

TECHNICAL MANUAL  
OPERATOR'S MANUAL  
FOR

TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998 NSN 2320-01-107-7155 (EIC: BBD)  
TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998A1 NSN 2320-01-371-9577 (EIC: BBN)  
TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, W/WINCH, M1038 NSN 2320-01-107-7156  
(EIC: BBE)  
TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, W/WINCH, M1038A1 NSN 2320-01-371-9578  
(EIC: BBP)  
TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097 NSN 2320-01-346-9317 (EIC: BBM)  
TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097A1 NSN 2320-01-371-9583 (EIC: BBU)  
TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097A2, M1097R1 NSN 2320-01-380-8604 (EIC: BB6)  
TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1123 NSN 2320-01-455-9593 (EIC: B6G)  
TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M966 NSN 2320-01-107-7153 (EIC: BBC)  
TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M966A1 NSN 2320-01-372-3932 (EIC: BBX)  
TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M1121 NSN 2320-01-456-1282 (EIC: B6H)  
TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045  
NSN 2320-01-146-7191  
TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4,  
M1045A1 NSN 2320-01-371-9580 (EIC: BBR)  
TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4,  
M1045A2 NSN 2320-01-380-8229 (EIC: BB5)  
TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH, M1046  
NSN 2320-01-146-7188  
TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH,  
M1046A1 NSN 2320-01-371-9582 (EIC: BBT)  
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025 NSN 2320-01-128-9551  
(EIC: BBF)  
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025A1 NSN 2320-01-371-9584  
(EIC: BBV)  
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025A2, M1025R1  
NSN 2320-01-380-8233 (EIC: BB3)  
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, W/WINCH,  
M1026 NSN 2320-01-128-9552 (EIC: BBG)  
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, W/WINCH,  
M1026A1 NSN 2320-01-371-9579 (EIC: BBQ)  
TRUCK, UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1043  
NSN 2320-01-146-7190  
TRUCK, UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4,  
M1043A1 NSN 2320-01-372-3933 (EIC: BBY)  
TRUCK, UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4,  
M1043A2 NSN 2320-01-380-8213 (EIC: BB4)  
TRUCK, UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH,  
M1044 NSN 2320-01-146-7189  
TRUCK, UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4,  
W/WINCH, M1044A1 NSN 2320-01-371-9581 (EIC: BBS)  
TRUCK, UTILITY: S250 SHELTER CARRIER, 4X4, M1037 NSN 2320-01-146-7193 (EIC: BBK)  
TRUCK, UTILITY: S250 SHELTER CARRIER, 4X4, W/WINCH, M1042 NSN 2320-01-146-7187  
TRUCK, AMBULANCE, 2-LITTER, ARMORED, 4X4, M996 NSN 2310-01-111-2275 (EIC: BBB)  
TRUCK, AMBULANCE, 2-LITTER, ARMORED, 4X4, M996A1 NSN 2310-01-372-3935 (EIC: BB2)  
TRUCK, AMBULANCE, 4-LITTER, ARMORED, 4X4, M997 NSN 2310-01-111-2274 (EIC: BBA)  
TRUCK, AMBULANCE, 4-LITTER, ARMORED, 4X4, M997A1 NSN 2310-01-372-3934 (EIC: BBZ)  
TRUCK, AMBULANCE, 4-LITTER, ARMORED, 4X4, M997A2 NSN 2310-01-380-8225 (EIC: BB8)  
TRUCK, AMBULANCE, 2-LITTER, SOFT TOP, 4X4, M1035 NSN 2310-01-146-7194  
TRUCK, AMBULANCE, 2-LITTER, SOFT TOP, 4X4, M1035A1 NSN 2310-01-371-9585 (EIC: BBW)  
TRUCK, AMBULANCE, 2-LITTER, SOFT TOP, 4X4, M1035A2 NSN 2310-01-380-8290 (EIC: BB9)

**\*SUPERSEDURE NOTICE:** This TM supersedes TM 9-2320-280-10 dated 31 January 1996 and all changes.

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

**INITIAL SETUP:****References**

WP 0092

AR 385-10

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

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/AVAILABLE IF:</b>
1.	Before	Left Front, Side Exterior	<p><b><u>WARNING</u></b></p> <p>Always remember WARNINGS, CAUTIONS, and NOTES before operating this vehicle and prior to PMCS.</p> <p><b><u>NOTE</u></b></p> <p>Perform your before, after, and weekly checks if:</p> <ol style="list-style-type: none"> <li>1. You are the assigned driver but have not operated the vehicle since the last weekly inspection.</li> <li>2. You are operating the vehicle for the first time.</li> <li>3. See separate manual for smoke generator, TOW launcher, and radios.</li> </ol> <p><b><u>DRIVER</u></b></p> <p><b><u>CAUTION</u></b></p> <p>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.</p> <p><b><u>NOTE</u></b></p> <p>If leakage is detected, further investigation is needed to determine location and cause of leak.</p>	

