***ARMY TM 9-2320-387-10**
AIR FORCE TO 36A12-1A-3061-1
MARINE CORPS TM 11033-OR

TECHNICAL MANUAL
OPERATOR'S MANUAL
FOR

TRUCK, UTILITY: S250 SHELTER CARRIER, 4X4, M1113 NSN 2320-01-412-0143 (EIC B6B)

TRUCK, UTILITY: UP-ARMORED CARRIER, 4X4, M1114 NSN 2320-01-413-3739 (EIC B6C)

TRUCK, UTILITY: EXPANDED CAPACITY, ARMAMENT CARRIER, M1151 NSN 2320-01-518-7330 (EIC BA5)

TRUCK, UTILITY: EXPANDED CAPACITY, ARMAMENT CARRIER, IAP/ARMOR READY, M1151A1 NSN 2320-01-540-2038 (EIC BEG)

TRUCK, UTILITY: EXPANDED CAPACITY, ENHANCED, M1152 NSN 2320-01-518-7332 (EIC BA6)

TRUCK, UTILITY: EXPANDED CAPACITY, ENHANCED, IAP/ARMOR READY, M1152A1 NSN 2320-01-540-2007 (EIC BEH)

TRUCK, UTILITY: COMMAND AND CONTROL/GENERAL PURPOSE VEHICLE, M1165 NSN 2320-01-540-1993 (EIC BEK)

TRUCK, UTILITY: COMMAND AND CONTROL/GENERAL PURPOSE VEHICLE, IAP/ARMOR READY, M1165A1 NSN 2320-01-540-2017 (EIC BEJ)

TRUCK, UTILITY: EXPANDED CAPACITY, TOW ITAS CARRIER, M1167 NSN 2320-01-544-9638 (EIC BF9)

TRUCK, AMBULANCE, 4-LITTER, 4X4, M997A3 NSN 2310-01-595-3986

***SUPERSEDURE NOTICE:** This TM supersedes TM 9-2320-387-10 dated 09 January 2012 and all changes.

HEADQUARTERS, DEPARTMENTS OF THE ARMY, AIR FORCE, AND HEADQUARTERS, US MARINE CORPS
28 SEPTEMBER 2012

Marine Corps PCN 184 110330 00

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1.	Before	Left Front, Side Exterior	**DRIVER** **CAUTION** If leaks are detected in area of transfer case oil cooler, do not attempt to tighten retaining nuts. Internal damage to transfer case oil cooler may result. Notify field maintenance. **NOTE** If leakage is detected, further investigation is needed to determine location and cause of leak.	
			a. Visually check underneath vehicle for any evidence of fluid leakage.	Any brake fluid leaks; class III leak of oil, fuel, or coolant.
			b. Visually check front and left side of vehicle for obvious damage that would impair operation.	Any damage that prevents operation.
			NOTE Perform following check prior to airlift procedure.	
			c. Inspect shackle for loose or missing mounting hardware.	Loose or missing hardware.
2.	Before	Left Side Tires	**DRIVER** **WARNING** Operating a vehicle with a tire in an underinflated condition or with a questionable defect may lead to premature tire failure and may cause equipment damage and injury or death to personnel. **NOTE** Radial tire is a bidirectional tire and tread may be positioned in either direction.	

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			Visually check tires for underinflation and defects.	Tire missing, deflated, or unserviceable.
3.	Before	Rear Exterior	**DRIVER**	
			NOTE If leakage is detected, further investigation is needed to determine location and cause of leak.	
			a. Visually check underneath vehicle for evidence of fluid leakage.	Any brake fluid leaks; class III leak of oil, fuel, or coolant.
			b. Visually check rear of vehicle for obvious damage that would impair operation.	Any damage that prevents operation.
			c. Inspect bumper supports for cracks before towing trailer.	Any damage that prevents operation.
			NOTE Perform following check prior to airlift procedure.	
			d. Inspect shackle for loose or missing mounting hardware.	Loose or missing hardware.
4.	Before	Right Front, Side Exterior	**DRIVER**	
			NOTE If leakage is detected, further investigation is needed to determine location and cause of leak.	
			a. Visually check underneath vehicle for evidence of fluid leakage.	Any brake fluid leaks; class III leak of oil, fuel, or coolant.
			b. Visually check front and right side of vehicle for obvious damage that would impair operation.	Any damage that prevents operation.

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			NOTE Perform following check prior to airlift procedure.	
			c. Inspect shackle for loose or missing mounting hardware.	Loose or missing hardware.
5.	Before	Exhaust Louvers (M997A3)	**DRIVER** Check air exhaust louvers to ensure they are clear and free of debris that would restrict air flow. Clean any dirt or debris from louvers.	Any dirt or debris on exhaust louvers.
6.	Before	Right Side Tires	**DRIVER** **WARNING** Operating a vehicle with a tire in an underinflated condition or with a questionable defect may lead to premature tire failure and may cause equipment damage and injury or death to personnel. **NOTE** Radial tire is a bidirectional tire and tread may be positioned in either direction.	
			Visually check tires for underinflation and defects.	Tire missing, deflated, or unserviceable.
7.	Before	Front	**DRIVER** **NOTE** If leakage is detected, investigation is needed to determine location and cause of leak.	
			a. Visually check front of vehicle for obvious damage that would impair operation.	Any damage that prevents operation.
			b. Visually check underneath vehicle for evidence of fluid leakage.	Any brake fluid leaks; class III leak of oil, fuel, or coolant.

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8.	Before	Power Steering Reservoir (Serial Numbers 196900 and Below)	**DRIVER** **CAUTION** • Do not permit dirt, dust, or grit to enter power steering reservoir. Damage to power steering system will result if power steering fluid becomes contaminated. • Do not overfill power steering reservoir. Damage to power steering system will result. Check fluid in power steering reservoir (WP 0117). Fluid should be between **HOT** and **COLD** marks. Add fluid if level is below **COLD** mark.	

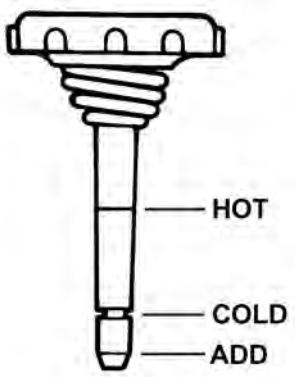


Figure 1. Power Steering Reservoir Cap (Serial Numbers 196900 and Below).

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9.	Before	Power Steering Reservoir (Serial Numbers 196901 and Above)	**DRIVER** **CAUTION** • Do not permit dirt, dust, or grit to enter power steering reservoir. Damage to power steering system will result if power steering fluid becomes contaminated. • Do not overfill power steering reservoir. Damage to power steering system will result. Check sightglass for proper fluid level. If fluid is **HOT**, level should be at top of sightglass. If fluid is **COLD**, fluid should be in center of sightglass. Add fluid if level is at bottom of sightglass.	

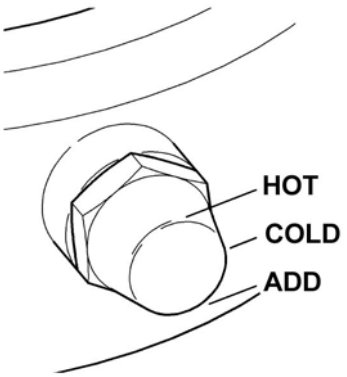


Figure 2. Power Steering Reservoir Cap (Serial Numbers 196901 and Above).

