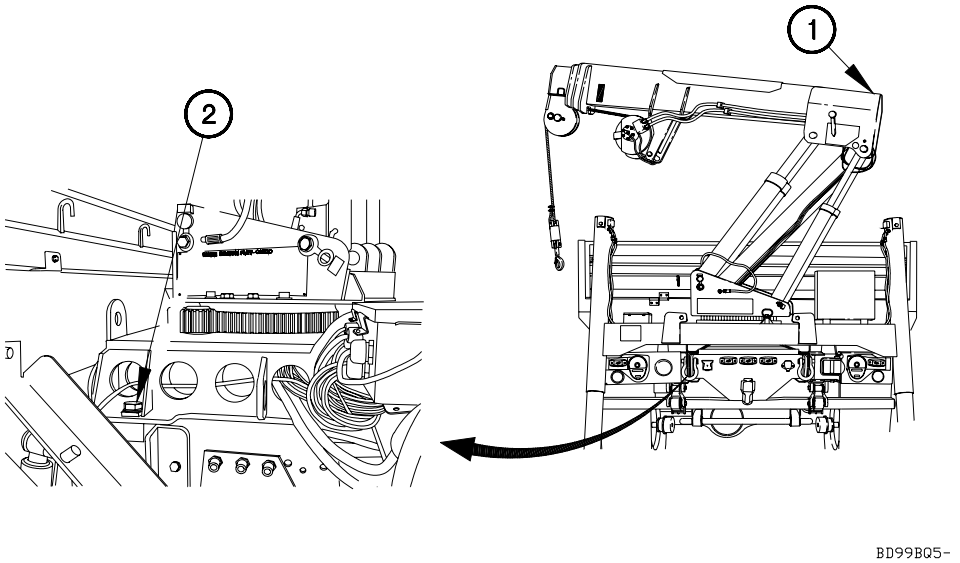


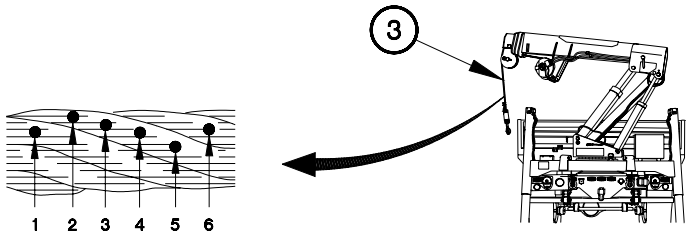
Table 13. Preventive Maintenance Checks and Services (PMCS) - Monthly - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly		Material Handling Crane (MHC) - Continued		

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.

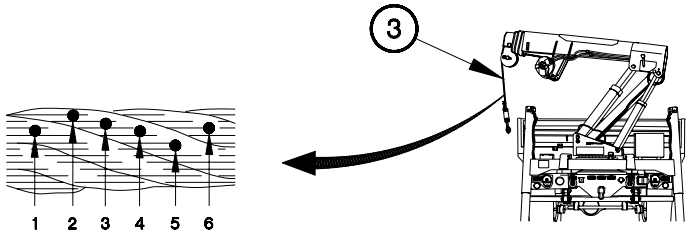
				2. Pay out MHC cable (3) completely (WP 0030 00) and inspect for kinks, sharp bends, abrasions, and broken wires.	Six randomly distributed broken wires in any 6 in. (15 cm) section of cable or three broken wires in one bundle (e.g., breaks 3, 4, 5) in a 6 in. (15 cm) section.



BD99BQ6-

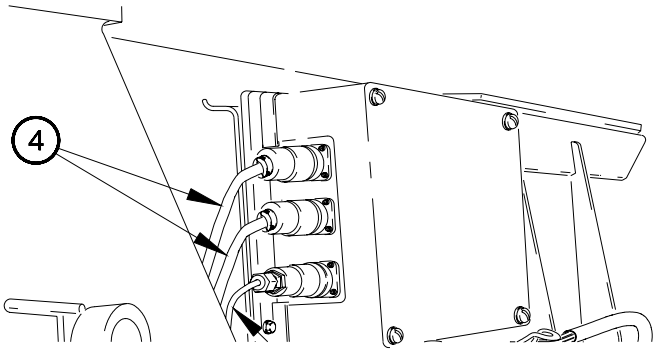
Table 13. Preventive Maintenance Checks and Services (PMCS) - Monthly - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly		Material Handling Crane (MHC) - Continued	3. Check for kinking, crushing, or any other damage resulting in distortion of cable (3) structure.	Cable is kinked or crushed.



BD99BQ7-

				4. Inspect electrical cables (4) for cracking, fraying, and excessive wear.	Electrical cables are frayed, cracked, or excessively worn.



BD99BQ8-

Table 13. Preventive Maintenance Checks and Services (PMCS) - Monthly - Models M1084A1 and M1086A1 - Continued.

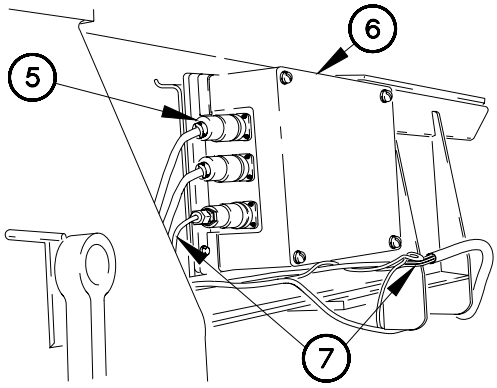
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly		Material Handling Crane (MHC) - Continued	5. Check security of electrical connectors (4) on overload shutdown box (5). 6. Inspect electrical wiring (6) for cracking, fraying, and excessive wear.	 Wiring is frayed, cracked, or excessively worn.
			 BD99BQ9-		
2	Monthly	0.1	Oil Can Points	Lubricate all oil can points with OE/HDO specified for ambient temperature. The operator/crew is responsible for lubricating the following points: 1. MHC control lever pivot points on manual controls.	

Table 13. Preventive Maintenance Checks and Services (PMCS) - Monthly - Models M1084A1 and M1086A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Monthly	0.1	Oil Can Points - Continued	2. MHC hand pump handle mounting/ hinge pins. 3. MHC turntable locking pin. 4. MHC cable hook swivel points.	

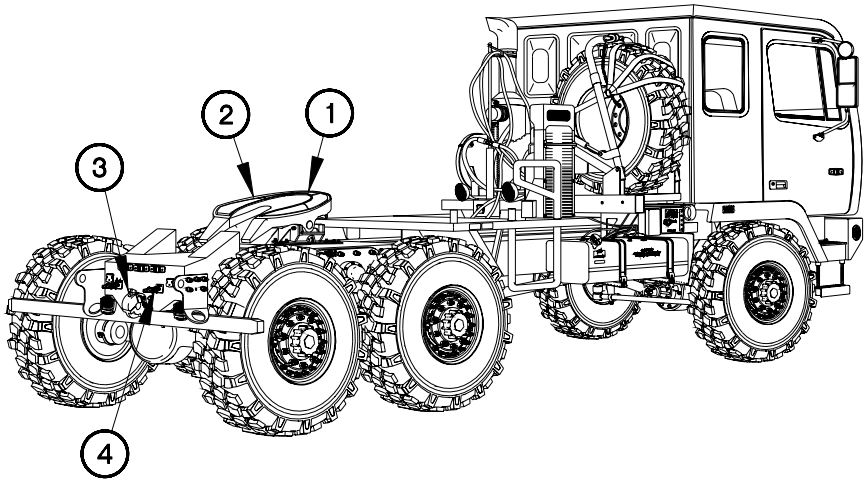
DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Oil Can Points	As required	OE/HDO-10	OE/HDO-10	OEA

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Before PMCS Procedures for Model M1088A1

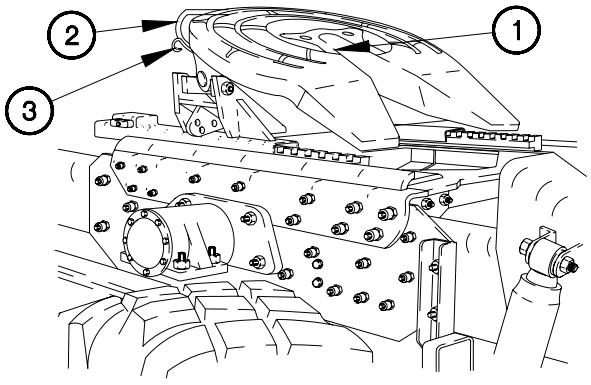
These illustrations will help you perform BEFORE vehicle PMCS. The callouts match PMCS item number/procedures.



BD99BR0-

Table 14. Preventive Maintenance Checks and Services (PMCS) -Before - Model M1088A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before		Fifth Wheel without Semitrailer Coupled	1. Check coupler jaws (1), primary lock-release handle (2), secondary lock-release handle (3), linkage, and locking plunger for damage and proper operation. 2. Check that coupler jaws lock open: a. Pull out secondary lock-release handle (3) and hook assembly into position. b. Pull out primary lock-release handle (2).	Coupler jaws are broken or primary and/or secondary lock-release handles will not operate properly. Coupler jaws fail to lock open.



BD99BR1-

Table 14. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1088A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before		Fifth Wheel without Semitrailer Coupled - Continued	3. Place primary lock-release handle (2) in locked position. 4. Check that coupler jaws (1) stay open with primary lock-release handle (2) in locked position.	

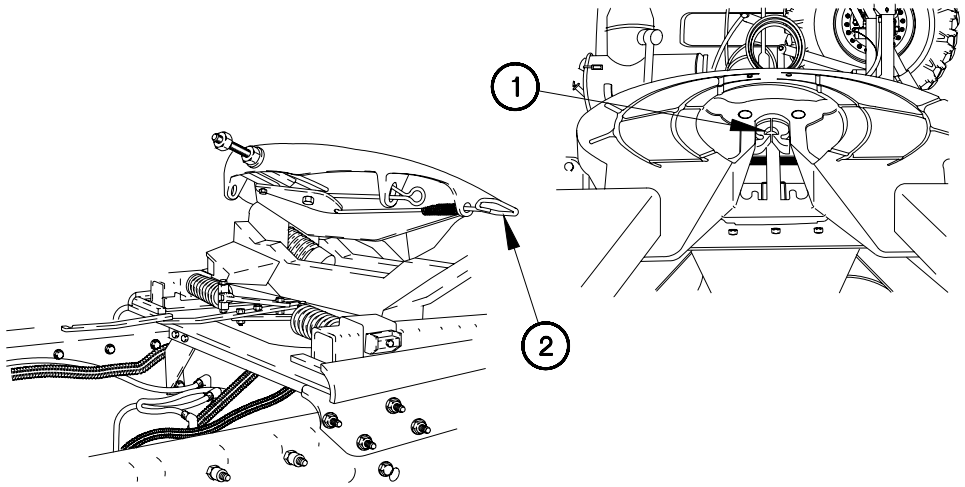
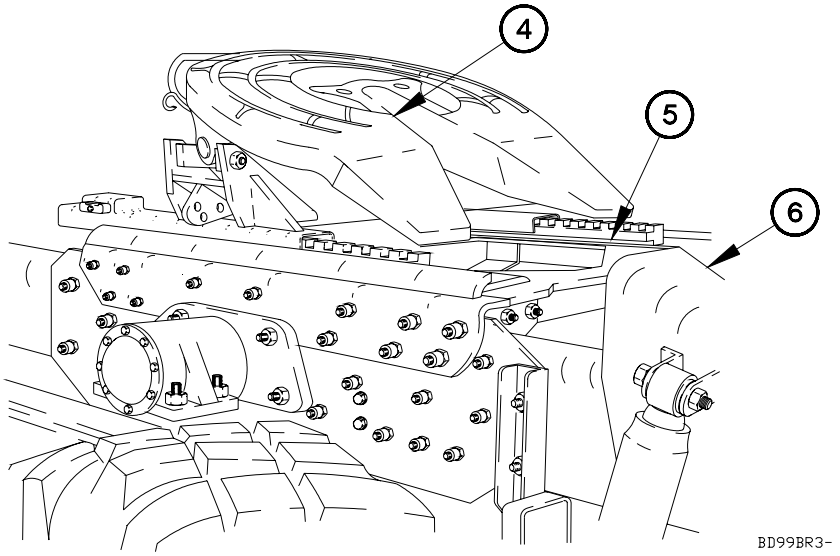


Table 14. Preventive Maintenance Checks and Services (PMCS) -Before - Model M1088A1 - Continued.

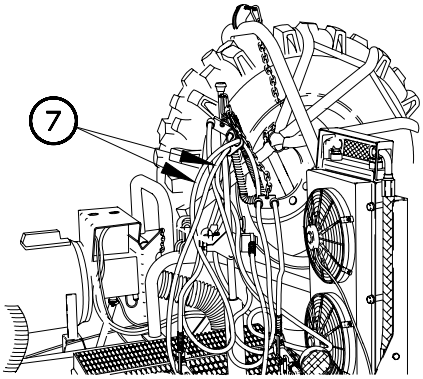
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before	0.1	Fifth Wheel without Semitrailer Coupled - Continued	5. Check that top surface of fifth wheel (4), slide path (5), and guide ramps (6) are lubricated.	



DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26° C)	-15° to -50°F (-26° to -46° C)
Fifth Wheel and Slide Path	As required	GAA	GAA	GAA

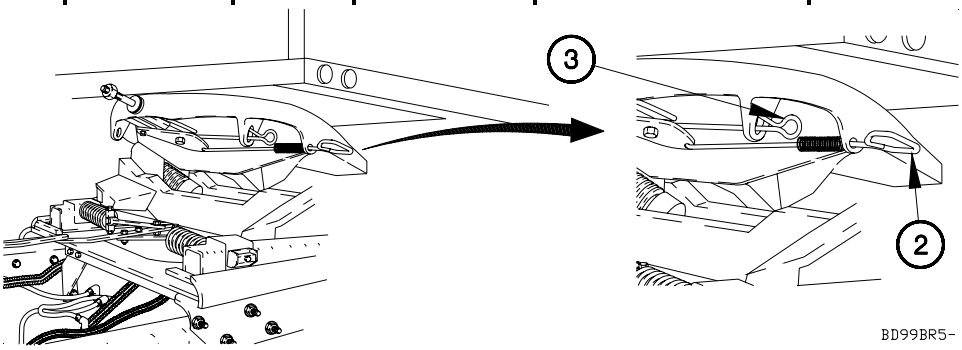
Table 14. Preventive Maintenance Checks and Services (PMCS) -Before - Model M1088A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before		Fifth wheel without Semitrailer Coupled-Continued	6. Check that air brake hoses (7) do not drag on work platform. Refer to WP 0032 00 for adjustment.	



BD99BR4-

2	Before		Fifth Wheel with Semitrailer Coupled	Check that primary lock-release handle (2) and secondary lock-release handle (3) are completely in.	



BD99BR5-

Table 14. Preventive Maintenance Checks and Services (PMCS) -Before - Model M1088A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Before		Semitrailer Air-brake hoses with Semitrailer Coupled	1. Check that air brake hoses (7) are securely connected to semitrailer.	Both air brake hoses cannot be connected to semitrailer.
				2. Check semitrailer air brake hoses (7) and gladhands (8) for leaks and other obvious damage.	Semitrailer air brake hoses or gladhands are leaking or damaged.

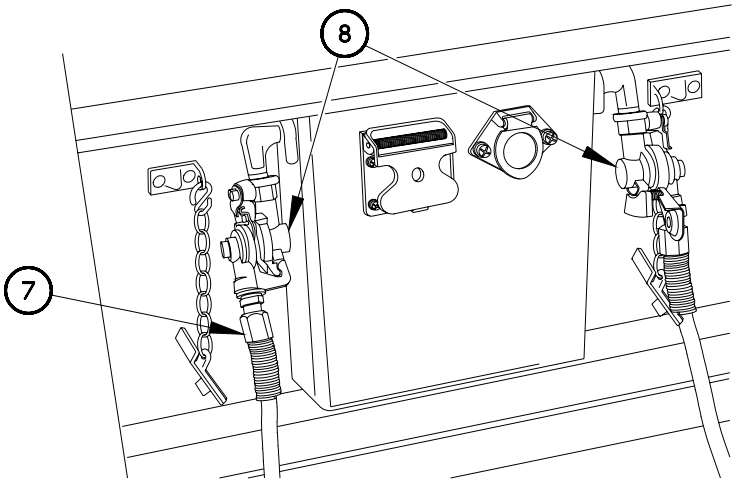


Table 14. Preventive Maintenance Checks and Services (PMCS) -Before - Model M1088A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Before		Semitrailer Air-brake hoses with Semitrailer Coupled - Continued	3. Check that semitrailer air brake hoses (7) do not drag on work platform. Refer to WP 0032 00 for adjustment.	

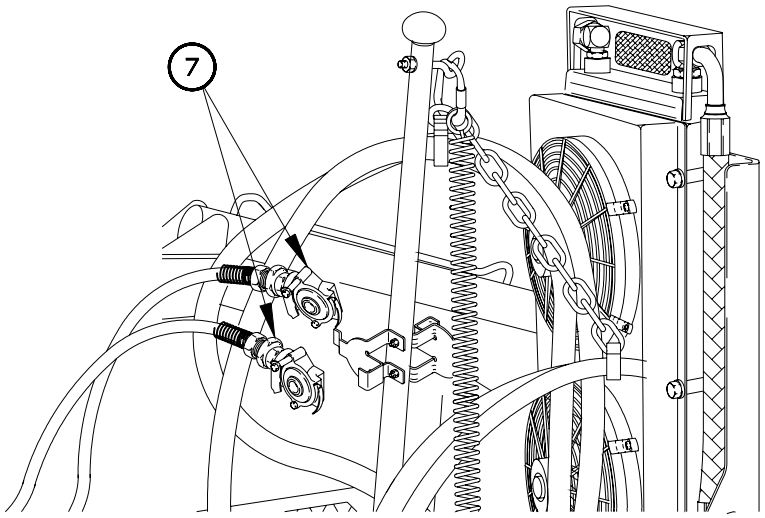
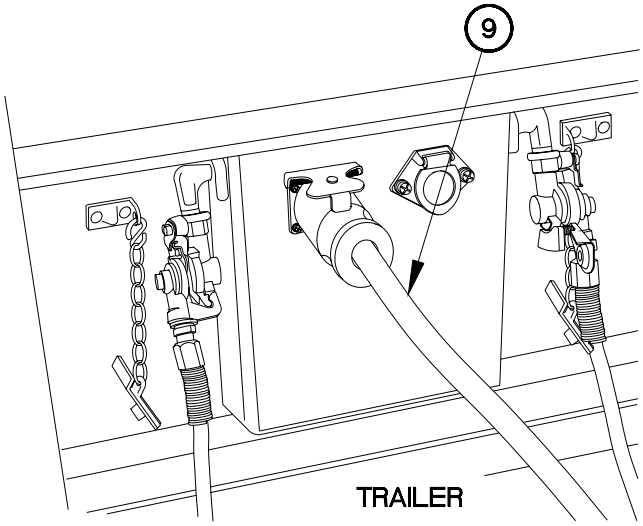


Table 14. Preventive Maintenance Checks and Services (PMCS) -Before - Model M1088A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before		Intervehic-ular Cable with Semitrailer Coupled	1. Check for secure attachment of intervehicular cable (9) to semitrailer.	Intervehicular cable cannot be securely attached to semitrailer.
				2. Check intervehic-ular cable (9) for cracked insulation or bare wires.	Intervehicular cable has bare wires or cracked insulation.

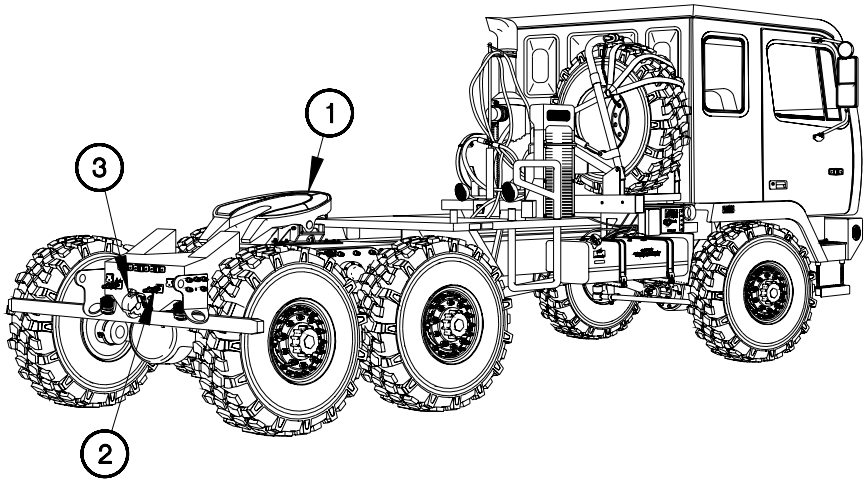


BD99BR8-

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued 0103 00

Weekly PMCS Procedures for Model M1088A1

These illustrations will help you perform WEEKLY vehicle PMCS. The callouts match PMCS item number/procedures.



BD99BR9-

Table 15. Preventive Maintenance Checks and Services (PMCS) - Weekly - Model M1088A1.

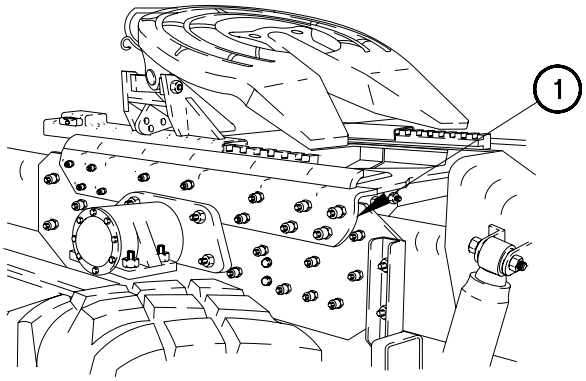
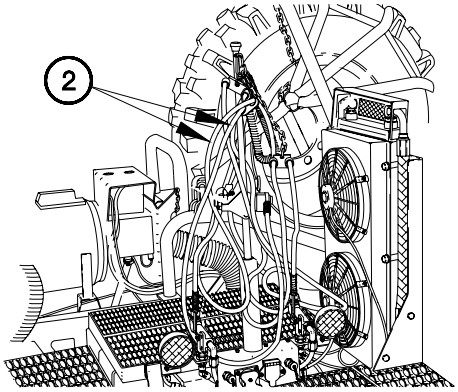
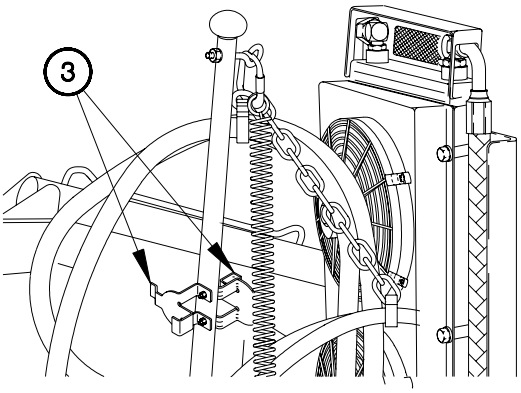
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Weekly		Fifth Wheel without Semitrailer Coupled	Check for loose mounting hardware (1) at fifth wheel base.	Mounting hardware is loose.
				 BD99BS0-	
2	Weekly		Semitrailer Air-brake Hoses without Semitrailer Coupled	1. Check semitrailer air brake hoses (2) and gladhands for leaks and other obvious damage.	Air leak is detected.
				 BD99BS1-	

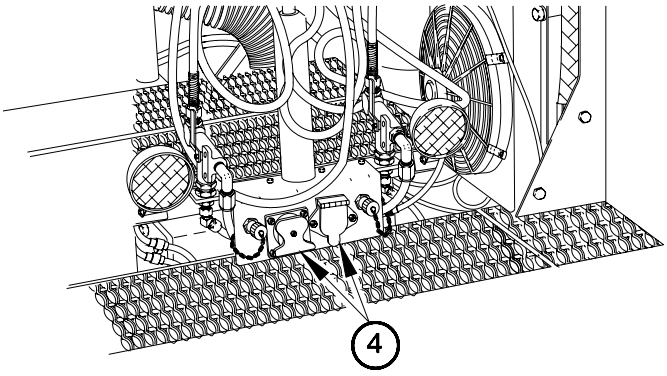
Table 15. Preventive Maintenance Checks and Services (PMCS) - Weekly - Model M1088A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Weekly		Semitrailer Air-brake Hoses without Semitrailer Coupled - Continued	2. Remove dummy couplings (3) from gladhands and check condition of seals.	Seals are damaged.



BD99BS2-

3	Weekly		Semitrailer Electrical Connectors	Check electrical connectors (4) and seals for damage.	



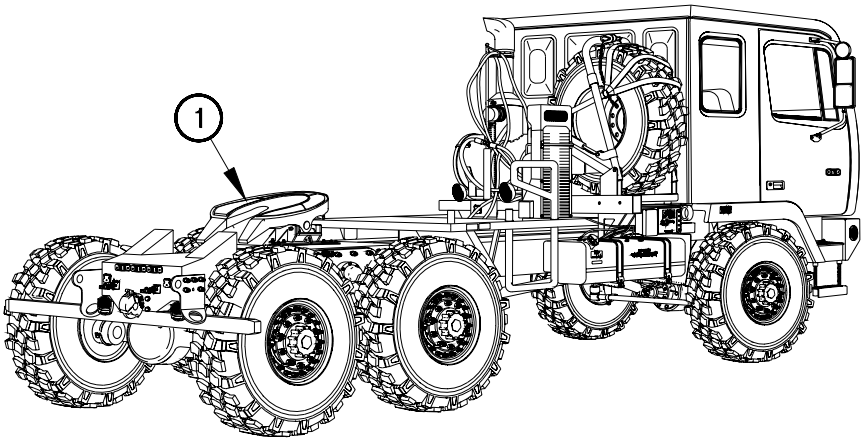
BD99BS3-

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Monthly PMCS Procedures for Model M1088A1

These illustrations will help you perform MONTHLY vehicle PMCS. The callouts match PMCS item number/procedures.



BD99BS4-

Table 16. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1088A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly	0.1	Oil Can Points	Lubricate all oil can points with OE/HDO specified for ambient temperature. The operator/crew is responsible for lubricating the following points: 1. Plunger lock latch 2. Coupler jaw linkage.	

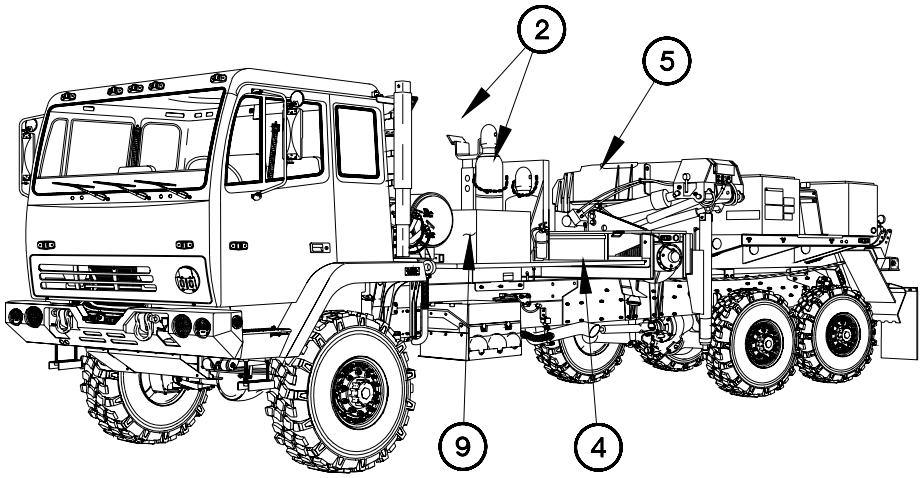
DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Oil Can Points	As required	OE/HDO-10	OE/HDO-10	OEA

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

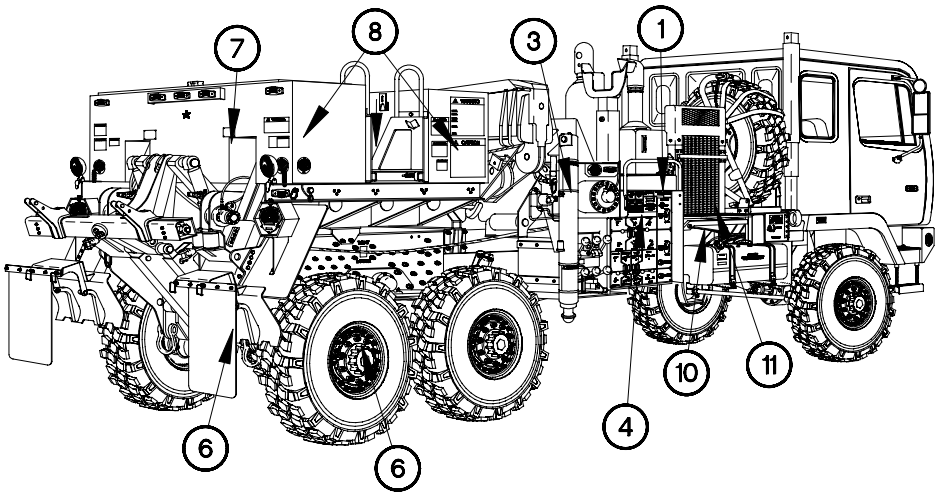
0103 00

Before PMCS Procedures for Model M1089A1

These illustrations will help you perform BEFORE vehicle PMCS. The callouts match PMCS item number/procedures.



BD99BS5-



BD99BS6-

Table 17. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1089A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before		Shutoff and Return Valve		

CAUTION

Shutoff valve and return valve must be opened before Material Handling Crane (MHC), underlift assembly, stifflegs, or 30K winches are operated. Failure to comply may result in damage to equipment.

			1. Check that shutoff (1) and return (2) valves are open. Open valves as required.	
			2. Check that hydraulic hoses (3) are not damaged or leaking.	Class III leak is evident.

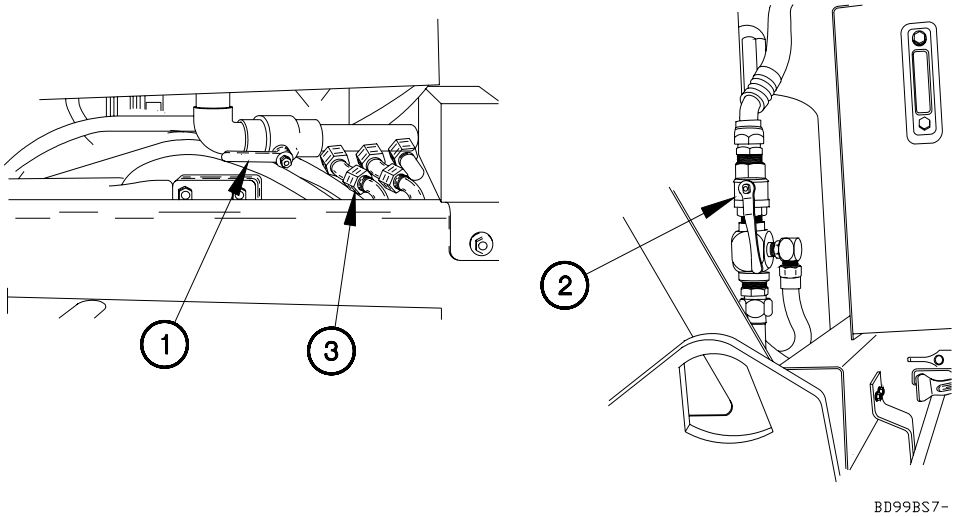
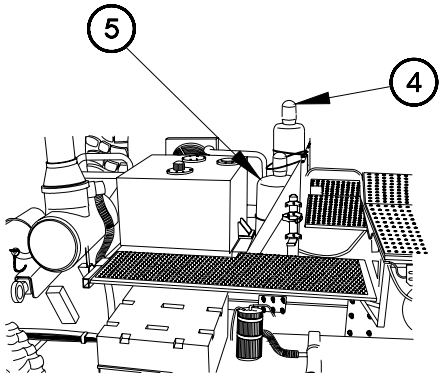
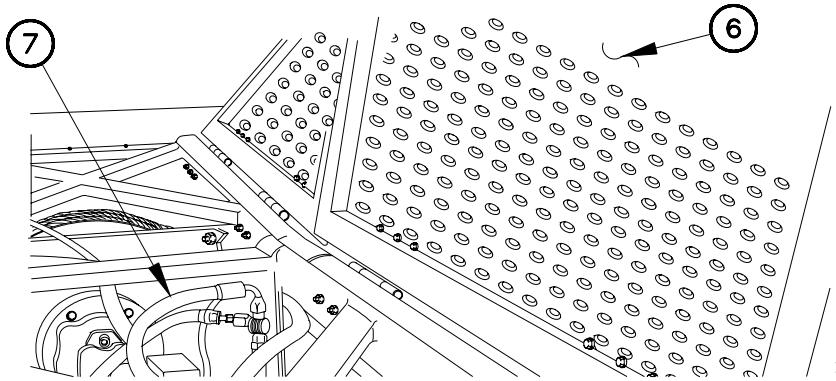


Table 17. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Before		Oxygen Tank and Acetylene Cylinder	Check that oxygen tank (4) and acetylene cylinder (5) are properly mounted and securely fastened.	
3	Before		Hydraulic Hoses and Fittings	Raise catwalk (6) and check hydraulic hoses (7) and fittings for leakage and damage.	Class III leak is evident.



BD99BS8-



BD99BS9-

Table 17. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before		30K Winches		

NOTE

Both 30K winches are checked before vehicle operation only if they will be operated as part of vehicle mission.

				1. Check hydraulic hoses on 30K winches for leakage and damage.	Class III leak is evident.
				2. Check 30K winch tensioner (8) for obvious damage.	
				3. Check 30K winch tensioner air chamber (9) for obvious damage and for leaking air lines.	Air leak is evident.

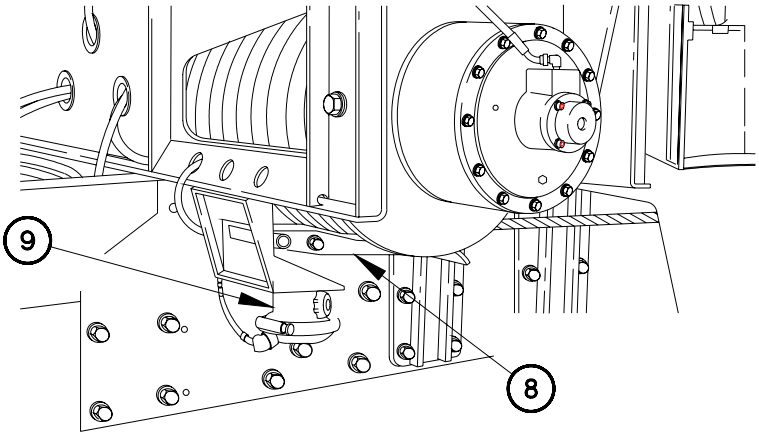
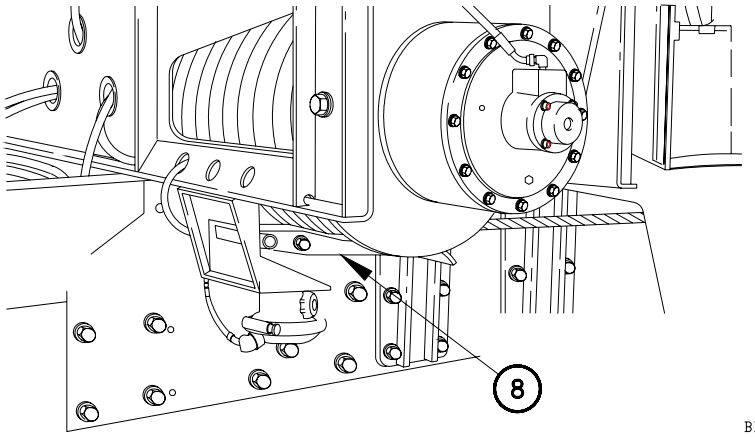


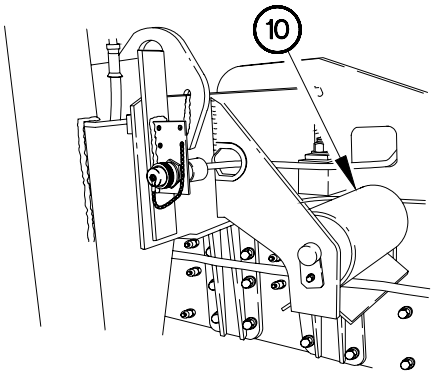
Table 17. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before		30K Winches - Continued	4. Check 30K winch tensioner (8) for proper operation. Check that tensioner moves freely.	



BD99BT1-

				5. Check that rollers (10) turn freely and are not damaged.	



BD99BT2-

Table 17. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before		30K Winches - Continued	6. Check that 30K winch cable clevis pin (11) is not missing or damaged and is secure.	Clevis pin is missing or damaged and 30K winch is required for mission.

UNDERLIFT SHOWN LOWERED AND 30K WINCH CABLE SHOWN PAYED OUT FOR CLARITY

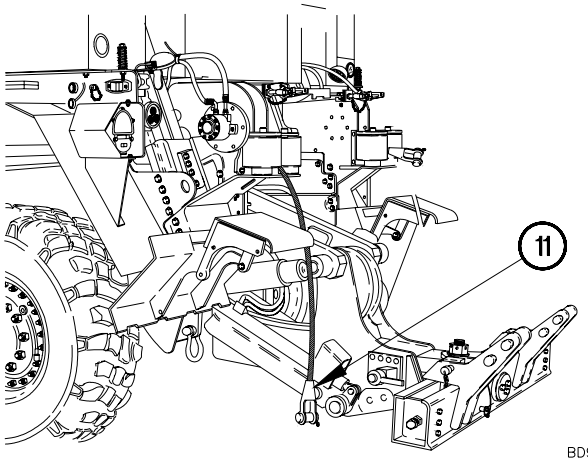


Table 17. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5	Before		Material Handling Crane (MHC)		
			NOTE M1089A1 MHC is checked before vehicle operation if it will be operated as part of vehicle mission.		
				1. Inspect MHC (12) for loose parts, oil leaks, damage to hydraulic hoses (13) and tubes, and other obvious damage.	Class III leak is evident or damaged hoses, tubes, or fittings are found.
				2. Check hook assembly (14) for cracks and other obvious damage.	Hook block is damaged.

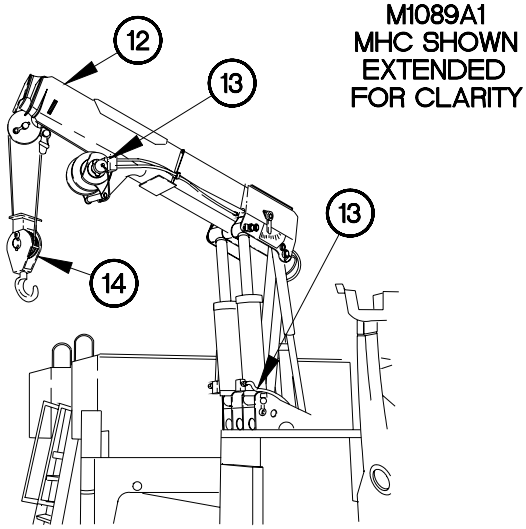


Table 17. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
6	Before		Stifflegs		
				NOTE The underlift assembly is checked before vehicle operation if it will be operated as part of vehicle mission.	
				1. Check stifflegs (15) for oil leaks and other obvious damage. 2. Check sandshoes (16) for damage. 3. Check that two pins are installed in each sandshoe (16) and that pins are not damaged.	Class III leak is evident or damaged hardware is found.

UNDERLIFT SHOWN LOWERED FOR CLARITY

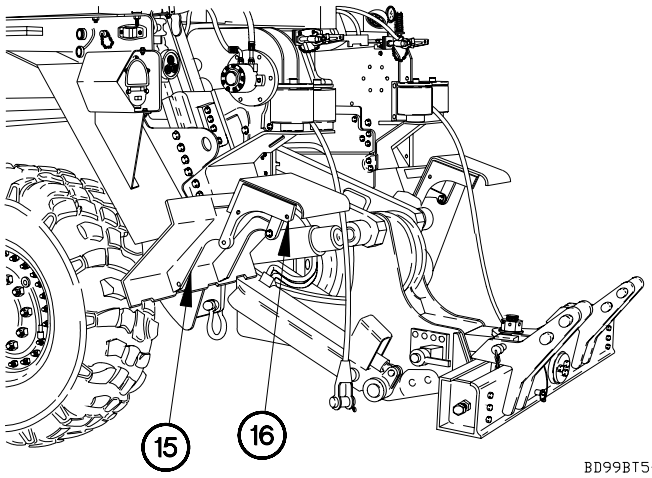


Table 17. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
7	Before		Underlift Assembly		
				NOTE The underlift assembly is checked before vehicle operation if it will be operated as part of vehicle mission.	
				1. Check underlift fold (17) and lift cylinders (18) for leaks and obvious damage.	Class III leak is evident.
				2. Check that underlift lock pin (19) is installed and is not damaged.	Underlift lock pin is missing or damaged.

UNDERLIFT SHOWN LOWERED FOR CLARITY

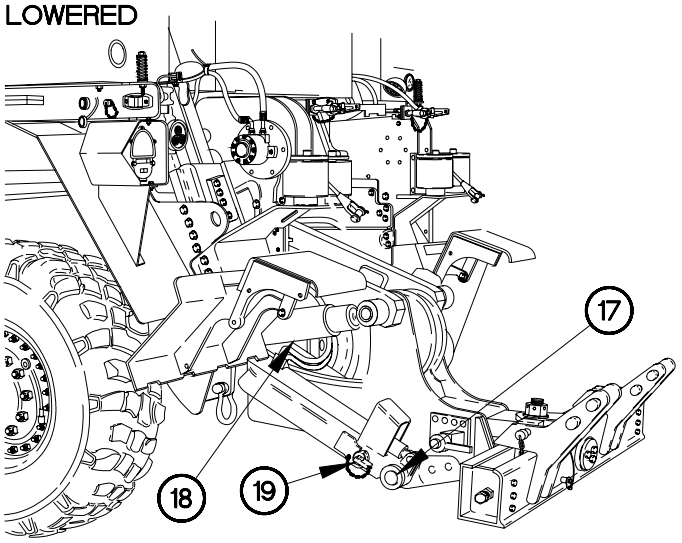


Table 17. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
7	Before		Underlift Assembly - Continued	3. Check that stinger cam lock (20) is in locked position and is not damaged.	Stinger cam lock cannot be secured stinger.
				4. Check that crossbar (21) is not damaged.	Crossbar is damaged.
				5. Check that crossbar pin (22) is installed.	Crossbar pin is missing.

UNDERLIFT SHOWN LOWERED FOR CLARITY

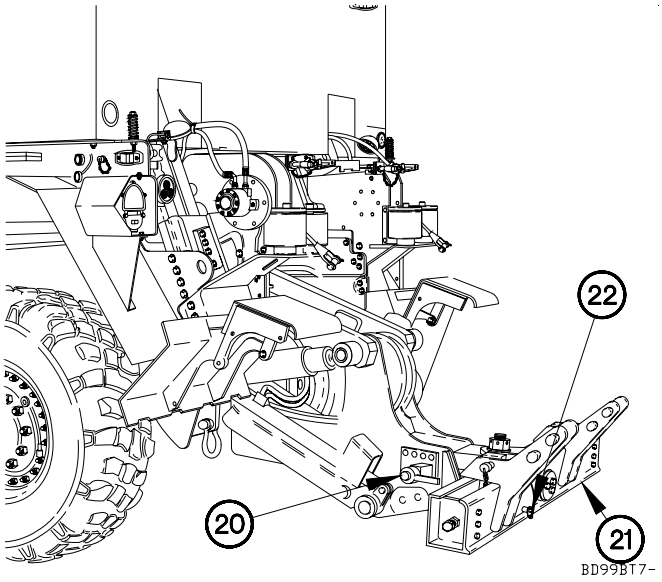
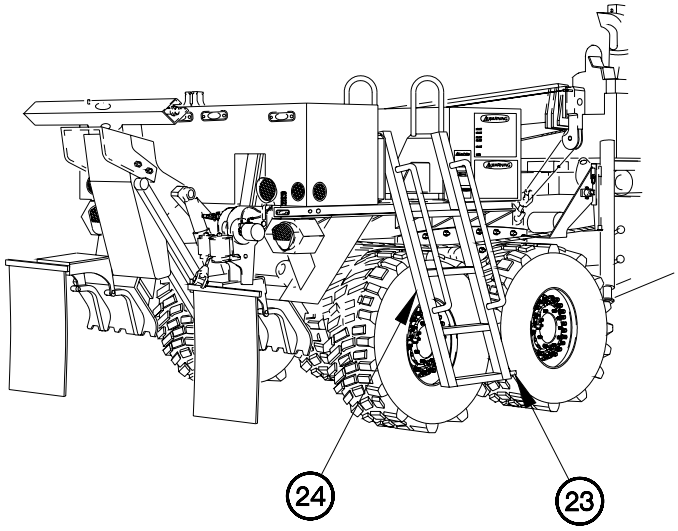


Table 17. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1089A1 - Continued.

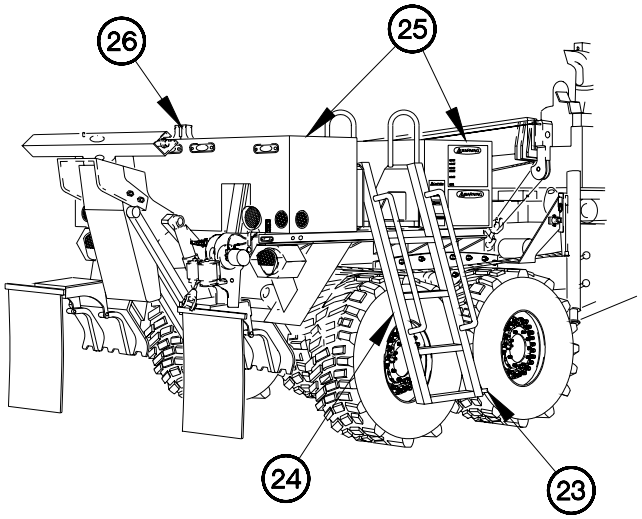
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8	Before		Tool Boxes, Ladder, and Vise	1. Pull spring pin (23) and lower ladder (24). 2. Check ladder (24) for damaged rungs and for broken welds.	Ladder is damaged to the point that it is unsafe.



BD99BT8-

Table 17. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1089A1 - Continued.

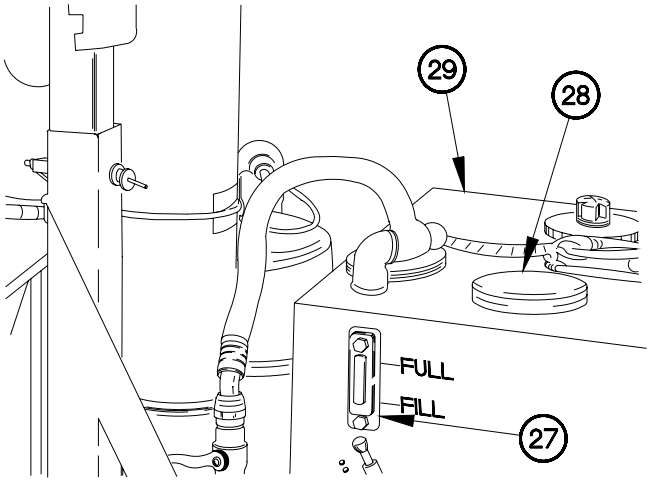
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8	Before		Tool Boxes, Ladder, and Vise - Continued	3. Check both tool boxes (25) for damaged latches. 4. Check that vise (26) is mounted securely and is not damaged. 5. Stow ladder (24). Check that spring pin (23) locks ladder securely in stowed position.	



BD99BT9-

Table 17. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Hydraulic Oil		
				CAUTION Oil level must not be above FULL line or below FILL line on hydraulic tank. Failure to comply may result in damage to equipment.	
				1. Check hydraulic oil level at sight gage (27) 2. Remove cap (28) from hydraulic tank (29) and fill hydraulic tank to proper level. 3. Install cap (28) on hydraulic tank (29).	Oil level is above FULL line.



BD99BU0-

Table 17. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Hydraulic Oil - Continued		

DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
M1089A1 Hydraulic tank	74 GAL (280 L)	OE/HDO-10	OE/HDO-10	OEA

10	Before		Catwalk Ladder	1. Pull spring pin (30) and lower ladder (31). 2. Check ladder (31) for damaged rungs and for broken welds.	Ladder is damaged to the point that it is unsafe.

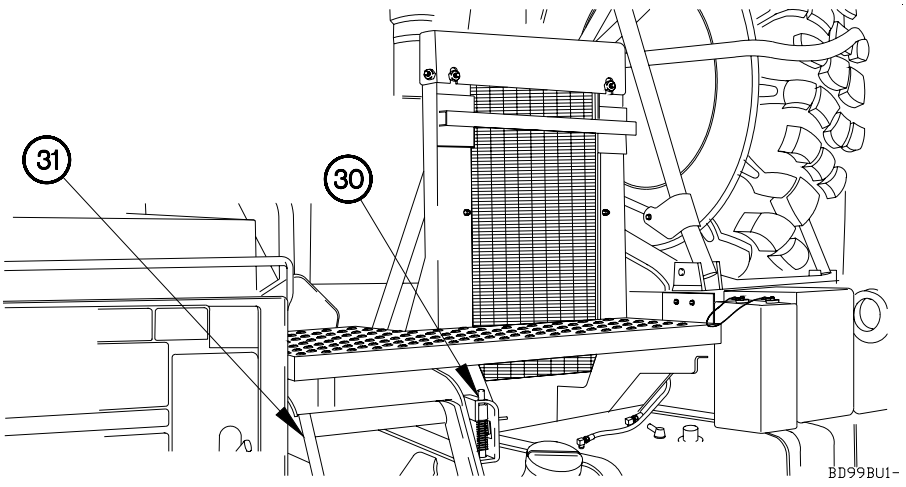
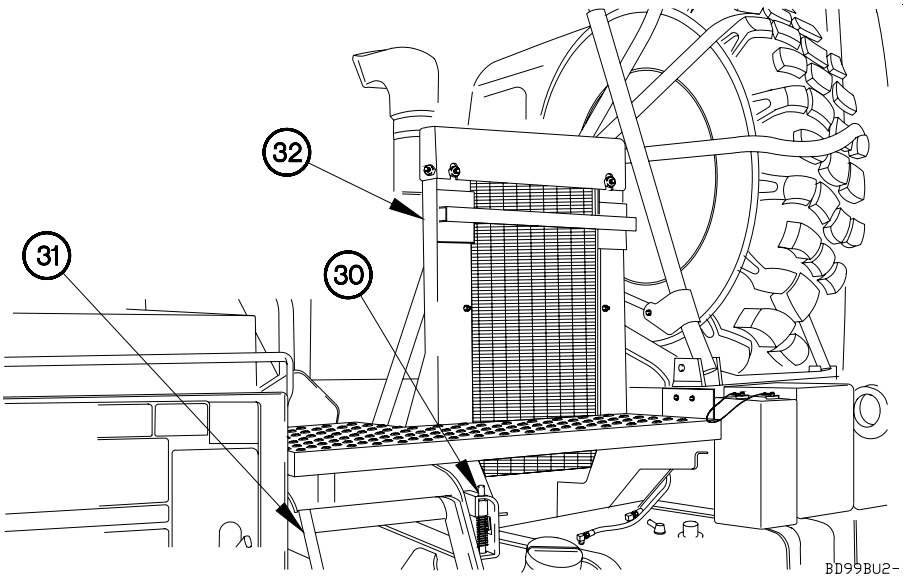


Table 17. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1089A1 - Continued.

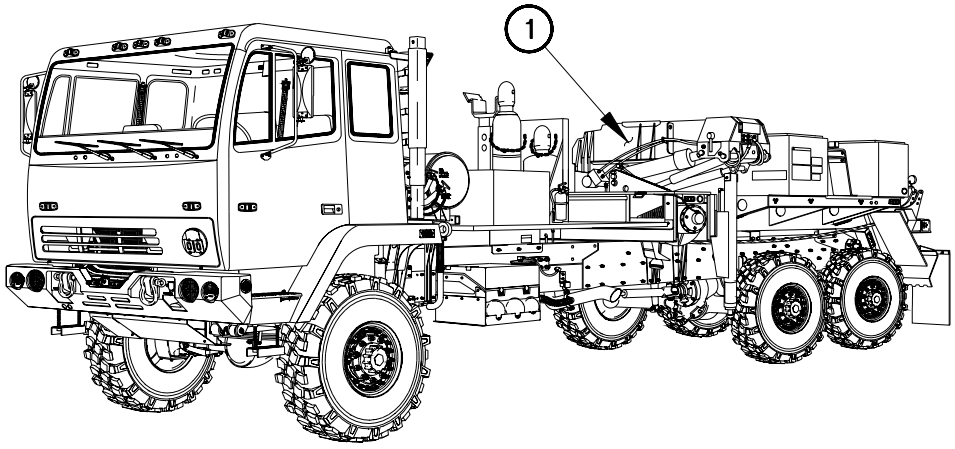
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
10	Before		Catwalk Ladder - Continued	3. Stow ladder (31). Check that spring pin (30) locks ladder securely in stowed position.	
11	Before		Auxiliary Oil Cooler	Check auxiliary oil cooler (32) for debris around coils.	



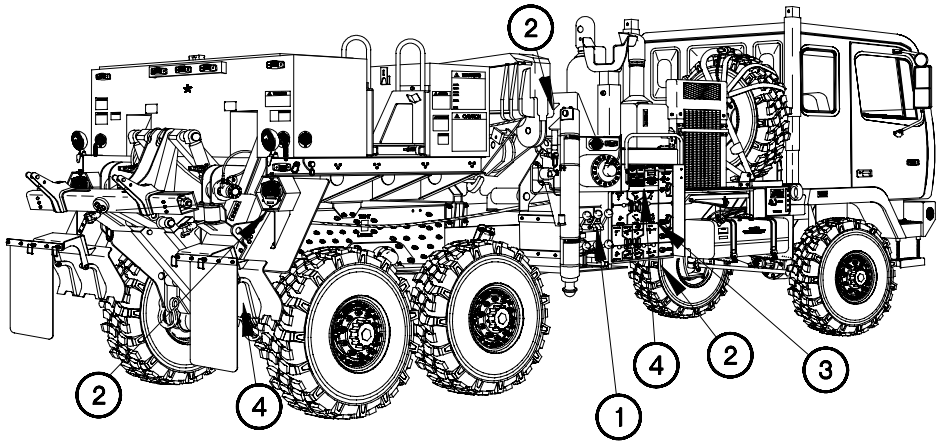
M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

During PMCS Procedures for Model M1089A1

These illustrations will help you perform DURING vehicle PMCS. The callouts match PMCS item number/procedures.



BD99BU3-



BD99BU4-

Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Material Handling Crane (MHC)	1. Check that hydraulic system operates properly as follows: a. Start engine (WP 0018 00). b. Pull out SYSTEM PARK control (1). c. Position PTO switch (2) to on	 PTO does not engage.

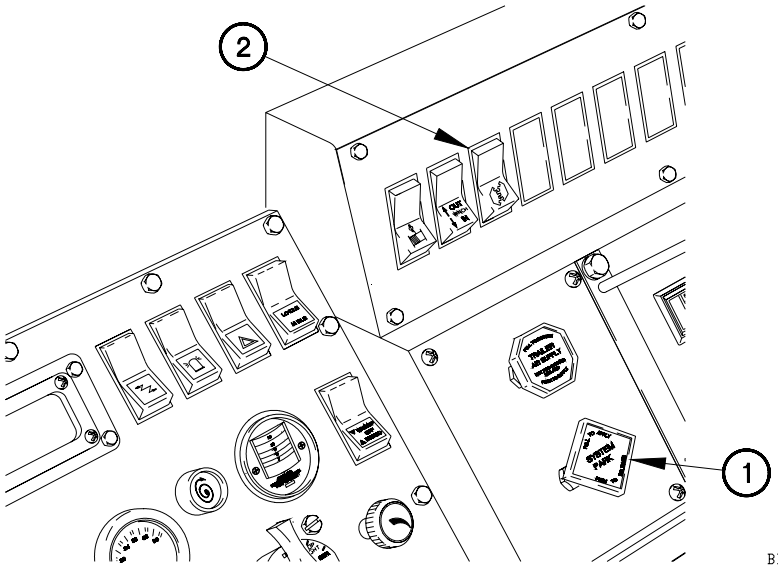


Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1- Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Material Handling Crane (MHC) - Continued	d. Position MAIN POWER ON/OFF switch (3) to ON.	

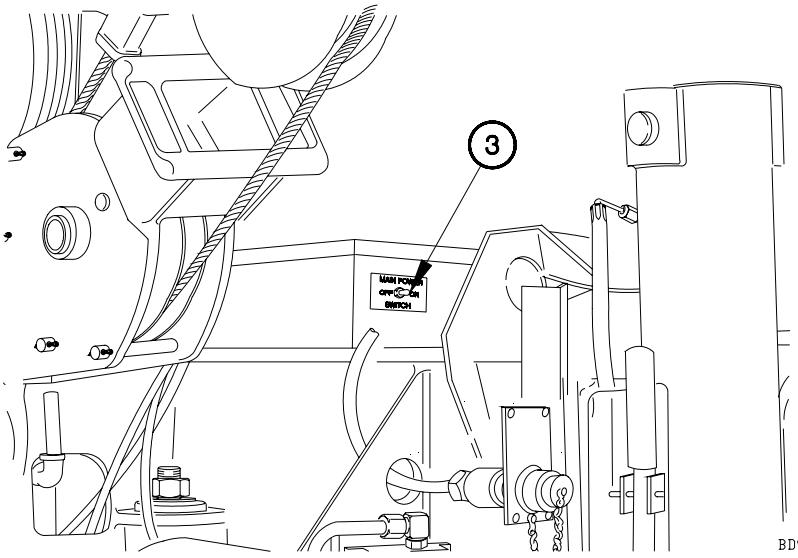


Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Operation		

WARNING

Do not operate Material Handling Crane (MHC) unless outriggers are set up and MHC is level from side to side. Failure to comply may result in serious injury or death to personnel.

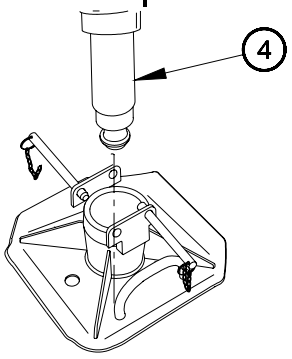
Keep hands and feet clear of outriggers during operation. Failure to comply may result in injury to personnel.

NOTE

Operate MHC control levers using even pressure. Moving lever slightly will cause slow movement of MHC. Moving lever to full travel will cause faster movement of MHC.

Check MHC controls one at a time for proper operation, obvious damage, missing parts, binding, and looseness.

1. Set up outriggers (4) (WP 0043 00).



BD99BU7-

Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Operation - Continued	2. Check that two pins (5) are attached to each pad (6).	Pin(s) is damaged or missing.
				3. Move O/R EXT lever (7) to OUT position until outriggers (4) have fully extended.	Outriggers will not extend.
				4. Move LH O/R JACK lever (8) to DOWN position until end of outrigger (4) lowers to outrigger pad socket (9).	Outrigger cylinder will not come out or will not lower completely to outrigger pad.
				5. Install two pins (5) in outrigger pad (6).	

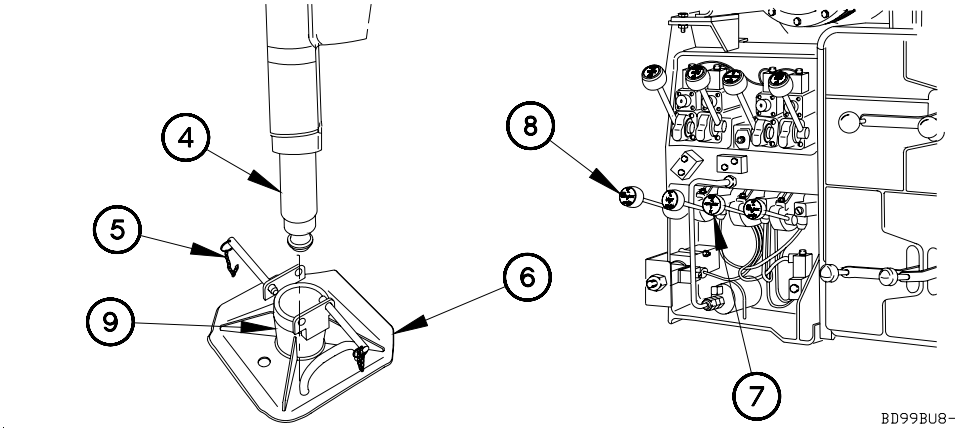


Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			NOTE MHC can operate on up to 5-degree side slope		
2	During		Material Handling Crane (MHC) Operation - Continued	6. Move RH O/R JACK lever (10) to DOWN position until end of outrigger (4) lowers to outrigger pad socket (9). 7. Install two pins (5) in outrigger pad (6). 8. Check that outriggers (4) level vehicle from side to side.	Outrigger cylinder will not come out or will not lower completely to outrigger pad. Outriggers will not level vehicle from side to side.

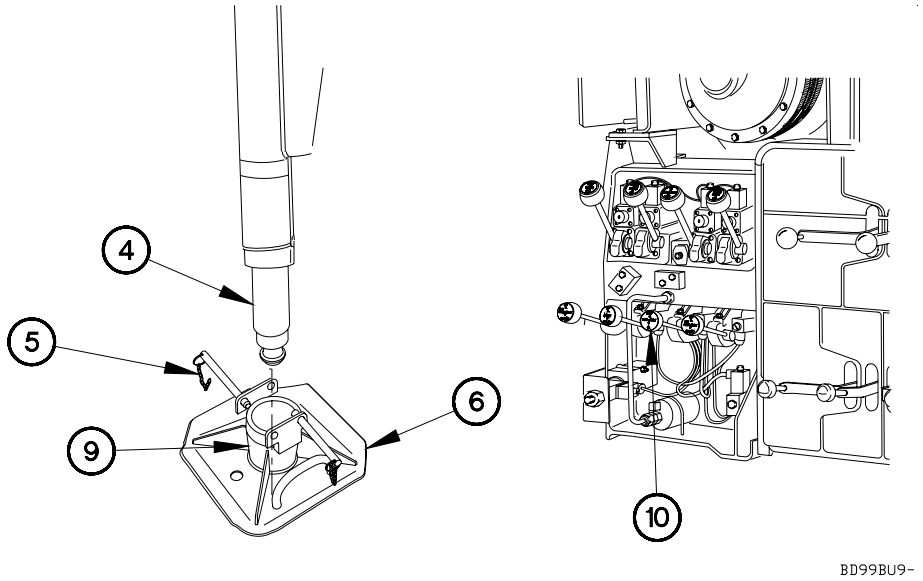


Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Operation - Continued	9. Check boom angle indicator (11) for damage.	Boom angle indicator is damaged and does not give proper boom angle reading.
				10. Raise boom (12) and mast (13) to operating position (WP 0043 00).	Cylinders do not raise boom and mast completely.

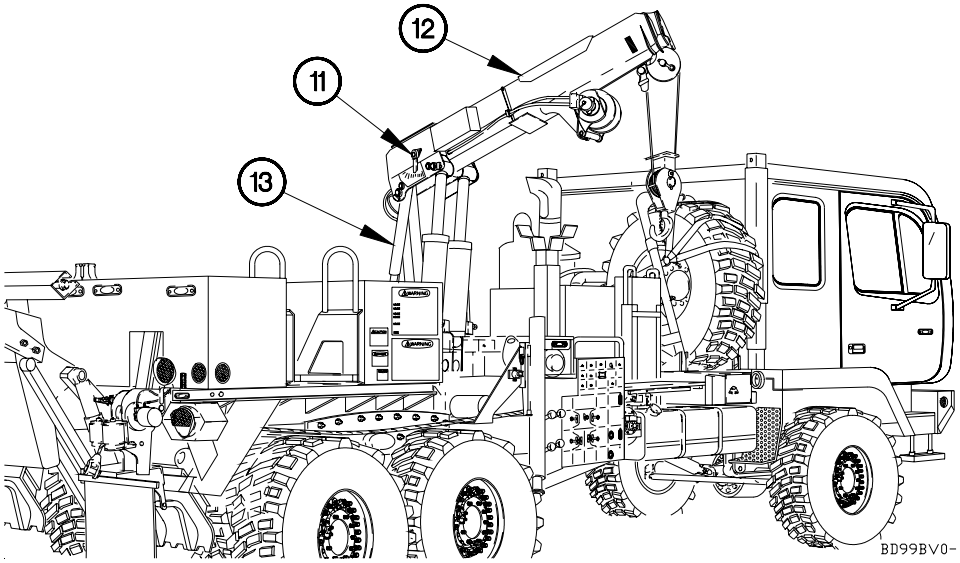


Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Operation - Continued	11. Move SWING lever (14) to CW position (WP 0043 00) to move boom (12) to the right.	Boom does not move to the right.
				12. Move SWING lever (14) to CCW position (WP 0043 00) to move boom (12) to the left.	Boom does not move to the left.

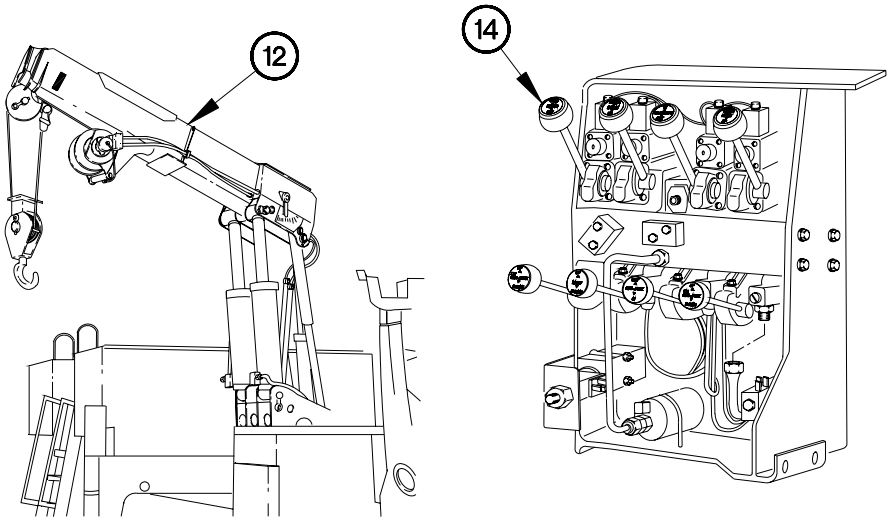


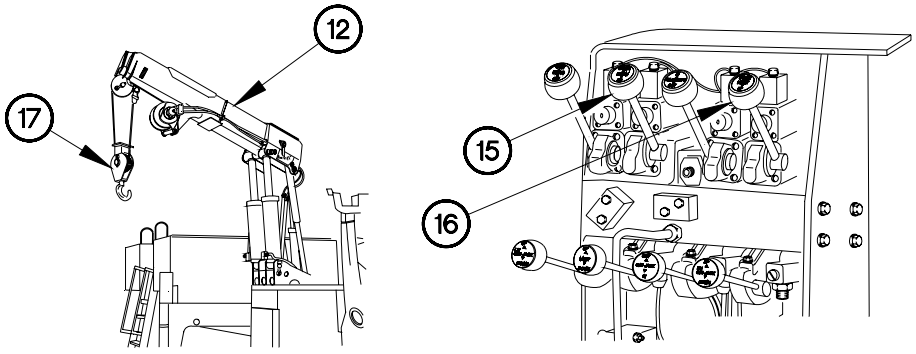
Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Operation - Continued		

CAUTION

Keep hook assembly at least 2 ft (0.61 m) from end of boom. If hook assembly hits end of boom, Material Handling Crane (MHC) will lose power for several seconds. Failure to comply may result in damage to equipment.

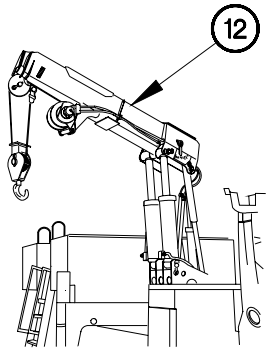
				13. Move TELESCOPE lever (15) to OUT position and HOIST lever (16) to DOWN position (WP 0043 00) to extend boom (12).	Boom does not extend or hook block (18) does not lower.

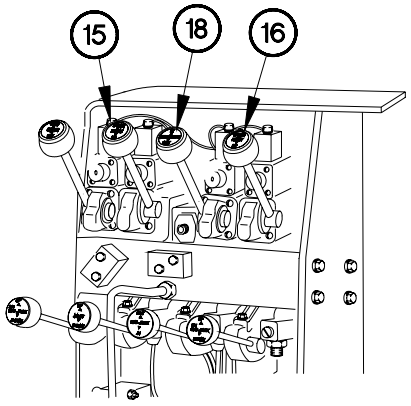


BD99BV2-

Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Operation - Continued	14. Check all three stages of boom extension for broken welds and other obvious damage.	Any broken welds or other obvious damage are found.
				15. Move TELESCOPE lever (15) to IN position and HOIST lever (16) to UP position (WP 0043 00) to retract boom (12).	Boom does not retract or hook assembly does not raise.
				16. Move BOOM lever (18) to UP position (WP 0043 00) to increase boom (12) angle.	Boom angle does not increase.





BD99BV3-

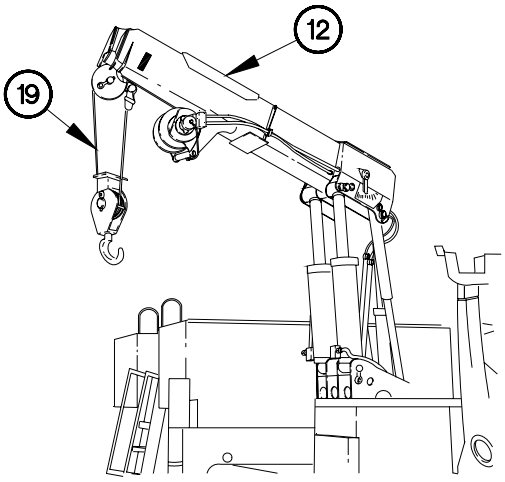
Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Operation - Continued	17. Move BOOM lever (18) to UP position (WP 0043 00) to decrease boom (12) angle.	Boom angle does not decrease.

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.

				18. Check portion of cable (19) which is visible for kinks, frays, or breaks.	Kinks, frays, or breaks in cable are found.



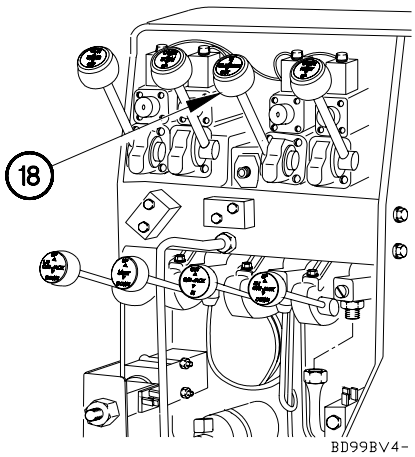


Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Material Handling Crane (MHC) Operation - Continued	19. Check that pulley (20) at end of boom (12) is mounted securely, turns smoothly, and is not damaged. 20. Check that hoist (21) is mounted securely and is not damaged. 21. Move HOIST lever (16) to UP position (WP 0043 00) to reel in cable.	Pulley is damaged, not mounted securely, or does not turn smoothly. Hoist is not mounted securely or is damaged. Hoist does not reel in cable.

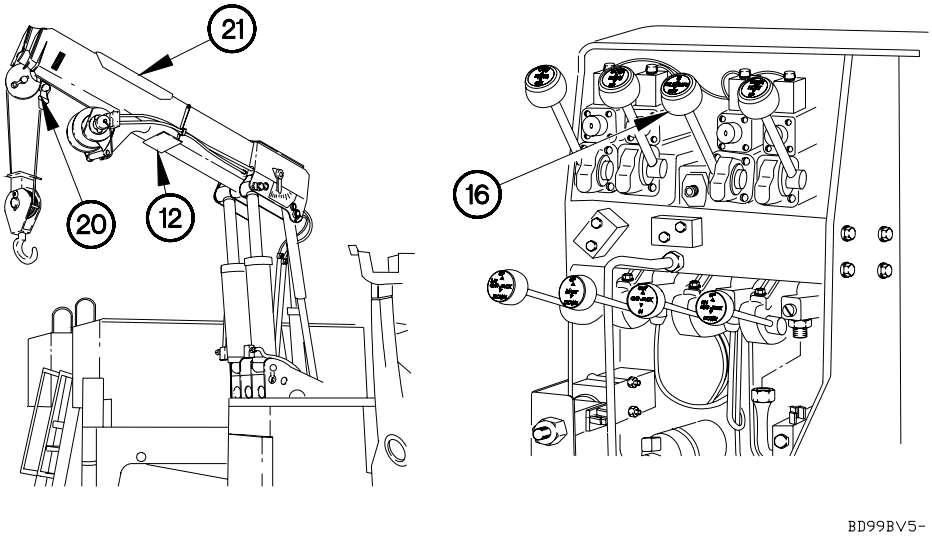
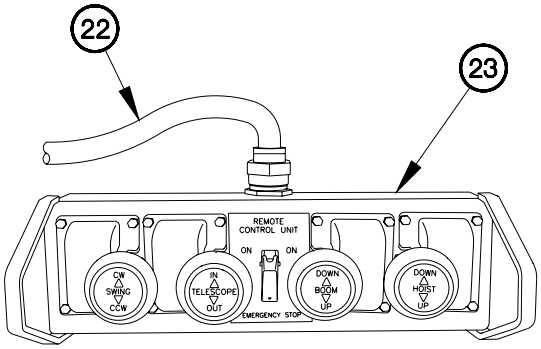


Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

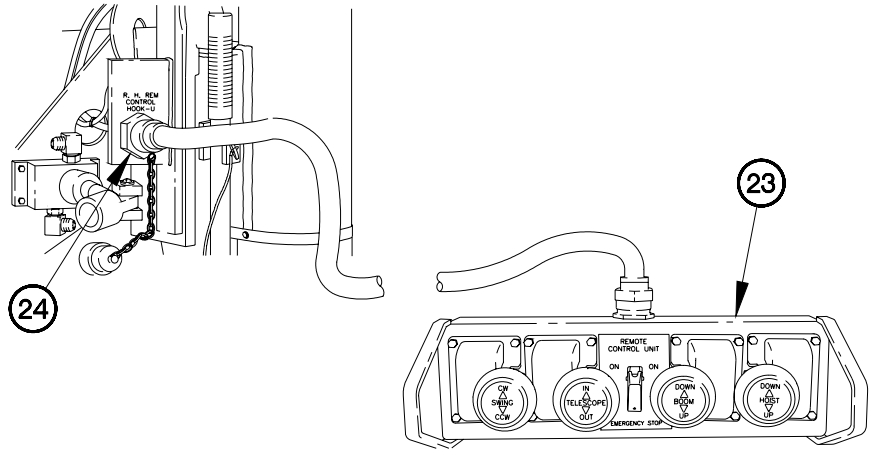
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	During		Material Handling Crane (MHC) REMOTE CONTROL UNIT	1. Check remote control cable (22) for cracked insulation and damage to plugs on cable ends.	Insulation is cracked and bare wire is exposed or cable plug is damaged.
				2. Check REMOTE CONTROL UNIT (23) for broken controls or other obvious damage.	
				3. Check receptacle on REMOTE CONTROL UNIT (23) for damaged or missing pins.	Damaged or missing pins are found.