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

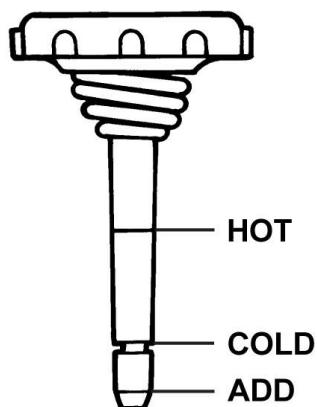
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
2.	Before	Left Side Tires	<p>a. Visually check underneath vehicle for any evidence of fluid leakage.</p> <p>b. Visually check front and left side of vehicle for obvious damage that would impair operation.</p> <p>c. Check and adjust mirror.</p> <p><b>DRIVER</b></p> <p><b><u>WARNING</u></b></p> <p>Operating a vehicle with a tire in an underinflated condition or with a questionable defect may lead to premature tire failure. Failure to comply may result in equipment damage and injury or death to personnel.</p> <p>Visually check tires for underinflation and defects.</p>	Any brake fluid leaks; class III leak of oil, fuel, or coolant. Any damage that prevents operation. Mirror cracked, broke, or missing.
3.	Before	Rear Exterior	<p><b>DRIVER</b></p> <p><b><u>NOTE</u></b></p> <p>If leakage is detected, further investigation is needed to determine location and cause of leak.</p> <p>a. Visually check underneath vehicle for evidence of fluid leakage.</p> <p>b. Visually check rear of vehicle for obvious damage that would impair operation.</p> <p>c. Inspect bumper supports for cracks before towing trailer.</p>	Tire missing, deflated, or unserviceable. Any brake fluid leaks; class III leak of oil, fuel, or coolant. Any damage that prevents 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:
4.	Before	Exhaust Louvers (M996, M996A1)	<p><b>NOTE</b> Perform following check prior to airlift procedure.</p> <p>d. Inspect shackle for loose or missing mounting hardware.</p> <p><b>DRIVER</b> 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.</p>	Loose or missing hardware.
5.	Before	Right Front, Side Exterior	<p><b>DRIVER</b></p> <p><b>NOTE</b> If leakage is detected, further investigation is needed to determine location and cause of leak.</p> <p>a. Visually check underneath vehicle for evidence of fluid leakage.</p> <p>b. Visually check front and right side of vehicle for obvious damage that would impair operation.</p> <p>c. Check and adjust mirror.</p>	Any brake fluid leaks; class III leak of oil, fuel, or coolant.  Any damage that prevents operation.  Mirror cracked, broke, or missing.
6.	Before	Right Side Tires	<p><b>DRIVER</b></p> <p><b>WARNING</b> Operating a vehicle with a tire in an underinflated condition or with a questionable defect may lead to premature tire failure. Failure to comply may result in equipment damage and injury or death to personnel.</p> <p>Visually check tires for underinflation and defects.</p>	Tire missing, deflated, or unserviceable.

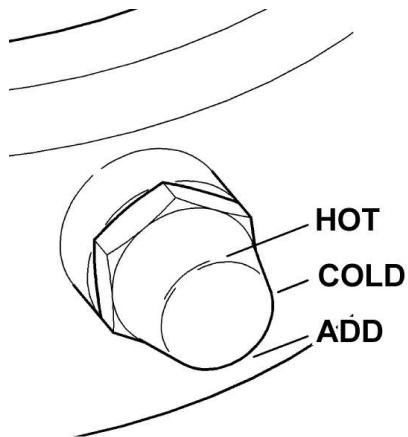
**Table 1. Preventive Maintenance Checks and Services - Before - Continued.**

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
7.	Before	Front	<p><b>DRIVER</b></p> <p><b>NOTE</b></p> <p>If leakage is detected, investigation is needed to determine location and cause of leak.</p> <p>a. Visually check front of vehicle for obvious damage that would impair operation.</p> <p>b. Visually check underneath vehicle for evidence of fluid leakage.</p>	Any damage that prevents operation.  Any brake fluid leaks; class III leak of oil, fuel, or coolant.
8.	Before	Power Steering Reservoir (All models excepts A2 and M1123)	<p><b>DRIVER</b></p> <p><b>CAUTION</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>Do not overfill power steering reservoir. Damage to power steering system will result.</li> </ul> <p>Check fluid in power steering reservoir (WP 0092). Fluid should be between <b>HOT</b> and <b>COLD</b> marks. Add fluid if level is below <b>COLD</b> mark.</p>	