10.	Before	Serpentine Drivebelt and Pulleys	**DRIVER** a. Visually check drive and idler pulleys for evidence of excessive wear or misalignment.	Pulleys worn, broken, or misaligned.

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			b. Check if serpentine drivebelt is missing, broken, cracked, frayed, loose, misaligned, or split.	Serpentine drivebelt is missing or broken. Drivebelt fiber has more than one crack 1/8 in. (3.2 mm) in depth or 50% of belt thickness, or frays more than 2 in. (5.1 cm) long. Drivebelt is loose or misaligned (off one or more grooves on any pulley).

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
11.	Before	Cooling System	**DRIVER** **WARNING** If engine has been recently operated, do not remove radiator cap to check coolant level. Cooling system is under pressure, and escaping steam or coolant can cause burns. **CAUTION** • Type 1, ethylene glycol (green), and Type 2, propylene glycol (purple), should never be mixed due to their difference in toxic properties. Failure to comply may result in damage to equipment. • Using antifreeze without mixing it with water can cause high operating temperatures, blockage of cooling system passages, and damage to water pump seals. **NOTE** Type 1 antifreeze is an ethylene glycol based coolant, green in color. Type 1 can be added to factory-filled pink coolant. When it becomes necessary to flush factory coolant, Type 1, ethylene glycol, will be used. When mixing Type 1 antifreeze with water, distilled water is recommended. Tap water should only be used in emergency situations. Check coolant level in coolant tank. Level should be at or above **FULL COLD** line. Add coolant if below **FULL** line.	
12.	Before	Doors (M1114 Only)	**DRIVER** Check door for proper operation of door lock.	Door does not lock.

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
13.	Before	Seat and Seatbelts	**DRIVER** **NOTE** Vehicle operation with inoperative seatbelts may violate AR 385-10.	
			a. Check all seatbelts for security, damage, and operation of buckle and clasp ends.	
			b. Check gunner's restraint for security, damage, and operation of harness, tail strap, sling seat assembly, turret brackets, mount retractor, rotary buckle quick release and clasp ends.	Harness, tail strap, sling seat assembly is missing, frayed, damaged or does not fasten, adjust, retract or operate.
			c. Check operation of seat adjusting mechanism (driver's seat only).	Seat adjustment lock broken or missing.
14.	Before	Fire Extinguisher	**DRIVER** a. Check for missing or damaged fire extinguisher.	Fire extinguisher missing or damaged.
			b. Check gauge for proper pressure of about 150 psi (1,034 kPa).	Pressure gauge needle in recharge area.
			c. Check for damaged or missing seal.	Seal broken or missing.

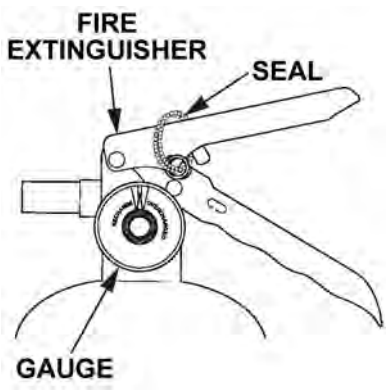


Figure 3. Fire Extinguisher.

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
15.	Before	Automatic Fire Extinguishing System	**DRIVER** **WARNING** Always assume the fire extinguisher is charged, even if the gauge does not show any pressure. Failure to comply may cause equipment damage and injury or death to personnel. **CAUTION** Do not handle fire extinguisher unless anti-recoil plug is installed in valve outlet port and manual lever lock pin is installed in lever lock holes. **NOTE** • Smoking in a vehicle with Automatic Fire Extinguishing System (AFES) installed may activate sensor and cause system to discharge. • Large, high intensity spotlights may activate sensor and cause system to discharge. a. Check that pressure gauges on fire extinguishers read at or above minimum pressure on extinguisher label using Minimum Pressure table below.	Pressure gauge reads below pressure shown on label.

Figure 4. AFES Pressure Gauge.

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:

TEMP. °F	-40	-22	-4	14	32	50	68	86	104	122	140	158
TEMP. °C	-40	-30	-20	-10	0	10	20	30	40	50	60	70
P min, PSIG	585	620	655	690	730	770	810	850	905	955	1005	1060

Figure 5. Minimum Pressure at Temperature.

WARNING

Do not remove manual lever lock pin. Injury to personnel may happen if fire suppression system is accidently discharged.

CAUTION

- Ensure that stowed items do not interfere with fire suppression system operation. Do not stow any items around valve outlet port nozzles that may negate extinguishers disbursement radius in the case of a fire. Failure to comply may prevent proper fire suppression system operation.
- Ensure optical fire sensors are kept clean. If optical fire sensors are not kept clean, it could decrease system ability to quickly and correctly identify a fire and activate automatic fire extinguishing system.

b. Check system wiring harness and sensors for presence, security and damage.

Wiring harness or sensor box is disconnected, improperly installed, damaged or missing.

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

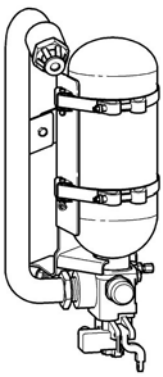
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			 *Figure 6. AFES Wiring Harness and Sensor.*	
			c. Check for loose, improperly installed, or missing fire extinguisher, manual lever lock pin or tube assembly. d. Check that anti-recoil plugs are properly stowed.	Fire extinguisher, manual lever lock pin or tube assembly missing.
			 *Figure 7. AFES Fire Extinguisher.*	
			e. Turn rotary switch to **RUN** position, check control module LED indicator for a continuous **ON** green light to see if system is fully functional. f. Check for damaged or missing safety wire.	Green LED indicator light is off, steady blink, slow blink, or double blink. Safety wire is damaged or missing.

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

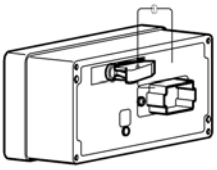
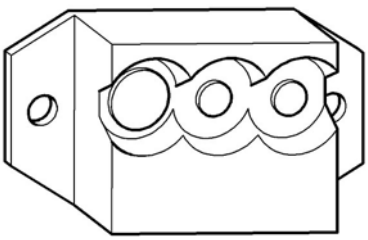
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			 *Figure 8. AFES Rotary Switch.*	
			g. Check fire sensors LED for continuous green light and cleanliness.	LED light does not come on, is blinking, or covered with dust or any foreign object.
			 *Figure 9. AFES Fire Sensor LED.*	
16.	Before	NBC (CBRN) System (M997A3)	**DRIVER** a. Check NBC (CBRN) system power switch for proper operation and security of mounting. All system fuses, including spares, should be present. b. Check NBC (CBRN) heater for proper operation. c. Check for steady flow of air at hose outlets.	Power switch inoperable or fuses missing. Heater inoperable. No steady flow of air present at hose outlets.