BD99BV6-

Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	During		Material Handling Crane (MHC) REMOTE CONTROL UNIT - Continued	4. Check RH REMOTE CONTROL HOOK-UP and LH REMOTE CONTROL HOOK-UP receptacles (24) for damaged or missing pins. 5. Connect REMOTE CONTROL UNIT (23) (WP 0043 00).	Damaged or missing pins are found.



BD99BV7-

Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	During		Material Handling Crane (MHC) REMOTE CONTROL UNIT - Continued		

WARNING

Keep boom clear of all electrical lines and other obstacles while operating Material Handling Crane (MHC). Failure to comply may result in serious injury or death to personnel.

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 Material Handling Crane (MHC) with REMOTE CONTROL UNIT. Failure to comply may result in serious injury or death to personnel.

CAUTION

Keep hook assembly at least 2 ft (0.61 m) from end of boom. If hook assembly hits end of boom, M1089A1 Material Handling Crane (MHC) will lose power for several seconds. Failure to comply may result in damage to equipment.

Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	During		Material Handling Crane (MHC) REMOTE CONTROL UNIT - Continued	6. Move SWING lever (14) to CW position to move boom (12) to right.	Boom does not rotate to right.
				7. Move SWING lever (14) to CCW position to move boom (12) to left.	Boom does not rotate to left.
				8. Move TELESCOPE lever (15) to OUT position and HOIST lever (16) to DOWN position to extend boom (12).	Boom does not extend or cable does not lower.

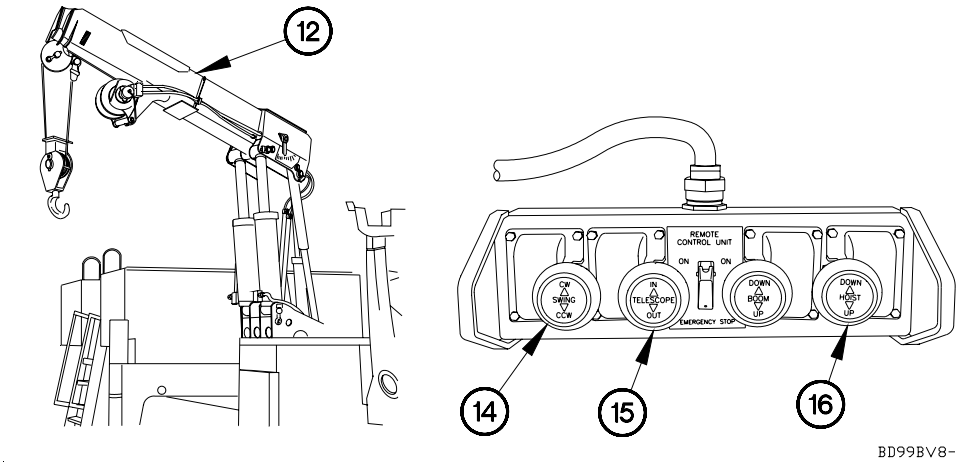
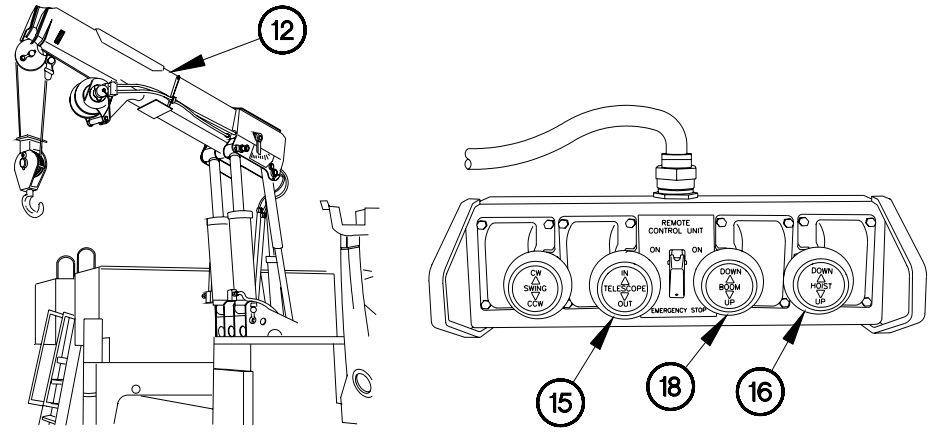


Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	During		Material Handling Crane (MHC) REMOTE CONTROL UNIT - Continued	9. Move TELESCOPE lever (15) to IN position and HOIST lever (16) to UP position to retract boom (12).	Boom does not retract or hoist does not reel in cable.
				10. Move BOOM lever (18) to UP position to increase boom (12) angle.	Boom angle does not increase.
				11. Move BOOM lever (18) to DOWN position to decrease boom (12) angle.	Boom angle does not decrease.



BD99BV9-

Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	During		Material Handling Crane (MHC) Remote Controls - Continued	12. Move HOIST lever (16) to DOWN position to pay out cable (19).	Hoist does not pay out cable.
				13. Move HOIST lever (16) to UP position to reel in cable (19).	Hoist does not reel in cable.
				14. Disconnect REMOTE CONTROL UNIT (23) (WP 0043 00).	

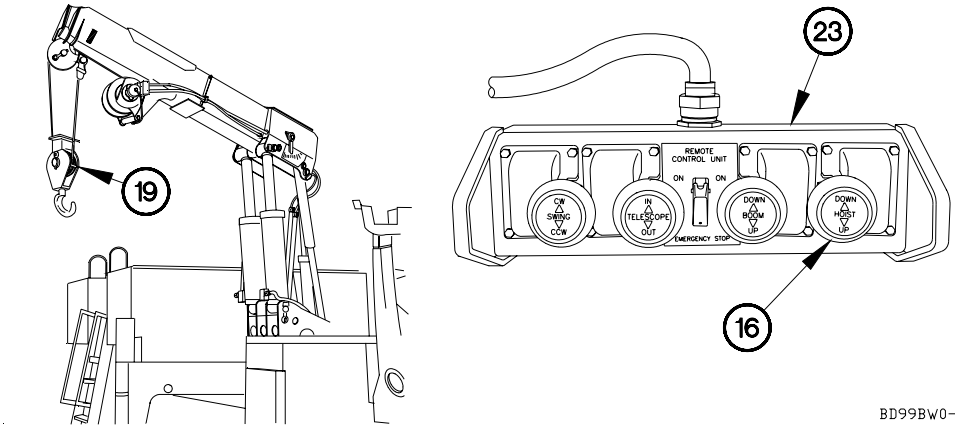
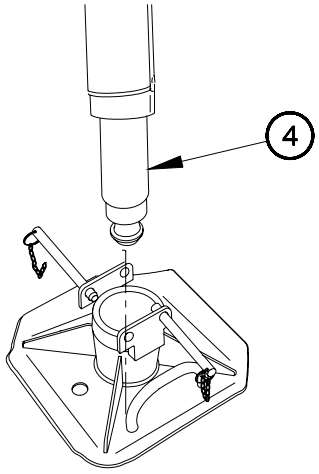


Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	During		Material Handling Crane (MHC) Remote Controls - Continued	15. Stow outriggers (5) (WP 0043 00). 16. Shut down M1089A1 MHC (WP 0043 00).	



BD99BW1-

Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	During		Stifflegs and 30K Winches	Check that 30K winches operate properly as follows: 1. Position STATION SELECTOR switch (25) to WRECKER CONTROL PANEL. 2. Position MODE SELECTOR switch (26) to NORMAL.	

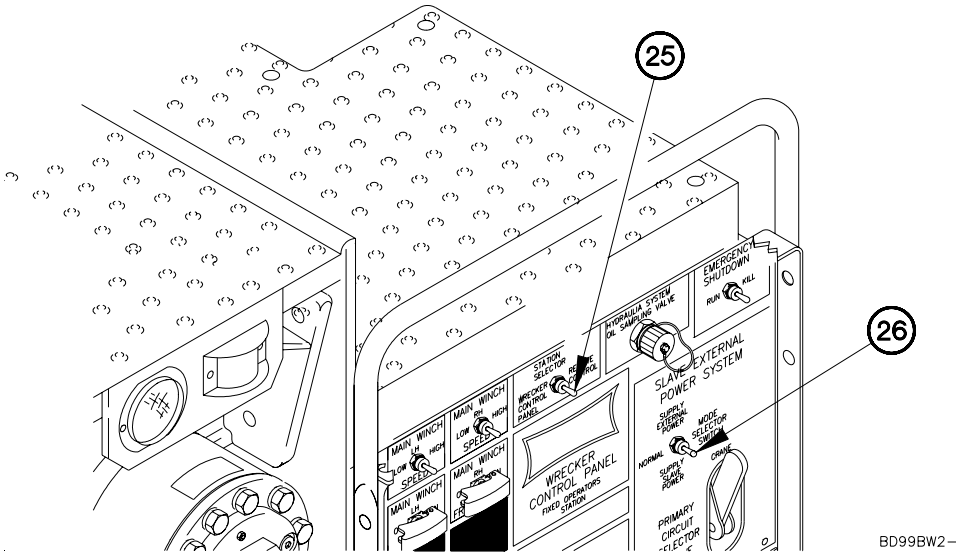


Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	During		Stifflegs and 30K Winches - Continued		

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.

Keep hands clear of 30K winch during operation. Failure to comply may result in injury to personnel.

				3. Pay out and reel in 30K winch cable (27) (WP 0035 00). Check that 30K winches operate properly in both directions.	
				4. Check 30K winch cable (27) for kinks, frays, and breaks.	Kinks, frays, or breaks are found.

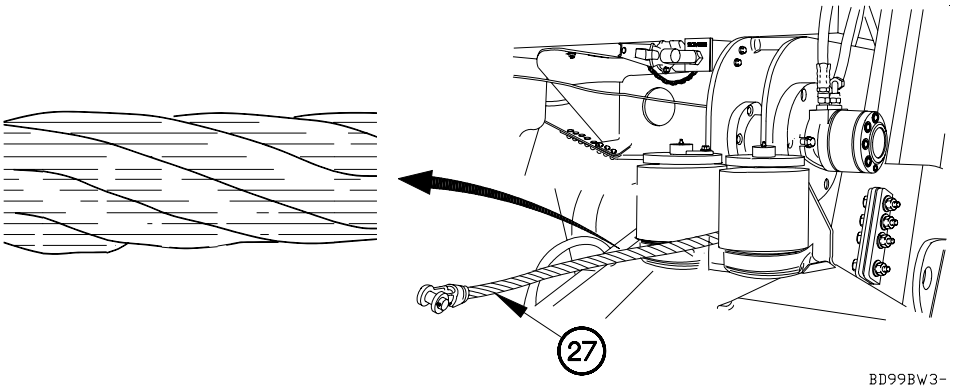
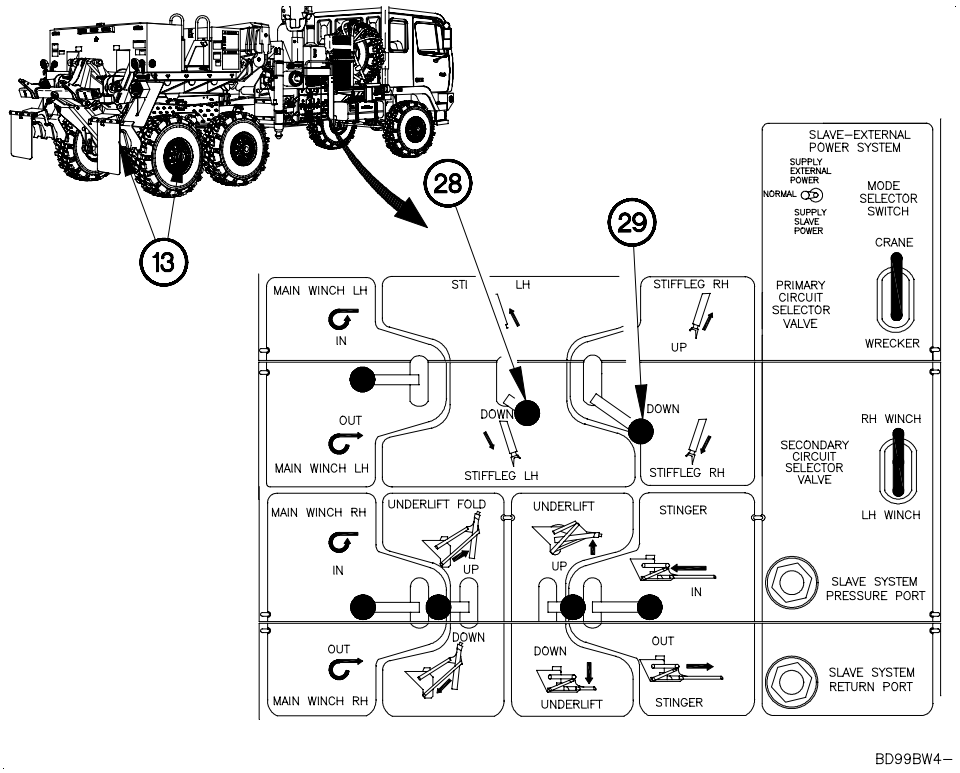


Table 18. Preventive Maintenance Checks and Services (PMCS) - During - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	During		Stifflegs and 30K Winches - Continued	5. Check that stifflegs (14) lower when STIFFLEG LH (28) and STIFFLEG RH (29) levers are placed in DOWN position.	Stifflegs do not lower.

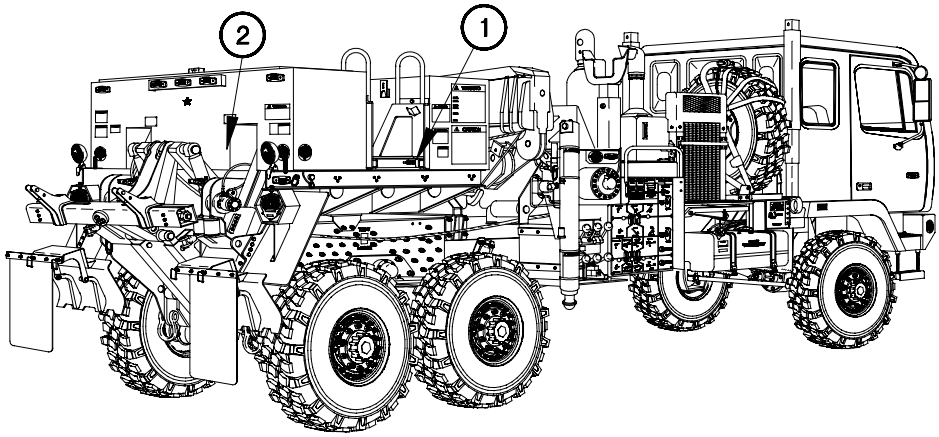


M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

After PMCS Procedures for Model M1089A1

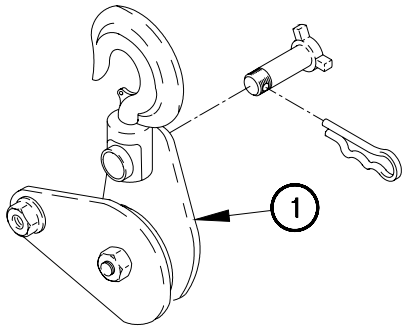
These illustrations will help you perform AFTER vehicle PMCS. The callouts match PMCS item number/procedures.



BD99BW5-

Table 19. Preventive Maintenance Checks and Services (PMCS) - After - Model M1089A1.

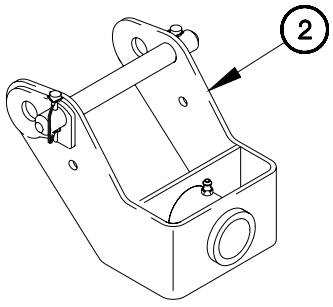
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	After		30 Ton Snatch Block	Lubricate snatch block (1) after use.	



BD99BW6-

DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
30 Ton Snatch Block	As required	GAA	GAA	GAA

2	After		Towing Pintle Assembly	Lubricate towing pintle (2).	



BD99BW7-

Table 19. Preventive Maintenance Checks and Services (PMCS) - After - Model M1989A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	After		Towing Pintle Assembly - Continued		

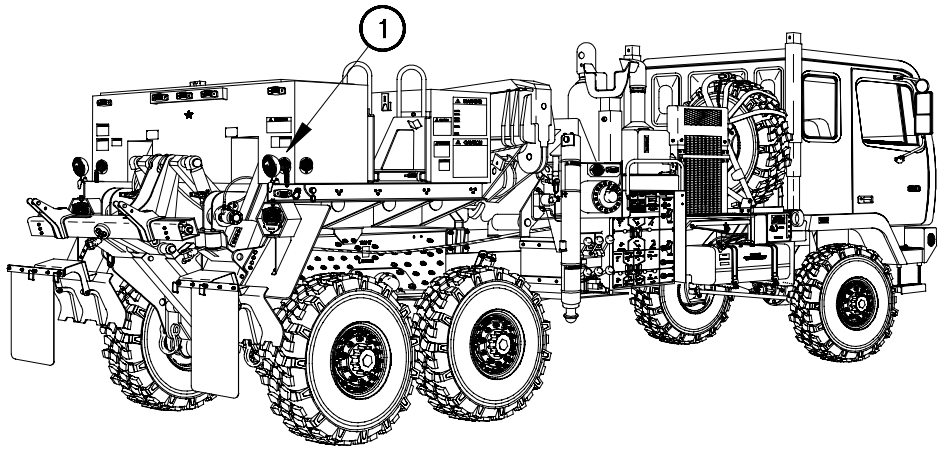
DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
30 Ton Snatch Block	As required	GAA	GAA	GAA

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Weekly PMCS Procedures for Model M1089A1

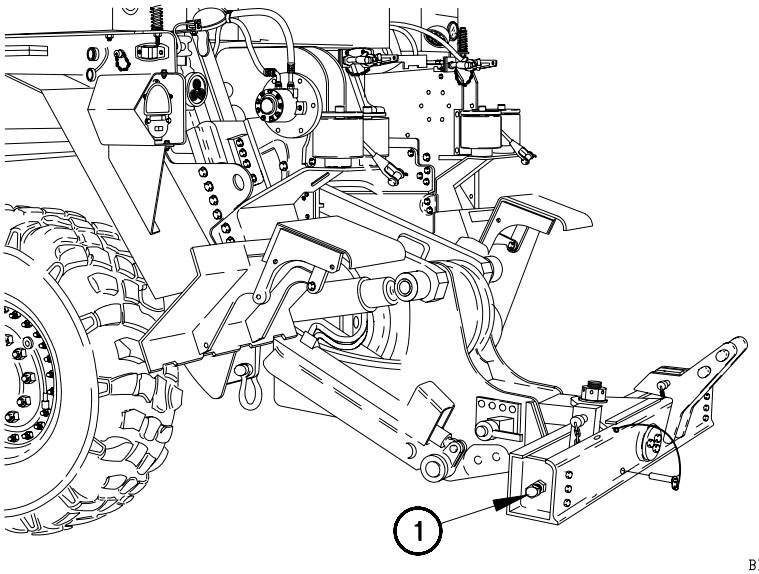
These illustrations will help you perform weekly vehicle PMCS. The callouts match PMCS item number/procedures.



BD99BW8-

Table 20. Preventive Maintenance Checks and Services (PMCS) - Weekly - Model M1089A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Weekly		Crossbar Screws	Lubricate crossbar screws (1).	



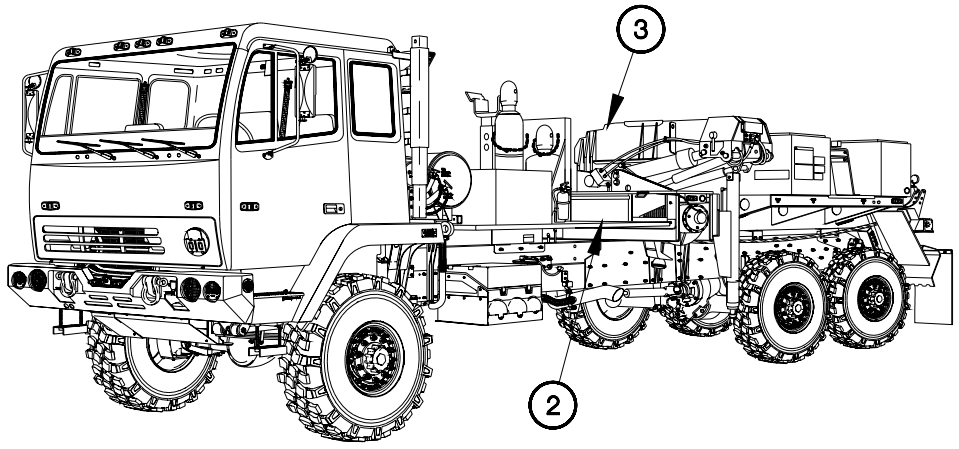
DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Crossbar Screws	As required	GAA	GAA	GAA

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

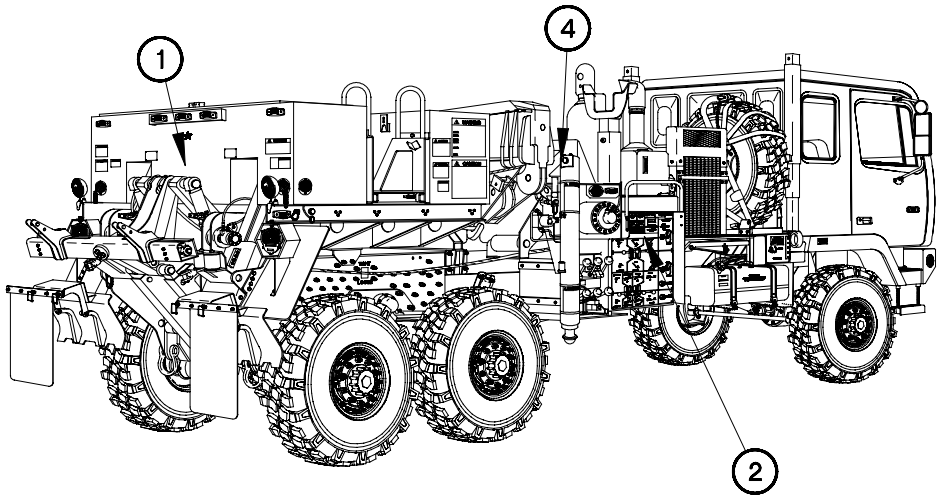
0103 00

Monthly PMCS Procedures for Model M1089A1

These illustrations will help you perform MONTHLY vehicle PMCS. The callouts match PMCS item number/procedures.



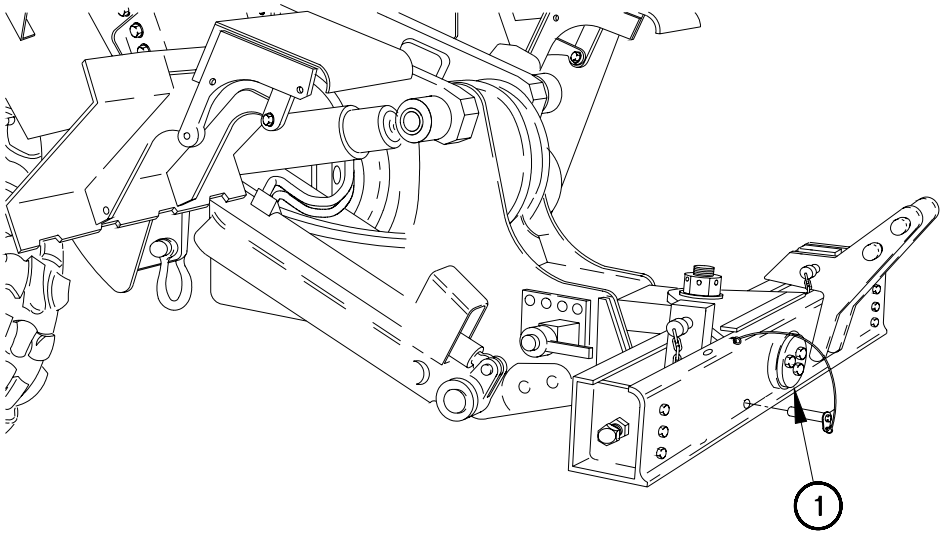
BD99BX0-



BD99BX1-

Table 21. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1089A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly		Underlift Assembly Crossbar	Notify Field Maintenance to inspect and lubricate crossbar thrust bearing (1) at 1,000 (1,609 km) miles of tow use.	



DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Crossbar Thrust Bearing	As required	OE/HDO-10	OE/HDO-10	OEA

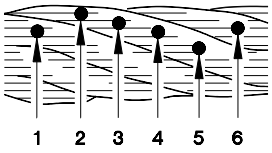
Table 21. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Monthly		30K Winch Cable		

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.

				Pay out 30K winch cable (2) completely (WP 0035 00) and inspect for kinks, sharp bends, abrasions, and broken wires.	30K winch cable is damaged or excessively worn. Six randomly distributed broken wires in any 6 in. (15 cm) section of cable or three broken wires in one bundle (breaks 3, 4, 5) in a 6 in. (15 cm) section.



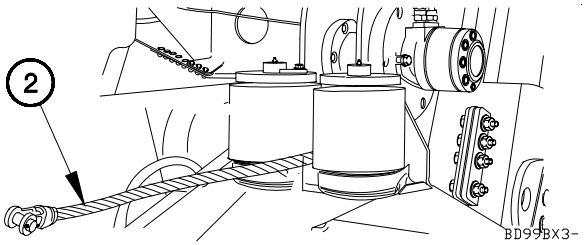


Table 21. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Monthly		30K Winch Cable - Continued		Kinking, crushing, or any other damage resulting in distortion of cable structure.
3	Monthly		Material Handling Crane (MHC)		

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.

				1. Check MHC (3) for corrosion, cracks, and security of mounting hardware.	MHC is damaged or not securely mounted.

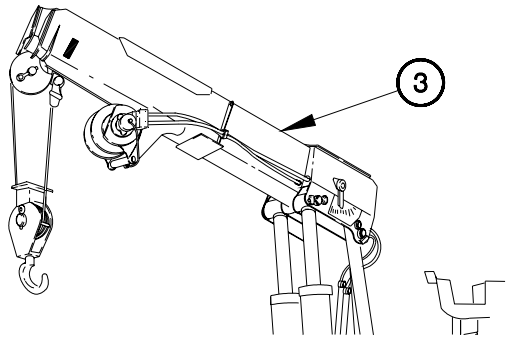
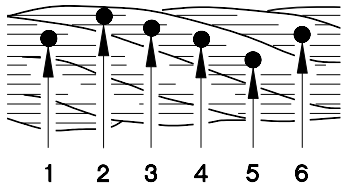


Table 21. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Monthly		Material Handling Crane (MHC) - Continued	2. Pay out MHC cable (4) completely (WP 0043 00) and inspect for kinks, sharp bends, abrasions, and broken wires.	MHC cable is damaged or excessively worn. Six randomly distributed broken wires in any 6 in. (15 cm) section of cable or three broken wires in one bundle (breaks 3, 4, 5) in a 6 in. (15 cm) section. Kinking, crushing, or any other damage resulting in distortion of cable structure.



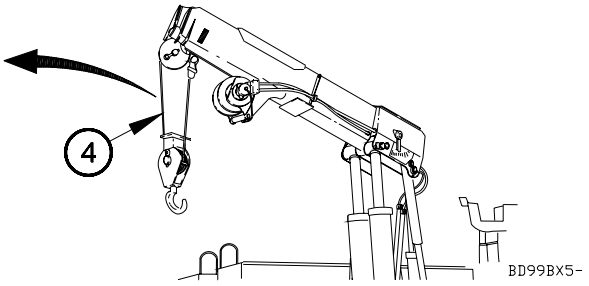


Table 21. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1089A1 - Continued.

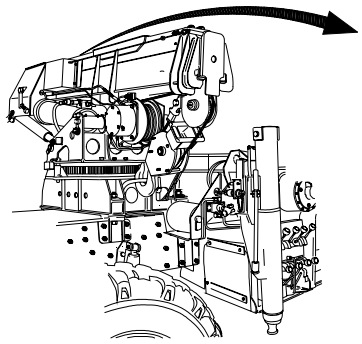
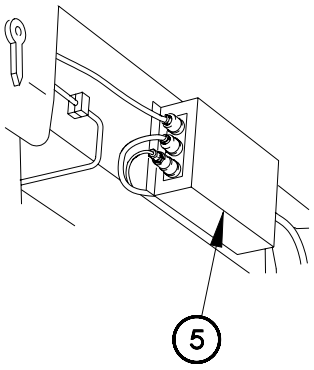
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Monthly		Material Handling Crane (MHC) - Continued	3. Check security of electrical connectors on overload shutdown box (5). 4. Inspect electrical wiring for cracking, fraying and excessive wear.	 Wiring is frayed, cracked, or excessively worn.
				  BD99BX6-	
4	Monthly	0.1	Oil Can Points	Lubricate all oil can points with OE/HDO specified for ambient temperature. The operator/crew is responsible for lubricating the following points: 1. Tool box latches and hinges	

Table 21. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1089A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Monthly	0.1	Oil Can Points - Continued	2. M1089A1 MHC control lever pivot points on manual controls 3. M1089A1 MHC cable tie off point pin on hook assembly	
				CAUTION Verify three screws securing thrust bearing are not missing or damaged. Failure to comply may result in damage to equipment.	
				4. Crossbar thrust bearing 5. Upper sheave of pay-out assemblies 6. Fairleads	Screws missing or damaged

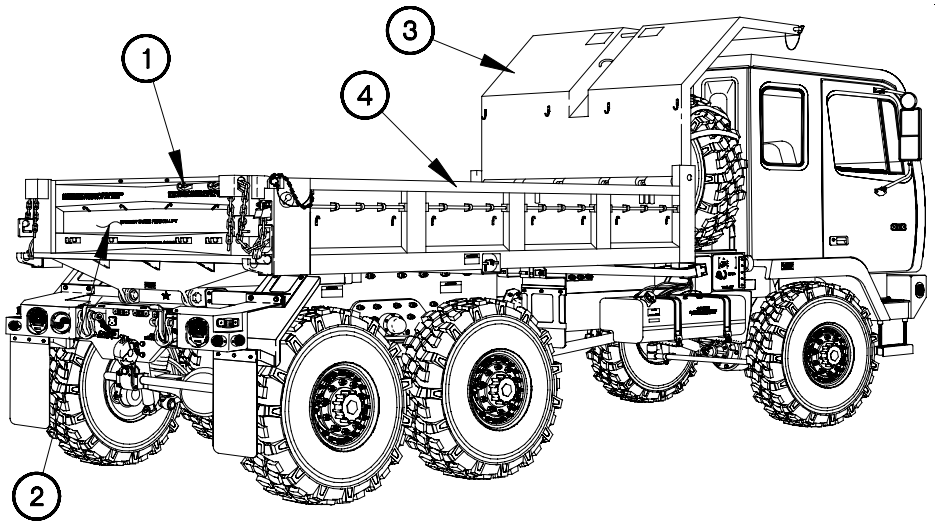
DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Oil Can Points	As required	OE/HDO-10	OE/HDO-10	OEA

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Before PMCS Procedures for Model M1090A1

These illustrations will help you perform BEFORE vehicle PMCS. The callouts match PMCS item number/procedures.



BD99BX7-

Table 22. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1090A1.

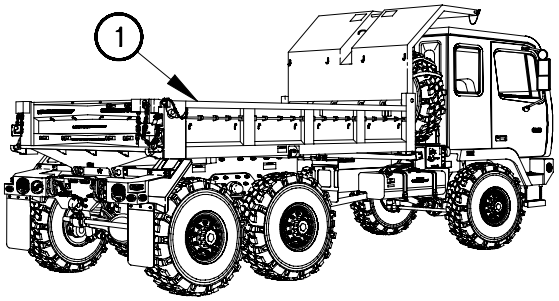
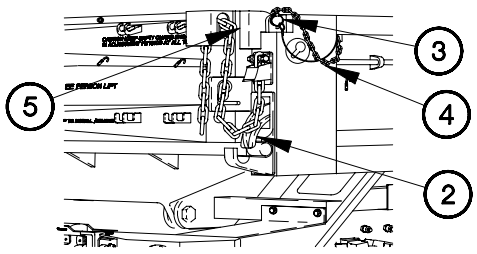
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before		Dump Body	Check dump body (1) for obvious signs of damage.	
				 BD99BX8-	
2	Before		Tailgate	1. Check hinges (2) for damage. 2. Check hinge pins (3) and hinge pin chains (4) for damage. 3. Check that tailgate locks (5) securely in closed position.	Hinge is damaged. Hinge pins or hinge pin chains are missing or broken. Tailgate does not lock in the closed position.
				 BD99BX9-	

Table 22. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1090A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Before		Cab Protector	1. Raise cab protector (6) (WP 0031 00). 2. Ensure two pins (7) and two bolts (8) are present and securely lock cab protector in raised position. 3. Check cab protector (6) for obvious signs of damage. 4. Lower cab protector (6) (WP 0031 00) if not required for mission.	One or more pin(s) or bolt(s) is missing.

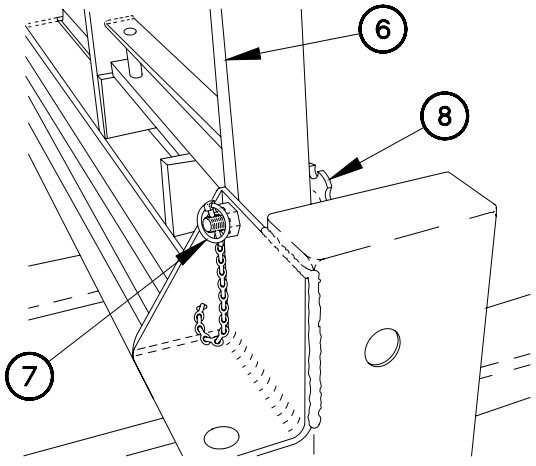
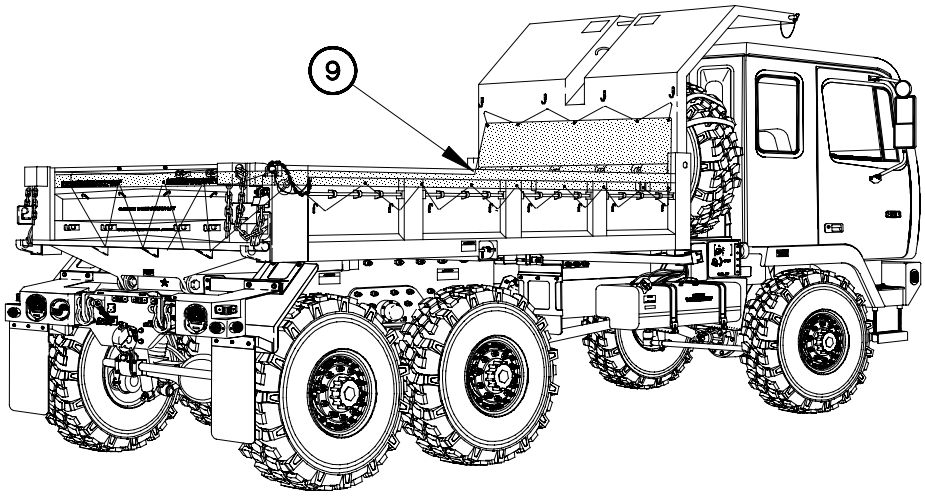


Table 22. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1090A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before		Debris Cover	Check debris cover (9) for tears and ripped seams that would interfere with proper operation.	



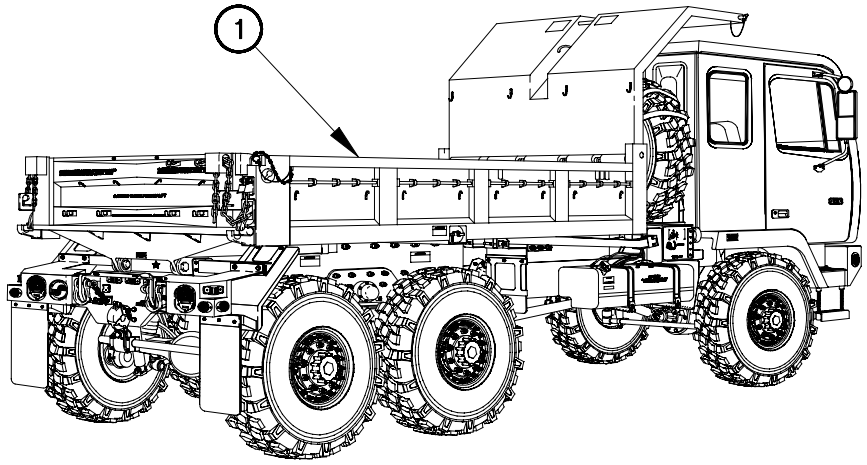
BD99BY1-

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

During PMCS Procedures for Model M1090A1

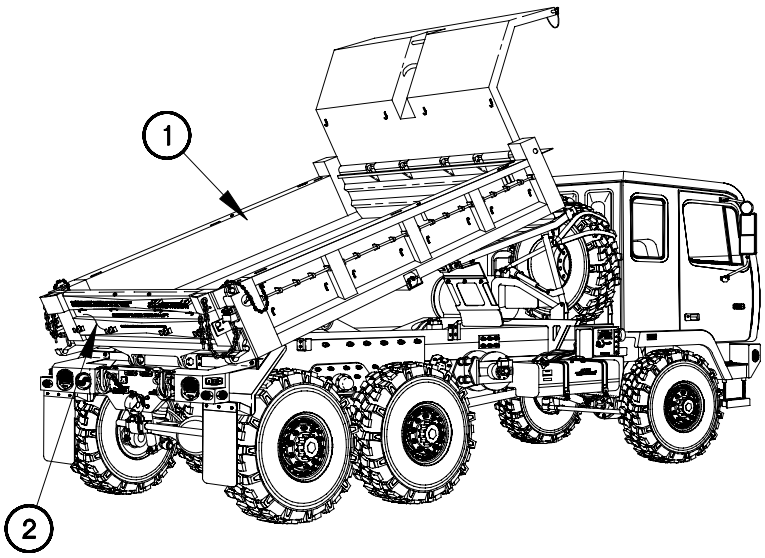
These illustrations will help you perform DURING vehicle PMCS. The callouts match PMCS item number/procedures.



BD99BY2-

Table 23. Preventive Maintenance Checks and Services (PMCS) -During - Model M1090A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Dump Body and Tailgate Operation	1. Raise dump body (1) (WP 0031 00). 2. Release tailgate (2) (WP 0031 00). 3. Lower dump body (1) (WP 0031 00).	Dump body does not raise. Tailgate does not release. Dump body does not lower.



BD99BY3-

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Weekly PMCS Procedures for Model M1090A1

These illustrations will help you perform WEEKLY vehicle PMCS. The callouts match PMCS item number/procedures.

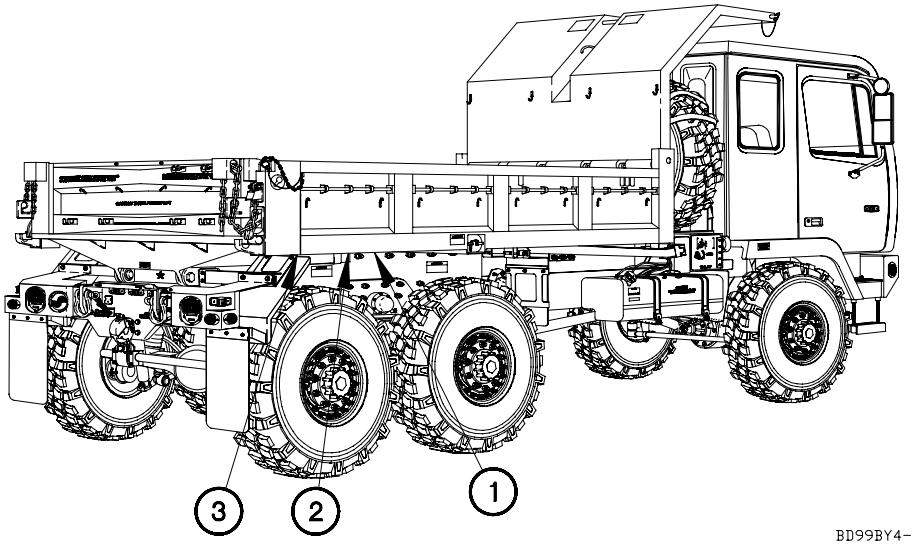


Table 24. Preventive Maintenance Checks and Services (PMCS) - Weekly - Model M1090A1.

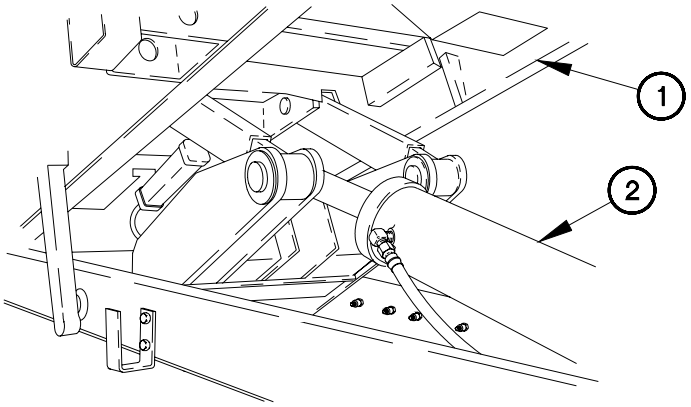
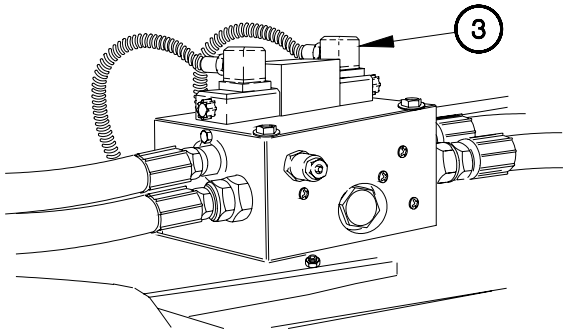
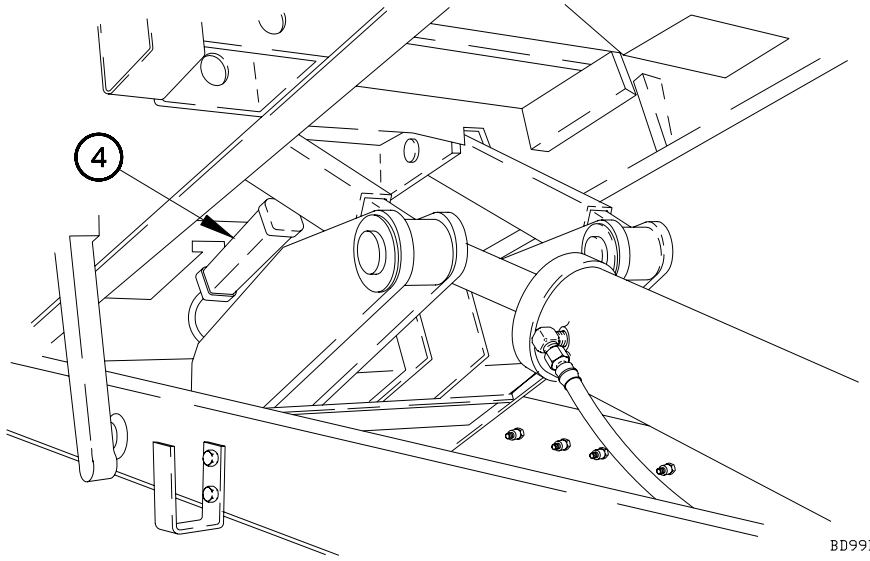
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Weekly		Dump Body Lift Cylinder	1. Raise dump body (1) (WP 0031 00). 2. Check lift cylinder (2) for obvious damage and leaks.	Class III leak is evident or lift cylinder is damaged.
				 BD99BY5-	
2	Weekly		Control Valve	Check control valve (3) for obvious damage.	Control valve is damaged.
				 BD99BY6-	

Table 24. Preventive Maintenance Checks and Services (PMCS) - Weekly - Model M1090A1 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Weekly		Tailgate Pneumatic Cylinder	Check pneumatic cylinder (4) for obvious damage.	Pneumatic cylinder is damaged.

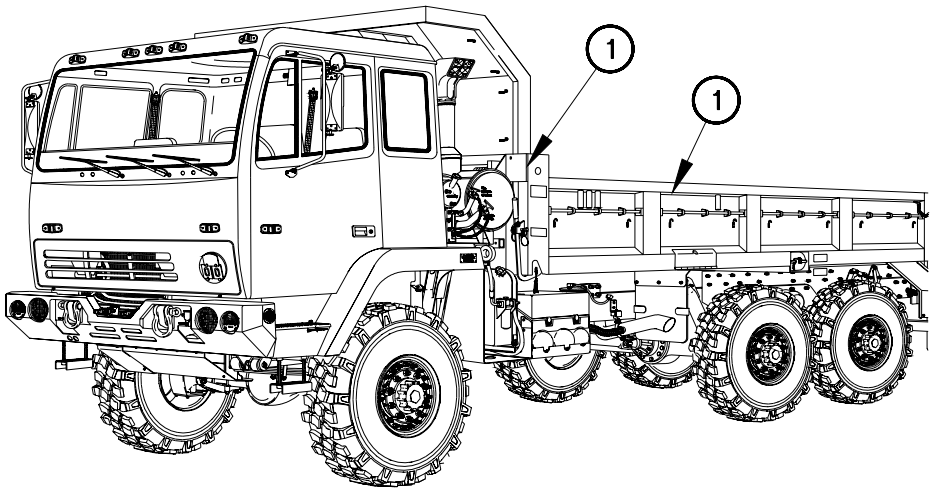


M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

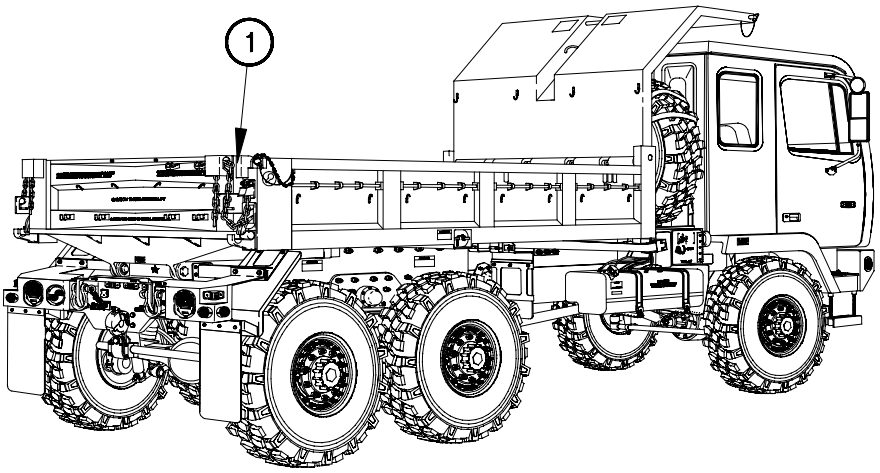
0103 00

Monthly PMCS Procedures for Model M1090A1

These illustrations will help you perform MONTHLY vehicle PMCS. The callouts match PMCS item number/procedures.



BD99BY8-



BD99BY9-

Table 25. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1090A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly	0.1	Oil Can Points	Lubricate all oil can points with OE/HDO specified for ambient temperature. The operator/crew is responsible for lubricating the following points: 1. Cab protector locking pins and hinge pins 2. Tailgate release handle linkage 3. Tailgate post hinge assemblies 4. Tool box latches and hinges 5. Dump body tiedown rings.	

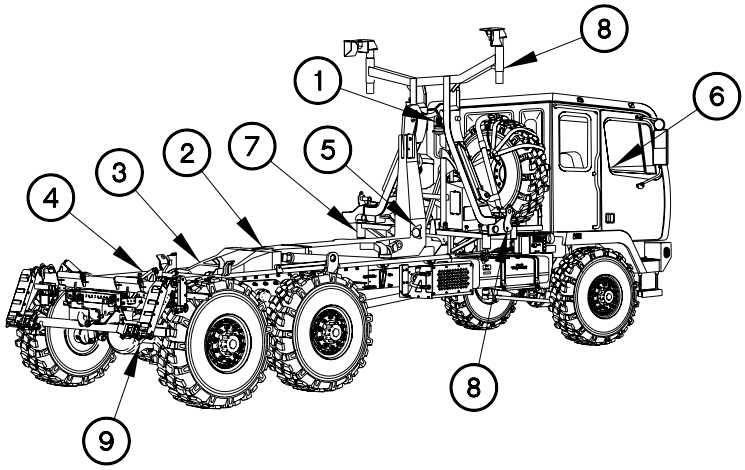
DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Oil Can Points	As required	OE/HDO-10	OE/HDO-10	OEA

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Before PMCS Procedures for Model M1148

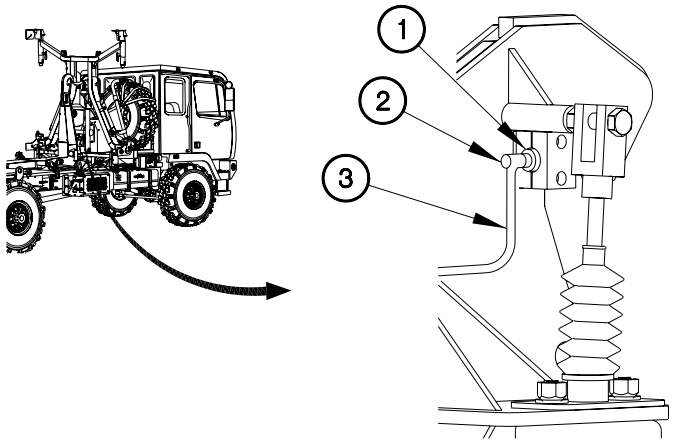
These illustrations will help you perform BEFORE vehicle PMCS. The callouts match PMCS item number/procedures.



1030B01

Table 26. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1148.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before		Lifting Frame Stowed Sensor	1. Check lifting frame stowed sensor (1) is free from mud, dirt, etc. Clean if necessary.. 2. Check lifting frame stowed sensor (1), connector (2), and wiring harness (3) for damage or missing hardware.	If lifting frame stowed sensor, connector, and/or wiring harness is damaged or missing hardware, notify Field Level maintenance.



1030B02

Table 26. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Before		Hook Arm Sensor	1. Check hook arm up sensor (4) is free from mud, dirt, etc. Clean if necessary. 2. Check hook up arm sensor (4), connector (5), and wiring harness (6) for damage or missing hardware.	If hook up arm sensor, connector, and/or wiring harness is damaged or missing hardware, notify Field Level maintenance.

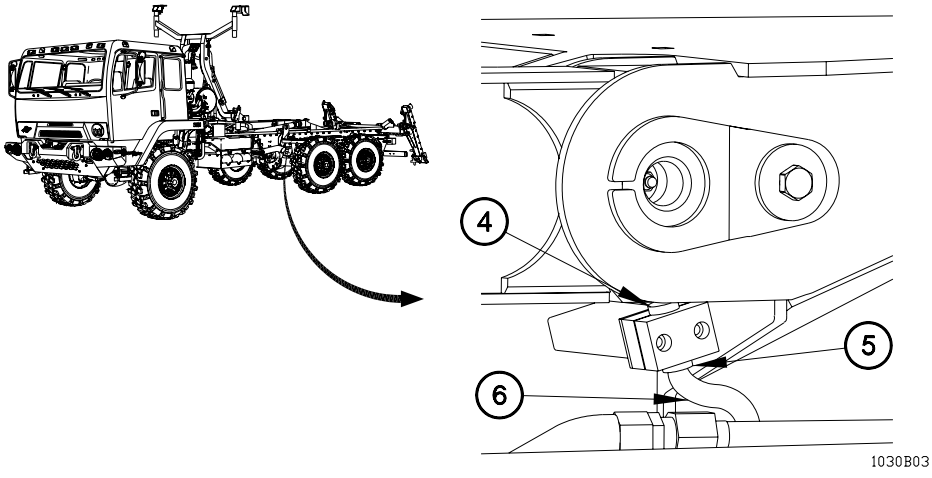


Table 26. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Before		Middle Frame Down Sensor	1. Check middle frame down sensor (7) is free from mud, dirt, etc. Clean if necessary. 2. Check middle frame down sensor (7), connector (8), and wiring harness (9) for damage or missing hardware.	If middle frame down sensor, connector, and/or wiring harness is damaged or missing hardware, notify Field Level maintenance.

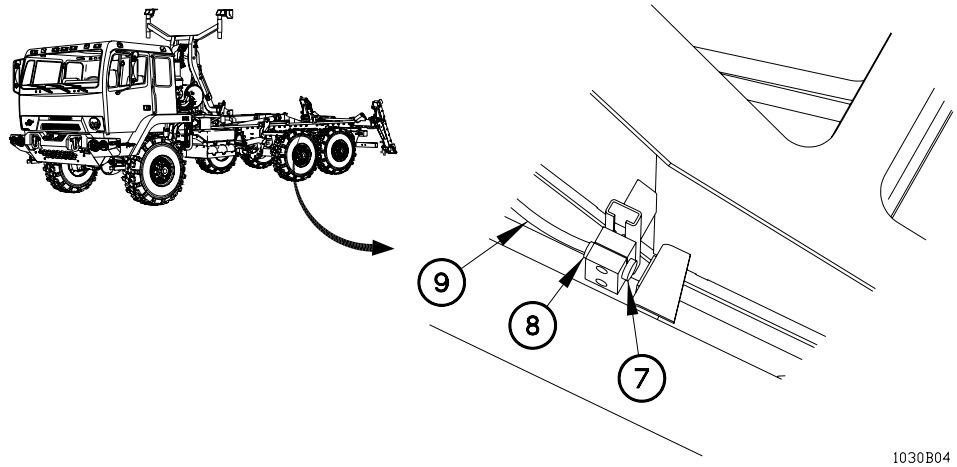


Table 26. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before		Roller Position Sensor	1. Check roller position sensor (10) is free from mud, dirt, etc. Clean if necessary. 2. Check roller position sensor (10), connector (11), and wiring harness (12) for damage or missing hardware.	If roller position sensor, connector, and/or wiring harness is damaged or missing hardware notify Field Level maintenance.

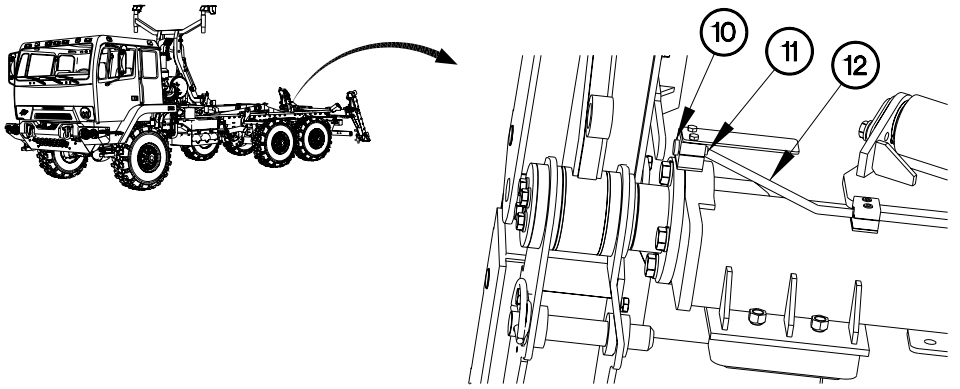


Table 26. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5	Before		Hook Arm Down Sensor	1. Check hook arm down sensor (13) is free from mud, dirt, etc. Clean if necessary. 2. Check hook arm down sensor (13), connector (14), and wiring harness (15) for damage or missing hardware.	If hook arm down sensor, connector, and/or wiring harness is damaged or missing hardware, notify Field Level maintenance.

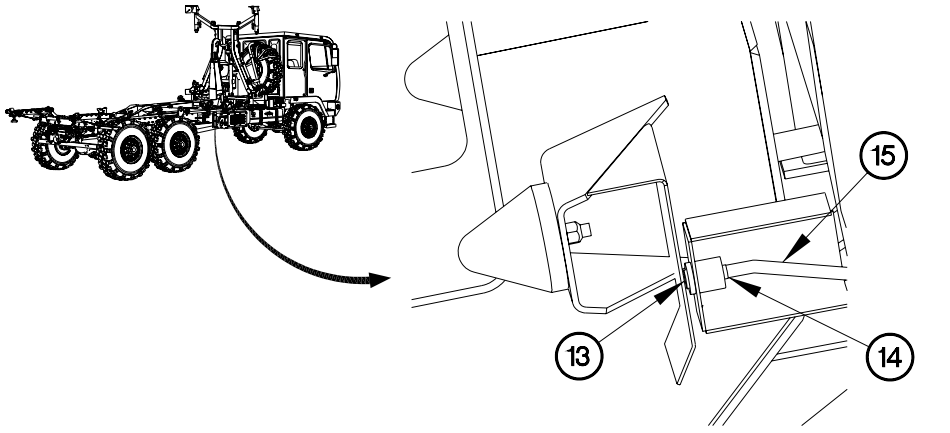


Table 26. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1148 - Continued.

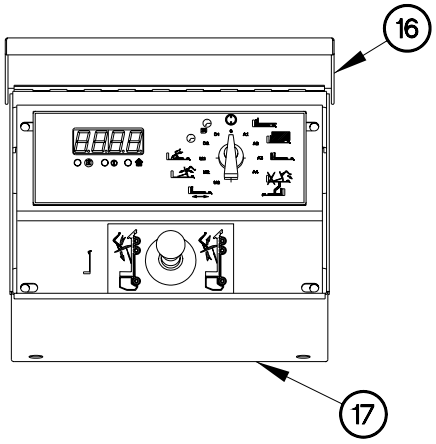
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
6	Before		Home Light	1. Start engine (WP 0020). 2. Open cover (16) on cab control box (17).	
				 1030B07	
				3. Check that home light is illuminated (WP 0006 00).	If home light does not illuminate, perform Electrical System troubleshooting (Home Light Does Not Illuminate).

Table 26. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
6	Before		Hook Arm Down Sensor - Cont	4. Using LHE position lifting bracket approximately 6 in. (12 cm) from the ground at the rear of the vehicle (WP 0043 21). 5. Check that home light is not illuminated (WP 0006 00).	If home light does not illuminate, perform Electrical System troubleshooting (Home Light Illuminates While Operating Load Handling Equipment (LHE).
7	Before		Load Handling Equipment (LHE)	1. Remove main manifold cover (WP 0115 01).	

Table 26. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
7	Before		Load Handling Equipment (LHE) - Cont	2. Inspect LHE hydraulic tubes (18), hoses (19), valves (20), actuators (21), cylinders (22), locking pins (23), and fittings (24) for damage, leaks, and or excessive wear.	If damage, excessive wear, or Class III leak is present at hydraulic tubes, hoses, valves, actuators, cylinders, locking pins, or fittings, notify Field Level maintenance.
				3. Install main manifold cover (WP 0115 01).	

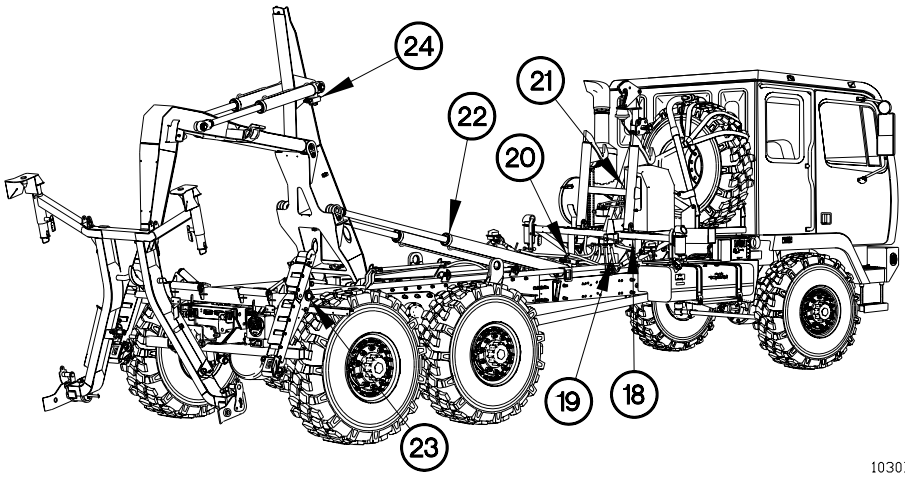
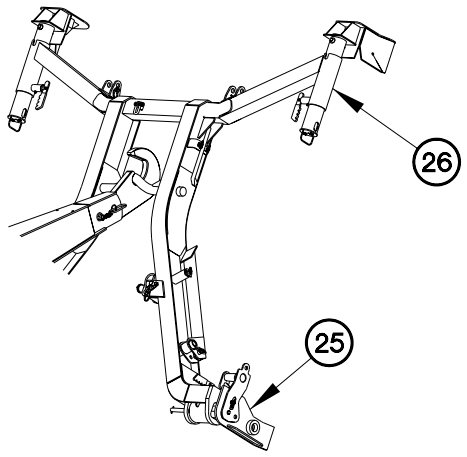


Table 26. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			NOTE The following two steps require the aid of an assistant. Left and right storage locks and guide blocks operate the same. Left side shown..		
8	Before		Lifting Bracket	1. Check the operation of the storage locks (25) and guide blocks (26) (WP 0011 00).	If guide blocks or storage locks do not operate, notify Field Level maintenance.



1030B08

Table 26. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8	Before		Lifting Bracket - Cont	2. Perform previous step on right side of vehicle. 3. Return the lifting bracket to stowage guide and return the LHE to the home position (WP 0043 22). 4. Shut down engine (WP 0020 00).	
				NOTE Left and right twist locks operate the same. Right side shown.	
9	Before		Twist Locks	1. Check the operation of twist locks (27)	If twist locks do not operate, notify Field Level maintenance.
				2. Perform previous step on left side of vehicle.	

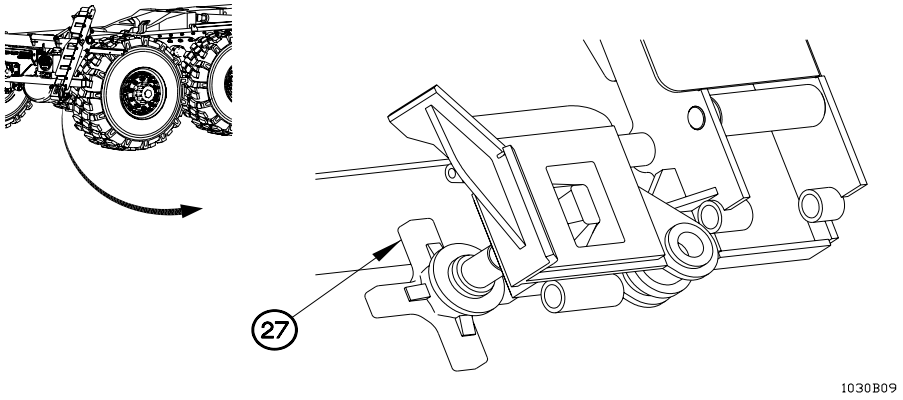
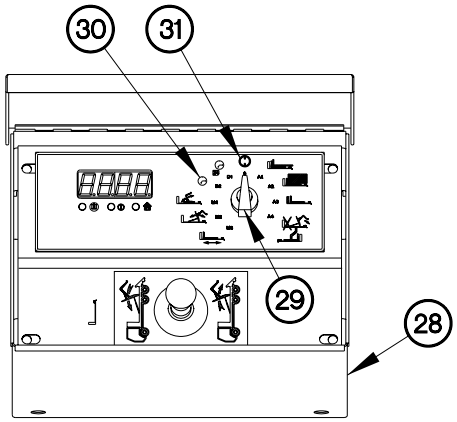


Table 26. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
10	Before		Run Timer	1. Position master power switch to on (WP 0004 00). 2. Open Cab control box (28). 3. Position mode select switch (29) to D2 (30). 4. Check total hours run-timer to see if 20 or 40 hour PMCS is due. 5. Position mode select switch (29) to 0 (31). 6. Close cab control box (28)	If 20 or 40 Hour PMCS is required, notify Field Maintenance.



1030B11

Table 26. Preventive Maintenance Checks and Services (PMCS) - Before - Model M1148 - Continued.

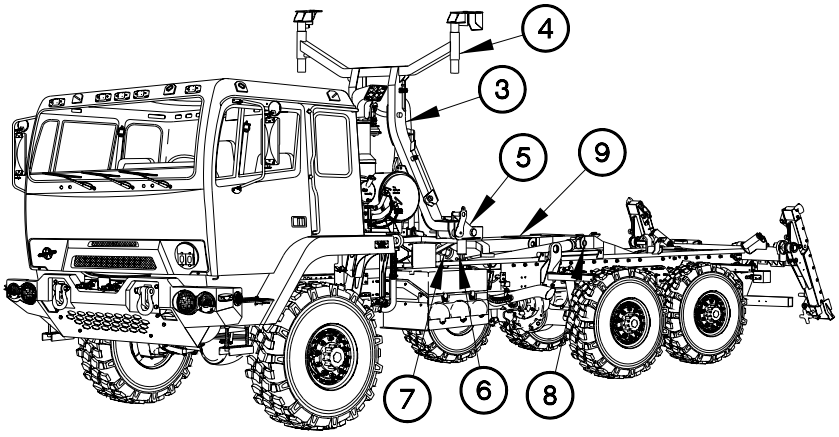
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
10	Before		Run Timer - Cont	7. Position master power switch to off. (WP 0004 00).	

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

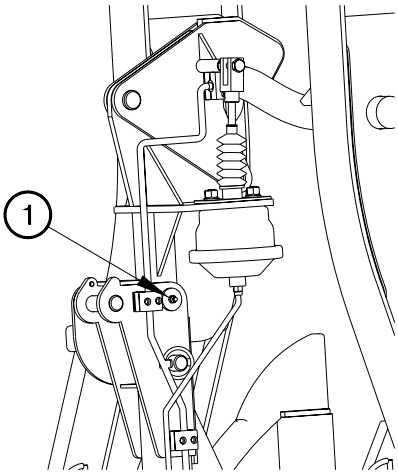
Monthly PMCS Procedures for Model M1148

These illustrations will help you perform MONTHLY vehicle PMCS. The callouts match PMCS item number/procedures.



1030B12

Table 27. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1148 - Continued.

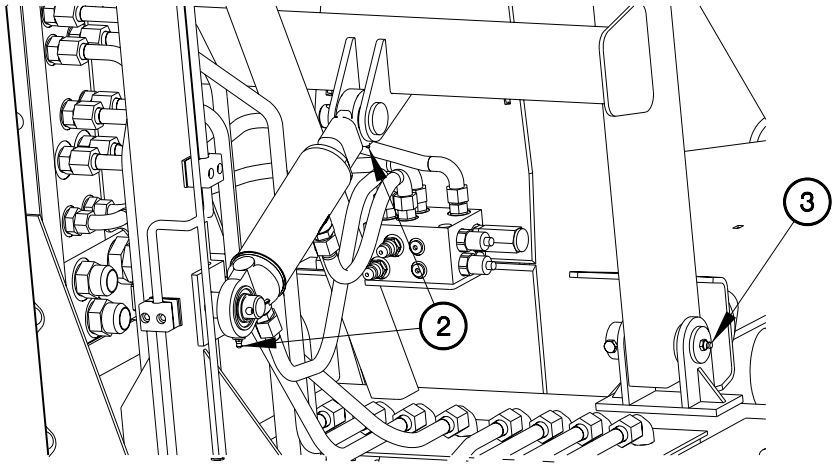
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly	0.1	Stowage Latch Support	Lubricate stowage latch support (1).	
				 1030B13	
2	Monthly	0.1	Stowage Guide and Cylinder	1. Lubricate stowage guide cylinder (2).	

NOTE

The following step applies to right and left side of vehicle. Left side shown.

Table 27. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Monthly			2. Lubricate stowage guide (3).	

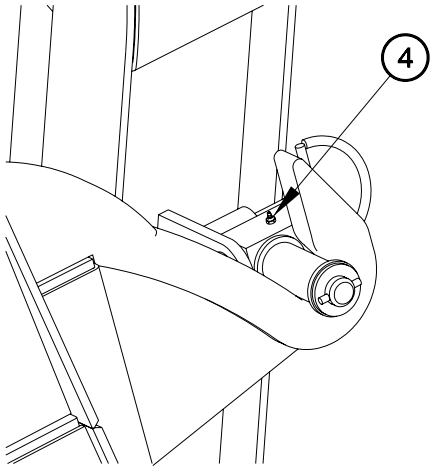


1030B14

NOTE

The following step applies to right and left side of vehicle. Left side shown.

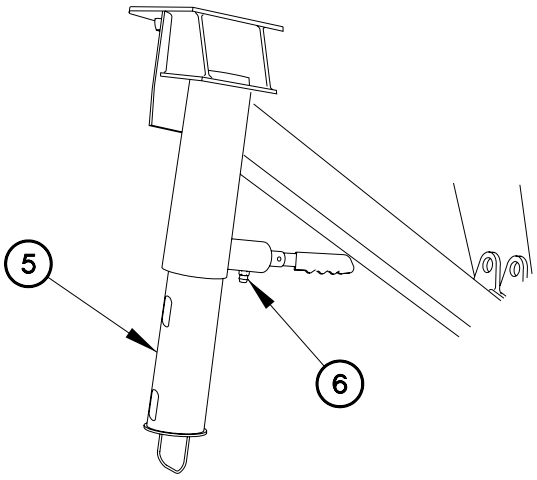
3	Monthly	0.1	Lifting Frame Roller	1. Lubricate lifting frame roller (4).	



1030B15

Table 27. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			NOTE		
			The following two steps apply to right and left side of vehicle. Left side shown.		
4	Monthly	0.1	Guide Block / Locking Handle	1. Lubricate guide block cylinder (5) generously and completely with grease using a rag. 2. Lubricate guide block locking handle (6).	



1030B16

			NOTE		
			The following step applies to right and left side of vehicle. Left side shown.		
5	Monthly	0.1	Stowage Lock/Locking Handles and Deflector Bar/Locking Handle	1. Lubricate stowage lock (7) generously and completely with grease using a rag.	

Table 27. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5	Monthly		Stowage Lock/Locking Handles and Deflector Bar/Locking Handle	2. Lubricate stowage locking handle (8). 3. Lubricate deflector bar (9) generously and completely with grease using a rag. 4. Lubricate deflector bar locking handle (10).	

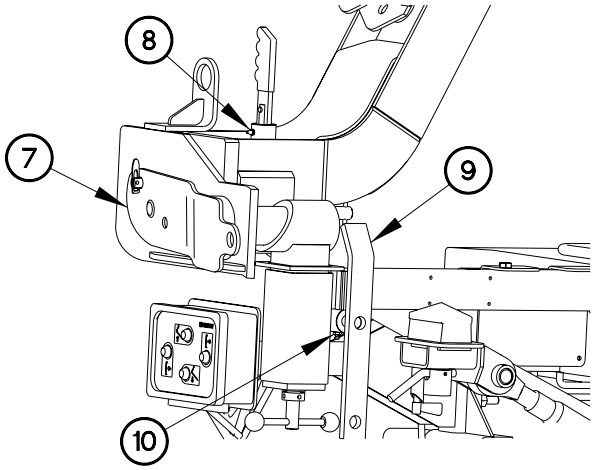


Table 27. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			NOTE		
			The following step applies to right and left side of vehicle. Left side shown.		
6	Monthly	0.1	Front Middle Frame Cylinder	Lubricate front middle frame cylinder (11).	

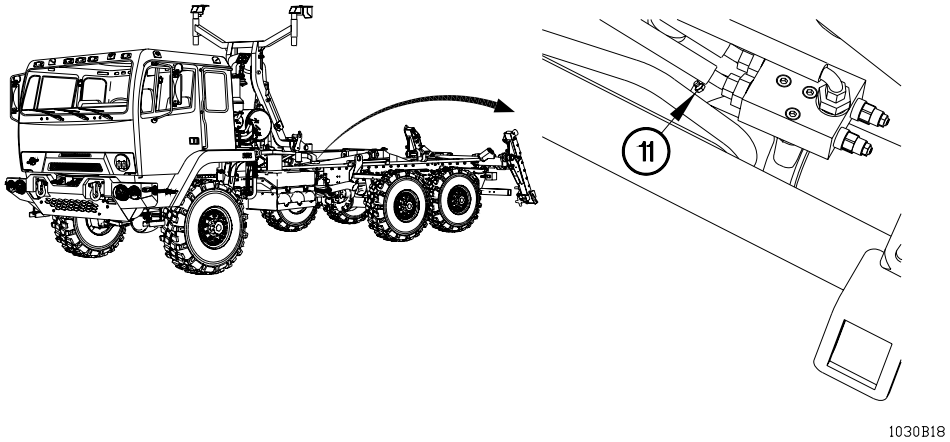
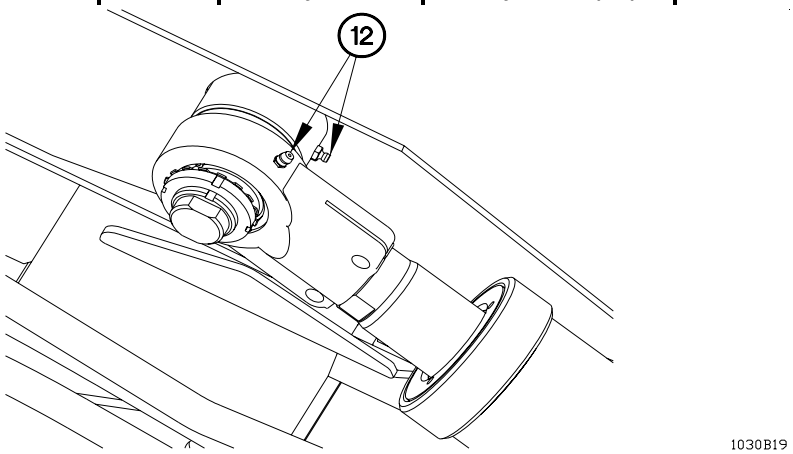


Table 27. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			NOTE		
			The following step applies to right and left side of vehicle. Left side shown.		
7	Monthly	0.1	Front Hook Arm Cylinder	Lubricate hook arm cylinder (12).	



			NOTE		
			The following step applies to right and left side of vehicle. Left side shown.		
8	Monthly	0.1	Rear Middle Frame Cylinder	Lubricate middle frame cylinder (13).	