*Figure 1. Power Steering Reservoir Cap (Basic and A1 Vehicles Only).*

**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 (A2 and M1123 models only)	<p><b>DRIVER</b></p> <p><b>CAUTION</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>Do not overfill power steering reservoir. Damage to power steering system will result.</li> </ul> <p>Check sightglass for proper fluid level. If fluid is <b>HOT</b>, level should be at top of sightglass. If fluid is <b>COLD</b>, fluid should be in center of sightglass. Add fluid if level is at bottom of sightglass.</p>	

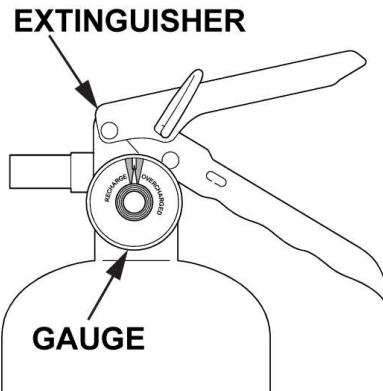
*Figure 2. Power Steering Reservoir Cap (A2, R1, M1123 Vehicles Only).*

10.	Before	Cooling System	<p><b>DRIVER</b></p> <p><b>WARNING</b></p> <p>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.</p> <p><b>CAUTION</b></p> <p>Overheating, caused by lack of coolant, will cause engine damage.</p>	
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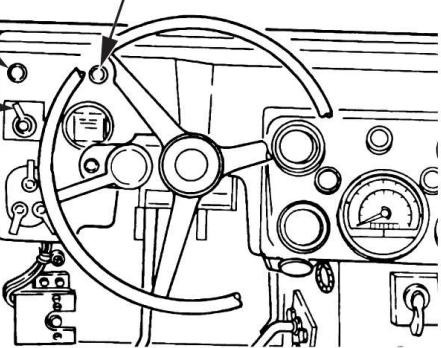
**Table 1. Preventive Maintenance Checks and Services - Before - Continued.**

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
11.	Before	Seat and Seatbelts	<p>Check coolant level in coolant tank. Level should be at or above <b>FULL COLD</b> line. Add coolant if below <b>FULL</b> line.</p> <p><b>DRIVER</b></p> <p><b>NOTE</b></p> <p>Vehicle operation with inoperative seatbelts may violate AR 385-10.</p> <ul style="list-style-type: none"> <li>a. Check all seatbelts, including troop seat safety strap for security, damage, and proper operation.</li> <li>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.</li> <li>c. Check operation of seat adjusting mechanism (driver's seat only).</li> </ul>	<p>Seatbelts inoperable, buckles or clasps damaged, retractor damaged, or straps frayed.</p> <p>Harness, tail strap, sling seat assembly is missing, frayed, damaged or does not fasten, adjust, retract or operate.</p> <p>Seat adjusting lock inoperative, or missing.</p>
12.	Before	Fire Extinguisher	<p><b>DRIVER</b></p> <ul style="list-style-type: none"> <li>a. Check for missing or damaged fire extinguisher.</li> <li>b. Check gauge for proper pressure of about 150 psi (1,034 kPa).</li> <li>c. Check for damaged or missing seal.</li> </ul>	<p>Fire extinguisher missing or damaged.</p> <p>Pressure gauge needle in recharge area.</p> <p>Seal broken or missing.</p>

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

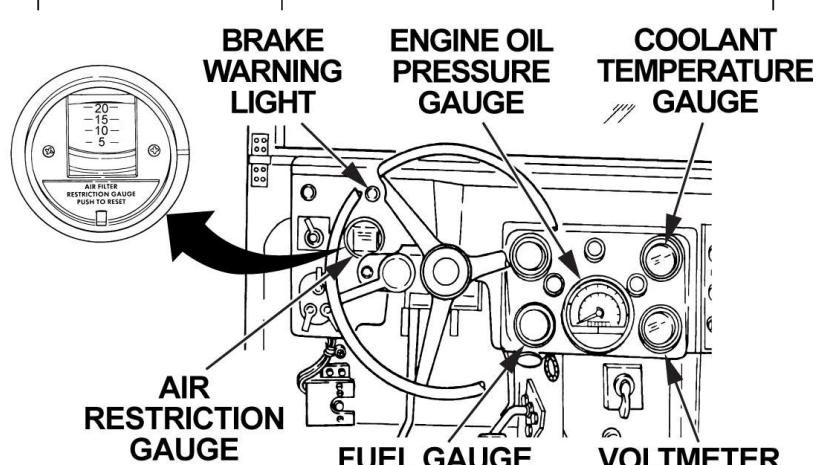
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
			 <p><b>EXTINGUISHER</b> <b>GAUGE</b></p>	
13.	Before	Instrument Panel	<p><b>DRIVER</b></p> <p><b>WARNING</b></p> <p>If gauges, instruments, or instrument lights are inoperable or not within ranges described 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.</p> <p><b>NOTE</b></p> <p>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.</p> <p>a. Check wait to start light and brake warning light. Turn rotary switch to <b>RUN</b>. Wait to start and brake warning light should come on.</p>	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:
		<b>WAIT-TO-START LAMP</b> <b>ROTARY SWITCH</b> <b>BRAKE WARNING LAMP</b> 	<p>b. Start engine and check following:</p> <ol style="list-style-type: none"> <li>1. Engine oil pressure gauge.</li> <li>2. Voltmeter.</li> <li>3. Air restriction gauge.</li> <li>4. Brake warning light should go off when hand brake is released.</li> <li>5. Check fuel gauge.</li> </ol>	<p>Engine will not start.</p> <p>Oil pressure is less than 10 psi (69 kPa) at idle.</p> <p>Voltmeter needle stays in yellow or red range.</p> <p>Air restriction indicator reaches red zone.</p> <p>Brake warning light stays on after hand brake is released or comes on while driving.</p>