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
17.	Before	Gear Shifter Lever	**DRIVER** a. Check transmission shift lever operation. Shift transmission lever through all operating ranges. Lever should move freely through all range positions.	Lever inoperable or binds between range detents.
			b. Check transfer shift lever operation. With transmission in N, shift transfer lever through all range positions. Lever should move freely through all range positions.	Lever inoperable or does not engage in all ranges with engine not running.
18.	Before	Instrument Panel	**DRIVER** **WARNING** If gauges, instruments, or instrument lights are inoperable or not within ranges described in these checks, immediately shut off engine and notify your supervisor or unit maintenance personnel. Continued operation of vehicle may result in injury to personnel or damage to equipment. **NOTE** If engine is warm, wait to start light may not come on. During cranking or after starting, light may go on and off a few times.	
			a. Check wait to start light and brake warning light. Turn rotary switch to **RUN**. Wait to start and brake warning light should come on.	Wait to start light does not come on when engine is cold, or wait light stays on continually. Brake warning light does not come on.

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

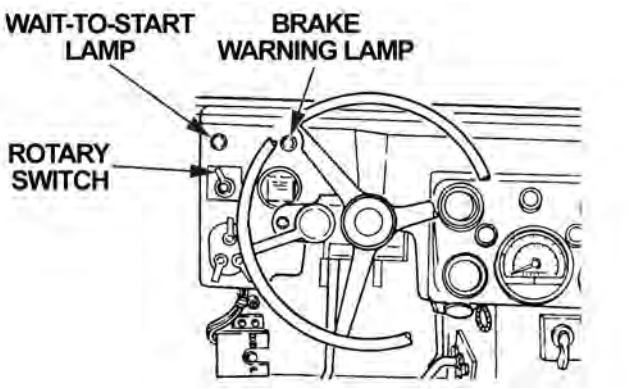
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			 *Figure 10. Rotary Switch, Wait-To-Start Lamp, and Brake Warning Lamp.*	
			b. Start engine and check following:	Engine will not start.
			1. Engine oil pressure gauge.	Oil pressure is less than 10 psi (69 kPa) at hot idle or 40-45 psi (276-310 kPa) at 2000 RPM.
			2. Voltmeter.	Voltmeter needle stays in yellow or red range.
			3. Air restriction gauge.	Air restriction indicator reaches red zone.
			4. Brake warning light should go off when hand brake is released.	Brake warning light stays on after hand brake is released or comes on while driving.
			5. Check fuel gauge.	

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			6. Check coolant temperature gauge.	Coolant temperature gauge inoperative or reads greater than 250º F (120º C) and/or overheat lamp illuminates.
			c. Check transmission indicator lamp.	Transmission indicator lamp stays on after engine has started or comes on while driving.

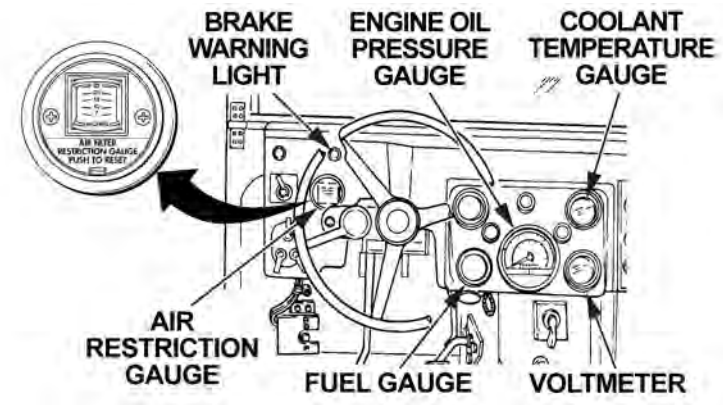


Figure 11. Instrument Panel Gauges.

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

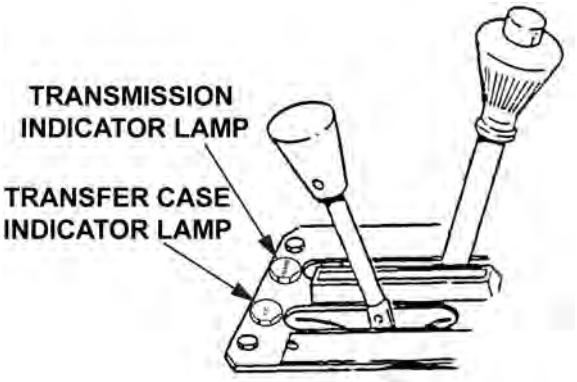
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			 *Figure 12. Transmission and Transfer Case Gauges.*	
			d. Check transfer case indicator lamp.	Transfer case indicator lamp stays on while vehicle is in H (high) or N (neutral). Transfer case indicator lamp stays off while vehicle is in HL (high lock) or L (low).

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
19.	Before	Air conditioner	**DRIVER** **CAUTION** • Prior to engagement and during operation of the A/C, ensure the voltmeter needle is in the green zone. Failure to comply may result in damage to equipment. • For A/C system operation in ambient temperatures of 75° F or less, ensure that all instrument panel vents are fully open and the fan switch is on high. Failure to comply may result in damage to equipment. **NOTE** If ambient air temperature is below 40° F (4° C), A/C system will not operate. Move vehicle to warmer location or run vehicle, with heat ON, until engine is at normal operating temperature.	
			a. Inspect rear evaporator air filter for dirt or damage.	Rear evaporator air filter is dirty or damaged.
			b. Turn air conditioner on. Wait 5 minutes to allow temperature to stabilize. Check vents for cool air.	Air is not cooler than ambient temperature.
20.	Before	Steering	**DRIVER** Check steering wheel for operation. With engine running, turn steering wheel from left to right. Steering wheel should move freely.	Steering wheel inoperable or binds.
21.	Before	Brakes	**DRIVER** **NOTE** Engine must be warmed up and idling, transmission in OD (overdrive), transfer in H (high), and parking brake released to perform following check.	

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			a. Check brake pedal travel. With vehicle at idle, transmission in OD, allow vehicle to move forward. As vehicle moves, slowly depress brake pedal. Pedal should travel 1 to 1 ½ in. (2.5 to 3.8 cm) before brakes take hold. After brakes take hold, pedal may exceed 1 to 1 ½ in. (2.5 to 3.8 cm) travel. This is normal.	Brakes will not stop vehicle.
			b. Check parking brake. With parking brake fully applied, transmission in OD or R, and transfer in H, vehicle should not move.	Parking brake inoperable or unable to hold vehicle.
			c. Check parking brake lever safety mechanism to ensure that it latches when parking brake is applied.	Parking brake lever safety mechanism is not functioning properly.
22.	Before	Weapon Station (M1114, M1151, M1151A1, M1167)	**DRIVER** **NOTE** Weapon station binding should be checked with weapon system or equivalent weight applied to turret. Refer to appropriate system TM to determine weight of weapon system.	
			a. Check weapon station for binding by rotating 360º in both directions at least five times.	Weapon station binds.

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			b. Check armament mounting plate and bearing sleeve for security of mounting and obvious damage that would impair operation.	Armament weapons required for missions and mounting plate or bearing sleeve missing or any damage that prevents or impair mounting of armament weapons.
23.	Before	Traversing Unit (M1114, M1151A1, M1167)	**DRIVER** **NOTE** If equipped with and operational Battery Powered Motorized Traversing Unit (BPMTU), a not fully mission capable Manual Traversing Unit (MTU) does not deadline weapon system.	
			a. Check Manual Traversing Unit (MTU) gear linkage assembly for bent, broken, or missing linkage.	Gearlinkage assembly bent, broken, or missing linkage.
			b. Inspect MTU support bracket for loose or missing linkage.	Loose or missing mounting hardware.
			c. Inspect traversing handle for cracks or loose screws and quick release pin for damage or missing.	Handle missing or unserviceable, or quick release pin damaged or missing.
			d. Check MTU cover for damage or missing.	MTU cover is missing.
			e. Check disengage handle for proper operation.	Disengage handle not operating properly.
			f. Check operation of MTU while engaged with weapon station by rotating 360º in both directions at least five times.	