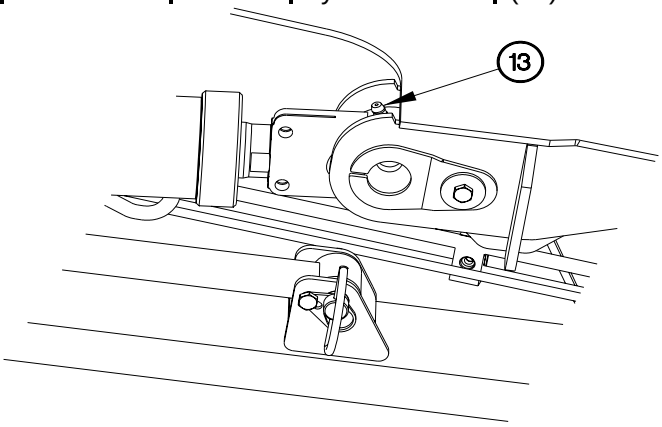
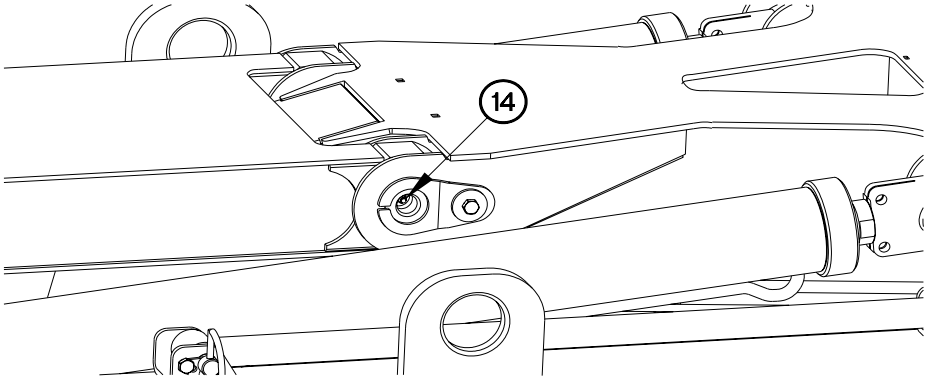


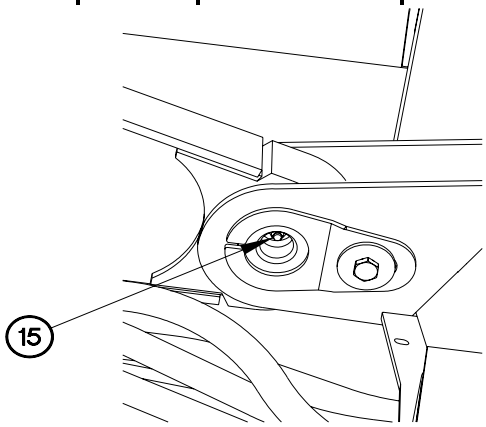
Table 27. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			NOTE		
			The following step applies to right and left side of vehicle. Left side shown.		
9	Monthly	0.1	Hook Arm/Middle Frame Joint	Lubricate hook arm/middle frame joint (14).	



1030B21

			NOTE		
			The following step applies to right and left side of vehicle. Left side shown.		
10	Monthly	0.1	Middle Frame Joint	Lubricate middle frame joint (15).	



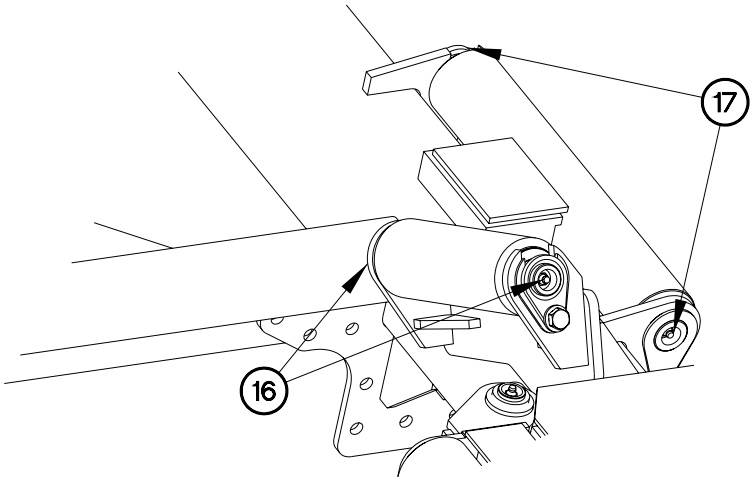
1030B22

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

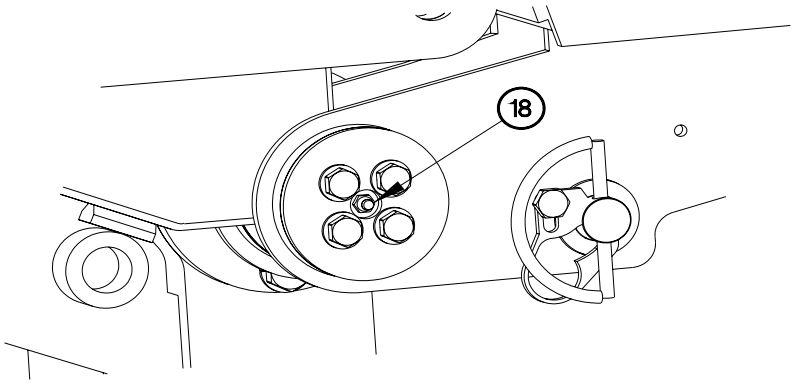
Table 27. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
				NOTE	
				The following 13 steps apply to right and left side of vehicle. Left side shown.	
11	Monthly	0.1	Rear Rollers	1. Lubricate both ends of roller (16). 2. Lubricate both ends of roller (17).	



1030B23

				3. Lubricate roller assembly (18).	



1030B24

Table 27. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
11	Monthly		Rear Rollers	4. Lubricate roller (19). 5. Lubricate roller (20). 6. Lubricate roller (21). 7. Lubricate roller bracket (22).	
				8. Lubricate roller (23). 9. Lubricate roller (24). 10. Lubricate roller (25).	

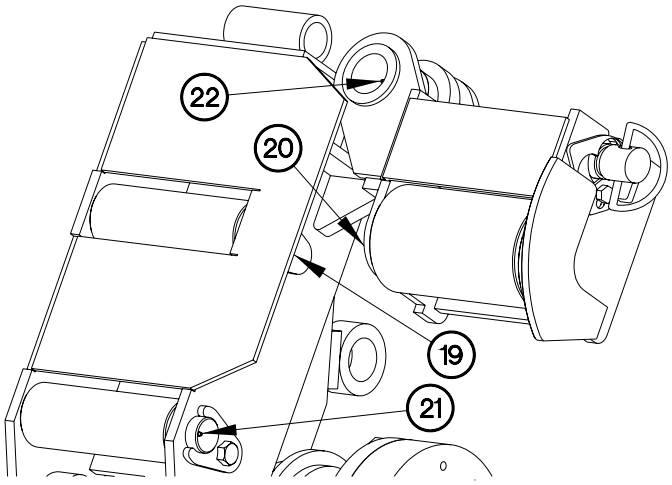


Table 27. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
11	Monthly		Rear Rollers	11. Lubricate roller (26).	

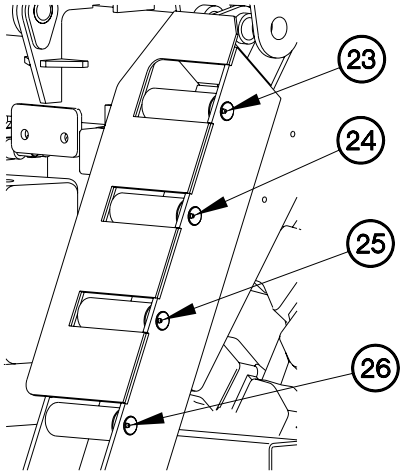
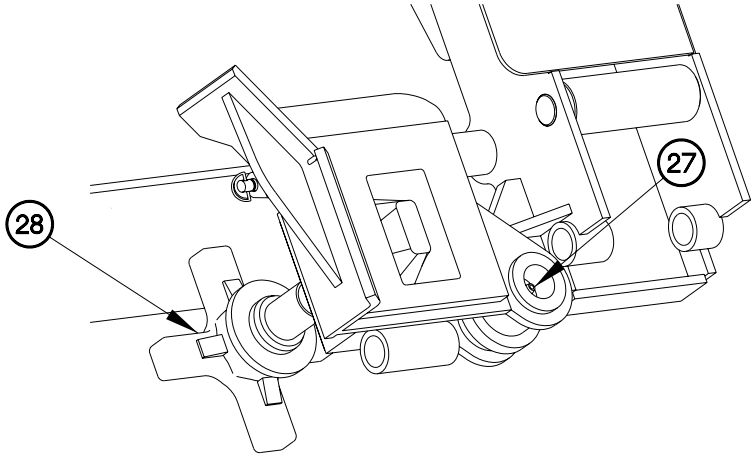


Table 27. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1148 - Continued.

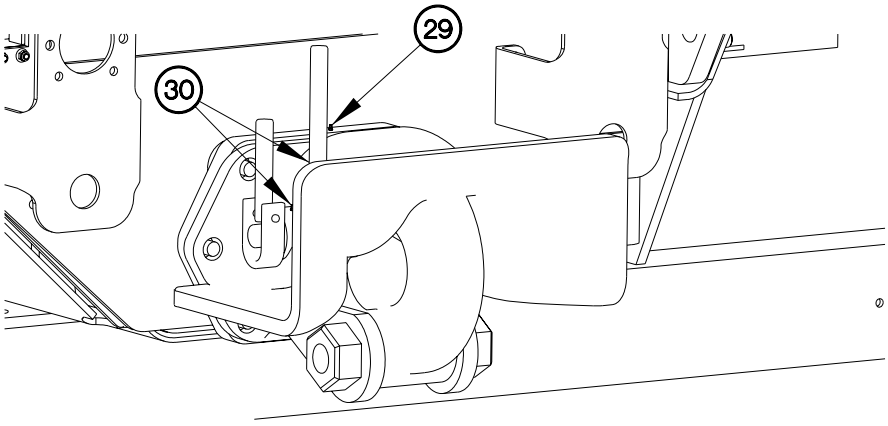
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
11	Monthly		Rear Rollers	12. Lubricate roller bracket (27). 13. Lubricate twist lock (28) generously and completely with grease using a rag.	



M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

Table 27. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
12	Monthly	0.1	Pintle Hook	1. Lubricate pintle (29). 2. Lubricate two locking pins (30).	

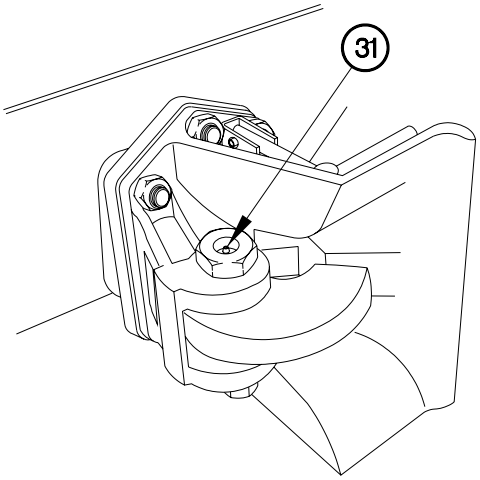


1030B28

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

Table 27. Preventive Maintenance Checks and Services (PMCS) - Monthly - Model M1148 - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
12	Monthly		Pintle Hook	3. Lubricate latch (31).	

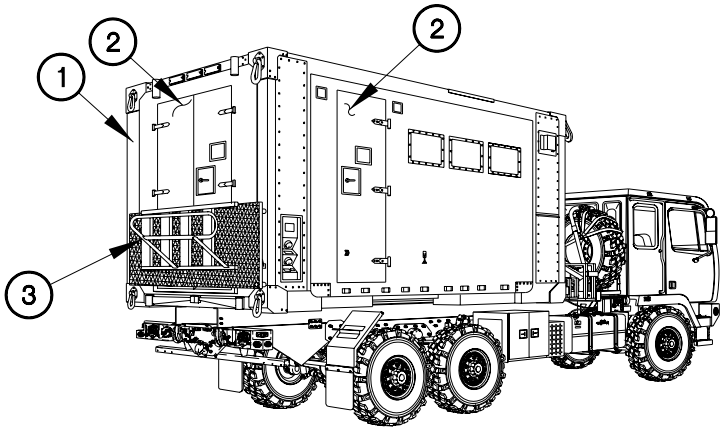


M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

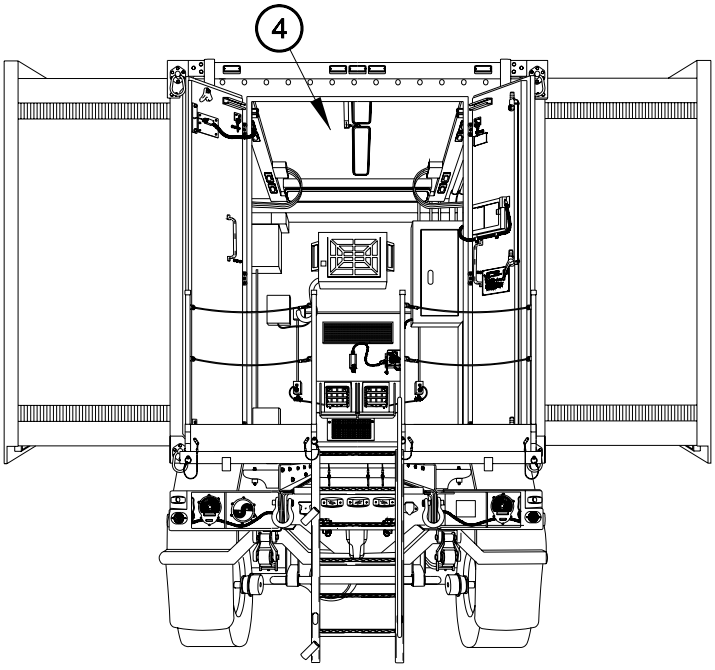
0103 00

Before PMCS Procedures for Model M1087A1

These illustrations will help you perform Before vehicle PMCS. The callouts match PMCS item number/procedures.



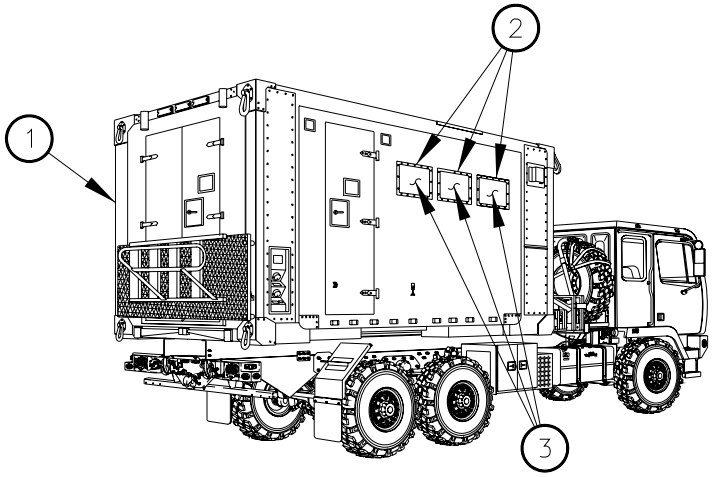
M103PM01



M103PM02

Table 28. Preventive Maintenance Checks and Services (PMCS) – Before – Model M1087A1.

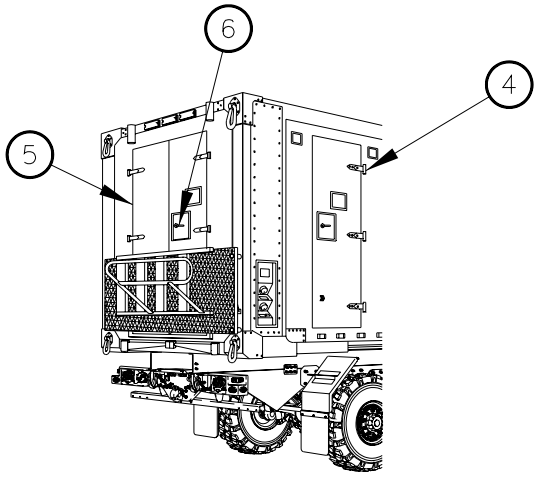
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before		Van Body	Inspect van body (1), windows (2), and blackout screens (3) for obvious signs of damage.	



M103PM03

Table 28. Preventive Maintenance Checks and Services (PMCS) – Before – Model M1087A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Before		Van Doors	1. Check door hinges (4) for damage and broken welds. 2. Check van doors (5) for missing or damaged latches (6). Check that latches lock securely when doors are closed.	More than one door hinge is damaged or weld is broken.



M103PM04

Table 28. Preventive Maintenance Checks and Services (PMCS) – Before – Model M1087A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Before		Ladder and platform.	1. Install ladder and platform (WP 0043 01). 2. Check hand rail (7) for damaged or broken welds. 3. Check ladder and platform for damaged rungs (8), damaged grating (9), broken welds and proper mounting.	

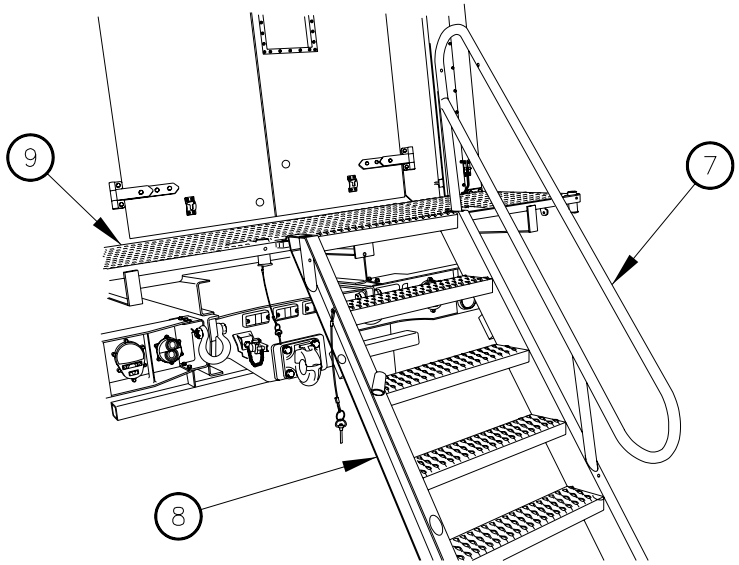


Table 28. Preventive Maintenance Checks and Services (PMCS) – Before – Model M1087A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before		Van Body Interior	1. Check INTERIOR LIGHT switch (10), blackout override switches (11), and blackout panels (12) for obvious signs of damage.	

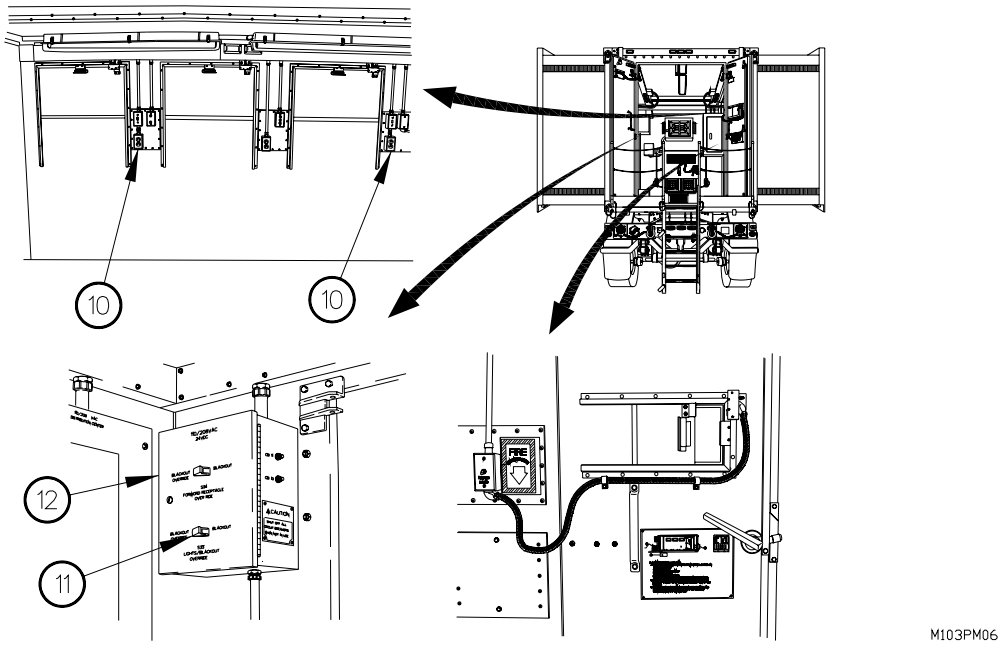
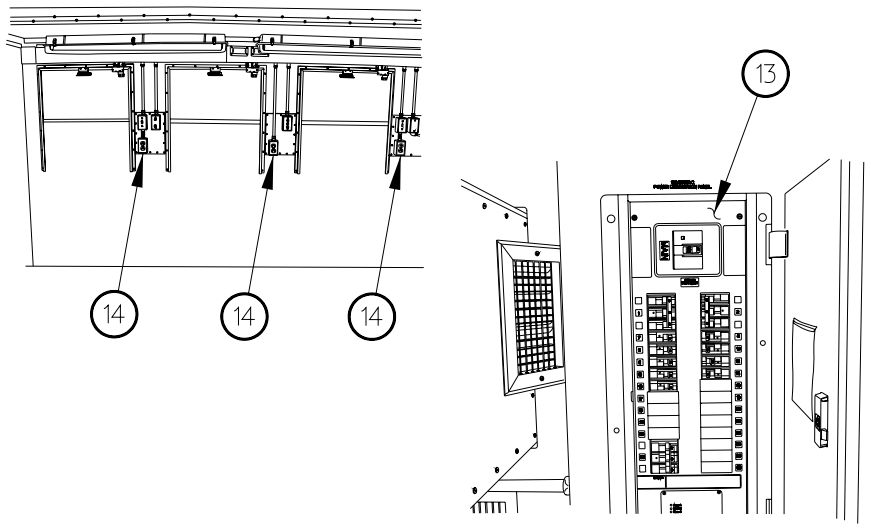


Table 28. Preventive Maintenance Checks and Services (PMCS) – Before – Model M1087A1.

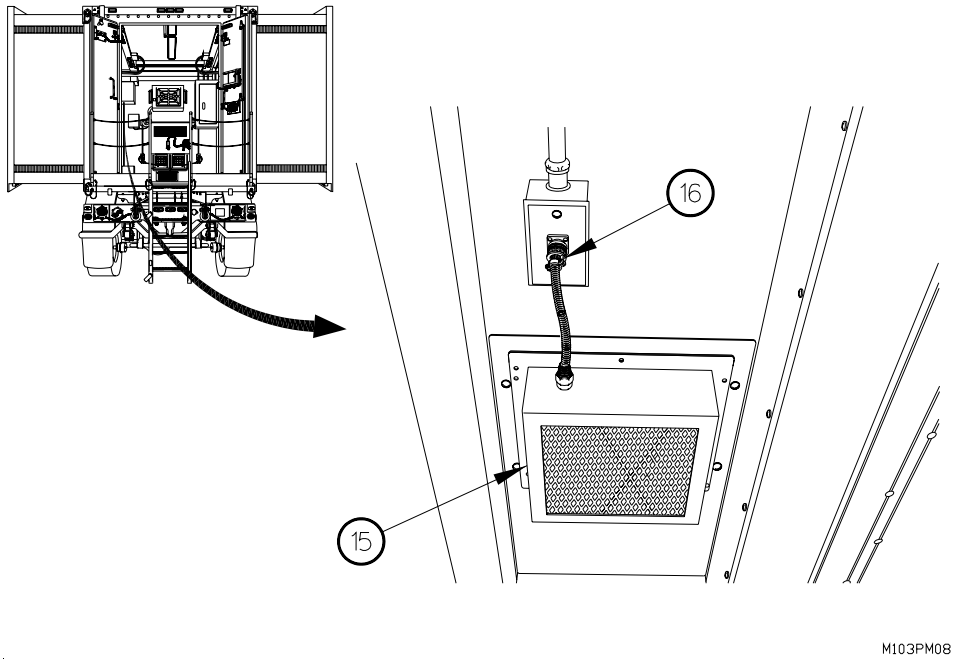
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before		Van Body Interior - Continued	2. Check 120/208 VAC POWER DISTRIBUTION PANEL (13) and electrical receptacles (14) for signs of obvious damage.	



M103PM07

Table 28. Preventive Maintenance Checks and Services (PMCS) – Before – Model M1087A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before		Van Body Interior - Continued	3. Check ventilation fan (15) and fan connector (16) for signs of obvious damage. 4. Stow ladder and platform (0043 01).	

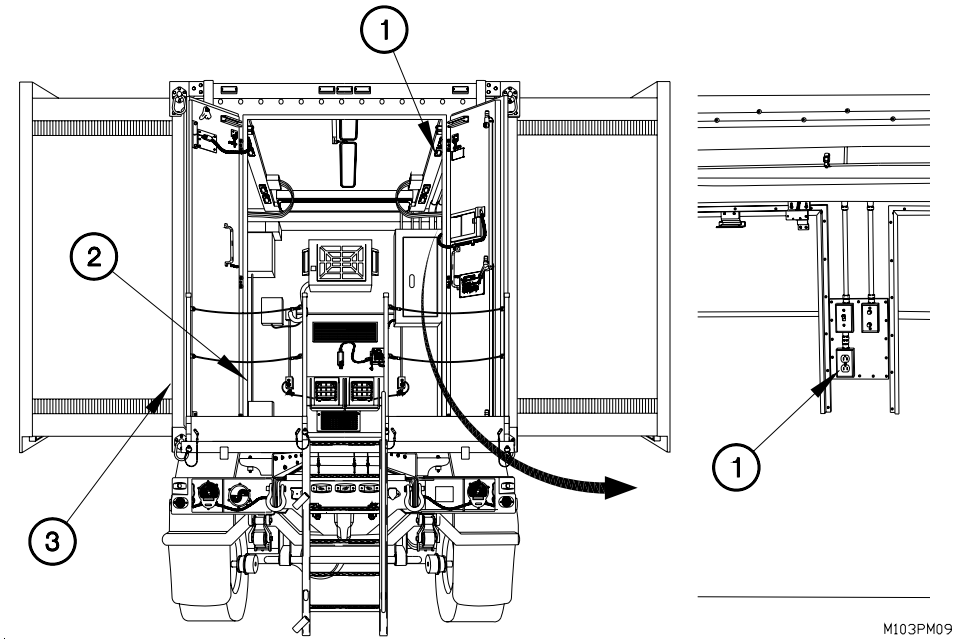


M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

During PMCS Procedures for Model M1087A1

These illustrations will help you perform DURING vehicle PMCS. The callouts match PMCS item number/procedures.



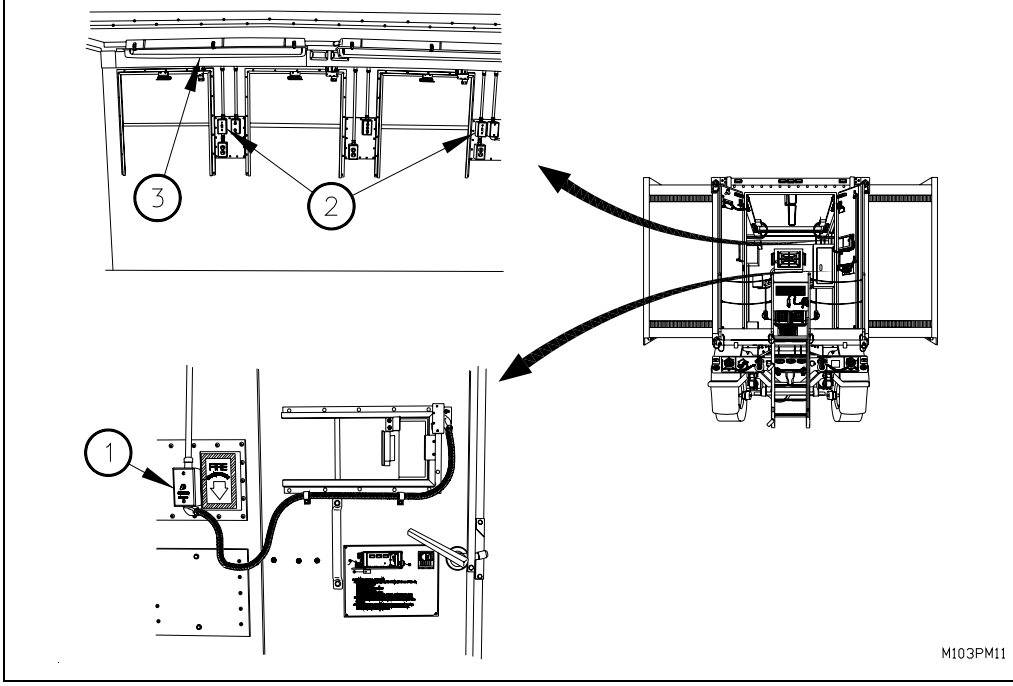
M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

During PMCS Procedures for Model M1087A1.

Table 28. Preventive Maintenance Checks and Services (PMCS) -During – Model M1087A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Interior lights	1. Position main INTERIOR LIGHTS switch (1) to ON. 2. Position all interior light switches (2) to ON and check that all interior lights (3) illuminate.	



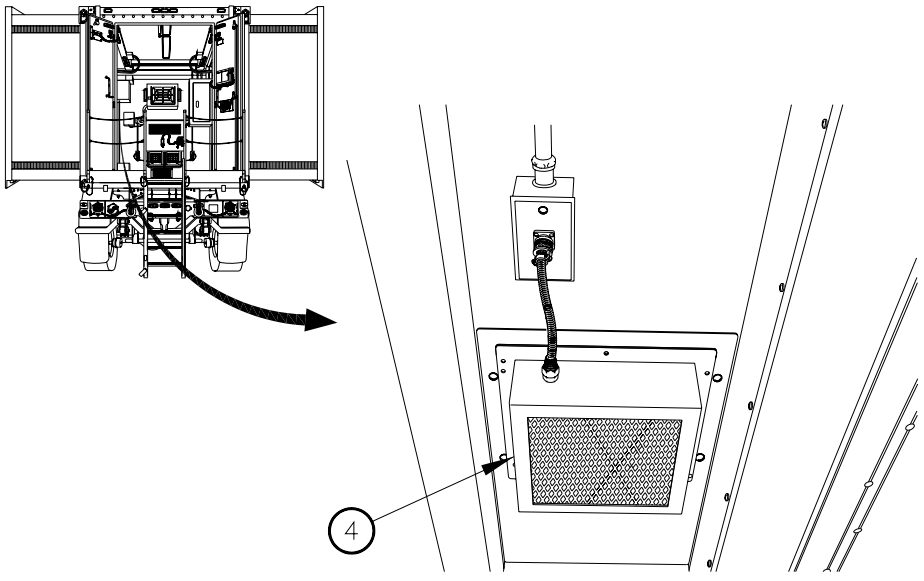
M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

During PMCS Procedures for Model M1087A1.

Table 28. Preventive Maintenance Checks and Services (PMCS) -During – Model M1087A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	During		Interior lights - Continued	3. Perform van lighting in BLACKOUT mode (WP 0043 05).	Vehicle doesn't go into BLACKOUT mode
3	During		Ventilation Fan	4. Check that fan (4) operates properly.	



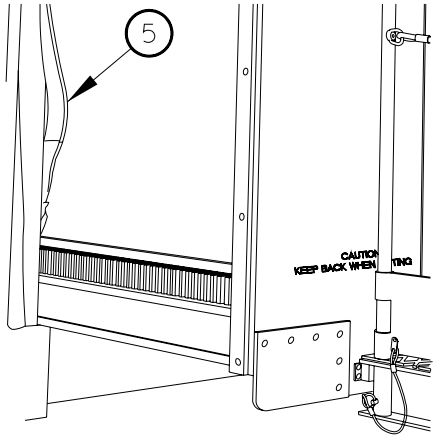
M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

During PMCS Procedures for Model M1087A1.

Table 28. Preventive Maintenance Checks and Services (PMCS) -During – Model M1087A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	During		Van upper and side seals	Inspect van upper and side seals (5) to ensure proper installation or for damage	



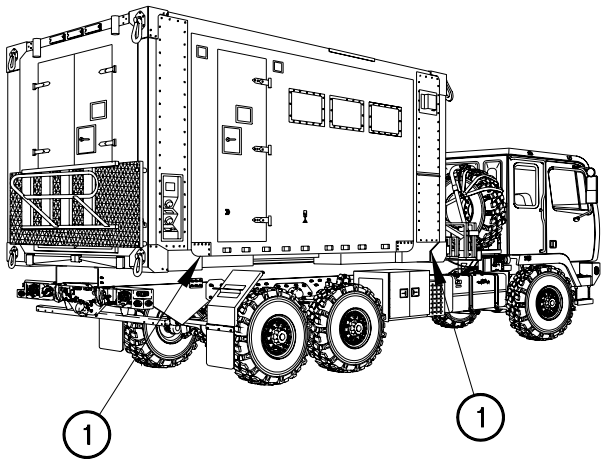
M103PM13

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

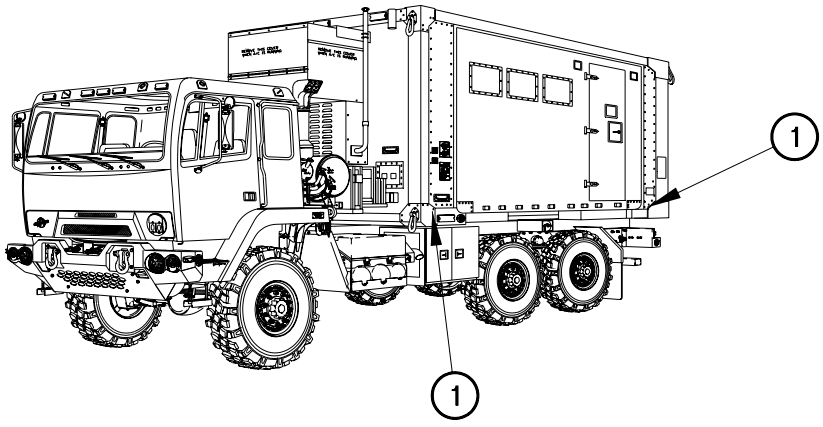
0103 00

After PMCS Procedures for Model M1087A1

These illustrations will help you perform AFTER vehicle PMCS. The callouts match PMCS item number/procedures.



M103PM14



M103PM15

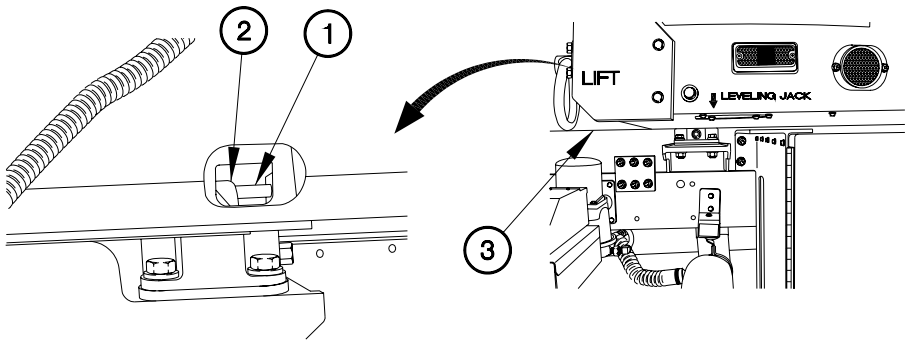
M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

After PMCS Procedures for Model M1087A1.

Table 29. Preventive Maintenance Checks and Services (PMCS) -After – Model M1087A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	After		ISO Locks	Inspect/Adjust all four ISO locks. Ensure safety locks (1) are properly engaged with against ISO locks (2). Ensure ISO locks (2) are properly engaged against Van Body (3).	



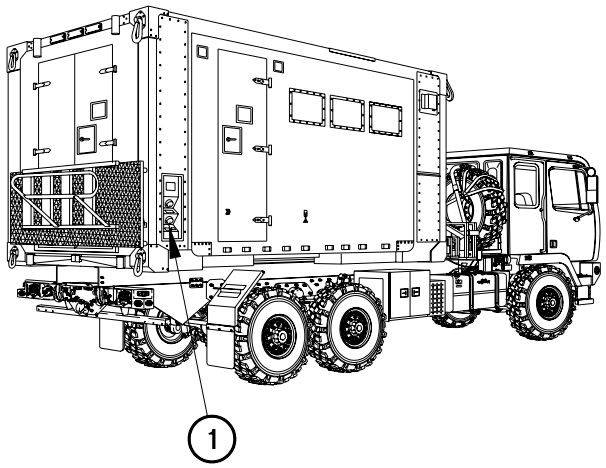
M103PM16

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

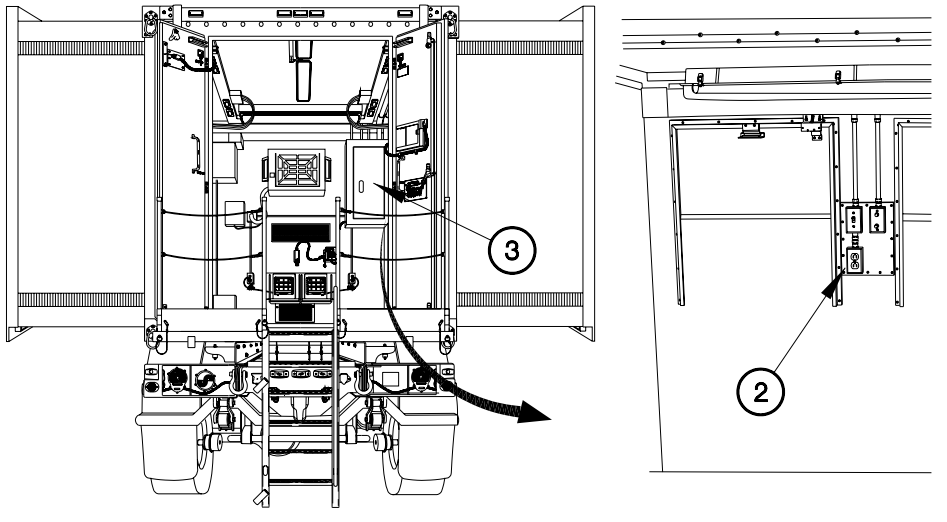
0103 00

Weekly PMCS Procedures for Model M1087A1

These illustrations will help you perform Weekly vehicle PMCS. The callouts match PMCS item number/procedures.



M103PM17



M103PM18

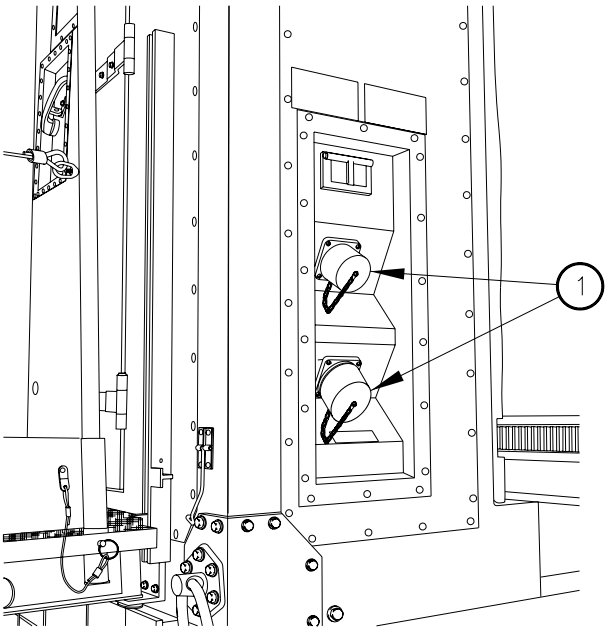
M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Weekly PMCS Procedures for Model M1087A1.

Table 30. Preventive Maintenance Checks and Services (PMCS) – Weekly – Model M1087A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Weekly		Power Panel Receptacles	Check 120/208 VAC power panel receptacles (1) for damage.	Power panel receptacles(1) is damaged.



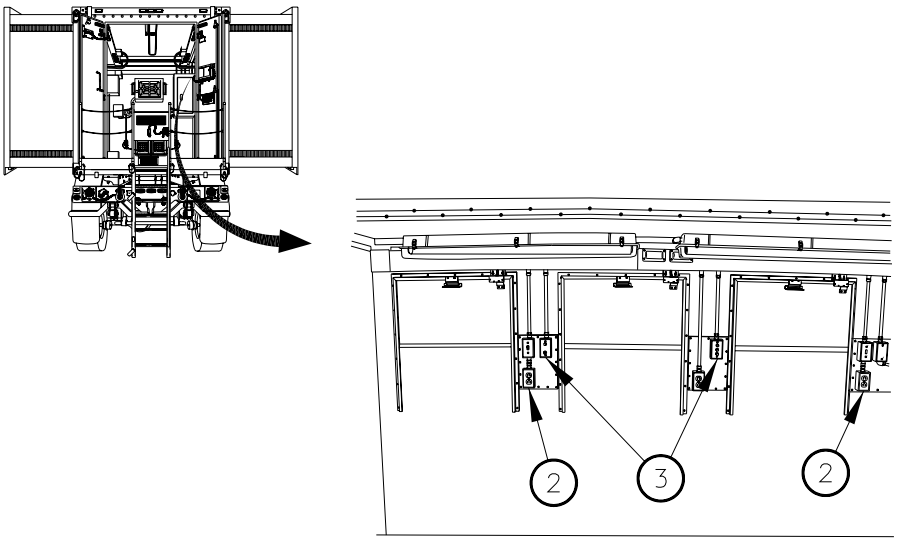
M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Weekly PMCS Procedures for Model M1087A1.

Table 30. Preventive Maintenance Checks and Services (PMCS) – Weekly – Model M1087A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Weekly		Electrical Receptacles and Binding Posts	1. Install ladder and platform (0043 01). 2. Check all electrical receptacles (2) and binding posts (3) for obvious signs of damage.	Three or more electrical receptacles or one or more binding post(s) are damaged.



M103PM20

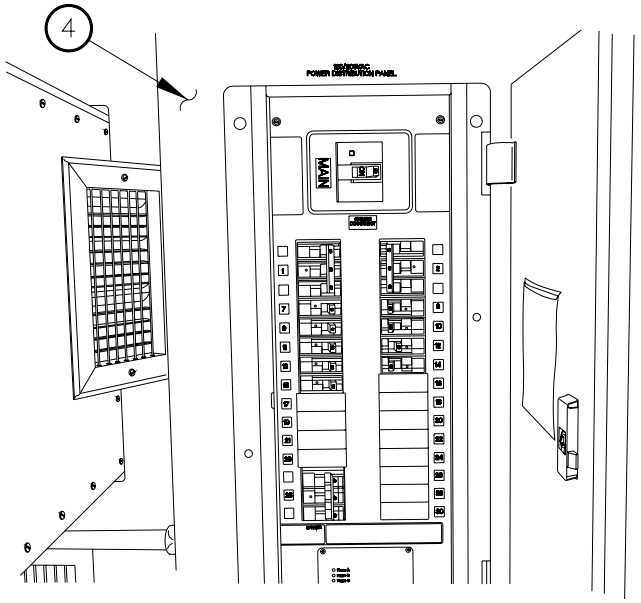
M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Weekly PMCS Procedures for Model M1087A1.

Table 30. Preventive Maintenance Checks and Services (PMCS) – Weekly – Model M1087A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Weekly		Power Distribution Panel	1. Check 120/208 VAC POWER DISTRIBUTION PANEL (4) for obvious signs of damge. 2. Stow ladder and platform (0043 01).	120/208 VAC POWER DISTRIBUTION PANEL (4) is damaged to the extent that shock hazard is present.



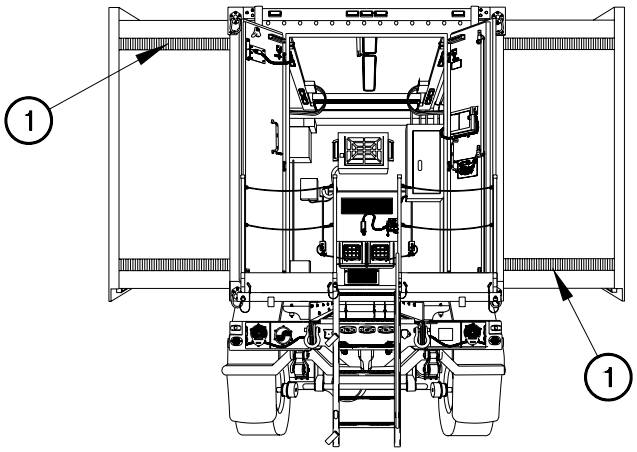
M103PM21

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Monthly PMCS Procedures for Model M1087A1

These illustrations will help you perform MONTHLY vehicle PMCS. The callouts match PMCS item number/procedures.



M103PM22

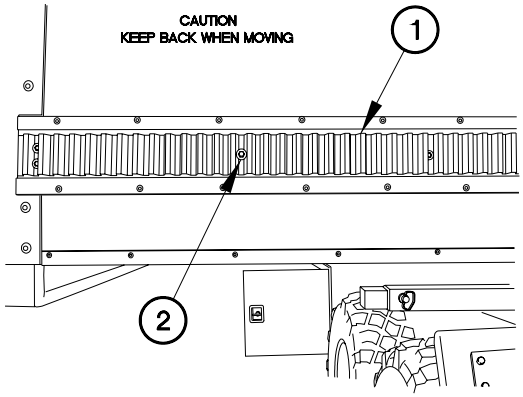
M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Monthly PMCS Procedures for Model M1087A1.

Table 31. Preventive Maintenance Checks and Services (PMCS) – Monthly – Model M1087A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly		Gear Drive Racks	Inspect gear drive racks (1) for surface rust, corrosion, or missing bolts (2).	Gear drive racks (1) missing bolts (2).



M103PM23

M1083A1 SERIES PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - Continued

0103 00

Monthly PMCS Procedures for Model M1087A1.

Table 31. Preventive Maintenance Checks and Services (PMCS) – Monthly – Model M1087A1.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Monthly	0.1	Oil Can Points	1. Lubricate all oil can points with OE/HDO specified for ambient temperature. The operator/ crew is responsible for lubricating the following points: 1. Van door latches and pins. 2. Ladder and platforms pin locks.	

DESCRIPTION	CAPACITY	TYPE OF FLUID USED AT THESE EXPECTED TEMPERATURES		
		Above 40°F (Above 4°C)	40° to -15°F (4° to -26°C)	-15° to -50°F (-26° to -46°C)
Oil Can Points	As Required	OE/HDO-10	OE/HDO-10	OEA

MAINTENANCE INTRODUCTION 0104 00

The following work packages (WP 0106 00 through WP 0113 00) contain instructions for servicing, installing, and removing components at the operator maintenance level.

CHANGING TIRE 0105 00

THIS WORK PACKAGE COVERS:

Lower Spare Tire, Tire Removal, Tire Installation, Tire Stowage, and Operational Check

INITIAL SETUP:

Maintenance Level
Operator

Equipment Conditions
Vehicle parked on level ground.
Engine shut down (WP 0018 00).
Wheels chocked (WP 0018 00).
Cab raised (WP 0021 00).

Material/Parts
Gloves, Leather (WP 0118 00)

Tools and Special Tools
Jack, Hydraulic (Item 33, Table 2, WP 0117 00)
Wrench, Adjustable (Item 49, WP 0117 00)
Wrench, Socket (Item 55, Table 2, WP 0117 00)
Jack Adapter (Item 32, Table 2, WP 0012 00)
Bar, Socket Wrench Handle (Item 4, Table 2, WP 0117 00)

Personnel Required
Two

References
WP 0044 00

GENERAL

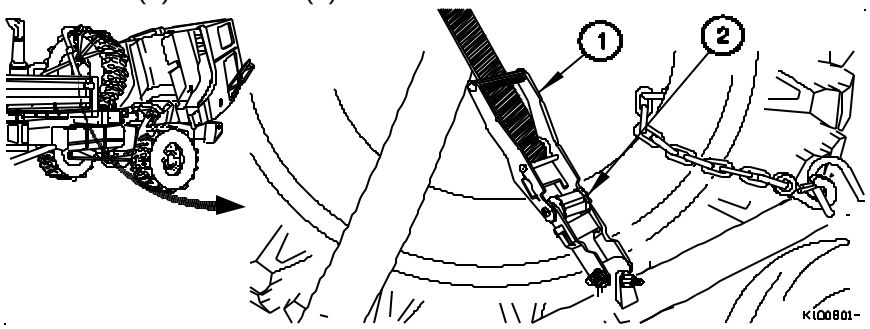
This work package contains information and instructions to change the tire on the M1083A1 series vehicle.

LOWER SPARE TIRE

WARNING

Ensure vehicle is parked on level ground before changing flat tire. Vehicle may roll. Failure to comply may result in serious injury or death to personnel.

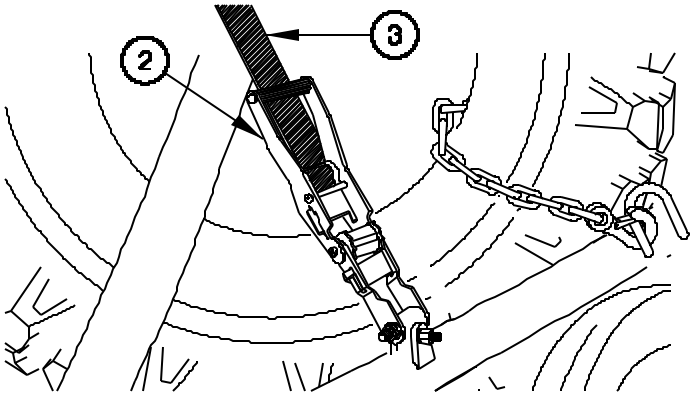
1. Release latch (1) on ratchet (2).



LOWER SPARE TIRE - Continued

2. Lift ratchet (2) and release strap (3).

3. Remove strap (3) from ratchet (2).

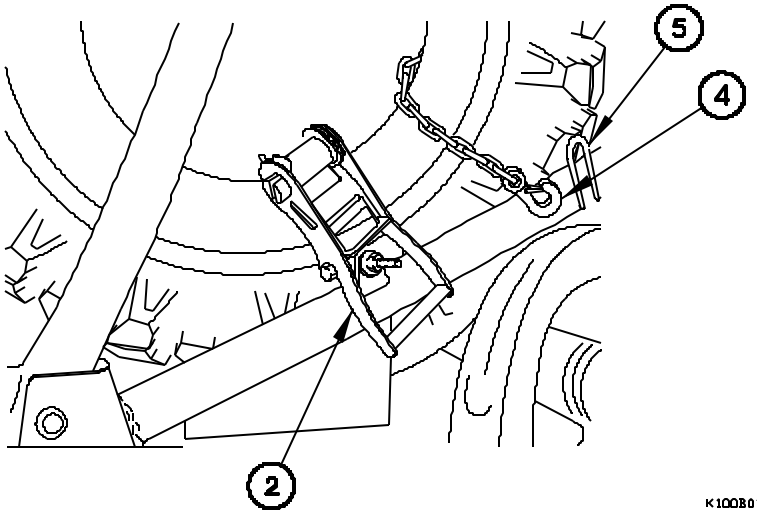


4. Disconnect safety chain (4) from spare tire retainer (5).

CAUTION

Ratchet must be in the down position before cab is lowered. Failure to comply may result in damage to equipment.

5. Place ratchet (2) in down position.



LOWER SPARE TIRE - Continued

6. Remove strap (3) and safety chain (4) from spare tire retainer (5).

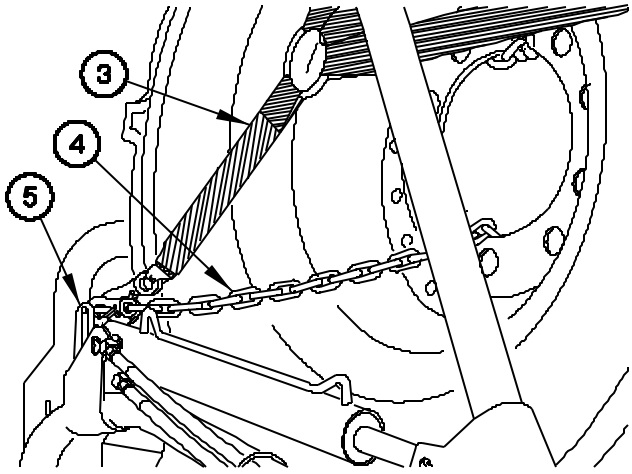
CAUTION

Cab must remain raised to remove spare tire from M1089A1. Failure to comply may result in damage to equipment.

NOTE

Perform step 7 for all models except M1089A1.

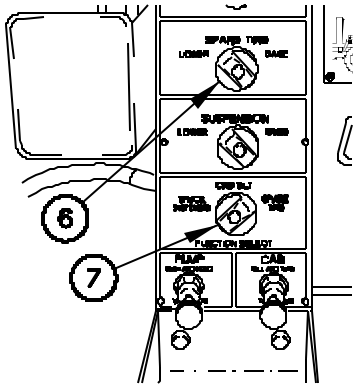
7. Lower cab (WP 0021 00).



K100804-

8. Position SPARE TIRE knob (6) to the LOWER.

9. Position FUNCTION SELECT knob (7) to the SPARE TIRE.



K100805-

LOWER SPARE TIRE - Continued

WARNING

Tire weighs approximately 350 lbs (159 kgs). If treads of tire catch on TOOL BOX during lowering, raise tire and pull tire away from TOOL BOX and continue lowering. Use extreme care when handling tire. Failure to comply may result in injury to personnel.

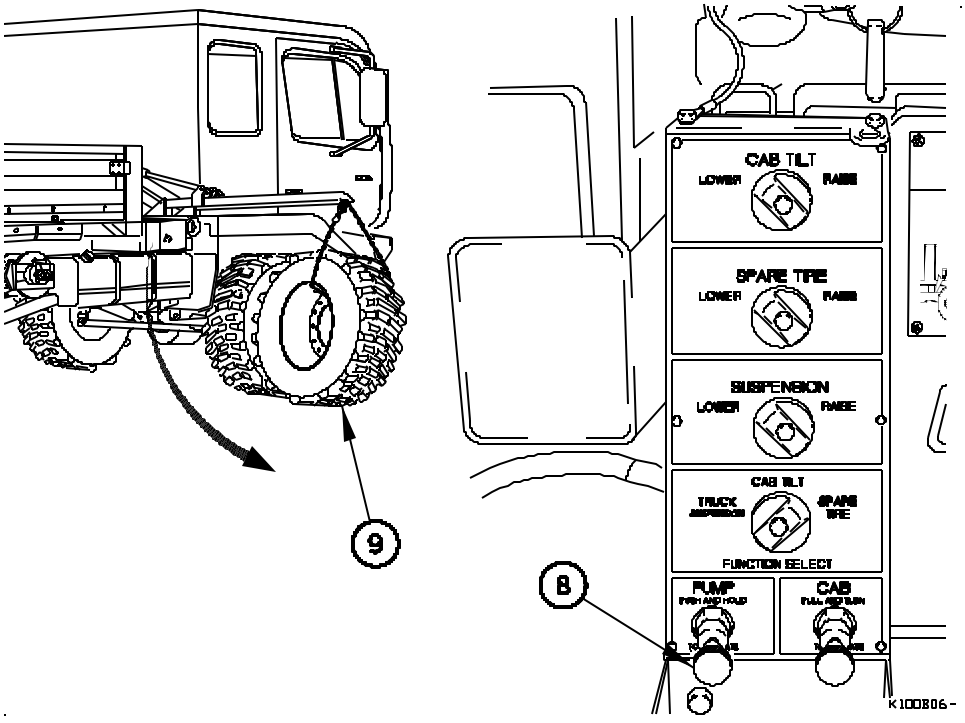
CAUTION

Use caution when lowering tire to prevent damage to Central Tire Inflation System (CTIS) wheel valve. Failure to comply may result in damage to equipment.

NOTE

Use back-up hydraulic pump (WP 0044 00) if temperature is below -25° F (-32° C) or if pressing PUMP knob does not accomplish step 10.

10. Press and hold PUMP knob (8) to lower spare tire (9) to ground.

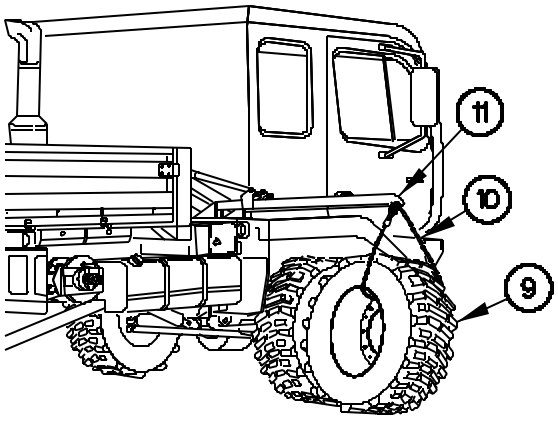


LOWER SPARE TIRE - Continued

11. Disconnect one end of chain (10) from spare tire retainer lift arm (11).

12. Pull chain (10) through hole in spare tire (9).

13. Hook chain (10) to spare tire retainer lift arm (11).



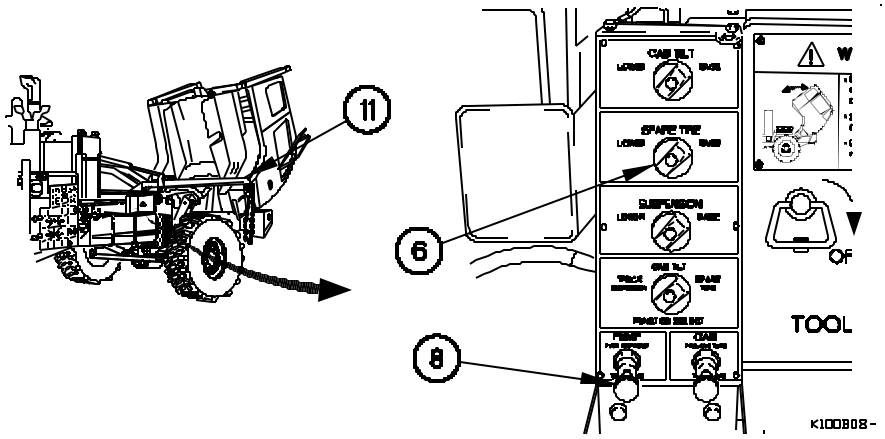
NOTE

Perform steps 14 through 16 for M1089A1.

14. Turn SPARE TIRE knob (6) to the RAISE position.

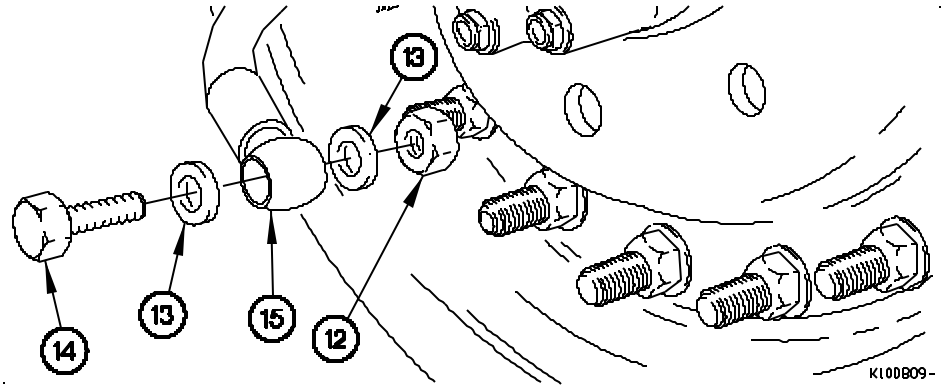
15. Press and hold PUMP knob (8) to raise spare tire retainer lift arm (11) to the vertical position.

16. Lower cab (WP 0021 00).



LOWER SPARE TIRE - Continued

17. Remove nut (12), two washers (13), and bolt (14) from CTIS hose (15).



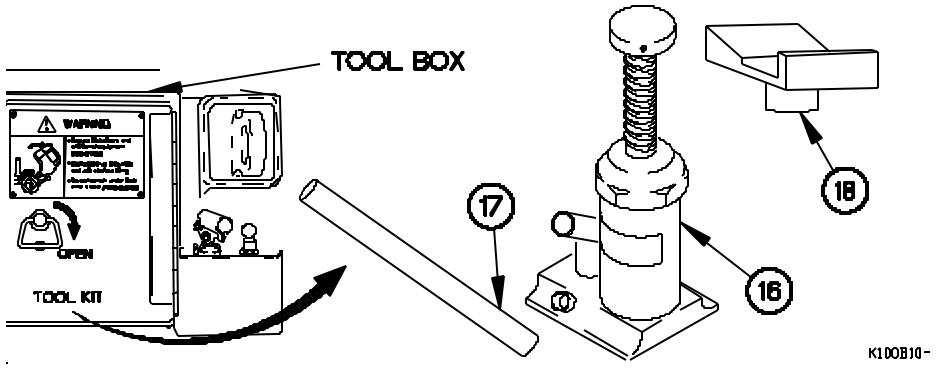
TIRE REMOVAL

WARNING

Place hydraulic jack on flat surface. Do not allow personnel under vehicle when jacking. Failure to comply may result in serious injury or death to personnel.

DO NOT attempt to use hydraulic jack on rear axles without jack adapter installed. Failure to comply may result in serious injury or death to personnel.

1. Remove hydraulic jack (16), handle (17), and jack adapter (18) from tool box.

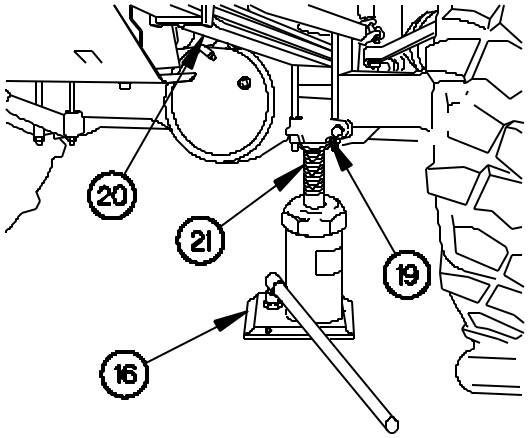


TIRE REMOVAL - Continued

NOTE

Perform steps 2 and 3 when removing front tire.

2. Position hydraulic jack (16) under saddle (19) of leaf spring (20).
3. Unscrew jack ram (21) until it touches saddle (19).

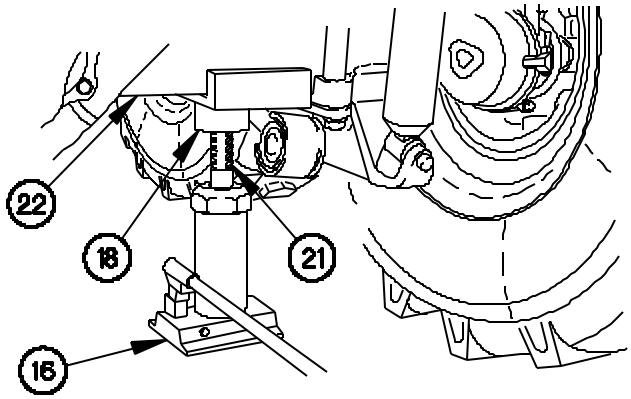


K100811-

NOTE

Perform steps 4 and 5 when removing rear tire.

4. Position hydraulic jack (16) and jack adapter (18) under axle (22).
5. Unscrew jack ram (21) until jack adapter (18) touches axle (22).



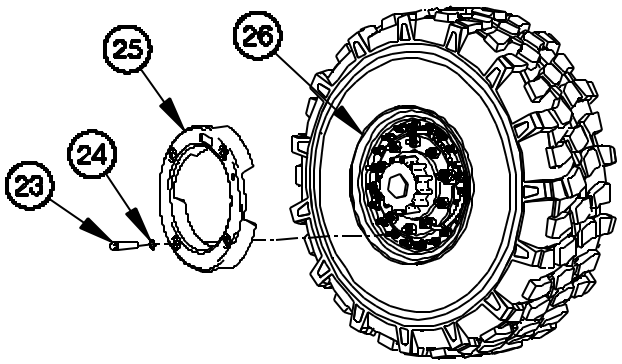
K100812-

TIRE REMOVAL - Continued

NOTE

Perform the following step on vehicles equipped with rim covers.

6. Remove four bolts (23), washers (24), and rim cover (25) from wheel (26).



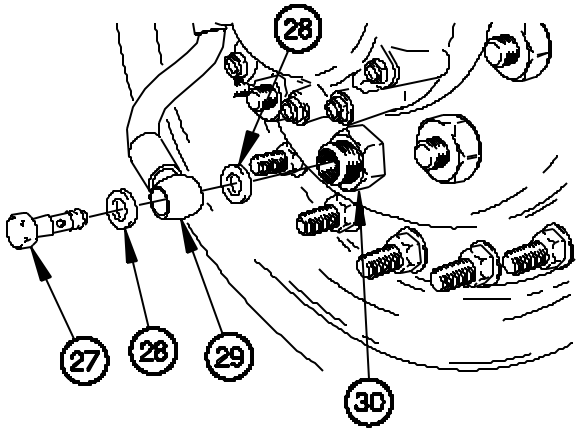
K)00831-

NOTE

Both front and rear tires are removed the same way. Rear tire is shown.

Air will not escape when CTIS hose is removed from hollow wheel stud.

7. Remove banjo bolt (27), two washers (28), and CTIS hose (29) from hollow wheel stud (30).



K)00813-

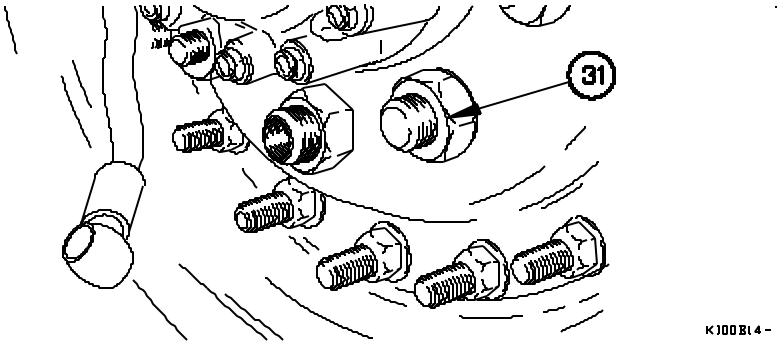
TIRE REMOVAL - Continued

NOTE

Studs and lugnuts on left side of vehicle have left-hand threads. Turn lugnuts to right to loosen, and to left to tighten.

Studs and lugnuts on right side of vehicle have right-hand threads. Turn lugnuts to left to loosen, and to right to tighten.

8. Loosen 10 lugnuts (31).



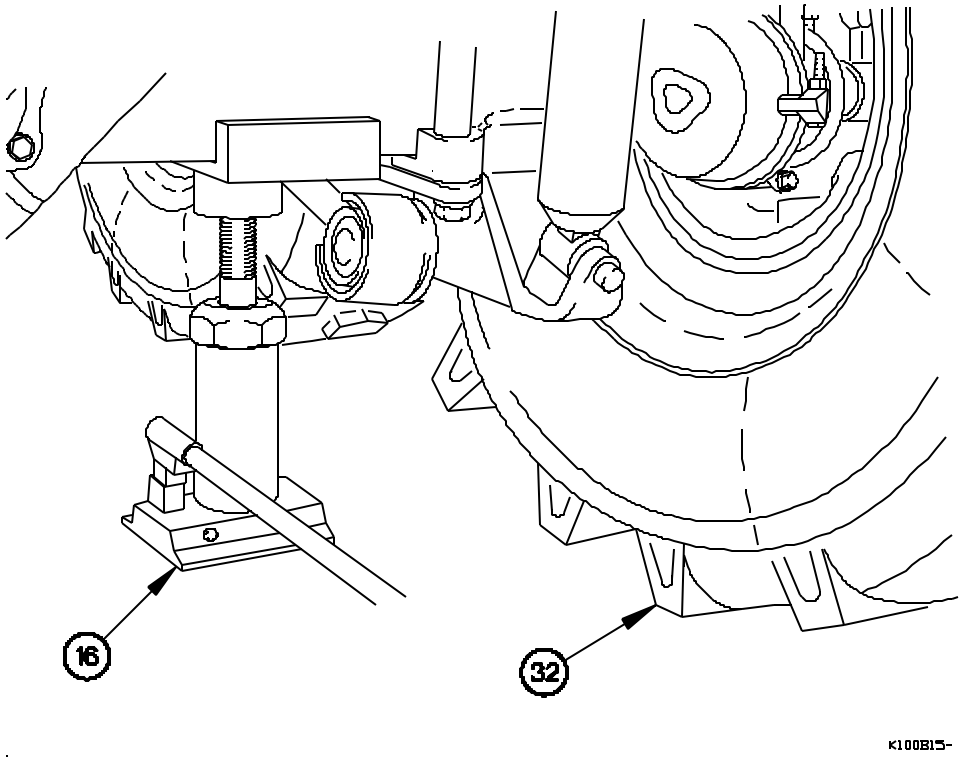
CHANGING TIRE-Continued 0105 00

TIRE REMOVAL - Continued

NOTE

Both intermediate and rear axles are jacked up the same way. Rear axle is shown.

9. Raise hydraulic jack (16) until tire (32) is off ground.



TIRE REMOVAL - Continued

WARNING

Tire weighs approximately 350 lbs (159 kgs). Use extreme care when handling tire. Failure to comply may result in injury to personnel.

10. Remove 10 lugnuts (31) from studs (33).

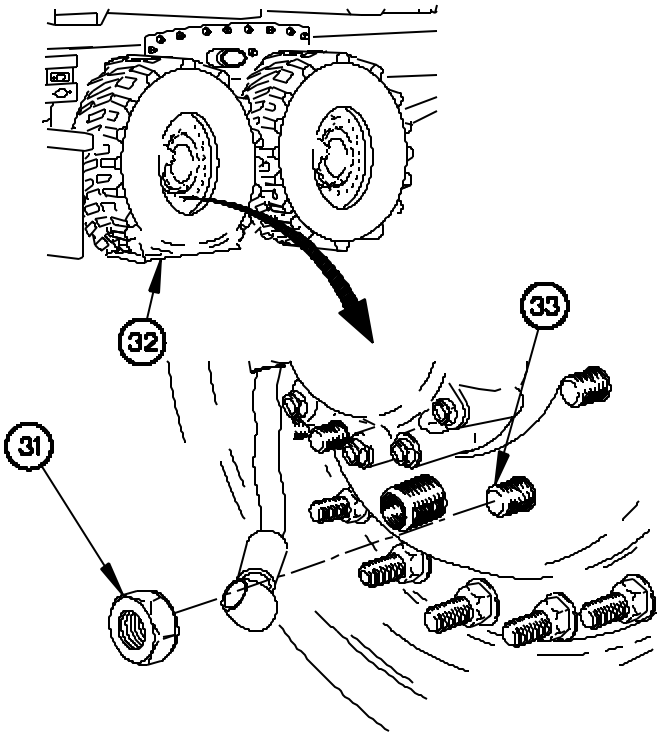
CAUTION

Do not drag tire across studs during removal. Failure to comply may result in damage to equipment.

NOTE

Step 11 requires the aid of an assistant.

11. Remove tire (32) from studs (33).



TIRE INSTALLATION

WARNING

Tire weighs approximately 350 lbs (159 kgs). Use extreme care when handling tire. Failure to comply may result in injury to personnel.

NOTE

Steps 1 through 5 require the aid of an assistant.

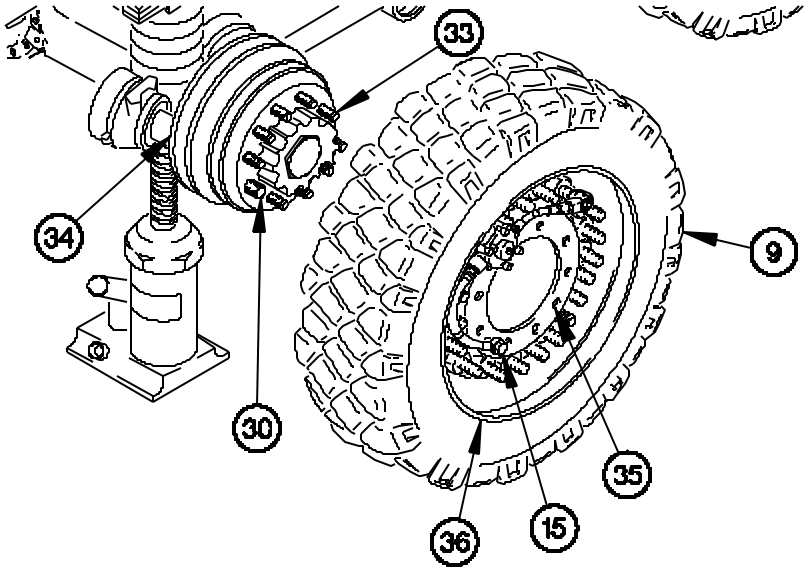
Front and rear tires are installed the same way. Rear tire installation shown.

1. Roll spare tire (9) up to hub (34).
2. Align CTIS hose (15) with hollow wheel stud (30).
3. Align 10 holes (35) in wheel (36) with studs (33).

CAUTION

Do not drag tire across studs or crossthread lugnuts. Failure to comply may result in damage to equipment.

4. Install wheel (36) on studs (29).



K100817-

TIRE INSTALLATION - Continued

WARNING

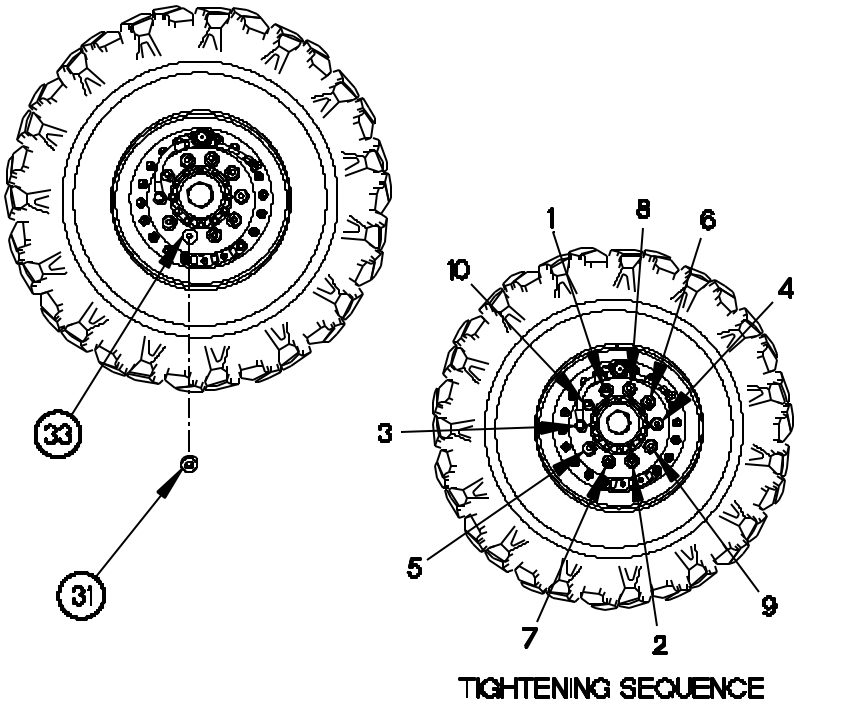
Notify Field Maintenance that lugnuts must be tightened to 415-475 lb-ft (563-644 N·m) as soon as possible. Wheel may come loose if lugnuts are not tightened to proper torque. Failure to comply may result in serious injury or death to personnel.

NOTE

Studs and lugnuts on left side of vehicle have left-hand threads. Turn lugnuts to right to loosen, and to left to tighten.

Studs and lugnuts on right side of vehicle have right-hand threads. Turn lugnuts to left to loosen, and to right to tighten.

5. Install 10 lugnuts (31) on studs (33) in sequence shown.



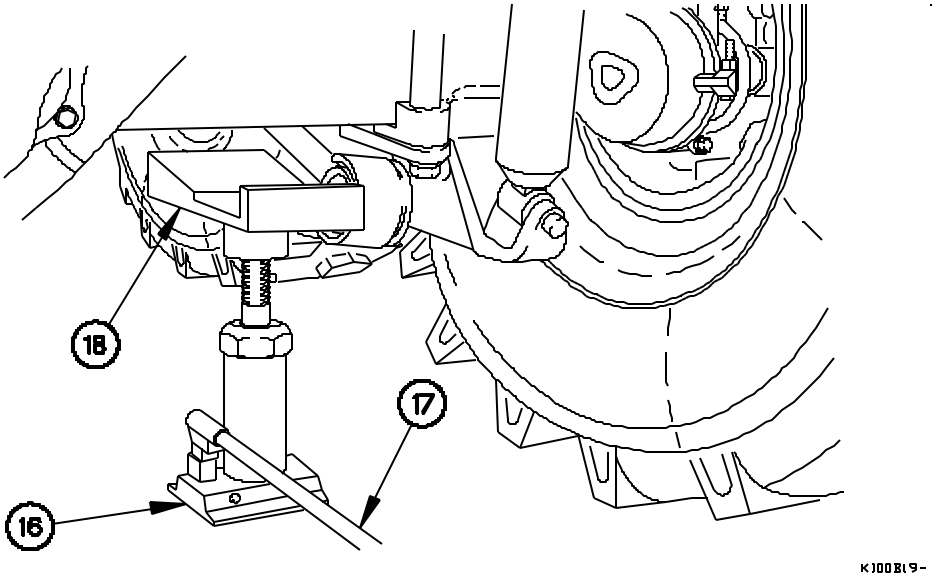
TIGHTENING SEQUENCE

K100818-

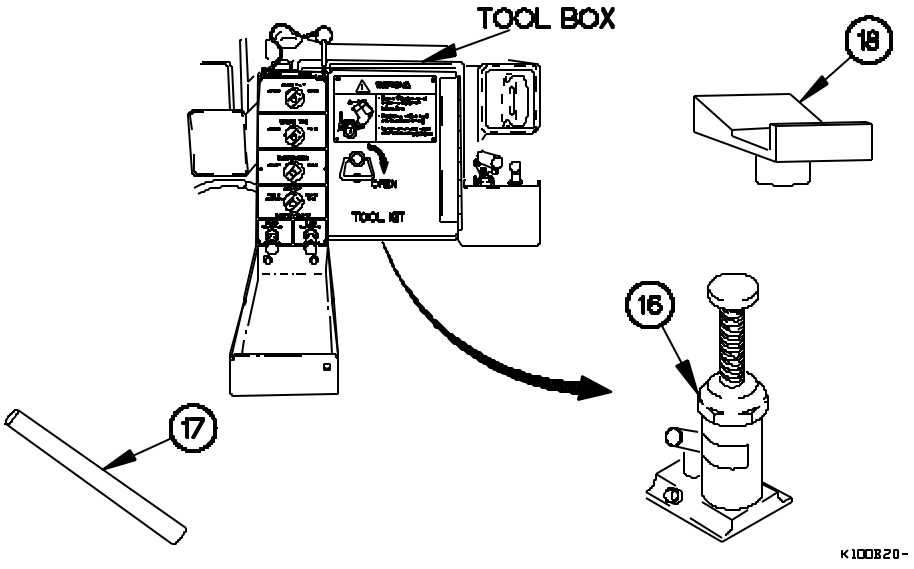
TIRE INSTALLATION - Continued

6. Lower vehicle to ground with hydraulic jack (16).

7. Remove hydraulic jack (16), handle (17), and jack adapter (18) from vehicle.



8. Stow hydraulic jack (16), handle (17), and jack adapter (18) in tool box.

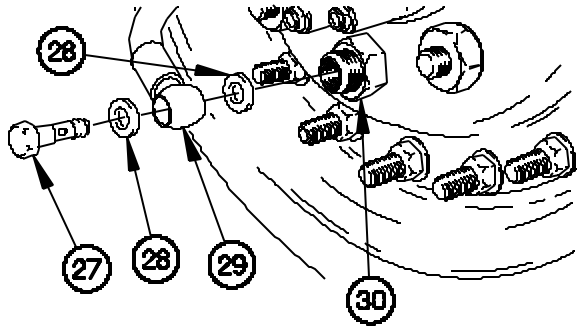


TIRE INSTALLATION - Continued

CAUTION

Do not overtighten banjo bolt when installing CTIS hose on hollow wheel stud. Failure to comply may result in damage to equipment.

9. Install CTIS hose (29) on hollow wheel stud (30) with two washers (28) and banjo bolt (27).



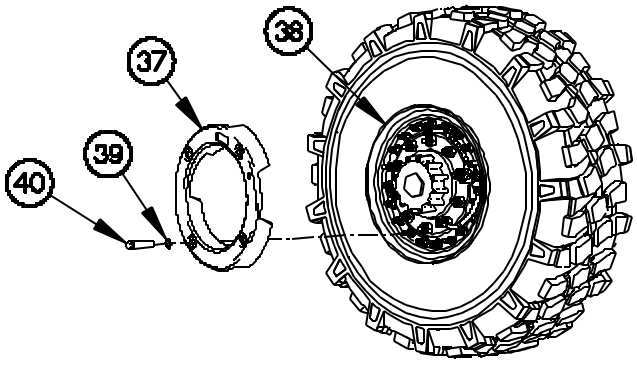
K100821-

NOTE

Slotted hole in rim cover is aligned with pressure valve extension.

9.1 Position rim cover (37) on wheel (38) with four washers (39) and bolts (40).

9.2 Notify Field Maintenance to torque four rim cover bolts to 71-95 lb-ft (96-128 N•m).



K100832-

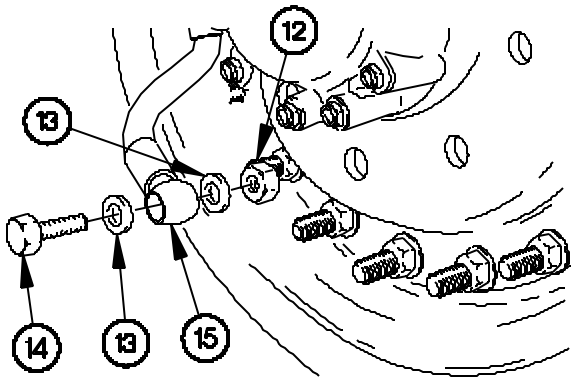
TIRE STOWAGE

WARNING

Handle tire with care. Tire may have exposed broken metal cords or sharp debris in it. Failure to comply may result in injury to personnel.

Tire weighs approximately 350 lbs (159 kgs). Use care when handling tire. Failure to comply may result in injury to personnel.

1. Install bolt (14), two washers (13) and nut (12) in CTIS hose (15).



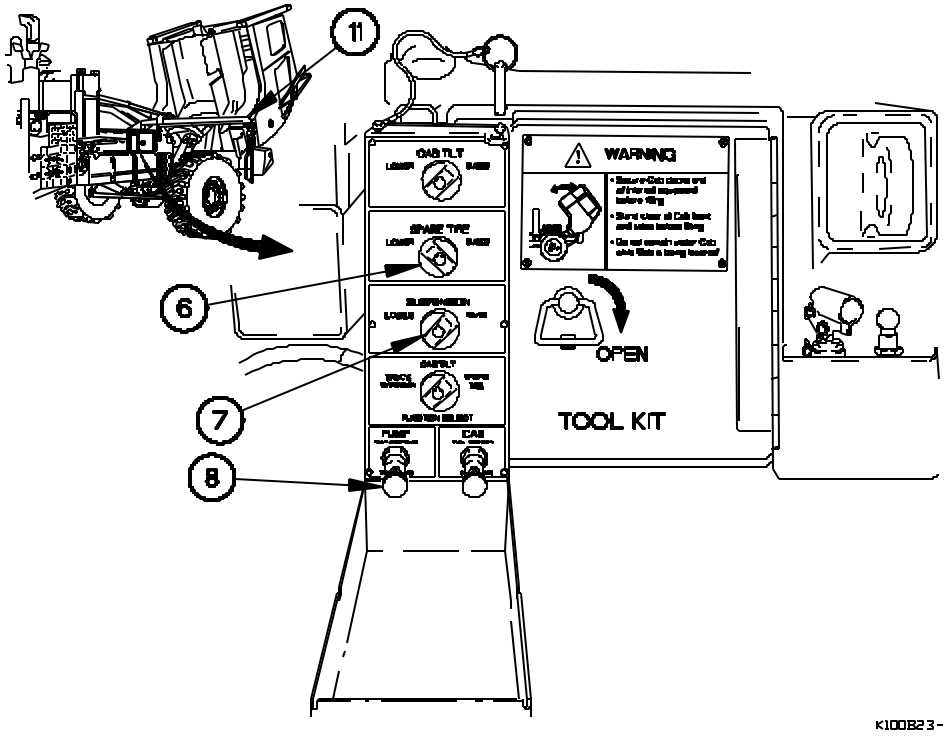
K100822-

TIRE STOWAGE - Continued

NOTE

Perform steps 2 through 5 for M1089A1.

2. Raise cab (WP 0019 00).
3. Position SPARE TIRE knob (6) to LOWER.
4. Position FUNCTION SELECT knob (7) to SPARE TIRE.
5. Press and hold PUMP knob (8) to lower spare tire retainer lift arm (11).



TIRE STOWAGE - Continued

6. Roll tire (32) under center of spare tire retainer lift arm (11).

7. Disconnect one end of chain (10) from spare tire retainer lift arm (11).

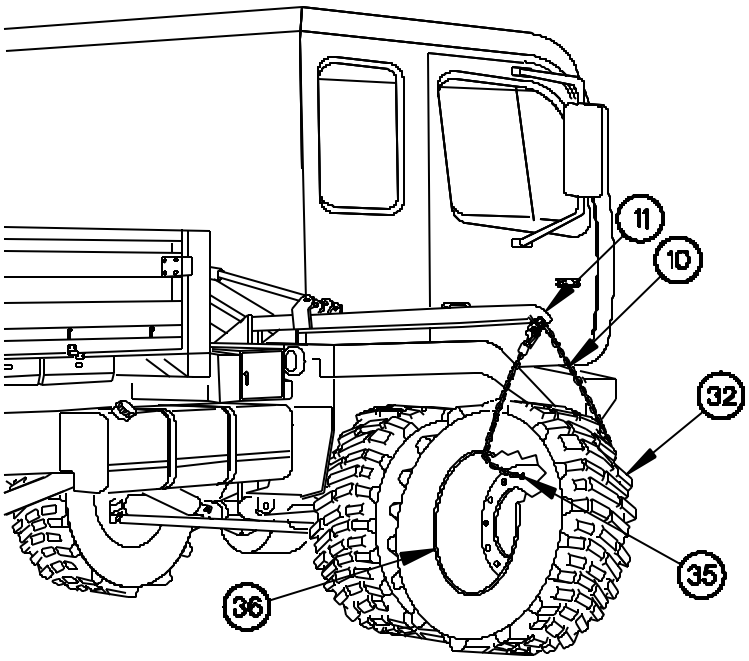
NOTE

CTIS valve on tire must be positioned to the front of vehicle and at the six o'clock position.

Tire should be straight up and down when installing chain through lug hole.

8. Route chain (10) through uppermost lug hole (35) in wheel (36).

9. Connect chain (10) to spare tire retainer lift arm (11).



K100824-

TIRE STOWAGE - Continued

CAUTION

Use caution when raising tire to prevent damage to CTIS valve. Failure to comply may result in damage to equipment.

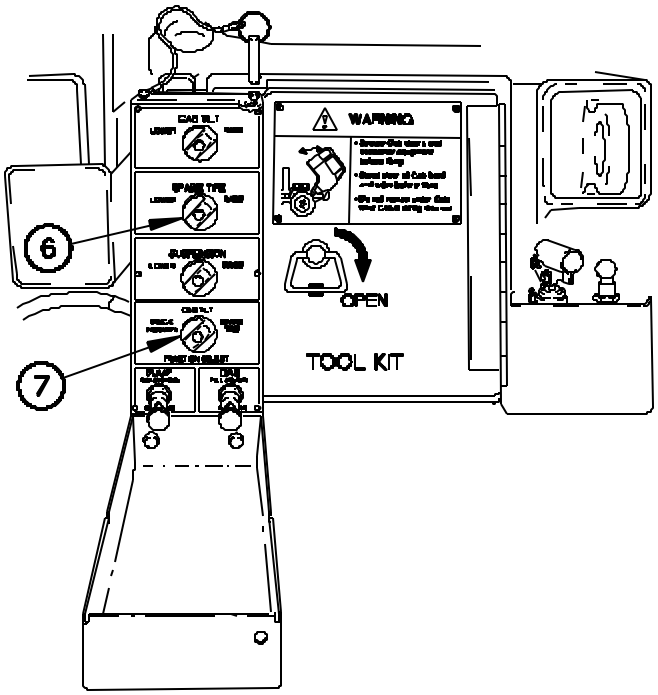
NOTE

Perform step 10 on all models except M1089A1.

10. Raise cab (WP 0019 00).

11. Position SPARE TIRE knob (6) to RAISE.

12. Position FUNCTION SELECT knob (7) to SPARE TIRE.



K100825-

TIRE STOWAGE - Continued

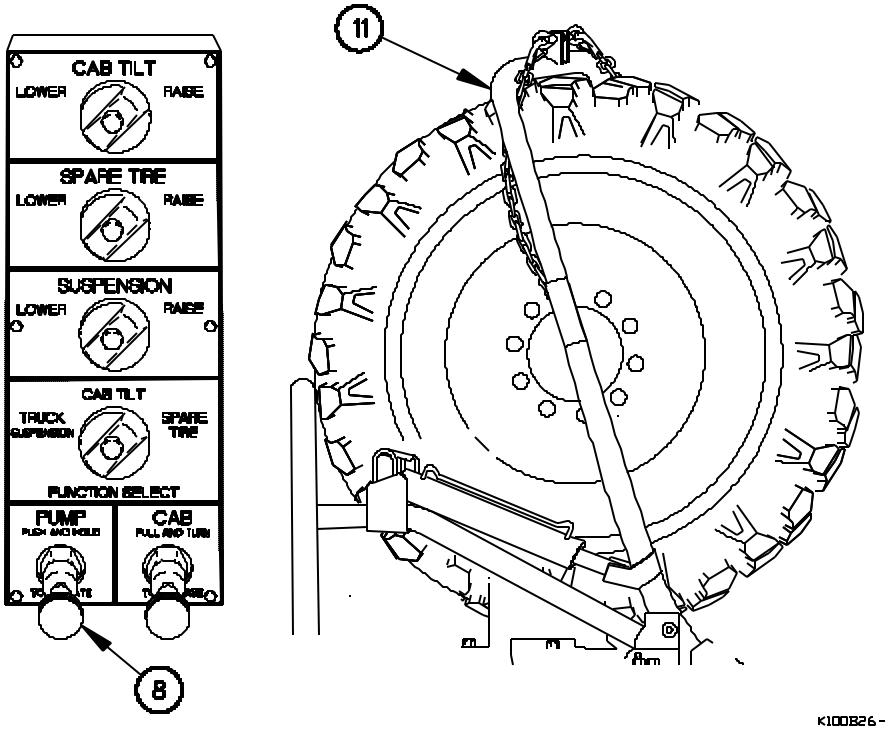
CAUTION

Tire must be stowed against back frame of spare tire retainer. Failure to comply may result in damage to equipment.

NOTE

Use back-up hydraulic pump (WP 0042 00) if temperature is below -25° F (-32° C) or if pressing PUMP knob does not accomplish step 13.

13. Press and hold PUMP knob (8) to raise spare tire retainer lift arm (11) to the stowed position.



TIRE STOWAGE - Continued

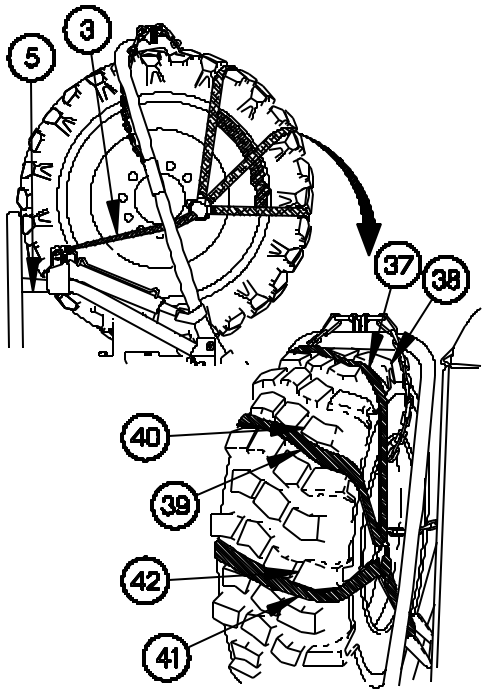
CAUTION

Tread engagers must be in slots of tire treads. A loose strap will allow tire to move causing chafing of strap and possible loss of tire. Failure to comply may result in damage to equipment.

Tread engagers must not be snug at installation for proper fit, but strap must have a tight fit. Failure to comply may result in damage to equipment.

14. Position tread engager (37) in third tread (38), tread engager (39) in sixth tread (40), and tread engager (41) in ninth tread (42).

15. Connect strap (3) to spare tire retainer (5).



K100827-

TIRE STOWAGE - Continued

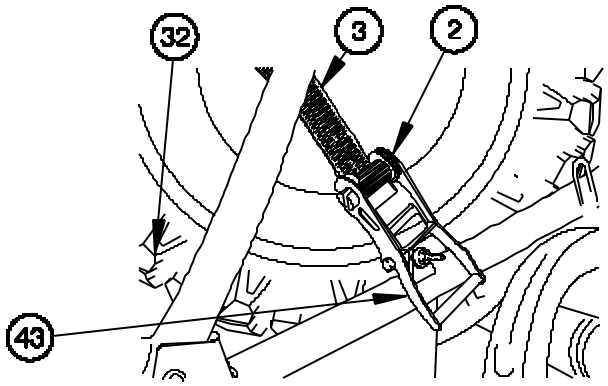
16. Feed other end of strap (3) through ratchet (2).

CAUTION

Ensure that strap is wrapped around ratchet at least three complete wraps after tightening. Failure to comply may result in damage to equipment.

17. Tighten strap (3) around tire (32) with ratchet (2).

18. Place ratchet handle (43) in down position.

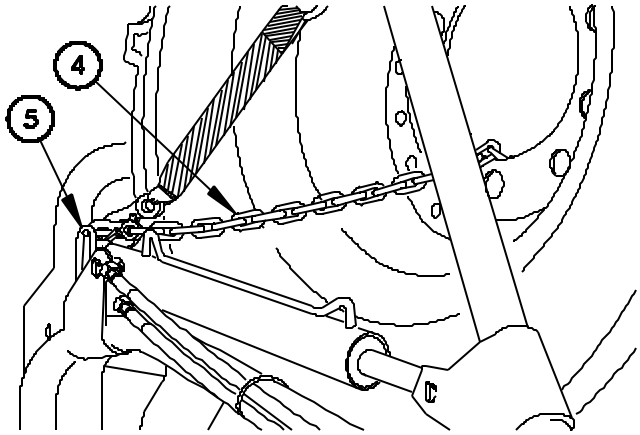


K100828-

CAUTION

Ensure that safety chain is loose. If safety chain is tight then strap is not tight enough. Failure to comply may result in damage to equipment.

19. Connect safety chain (4) to spare tire retainer (5).

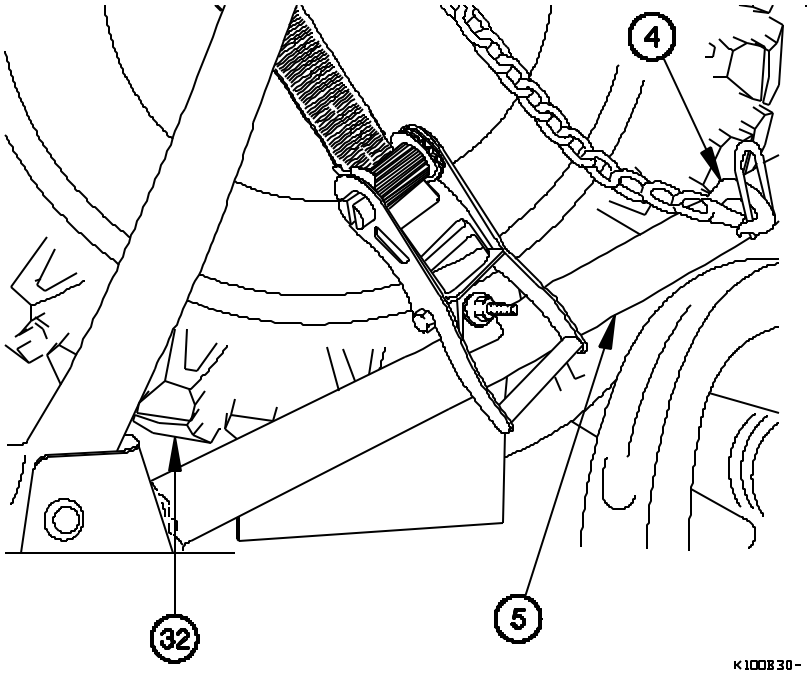


K100829-

TIRE STOWAGE - Continued

20. Route other end of safety chain (4) through tire (32) and connect to spare tire retainer (5).

21. Lower cab (WP 0019 00).



OPERATIONAL CHECK

1. Remove wheel chocks (WP 0018 00).

2. Notify Field Maintenance that lugnuts need to be tightened to 415-475 lb-ft (563-644 N·m).

3. Notify Field Maintenance that flat tire needs to be repaired/replaced.

4. If vehicle is S/N 11,438 to 99,999 notify Field Maintenance if flat tire was replaced on front of vehicle that kneeling valve must be installed.

5. Notify Field Maintenance that banjo bolts need to be tightened to 22-28 lb-ft (30-52 N·m).

END OF WORK PACKAGE.

SERVICING TIRES 0106 00

THIS WORK PACKAGE COVERS:
Checking Tire Pressures, Manually Inflating Tires

INITIAL SETUP:

Maintenance Level
Operator

Equipment Conditions
Engine shut down (WP 0018 00).

Tools and Special Tools
Inflator-Gage, Tire w/Hose (Item 31, Table 2, WP 0117 00)

Personnel Required
Two

GENERAL

This work package contains information and instructions to service the tires for the M1083A1 series vehicle.

WARNING

Ensure tires have correct tire pressure (within ± 3 psi (21 kPa)) for terrain conditions and driving speed (refer to Table 1 or Table 2). Failure to comply may result in serious injury or death to personnel.

CHECKING TIRE PRESSURES

Check tire pressures with tire inflator-gage.

Table 1. Cold Tire Inflation Pressures and Restrictions for M1083A1, M1084A1, M1085A1, M1086A1, M1090A1, M1092A1, M1093A1, M1094A1, and M1096A1 Models.

Operating Mode	Maximum Vehicle Speed	Operating Time Restriction	Tire Pressure
Highway	55 mph (88 km/h)	NONE	60 psi (414 kPa)
Cross-Country	40 mph (64 km/h)	NONE	37 psi (255 kPa)
Sand	12 mph (19 km/h)	NONE	22 psi (152 kPa)
Emergency	5 mph (8 km/h)	10 MINUTES	16 psi (110 kPa)

Table 2. Cold Tire Inflation Pressures and Restrictions for M1088A1 and M1089A1 Models.

Operating Mode	Maximum Vehicle Speed	Operating Time Restriction	Tire Pressure
Highway	55 mph (88 km/h) (M1088A1) 40 mph (64 km/h) (M1089A1)	NONE	81 psi (558 kPa)
Cross-Country	40 mph (64 km/h)	NONE	54 psi (372 kPa)
Sand	12 mph (19 km/h)	NONE	32 psi (221 kPa)
Emergency	5 mph (8 km/h)	10 MINUTES	24 psi (165 kPa)

MANUALLY INFLATING TIRES

WARNING

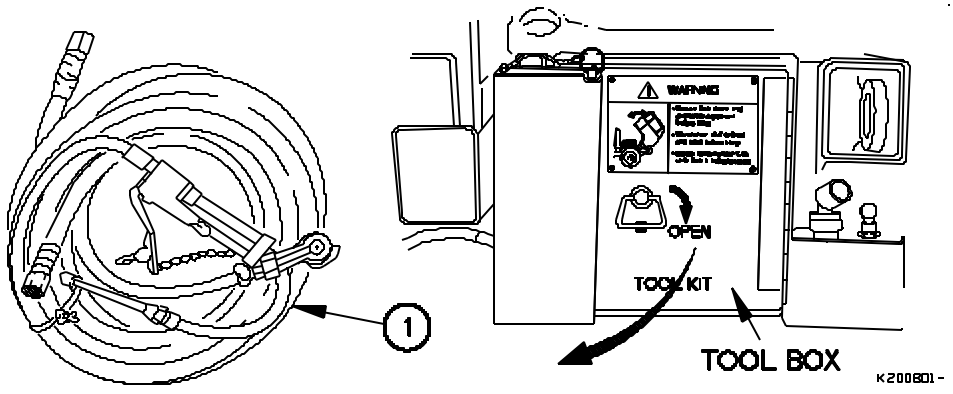
Use caution when inflating tire. Over inflation may cause tire to blow apart. Failure to comply may result in serious injury or death to personnel or damage to equipment.

NOTE

If CTIS is not operating, tires may be inflated manually. Tires should be inflated when they are cool. Inflate to proper pressure for terrain conditions and driving speed. Refer to Table 1 or 2.

SERVICE or EMERGENCY gladhands at rear of vehicle are used to manually inflate tires.

1. Remove tire inflator-gage with hose (1) from tool box.



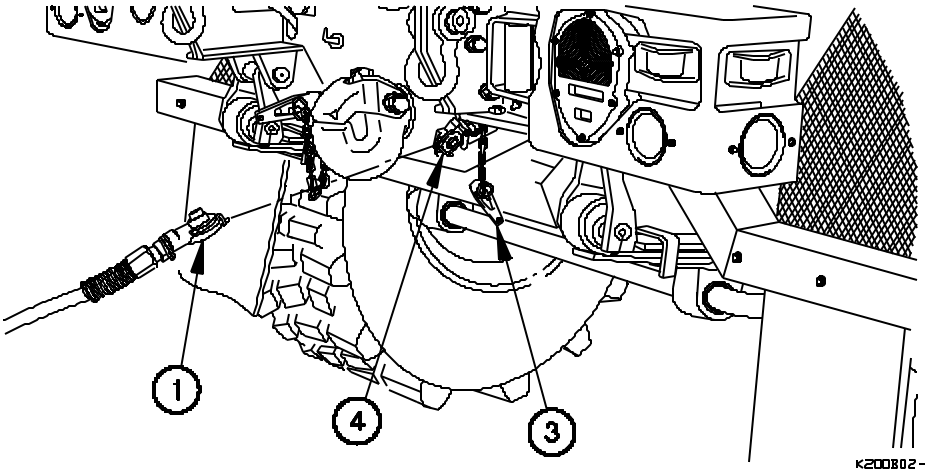
SERVICING TIRES - Continued 0106 00

MANUALLY INFLATING TIRES - Continued

2. Remove dummy coupling (3) from SERVICE or EMERGENCY gladhand (4) at rear of vehicle.

3. Connect tire inflator-gage and hose (1) to SERVICE or EMERGENCY gladhand (4).

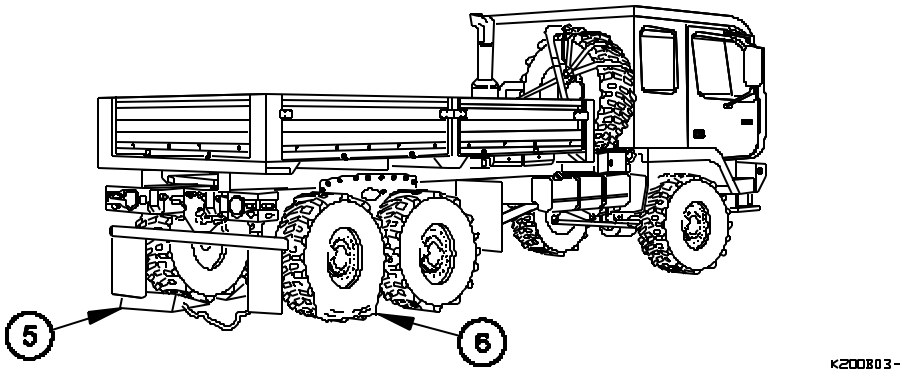
4. Start engine (WP 0018 00).



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.

5. Install two wheel chocks (5) against tire across from tire (6) that is to be inflated.



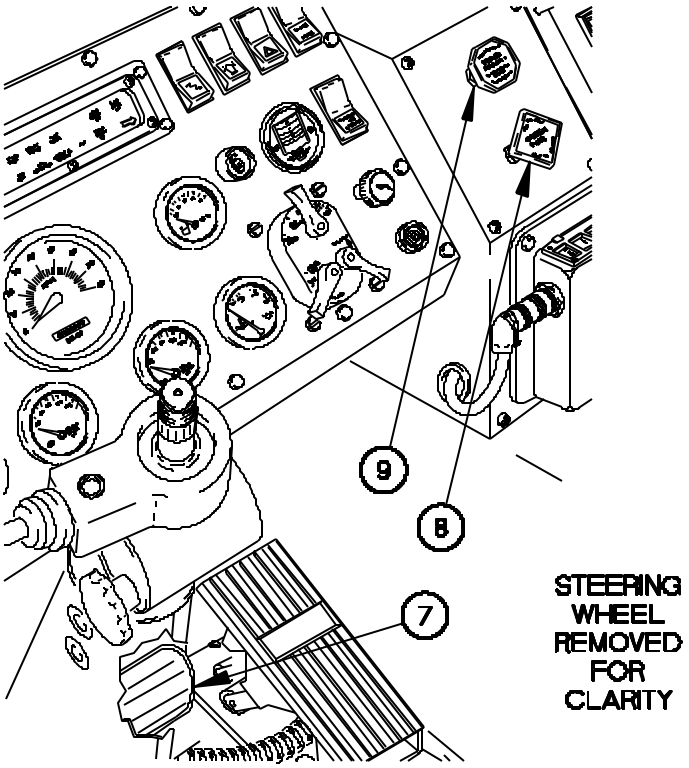
MANUALLY INFLATING TIRES - Continued

NOTE

Air is available at service gladhand as long as brake pedal is applied. Air is available at emergency gladhand once SYSTEM PARK and TRAILER AIR SUPPLY valves are depressed.

Steps 6 through 14 require the aid of an assistant.

6. Depress brake pedal (7).
7. Push in SYSTEM PARK control (8).
8. Push in TRAILER AIR SUPPLY control (9).



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MANUALLY INFLATING TIRES - Continued

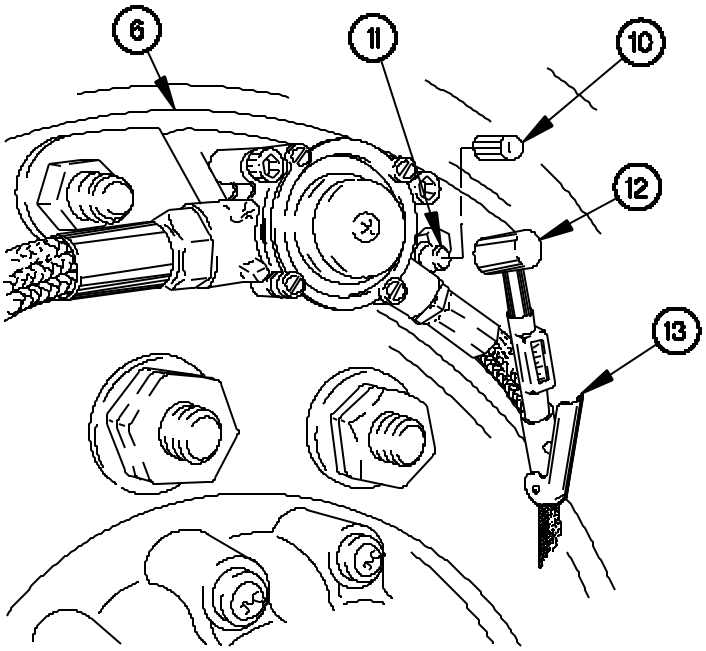
9. Remove cap (10) from valve stem (11).

10. Press chuck of tire inflator-gage (12) over valve stem (11) and squeeze handle (13).

11. Add air to tire (6) as required by Table 1, Cold Tire Inflation Pressures and Restrictions for M1083A1, M1084A1, M1085A1, M1086A1, M1090A1, M1092A1, M1093A1, M1094A1, and M1096A1 Models, or Table 2, Cold Tire Inflation Pressures and Restrictions for M1088A1 and M1089A1 Models.

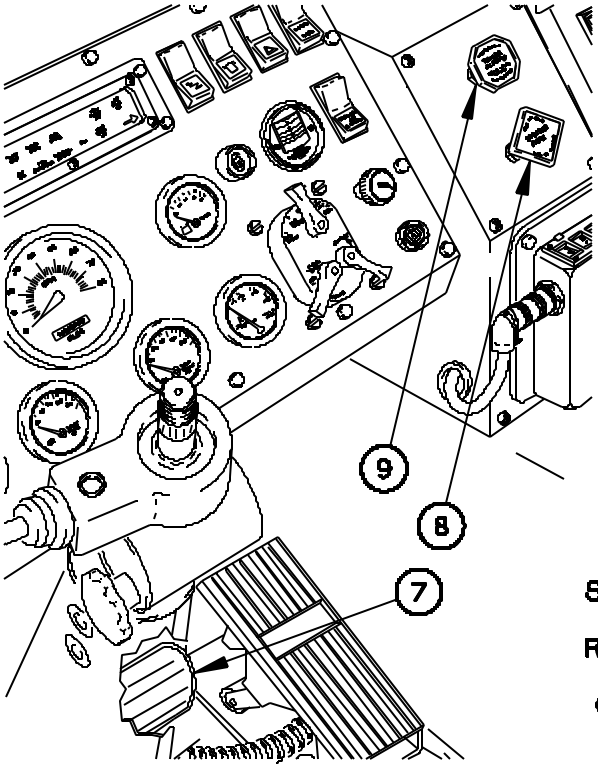
12. Remove chuck of tire inflator-gage (12) from valve stem (11).

13. Install cap (10) on valve stem (11).



MANUALLY INFLATING TIRES - Continued

14. Pull out SYSTEM PARK control (8).
15. Pull out TRAILER AIR SUPPLY control (9).
16. Release brake pedal (7).
17. Shut down engine (WP 0018 00).

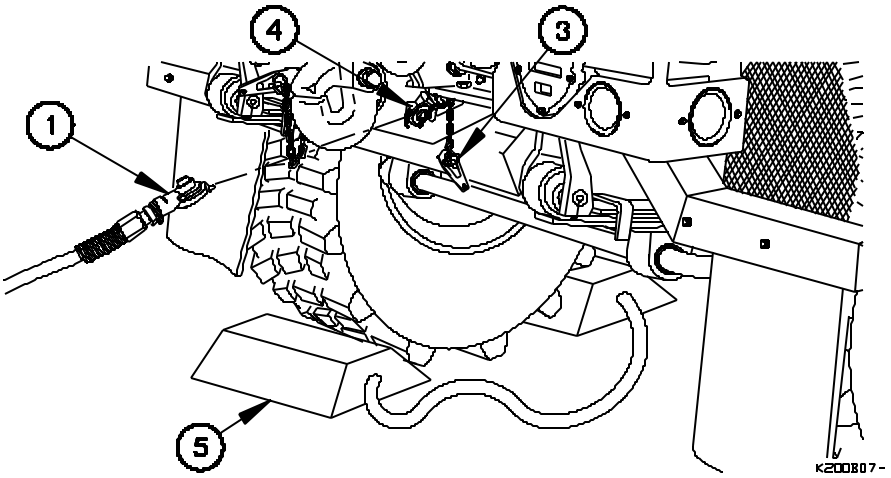


MANUALLY INFLATING TIRES - Continued

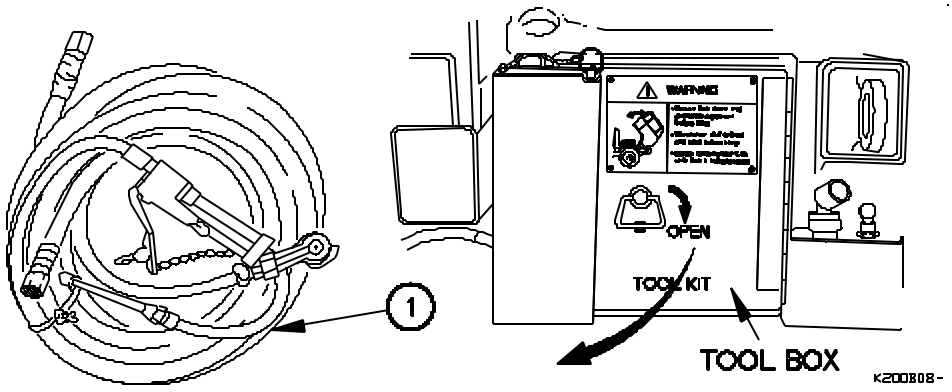
18. Remove tire inflator-gage with hose (1) from SERVICE or EMERGENCY gladhand (4).

19. Install dummy coupling (3) on SERVICE or EMERGENCY gladhand (4).

20. Remove two wheel chocks (5).



21. Stow tire inflator-gage with hose (1) in tool box.



END OF WORK PACKAGE.

CLEANING VEHICLE 0107 00

THIS WORK PACKAGE COVERS:
Cleaning Exterior, Cleaning Interior

INITIAL SETUP:

Maintenance Level
Operator

Equipment Condition
Wheels chocked (WP 0018 00).

Materials/Parts
Gloves, Rubber (Item 9, WP 0119 00)
Goggles, Industrial (Item 10, WP 0119 00)

Materials/Parts
Oil, Lubricating (Item 18, WP 0119 00)
Rags, Wiping (Item 25, WP 0119 00)
Soap, Laundry (Item 26, WP 0119 00)
Solvent, Dry Cleaning (Item 27, WP 0119 00)

References
TM 9-247

GENERAL

This work package contains information and instructions to clean the M1083A1 Series vehicle.

WARNING

All cleaning procedures must be accomplished in well-ventilated areas. Failure to comply may result in injury to personnel or damage to equipment.

Protective gloves, clothing, and/or respiratory equipment must be worn whenever caustic, toxic, or flammable cleaning solutions are used. Failure to comply may result in injury to personnel.

Diesel fuel or gasoline must never be used for cleaning. Failure to comply may result in injury to personnel or damage to equipment.

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.

CLEANING VEHICLE - Continued 0107 00

WARNING

Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using Dry Cleaning Solvent; the flashpoint for Type I Dry Cleaning Solvent is 100°F (38°C) and for Type II is 138°F (50°C). Failure to comply may result in serious injury or death to personnel.

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

CAUTION

Do not wipe dirt off vehicle when it is dry. Dirt, stones, or debris may scratch and damage vehicle. Failure to comply may result in damage to equipment.

Use caution when washing around the engine compartment to prevent damage to sensors and inadvertent removal of grease in bearing surfaces. Failure to comply may result in damage to equipment.

Periodically wash the engine side of the fan clutch in the engine compartment. Fine particles of road debris may accumulate in the fan clutch housing causing the fan clutch to drag and not fully release. Failure to comply may result in damage to equipment.

Do not allow water to enter air cleaner inlet while washing vehicle. Air cleaner becomes restricted when wet and may cause a loss in engine power. Failure to comply may result in damage to equipment.

Do not use high pressure water or steam on starting motor. When cleaning engine/transmission, starting motor must be protected from any high pressure water or steam. Failure to comply may result in damage to equipment.

Do not use high pressure water or steam on remote IGN, ST, or BATT switches. When cleaning engine, remote IGN, ST, and BATT switches must be protected from any high pressure water or steam. Failure to comply may result in damage to equipment.

CLEANING VEHICLE - Continued 0107 00

CAUTION

Do not direct high-pressure water stream at glass surfaces, seals, air intake, exhaust outlet, or any other component of vehicle that could be easily damaged by high-pressure water stream. Failure to comply may result in damage to equipment.

Do not use high pressure water or steam to clean interior of vehicle. Failure to comply may result in damage to equipment.

Do not use strong detergent or abrasive. Failure to comply result in damage to equipment.

Do not allow cleaning compounds to come into contact with rubber, vinyl, or canvas materials. Failure to comply may result in damage to equipment.

Do not allow corrosion-removing cleaning compounds to contact painted surfaces. Failure to comply may result in damage to equipment.

Do not use compressed air in cleaning cab interior. Failure to comply may result in damage to equipment.

Do not steam clean any part of vehicle that has been rustproofed. Failure to comply may result in damage to equipment.

Mildew must be removed with a bristle brush before canvas can be properly cleaned and aired. Failure to comply may result in damage to equipment.

The radiator is always cleaned first from behind with low pressure water or air in order to blow debris, insects, or other obstructions out and away from the radiator core. Failure to comply may result in damage to equipment.

NOTE

Detailed description of specific cleaning compounds, cleaning solvents, dry cleaning solutions, and corrosion-removing compounds are found in TM 9-247.

Table 1, General Cleaning Instructions, provides a general guideline to cleaning materials used in removing contaminants from various vehicle surfaces.

Table 1. General Cleaning Instructions.

Cleaning Materials Used to Remove			
Surface	**Oil/Grease**	**Salt/Mud/ Dust/Debris**	**Surface Rust/Corrosion**
Body	Grease cleaning compound, running water, and damp or dry rags.	High pressure water, soapy warm water, soft brush, and damp or dry rags.	Corrosion-removing compound, bristle brush, dry rags, and lubricating oil.*
Cab Interior (Metals)	Grease cleaning compound and damp or dry rags.	Damp and dry rags.	Corrosion-removing compound, bristle brush, dry rags, and lubricating oil.*
Cab Interior (Material)	Saddle soap, warm water, soft brush, and dry rags.	Soft brush, soapy warm water, and damp or dry rags.	Not applicable.
Frame	Grease cleaning compound rinsed with running water and rags.	High pressure water, soapy warm water, wire brush, and damp or dry rags.	Corrosion-removing compound, bristle brush, dry rags, and lubricating oil.*
Starting Motor	Mixed solution, 1 part grease cleaning compound, 4 parts dry cleaning solvent, and rags.	Soapy warm water, soft wire brush, and damp or dry rags.	Bristle brush, warm soapy water, and dry rags.
Engine/Transmission	Mixed solution, 1 part grease cleaning compound, 4 parts dry cleaning solvent, and rags.	High pressure water, soapy warm water, soft wire brush, and damp or dry rags.	Bristle brush, warm soapy water, and dry rags.
Glass	Glass cleaning solution and clean dry rags.	Glass cleaning solution and clean, dry rags.	Not applicable.
Radiator	Not applicable.	Low pressure water, air, soapy warm water, and damp or dry rags.	Not applicable.

Table 1. General Cleaning Instructions - Continued.

Cleaning Materials Used to Remove			
Surface	**Oil/Grease**	**Salt/Mud/ Dust/Debris**	**Surface Rust/Corrosion**
Rubber Insulation	Damp or dry rags.	Damp or dry rags.	Not applicable.
Tires	Soapy water and bristle brush.	High pressure water and bristle brush.	Not applicable.
Cable	Cleaning compound and wire brush.	Wire brush.	Wire brush and lubricating oil.*
*After cleaning, apply light grade of lubricating oil to all unprotected surfaces to prevent continued rust.			

CLEANING EXTERIOR

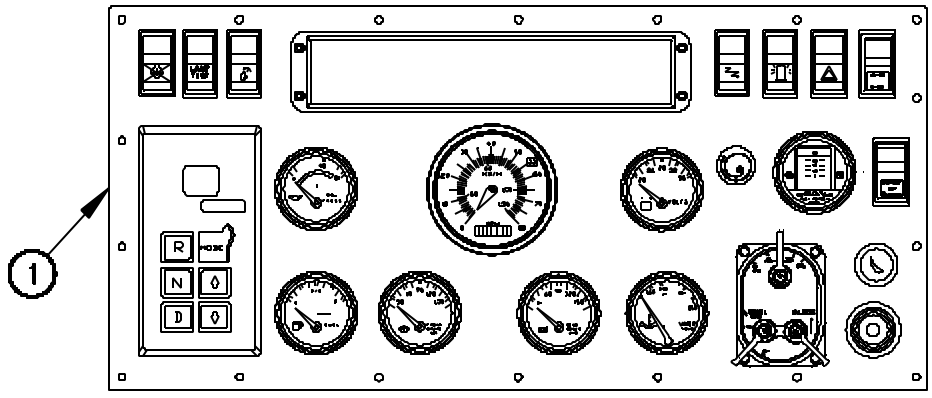
Wash vehicle as instructed in Table 1.

CLEANING INTERIOR

CAUTION

Do not allow water to contact electrical controls, gages, or indicators. Failure to comply may result in damage to equipment.

1. Remove loose dirt and dust from instrument panel assembly (1) with damp wiping rag.



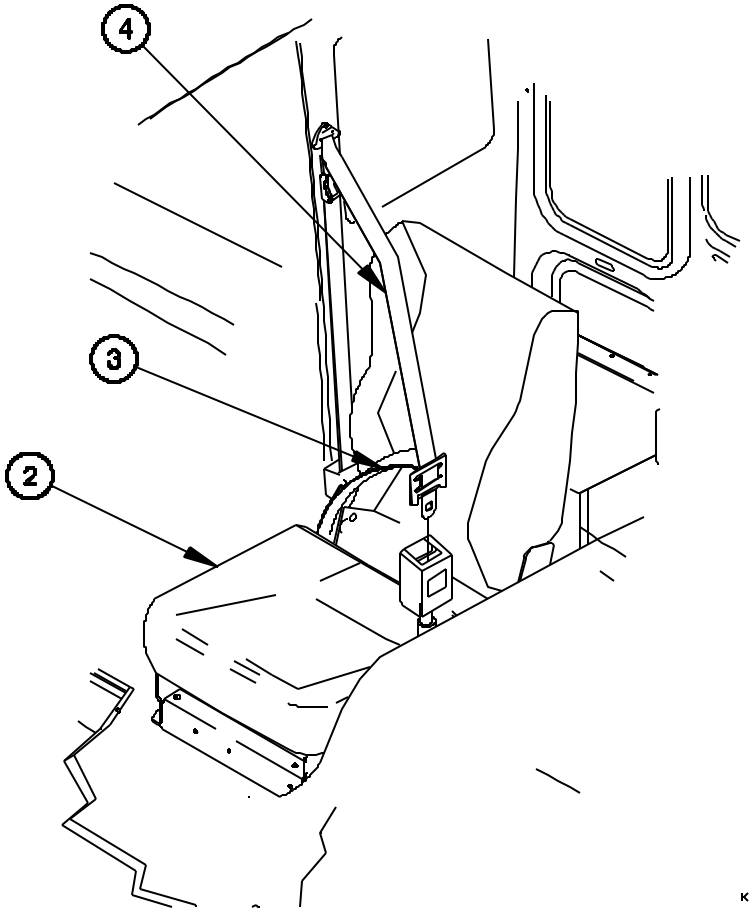
K300801-

CLEANING VEHICLE - Continued 0107 00

CLEANING INTERIOR - Continued

2. Clean seat cushions (2), seat belts (3), and shoulder harnesses (4) with warm soapy water.

3. Wipe seat cushions (2), seat belts (3), and shoulder harnesses (4) dry with wiping rags.



CLEANING VEHICLE - Continued 0107 00

CLEANING INTERIOR - Continued

NOTE

Both left and right side drain plugs are removed/installed the same. Left side shown.

Vehicles with serial numbers of 18,548 and up are equipped with two free flowing drain plugs. Removal of drain plugs in these Vehicles is not required.

4. Remove four drain plugs (5) from floor (6).

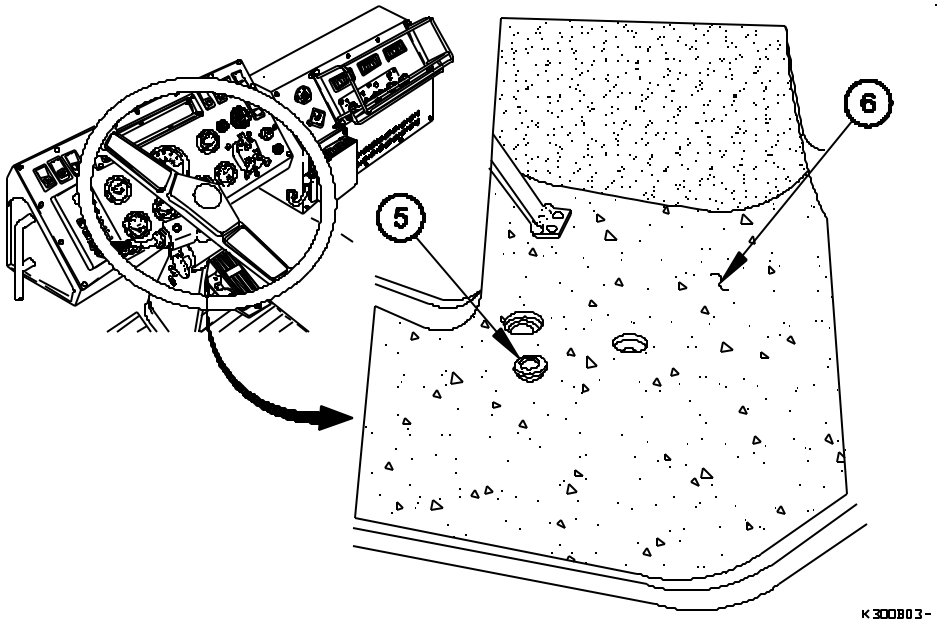
CAUTION

Do not use water to clean instrument panel area, especially under instrument panel. Failure to comply may result in damage to equipment.

5. Using a low pressure hose, wash mud, sand, or dirt from floor (6).

6. Wipe excess water from floor (6) with wiping rags.

7. Install four drain plugs (5) in floor (6).



END OF WORK PACKAGE.

OPENING BATTERY BOX/TESTING BATTERIES 0108 00

THIS WORK PACKAGE COVERS:

Opening Battery Box, Testing Batteries, Closing Battery Box

INITIAL SETUP:

Maintenance Level
Operator

Materials/Parts
Rags, Wiping (Item 25, WP 0119 00)

Equipment Conditions
Engine shut down (WP 0018 00).

GENERAL

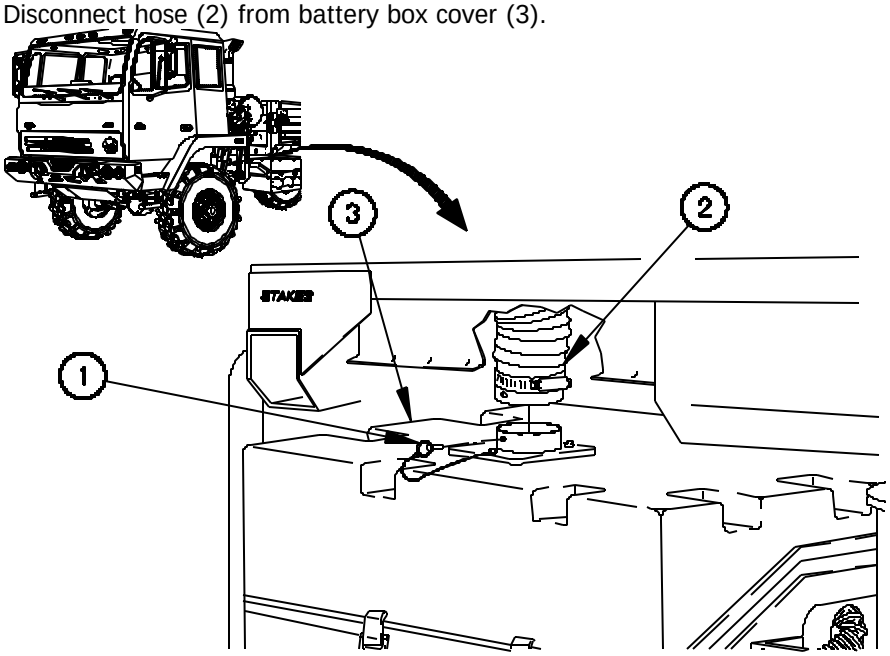
This work package contains information and instructions to open the battery box and test the batteries on the M1083A1 series vehicle.

OPENING BATTERY BOX

NOTE

Perform steps (1) and (2) only on cargo vehicles equipped with cargo arctic heaters.

1. Remove pin (1) from hose (2).
2. Disconnect hose (2) from battery box cover (3).

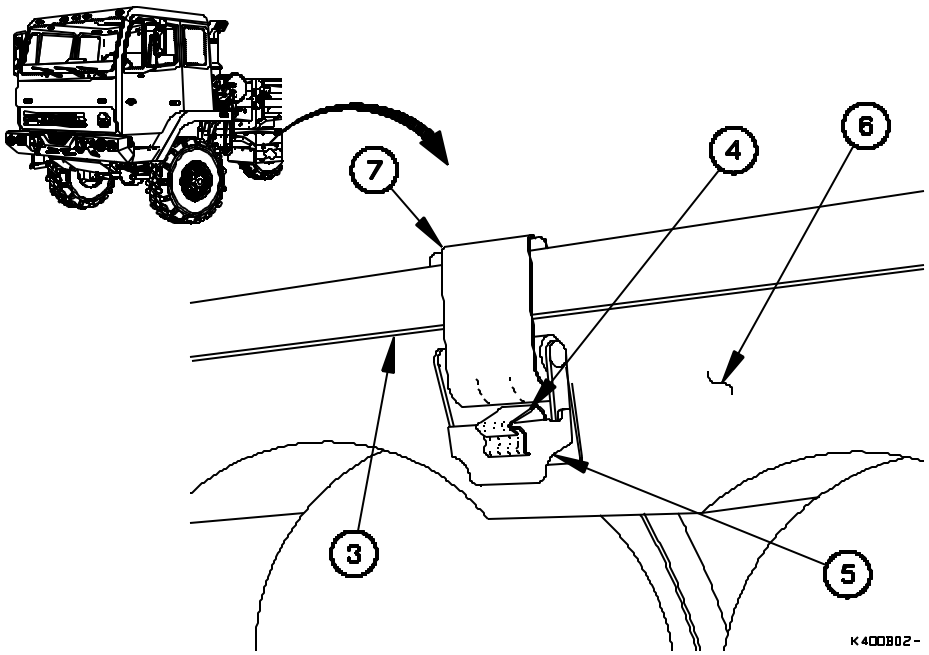


K400801-

OPENING BATTERY BOX/TESTING BATTERIES - Continued 0108 00

OPENING BATTERY BOX - Contiued

3. Lift two spring catches (4) and latch levers (5) from battery box (6).
4. Release latches (7) from battery box cover (3).
5. Remove battery box cover (3) from battery box (6).



OPENING BATTERY BOX/TESTING BATTERIES - Continued 0108 00

TESTING BATTERIES

1. Start engine (WP 0018 00).

2. Shut down engine after idling for approximately four minutes (WP 0018 00).

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.

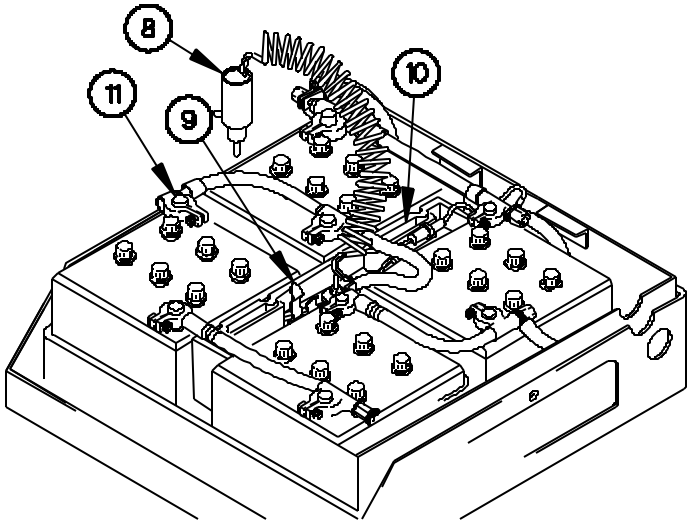
Remove rings, bracelets, wristwatches, neck chains, and other jewelry before working around vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal. Failure to comply may result in serious injury or death to personnel.

3. Remove battery tester (8) from clamp (9) on battery tray (10).

NOTE

If battery tester red light illuminates then battery tester is operational. If red light does not illuminate notify Field Maintenance.

4. Check operation of battery tester (8) by touching tip of battery tester to positive battery post (11).



K400803-

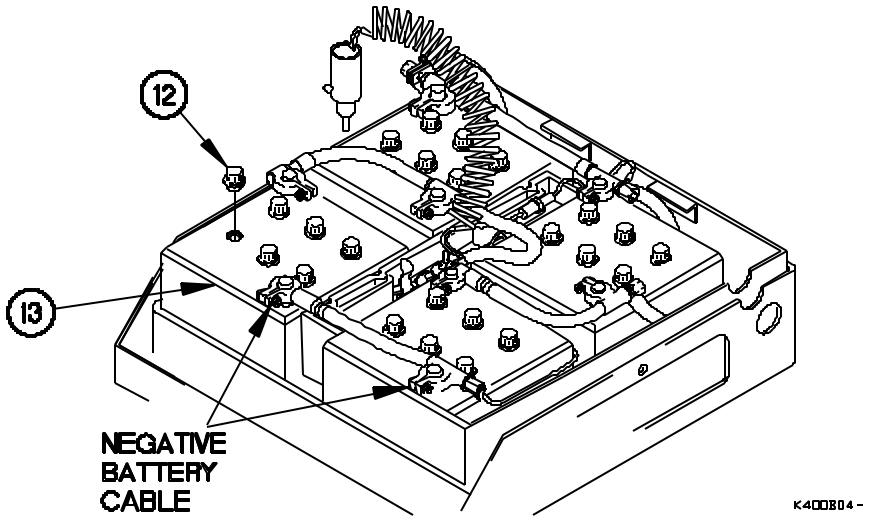
OPENING BATTERY BOX/TESTING BATTERIES - Continued 0108 00

TESTING BATTERIES - Continued

NOTE

All four batteries can be checked the same way. Check inside cells of inside batteries first, outside cells of outside batteries last. Left front battery shown.

5. Remove battery fill caps (12) from battery (13).



OPENING BATTERY BOX/TESTING BATTERIES - Continued 0108 00

TESTING BATTERIES - Continued

NOTE

If red light illuminates before inserting battery tester all the way in fill hole, battery may be overfilled.

Red light may flash intermittently as battery tester is inserted in fill hole.

With battery tester inserted fully into the fill hole adjacent to the negative battery posts of the outside batteries, the red light may illuminate briefly and then go out if the electrolyte is at proper level.

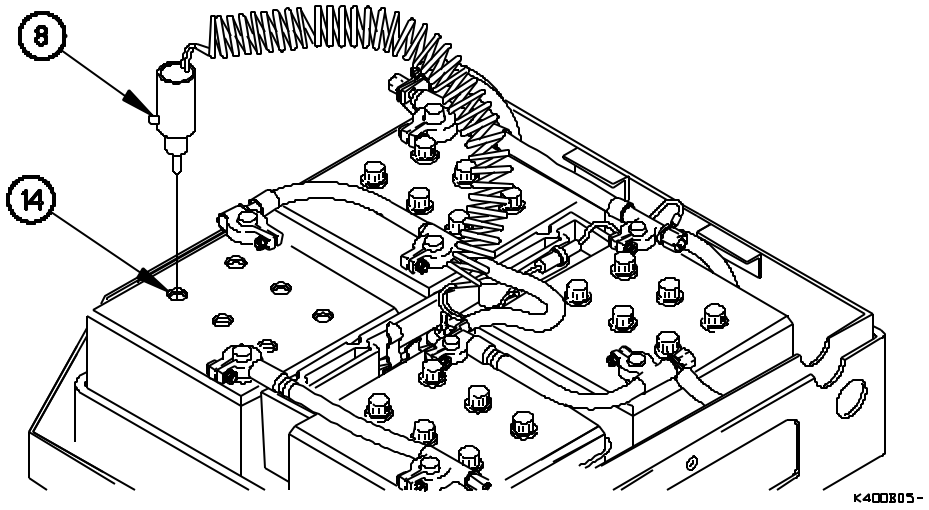
With battery tester inserted fully in fill hole, red light will illuminate if electrolyte is at its proper level.

If red light does not illuminate, or if cell is overfilled, notify Field Maintenance that battery requires servicing.

6. Place battery tester (8) in fill hole (14).

7. Check battery tester (8) for red light.

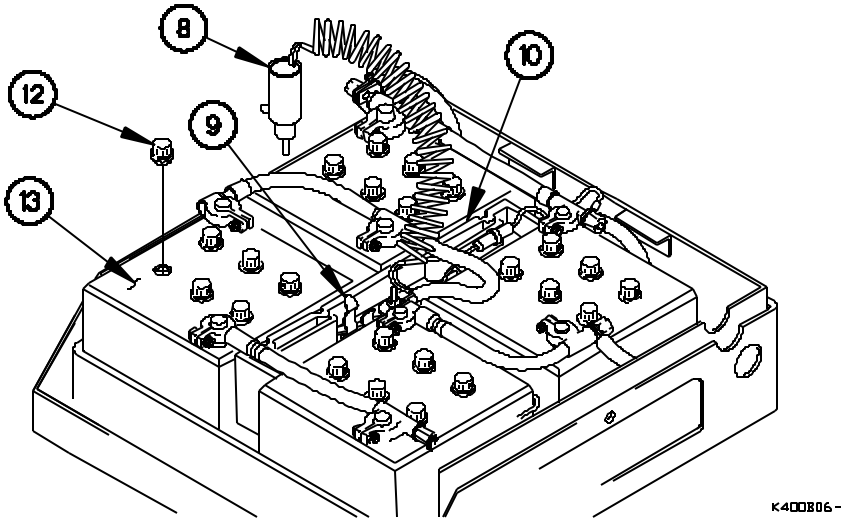
8. Remove battery tester (8) from fill hole (14).



OPENING BATTERY BOX/TESTING BATTERIES - Continued 0108 00

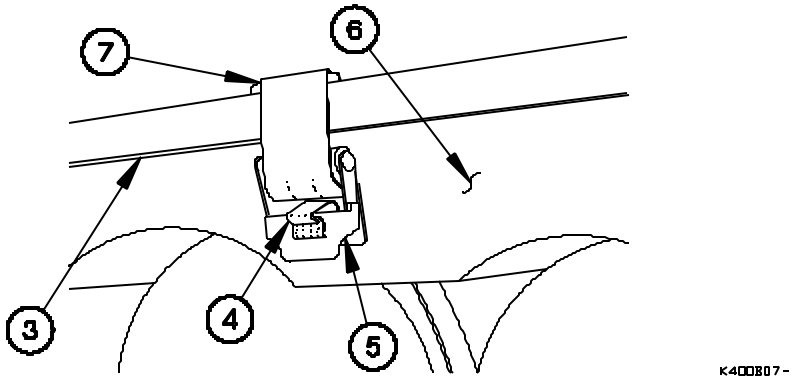
TESTING BATTERIES - Continued

9. Install battery fill caps (12) on battery (13).
10. Wipe tip of battery tester (8) clean of any fluid with wiping rag.
11. Install battery tester (8) in clamp (9) on battery tray (10).



CLOSING BATTERY BOX

1. Position battery box cover (3) on battery box (6).
2. Fasten two latches (7) on battery box cover (3).
3. Push down on two latch levers (5) until spring catches (4) are engaged.



OPENING BATTERY BOX/TESTING BATTERIES - Continued 0108 00

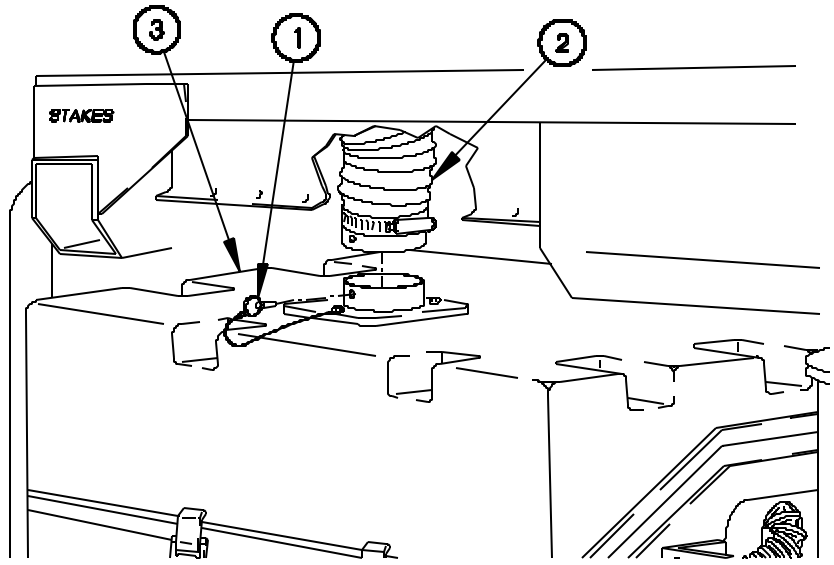
CLOSING BATTERY BOX-Continued

NOTE

Perform steps (4) and (5) on cargo vehicles equipped with cargo arctic heaters.

4. Position hose (2) on battery box cover (3).

5. Install pin (1) in hose (2).



K400808-

END OF WORK PACKAGE.

SERVICING AIR FILTER (EMERGENCY PROCEDURE) 0109 00

THIS WORK PACKAGE COVERS:
Servicing, Operational Check

INITIAL SETUP:

Maintenance Level
Operator

Materials/Parts
Rags, Wiping (Item 25, WP 0119 00)

Equipment Conditions
Engine shut down (WP 0018 00).
Wheels chocked (WP 0018 00).

References
FM 3-4
FM 3-5
TB 700-4

GENERAL

This work package contains information and instructions to service the air filter in an emergency.

SERVICING

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 3-5 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.

SERVICING AIR FILTER (EMERGENCY PROCEDURE) - 0109 00 Continued

SERVICING - Continued

CAUTION

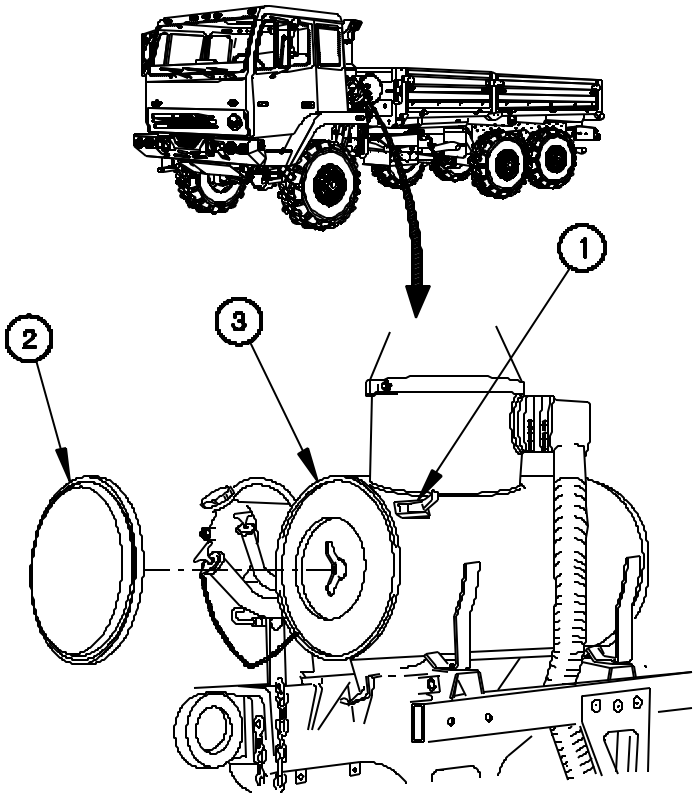
Do not operate engine without air filter installed. Failure to comply may result in damage to equipment.

NOTE

This is an emergency procedure and is only to be performed when AIR FILTER RESTRICTION GAUGE reads greater than 25 (in red area) while vehicle is on mission.

1. Unlatch three clasps (1) on cover (2).

2. Remove cover (2) from intake air cleaner housing (3).



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SERVICING AIR FILTER (EMERGENCY PROCEDURE) - 0109 00 Continued

SERVICING - Continued

3. Loosen wingnut (4) and remove air filter (5) from intake air cleaner housing (3).

CAUTION

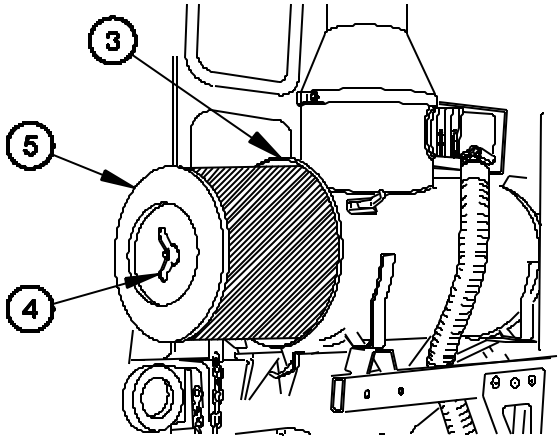
Use extreme care when cleaning air filter. Failure to comply may result in damage to equipment.

NOTE

If filter element is damaged or cannot be cleaned by tapping, notify Field Maintenance upon completion of the current mission.

4. Gently tap air filter (5) on a flat hard surface to loosen dirt.

5. Inspect filter element (5) for damage.

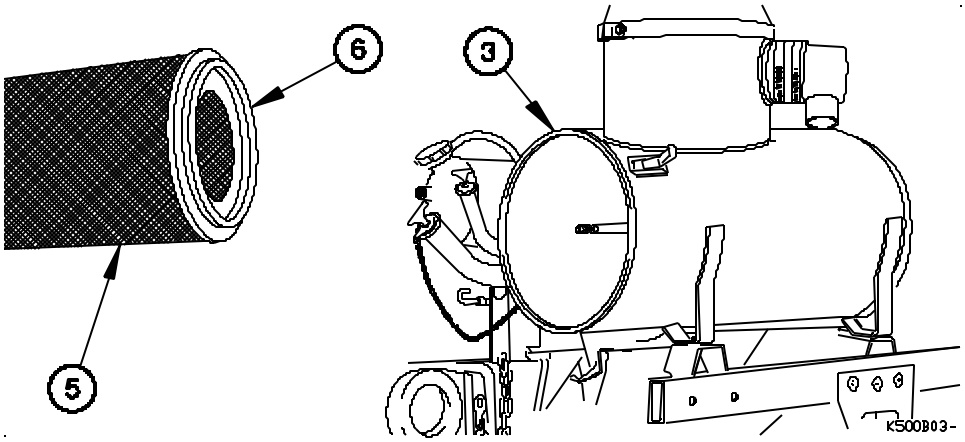


K500902-

SERVICING AIR FILTER (EMERGENCY PROCEDURE) - 0109 00 Continued

SERVICING - Continued

6. Clean air filter (5) with clean rag to free trapped dirt.
7. Clean air filter gasket (6) with clean rag.
8. Clean inside intake air cleaner housing (3) with clean rag.



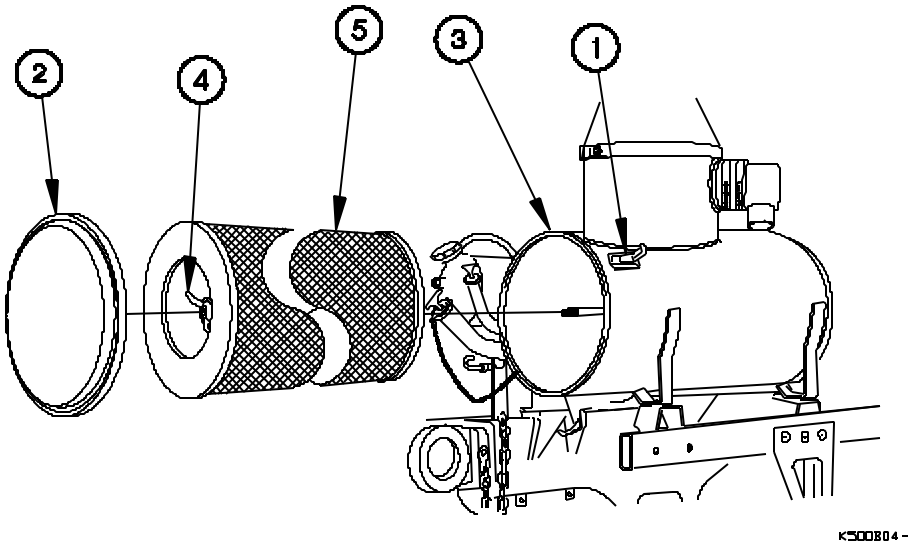
SERVICING AIR FILTER (EMERGENCY PROCEDURE) - 0109 00 Continued

SERVICING - Continued

NOTE

Filter element is installed in intake air cleaner housing with gasket end first.

9. Position filter element (5) in intake air cleaner housing (3).
10. Tighten wingnut (4) on filter element (5).
11. Position cover (2) on intake air cleaner housing (3).
12. Latch three clasps (1).



OPERATIONAL CHECK

Start engine (WP 0018 00) and check AIR FILTER RESTRICTION GAUGE. Notify Field Maintenance if AIR FILTER RESTRICTION GAUGE still reads greater than 25 (in red area).

END OF WORK PACKAGE.

M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL

0110 00

THIS WORK PACKAGE COVERS:

Installation, Removal

INITIAL SETUP:

Maintenance Level

Operator

Equipment Conditions

Engine shut down (WP 0018 00).

Tools and Special Tools

Screwdriver, Flattip (Item 39, Table 2, WP 0117 00)

Wrench, Adjustable (Item 51, Table 2, WP 0117 00)

Personnel Required

Two

GENERAL

This work package contains information and instructions to install and remove the M1083A1/M1084A1 Troopseat Kit.

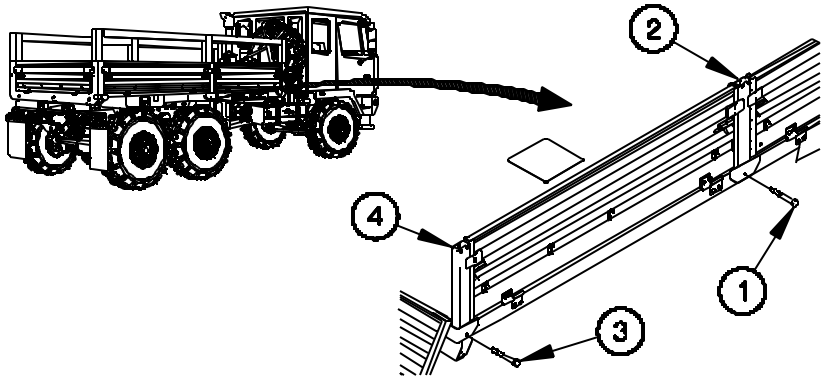
INSTALLATION

NOTE

Left and right side bolts are installed in cargo bed stakes the same way. Right side shown.