Table 1. Preventive Maintenance Checks and Services - Before - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:

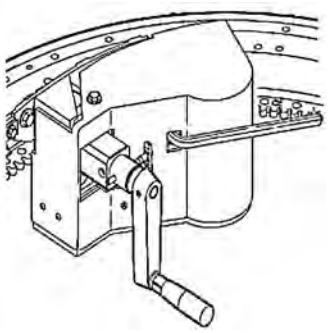


Figure 13. Manual Traversing Unit.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - DURING

INITIAL SETUP:

References

DA Form 2404

Table 1. Preventive Maintenance Checks and Services - During.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1.	During	Controls and Indicators	**DRIVER** a. Monitor fuel gauge.	
			b. Monitor engine oil pressure gauge.	Engine oil pressure gauge reads less than 10 psi (69 kPa) at hot idle or 40–45 psi (276–310 kPa) at 2000 RPM.
			c. Monitor coolant temperature gauge.	Coolant temperature gauge reads greater than 250º F (120º C) and/or overheat lamp illuminates.
			d. Monitor air restriction gauge.	Air restriction gauge indicates restriction in air cleaner.
			e. Monitor voltmeter.	Voltmeter indicates a loss of voltage.
			f. Monitor brake warning light.	If light stays lit, brakes may not function properly.
			g. Check speedometer operation.	Speedometer needle does not move, jerks unevenly during sustained speeds, or appears stuck.

Table 1. Preventive Maintenance Checks and Services - During - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2.	During	Brakes	**DRIVER** Check brakes for pulling or grabbing.	Brakes pull or grab.
3.	During	Steering	**DRIVER** Be alert for vibration, excessive sway, leaning to one side, or unstable handling. Check steering response for unusual free play, binding, or shimmy.	Handling is unstable; turning is difficult; unusual free play, binding, or shimmy detected.
4.	During	Accelerator Pedal	**DRIVER** Check response to accelerator feed. Check for sticking or binding pedal.	Pedal sticking or binding.
5.	During	Powertrain	**DRIVER** Be alert for unusual noises or vibrations from engine, transmission, transfer case, differentials, propeller shafts, axle shafts, or wheels.	Unusual noise or vibration detected.
6.	During	Transmission	**DRIVER** Check transmission for proper operation.	Transmission slips or will not shift.
7.	During	Air Conditioner (All Models Except M1113 and M997A3)	**DRIVER** **CAUTION** • Prior to engagement and during operation of the A/C, ensure the voltmeter needle is in the green zone. Failure to comply may result in damage to equipment. • For A/C system operation in ambient temperatures of 75° F or less, ensure that all instrument panel vents are fully open and the fan switch is on high. Failure to comply may result in damage to equipment. **NOTE** Perform following inspection only if air conditioner is required for climatic conditions.	

Table 1. Preventive Maintenance Checks and Services - During - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			Turn air conditioner on. Wait 5 minutes to allow temperature to stabilize. Check vents for cool air.	Climatic conditions require air-conditioning and A/C is inoperable, or outlet duct air is not cooler than ambient temperature.
8.	During	Ambulance Air-conditioner (M997A3)	**DRIVER** **CAUTION** • Prior to engagement and during operation of the A/C, ensure the voltmeter needle is in the green zone. Failure to comply may result in damage to equipment. • For A/C system operation in ambient temperatures of 75° F or less, ensure that all instrument panel vents are fully open and the fan switch is on high. Failure to comply may result in damage to equipment. **NOTE** Perform the following inspection only if the air conditioner is required for climatic conditions.	
			Turn air conditioner on and set blower to maximum cooling only speed settings. Wait 5 minutes to allow temperature to stabilize. Check outlet ducts for cool air.	Climatic conditions require air conditioning and A/C is inoperable, and if outlet duct air is not cooler than ambient temperature.
9.	During	De-Icer	**DRIVER** **NOTE** Perform following inspection only if de-icer is required for climatic conditions.	

Table 1. Preventive Maintenance Checks and Services - During - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			Turn de-icer on. Check to see if de-icer functions by removing steam, frost, or ice from windshield.	De-icer does not operate and mission requires de-icer.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - AFTER

INITIAL SETUP:

References

AR 385-10

DA Form 2404

Table 1. Preventive Maintenance Checks and Services - After.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1.	After	Gear Shifter Lever	**DRIVER** a. Start engine and check transmission shift lever operation. Shift transmission through all operating ranges. Lever should move freely through all range positions.	Lever inoperable or binds between range detents.
			b. Check transfer case shift lever operation. With transmission in N, shift transfer case lever through all range positions. Lever should move freely through all range positions.	Lever inoperable or does not engage in all ranges with engine not running.

Table 1. Preventive Maintenance Checks and Services - After - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2.	After	Transmission Fluid	**DRIVER** **CAUTION** • Do not permit dirt, dust, fluid or grit to enter transmission oil dipstick tube. Internal transmission damage will result if transmission oil becomes contaminated. • Do not overfill transmission. Damage to transmission will result. An over-full transmission can also indicate a transfer case fluid leak. Notify field maintenance if transmission fluid is above crosshatch mark. **NOTE** • Transmission fluid level should be checked with engine running, parking brake set, transmission shift lever in **P** (Park), and vehicle on level ground. Fluid level should be at crosshatch marks on dipstick. • Let vehicle idle with all accessories off for three minutes. • Engine operating temperature of 185–250° F (85–120° C) must be reached before performing AFTER checks. Check transmission fluid level. Apply brake and move shift lever through each gear range. Pause for about three seconds in each range, ending in P. If level is below crosshatch marks, add sufficient fluid to bring level to crosshatch marks.	

Table 1. Preventive Maintenance Checks and Services - After - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
				
			Figure 1. Transmission Oil Dipstick.	
3.	After	Fuel Filter	**DRIVER** **WARNING**  Do not perform fuel system checks, inspections, or maintenance while smoking or near fire, flames, or sparks. Fuel may ignite, causing damage to vehicle and injury or death to personnel. **NOTE** A rubber hose can be attached to drain valve to catch fuel in container before opening drain valve. If fuel is clear, put fuel back in fuel tank. a. Check fuel for contamination. With engine running, open drain valve. Allow fuel to drain into suitable container until it runs clear and close valve. **NOTE** Fuel retained in drain valve may drip when vehicle vibrations occur. This is normal and does not constitute a leak. Wipe drain valve with rag until excess fuel is removed.	Fuel is not clear after draining 1 pt (0.47 L).

Table 1. Preventive Maintenance Checks and Services - After - Continued.

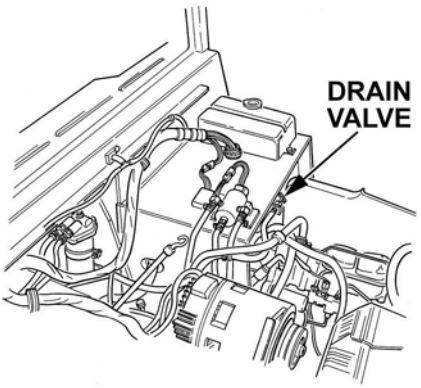
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			b. Check for leaks. c. Stop engine and remove rubber hose from drain valve, if installed.	Class III leakage evident.
				