1. Position bolt (1) in center cargo bed stake (2).

2. Position bolt (3) in rear cargo bed stake (4).



M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

0110 00

INSTALLATION - Continued

CAUTION

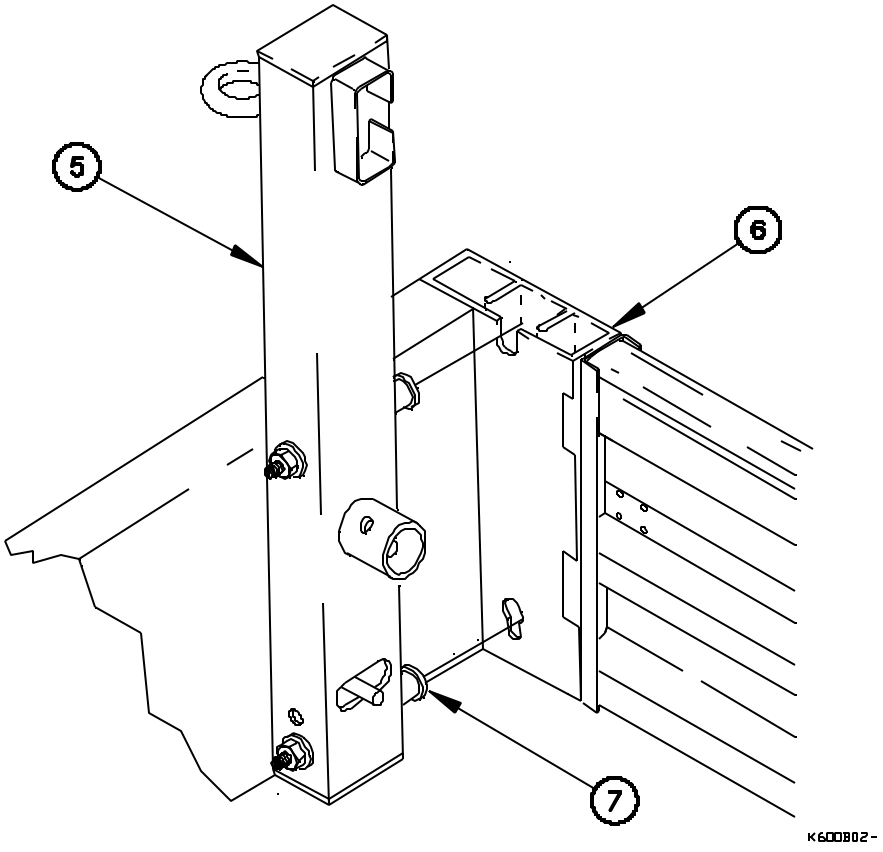
Ensure seat post is flush with cargo bed floor prior to tightening bolts. Failure to comply may result in damage to equipment.

NOTE

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

Steps 3 through 21 require the aid of an assistant.

3. Attach front seat post (5) to front cargo bed stake (6) with two bolts (7).

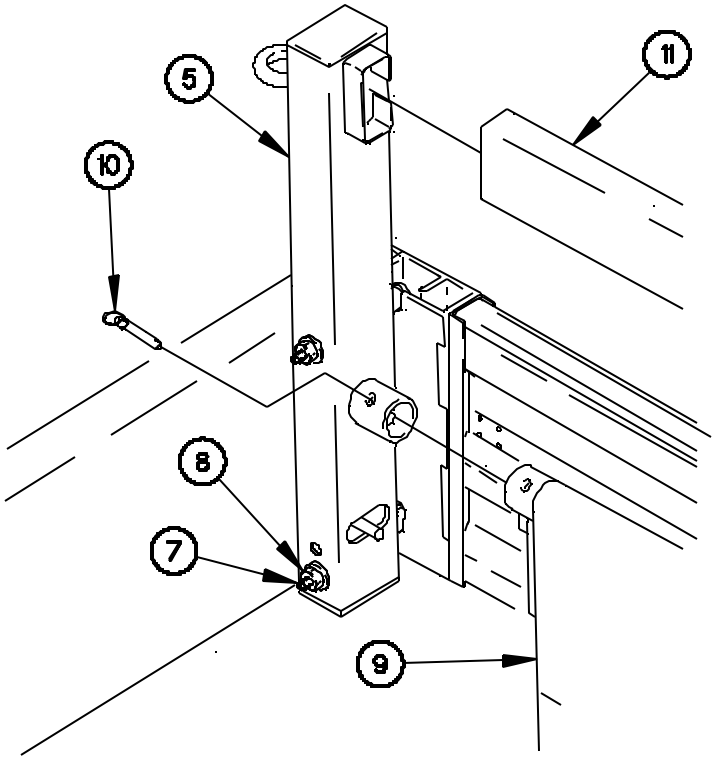


M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

0110 00

INSTALLATION - Continued

4. Hold bolts (7).
5. Tighten two nuts (8) on bolts (7).
6. Install front seats (9) on front seat post (5).
7. Insert quick release pin (10) in front seats (9).
8. Install backrest (11) on front seat post (5).

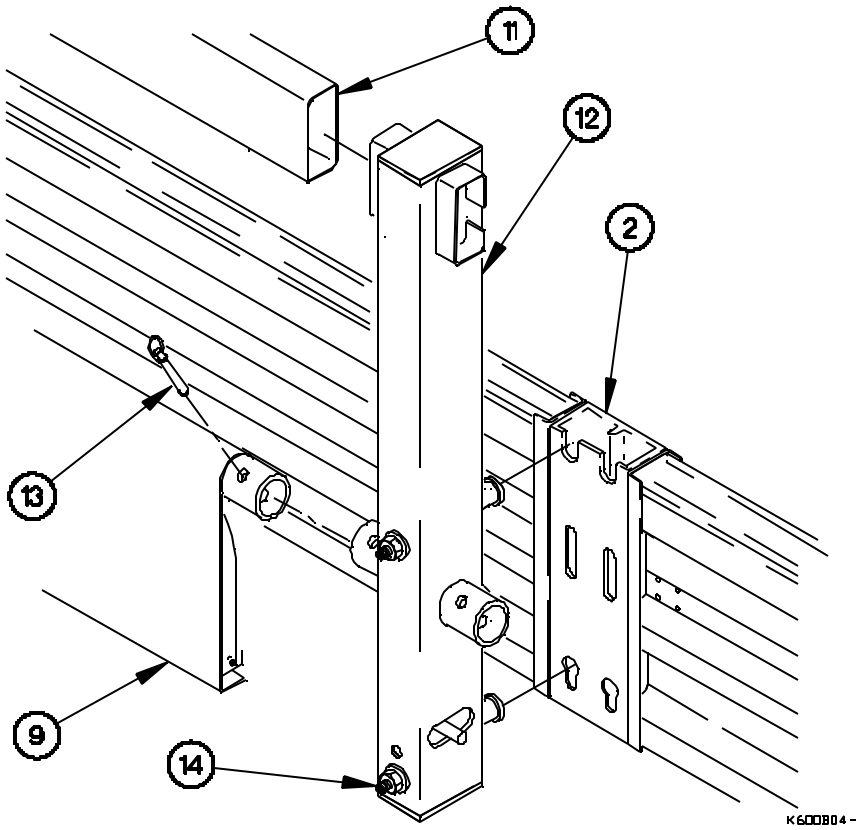


K600803-

M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

INSTALLATION - Continued

9. Install center seat post (12) on backrest (11) and front seats (9).
10. Insert quick release pin (13) in front seats (9).
11. Attach center seat post (12) to center cargo bed stake (2) with two bolts (14).

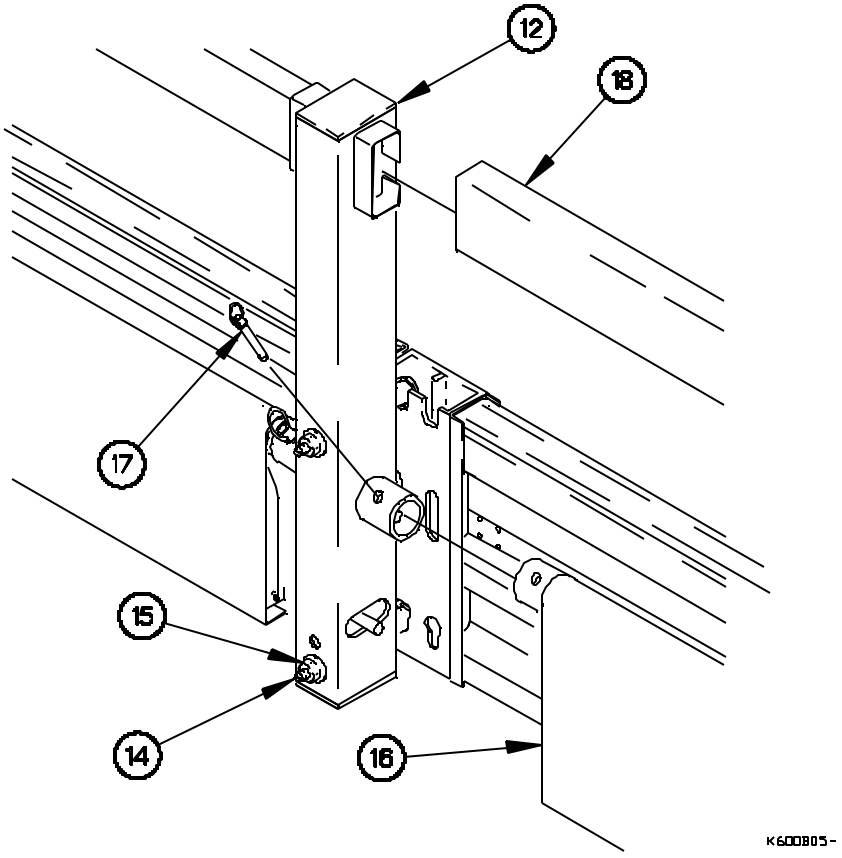


M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

0110 00

INSTALLATION - Continued

12. Hold bolts (14).
13. Tighten two nuts (15) on bolts (14).
14. Install rear seats (16) on center seat post (12).
15. Insert quick release pin (17) in rear seats (16).
16. Install backrest (18) on center seat post (12).



M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

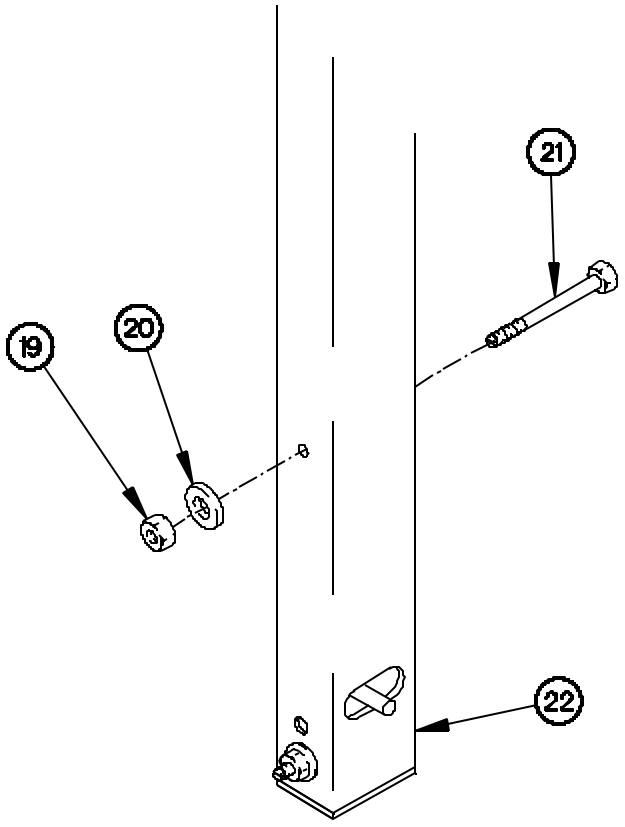
0110 00

INSTALLATION - Continued

NOTE

Perform the following two steps when installing rear seat post with boarding handle for the first time.

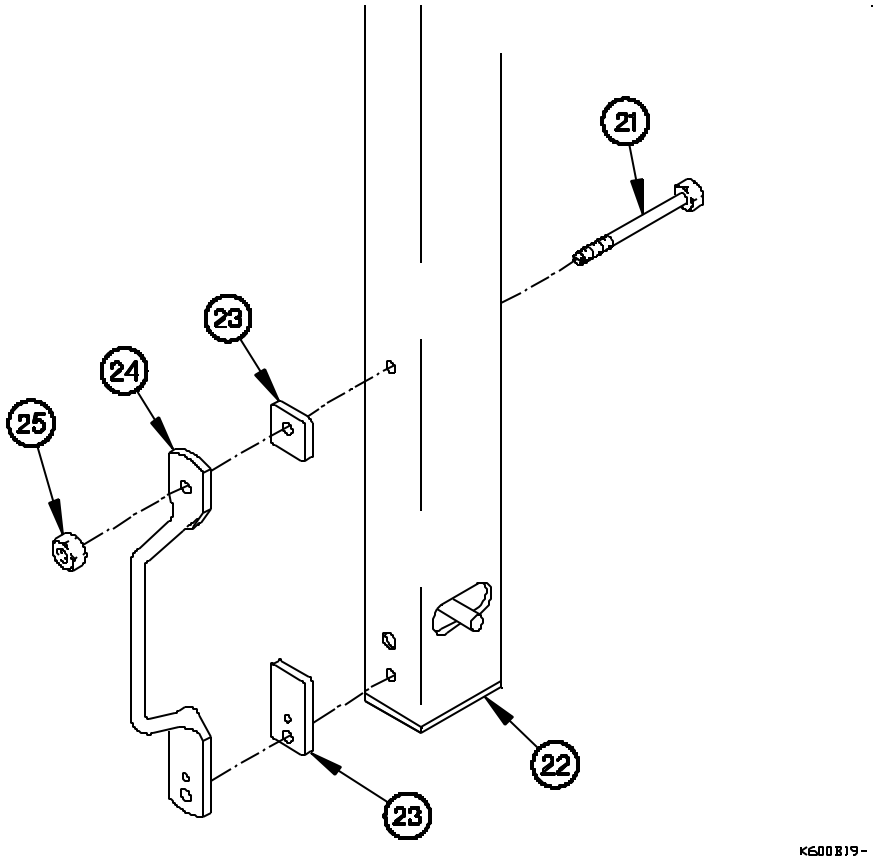
17. Remove two nuts (19), washers (20), and bolts (21) from rear seat post (22). Discard nuts and washers.



M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

INSTALLATION - Continued

18. Position two bolts (21), gaskets (23), handle (24), and two knerled nuts (25) on rear seat post (22).



M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

0110 00

INSTALLATION - Continued

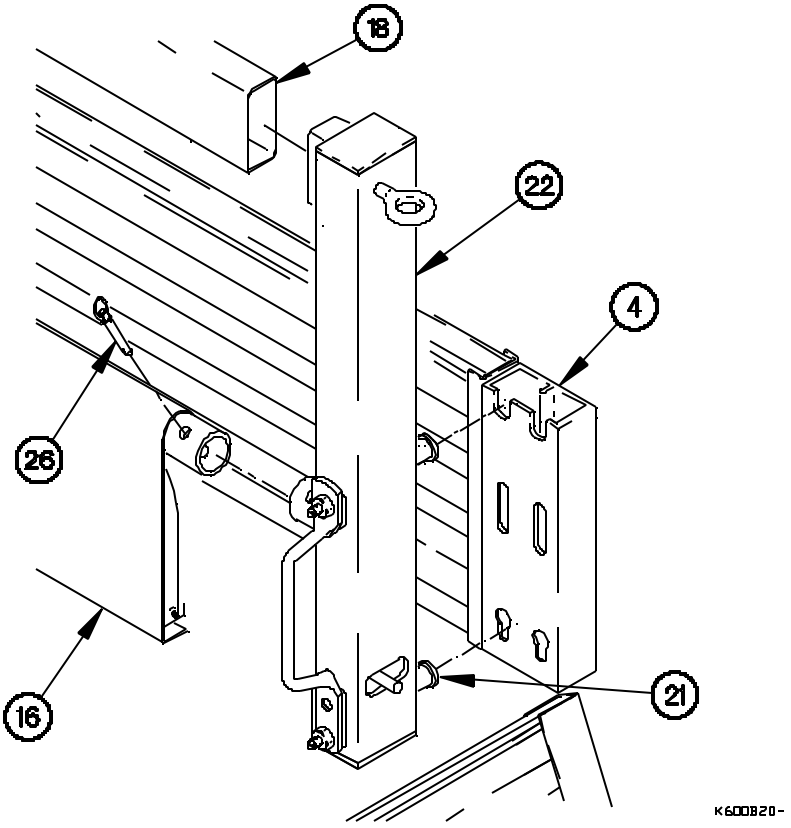
NOTE

Perform the following steps on troop seat kit with boarding handle.

19. Install rear seat post (22) on backrest (18) and rear seats (16).

20. Insert quick release pin (26) in rear seats (16).

21. Attach rear seat post (22) to rear cargo bed stake (4) with two bolts (21).



M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

0110 00

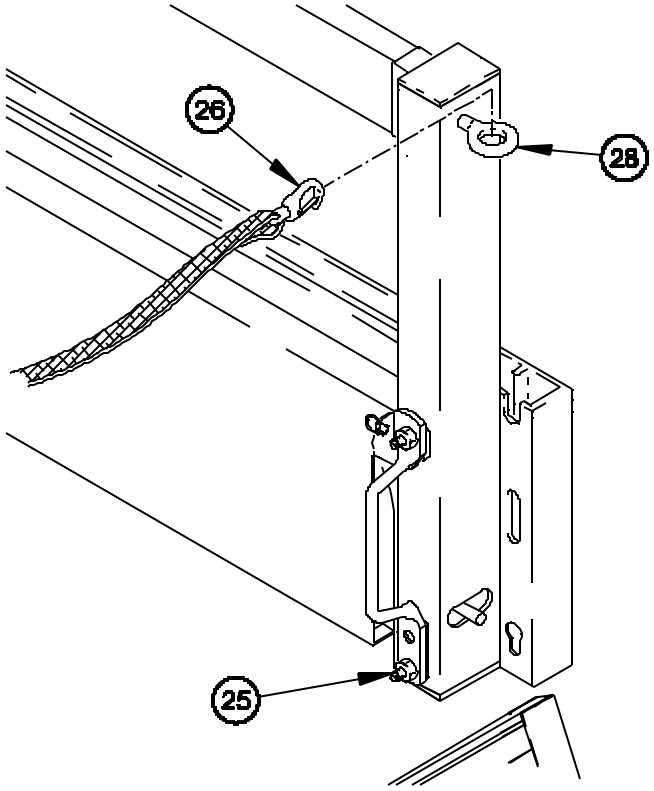
INSTALLATION - Continued

22. Tighten two nuts (25) on bolts (21).

NOTE

All four safety strap hooks are installed the same way. Right rear safety strap hook shown.

23. Install safety strap hook (27) in eyebolt (28).



K600821-

M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

0110 00

INSTALLATION - Continued

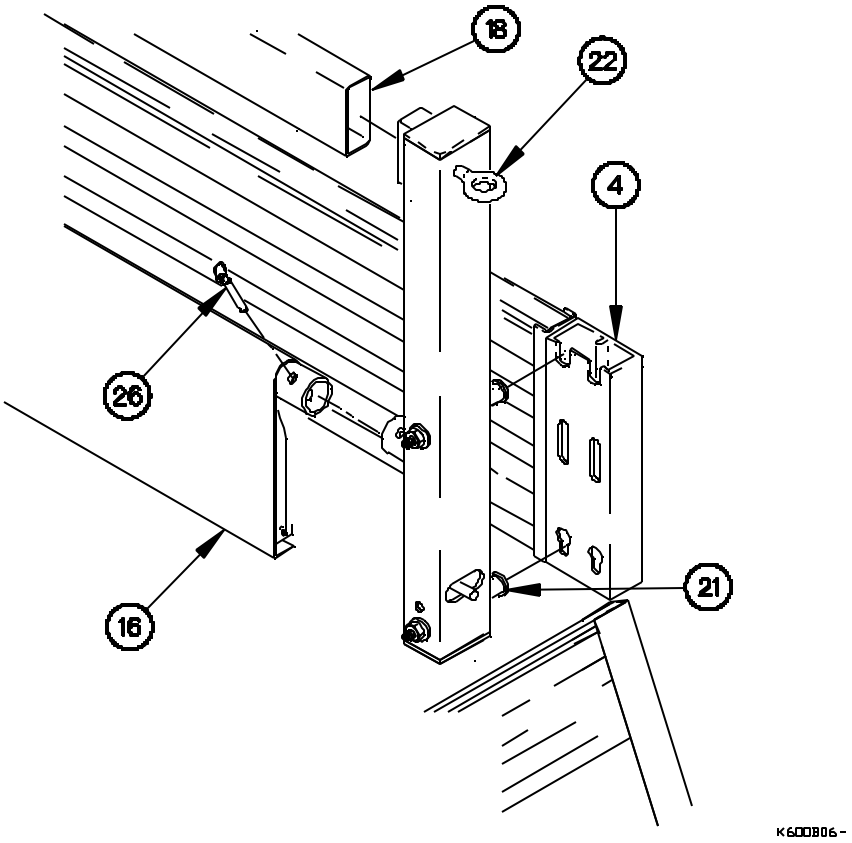
NOTE

Perform the following five steps on troopseat kit without boarding handle.

24. Install rear seat post (22) on backrest (18) and rear seats (16).

25. Insert quick release pin (26) in rear seats (16).

26. Attach rear seat post (22) to rear cargo bed stake (4) with two bolts (21).



M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

0110 00

INSTALLATION - Continued

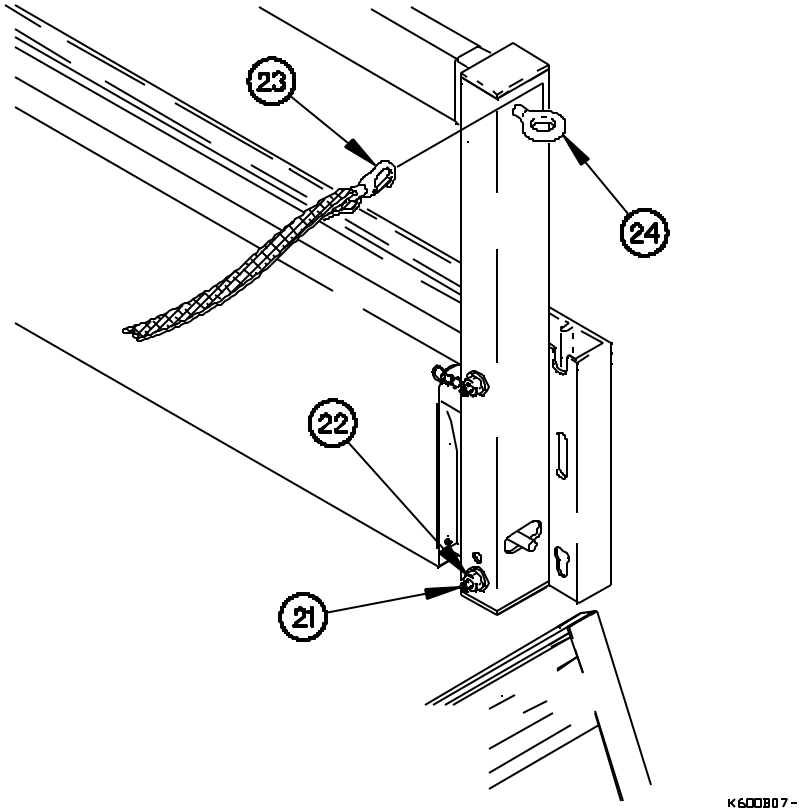
27. Hold bolts (21).

28. Tighten two nuts (22) on bolts (21).

NOTE

All four safety strap hooks are installed the same way. Right rear safety strap hook shown.

29. Install safety strap hook (27) in eyebolt (28).



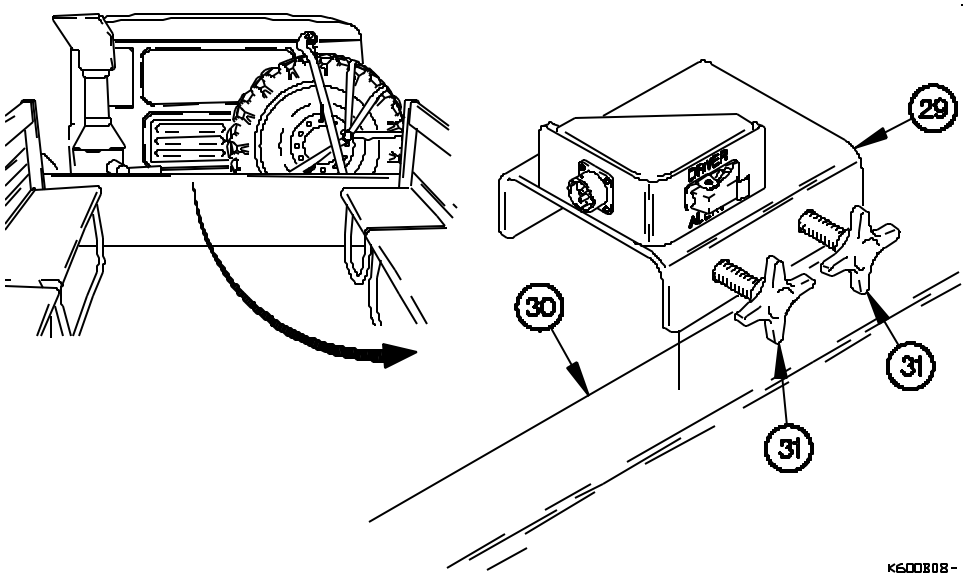
M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

0110 00

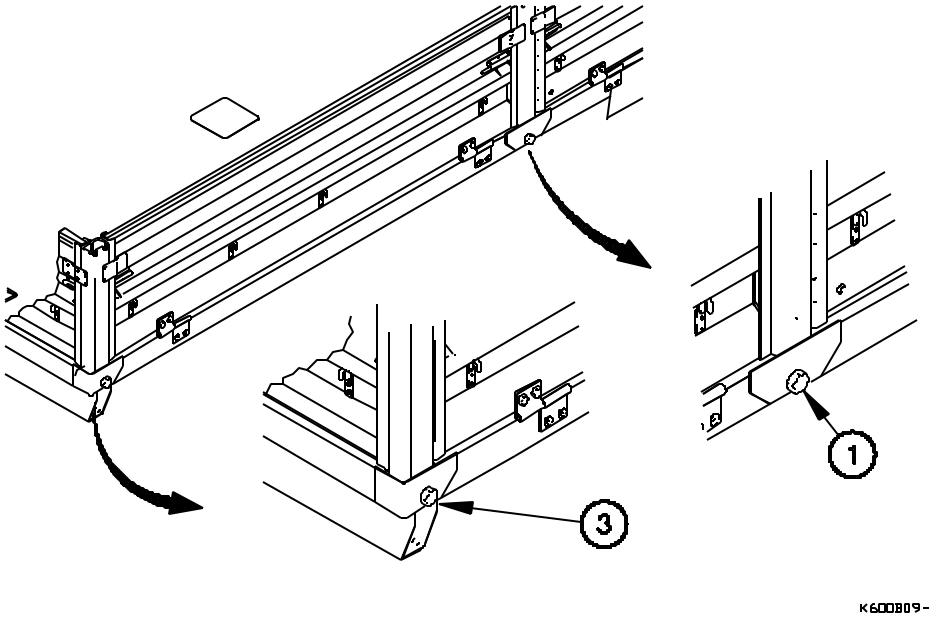
INSTALLATION - Continued

30. Install alarm bracket (29) on cargo bed (30) with two knobs (31).

31. Notify Field Maintenance to install troop transport alarm cable assembly.



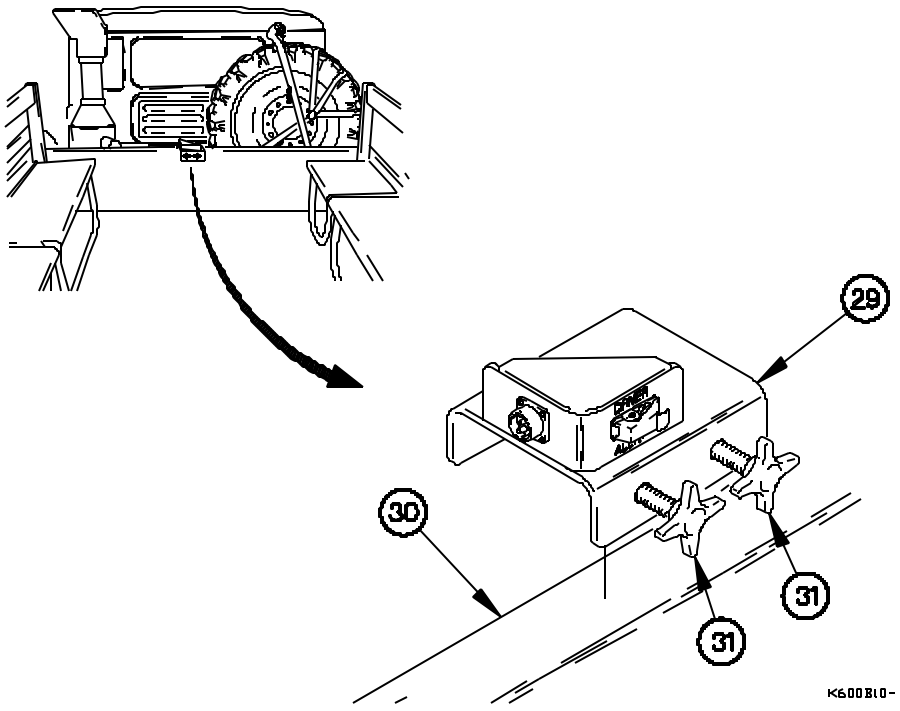
32. Notify Field Maintenance to tighten bolt (1) and bolt (3) to 46-57 lb-ft (62-77 N•m).



M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

REMOVAL

1. Notify Field Maintenance to remove troop transport alarm cable assembly.
2. Loosen two knobs (31) on alarm bracket (29).
3. Remove alarm bracket (29) from cargo bed (30).



M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued 0110 00

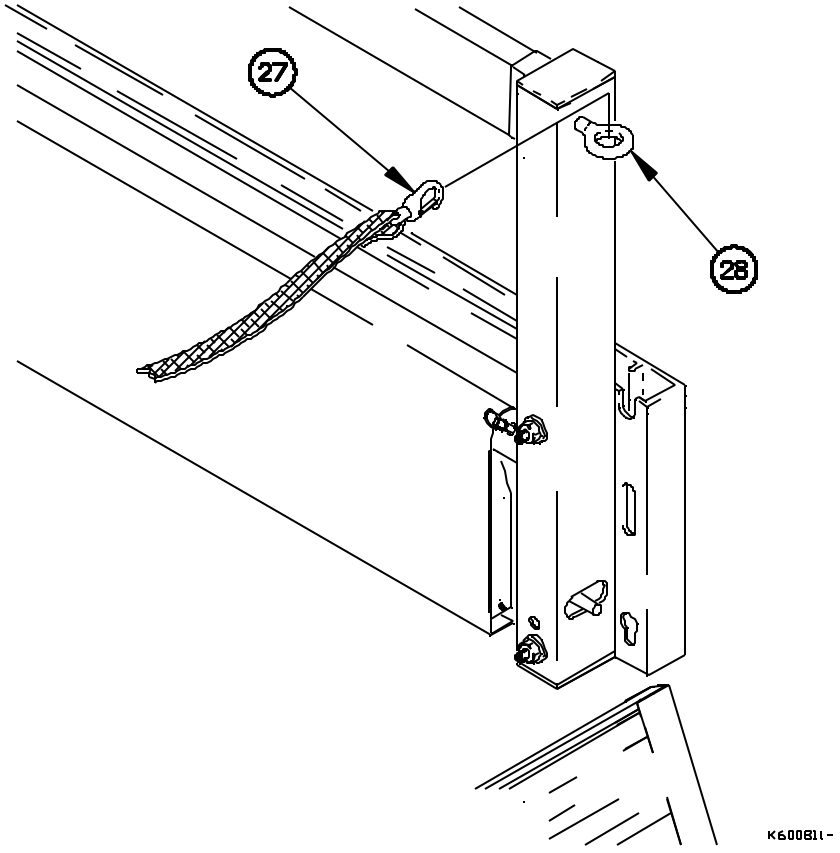
REMOVAL - Continued

NOTE

All four safety strap hooks are removed the same way. Right rear safety strap hook shown.

Eyebolts are located on all corner seat posts. Right rear eyebolts shown.

4. Remove safety strap hook (27) from eyebolt (28).



M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

0110 00

REMOVAL - Continued

NOTE

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

Steps 5 through 22 require the aid of an assistant.

If seat post is equipped with spring locking pin, spring locking pin must be pulled back to release seat post from cargo bed stake.

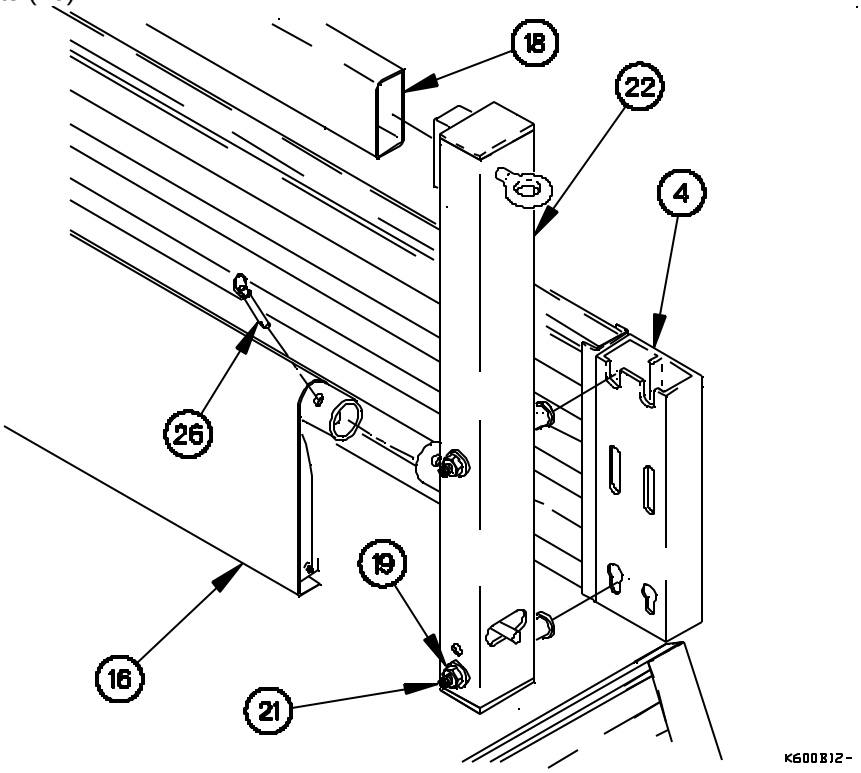
All spring locking pins are released the same way. Right rear spring locking pin shown.

5. Remove quick release pin (26) from rear seats (16).

NOTE

Loosen nuts enough to remove seat post from cargo bed stake.

6. Hold two bolts (21) with screwdriver.
7. Loosen two nuts (22) on bolts (21).
8. Remove rear seat post (19) from rear cargo bed stake (4), backrest (18), and rear seats (16).



M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

0110 00

REMOVAL - Continued

NOTE

Perform the following steps if rear seat post is equipped with boarding handle.

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

9. Remove quick release pin (26) from rear seats (16).

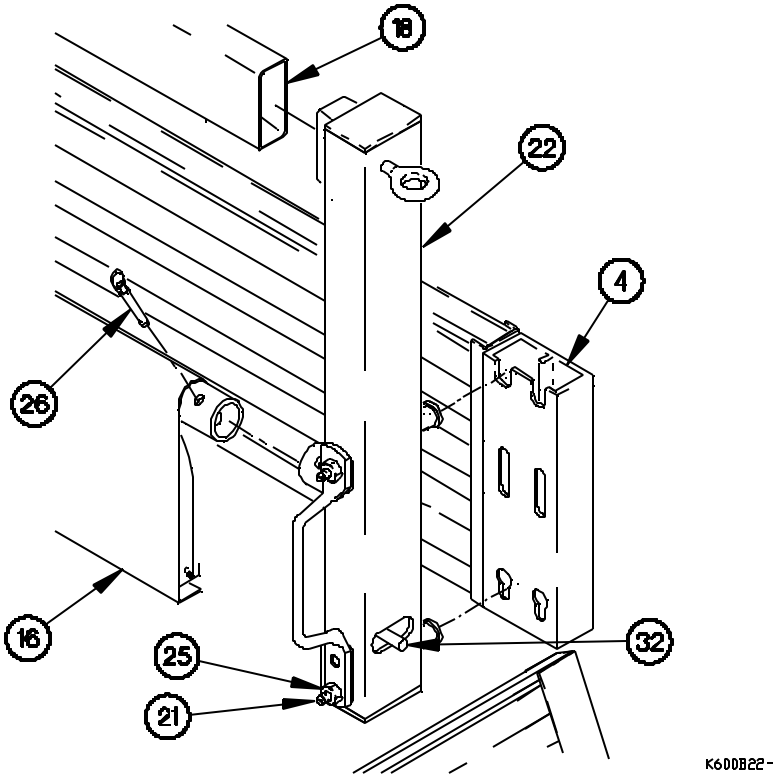
NOTE

Loosen nuts enough to remove seat post from cargo bed stake.

10. Hold two bolts (21) and loosen two nuts (25).

11. Pull back on spring pin (32).

12. Remove rear seat post (22) from rear cargo bed stake (4), backrest (18), and rear seats (16).

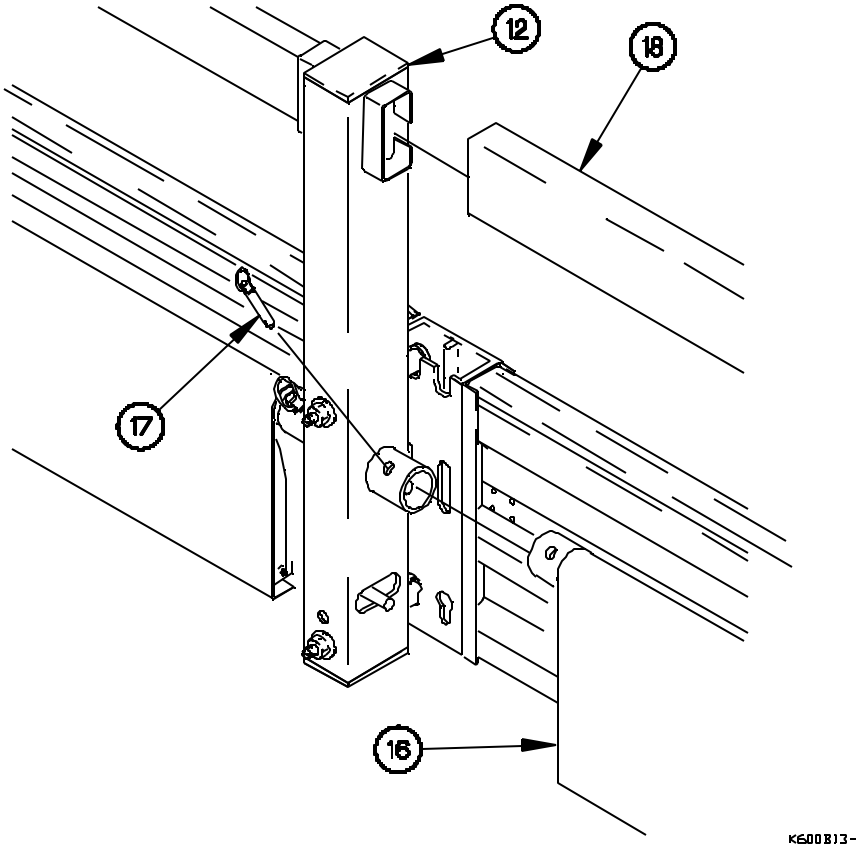


M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

0110 00

REMOVAL - Continued

13. Remove backrest (18) from center seat post (12).
14. Remove quick release pin (17) from rear seats (16).
15. Remove rear seats (16) from center seat post (12).



M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

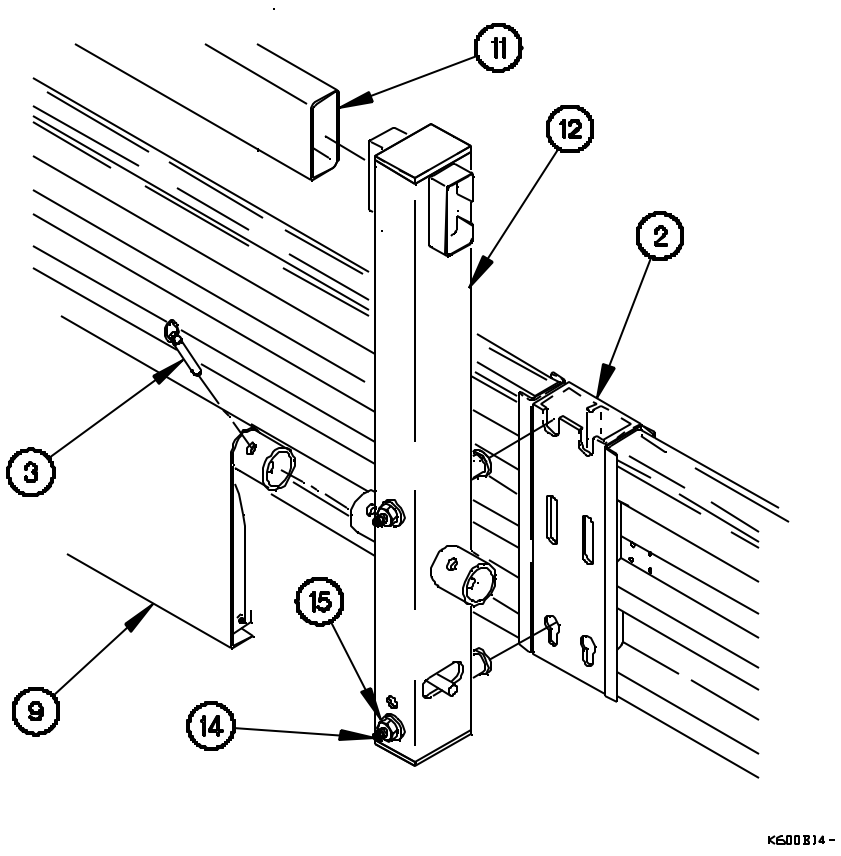
0110 00

REMOVAL - Continued

NOTE

Loosen nuts enough to remove seat post from cargo bed stake.

16. Hold two bolts (14).
17. Loosen two nuts (15) on bolts (14).
18. Remove center seat post (12) from center cargo bed stake (2).
19. Remove quick release pin (13) from front seats (9).
20. Remove center seat post (12) from backrest (11) and front seats (9).



M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

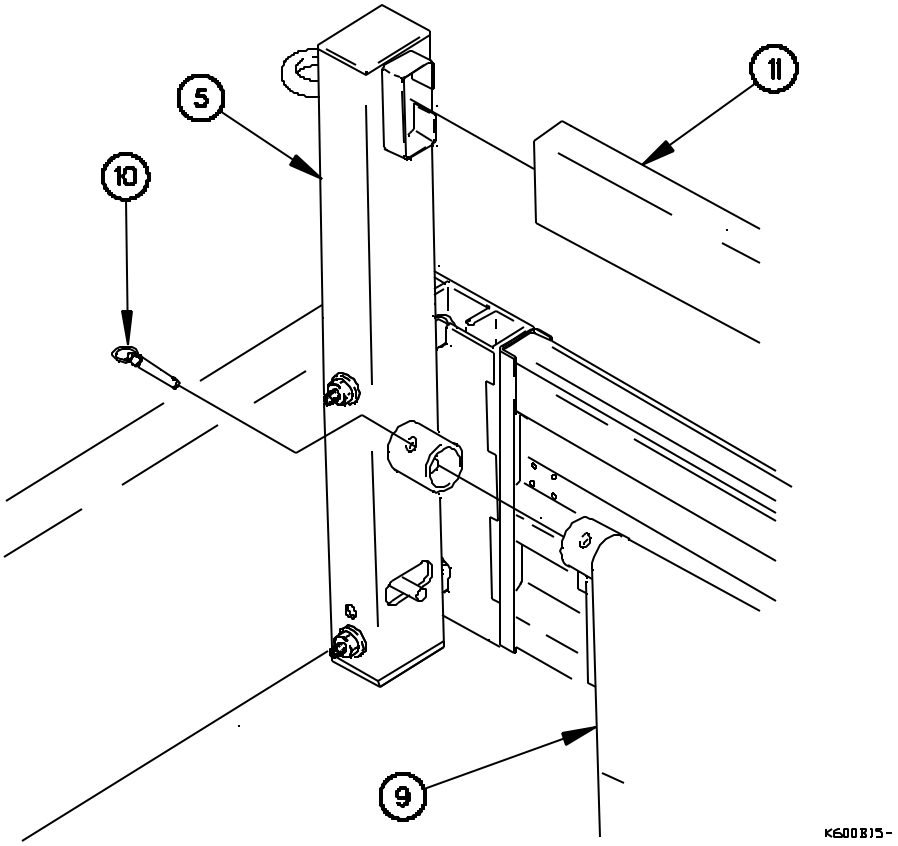
0110 00

REMOVAL - Continued

21. Remove backrest (11) from front seat post (5).

22. Remove quick release pin (10) from front seats (9).

23. Remove front seats (9) from front seat post (5).



M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

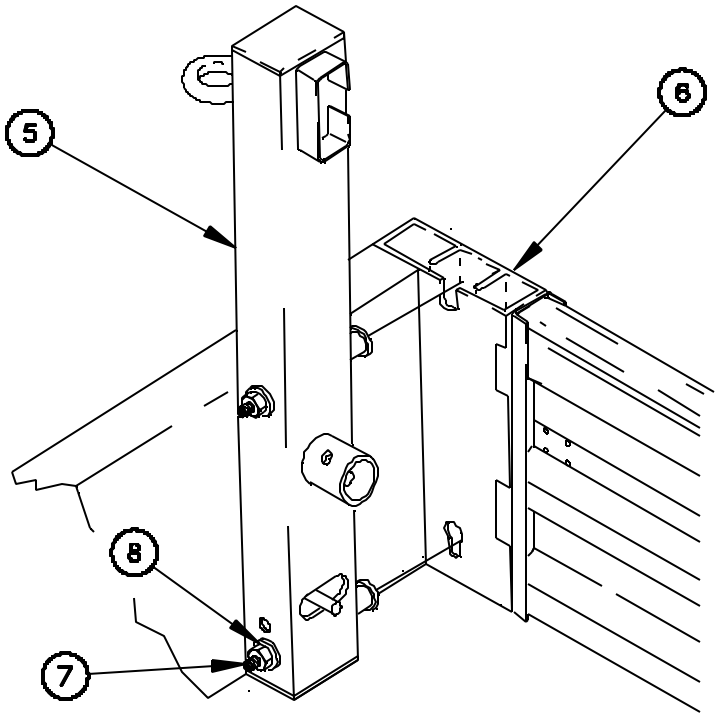
0110 00

REMOVAL - Continued

24. Hold two bolts (7).

25. Loosen two nuts (8) on bolts (7).

26. Remove front seat post (5) from front cargo bed stake (6).



K600816-

M1083A1/M1084A1 TROOPSEAT KIT INSTALLATION/REMOVAL - Continued

0110 00

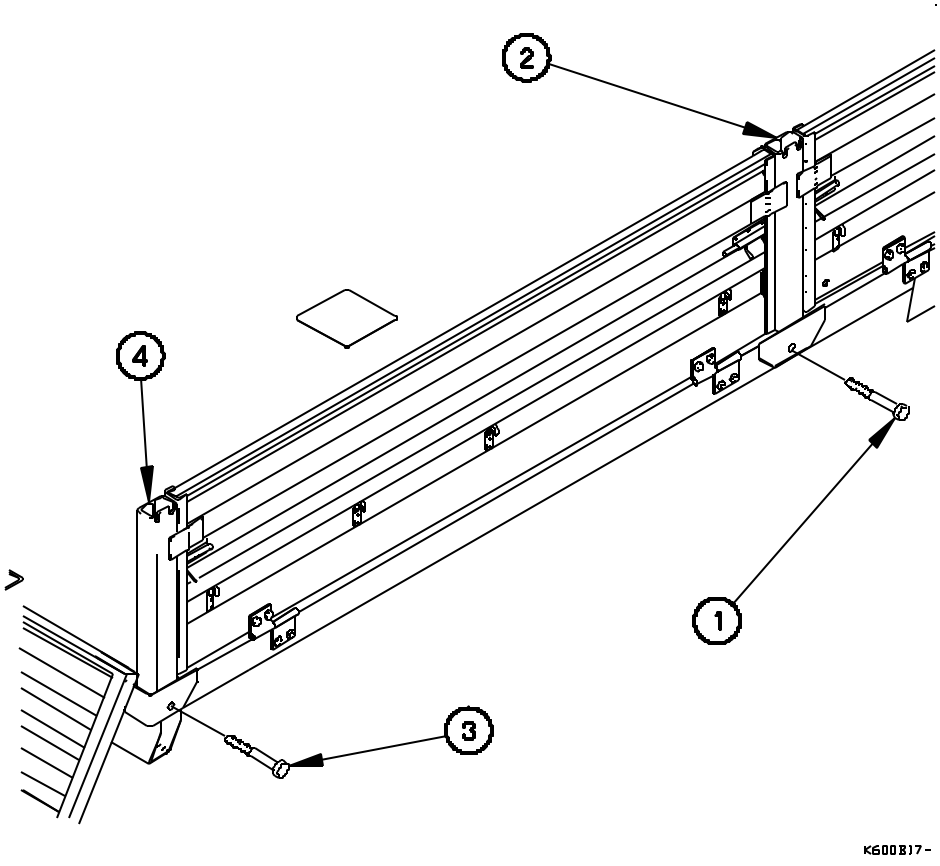
REMOVAL - Continued

NOTE

Left and right side bolts are removed from cargo bed stakes the same way. Right side shown.

27. Remove bolt (3) from rear cargo bed stake (4).

28. Remove bolt (1) from center cargo bed stake (2).



END OF WORK PACKAGE.

M1085A1 TROOPSEAT KIT INSTALLATION/REMOVAL 0111 00

THIS WORK PACKAGE COVERS:

Installation, Removal

INITIAL SETUP:

Maintenance Level

Operator

Equipment Conditions

Engine shut down (WP 0018 00).
Wheels chocked (WP 0018 00).

Tools and Special Tools

Screwdriver, Flattip (Item 39, Table 2, WP 0117 00)
Wrench, Adjustable (Item 51, Table 2, WP 0117 00)

Personnel Required

Two

GENERAL

This work package contains information and instructions to install and remove the M1085A1 Troopseat Kit.

M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued 0111 00

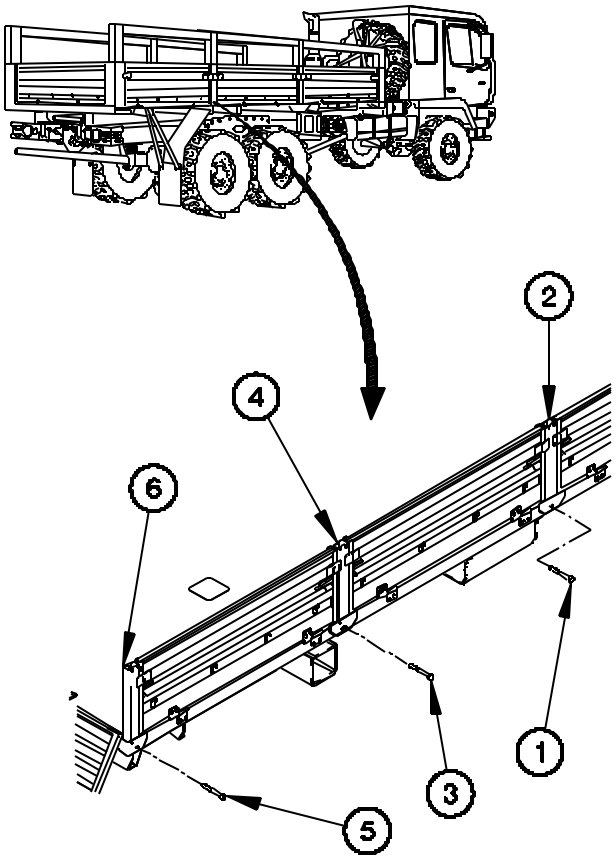
INSTALLATION

NOTE

Left and right side bolts are installed in cargo bed stakes the same way. Right side shown.

Steps 1 through 39 require the aid of an assistant.

1. Position bolt (1) in front center cargo bed stake (2).
2. Position bolt (3) in rear center cargo bed stake (4).
3. Position bolt (5) in rear cargo bed stake (6).



K700801-

M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued

0111 00

INSTALLATION - Continued

CAUTION

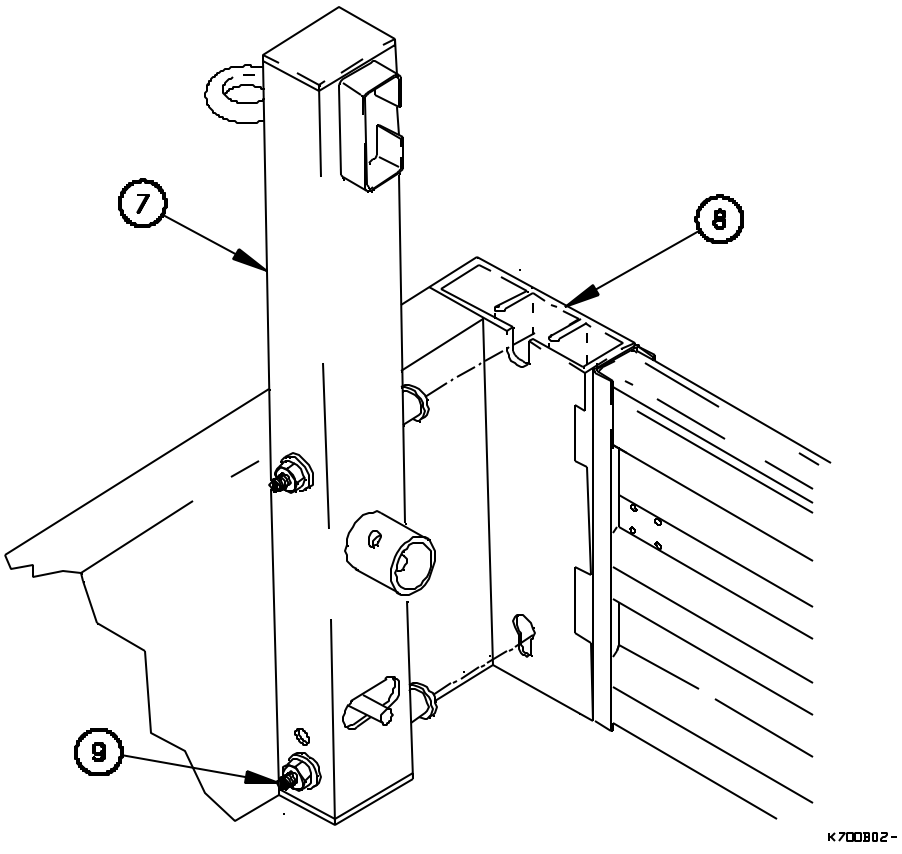
Ensure seat post is flush with cargo bed floor prior to tightening bolts. Failure to comply may result in damage to equipment.

NOTE

There are six sets of seats. The two rear sets have two long seat panels.

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

4. Attach front seat post (7) to front cargo bed stake (8) with two bolts (9).

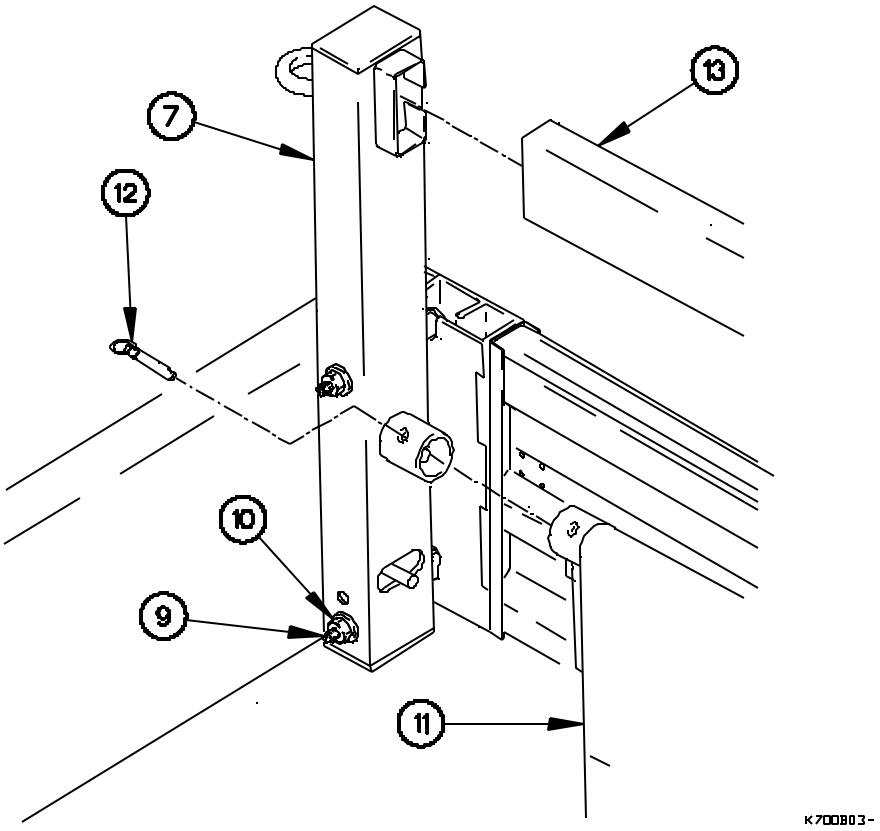


M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued

0111 00

INSTALLATION - Continued

5. Hold bolts (9).
6. Tighten two nuts (10) on bolts (9).
7. Install front seats (11) on front seat post (7).
8. Insert quick release pin (12) in front seats (11).
9. Install backrest (13) on front seat post (7).

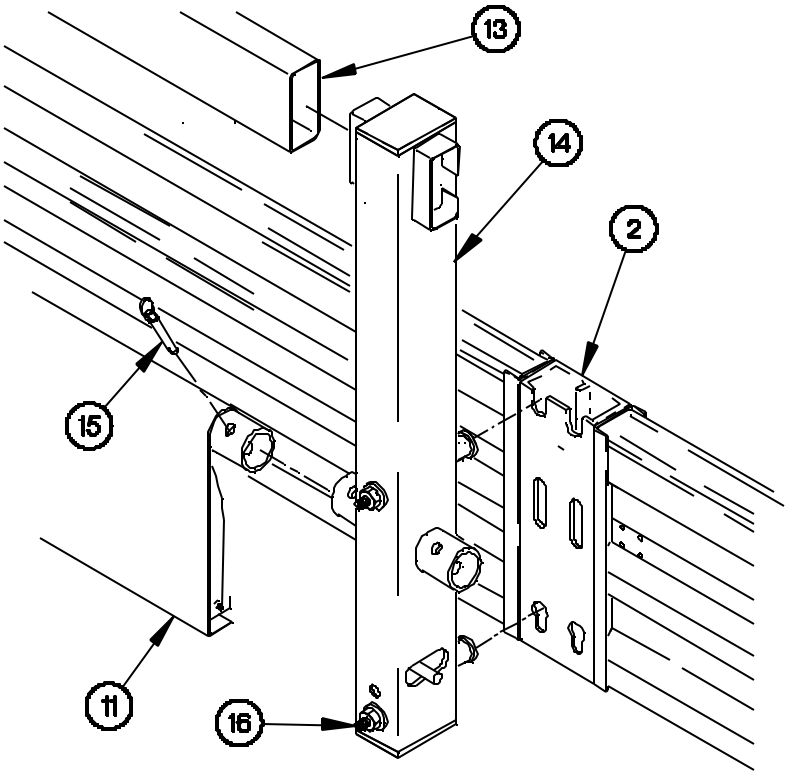


M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued

0111 00

INSTALLATION - Continued

10. Install front seats (11) on front center seat post (14).
11. Install backrest (13) on front center seat post (14).
12. Insert quick release pin (15) in front seats (11).
13. Attach front center seat post (14) to front center cargo bed stake (2) with two bolts (16).

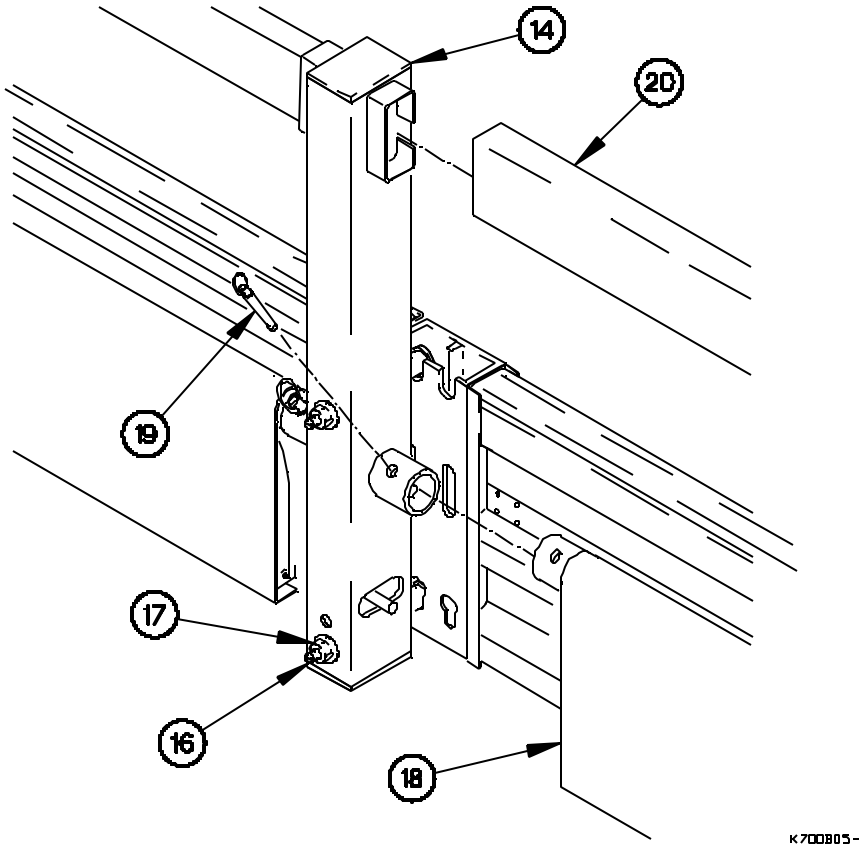


M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued

0111 00

INSTALLATION - Continued

14. Hold two bolts (16).
15. Install two nuts (17) on bolts (16).
16. Install center seats (18) on front center seat post (14).
17. Insert quick release pin (19) in center seats (18).
18. Install center backrest (20) on front center seat post (14).

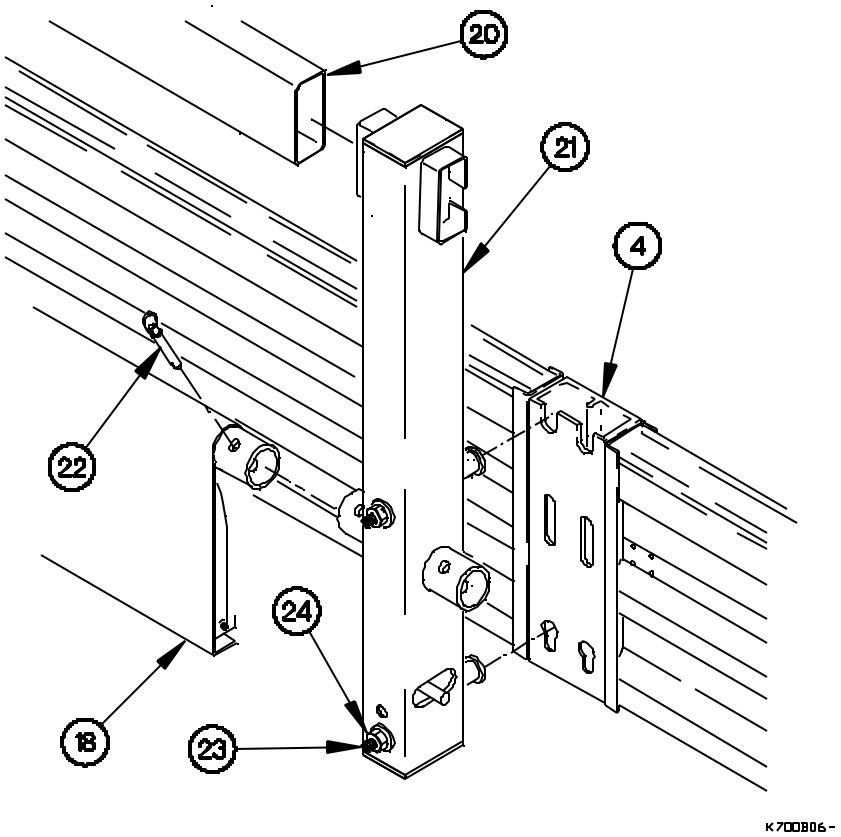


M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued

0111 00

INSTALLATION - Continued

19. Install center seats (18) on rear center seat post (21).
20. Install center backrest (20) on rear center seat post (21).
21. Insert quick release pin (22) in center seats (18).
22. Install rear center seat post (21) on rear center cargo bed stake (4) with two bolts (23).
23. Hold two bolts (23).
24. Install two nuts (24) on bolts (23).



M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued

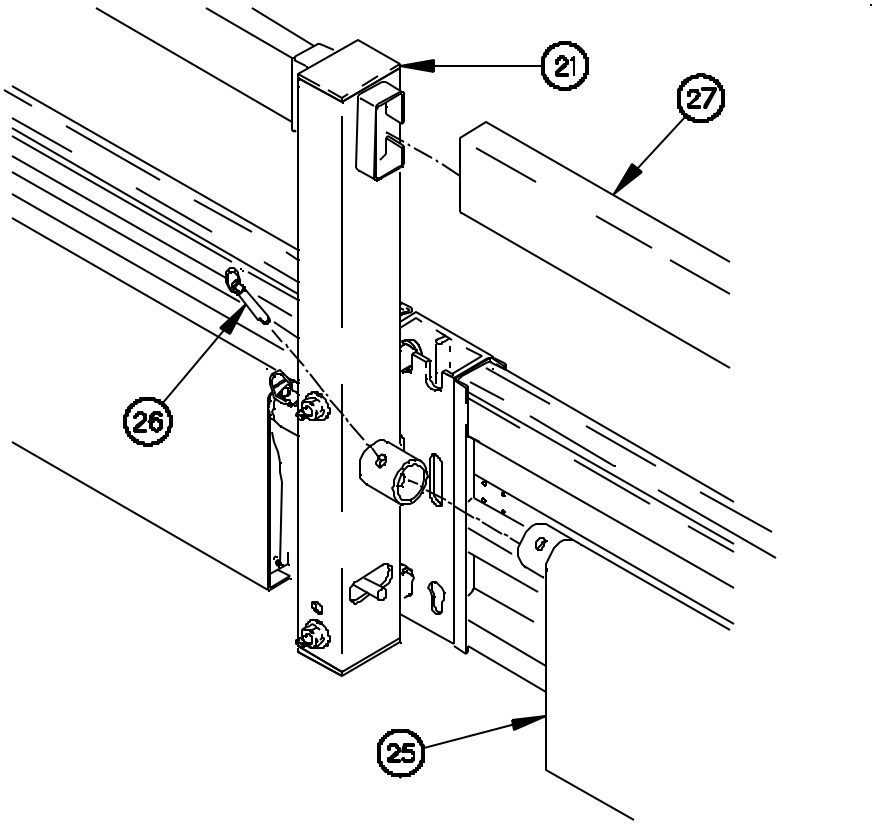
0111 00

INSTALLATION - Continued

25. Install rear seats (25) on rear center seat post (21).

26. Insert quick release pin (26) in rear seats (25).

27. Install rear backrest (27) on rear center seat post (21).



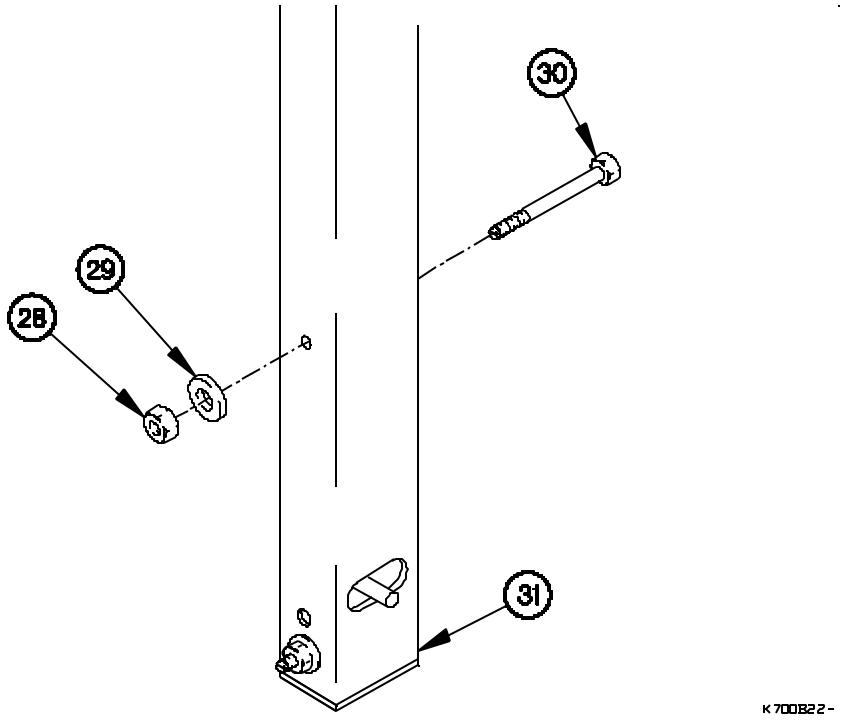
M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued 0111 00

INSTALLATION - Continued

NOTE

Perform the following two steps when installing rear seat post with boarding handle for the first time.

28. Remove two nuts (28), washers (29) and bolts (30) from rear seat post (31). Discard nuts and washers.

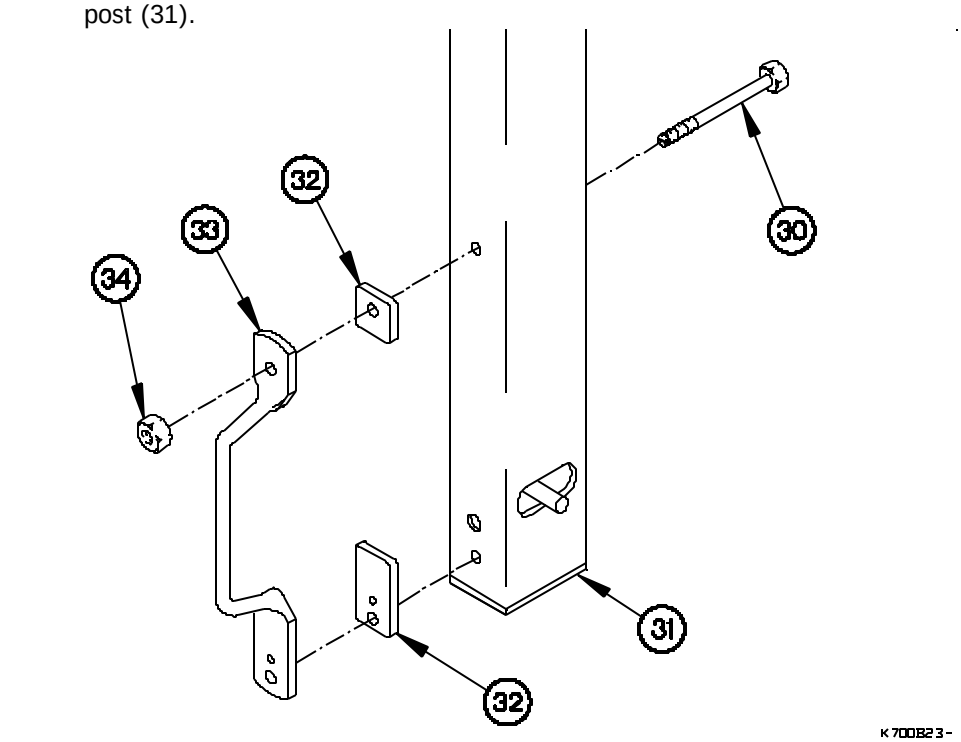


M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued

0111 00

INSTALLATION – Continued

29. Position two bolts (30), gaskets (32), handle (33) and two nuts (34) on rear seat post (31).



M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued

0111 00

INSTALLATION – Continued

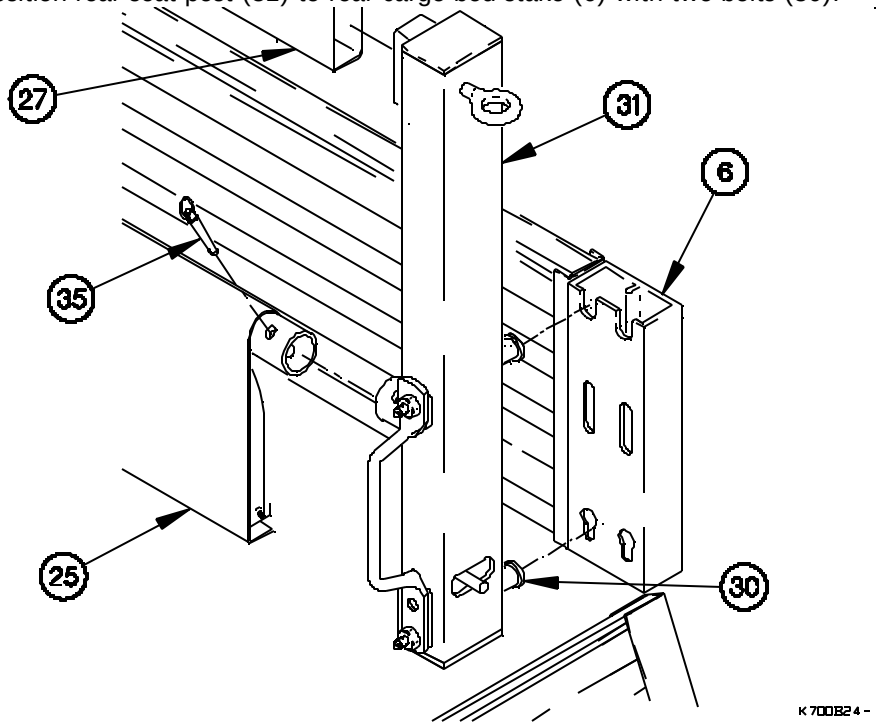
NOTE

Perform the following five steps on troop seat kits with boarding handles.