			Figure 2. Fuel Filter Drain Valve.	
4.	After	Left Side Tires	**DRIVER** **WARNING** Operating a vehicle with a tire in an underinflated condition or with a questionable defect may lead to premature tire failure and may cause equipment damage and injury or death to personnel. Visually check tires for underinflation, cuts, gouges, cracks, or bulges. Remove all penetrating objects.	Tires deflated or otherwise unserviceable.
5.	After	Left Side Mirror	**DRIVER** **NOTE** Vehicle operation with damaged or missing outside rearview mirrors may violate AR 385-10. Check mirror for defects, cracks, and serviceability.	

Table 1. Preventive Maintenance Checks and Services - After - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
6.	After	Left Front, Side Exterior	**DRIVER** **NOTE** If leakage is detected, further investigation is needed to determine location and cause of leak.	
			a. Visually check underneath vehicle for evidence of fluid leakage.	Any brake fluid leaks; class III leak of oil, fuel, or coolant.
			b. Visually check halfshaft CV boots and ball joint boots for rips, tears, or cuts.	
			c. Inspect frame crossmembers and underbody support for missing hardware, cracks, bends, and breaks. Notify field maintenance if rust is present, but base metal is sound.	Crossmembers or underbody support are missing any hardware, are cracked, broken, or bent or rusted-through condition is present that would affect vehicle operation.
			d. Visually check for body damage that would impair operation of vehicle.	Any damage that prevents operation.
7.	After	Rear Exterior	**DRIVER** **NOTE** If leakage is detected, further investigation is needed to determine location and cause of leak.	
			a. Visually check underneath vehicle for evidence of fluid leakage.	Any brake fluid leaks; class III leak of oil, fuel, or coolant.
			b. Visually check halfshaft CV boots and ball joint boots for rips, tears, or cuts.	

Table 1. Preventive Maintenance Checks and Services - After - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			c. Inspect frame crossmembers and underbody support for missing hardware, cracks, bends, and breaks. Notify field maintenance if rust is present, but base metal is sound.	Crossmembers or underbody support are missing any hardware, are cracked, broken, or bent or rusted-through condition is present that would affect vehicle operation.
			d. Inspect bumper or crossmember and inner braces in area around towing pintle for cracks or breaks.	Bumper, crossmember, or an inner brace is cracked or broken.
8.	After	Right Side Tires	**DRIVER** **WARNING** Operating a vehicle with a tire in an underinflated condition or with a questionable defect may lead to premature tire failure and may cause equipment damage and injury or death to personnel.	
			Visually check tires for underinflation, cuts, gouges, cracks, or bulges. Remove all penetrating objects.	Tire deflated or otherwise unserviceable.
9.	After	Right Side Mirror	**DRIVER** **NOTE** Vehicle operation with damaged or missing outside rearview mirrors may violate AR 385-10.	
			Check mirror for defects, cracks, and serviceability.	
10.	After	Right Front, Side Exterior	**DRIVER** **NOTE** If leakage is detected, further investigation is needed to determine location and cause of leak.	

Table 1. Preventive Maintenance Checks and Services - After - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			a. Visually check underneath vehicle for evidence of fluid leakage.	Any brake fluid leaks; class III leak of oil, fuel, or coolant.
			b. Visually check halfshaft CV boots and ball joint boots for rips, tears, or cuts.	
			c. Inspect frame crossmembers and underbody support for missing hardware, cracks, bends, and breaks. Notify field maintenance if rust is present, but base metal is sound.	Crossmembers or underbody support are missing any hardware, are cracked, broken, or bent or rusted-through condition is present that would affect vehicle operation.
			d. Visually check front and right side of vehicle for obvious damage that would impair operation.	Any damage that prevents operation.
11.	After	Engine Oil	**DRIVER** **CAUTION** • Do not permit dirt, dust, or grit to enter engine oil dipstick tube. Internal engine damage will result if engine oil becomes contaminated. • Do not overfill engine crankcase. Damage to engine will result. Check engine oil level. Level should be between **ADD** and **FULL**. If level is below **ADD**, add oil to bring level between **ADD** and **FULL** marks.	Oil appears milky.

Table 1. Preventive Maintenance Checks and Services - After - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
				
			Figure 3. Engine Oil Dipstick.	
12.	After	Power Steering Lines and Fittings	**DRIVER** **CAUTION** Notify field maintenance if power steering system has class III leak. Loss of power assist could occur if this condition exists. Check power steering lines and fittings for leaks.	Class III leakage evident.
13.	After	Cooling System	**DRIVER** Inspect radiator hoses for leakage.	Class III leakage evident.
14.	After	Master Cylinder	**DRIVER** Visually check master cylinder lines for leaks and security of cover.	Any leak, or cover missing.
15.	After	Lights	**CAUTION** Never set rotary switch to **RUN** to check lights. This drains batteries and can burn out glow plugs and control box. **NOTE** Vehicle operation with damaged or inoperable headlights may violate AR 385-10. a. Check for presence and operation of service drive, turn signal, blackout marker, marker, blackout drive, and side marker lights.	

Table 1. Preventive Maintenance Checks and Services - After - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			b. Check operation of tail/stoplights. Push down brake pedal approximately 1/4 in. (6.4 mm). Tail/stoplights should come on.	
16.	After	Horn	**DRIVER** **NOTE** Vehicle operation with inoperative horn may violate AR 385-10. Check operation of horn if tactical situation permits.	
17.	After	Windshield and Wipers	**DRIVER** **NOTE** Vehicle operation with damaged windshield may violate AR 385-10. a. Check windshield for damage that would impair operator's vision.	Windshield is cracked, broken, or discolored (cloudy) sufficiently to impair operator's vision.
			NOTE Vehicle operation with inoperative wipers may violate AR 385-10. b. Check windshield wiper, blade, and washer fluid reservoir for defects, damage, and proper operation. c. Check windshield wiper motor for proper operation. d. Check washer reservoir fluid level.	

Table 1. Preventive Maintenance Checks and Services - After - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			e. Inspect inner surface of windshield glass (spall liner) for complete breaks, delamination, scratches, gouges, tape, decals, adhesives, or blurred vision.	Bond between glass and frame is separated from glass or frame. Any complete break on inner surface of glass. Any digs, gouges, or scratches on inner surface of glass.
			f. Inspect outer surface of windshield glass for a complete break.	Any complete break on outer surface of windshield glass.
18.	After	Light Switches	**DRIVER** **NOTE** Ensure all switches are in **OFF** position. Failure to turn switches to **OFF** position when not in use will drain batteries. Check and ensure all switches are in **OFF** position.	
19.	After	Patient Compartment (M997A3)	**DRIVER** a. Check presence and operation of ceiling white lights, blackout lights, and task lights.	One or more lights inoperative or unserviceable.
			b. Check operation of blackout switches at rear step, rear doors, and bulkhead door.	Any blackout switch inoperable.
			c. Inspect condition and security of litter racks and components.	
			d. Inspect upper litter rack hinges and latches for proper operation, damage, or missing components.	Hinges or latches inoperative, damaged, or missing.