30. Install rear seat post (31) on backrest (27) and rear seats (25)>

31. Insert quick release pin (35) in rear seats (25).

32. Position rear seat post (31) to rear cargo bed stake (6) with two bolts (30).



M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued

0111 00

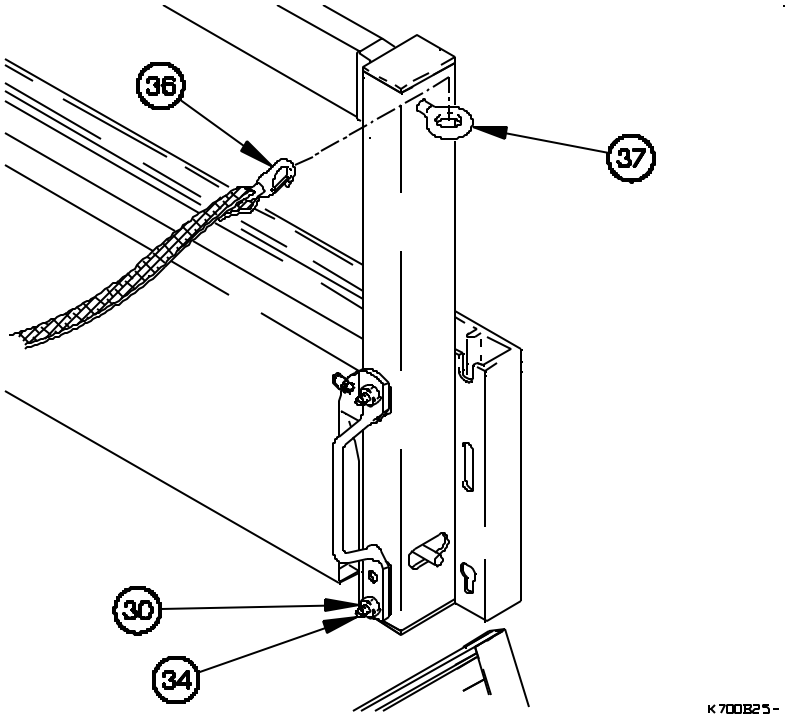
INSTALLATION – Continued

NOTE

Tighten two nuts (34) on bolts (30).

All four safety strap hooks are installed the same way. Right rear safety strap hook shown.

33. Install safety strap hook (36) in eyebolt (37).



M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued

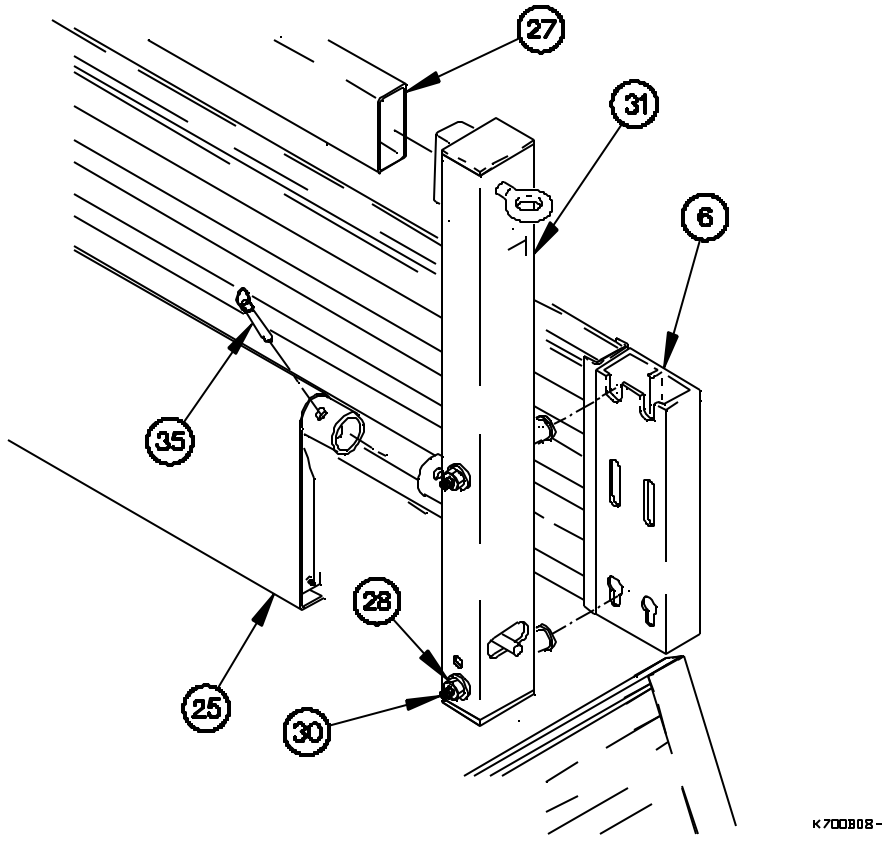
0111 00

INSTALLATION - Continued

NOTE

Perform the following five steps on troop seat kit without boarding handles.

34. Install rear seats (25) on rear seat post (31).
35. Install rear backrest (27) on rear seat post (31).
36. Insert quick release pin (35) in rear seats (25).
37. Install rear seat post (31) to rear cargo bed stake (6) with two bolts (30).
38. Hold two bolts (30).
39. Install two nuts (28) on bolts (30).



M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued

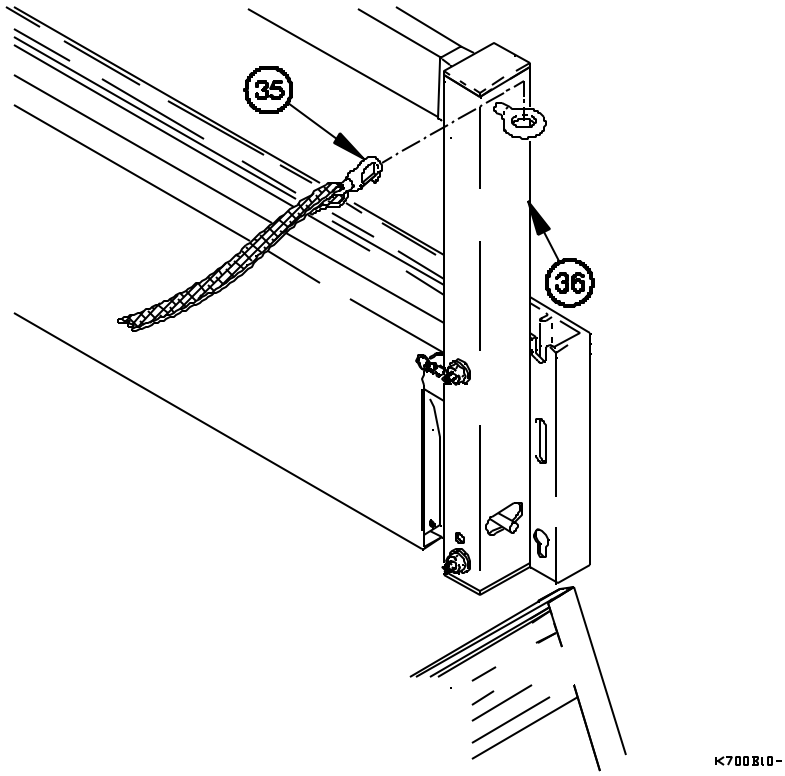
0111 00

INSTALLATION - Continued

NOTE

Eyebolts are located on all corner seat posts. Right rear eyebolt shown.

40. Connect safety strap hook (36) in eyebolt (37).



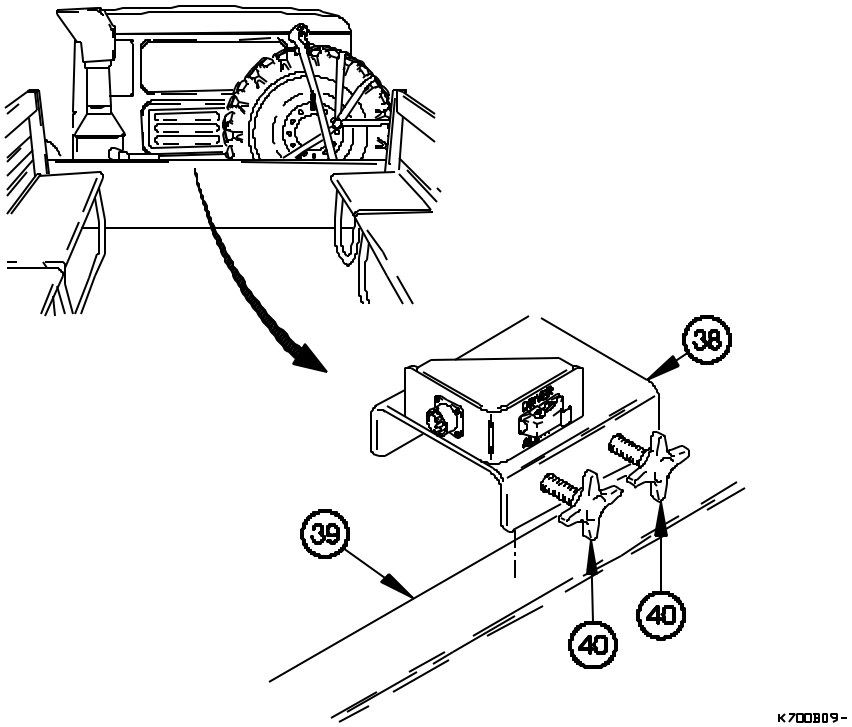
M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued

0111 00

INSTALLATION - Continued

41. Install alarm bracket (38) on cargo bed (39) with two knobs (40).

42. Notify Field Maintenance to install troop transport alarm cable assembly.

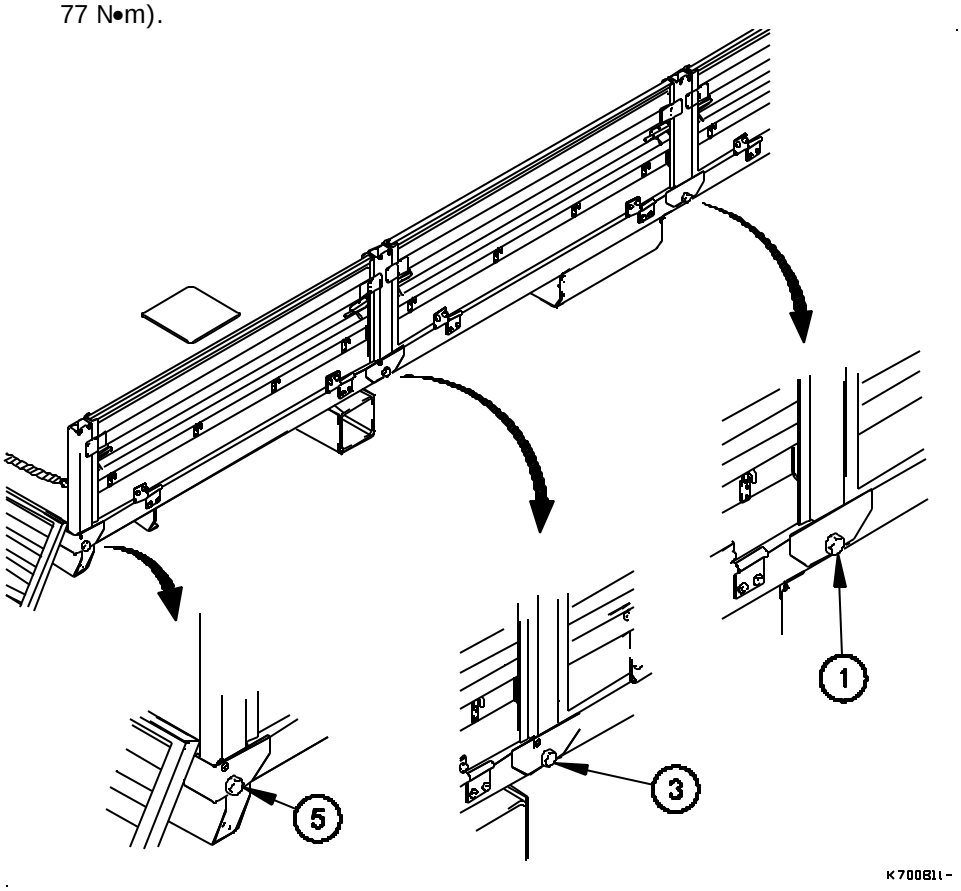


M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued

0111 00

INSTALLATION - Continued

43. Notify Field Maintenance to tighten bolt (1), bolt (3), and bolt (5) to 46-57 lb-ft (62-77 N•m).

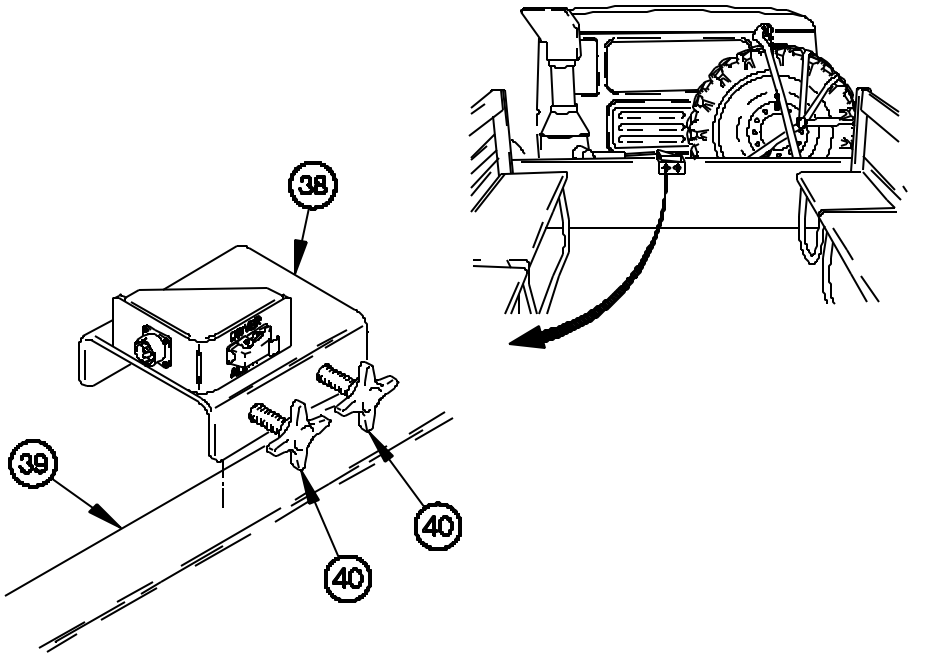


M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued

0111 00

REMOVAL

1. Notify Field Maintenance to remove troop transport alarm cable assembly.
2. Loosen two knobs (40) on alarm bracket (38).
3. Remove alarm bracket (38) from cargo bed (39).



K700812-

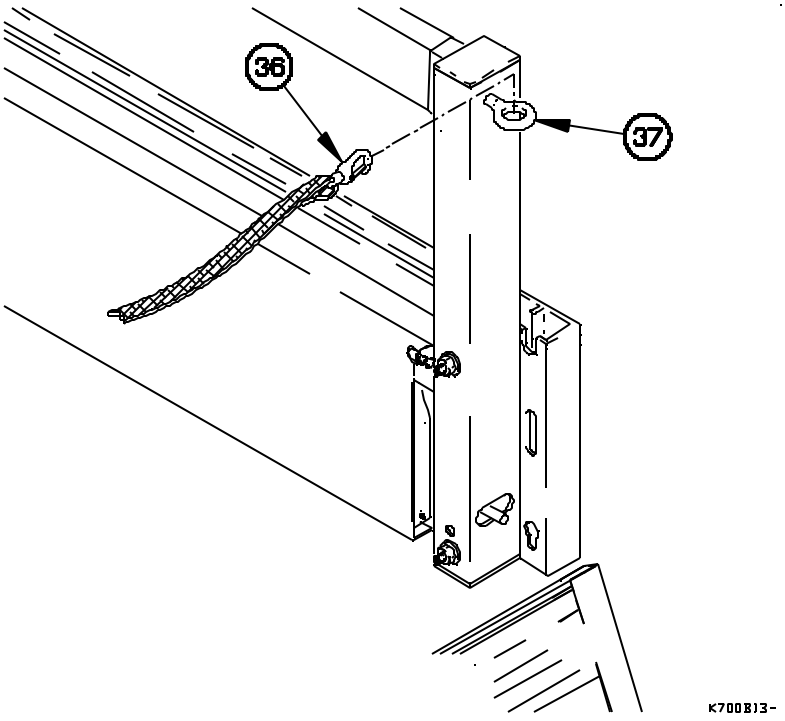
M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued 0111 00

REMOVAL - Continued

NOTE

Eyebolts are located on all corner seat posts. Right rear eyebolts shown.

4. Remove safety strap hook (36) from eyebolt (37).



M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued 0111 00

REMOVAL - Continued

NOTE

Right and left side troopseats are removed the same way. Right side shown.

Steps 5 through 34 require the aid of an assistant.

If seatpost is equipped with spring locking pin, spring locking pin must be pulled back to release seat from cargo bed stake.

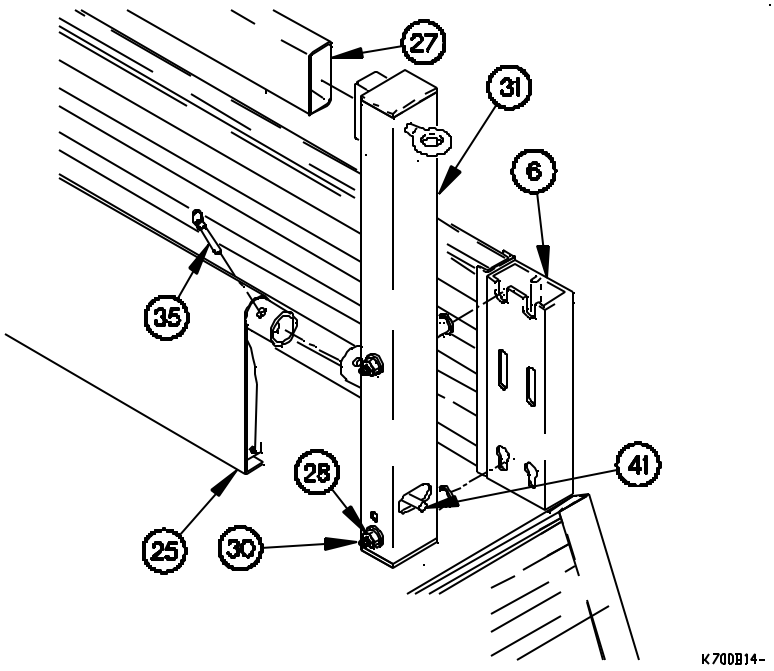
All spring locking are released the same way. Right rear spring locking pin shown.

5. Remove quick release pin (35) from rear seats (25).

NOTE

Loosen nuts enough to remove seat post from cargo bed stake.

6. Hold two bolts (30) and loosen two nuts (28) on bolts (30).
7. Pull back on spring locking pin (41).
8. Remove rear seat post (31) from rear cargo bed stake (6), backrest (27), and rear seats (25).



M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued 0111 00

REMOVAL - Continued

NOTE

Perform the following four steps if rear seat post is equipped with boarding handle.

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

9. Remove quick release pin (35) from rear seats (25).

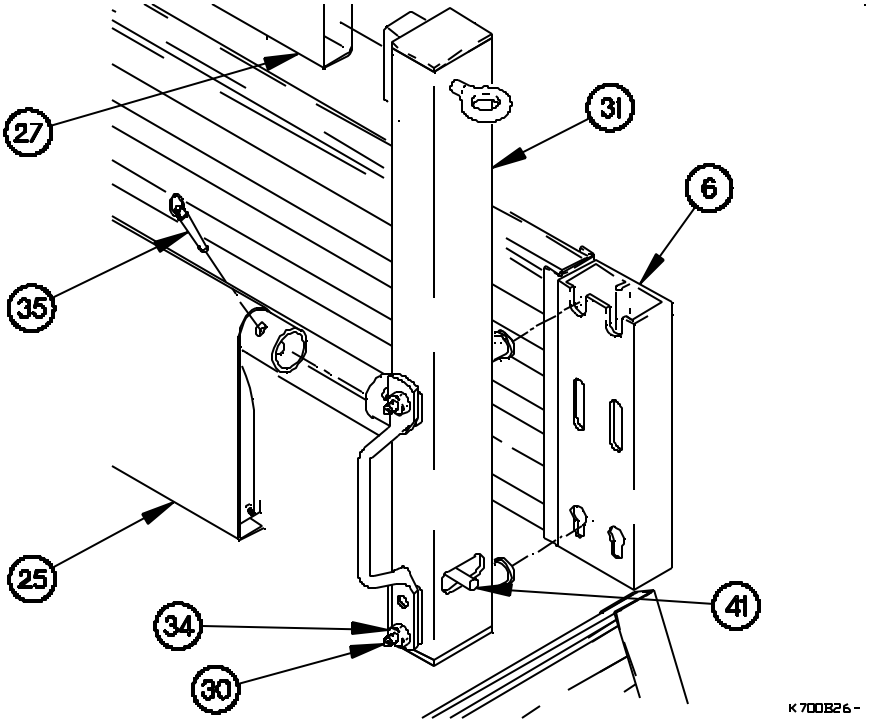
NOTE

Loosen nuts enough to remove seat post from cargo bed stake.

10. Hold two bolts (30) and loosen two nuts (34).

11. Pull back on spring locking pin (41).

12. Remove rear seat post (31) from rear cargo bed stake (6), backrest (27), and rear seats (25).



M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued

0111 00

REMOVAL - Continued

NOTE

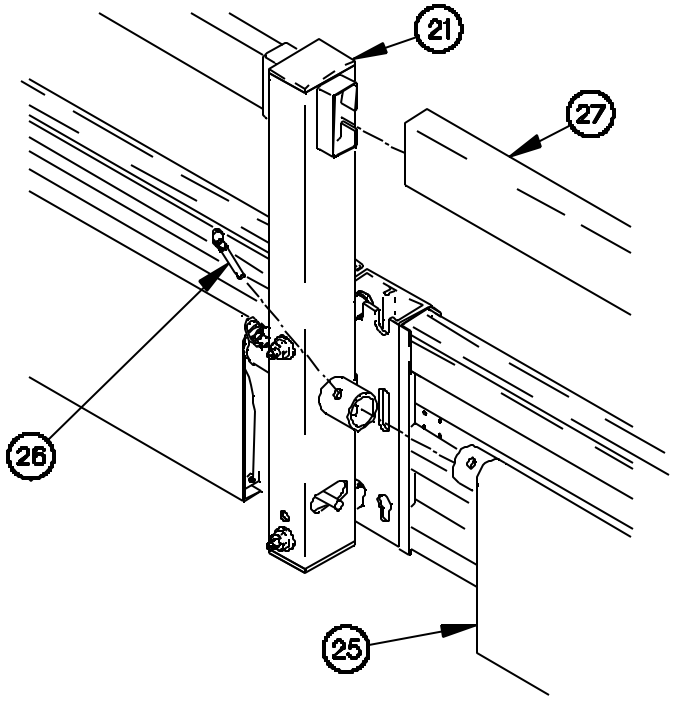
If seat post is equipped with spring locking pin, spring locking pin must be pulled back to release seat post from cargo bed stake.

All spring locking pins are released the same way. Right rear spring locking pin shown.

13. Remove rear backrest (27) from rear center seat post (21).

14. Remove quick release pin (26) from rear seats (25).

15. Remove rear seats (25) from rear center seat post (21).



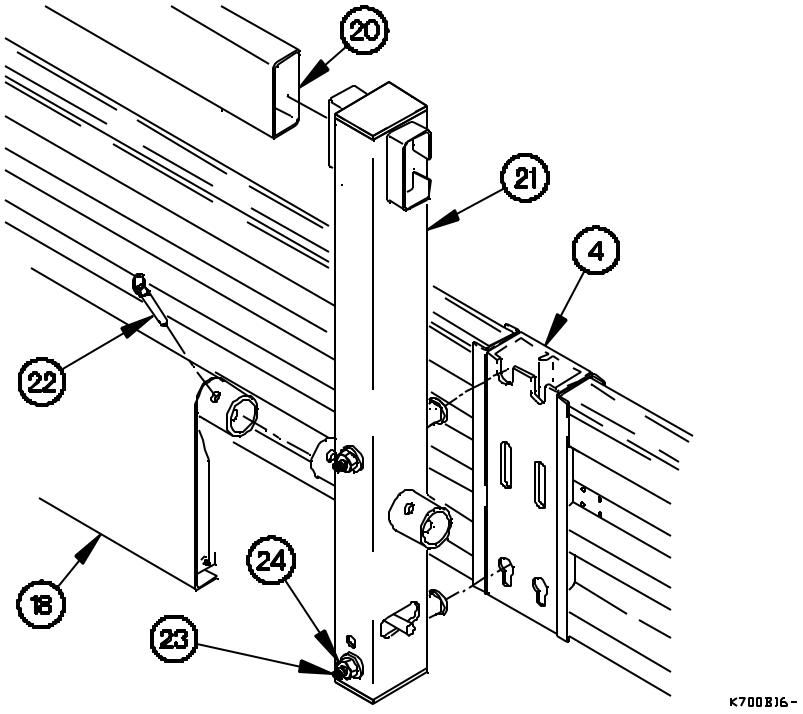
M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued 0111 00

REMOVAL - Continued

NOTE

Loosen nuts enough to remove seat post from cargo bed stake.

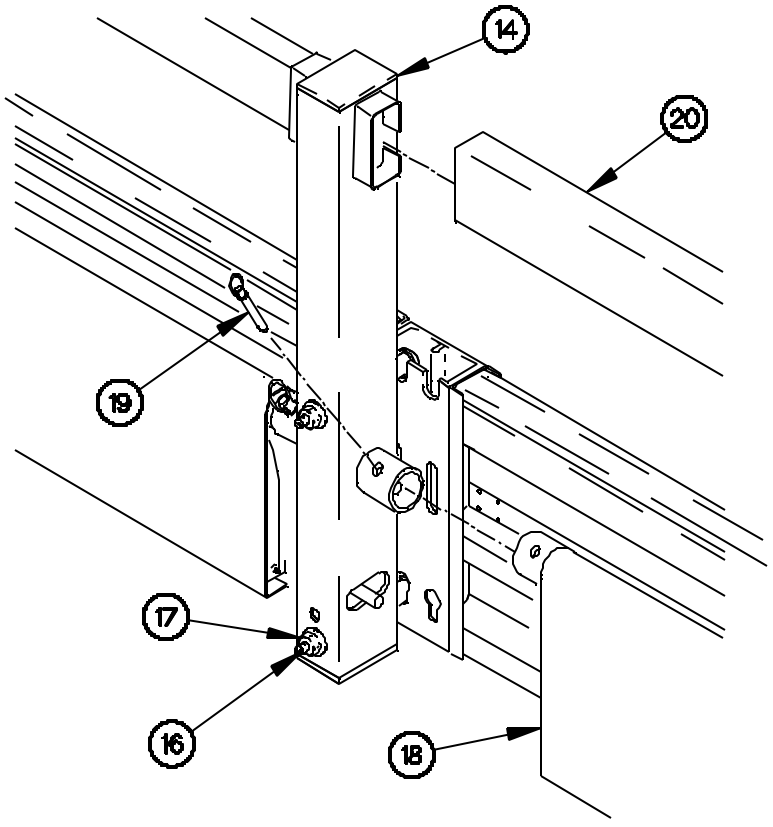
16. Hold two bolts (23).
17. Loosen two nuts (24) on bolts (23).
18. Remove rear center seat post (21) from rear center cargo bed stake (4).
19. Remove quick release pin (22) from center seats (18).
20. Remove rear center seat post (21) from center backrest (20) and center seats (18).



M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued 0111 00

REMOVAL - Continued

21. Remove center backrest (20) from front center seat post (14).
22. Remove quick release pin (19) from center seats (18).
23. Remove center seats (18) from front center seat post (14).
24. Hold two bolts (16).
25. Loosen two nuts (17) on bolts (16).



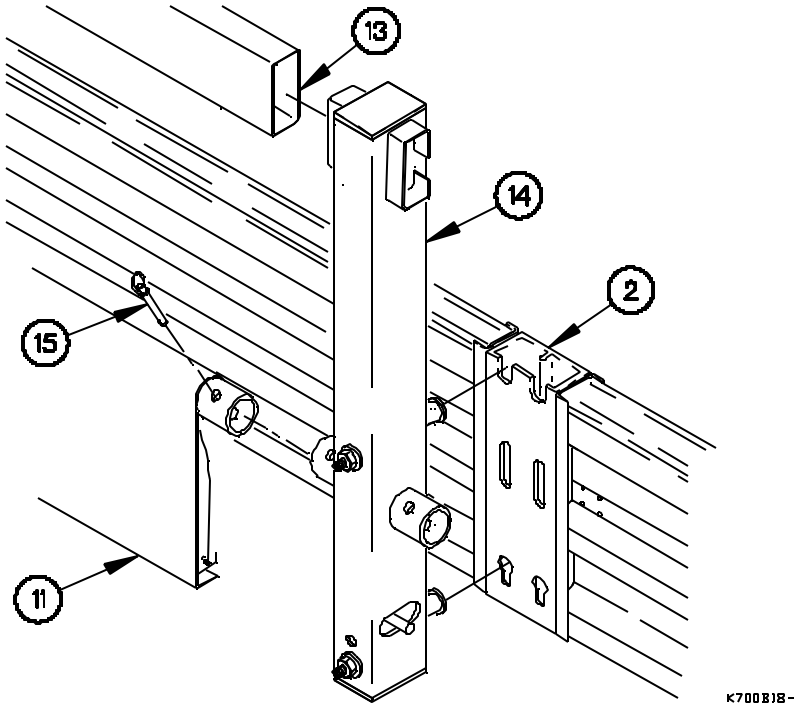
M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued 0111 00

REMOVAL - Continued

26. Remove front center seat post (14) from front center cargo bed stake (2).

27. Remove quick release pin (15) from front seats (11).

28. Remove front center seat post (14) from backrest (13) and front seats (11).



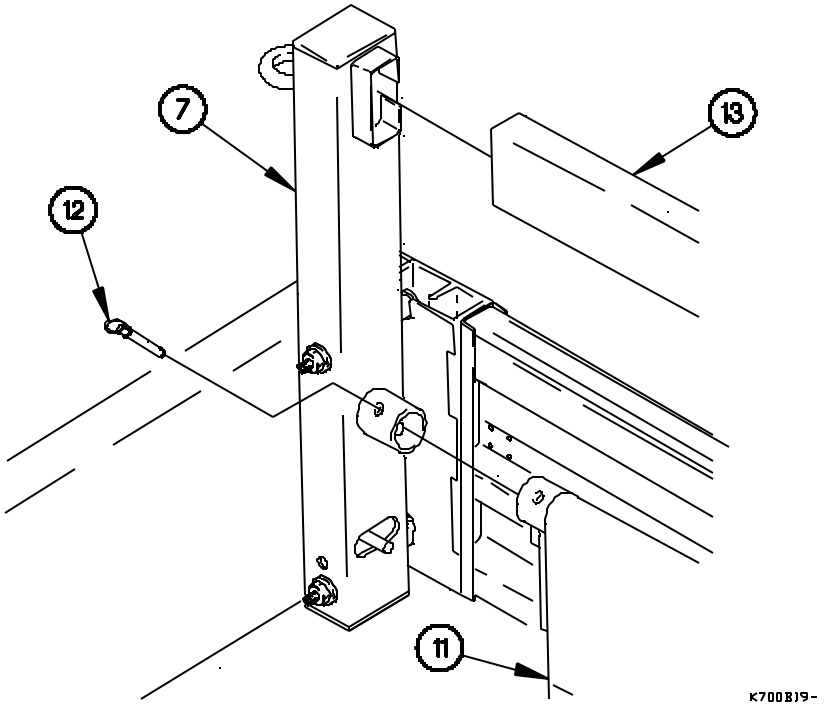
M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued 0111 00

REMOVAL - Continued

29. Remove backrest (13) from front seat post (7).

30. Remove quick release pin (12) from front seats (11).

31. Remove front seats (11) from front seat post (7).



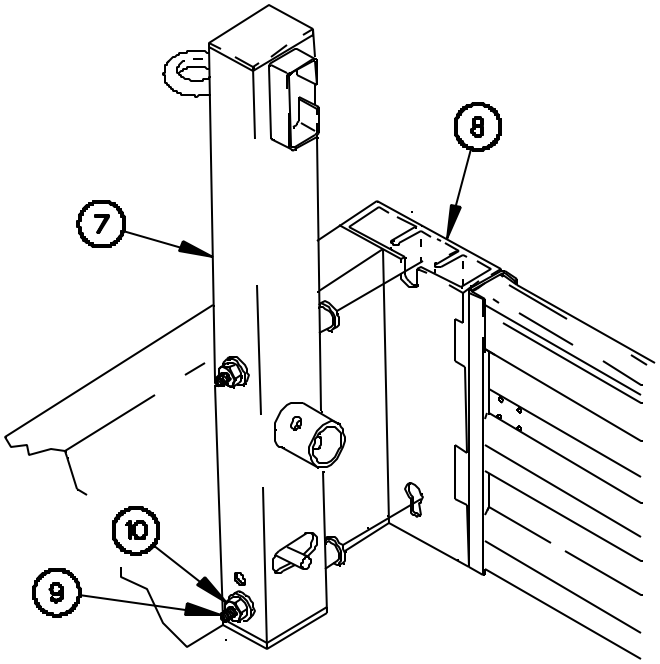
M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued 0111 00

REMOVAL - Continued

32. Hold two bolts (9).

33. Loosen two nuts (10) on bolts (9).

34. Remove front seat post (7) from front cargo bed stake (8).



K700820-

M1085A1 TROOPSEAT KIT INSTALLATION/ REMOVAL - Continued 0111 00

REMOVAL - Continued

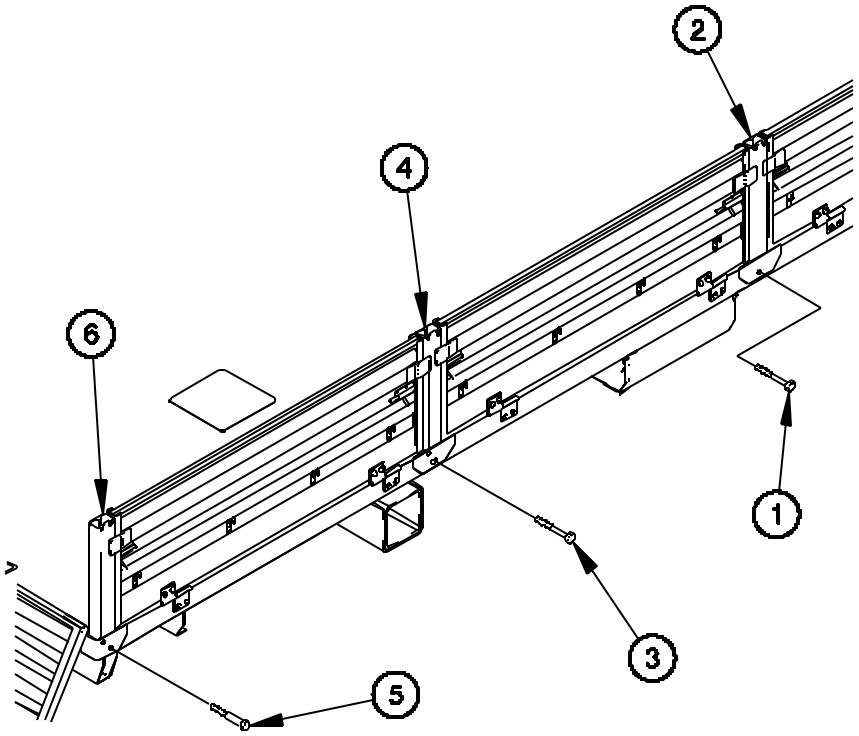
NOTE

Left and right side bolts are removed from cargo bed stakes the same way. Right side shown.

35. Remove bolt (5) from rear cargo bed stake (6).

36. Remove bolt (3) from rear center cargo bed stake (4).

37. Remove bolt (1) from front center cargo bed stake (2).



K700821-

END OF WORK PACKAGE.

M1090A1 TROOPSEAT KIT INSTALLATION/REMOVAL 0112 00

THIS WORK PACKAGE COVERS:
Installation, Removal

INITIAL SETUP:

Maintenance Level
Operator

Equipment Conditions
Engine shut down (WP 0018 00).
Wheels chocked (WP 0018 00).

Tools and Special Tools
Screwdriver, Flattip (Item 39, Table 2 WP 0117 00)
Wrench, Adjustable (Item 51, Table 2, WP 0117 00)

Personnel Required
Two

GENERAL

This work package contains information and instructions to install and remove the M1090A1 Troopseat Kit.

INSTALLATION

CAUTION

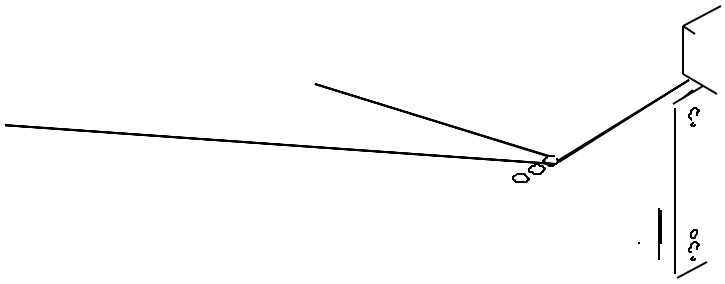
Ensure seat post is flush with dump body floor prior to tightening bolts. Failure to comply may result in damage to equipment.

NOTE

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

Steps 1 through 17 require the aid of an assistant.

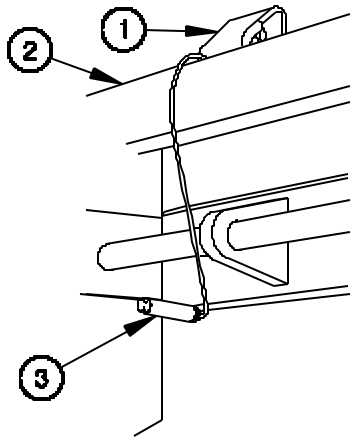
1. Install three dump body stakes (1) in dump body (2).



M1090A1 TROOPSEAT KIT INSTALLATION/ - REMOVAL Continued 0112 00

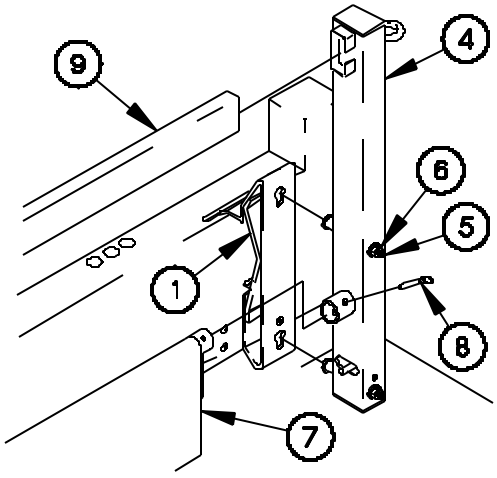
INSTALLATION - Continued

2. Install three bolts (3) from outside of dump body (2) into three dump body stakes (1).



K800817-

3. Install front seat post (4) to front dump body stake (1) with two bolts (5).
4. Hold two bolts (5).
5. Install two nuts (6) on bolts (5).
6. Install front seats (7) on front seat post (4).
7. Insert quick release pin (8) in front seats (7).
8. Install backrest (9) on front seat post (4).



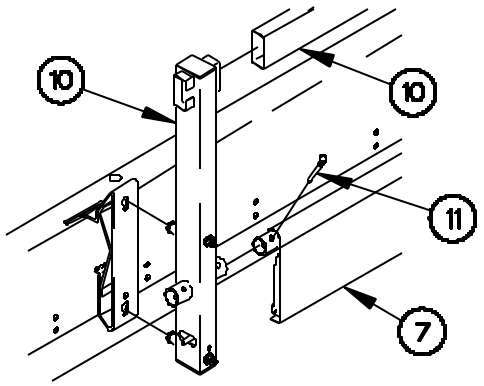
K800802-

M1090A1 TROOPSEAT KIT INSTALLATION/ - REMOVAL Continued — 0112 00

INSTALLATION - Continued

9. Install center seat post (10) on backrest (9) and front seats (7).

10. Insert quick release pin (11) in front seats (7).

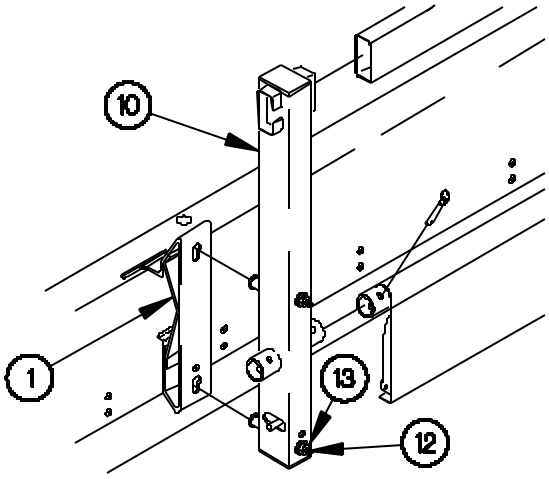


KB00803-

11. Install center seat post (10) to center dump body stake (1) with two bolts (12).

12. Hold two bolts (12).

13. Install two nuts (13) on bolts (12).



KB00804-

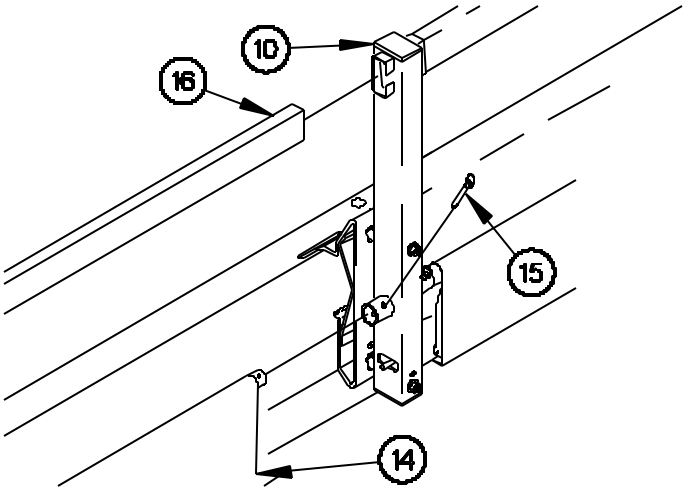
M1090A1 TROOPSEAT KIT INSTALLATION/ - REMOVAL Continued 0112 00

INSTALLATION - Continued

14. Install rear seats (14) on center seat post (10).

15. Insert quick release pin (15) in rear seats (14).

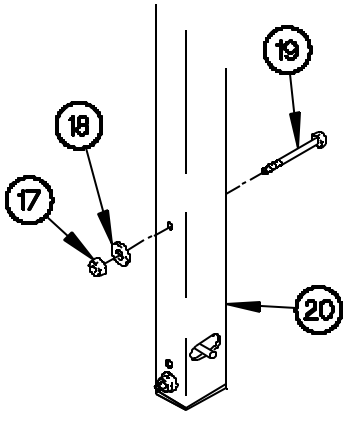
16. Install backrest (16) on center seat post (10).



NOTE

Perform the following two steps when installing rear seat post with boarding handle for the first time.

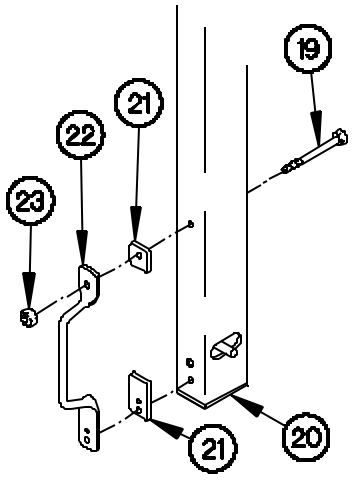
17. Remove two nuts (17), washers (18) and bolts (19) from rear seat post (20). Discard nuts and washers.



M1090A1 TROOPSEAT KIT INSTALLATION/ - REMOVAL Continued 0112 00

INSTALLATION - Continued

18. Position two bolts (20), gaskets (21), handle (22), and two nuts (23) on rear seat post (20).



KB00819-

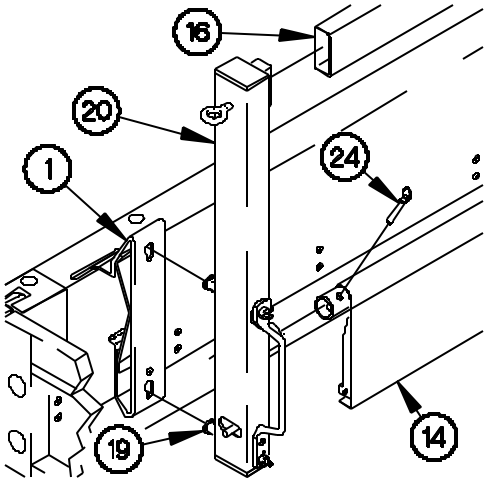
NOTE

Perform the following five steps on troop seat kits with boarding handles.

19. Install rear seat post (20) on backrest (16) and rear seats (14).

20. Insert quick release pin (24) in rear seats (14).

21. Position rear seat post (20) to rear cargo bed stake (1) with two bolts (19).



KB00820-

M1090A1 TROOPSEAT KIT INSTALLATION/ - REMOVAL Continued 0112 00

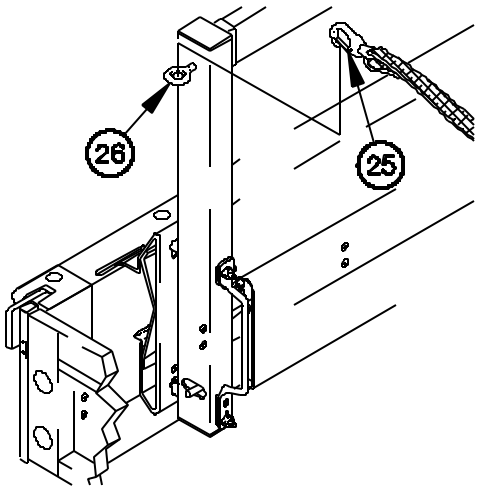
INSTALLATION - Continued

22. Tighten two nuts (23) on bolts (19).

NOTE

All four safety strap hooks are installed the same way. Right rear safety strap hook shown.

23. Install safety strap hook (25) in eyebolt (26).



K800821-

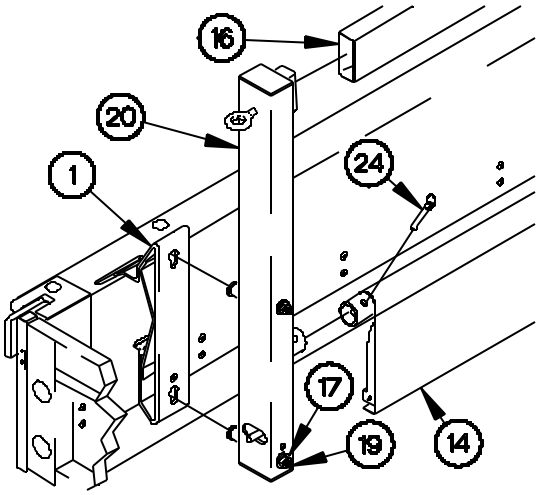
M1090A1 TROOPSEAT KIT INSTALLATION/ - REMOVAL Continued 0112 00

INSTALLATION - Continued

NOTE

Perform the following five steps on troopseat kit without boarding handles.

24. Install rear seat post (20) on backrest (16) and rear seats (14).
25. Insert quick release pin (24) in rear seats (14).
26. Install rear seat post (20) to rear dump body stake (1) with two bolts (19).
27. Hold two bolts (19) with screwdriver.
28. Install two nuts (17) on bolts (19).



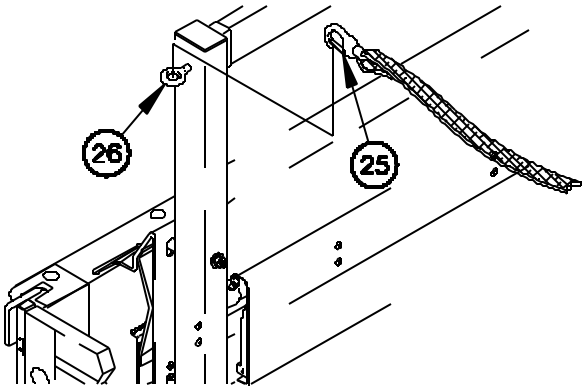
M1090A1 TROOPSEAT KIT INSTALLATION/ - REMOVAL Continued — 0112 00

INSTALLATION - Continued

NOTE

Eyebolts are located on all corner seat posts. Left rear eyebolt shown.

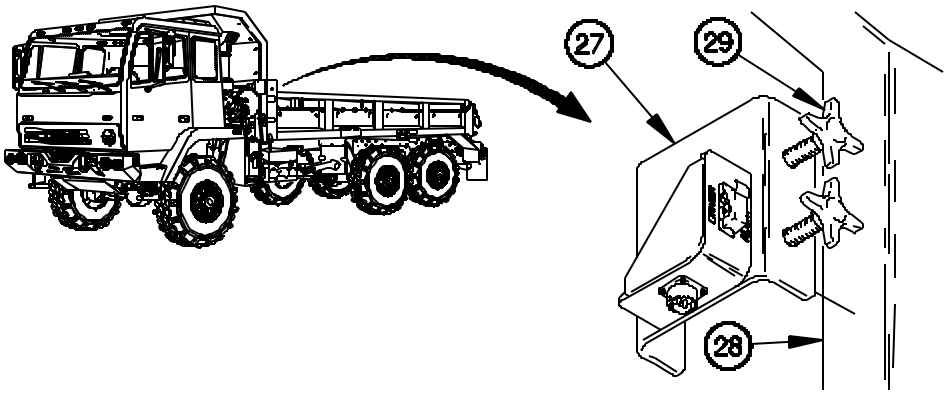
29. Connect safety strap hook (25) in eyebolt (26).



K800807-

30. Install alarm bracket (27) on cab protector (28) with two knobs (29).

31. Notify Field Maintenance to install troop transport alarm cable assembly.

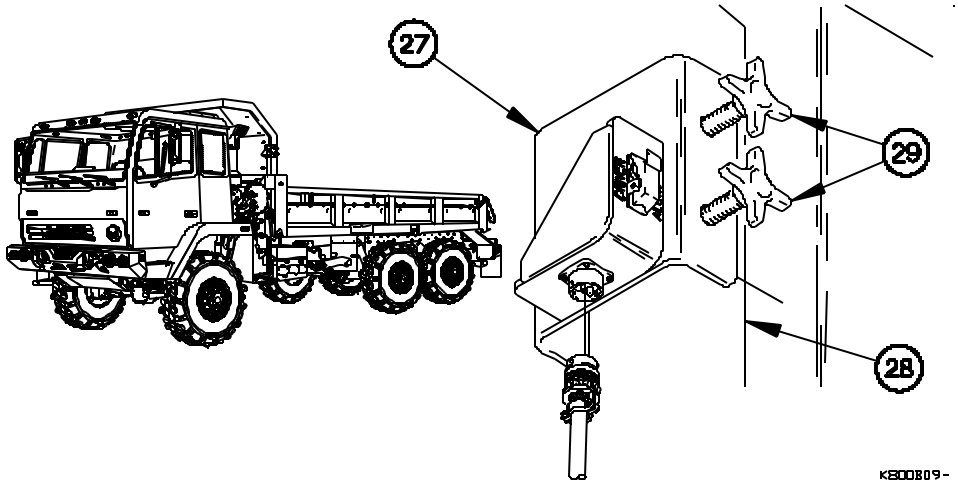


K800808-

M1090A1 TROOPSEAT KIT INSTALLATION/ - REMOVAL Continued — 0112 00

REMOVAL

1. Notify Field Maintenance to remove troop transport alarm cable assembly.
2. Loosen two knobs (29) on alarm bracket (27).
3. Remove alarm bracket (27) from cab protector (28).

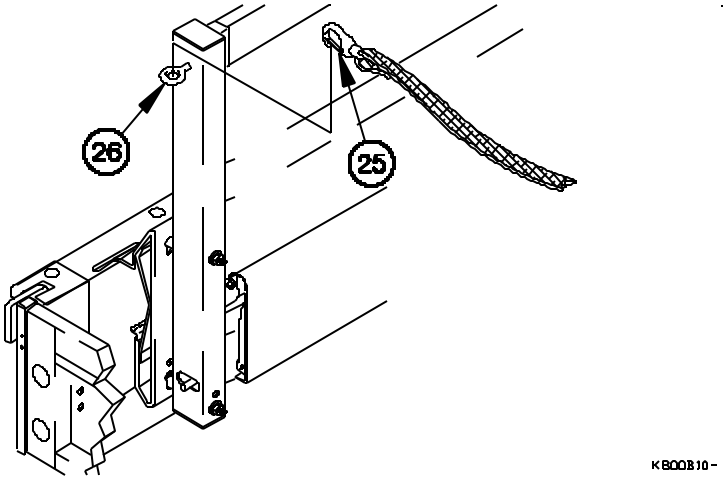


NOTE

Left and right troopseats are removed the same way. Left side shown.

Eyebolts are located on all corner seat posts. Left rear eyebolt shown.

4. Remove safety strap hook (25) from eyebolt (26).



M1090A1 TROOPSEAT KIT INSTALLATION/ - REMOVAL Continued — 0112 00

REMOVAL – Continued

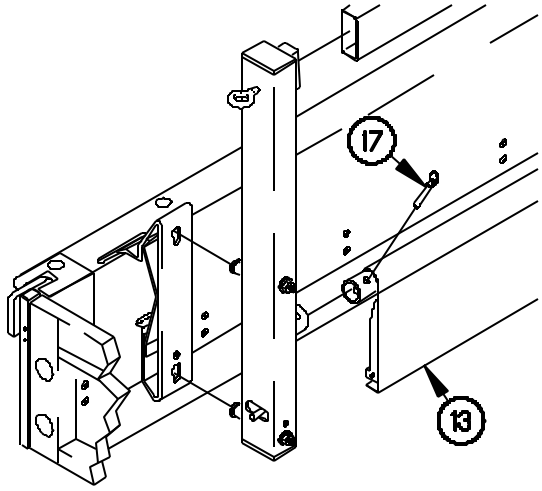
NOTE

Steps 5 through 17 require the aid of an assistant.

If seat post is equipped with spring locking pin, spring locking pin must be pulled back to release seat post from cargo bed stake.

All spring locking pins are released the same way. Left rear spring locking pin shown.

5. Remove quick release pin (24) from rear seats (14).



K800811-

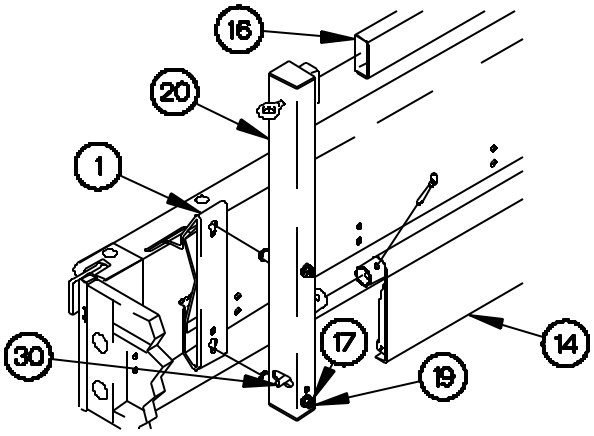
M1090A1 TROOPSEAT KIT INSTALLATION/ - REMOVAL Continued — 0112 00

REMOVAL - Continued

NOTE

Loosen nuts enough to remove seat post from stake pocket.

6. Hold two bolts (19) and loosen two nuts (17) on bolts (19)..
7. Pull back on spring locking pin (30).
8. Remove rear seat post (20) from rear dump body stake (1), backrest (16), and rear seats (14).



M1090A1 TROOPSEAT KIT INSTALLATION/ - REMOVAL Continued 0112 00

REMOVAL - Continued

NOTE

Perform the following four steps if rear seat post is equipped with boarding handle.

Left and right troopseats are removed the same way. Left side shown.

9. Remove quick release pin (24) from rear seats (14).

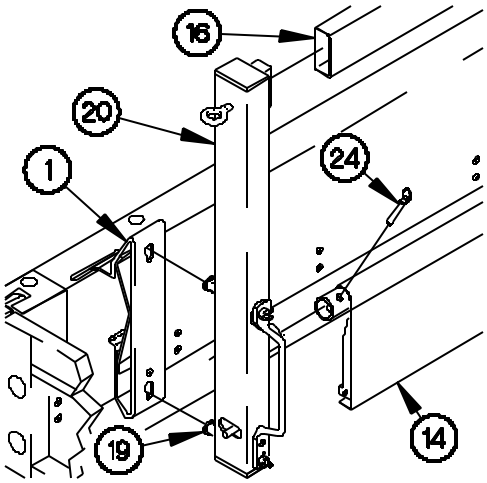
NOTE

Loosen nuts enough to remove seat post from cargo bed stake.

10. Hold two bolts (19) and loosen two nuts (23).

11. Pull back on spring locking pin (30).

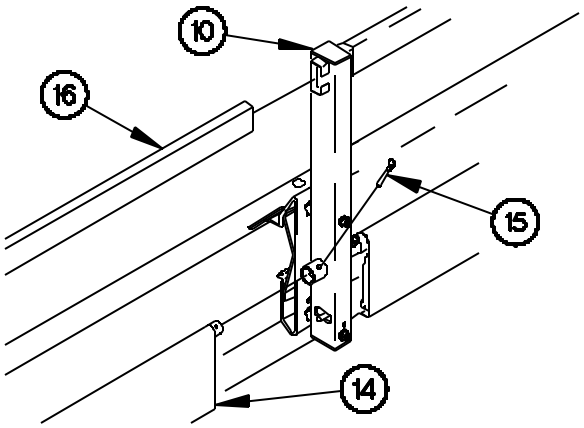
12. Remove rear seat post (20) from rear cargo bed stake (1), backrest (16), and rear seats (14).



M1090A1 TROOPSEAT KIT INSTALLATION/ - REMOVAL Continued 0112 00

REMOVAL - Continued

13. Remove backrest (16) from center seat post (10).
14. Remove quick release pin (15) from rear seats (14).
15. Remove rear seats (14) from center seat post (10).



KB00813-

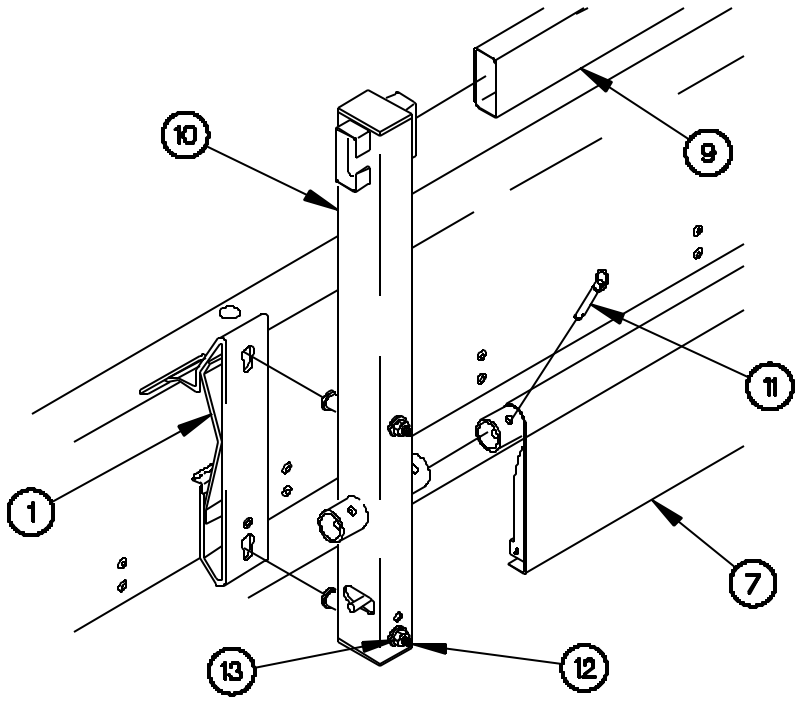
M1090A1 TROOPSEAT KIT INSTALLATION/ - REMOVAL Continued 0112 00

REMOVAL - Continued

NOTE

Loosen nuts enough to remove seat post from dump body stake.

16. Hold two bolts (12).
17. Loosen two nuts (13) on bolts (12).
18. Remove center seat post (10) from center dump body stake (1).
19. Remove quick release pin (11) from front seats (7).
20. Remove center seat post (10) from backrest (8) and front seats (7).

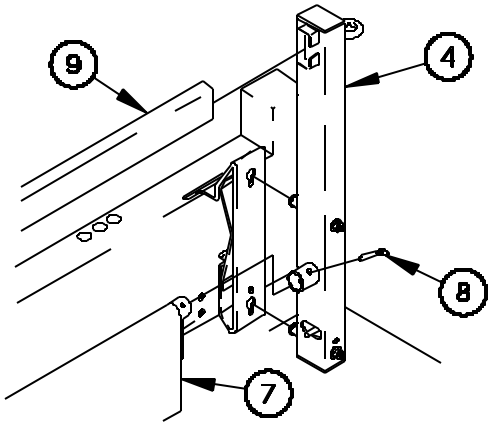


KB00814-

M1090A1 TROOPSEAT KIT INSTALLATION/ - REMOVAL Continued 0112 00

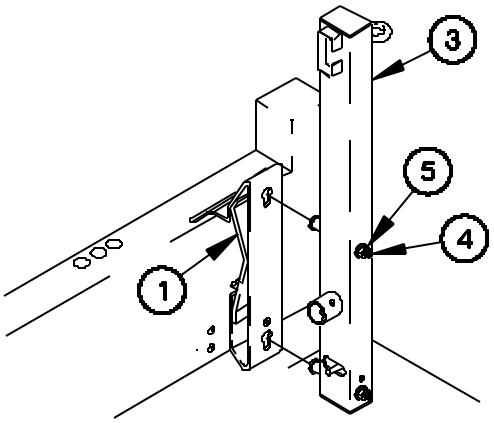
REMOVAL - Continued

21. Remove backrest (9) from front seat post (4).
22. Remove quick release pin (8) from front seats (7).
23. Remove front seats (7) from front seat post (4).



KB00815-

24. Hold two bolts (4).
25. Loosen two nuts (6) on bolts (5).
26. Remove front seat post (4) from front dump body stake (1).



KB00816-

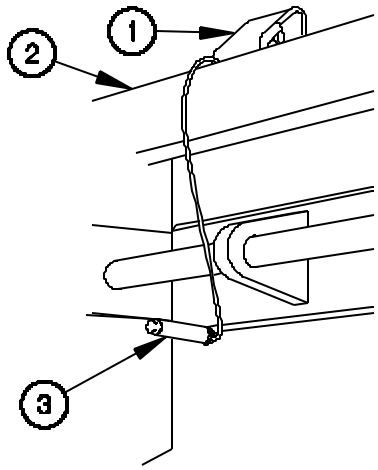
M1090A1 TROOPSEAT KIT INSTALLATION/ - REMOVAL Continued — 0112 00

REMOVAL - Continued

NOTE

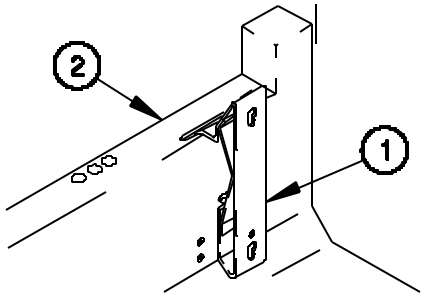
Left and right dump bed stakes are removed the same way. Left side shown.

27. Remove three bolts (3) from three dump bed stakes (1) on outside of dump bed (2).



K800817-

28. Remove three dump bed stakes (1) from dump bed (2).



K800822-

END OF WORK PACKAGE.

POWER DISTRIBUTION PANEL (PDP) COVER REMOVAL/INSTALLATION

0113 00

THIS WORK PACKAGE COVERS:

Removal, Installation

INITIAL SETUP:

Maintenance Level
Operator

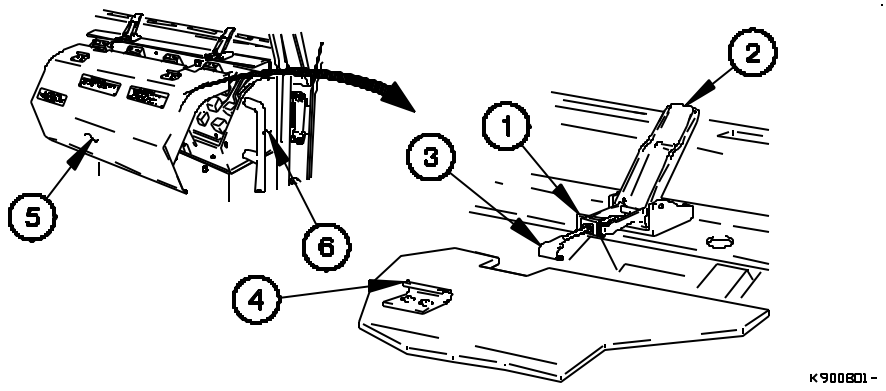
Equipment Conditions
Engine shut down (WP 0018 00).

GENERAL

This work package contains information and instructions to remove the PDP cover for the M1083A1 series vehicle.

REMOVAL

1. Pull two spring catches (1) and lift two latch levers (2).
2. Release two latch hooks (3) from two strike plates (4).
3. Remove PDP cover (5) from dashboard (6).



INSTALLATION

1. Position PDP cover (5) on dashboard (6).
2. Fasten two latch hooks (3) on two strike plates (4).
3. Push down on two latch levers (2) until spring catches (1) are engaged.

END OF WORK PACKAGE.

BUMPERETTE KIT INSTALLATION/REMOVAL 0114 00

THIS WORK PACKAGE COVERS:
Installation, Removal

INITIAL SETUP:

Maintenance Level
Operator

Equipment Conditions
Engine shut down (WP 0018 00).

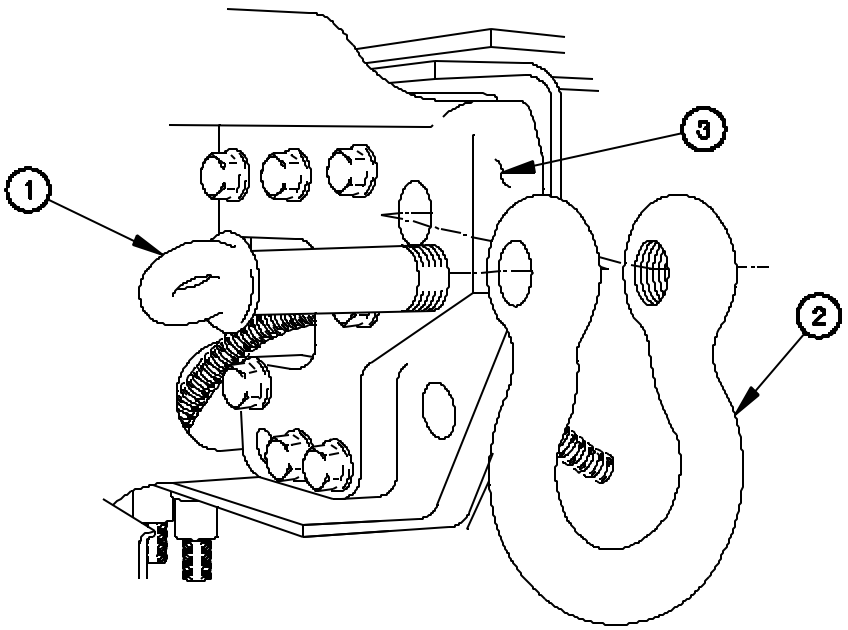
INSTALLATION

NOTE

Bumperette kit is intended for use on all Models except M1088A1 and M1089A1.

LH and RH side are installed the same way. RH side shown.

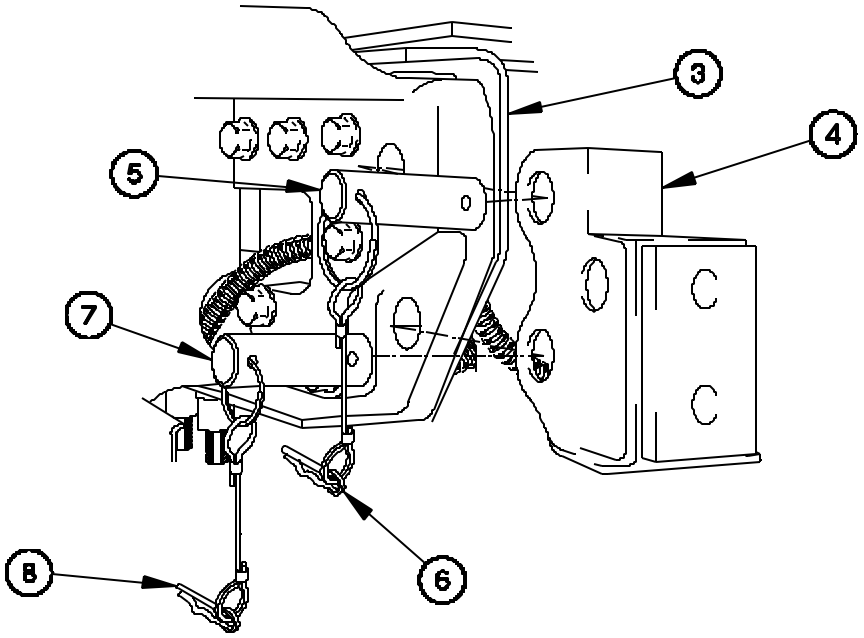
1. Remove shackle pin (1) and shackle (2) from frame rail (3).



BUMPERETTE KIT INSTALLATION/REMOVAL – Continued 0114 00

INSTALLATION - Continued

2. Install bumperette kit (4) on frame rail (3) with pin (5).
3. Install linchpin (6) in pin (5).
4. Install pin (7) in bumperette kit (4).
5. Install linchpin (8) in pin (7).



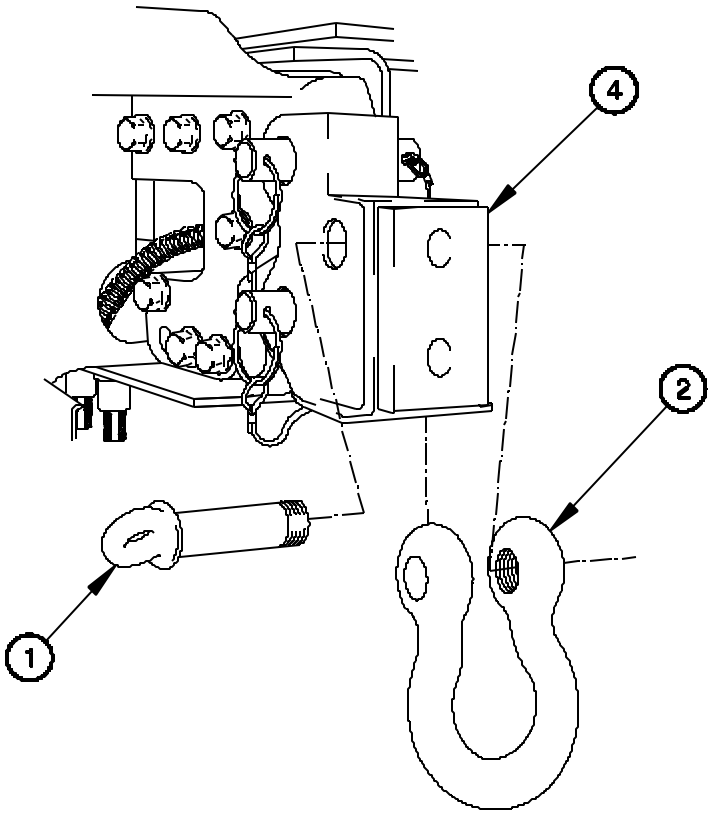
K109E02

BUMPERETTE KIT INSTALLATION/REMOVAL – Continued 0114 00

INSTALLATION - Continued

6. Install shackle (2) on bumperette (4) with shackle pin (1).

7. Perform steps (1) through (6) on RH side.



K109103

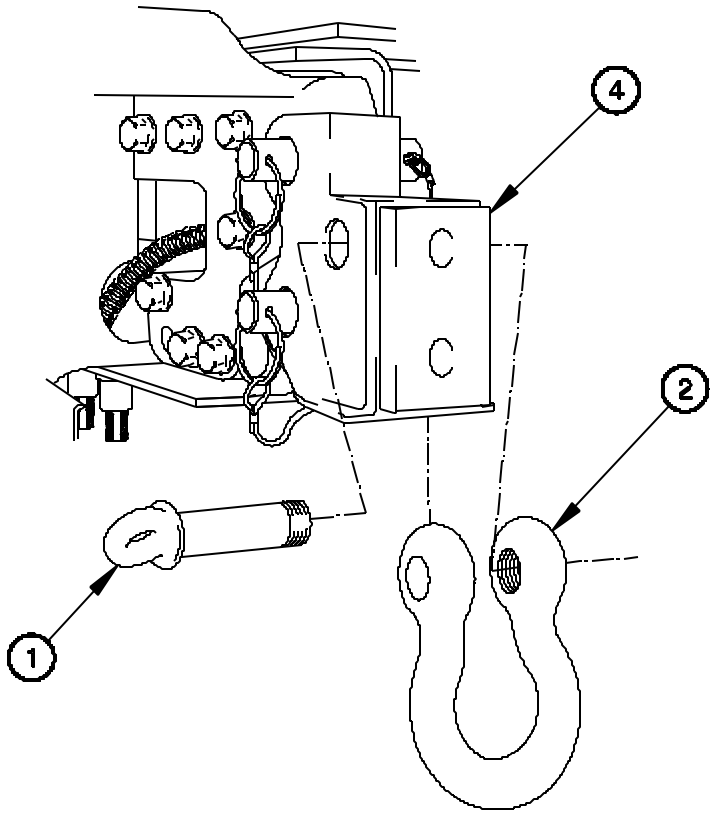
BUMPERETTE KIT INSTALLATION/REMOVAL – Continued 0114 00

REMOVAL

NOTE

LH and RH side are removed the same way. RH side shown.

1. Remove shackle pin (1) and shackle (2) from bumperette (4).

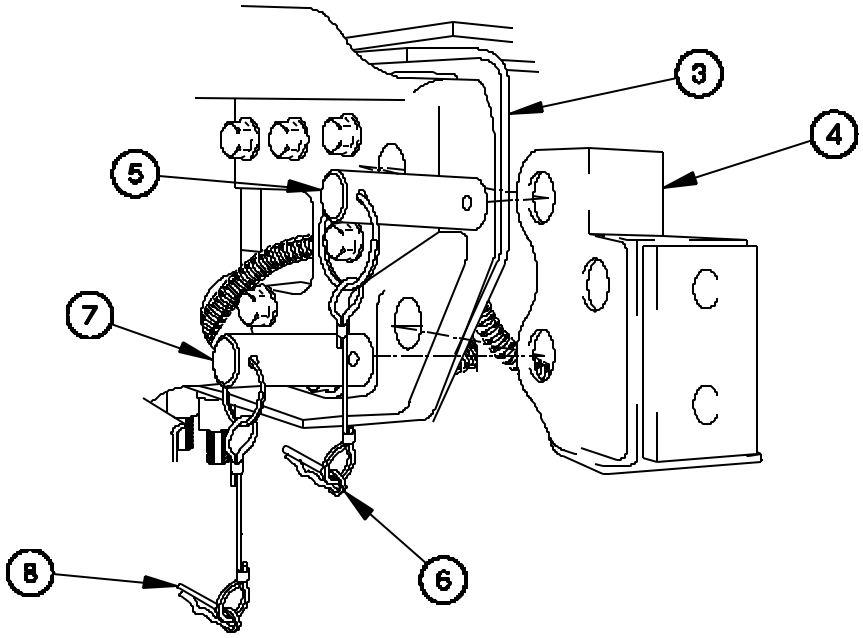


k109w03

BUMPERETTE KIT INSTALLATION/REMOVAL – Continued 0114 00

REMOVAL - Continued

2. Remove linchpin (8) from pin (7).
3. Remove pin (7) from bumperette (4).
4. Remove linchpin (6) from pin (5).
5. Remove pin (5) and bumperette (4) from frame rail (3).



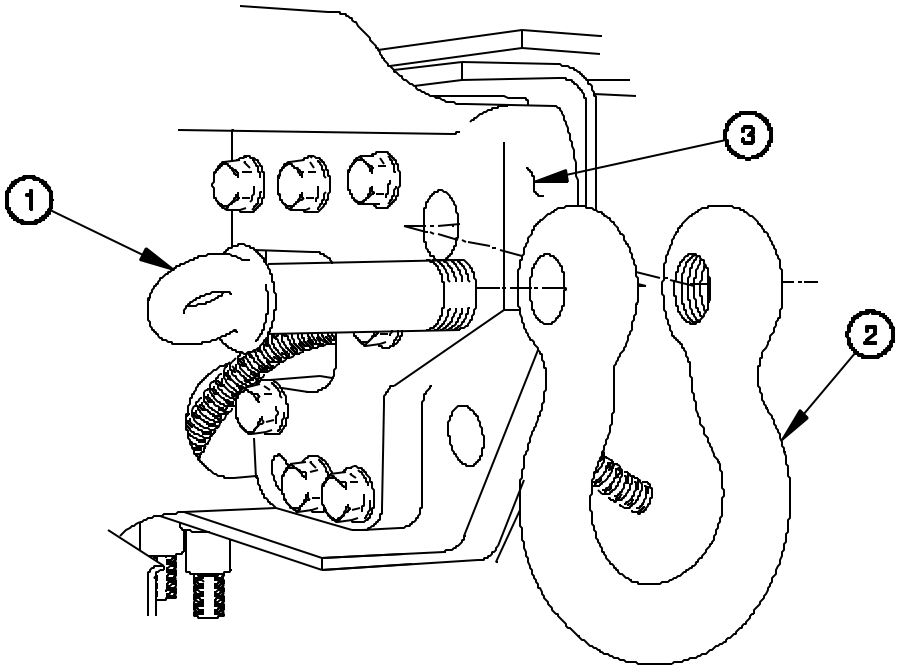
K109C02

BUMPERETTE KIT INSTALLATION/REMOVAL – Continued 0114 00

REMOVAL - Continued

6. Install shackle (2) on frame rail (3) with shackle pin (1).

7. Perform steps (1) through (6) on RH side.



k109101

END OF WORK PACKAGE.

REAR SPRING BRAKE CAGING 0115 00

THIS WORK PACKAGE COVERS:

Rear brake caging and uncaging.

INITIAL SETUP:

Maintenance Level

Operator

Tools and Special Tools

Bolt, Caging (4) (Item 5, Table 1, WP 0117 00)

Equipment Conditions

Engine shut down (WP 0018 00).

WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

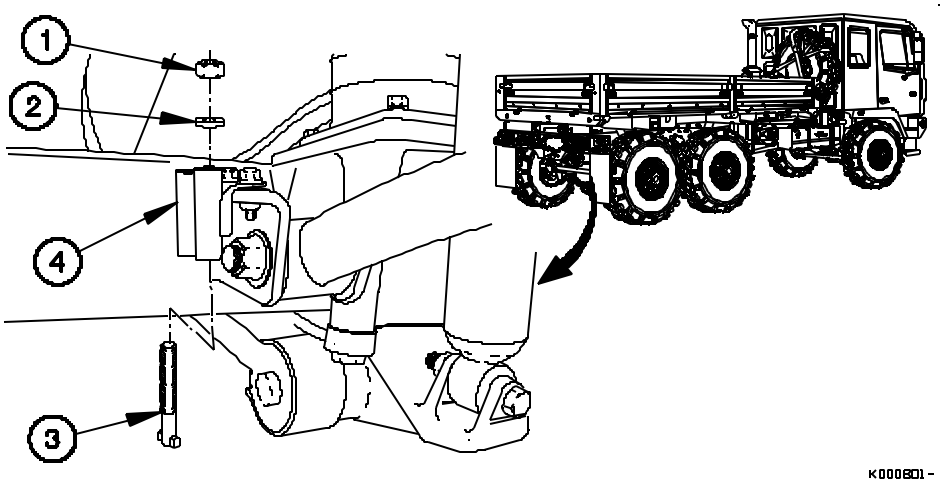
CAGING

NOTE

To cage brakes, apply caging procedure to both top and bottom spring brake chambers.

Perform steps (1) and (2) on vehicle S/N 16,876 or lower.

1. Remove nut (1) and washer (2) from caging bolt (3).
2. Remove caging bolt (3) from caging bolt holder (4).



K000601-

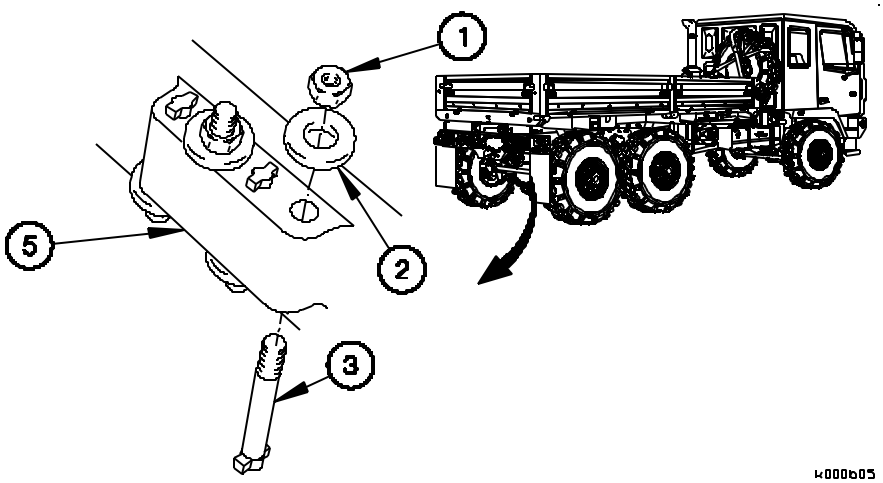
REAR SPRING BRAKE CAGING - Continued 0115 00

CAGING – Continued

NOTE

Perform steps (3) and (4) on vehicle S/N 16,877 or higher.

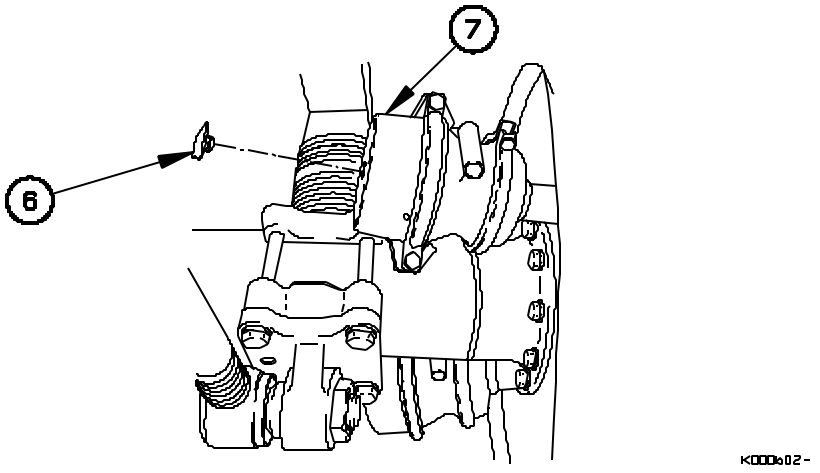
3. Remove nut (1) and washer (2) from caging bolt (3).
4. Remove caging bolt (3) from rear axle assembly (5).



NOTE

Save rubber cap for use after uncaging operation to seal spring brake chamber.

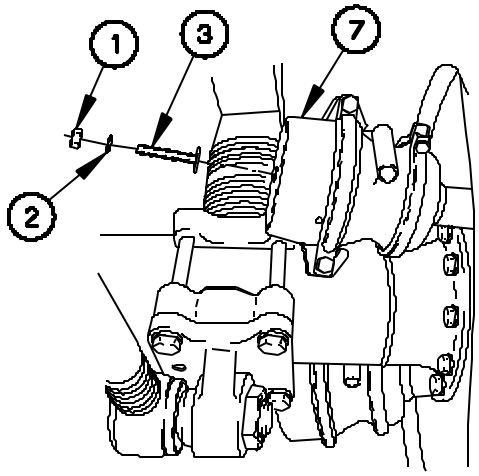
5. Remove rubber cap (6) from spring brake chamber (7).



REAR SPRING BRAKE CAGING - Continued 0115 00

CAGING – Continued

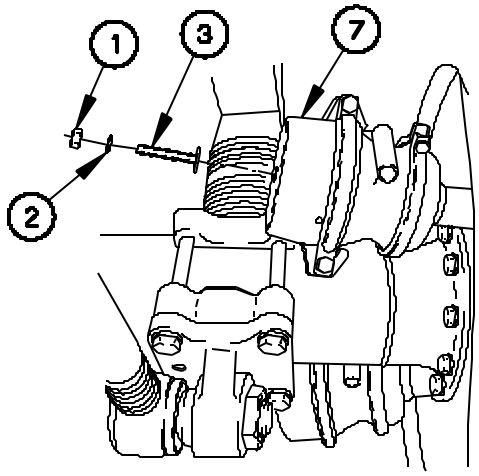
6. Insert T-end of caging bolt (3) in back of spring brake chamber (7).
7. Lock caging bolt (3) in place by turning caging bolt to the right 1/4 turn.
8. Install washer (2) and nut (1) on caging bolt (3).



K000x03-

UNCAGING

1. Remove nut (1) and washer (2) from caging bolt (3).
2. Remove caging bolt (3) by turning to the left 1/4 turn.
3. Remove caging bolt (3) from spring brake chamber (7).

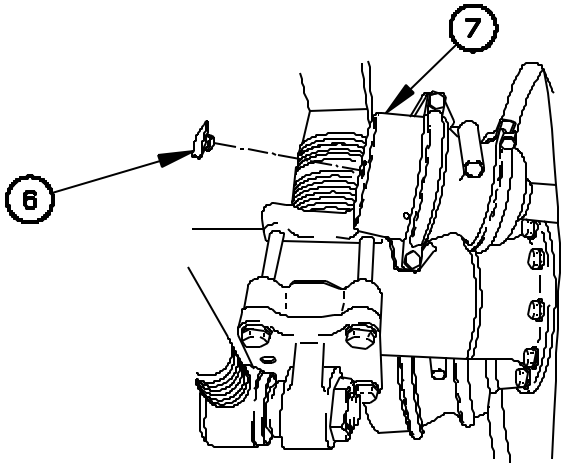


K000x03-

REAR SPRING BRAKE CAGING - Continued 0115 00

UNCAGING – Continued

4. Install rubber cap (6) on spring brake (7).

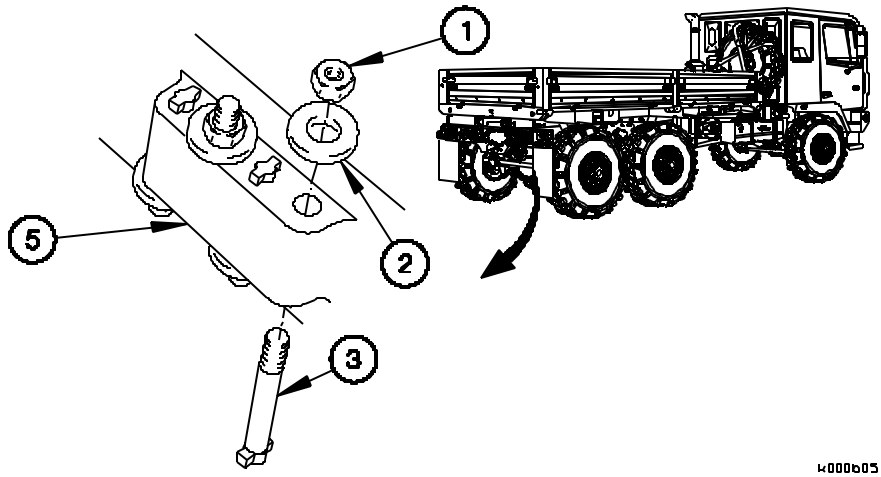


K000602-

NOTE

Perform steps (5) and (6) on vehicle S/N 16,877 or higher.

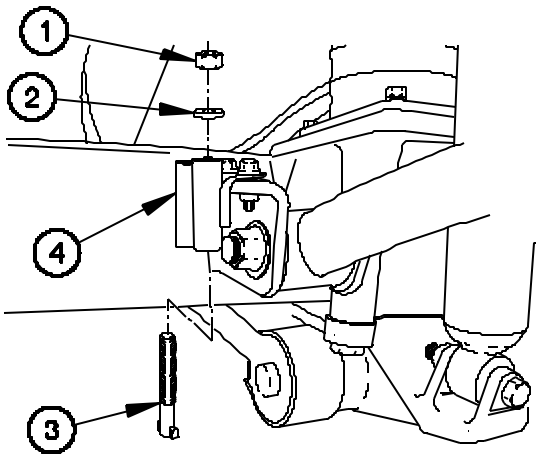
5. Position caging bolt (3) in rear axle assembly (5).
6. Install washer (2) and nut (1) on caging bolt (3).



K000605

REAR SPRING BRAKE CAGING - Continued 0115 00

7. Position caging bolt (3) in caging bolt holder (4).
8. Install washer (2) and nut (1) on caging bolt (3).



K000804-

END OF WORK PACKAGE.

REFERENCES 0116 00

SCOPE

This work package lists all forms, field manuals, technical manuals, and miscellaneous publications referenced in this manual. Those publications that should be consulted for additional information about vehicle operations are also listed.

FIELD MANUALS

Army Container Operations	FM 55-80
Multiservice Helicopter External Air Transport: Basic Army Motor Transport Units and Operations	FM 55-30
Basic Cold Weather Manual	FM 31-70
Desert Operations (How to Fight)	FM 90-3 (HTF)
Field Hygiene and Sanitation	FM 31-70
First Aid for Soldiers	FM 21-11
Jungle Operations (How to Fight)	FM 90-5 (HTF)
Manual for the Wheeled Vehicle Driver	FM 21-305
Mountain Operations	FM 90-6
NBC Protection	FM 3-4
NBC Decontamination	FM 3-5
Northern Operations	FM 31-71
Operation and Maintenance of Ordnance Materiel in Cold Weather (0 to -65 °F)	FM 9-207
Route Reconnaissance and Classification	FM 5-36
Operations and Equipment Multiservice Helicopter External Air Transport: Dual-Point	FM 55-450-3
Multiservice Helicopter External Air Load Rigging Procedures	FM 55-450-5
Multiservice Helicopter External Air Transport: Single-Point Load Rigging Procedures	FM 55-450-4
Standard Characteristics (Dimensions, Weight, and Cube) for Transportability of Military Vehicles and Other Vehicle Recovery Operations	FM 20-22
Visual Signals	FM 21-60

REFERENCES-Continued 0116 00

FORMS

Recommended Changes to DA Publications and Blank Forms	DA FORM 2028-2
Product Quality Deficiency Report	SF 368

TECHNICAL BULLETINS

Decontamination Operations Facilities & Equipment	TB 700-4
Installation Instructions for Installation Kit, Electronic Equipment, MK-2700/VRC (NSN 5895-01-421-0814) (EIC: N/A) to Permit Installation of Radio Set AN/VRC-87/88/90 Series into M1078A1, M1080A1, M1083A1, M1086A1, M1088A1-M1092A1 and M1096A1 Family of Medium Tactical Vehicles	TB 11-5820-890-20-101
Installation Instructions for Installation Kit, Electronic Equipment, MK-2715/VRC (NSN 5895-01-421-0812) (EIC: N/A) to Permit Installation of Radio Set AN/VRC-89/91/92 Series into M1078A1, M1080A1, M1083A1-M1086A1, M1088A1-M1092A1 and M1096A1 Family of Medium Tactical Vehicles	TB 11-5820-890-20-92
Standard Characteristics (Dimensions, Weight, and Cube) for Transportability of Military Vehicles and Other Outsize/Overweight Equipment (in TOE Line Item Number Sequence)	TB 55-46-1
Security of Tactical Wheeled Vehicles	TB 9-2300-422-20
Warranty Program for M1083A1 Series, 5 Ton, 6x6, Medium Tactical Vehicle (MTV)	TB 9-2300-427-15

TECHNICAL MANUALS

Cooling Systems: Tactical Vehicles	TM 750-254
Hand Receipt Covering Contents of Components of End Item (COEI), Basic Issue Items (BII), and Additional Authorization List (AAL), for M1083A1 Series, 5 Ton, 6x6, Medium Tactical Vehicles (MTV)	TM 9-2320-392-10-HR
Materials Used for Cleaning, Preserving, Abrading, and Cementing Ordnance Materiel and Related Materials Including Chemicals	TM 9-247
Operator's Manual for M809 Series Vehicles	TM 9-2320-260-10

REFERENCES 0116 00

TECHNICAL MANUALS - Continued

Operator's Manual for M939/M939A1 Series Vehicles	TM 9-2320-272-10
Operator's Manual for M998 Series Vehicles	TM 9-2320-280-10
Operator's Manual for M1008 Series Vehicles	TM 9-2320-289-10
Operator's Manual for M35 Series Vehicles	TM 9-2320-361-10
Operator's, Unit, Direct Support, and Intermediate General Support Maintenance Manual for Lead-Acid Storage Batteries	TM 9-6140-200-14
Operator's, Unit, Direct Support And General Support Maintenance Manual (Including Repair Parts And Special Tools List for Palletized Load System (PLS) Flatrack Model M1077/M1077A1)	TM 9-3990-206-14&P
Operator's, Unit, Direct Support And General Support Maintenance Manual (Including Repair Parts And Special Tools List for Platform (Crop) Model M3)	TM 9-3990-260-14&P
Operator's and Organizational Maintenance Manual for Radio Sets	TM 11-5820-498-12
Operator's Manual, Radio Set, AN/VRC-46	TM 11-5820-401-10-1
Operator's Manual, Radio Set, AN/VRC-90A	TM 11-5820-890-10-1
Operator and Organizational Maintenance Manual for Chemical Alarm	TM 3-6665-225-12
Operator's and Unit Maintenance Manual Including Repair Parts and Special Tools List for Decontaminating Apparatus: M13	TM 3-4230-214-12&P
Operator, Organizational, Direct Support, and General Support Maintenance Manual Including Repair Parts and Special Tools List for Various Machine Gun Mounts	TM 9-1005-245-14
Principles of Automotive Vehicles	TM 9-8000
Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use (US Army Tank-Automotive Command)	TM 750-244-6
Rigging	TM 5-575
Use and Care of Hand Tools and Measuring Tools	TM 9-243

REFERENCES 0116 00

MISCELLANEOUS PUBLICATIONS

The Army Maintenance Management System (TAMMS)	DA PAM 738-750
Consolidated Index of Army Publications and Blank Forms	DA PAM 25-30
Index Of Blank Forms	DA PAM 25-30
Marine Terminal Lifting Guidance	MTMCTEA PAM 56-1
Safety Prevention of Motor Vehicle Accidents	AR 385-55
Tiedown Handbook for Rail Movements	MTMCTEA PAM 55-19
Tiedown Handbook for Truck Movements	MTMCTEA REF 92-55-20

CHAPTER 5

SUPPORTING INFORMATION FOR THE M1083A1 SERIES VEHICLES

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS

0117 00

SCOPE

This work package lists COEI and BII for the MTV to help you inventory the items for safe and efficient operation of the equipment.

GENERAL

The COEI and BII information is divided into the following lists:

Components of End Item (COEI). This list is for information purposes only and is not authority to requisition replacements. These items are part of the MTV. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts. Items of COEI are removed and separately packaged for transportation or shipment only when necessary. Illustrations are furnished to help you find and identify the items.

Basic Issue Items (BII). These essential items are required to place the MTV in operation, operate it, and to do emergency repairs. Although shipped separately packaged, BII must be with the MTV during operation and when it is transferred between property accounts. Listing these items is your authority to request/requisition them for replacement based on authorization of the end item by the TOE/MTOE. Illustrations are furnished to help you find and identify the items.

Explanation of Columns in the COEI List and BII List

Column (1), Illus Number, gives you the number of the item illustrated.

Column (2), National Stock Number, identifies the stock number of the item to be used for requisitioning purposes.

Column (3), Description, CAGEC, and Part Number, identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The stowage location of COEI and BII is also included in this column. The last line below the description is the CAGEC (Commercial and Government Entity Code (in parentheses) and the part number.

Column (4), Use on Code, gives you a code if the item you need is not the same for different models of the equipment. These codes are identified below:

CODE	USED ON
MCD	M1083A1
MXB	M1083A1 w/ 15K Self-Recovery Winch
MCN	M1084A1
MCL	M1085A1
MXL	M1085A1 w/ 15K Self-Recovery Winch
MCM	M1086A1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

GENERAL - Continued

CODE	USED ON
MSB	M1087A1
MSA	M1087A1 w/ 15K Self-Recovery Winch
MCF	M1088A1
MXF	M1088A1 w/ 15K Self-Recovery Winch
MCG	M1089A1
MCH	M1090A1
MXH	M1090A1 w/ 15K Self-Recovery Winch
MCE	M1092A1
MCK	M1096A1
MLH	M1148

Column (5), U/M (unit of measure), indicates how the item is issued for the National Stock Number shown in column two.

Column (6), Qty Reqd, indicates the quantity required.

COMPONENTS OF END ITEM (COEI) LIST

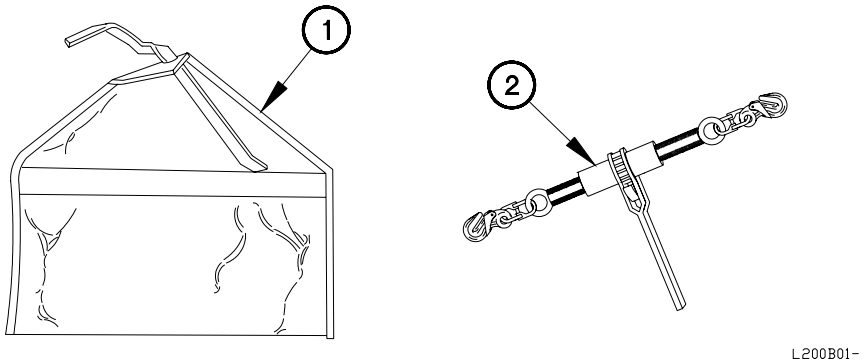


Table 1. Components of End Item List.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQ D
1	8105-01-387-2009	BAG, TOOL, TORCH (19207) 12412587	MCG	EA	1
2	3990-01-479-0538	BINDER, LOAD (19207) 12421708	MCG	EA	2

COMPONENTS OF END ITEM (COEI) LIST - Continued

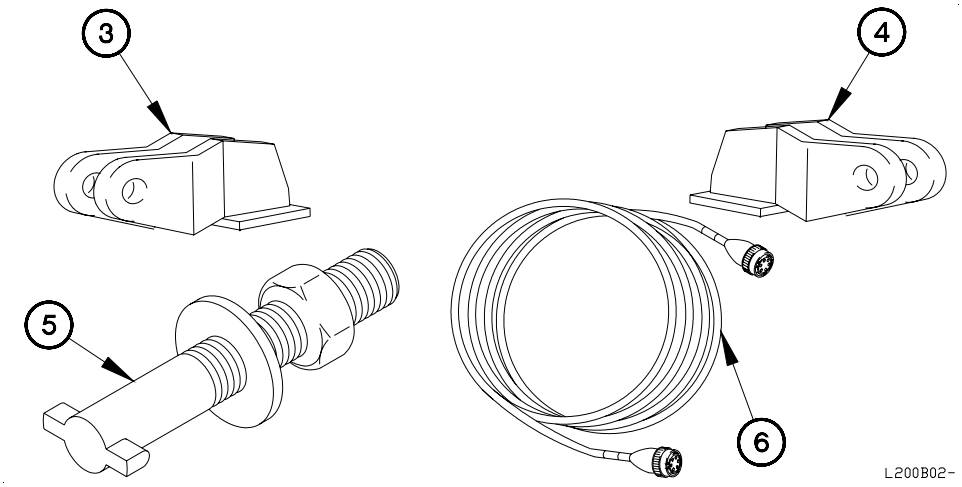
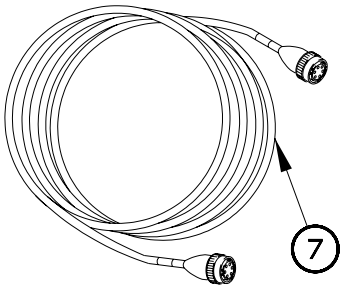


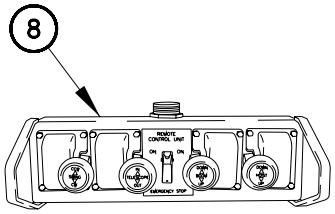
Table 1. Components of End Item List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
3	5340-01-475-2300	BRACKET, LOWER, LH (19207) 12421704-002	MCG	EA	1
4	5340-01-475-2286	BRACKET, LOWER, RH (19207) 12421704-001	MCG	EA	1
5	5306-01-479-1492	BOLT, CAGING (19207) 12422439		EA	8
6	6150-01-387-6357	CABLE ASSEMBLY, ELECTRICAL (12361) 2-195-6-00641	MCN, MCM	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

COMPONENTS OF END ITEM (COEI) LIST - Continued





L200B03-

Table 1. Components of End Item List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
7	6150-01-371-3924	CABLE ASSEMBLY, ELECTRICAL (12361) 2-195-6-00652	MCG	EA	1
8	6110-01-371-3907	CONTROL, REMOTE SWITCHING (12361) 2-195-6-00668	MCN	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

COMPONENTS OF END ITEM (COEI) LIST - Continued

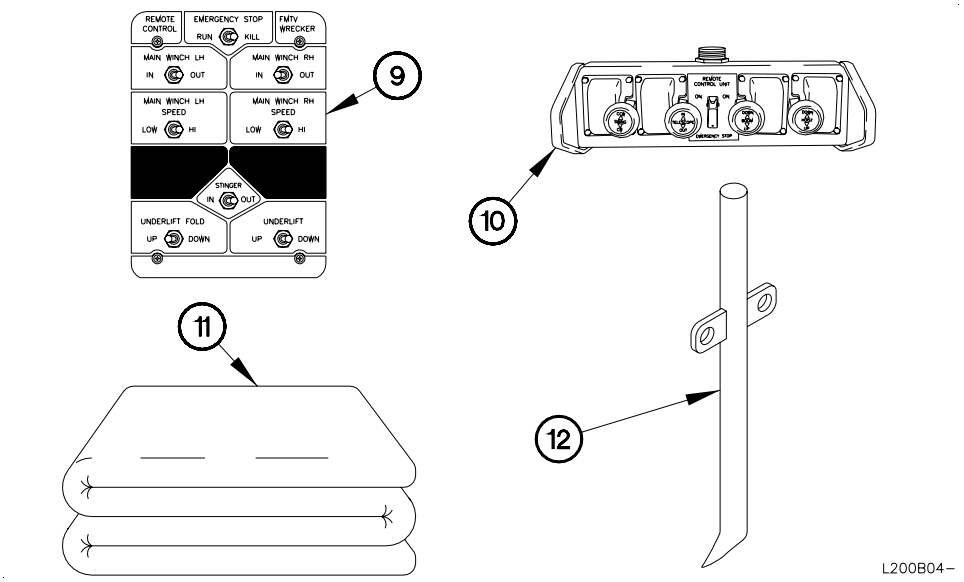


Table 1. Components of End Item List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
9	6110-01-373-2800	CONTROL, REMOTE SWITCHING (19207) 12412306	MCG	EA	1
10	6110-01-428-6142	CONTROL, REMOTE SWITCHING (12361) 2-195-6-00667	MCG	EA	1
11	2590-01-391-9944	COVER, VEHICULAR (19207) 12415785	MCH, MXH	EA	1
12	TBD	CROWBAR (U5503) HLD148-810	MLH	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

COMPONENTS OF END ITEM (COEI) LIST - Continued

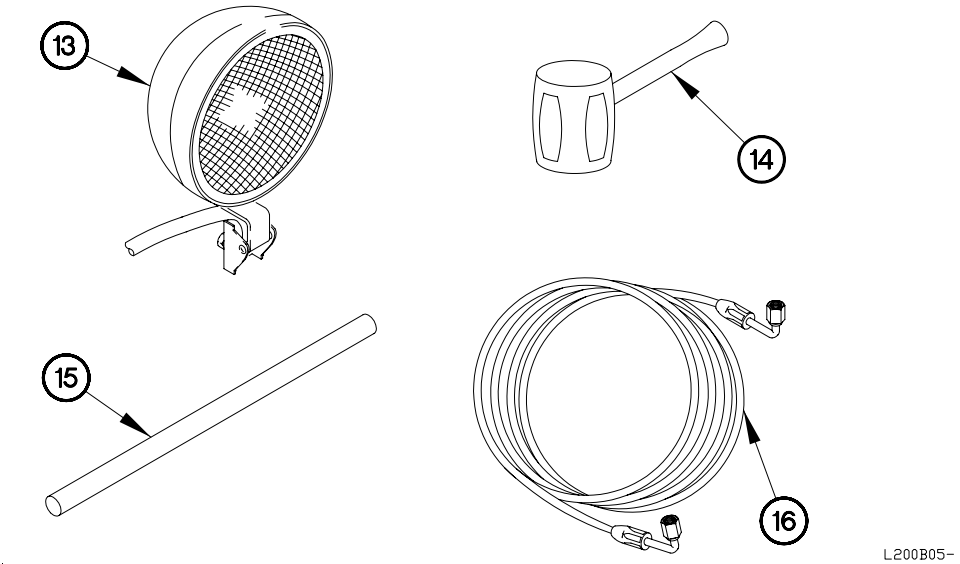


Table 1. Components of End Item List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
13	6220-01-390-7341	FLOODLIGHT, ELECTRICAL (19207) 12378828	MCN, MCF, MCG, MCM, MXF	EA	2
	6220-01-390-7341	FLOODLIGHT, ELECTRICAL (19207) 12378828	MLH	EA	1
14	5120-01-065-2211	HAMMER, HAND (1CV05) 57-534	MLH	EA	1
15	4320-01-351-8600	HANDLE, MANUAL CONTROL (95745) 6-511-001004	MCN, MCG, MCM	EA	1
16	4720-01-435-1664	HOSE ASSEMBLY (19207) 12413118	MCG	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

COMPONENTS OF END ITEM (COEI) LIST - Continued

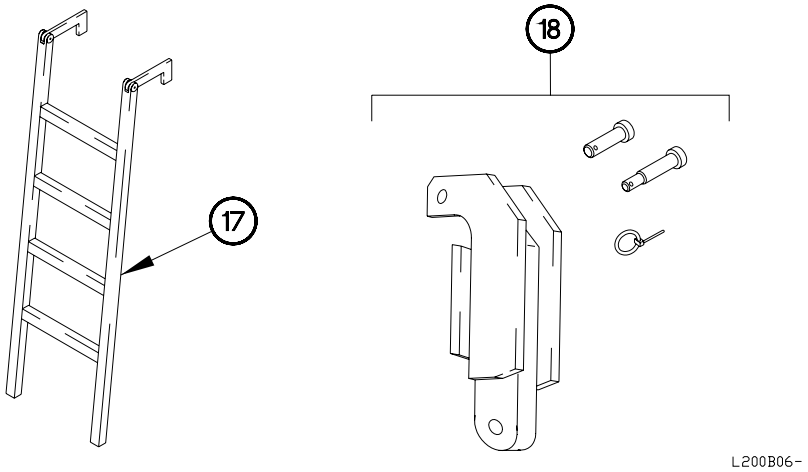


Table 1. Components of End Item List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
17	2540-01-394-9681	LADDER, BOARDING (19207) 12418950	MCD, MCN, MCL, MCM, MXB, MXL	EA	1
18	5340-01-475-2194	LIFTING EXTENSION (19207) 12421701	MCG	EA	2
	5315-01-475-9965	LINCHPIN (19207) 12421753	MCG	EA	4
	5315-01-476-0116	PIN, LIFT, UPPER (19207) 12421703	MCG	EA	2
	5315-01-475-9921	PIN, LIFT, LOWER (19207) 12421702	MCG	EA	2

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

COMPONENTS OF END ITEM (COEI) LIST - Continued

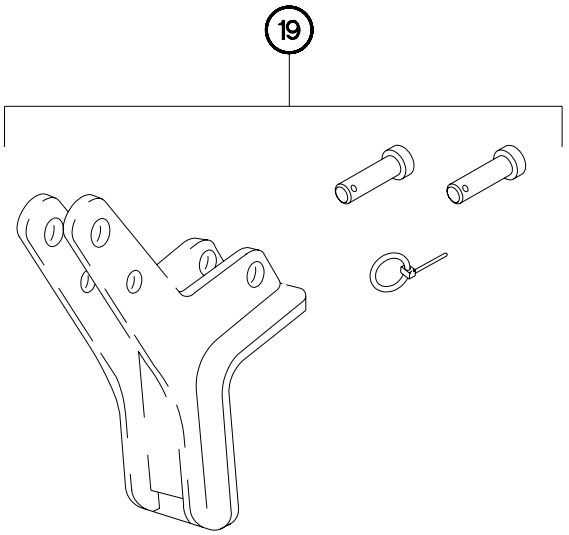


Table 1. Components of End Item List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
19	5340-01-372-0948	LIFT TOOL, RH (65459) 9-807-010052	MCG	EA	1
	5315-01-434-7266	LINCHPIN (65459) 9-557-010457-01	MCG	EA	2
	5315-01-371-9471	PIN, LIFT (65459) 9-557-01443	MCG	EA	1
	5315-01-371-9470	PIN, LIFT (65459) 9-557-010442	MCG	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

COMPONENTS OF END ITEM (COEI) LIST - Continued

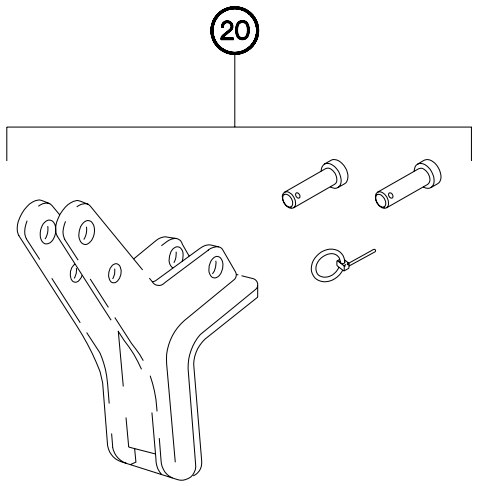
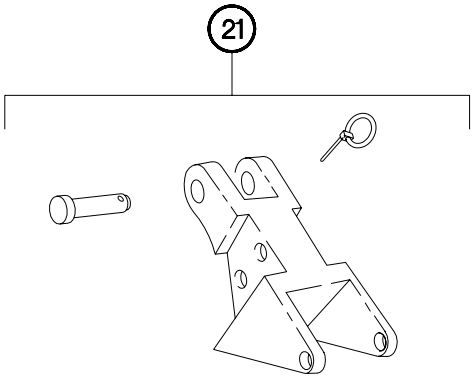


Table 1. Components of End Item List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
20	4910-01-434-6818	LIFT TOOL, LH (65459) 9-807-010050	MCG	EA	1
	5315-01-434-7266	LINCHPIN (65459) 9-557-010457-01	MCG	EA	2
	5315-01-371-9471	PIN, LIFT (65459) 9-557-010443	MCG	EA	1
	5315-01-371-9470	PIN, LIFT (65459) 9-557-010442	MCG	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

COMPONENTS OF END ITEM (COEI) LIST - Continued



L200B09-

Table 1. Components of End Item List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
21	4910-01-434-6814	LIFT TOOL, TOP BUMPER (65459) 9-807-010048	MCG	EA	2
	5315-01371-9471	PIN, LIFT (65459) 9-557-010443	MCG	EA	2
	5315-01-434-7266	LINCHPIN (65459) 9-557-010457-01	MCG	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

COMPONENTS OF END ITEM (COEI) LIST - Continued

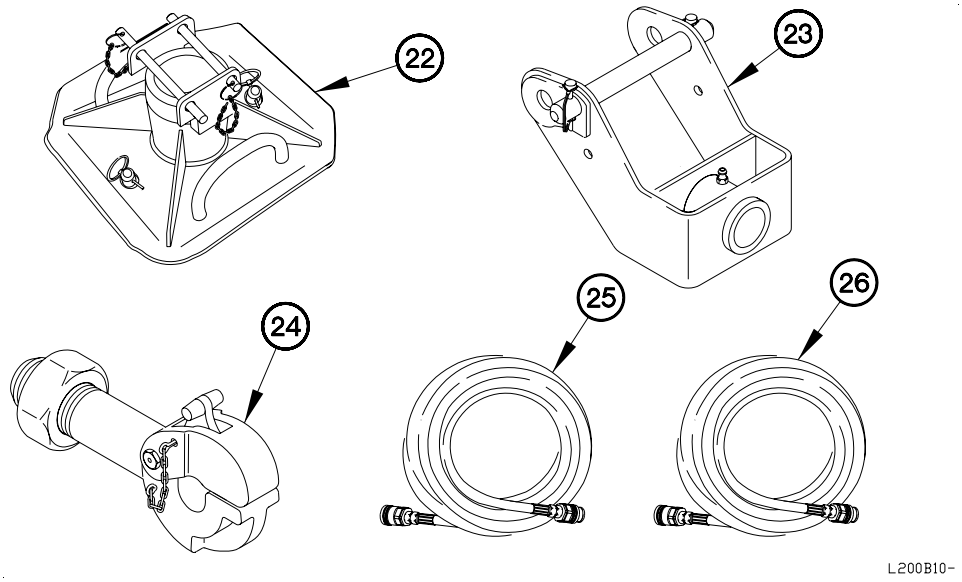


Table 1. Components of End Item List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
22	2590-01-428-6158	PAD, OUTRIGGER (65459) 2-195-1-00632	MCN, MCG, MCM	EA	2
23	2540-01-372-5098	PINTLE ASSEMBLY, TOWING (65459) 9-040-010057	MCG	EA	1
24	2540-00-047-3926	PINTLE ASSEMBLY, TOWING (96906) MS51117-1	MCG	EA	1
25		RECOVERY HOSE, RETURN (U5503) HLD 161-055	MLH	EA	1
26		RECOVERY HOSE, RETURN (U5503) HLD 161-054	MLH	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

COMPONENTS OF END ITEM (COEI) LIST - Continued

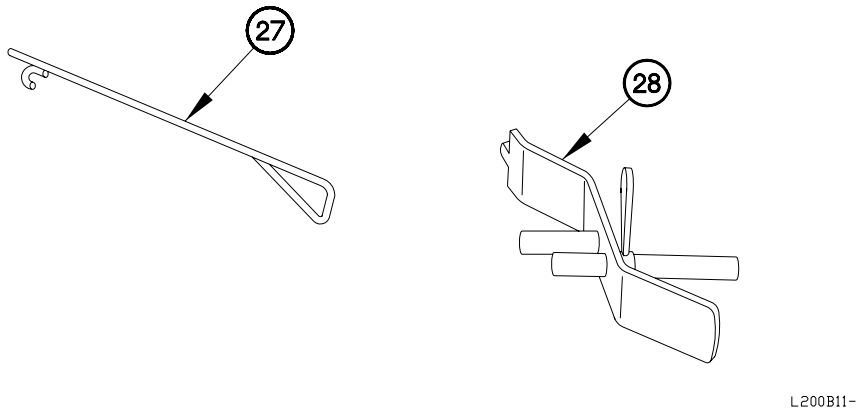
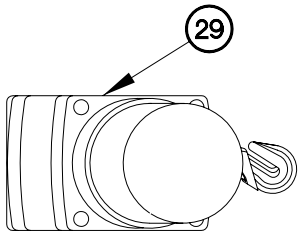


Table 1. Components of End Item List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
27	5340-01-328-4444	RELEASE TOOL (19207) 12421480-002	MCF,MXF	EA	1
28		TOOL, MANUAL OVERRIDE (U5503) 148-669	MLH	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

COMPONENTS OF END ITEM (COEI) LIST - Continued



L200B12-

Table 1. Components of End Item List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
29		WINCH (U5503) 1304/026	MLH	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued

0117 00

BASIC ISSUE ITEMS LIST

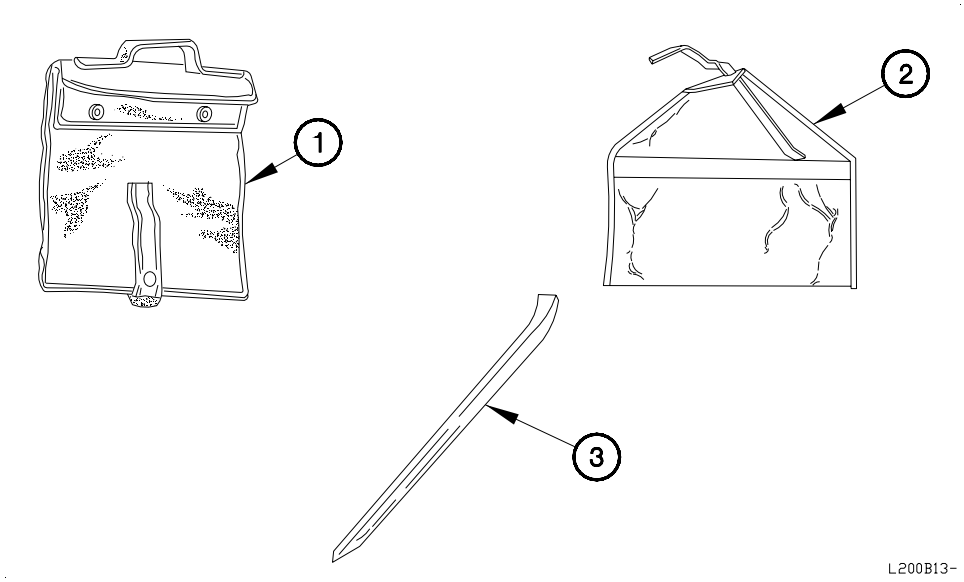


Table 2. Basic Issue Items List.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
1	2540-00-670-2459	BAG ASSEMBLY, PAMPHLET (19207) 7961712		EA	1
2	5140-00-772-4142	BAG, TOOL (19207) 7724142		EA	1
3	5120-00-244-1372	BAR, PINCH (80244) GGGB101TY3SZ3	MCG	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued

0117 00

BASIC ISSUE ITEMS LIST - Continued

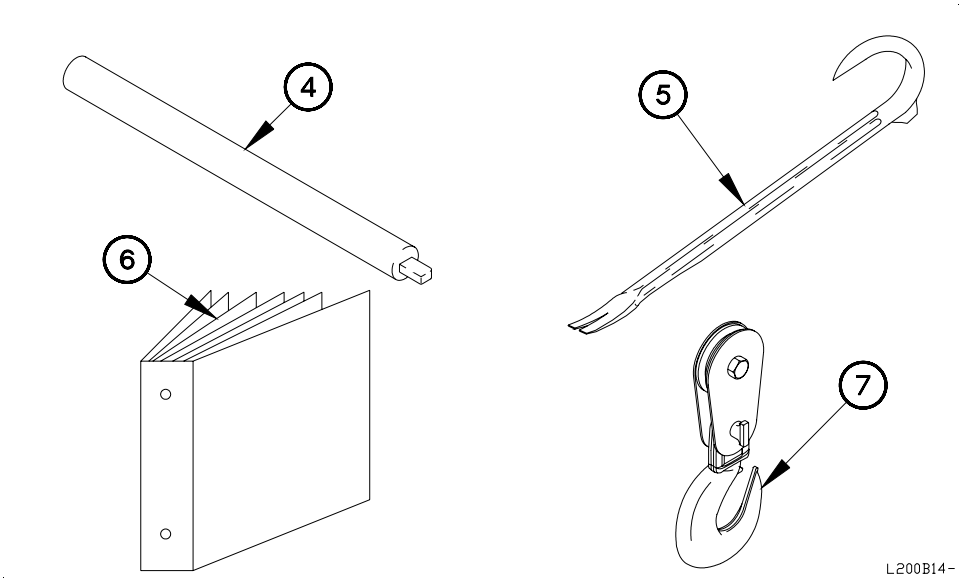


Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
4	5120-00-243-2419	BAR, SOCKET WRENCH HANDLE (19207) 6196147		EA	1
5	5120-00-293-0665	BAR, WRECKING (80244) GGG-B-101	MCG	EA	1
6	7510-00-889-3494	BINDER, LOOSE-LEAF (19207) 11677003		EA	1
7	3940-01-391-1848	BLOCK, SNATCH 30-T (19207) 12378672-002	MCG	EA	2

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

BASIC ISSUE ITEMS LIST - Continued

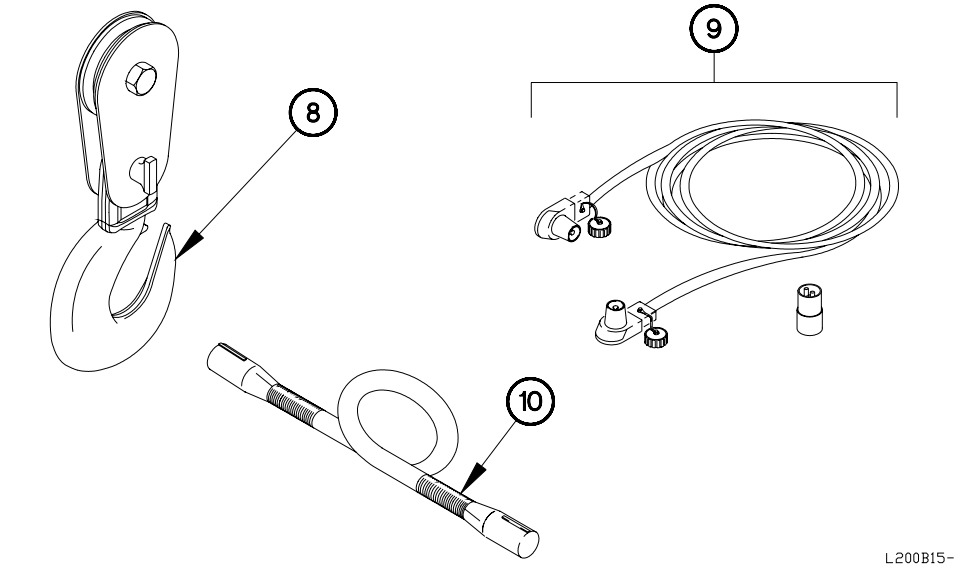


Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
8	3940-01-447-4095	BLOCK, SNATCH 15-5 T (19207) 12378672-003	MCG,MXB MXF,MXH, MXL, MSA	EA	1
9	2590-00-148-7961	CABLE KITS, SPECIAL POWER (19207) 11682379-1	MCG	EA	1
10	6150-01-390-7346	CABLE ASSEMBLY (19207) 12420385	MCG	EA	1

BASIC ISSUE ITEMS LIST - Continued

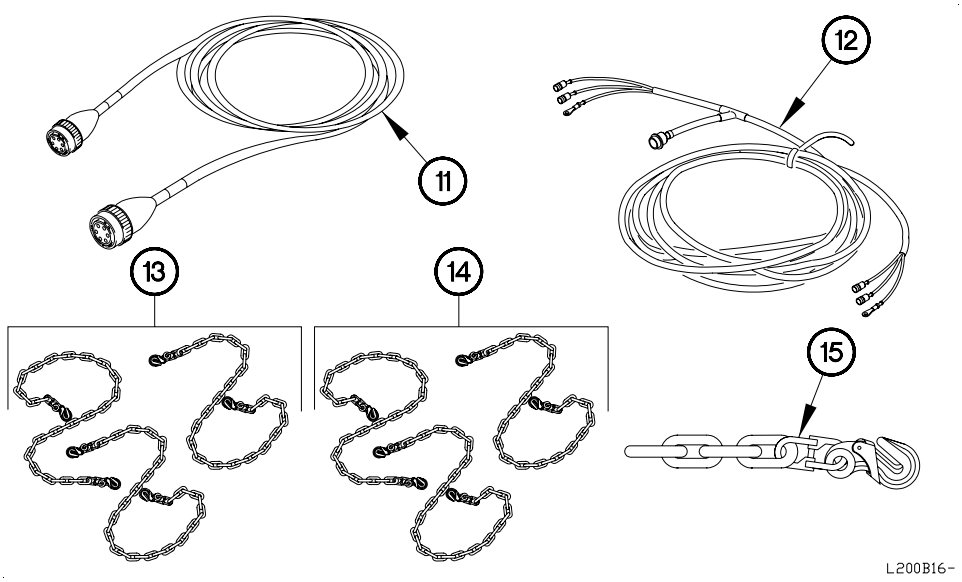


Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
11	6150-00-772-8814	CABLE ASSEMBLY (19207) 7728814	MCF,MXF	EA	1
12	6150-01-390-7345	CABLE KIT (19207) 12420757	MCG	EA	1
13	4010-01-483-2304	CHAIN ASSEMBLY (19207) 12441163-001	MLH	EA	2
14	4010-00-443-4845	CHAIN ASSEMBLY, SINGLE LEG (19207) 10944642-2	MCG	EA	3
15	4010-01-434-7397	CHAIN, 8 FT. W/HOOK (19207) 12421362	MCG	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

BASIC ISSUE ITEMS LIST - Continued

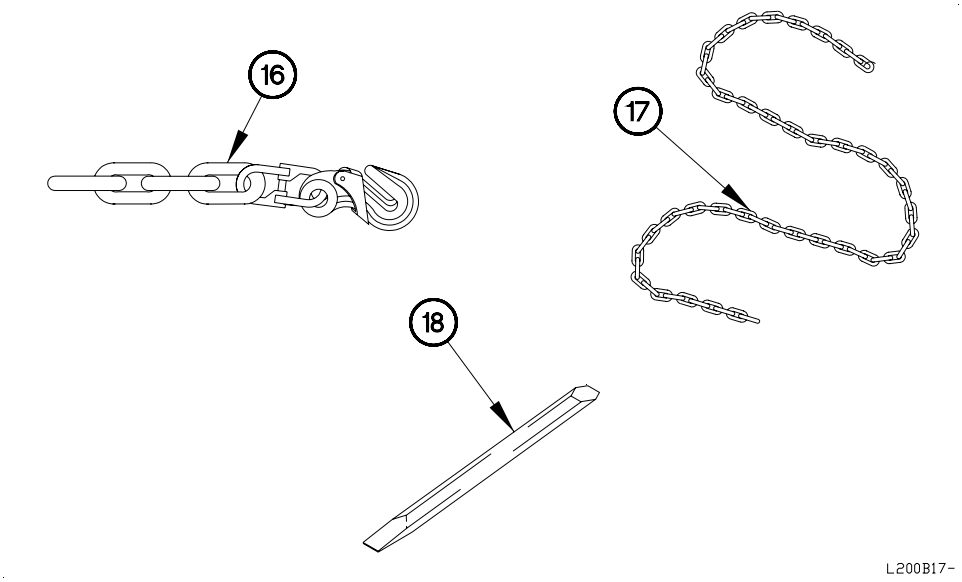


Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
16	4010-01-455-5630	CHAIN, HEAVY RECOVERY (19207) 12421485	MCG	EA	2
17	4010-01-389-1657	CHAIN, WELDED (19207) 12418052		EA	1
18	5110-00-221-1075	CHISEL, BLACKSMITH (96906) MS16882-2	MCG	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued

BASIC ISSUE ITEMS LIST - Continued

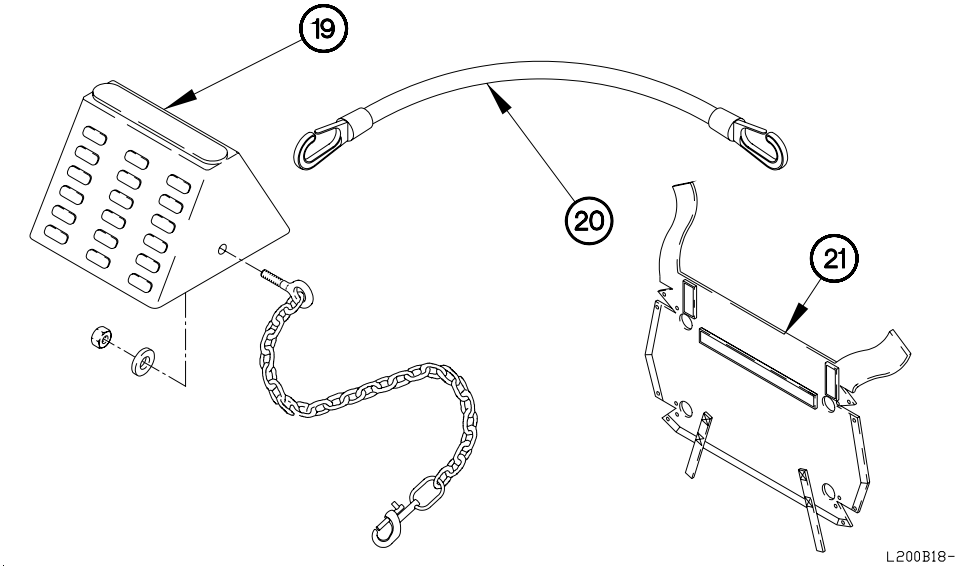


Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
19	2540-01-500-6119	CHOCK, WHEEL, RUBBER (58536) A52475-2		EA	2
20	2540-01-500-6119	CORD, SHOCKL, (19207) A12420277-190	MSA, MSB	EA	4
21	2540-01-453-6945	COVER, RADIATOR, COLD WEATHER (19207) 12421395		EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

BASIC ISSUE ITEMS LIST - Continued

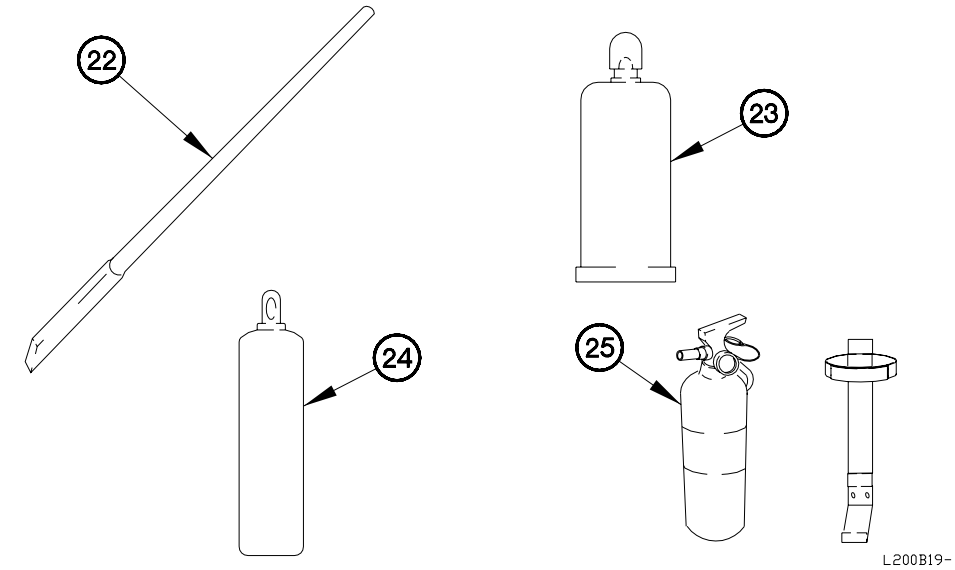
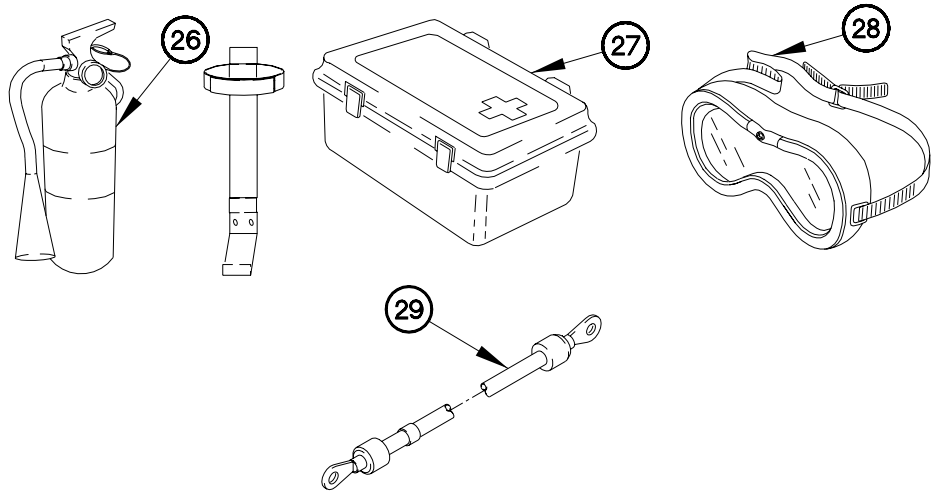


Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
22	5120-00-224-1390	CROWBAR (19207) 11677049-1	MCG	EA	1
23	8120-00-268-3360	CYLINDER, COMPRESSED (81349) MIL-C-3701	MCG	EA	1
24	8120-00-357-7992	CYLINDER, COMPRESSED (81348) RR-C-901/1-15	MCG	EA	1
25	4210-01-149-1356	EXTINGUISHER, FIRE (19207) 12255633-1		EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued

BASIC ISSUE ITEMS LIST - Continued



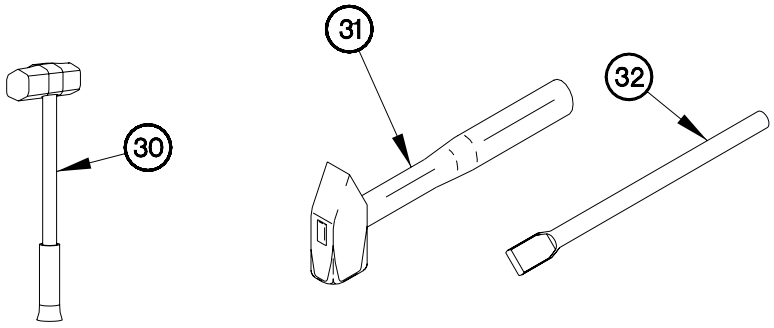
L200B20-

Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
26	4210-00-775-0127	EXTINGUISHER, FIRE (58536) A-A-393 TY1CL2SZ5	MSA, MSB MCG	EA	2
27	6545-00-922-1200	FIRST AID KIT (19207) 11677011	MSA, MSB MCG	EA	1
28	4240-00-052-3776	GOGGLES, INDUSTRIAL (58536) A-A-1110	MCN, MCG, MCM, MLH	EA	1
29	6150-01-460-9581	Ground, Cable (19207) 12421527	MSA MSB	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

BASIC ISSUE ITEMS LIST - Continued



L200B30-

Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
30	5120-00-900-6098	HAMMER, HAND (80244) GGG-H-86 TY10CL1	MCG	EA	1
31	5120-00-900-6103	HAMMER, HAND (80244) A-A-1292	MSA, MSB	EA	1
32	5120-00-243-2419	HANDLE, BAR WHEEL, STUD NUT (19207) 6196147	MSA, MSB	EA	1

BASIC ISSUE ITEMS LIST - Continued

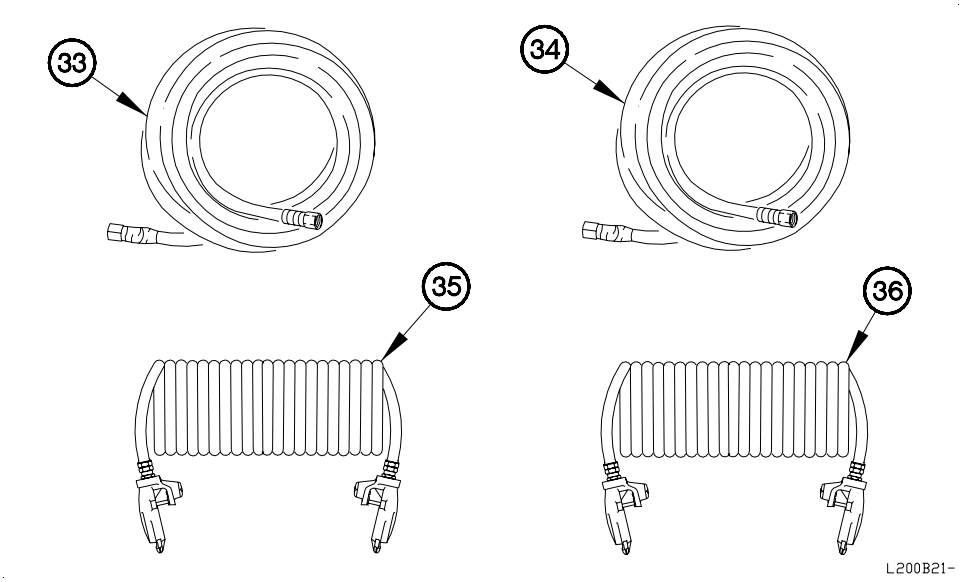


Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
33	4720-00-356-8571	HOSE ASSEMBLY, NONMETALLIC (13669) 21-1108	MCG	EA	1
34	4720-00-356-8572	HOSE ASSEMBLY, NONMETALLIC (81348) ZZ-H-461	MCG	EA	1
35	4720-01-391-8290	HOSE ASSEMBLY, NONMETALLIC (19207) 12419936-001	MCG	EA	1
36	4720-01-391-8291	HOSE ASSEMBLY, NONMETALLIC (19207) 12419936-002	MCG	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

BASIC ISSUE ITEMS LIST - Continued

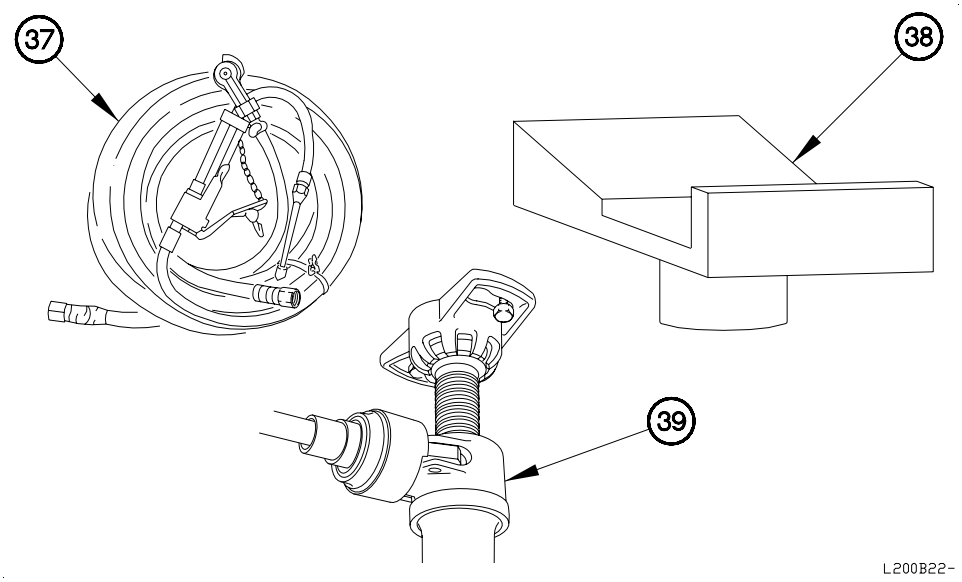
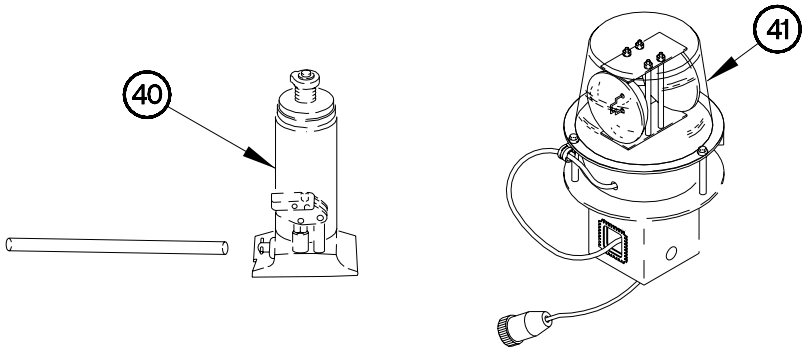


Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
37	4910-01-038-2820	INFLATOR-GAGE, TIRE W/HOSE (19207) 11677140-5		EA	1
38		JACK ADAPTER LA 000721		EA	1
39	5120-00-566-0617	JACK ASSEMBLY, LEVELING (19207) 7534672	MSA MSB	EA	4

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued

BASIC ISSUE ITEMS LIST - Continued



L200B23-

Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
40	5120-01-480-0700	JACK, HYDRAULIC, HAND OPERATED (19207) 12420061-002		EA	1
41	6220-01-433-5828	LIGHT, AMBER WARNING, WRECKER (19207) 12421444	MCG	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued 0117 00

BASIC ISSUE ITEMS LIST - Continued

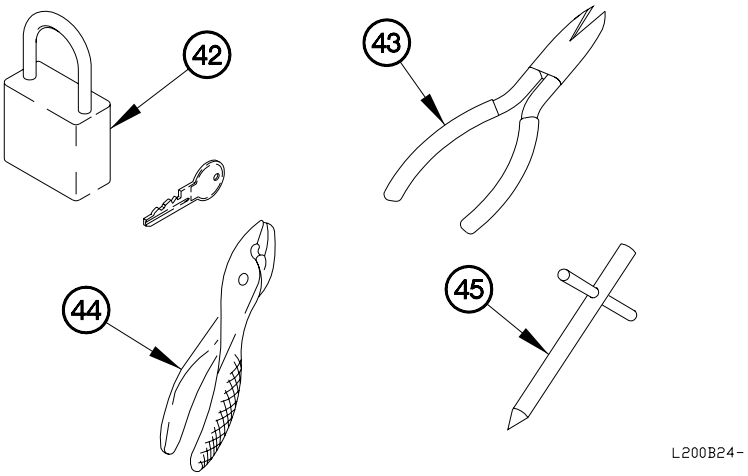


Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
42	5340-01-468-5390	PADLOCKS (19207) 12422368	MCE,MCK, MCF,MXF, MCH,MXH ,MCD,MCL ,MXB,MXL	EA	2
	5340-00-408-8425	PADLOCK SET (22107) 5200GLKA10	MCG	SET	1
	5340-00-437-0625	PADLOCK SET (22107) 5200GLKA6	MCN,MLH, MCM,MSA , MSB	SET	1
43	5120-00-595-9490	PLIERS, DIAGONAL CUTTING (58536) A-A-2506	MSA MSB	EA	1
44	5120-00-223-7397	PLIERS, SLIP JOINT (19207) 11655775-3		EA	1
45	2510-00-790-2296	ROD, GROUND (19207) 8380403	MSA MSB	EA	1

BASIC ISSUE ITEMS LIST - Continued

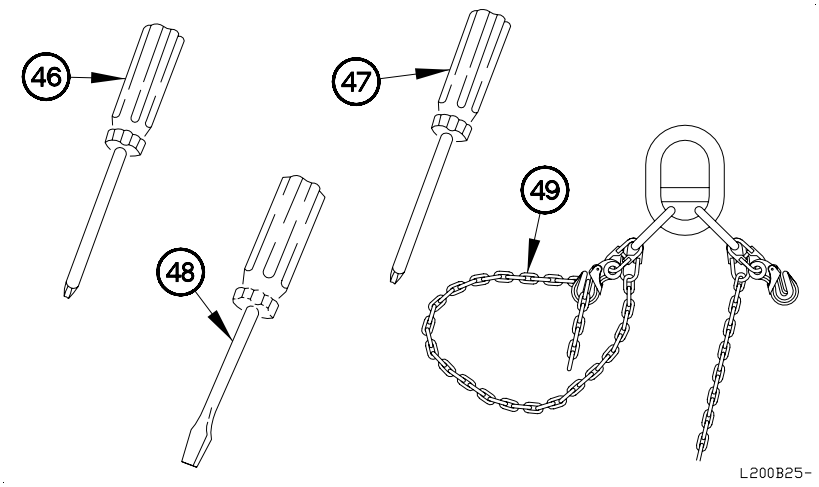


Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
46	5120-00-234-8912	SCREWDRIVER, CROSSTIP (19207) 11655777-9		EA	1
47	5120-00-234-8913	SCREWDRIVER, CROSSTIP (19207) 11655777-12		EA	1
48	5120-00-237-6985	SCREWDRIVER, FLAT TIP (19207) 11655777-10		EA	1
49	3940-01-209-6008	SLING AND WIRE ROPE ASSEMBLY (28620) AC 2000 00331	MCG	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued

0117 00

BASIC ISSUE ITEMS LIST - Continued

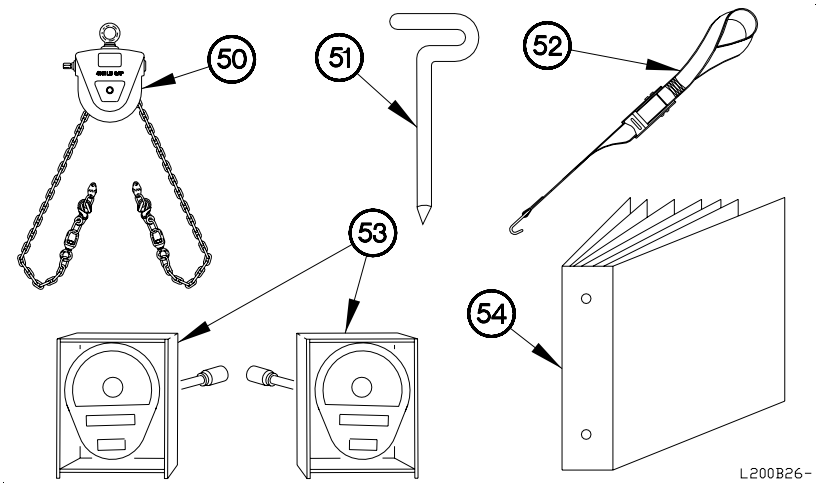


Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
50	4910-01-243-5556	SLING, ENGINE AND TRANSMISSION (59678) DFP-188	MCG	EA	1
51	2590-00-870-9936	Spike Assembly (19207) 7534689	MSA MSB	EA	1
52	5340-01-484-1472	STRAP, RETAINING, STEERING WHEEL (19207) 12419905	MCG	EA	1
53	6220-01-420-5986	TAILLIGHT ASSEMBLY (19207) 12420353	MCG	EA	2
54		TECHNICAL MANUAL, OPERATOR'S INSTRUCTIONS		EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued

0117 00

BASIC ISSUE ITEMS LIST - Continued

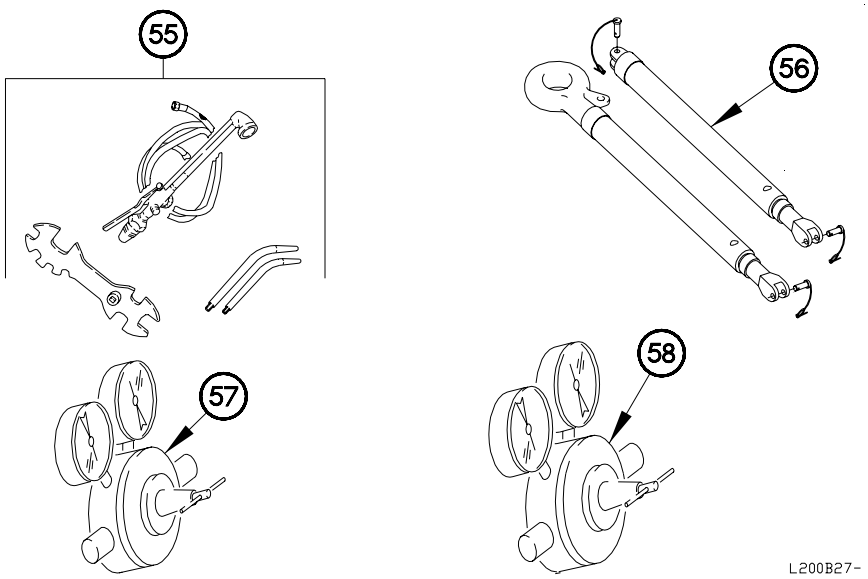


Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
55	3433-00-294-6743	TORCH SET, CUTTING AND WELDING (81349) MIL-T-13880	MCG	EA	1
56	4910-01-365-9304	TOWBAR, MOTOR VEHICLE (59678) 7551383	MCG	EA	1
57	4820-00-285-6067	VALVE, REGULATING, FLUID PRESSURE (81349) MIL-V-13877	MCG	EA	1
58	4820-00-641-3519	VALVE, REGULATING (81349) MIL-R-13877	MCG	EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued

0117 00

BASIC ISSUE ITEMS LIST - Continued

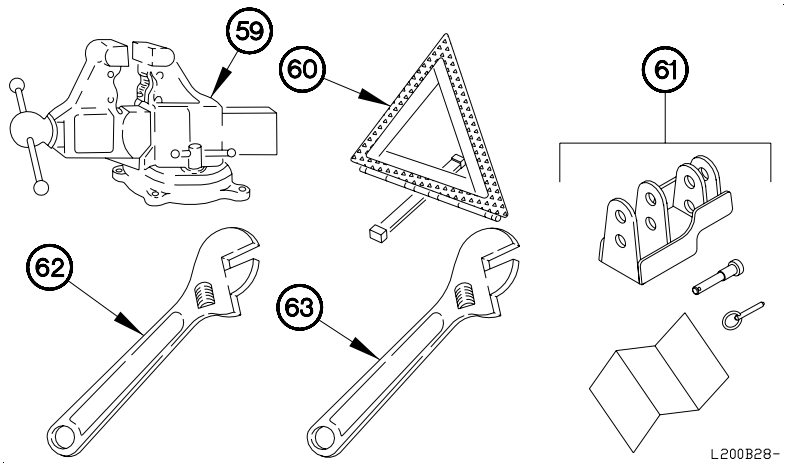


Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
59	5120-00-243-9072	VISE, BENCH AND PIPE (80244) GGG-V-410TYPE4-6IN JAW	MCG	EA	1
60	9905-00-148-9546	WARNING DEVICE KIT (19207) 11669000		EA	1
61	TBD	WRECKER, HMMWV, ADAPTER KIT (19207) 57K2052	MCG	EA	1
62	5120-00-264-3796	WRENCH, ADJUSTABLE, 12 In. (19207) 11655778-5		EA	1
63	5120-00-240-5328	WRENCH, ADJUSTABLE, 8 In. (19207) 11655778-3		EA	1

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS - Continued

BASIC ISSUE ITEMS LIST - Continued

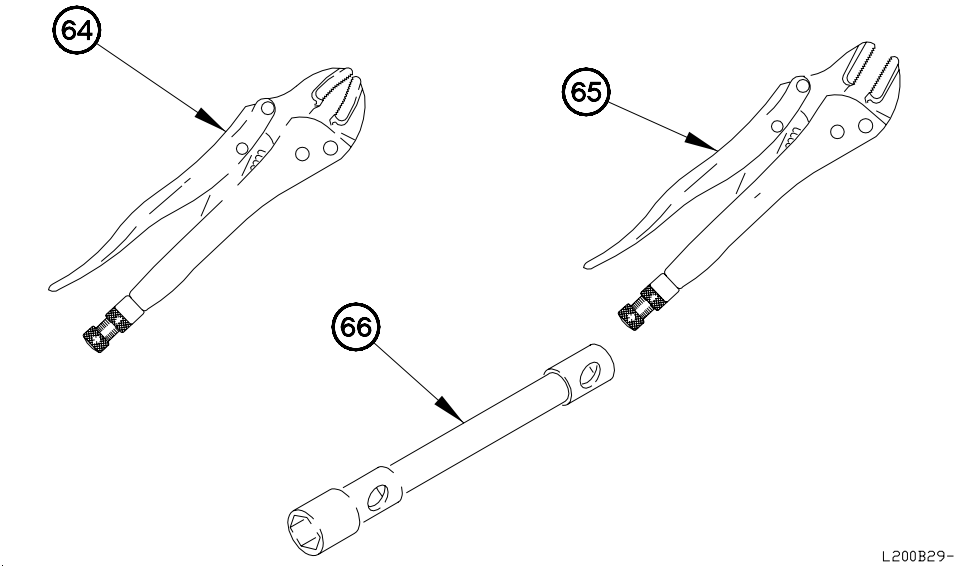


Table 2. Basic Issue Items List - Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQD
64	5120-00-277-4244	WRENCH, PLIER (80244) GGG-W-00649 TY1CL1STA	MCG	EA	1
65	5120-00-494-1911	WRENCH, PLIER (80244) GGG-W-00649 TY1CL2STB	MCG	EA	1
66	5120-00-316-9217	WRENCH, SOCKET (19207) 11677000-3		EA	1

ADDITIONAL AUTHORIZATION LIST (AAL) 0118 00

SCOPE

This work package lists additional items you are authorized for support of the vehicle.