Table 1. Preventive Maintenance Checks and Services - After - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			e. Inspect tension straps, support straps, litter straps, and footman loops for security of mounting, damage, and missing components.	
			f. Inspect oxygen bottles and mounting components for security of stowage when oxygen bottles are in stowed position.	
			g. Inspect IV straps and hangers for security of mounting, damage, and missing components.	
			h. Check operation or rear doors, handles, and latching mechanisms. Check for loose or missing components. Door should not bind and should close securely when latched shut.	Rear door handles and latching mechanisms do not operate properly. Missing or damaged components. Rear doors do not operate properly.
			i. Inspect rear door seals and step seals for proper installation and condition. Door seals must not allow emission of light signature under blackout.	Door seals allow emission of light signature under blackout conditions (detectable for 50ft (15m) from vehicle).

END OF WORK PACKAGE

OPERATOR MAINTENANCE
PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - WEEKLY

INITIAL SETUP:

Materials/Parts

Distilled Water (WP 0132, Item 12)

References

WP 0002

WP 0099

DA Form 2404

Table 1. Preventive Maintenance Checks and Services - Weekly.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1.	Weekly	Hand Throttle	**DRIVER** a. Check hand throttle and mounting bracket for security. Check throttle release lever to ensure hand throttle cable operates properly. b. Check hand throttle cable for corrosion, nicks, breaks, or burns.	

Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2.	Weekly	Tires	**DRIVER** **WARNING** • Do not exceed 50 psi (345 kPa) cold radial tire inflation pressure. Overinflation of tire may result in damage to equipment and injury or death to personnel. • Load Range D valves and tires are not compatible with Load Range E wheels. Load Range E valves and tires are not compatible with Load Range D wheels. Failure to comply may result in damage to equipment and injury or death to personnel. **NOTE** • Radial tire is a bidirectional tire and tread may be positioned in either direction. • Refer to Table 19. Tire Pressure (Radial Tire) (Load Range D Tire) or Table 20. Tire Pressure (Radial Tire) (Load Range E Tire) for vehicle tire pressures (WP 0002). a. Check tire tread depth. Tread should not be worn beyond level of wear bar (1/16 in. (1.59 mm) or less). Wear bars are molded across tread pattern in the valley between center rib and lugs. Tread Wear Indicator letters (TWI) are molded on sidewall to aid in locating wear bar.	Any tread is worn even to height of tread wear indicator (1/16 in. (1.59 mm) or less). Any cut, gouge, or crack that extends to the cord body or any bulges. Tires exhibit excessive inner or outer wear or balance.

Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.

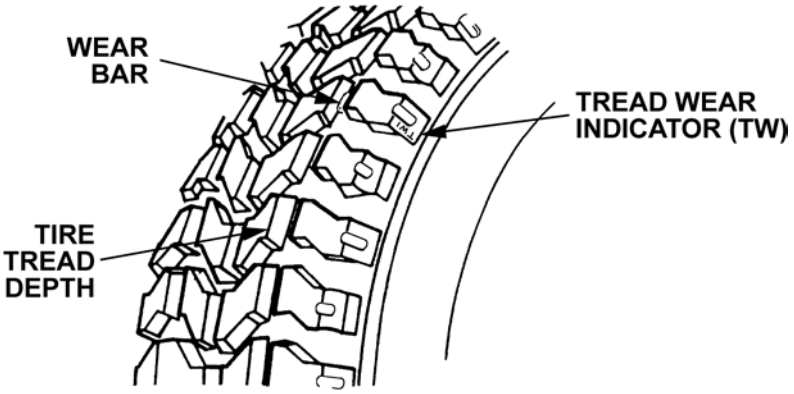
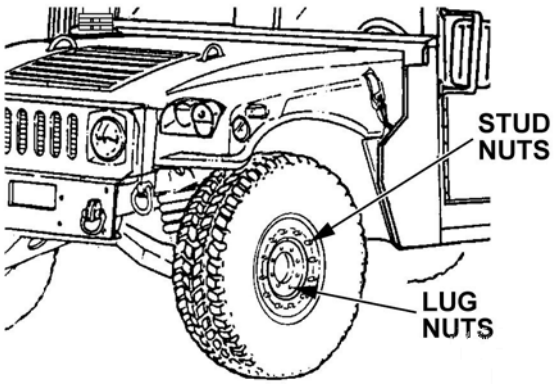
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			 *Figure 1. Tire Tread.*	
			NOTE • Wear bars are not evident on new or very low mileage tires. Wear bars will appear after usual use. • Some tires will show a diamond instead of TWI indicating where wear bar is located.	
			b. Check for missing or loose wheel stud nuts and lug nuts. Tighten loose lug nuts and have field maintenance tighten stud nuts and lug nuts to proper torque.	Any wheel stud nut or lug nut is missing or broken.
			 *Figure 2. Tire Nuts.*	

Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			WARNING Do not exceed 50 psi (345 kPa) cold radial tire inflation pressure. Overinflation of tire may result in damage to equipment and injury or death to personnel. **CAUTION** Deleted. c. Gauge tires for correct air pressure using tire inflation gauge. Adjust as necessary.	
3.	Weekly	Exhaust System	**DRIVER** Check exhaust system for security of all mounts, tightness of clamps and bolts, rusted conditions, damaged pipes, and any indication of an exhaust leak.	Any mounts are broken, pipes are rusted through or broken, or any indication of an exhaust leak.
4.	Weekly	Shock Absorbers	**DRIVER** Visually inspect shock absorbers for leaks, damage, and security of mounting.	Class III leakage or damage is evident; mounting damaged or loose.
5.	Weekly	Doors and Windows (M997A3, M1113, M1151, M1152, M1165)	**DRIVER** a. Check operation of doors and windows.	
			b. Check crew door assembly for visible cracks that would make door unserviceable or unable to secure properly.	Visible cracks or door does not secure properly.
			c. Check crew door assembly latch, hinges, and door handle for damage, looseness, or missing parts.	Loose, missing or unserviceable parts.
6.	Weekly	Doors and Windows (M1114, M1151A1, M1152A1, M1165A1, M1167)	**DRIVER** a. Inspect crew door locks for proper operation.	

Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			b. Inspect inner surface of door glass (spall liner) for complete breaks, delamination, scratches, gouges, tape, decals, adhesives, or blurred vision.	Bond between glass and frame is separated from glass or frame. Any complete break on inner surface of glass. Any digs, gouges, or scratches on inner surface of glass. Any complete break on inner surface of glass.
			c. Inspect outer surface of door glass for a complete break.	Any complete break of outer surface of door glass.
			d. (M1114 Only) Inspect door armor for cracks.	
7.	Weekly	Tailgate (All models except M997A3)	**DRIVER** Check operation of tailgate. Check that tailgate latches securely and operates properly.	
8.	Weekly	Body (M997A3, M1114, M1151, M1151A1, M1152A1, M1167)	**DRIVER** a. (All models except M997A3) Inspect cargo shell door for bends, warping, binding, and ease of operation. Inspect latching mechanisms for proper operation. Inspect lift cylinders for bends and security of mounting.	Lift cylinders or latches bent, warped, binding, or inoperative.
			b. (All models except M997A3) Inspect retaining wire rope for damage and security of mounting.	Retaining wire rope is damaged, missing, or not secured.
			c. (All models except M997A3) Inspect strap assembly for frays and security of mounting.	

Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			d. (All models except M997A3) Check cargo shell door for alignment as follows: 1. Insert a piece of paper between door seal and door opening. 2. With door closed, seal should offer resistance to pulling out paper. If door seal does not offer resistance, adjustment is required.	
			e. Check crew compartment armor for security of mounting.	
			f. Check armor for loose or missing fasteners.	
			g. Check armor components for cracks. **WARNING** Unauthorized welds and/or drilling of vehicle armor will degrade armor protection capabilities and could result in severe injury to personnel.	Armor components are cracked.
			h. (M1114 Only) Inspect underbody armor for missing retainer plates or screws.	Vehicle has a loose or missing retainer plate or bolt in position 1 and 5 from either side. Loose or missing more than three bolts in positions 2, 3, and 4 from either side or missing more than one retainer plate in positions 2, 3, and 4 from either side.

Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.

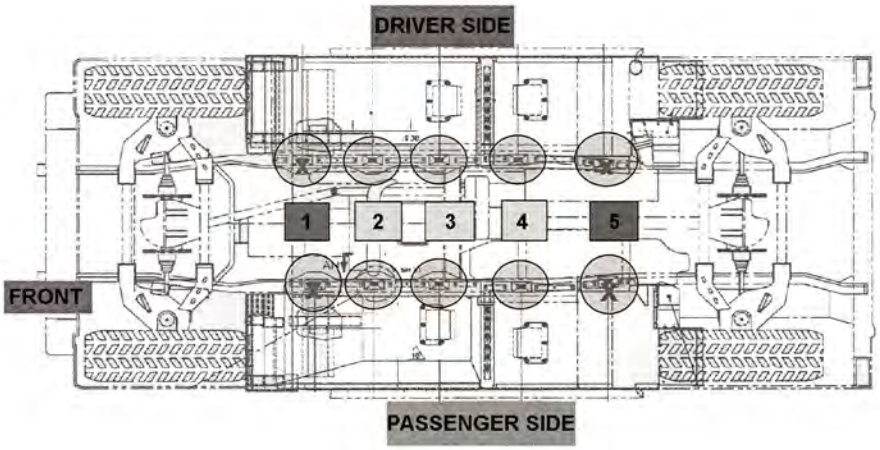
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
				
			Figure 3. Underbody Armor (M1114 only).	
			i. (All Models Except M1114) Inspect underbody plates for missing retainer plates or screws.	More than one retainer plate missing in positions 1, 2, 3, or 4. Loose or missing more than two screws in positions 1,2,3, or 4.

Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.

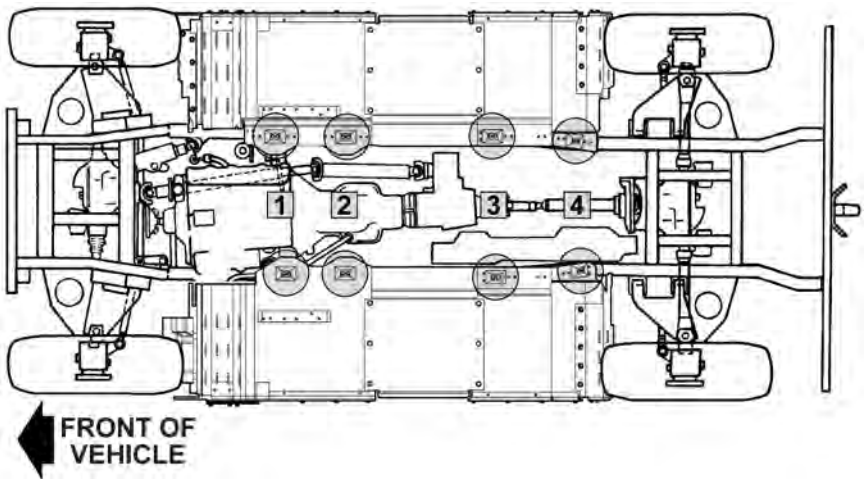
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
				
			Figure 4. Underbody Armor (All Models Except M1114).	
			j. Inspect underbody plates for any deformation (buckling, collapsing, or bending).	Deformation is visually detected.
			k. (All models except M997A3) Check operation of C-partition door and ensure it will lock in all three positions.	C-partition door will not close and lock in all three positions, or inoperative.
9.	Weekly	Geared Fan Drive (Serial Numbers 300000 and above Only)	**DRIVER** Check for missing grease fittings.	One or more grease fittings missing.
10.	Weekly	Vehicular Heater	**DRIVER (Vehicles w/Vehicular Winterization Kit)** a. Check heater and heater controls for proper operation.	Heater inoperable and mission requires heater.
			b. Check fuel lines and fittings for leaks, cracks, or breaks.	Class III fuel leakage is evident and mission requires heater.
			c. Check electrical cables and connections for security of mounting, and missing components.	Wires frayed or broken.

Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			d. Check heater exhaust pipe for damage, security of mounting, and missing components.	Heater exhaust damaged or components missing.
			e. Check fuel filter for leaks or damage.	Class III leak evident.
11.	Weekly	Air Cleaner	**DRIVER** **WARNING**  If NBC (CBRN) exposure is suspected, all air filter media should be handled by personnel wearing protective equipment. Consult your unit NBC (CBRN) officer or NBC (CBRN) NCO for appropriate handling or disposal instructions.	
			Check air cleaner weathercap, air cleaner assembly, air intake hose, and air horn for security of mounting and damage.	Damage to air cleaner weathercap, body, air intake hose, or mounting allows unfiltered air to enter engine.
12.	Weekly	Alternator Brackets	**DRIVER** Visually check power steering and alternator brackets for cracks, damage, or loose bolts.	Bracket is cracked or bolts damaged or loose.
13.	Weekly	Cooling System	**DRIVER** a. Check fan and fan pulley for damage.	Fan blade or pulley is bent, broken, cracked, or loose.
			b. Check radiator for leaks, clogged or damaged hoses to and from engine.	Class III leakage evident.

Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			c. Check support mounts, side brackets, and side bracket weldments on radiator for missing hardware, damage, or broken welds.	Support mounts broken, damaged, or missing hardware. Side brackets damaged of two or more weldments broken, allowing movement of radiator.
			d. Check fan shroud for damage.	Fan shroud broken, cracked, or loose that would affect its intended function or mounting.
			e. Check engine oil cooler and hoses for damage and leaks.	Class III leak evident.

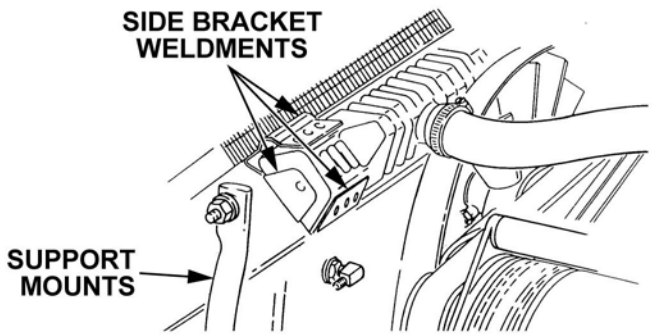


Figure 5. Cooling System Side Bracket and Support Mounts.

Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
14.	Weekly	Batteries	**DRIVER** **WARNING**  Do not smoke, have open flames, or make sparks around batteries, especially if caps are off. Batteries can explode and may cause injury or death. **WARNING**  Remove all jewelry such as rings, dog tags, bracelets, etc. If jewelry contacts battery terminal, a direct short may result, causing severe injury to personnel, or damage to equipment. a. Remove commander seat and check batteries for damaged casing, terminal posts, and security of mounting. b. Electrolyte should be filled to level/split ring in the battery filler opening (vent). If fluid is low, fill with distilled water to split ring (WP 0132, Item 12). **NOTE** Water in battery box can be caused by debris plugging battery box drain holes. If water is present, clean debris from battery box drain holes.	One or more batteries missing, unserviceable, or leaking; terminal or cables loose, corroded, or holddowns not secure.

Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			c. Check battery box for corrosion or water on bottom of battery tray.	
15.	Weekly	Weapon Station	**DRIVER** a. Inspect weapon station hatch and hinge for bends, cracks, warped, or damaged areas.	Hatch or hinges inoperable.
			b. Inspect brake for ease of operation.	Brake does not operate.
			c. Inspect gunner's sling for tears, frays, or damaged hook.	Sling is torn, shows wear, or hook is damaged.
16.	Weekly	Tiedowns	**DRIVER** a. Inspect stored equipment footman loops for presence and security of mounting. Inspect straps for tears or frays.	
			b. Inspect stowage brackets, footman loops, and tiedowns for security of mounting, damage, and missing components.	
			c. Inspect all tiedown strap assemblies for proper operation, frays, damage, cleanliness, and security of mounting.	
17.	Weekly	Tow Pintle	**DRIVER** Check pintle hook for looseness, damaged locking mechanism, and presence of cotter pin.	
18.	Weekly	Environment Control System	**DRIVER** **NOTE** Insufficient cooling could be a result of loss of R134a refrigerant. This is a gas, therefore leaks cannot be detected. If leaks in lines or fittings are suspected, vehicle is to be considered non-mission capable. Notify field maintenance.	

Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			a. Check Heating, Ventilation, and Air Conditioning (HVAC) vents, and mounting hardware for damage, leaks, missing components, and security of mounting.	Leaks in lines or fittings.
			b. Inspect exposed wiring harnesses for breaks, frayed insulation, loose or damaged connectors, and loose, damaged, or missing mounting hardware.	Wiring harness broken, frayed, or damaged. Mounting hardware missing.
19.	Weekly	Parking Brake	**DRIVER** Check combination service/parking brake assemblies; inspect parking brake for obstruction of actuating lever or broken or missing spring.	Actuating lever or spring is broken or missing.
20.	Weekly	Steering Gear Mounting	**DRIVER** With vehicle running, observe steering gear mounting area for movement while assistant turns steering wheel left and right.	Any movement observed in steering gear mounting area.
21.	Weekly	Windshield Washer	**DRIVER** a. Visually check windshield washer reservoir for damage. b. Check windshield washer fluid level.	
22.	Weekly	TOW ITAS Missile Rack (M1167 Only)	**DRIVER** a. Inspect TOW ITAS missile rack locking pins and support braces for presence and ease of operation. b. Inspect straps for tears and frays.	Rack will not stow six TOW ITAS missiles.
23.	Weekly	Floorboard (M1167 Only)	**DRIVER** Check for presence of TU adapter.	TU adapter missing or damaged.

Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
24.	Weekly	Patient Compartment (M997A3)	**DRIVER** **WARNING** Be sure cables are securely connected to the steps before using. Failure to comply may result in injury or death to personnel. Seek medical attention in the event of an injury.	
			a. Inspect step assembly.	Step assembly is damaged or inoperable.
			b. Check operation of step latch. Latch should securely engage step striker to secure step assembly in the stowed position.	Latch is damaged or inoperable.
			c. Check operation of attendant seat and rail. Inspect seat and rail for damage, missing components, and binding during operation. Ensure proper adjustment and operation of seat belt.	Seat belt, attendant seat, or rail is broken or missing.
			d. Check operation of ambulatory patient seat for damage or missing components.	Ambulatory patient seat is broken or missing.
			e. Inspect handhold straps and footman loops for security, damage, or missing components.	Handhold straps and footman loops are damaged, unsecured, or missing components.
25.	Weekly	Bulkhead Doors (M997A3)	**DRIVER** a. Check operation of bulkhead doors. Doors should securely latch when closed or fully opened. Inspect all door components for damage, adjustment, or missing components.	

Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
26.	Weekly	NBC (CBRN) Filtration System (M997A3)	**DRIVER** a. Inspect exposed NBC (CBRN) equipment for security of mounting, damage, and missing components.	Equipment damaged or unsecured.
			b. Inspect NBC (CBRN) stowage compartment door seals, hinges, latches, and straps for proper operation, damage, and missing components.	Components inoperable, damaged, or missing.
			c. Inspect M13 patient protective mask, hoses, and end connectors for damage, leaks, or missing components. Inspect adapter for stripped threads or other damage.	Components inoperable, damaged, or missing.
27.	Weekly	HVAC Air Intake Filter (M997A3)	**DRIVER** a. Inspect HVAC air intake filter for tears, rips, contaminants, or other damage. Refer to Heating, Ventilation, and Air-Conditioning (HVAC) air intake filter service.	Air intake filter torn, ripped, or damage.
			b. Inspect HVAC air intake filter frame for cracks, bends, or damaged.	Frame cracked, bent, or damaged.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - MONTHLY

INITIAL SETUP:

Materials/Parts
Lubricant (WP 0132, Item 30)

References
WP 0033

Table 1. Preventive Maintenance Checks and Services - Monthly.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1.	Monthly	Corrosion	**DRIVER** Visually inspect vehicle for indication of corrosion, cracks, and/or breaks.	Any corroded-through condition, cracks or breaks that would affect vehicle operation.
2.	Monthly	Tailgate (All models except for M997A3)	**DRIVER** Check tailgate for corroded-through condition and/or damage. If tailgate does not latch securely or is damaged, notify field maintenance.	Any corroded-through condition, or damage that would affect vehicle operation.
3.	Monthly	Winch	**DRIVER** a. Check winch controls for proper operation. b. Check winch cable for kinks, frays, or breaks. c. Inspect tree saver strap for cuts and abrasions. If red safety thread is visible in main body of strap, notify field maintenance for replacement of strap. d. If it is known strap has been overloaded, notify field maintenance for replacement of strap. e. Wrap winch cable (WP 0033).	
4.	Monthly	Zippers	**DRIVER** a. Check canvas top and door zippers for corrosion and/or damage.	

Table 1. Preventive Maintenance Checks and Services - Monthly - Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			b. Clean zippers with toothbrush. Apply interlock lubricant to canvas top, door zippers, and threads that hold zipper in place (WP 0132, Item 30).	
5.	Monthly	TOW ITAS Power Cable (M1167 Only)	**DRIVER** Inspect TOW ITAS power cable at point where it exits battery box. Chafing of nylon braid that covers cable is acceptable. If wire inside the cable is exposed, notify field maintenance.	Wire inside cable is exposed.
6.	Monthly	Red Cross Plate (M997A3)	**DRIVER** Check cross marking latches and hinges for proper operation, security of mounting, damage, or missing components.	
7.	Monthly	Stowage Component Door (M997A3)	Inspect stowage component door hinge, seal, and latch for proper operation, damage, or missing components.	

END OF WORK PACKAGE