GENERAL

This list identifies items that do not have to accompany the MTV and that do not have to be turned in with it. These items are all authorized to you by Common Tables of Allowance (CTA), Modification Table of Organization and Equipment (MTOE), Tables of Distribution and Allowances (TDA), or Joint Table of Allowance (JTA).

EXPLANATIONS OF COLUMNS IN THE AAL

Column (1), National Stock Number, identifies the stock number of the item to be used for requisitioning purposes.

Column (2), Description, CAGEC, and Part Number, identifies Federal item name (in all capital letters) followed by a minimum description when needed. The last line below the description is the CAGEC (Commercial and Government Entity Code) (in parentheses) and the part number.

Column (3), Usable On Code, when applicable, gives you a code if the item you need is not the same for different models of equipment.

Codes used are:

USABLE ON CODE	MODEL
MCD	M1083A1
MXB	M1083A1 w/15K Self-Recovery Winch
MCN	M1084A1
MCL	M1085A1
MXL	M1085A1 w/15K Self-Recovery Winch
MCM	M1086A1
MSB	M1087A1
MSA	M1087A1 w/15K Self-Recovery Winch
MCF	M1088A1
MXF	M1088A1 w/15K Self-Recovery Winch
MCG	M1089A1
MCH	M1090A1
MXH	M1090A1 w/15K Self-Recovery Winch
MCE	M1092A1
MCK	M1096A1
MLH	M1148

Column (4), U/M (unit of measure), indicates how the item is issued for the National Stock Number shown in column (1).

Column (5), QTY AUTH, indicates the quantity authorized.

ADDITIONAL AUTHORIZATION LIST (AAL) - Continued 0118 00

ADDITIONAL AUTHORIZED LIST ITEMS

Table 1. Additional Authorization List - Continued

(1) NATIONAL STOCK NUMBER	(2) DESCRIPTION, CAGEC, AND PART NUMBER	(3) USABLE ON CODE	(4) U/M	(5) QTY AUTH
6665-00-859-2215	ALARM UNIT, CHEMICAL AGENT, AUTOMATIC ALARM (M42) (81361) D5-15-4826		EA	1
5110-00-293-2336	AX, SINGLE BIT (19207) 6150925		EA	1
3940-01-449-2385	NET, DRAFT COVER (098P0) B9154-090-168-2R-14C)	MCD, MXB, MCN, MXL, MXL, MCM, MCH, MXH	EA	1
4030-01-477-0524	CLAMP, LINE, SLIDING (098P0) NEI PR054-001-B	MCD, MXB, MCN, MXL, MXL, MCM, MCH, MXH	EA	1
4030-01-477-0508	SNAP LINK, CARGO (098P0) NEI 40WGB	MCD, MXB, MCN, MXL, MXL, MCM, MCH, MXH	EA	1
5340-01-477-3850	SNAP HOOK (098P0) NEI 66C1705HUMJ	MCD, MXB, MCN, MXL, MXL, MCM, MCH, MXH	EA	1
4010-00-473-6166	CHAIN, 16 FT (19207) 7077063		EA	1
2540-01-483-2930	CHAIN, PNEUMATIC TIRE, TRUCK, SINGLE TIRE TYPE (4N506) A08SV (OPTIONAL P/N 2540-01-492-2989 (4N506) CL07S)		EA	4
6665-00-859-2201	DETECTOR UNIT, CHEMICAL AGENT, AUTOMATIC ALARM (M43) (81361) D5-15-4400		EA	1
6545-00-922-1200	KIT, FIRST AID (19207) 1167701		EA	1

ADDITIONAL AUTHORIZATION LIST (AAL) - Continued 0118 00

ADDITIONAL AUTHORIZED LIST ITEMS

Table 1. Additional Authorization List - Continued

(1) NATIONAL STOCK NUMBER	(2) DESCRIPTION, CAGEC, AND PART NUMBER	(3) USABLE ON CODE	(4) U/M	(5) QTY AUTH
8415-00-634-4658	GLOVES, LEATHER (90142) 37G2940		EA	1
5120-00-288-6574	HANDLE, MATTOCK PICK (19207) 11677021		EA	1
4910-01-396-5044	JACK, DOLLY TYPE, HYDRAULIC (1X747)		EA	1
5120-00-243-2395	MATTOCK PICK (19207) 11677022		EA	1
5120-00-293-3336	SHOVEL (19207) 11655784		EA	1
	SPECIAL PURPOSE KITS			
	12V OUTLET KIT (19207) 57K2034		KT	1
	ARCTIC KITS			
2540-01-381-1626	SWINGFIRE HEATER ADAPTER (19207) 57K1973		KT	1
2990-01-479-7713	ARCTIC ENGINE PREHEAT KIT (19207) 57K4366		KT	1
2540-01-383-5411	CAB HEATER (19207) 57K1971		EA	1
2540-01-479-8835	CARGO AREA ARCTIC KIT (19207) 57K4364	MCD,MCL, MXB, MXL	KT	1
2540-01-368-2952	CARGO COVER KIT (19207) 57K1899	MCD, MXB	KT	1
2540-01-387-5734	CARGO COVER KIT (19207) 57K1900	MCL, MXL	KT	1
2540-01-420-5985	CARGO COVER KIT (19207) 57K1901	MCH, MXH	KT	1
	KIT, ADJUSTABLE PASSENGER SEAT (19207) 57K2030		KT	1
2540-01-509-0717	KIT, SEE-THRU DEFROSTER PLENUM UPGRADE (19207) 57K2028		KT	1

ADDITIONAL AUTHORIZATION LIST (AAL) - Continued 0118 00

ADDITIONAL AUTHORIZED LIST ITEMS

Table 1. Additional Authorization List - Continued

(1) NATIONAL STOCK NUMBER	(2) DESCRIPTION, CAGEC, AND PART NUMBER	(3) USABLE ON CODE	(4) U/M	(5) QTY AUTH
	KIT, LH SIDE KICK PANEL (19207) 57K2032		KT	1
	KIT, SINGLE DOOR HANDLE UPGRADE (19207) 57K2059		KT	1
	KIT, CAB HEADLINER UPGRADE (19207) 57K2033		KT	1
2540-01-494-3528	KIT, INCLINOMETER (19207) 57K2036		KT	1
	KIT, MODIFIED PLATFORM	MAF, MWF	KT	1
	KIT, ROADSIDE SPLASH SHIELD UPGRADE (19207) 57K2027		KT	1
	KIT, CONVEX MIRROR (19207) 57K1995		KT	1
	KIT, SUN VISOR UPGRADE (19207) 57K2029-001		KT	1
	KIT, EXHAUST BRAKE ASSEMBLY REPLACEMENT/REPAIR (C10374)		KT	1
	KIT, SHELTER TAILGATE (19207) 57K4450		KT	1
2540-01-493-9101	KIT, RH CONVEX MIRROR (19207) 57K2008		KT	1
3810-01-384-9668	LIGHT MATERIAL HANDLING CRANE KIT 57K1215	MCD,MCL, MXB,MXL	KT	1
1005-01-381-5431	MACHINE GUN RING MOUNT KIT (19207) 57K1224		KT	1
2540-01-498-5929	KIT, BUMPERETTE (19207) 57K3398	MCD,MXD, MCL,MXL, MCH,MXH	KT	1
	KIT, RESILIENT MOUNT 57K2003		KT	1

ADDITIONAL AUTHORIZATION LIST (AAL) - Continued 0118 00

ADDITIONAL AUTHORIZED LIST ITEMS

Table 1. Additional Authorization List - Continued

(1) NATIONAL STOCK NUMBER	(2) DESCRIPTION, CAGEC, AND PART NUMBER	(3) USABLE ON CODE	(4) U/M	(5) QTY AUTH
2540-01-470-3842	KIT, PINTLE HOOK EXTENSION (19207) 57K1985		KT	1
6220-01-423-2337	ROTATING WARNING LIGHT KIT (19207) 57K1220		EA	1
	TROOPSEAT KIT			
2540-01-380-4913	(19207) 57K1894-001	MCD,MXB	KT	1
2540-01-381-5906	(19207) 57K1896-001	MCL,MXL	KT	1
2540-01-497-3374	(19207) 57K2015	MCH,MXH	KT	1
6115-01-432-2684	200 AMP ALTERNATOR KIT (19207) 57K1912		KT	1
	S280 SHELTER			
3990-01-444-1013	KIT, TIEDOWN, S280 SHELTER (19207) 57K1949	MCD, MXB	KT	1
3990-01-494-6072	KIT, MODIFICATION, S280 SHELTER TIEDOWN KIT – MTV CARGO (19207) 57K4377	MCD, MXB	KT	1
3990-01-488-4320	KIT, TIEDOWN, S280 SHELTER (MODIFIED) (19207) 57K4378	MCD, MXB	KT	1
3990-01-463-9191	KIT, TIEDOWN, S280 SHELTER (19207) 57K1970	MCL, MXL	KT	1
	S280 SHELTER (CONT)			
3990-01-494-2285	KIT, MODIFICATION, S280 SHELTER TIEDOWN KIT – LMTV CARGO OR LWB CARGO (19207) 57K4448	MCL, MXL	KT	1
3990-01-494-6074	KIT, TIEDOWN, S280 SHELTER (MODIFIED) (19207) 57K4447	MCL, MXL	KT	1
3990-01-444-0356	KIT, TIEDOWN, TANK AND PUMP UNIT (19207) 57K1954	MCD,MXB	KT	1

ADDITIONAL AUTHORIZATION LIST (AAL) - Continued 0118 00

ADDITIONAL AUTHORIZED LIST ITEMS

Table 1. Additional Authorization List - Continued

(1) NATIONAL STOCK NUMBER	(2) DESCRIPTION, CAGEC, AND PART NUMBER	(3) USABLE ON CODE	(4) U/M	(5) QTY AUTH
3990-01-444-0355	KIT, TIEDOWN, TANK AND PUMP UNIT (19207) 57K1955	MCL, MXL	KT	1
3990-01-443-8916	KIT, TIEDOWN, 500 GALLON DRUM (19207) 57K1956	MCD, MXB	KT	1
3990-01-444-0357	KIT, TIEDOWN, 500 GALLON DRUM (19207) 57K1957	MCL, MXL	KT	1
TBD	KIT, PTO SWITCH WRECKER RETURN VALVE (19207) 57K2035	MCG	KT	1

EXPENDABLE AND DURABLE ITEMS LIST 0119 00

INTRODUCTION

Scope

This work package lists all expendable and durable items that you will need to operate and maintain the MTV. This list is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970 Expendable/Durable Items (except Medical, Class V Repair Parts, and Heraldic Items), or CTA 8-100, Army Medical Department Expendable/Durable Items.

Explanations of Columns in the Expendable/Durable Items List

Column (1) - Item Number. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item, e.g., "Use hydraulic fluid (Item 5, WP 0119 00)".

Column (2) - Level. This column includes the lowest level of maintenance that requires the listed item (C = Operator/Crew).

Column (3) - National Stock Number. This is the NSN assigned to the item which you can use to requisition it.

Column (4) - Description, Part Number (P/N) and Commercial and Government Entity Code (CAGEC). This column provides the other information you need to identify the item.

Column (5) - Unit of Issue (U/I). This code shows the smallest quantity of an item that can be requisitioned and issued.

EXPENDABLE AND DURABLE ITEMS LIST

Table 1. Expendable and Durable Items List.

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description, Part Number, CAGEC	(5) U/I
1	C	6850-01-441-3248	Antifreeze, MIL-A-11755 (81349) 55 gal	DR
2	C	6850-01-441-3221	Antifreeze, Multi-Engine A-A-52624 (81349) 5 gal	CO
		6850-01-441-3223	55 gal	DR

EXPENDABLE AND DURABLE ITEMS LIST - Continued

Table 1. Expendable and Durable Items List - Continued.

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description, Part Number, CAGEC	(5) U/I
3	C		Cleaning Compound, Windshield, O-C-1901 (81348)	BX
		850-00-926-2275	12 ea, 16 oz. pkg.	
4	C	9150-00-664-0047	Damping Fluid, VV-D-1078 (81348)	LB
5	C		Diesel Fuel grade DF-2, ASTM D 975 (81346)	
		9140-00-286-5294		GL
		9140-00-286-5295	5 gal	CN
		9140-00-286-5297	55 gal	DR
6	C		Diesel Fuel grade DF-1, ASTM D 975 (81346)	
		9140-00-286-5286		GL
		9140-00-286-5288	55 gal	DR
		9140-00-286-5287	5 gal	CN
7	C		Diesel Fuel grade DF-A, DF-A (81346)	
		9140-00-286-5283		GL
		9140-00-286-5282	5 gal	CN
		9140-00-286-5284	55 gal	DR
8	C		Diesel fuel, MIL-F-16884 (81346)	
		9140-00-273-2377		GL
		9140-00-255-7764	5 gal	CN
		9140-00-255-2378	55 gal	DR
9	C	8415-00-641-4601	Gloves, Rubber, (ZZ-G-381) (81348)	PR
10	C	4240-00-052-3776	Goggles, Industrial (ANSIZ87.1) (80204)	PR

EXPENDABLE AND DURABLE ITEMS LIST - Continued

Table 1. Expendable and Durable Items List - Continued.

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description, Part Number, CAGEC	(5) U/I
11	C		Grease, Automotive and Artillery (GAA), MIL-G-10924 (81349)	
		9150-01-197-7688	2.25 oz	TU
		9150-01-197-7693	14 oz	CA
		9150-01-197-7692	35 lb	CN
12	C		Hydraulic Fluid, Petroleum Base, RYCO 756 (07950)	
		9150-00-252-6383		QT
		9150-00-223-4134	1 gal	GL
		9150-00-082-7524	10 gal	DR
		9150-00-265-9408	55 gal	DR
12.1	C		Hydraulic Fluid, Petroleum Base, RYCO 783 (07950)	
		9150-00-935-9808	1 gal	GL
12.2	C		Hydraulic Fluid A MIL-H-5606A (81349)	
		9150-00-265-9408	55 gl	DR
13	C		Kerosene, ASTM D3699 (NATO F45)	
14	C		Oil, Fuel, Diesel, DF-1, Winter, VV-F-800 (91348)	
		9140-00-286-5286		GL
		9140-00-286-5288	55 gal	DR
		9140-00-286-5289	55 gal	DR

EXPENDABLE AND DURABLE ITEMS LIST - Continued

Table 1. Expendable and Durable Items List - Continued.

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description, Part Number, CAGEC	(5) U/I
15	C		Oil, Lubricating, Gear, GO 75W, M2105-1-75W (81349)	
		9150-01-035-5390	1 qt	QT
		9150-01-035-5391	5 gal	GL
16	C		Oil, Lubricating, Gear, GO 80W-90, MIL-PRF-2105 (81349)	
		9150-01-035-5392	1 qt	QT
		9150-01-035-5393	5 gal	CN
		9150-01-035-5394	55 gal	DR
17	C		Oil, Lubricating, OE/HDO 10, MILL2104 (81349)	
		9150-00-183-7807		GL
		9150-00-186-6668		CN
		9150-00-191-2772	5 gal	DR
			55 gal	
18	C		Oil, Lubricating, OE/HDO 10W, MILL2104 (81349)	
		9150-00-189-6727		QT
19	C		Oil, Lubricating, OE/HDO 15W-40, MIL-M-2104 (81349)	
		9150-01-152-4117		QT
		9150-01-152-4118	5 gal	CN
		9150-01-152-4119	55 gal	DR

EXPENDABLE AND DURABLE ITEMS LIST - Continued 0119 00

EXPENDABLE AND DURABLE ITEMS LIST - Continued

Table 1. Expendable and Durable Items List - Continued.

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description, Part Number, CAGEC	(5) U/I
20	C		Oil, Lubricating, OE/HDO 30 (SAE 30), MIL-L-2104 (81349)	
		9150-00-183-7808		GL
		9150-00-186-6681		QT
		9150-00-188-9858	5 gal	CN
		9150-00-189-6729	55 gal	DR
21	C		Oil, Lubricating, OE/HDO 40, MIL-L-2104 (81349)	
		9150-00-405-2987		GL
		9150-00-189-6730		QT
		9150-00-188-9862	5 gal	CN
22	C		Oil, Lubricating, OEA, MIL-L-46167 (81349)	
		9150-00-402-4478		QT
		9150-00-402-2372	5 gal	CN
		9150-00-491-7197	55 gal	DR
23	C	9140-00-247-4364	Oil, Commercial burner fuel grade FO-1, ASTM D396 (81346)	DR
24	C	9140-00-247-4362	Oil, Commercial burner fuel grade FO-2, ASTM D396 (81346)	DR
25	C	7920-00-205-1711	Rag, Wiping, 7920-00-205-1711 (80244)	BE
26	C	7930-00-634-3935	Soap, Laundry, ASTM D 496 (81346) 200 lb	DR

EXPENDABLE AND DURABLE ITEMS LIST - Continued

Table 1. Expendable and Durable Items List - Continued.

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description, Part Number, CAGEC	(5) U/I
27	C		Solvent, Dry Cleaning, P-D-680 (81349)	
		6850-00-281-1985		GL
		6850-00-664-5685		QT
28	C		Turbine fuel, aviation, kerosene type grade JP-8, MIL-T-83133 (81349)	
		9140-00-286-5283		GL
		9140-00-286-5284	55 gal	DR
		9140-00-286-5285	55 gal	DR
29	C		Turbine fuel, aviation, kerosene type grade JP-8 MIL-T-83133 (81349)	
		9140-00-286-5294		GL
		9140-00-286-5296	55 gal	DR
		9140-00-286-5297	55 gal	DR
30	C	9130-01-429-4563	Turbine fuel, aviation, kerosene type grade JP-8, MIL-T-83133 (81349)	GL
31	C		Turbine fuel, grade JP-4, MIL-T-83133 (81349)	
		9130-00-273-2380	54 gal	DR
32	C		Turbine fuel, grade JP-5, MIL-T-5624 (81349)	
		9130-01-305-5596		DR
		9130-01-250-6353	55 gal	DR

STOWAGE LOCATION/DECAL/STENCIL GUIDE 0120 00

SCOPE

This work package shows the location for stowage of equipment and material required to be carried on M1083A1 series vehicles, locations of decals, and stencils that are required to be in place on the vehicle.

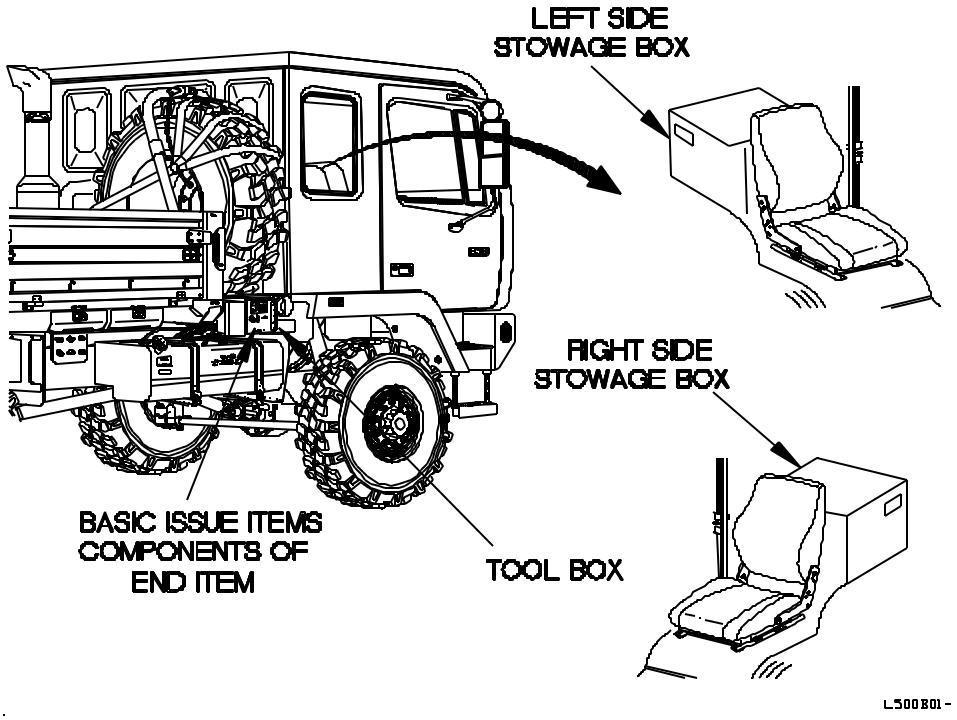
GENERAL

The equipment stowage locator is designed to help inventory items required for safe and efficient operation. The equipment locator is representative of BII and applicable AAL stowage on all M1083A1 series vehicles.

STOWAGE LOCATIONS, ALL VEHICLES

NOTE

On Vehicle S/N 18,549 or lower.

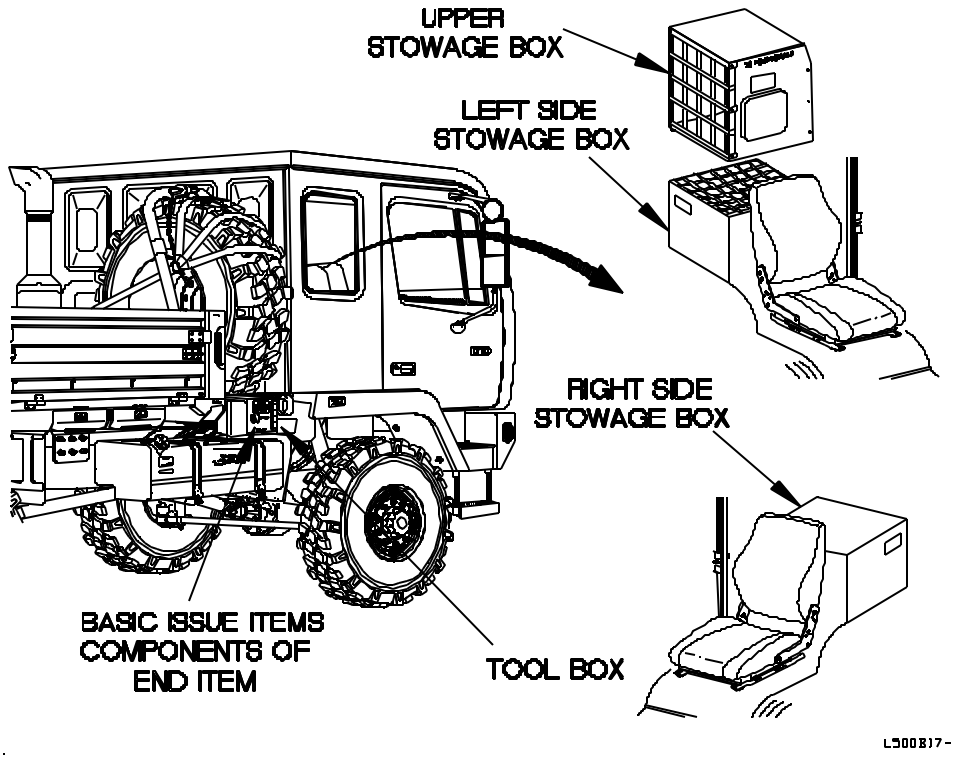


STOWAGE LOCATION/DECAL/STENCIL GUIDE - Continued 0120 00

STOWAGE LOCATIONS, M1089A1

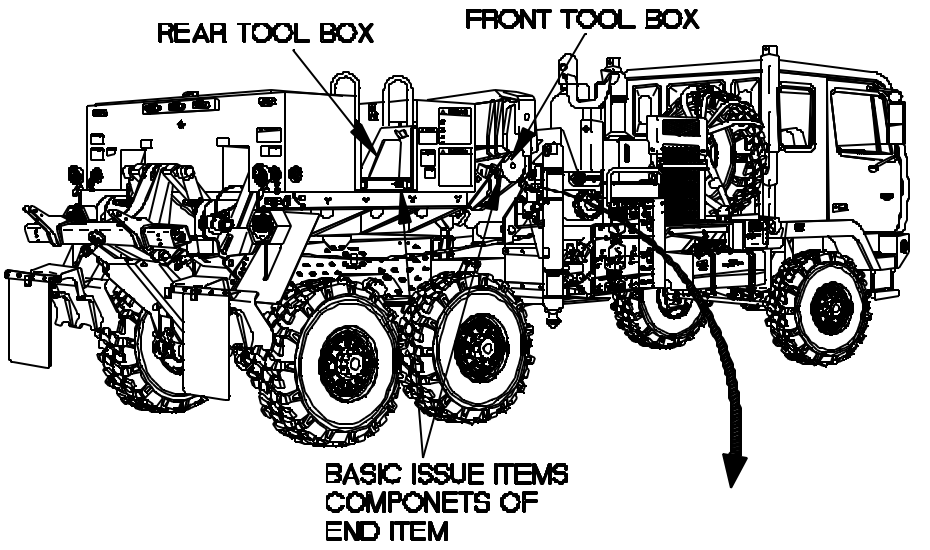
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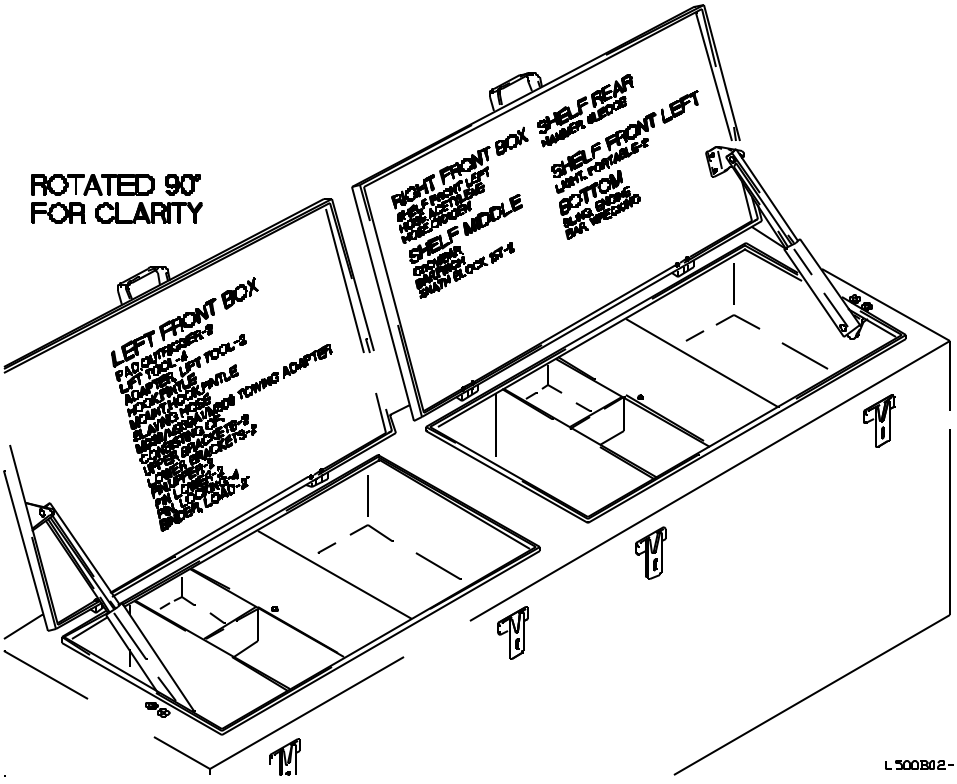
On Vehicle S/N 18,550 or higher.



STOWAGE LOCATION/DECAL/STENCIL GUIDE - Continued 0120 00

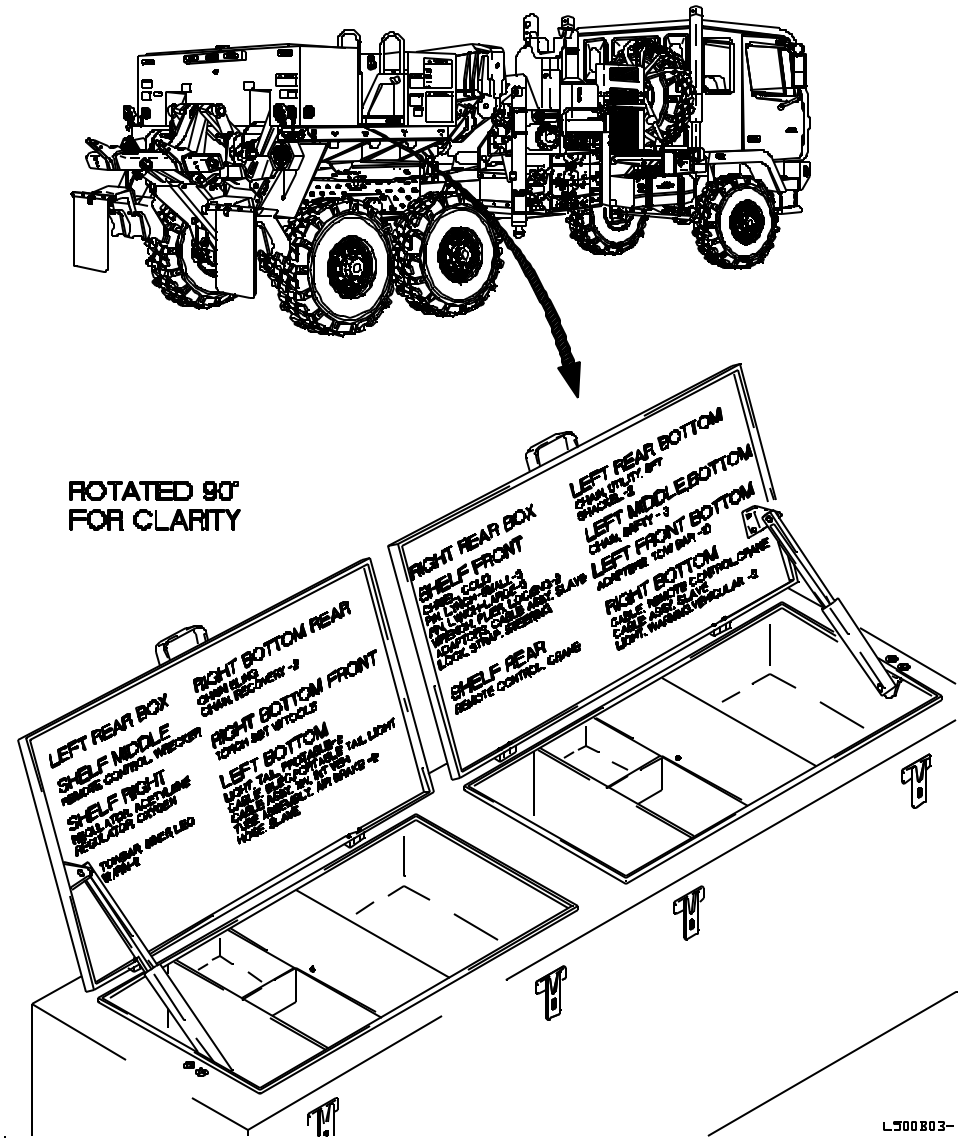
STOWAGE LOCATIONS, M1089A1





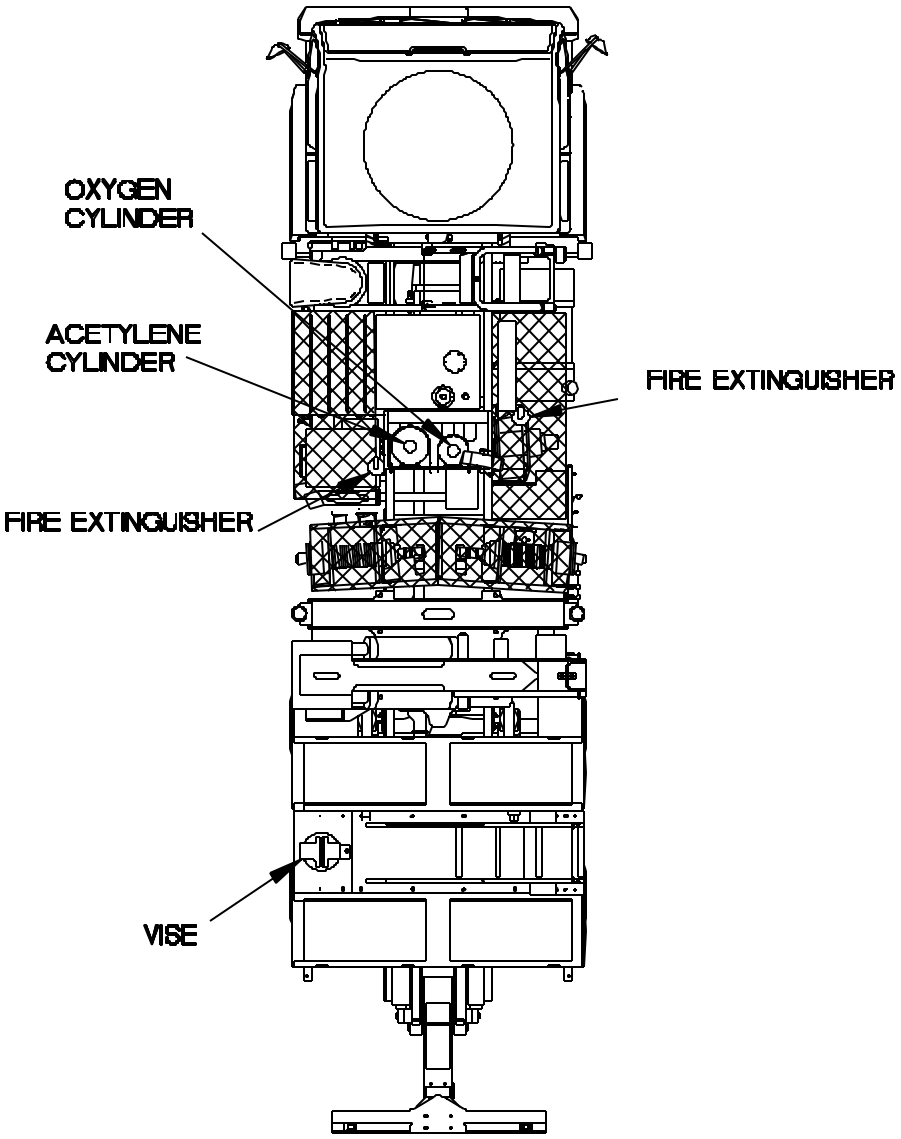
STOWAGE LOCATION/DECAL/STENCIL GUIDE - Continued 0120 00

STOWAGE LOCATIONS, M1089A1 - Continued



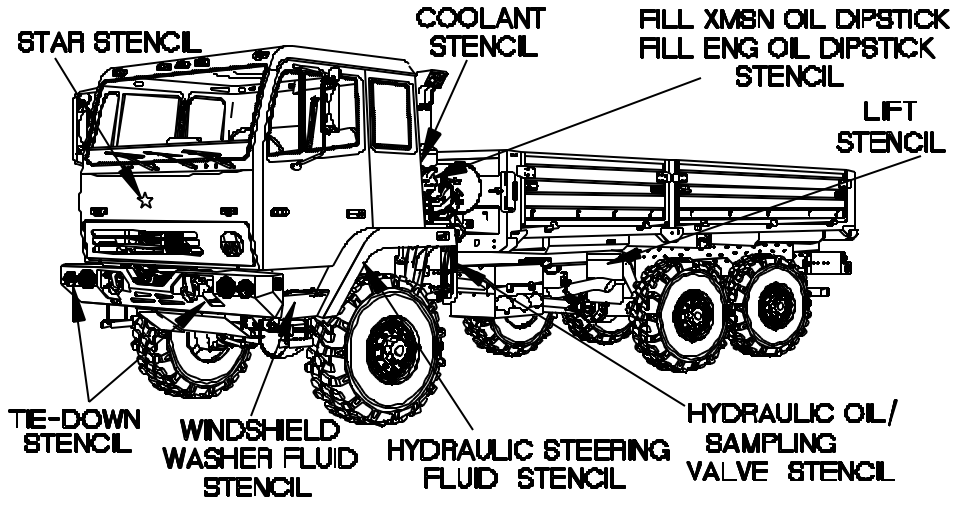
STOWAGE LOCATION/DECAL/STENCIL GUIDE - Continued 0120 00

STOWAGE LOCATIONS, M1089A1 - Continued

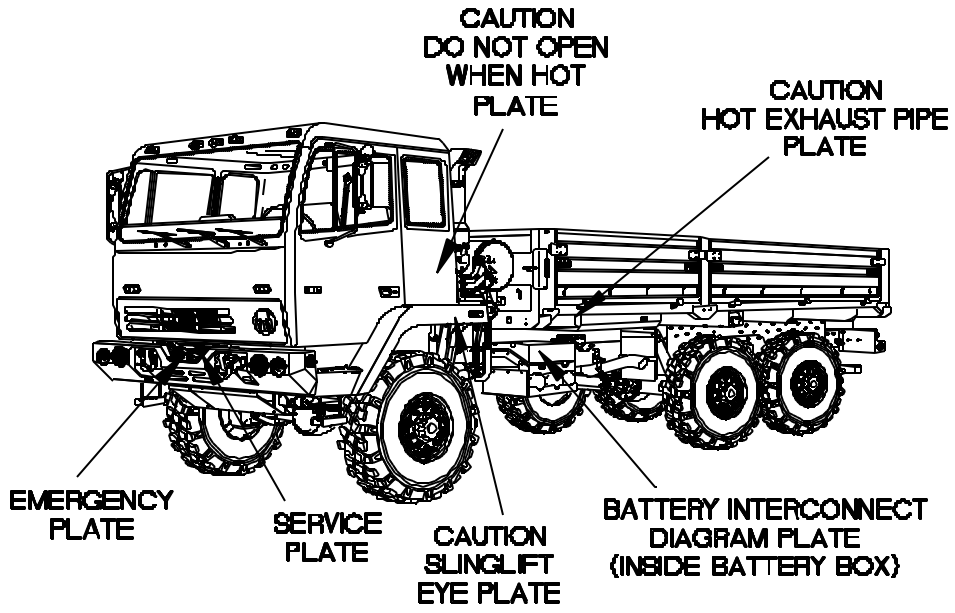


STOWAGE LOCATION/DECAL/STENCIL GUIDE - Continued 0120 00

DECALS/STENCILS, ALL VEHICLES



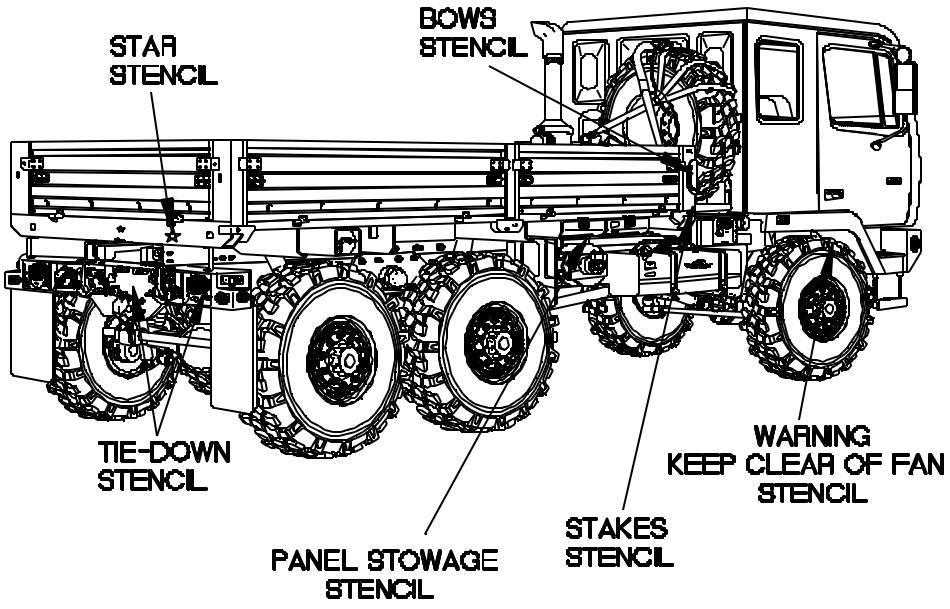
L500805-

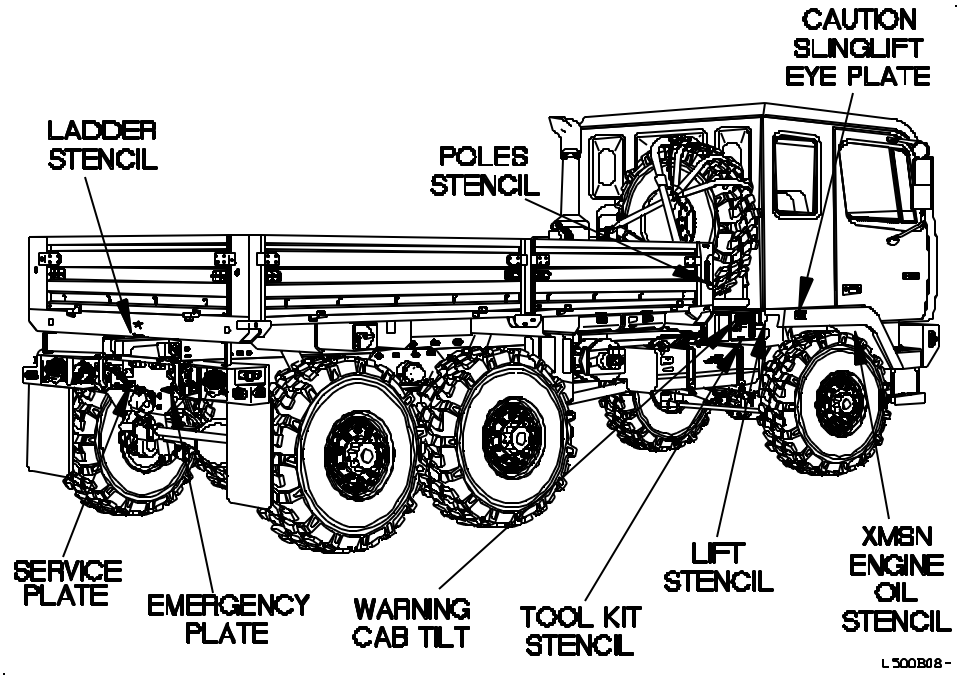


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STOWAGE LOCATION/DECAL/STENCIL GUIDE - Continued 0120 00

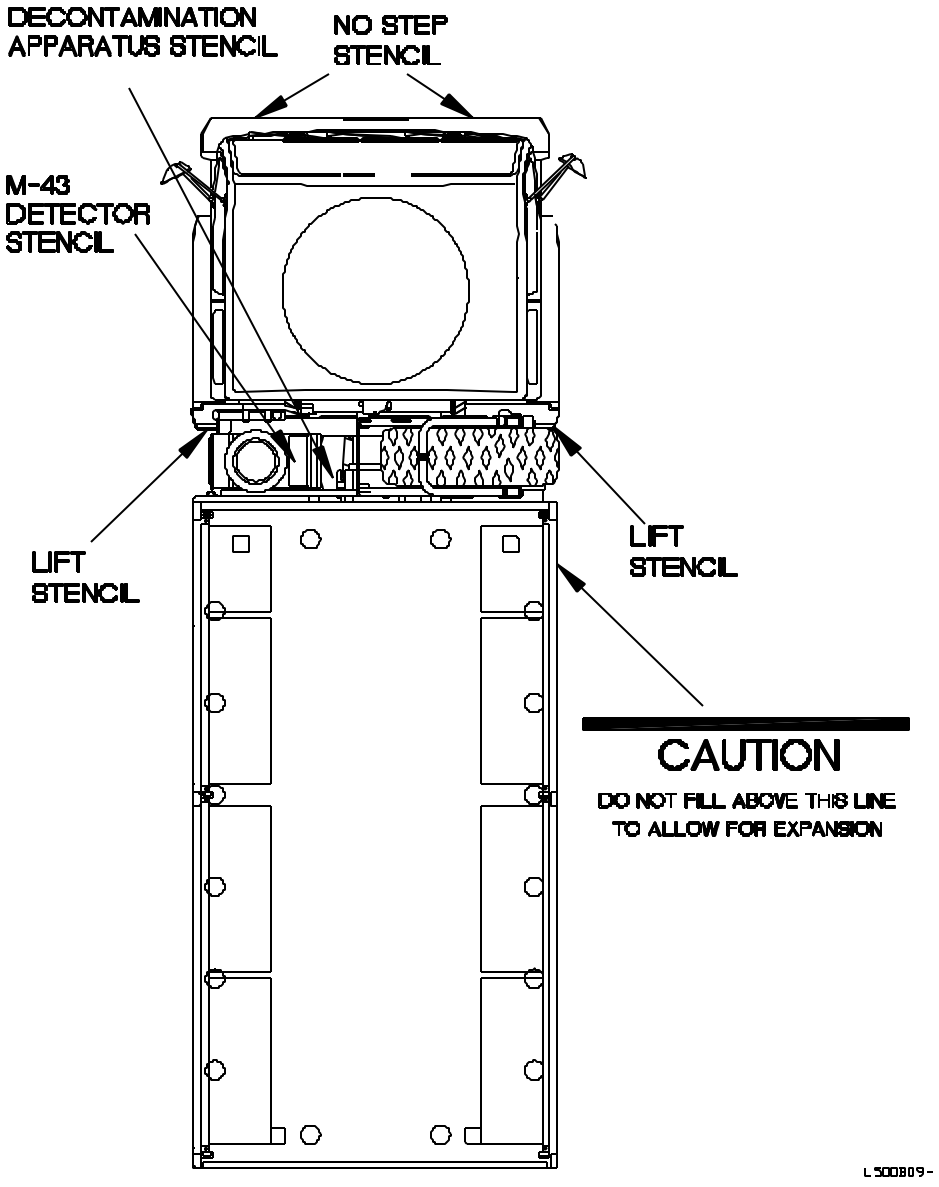
DECALS/STENCILS, ALL VEHICLES - Continued





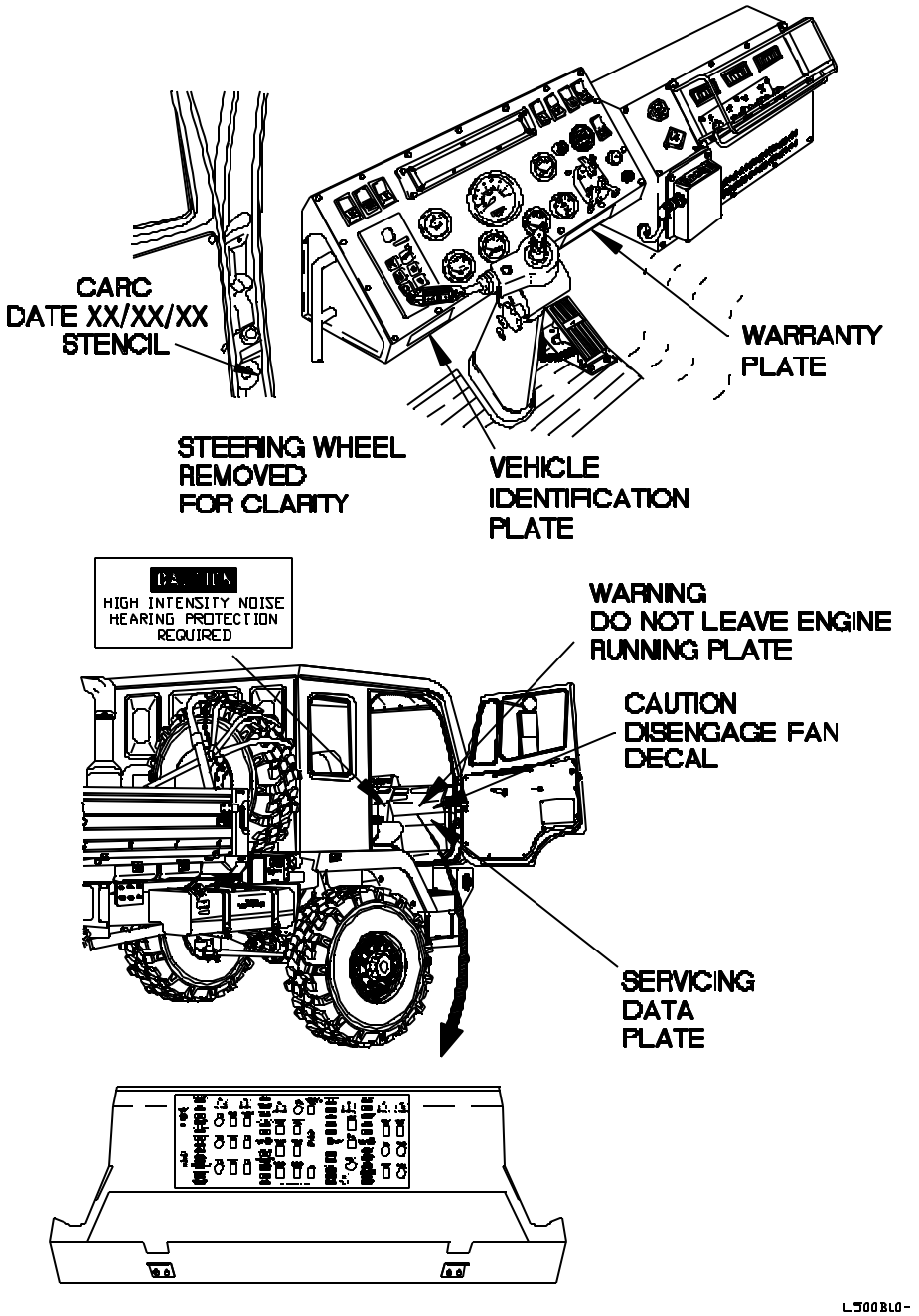
STOWAGE LOCATION/DECAL/STENCIL GUIDE - Continued 0120 00

DECALS/STENCILS, ALL VEHICLES - Continued



STOWAGE LOCATION/DECAL/STENCIL GUIDE - Continued 0120 00

DECALS/STENCILS, ALL VEHICLES - Continued

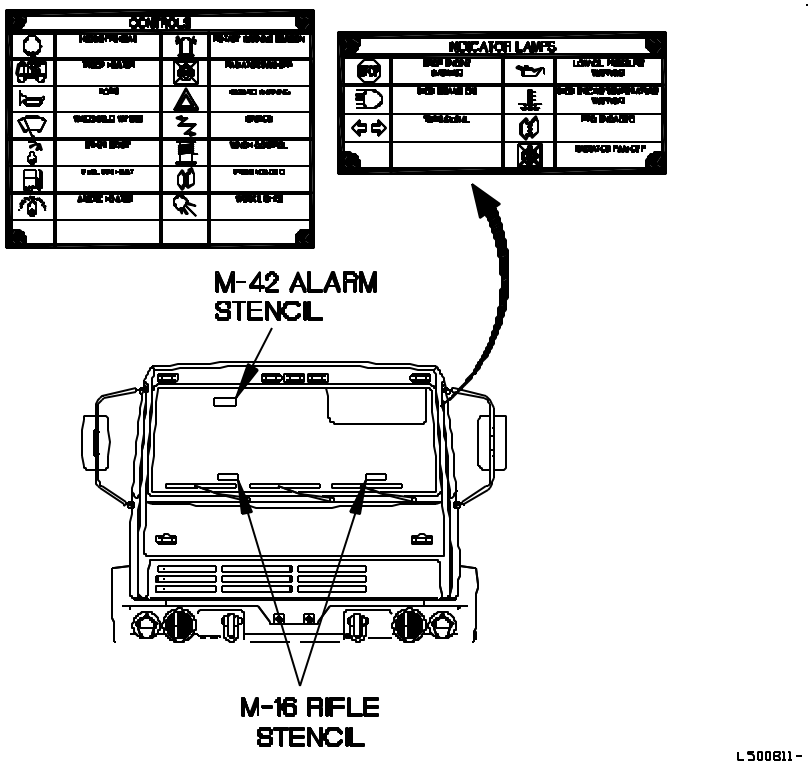


STOWAGE LOCATION/DECAL/STENCIL GUIDE - Continued 0120 00

DECALS/STENCILS, ALL VEHICLES - Continued

NOTE

On Vehicle S/N 18,549 or lower.

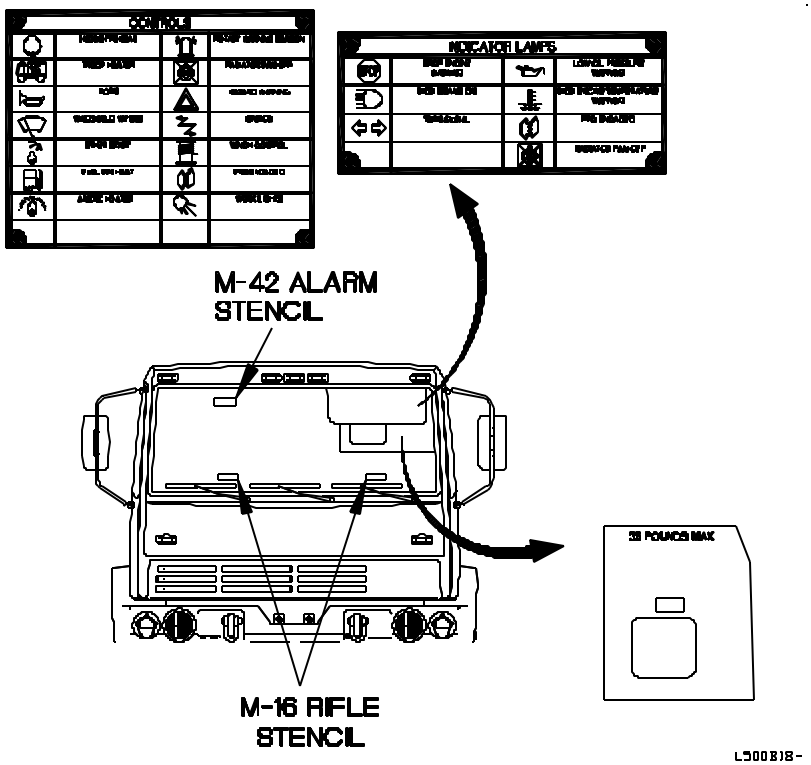


STOWAGE LOCATION/DECAL/STENCIL GUIDE - Continued 0120 00

STENCILS, M1084A1/M1086A1

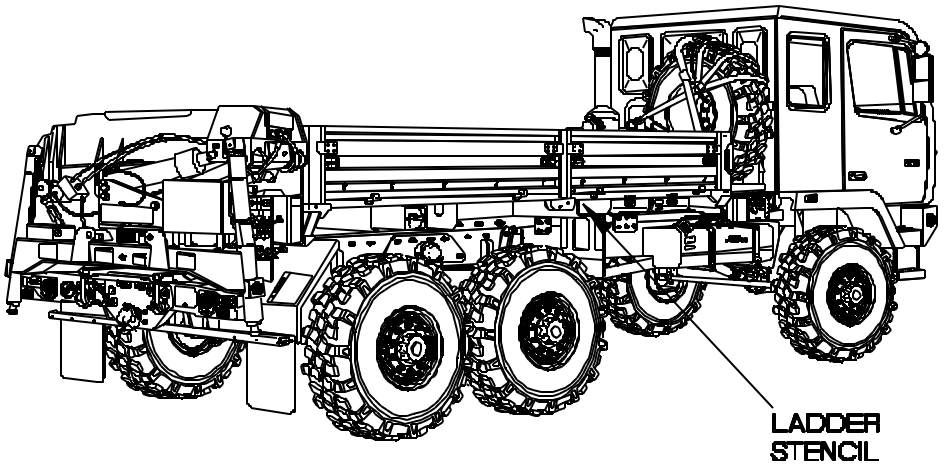
NOTE

On vehicles 18,550 or higher.

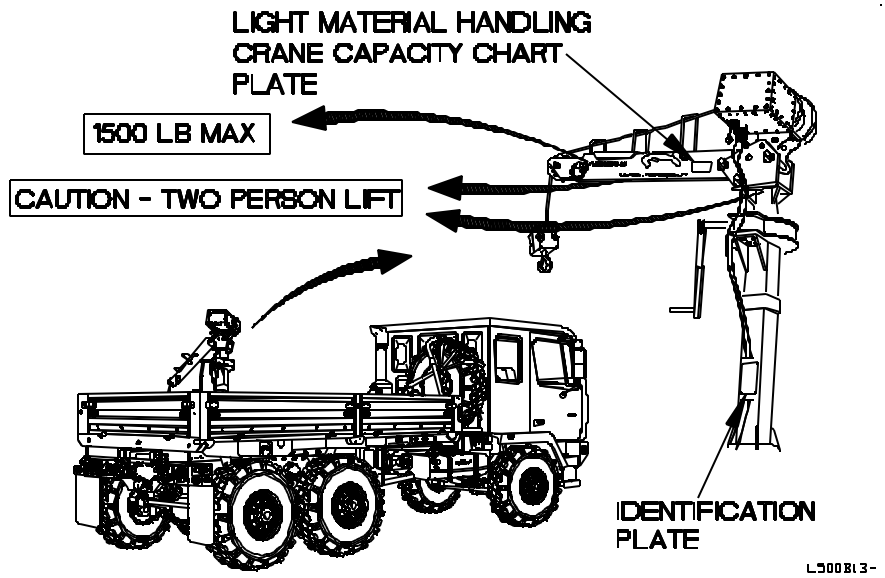


STOWAGE LOCATION/DECAL/STENCIL GUIDE - Continued 0120 00

STENCILS, M1084A1/M1086A1

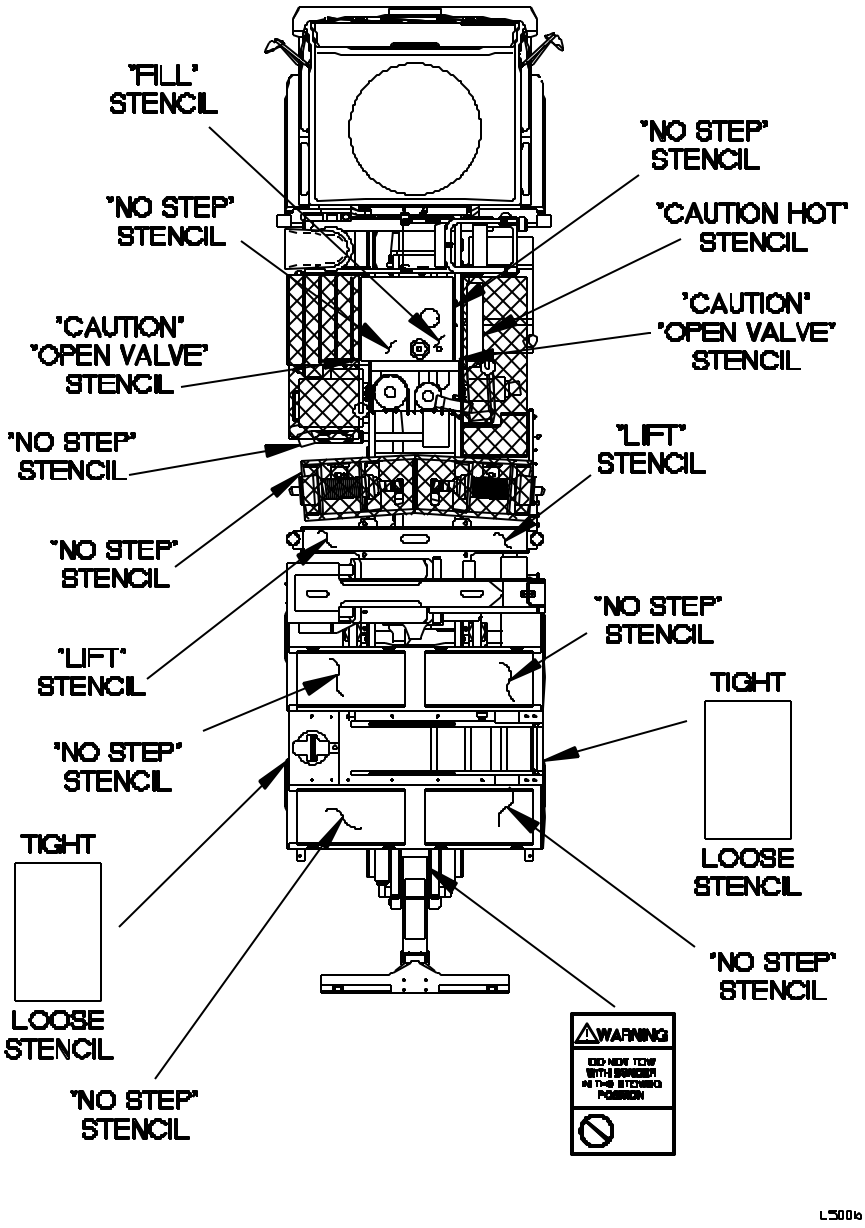


DECAL/DATA GUIDE, VEHICLES WITH LIGHT MATERIAL HANDLING CRANE (LMHC)



STOWAGE LOCATION/DECAL/STENCIL GUIDE - Continued 0120 00

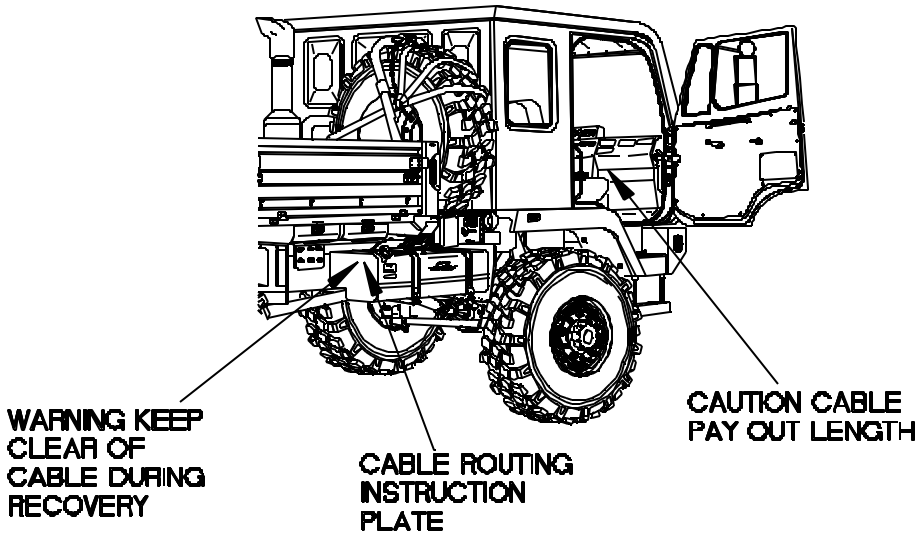
STENCILS, M1089A1



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STOWAGE LOCATION/DECAL/STENCIL GUIDE - Continued 0120 00

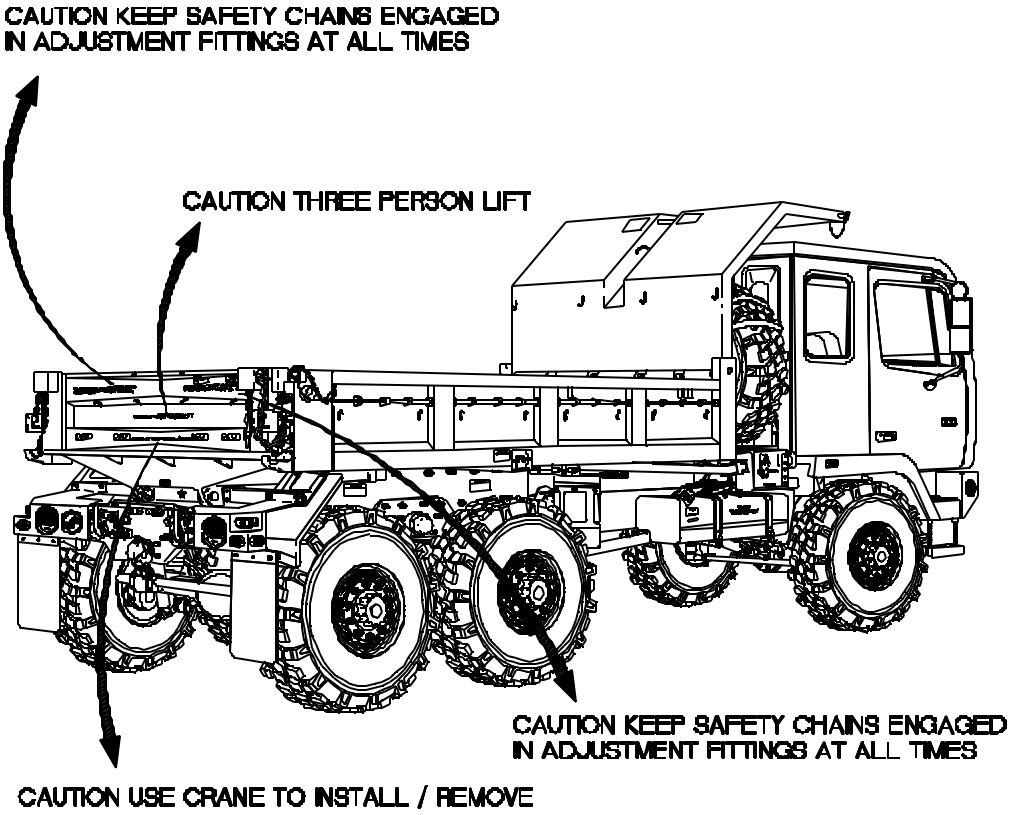
DECAL/DATA PLATE GUIDE, VEHICLES WITH 15K SELF-RECOVERY WINCHES (SRW)



L500B15-

STOWAGE LOCATION/DECAL/STENCIL GUIDE - Continued 0120 00

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COOLANT TEMP Indicator Illuminates....0080 00
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- TRANS TEMP Indicator Does Not Illuminate 0080 00
- TRANS TEMP Indicator Remains Illuminated 0081 00
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- M1089A1 Left Stiffleg Drifts or Does Not Operate 0097 00
- M1089A1 Material Handling Crane (MHC) Left or Right Outrigger (Jack) Drifts or Does Not Operate 0097 00
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- 30K Winch Left or Right Freespool Function Does Not Operate From WRECKER CONTROL PANEL 0080 00
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Load Handling Equipment (LHE) Code 08
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- Of Hydraulic Pressure (Single Stage Pump) 0087 00
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/M1086A1 Material Handling Crane (MHC)
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/M1086A1 Material Handling Crane (MHC)
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/M1086A1 Material Handling Crane (MHC)
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/M1086A1 Material Handling Crane (MHC)
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/M1086A1 Material Handling Crane (MHC)
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/M1086A1 Material Handling Crane (MHC)
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/M1086A1 Material Handling Crane (MHC)
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/M1086A1 Material Handling Crane (MHC)
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/M1086A1 Material Handling Crane (MHC) Swing CCW Does Not Operate From REMOTE CONTROL UNIT 0080 00
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/M1086A1 Material Handling Crane (MHC) Swing Drive Assembly Does Not Operate 0099 00
/M1086A1 Material Handling Crane (MHC) Swing, Telescope, Boom, and Hoist Do Not Operate 0099 00
/M1086A1 Material Handling Crane (MHC) Telescope In Does Not Operate From REMOTE CONTROL UNIT 0080 00
/M1086A1 Material Handling Crane (MHC) Telescope Out Does Not Operate From REMOTE CONTROL UNIT 0080 00
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M1086A1 (Continued)
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M1084A1/M1086A1 Material Handling Crane (MHC) Hoist Does Not Operate 0099 00
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M1084A1/M1086A1 Material Handling Crane (MHC) Hoist Up Does Not Operate From REMOTE CONTROL UNIT 0080 00
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M1084A1/M1086A1 Material Handling Crane (MHC) Hydraulics Troubleshooting 0099 00
M1084A1/M1086A1 Material Handling Crane (MHC) Left Outrigger (Jack) Drifts or Does Not Operate 0099 00
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M1084A1 (Continued)
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M1084A1/M1086A1 Material Handling Crane (MHC) Swing Drive Does Not Operate 0099 00
M1084A1/M1086A1 Material Handling Crane (MHC) Swing, Telescope, Boom, and Hoist Do Not Operate 0099 00
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120 VAC Outlet J507 and/or J508 Does Not Operate 0080 00
120 VAC Outlet J509 and/or J510 Does Not Operate in Blackout Mode 0080 00
120 VAC Outlet J515 Does Not Operate 0080 00
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M1088A1
/M1089A1 (LH) Worklight Does Not Illuminate....0080 00
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Material Handling Crane (MHC) Boom Down Does Not Operate From REMOTE CONTROL UNIT....0080 00
Material Handling Crane (MHC) Boom Down Lockout Does Not Activate....0080 00
Material Handling Crane (MHC) Boom Swing Drive Assembly Does Not Operate....0097 00
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Material Handling Crane (MHC) Hoist Up Lockout Does Not Activate....0080 00
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Material Handling Crane (MHC) Swing CCW Does Not Operate From REMOTE CONTROL UNIT....0080 00
Material Handling Crane (MHC) Swing CW Does Not Operate From REMOTE CONTROL UNIT....0080 00
Material Handling Crane (MHC) Telescope In Does Not Operate From REMOTE CONTROL UNIT....0080 00
Material Handling Crane (MHC) Telescope Out Does Not Operate From REMOTE CONTROL UNIT....0080 00
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- Stifflegs/Left 30K Winch/15K Self-Recovery Winch (SRW) Do Not Operate....0097 00
- Stinger Does Not Operate....0097 00
- Stinger/Telescopic Lift Cylinders/Fold Cylinder/Right 30K Winch Do Not Operate....0097 00
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- One or Both Front Blackout Marker Lights Do Not Illuminate....0080 00
- One Or Both Rear Blackout Marker Lights Do Not Illuminate....0080 00
- One or More Cab Top Marker Lights Do Not Illuminate....0080 00
- RH Door and/or RH Front Marker Lights Do Not Illuminate....0080 00
- Side and/or Rear Marker Lights Do Not Illuminate....0080 00
- Trailer Blackout Marker Lights Do Not Illuminate....0080 00
- Trailer Marker/Taillights Do Not Illuminate....0080 00

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M1084A1/M1086A1 Material Handling Crane (MHC) Boom Does Not Telescope In or Out....0099 00
M1084A1/M1086A1 Material Handling Crane (MHC) Boom Down Does Not Operate From REMOTE CONTROL UNIT....0080 00
M1084A1/M1086A1 Material Handling Crane (MHC) Boom Down Lockout Does Not Activate....0080 00
M1084A1/M1086A1 Material Handling Crane (MHC) Boom Up Does Not Operate From REMOTE CONTROL UNIT....0080 00
M1084A1/M1086A1 Material Handling Crane (MHC) Boom Up Lockout Does Not Activate....0080 00
M1084A1/M1086A1 Material Handling Crane (MHC) Does Not Operate....0080 00
M1084A1/M1086A1 Material Handling Crane (MHC) Does Not Operate From REMOTE CONTROL UNIT....0080 00
M1084A1/M1086A1 Material Handling Crane (MHC) Hand Pump Does Not Operate....0099 00
M1084A1/M1086A1 Material Handling Crane (MHC) Hoist Does Not Operate....0099 00
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M1084A1/M1086A1 Material Handling Crane (MHC) Hoist Up Does Not Operate From REMOTE CONTROL UNIT....0080 00
M1084A1/M1086A1 Material Handling Crane (MHC) Hoist Up Lockout Does Not Activate....0080 00
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By Order of the Secretary of the Army:

PETER J. SCHOOMAKER
General, United States Army
Chief of Staff

*O*fficial:



SANDRA R. RILEY
Administrative Assistant to the
Secretary of the Army
0501305

By Order of the Secretary of the Air Force:

RONALD R. FOGLEMAN
General, United States Air Force
Chief of Staff

*O*fficial:

HENRY VICCELLIO, JR.
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10	15-33 19-6	15-7 19-2		4		Item 10. Change Illustration. Reason: Text calls out 90-degree fitting. Art shows straight fitting. Text is correct. Step (4) of removal says to disconnect four hydraulic hoses from manifold. The correct number of hydraulic hoses is five. correct the text to reflect the actual quantity of hydraulic hoses. The supporting illustration is correct.

SAMPLE

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METRIC CONVERSION CHART

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches Square	Centimeters	6.451
Square Feet Square	Meters	0.093
Square Yards Square	Meters	0.836
Square Miles Square	Kilometers	2.590
Acres Square	Hectometers	0.405
Cubic Feet Cubic	Meters	0.028
Cubic Yards Cubic	Meters	0.765
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.35
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Centimeters	Cubic Inch	0.060
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621

TEMPERATURE CONVERSIONS

5/9 (°F-32) = °C
212° Fahrenheit is equivalent to 100° Celsius
90° Fahrenheit is equivalent to 32.2° Celsius
32° Fahrenheit is equivalent to 0° Celsius
9/5 C° + 32 = F°

PIN: 077750-000