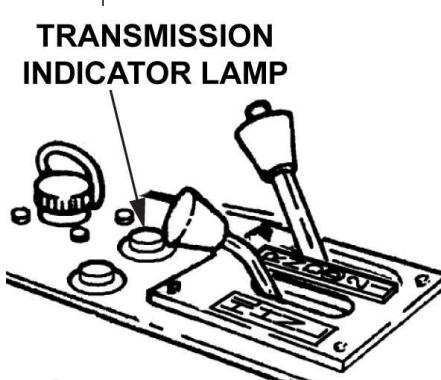
*Figure 4. Rotary Switch, Wait-To-Start Lamp, and Brake Warning Lamp.*

**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 240° F (116° C) and/or overheat lamp illuminates.
			 <p>The diagram shows a vintage-style instrument panel with several gauges and indicators. At the top left is a circular gauge labeled 'AIR FILTER RESTRICTION GAUGE' with markings from 5 to 20. To its right is a rectangular 'BRAKE WARNING LIGHT'. Below these are the 'ENGINE OIL PRESSURE GAUGE' and the 'COOLANT TEMPERATURE GAUGE', both indicated by arrows. In the center is the 'FUEL GAUGE'. At the bottom right is the 'VOLTMETER'. Arrows point from the labels to their respective components on the panel.</p>	

*Figure 5. Instrument Panel Gauges.*

	7. Check transmission indicator lamp.	Transmission indicator lamp stays illuminated.
	 <p>The diagram shows a close-up view of a transmission shifter lever. A line points from the label 'TRANSMISSION INDICATOR LAMP' to the top of the shifter lever, which typically houses the transmission indicator light.</p>	

*Figure 6. Transmission Indicator Lamp.*

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

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
14.	Before	Brakes	<p><b>DRIVER</b></p> <p><b>NOTE</b></p> <p>Engine must be warmed up and idling, transmission in drive (D), transfer in high (H), and parking brake released to perform following check.</p> <p>a. Check brake pedal travel. With vehicle at idle, transfer in high (H), transmission in drive (D), 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.</p> <p>b. Check parking brake. With parking brake fully applied, transmission in drive (D) or reverse (R), and transfer in high (H), vehicle should not move.</p> <p>c. Check parking brake lever safety mechanism to ensure that it latches when parking brake is applied.</p>	<p>Brakes will not stop vehicle.</p> <p>Parking brake inoperable or unable to hold vehicle.</p> <p>Parking brake lever safety mechanism (if equipped) is not functioning properly.</p>
15.	Before	NBC (CBRN) System (M996, M996A1, M997, M997A1, M997A2)	<p><b>DRIVER</b></p> <p>a. Check NBC (CBRN) system power switch for proper operation and security of mounting. All system fuses, including spares, should be present.</p> <p>b. Check NBC (CBRN) heater for proper operation. When knob is turned clockwise, the light should come on, indicating heater is working.</p>	Light does not come on. Heater inoperable.

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

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/AVAILABLE IF:</b>
16.	Before	Weapon Station (M966, M966A1, M1045, M1045A1, M1045A2, M1046, M1046A1, M1025, M1025A1, M1025A2/R1, M1026, M1026A1, M1043, M1043A1, M1043A2, M1044, M1044A1, M1121)	<p>c. Check for steady flow of air at hose outlets.</p> <p><b>DRIVER</b></p> <p><b>NOTE</b></p> <p>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.</p> <p>a. Check weapon station for binding by rotating 360° in both directions at least five times.</p> <p>b. (Armament carriers only) Check armament mounting plate and bearing sleeve for security of mounting and obvious damage that would impair operation.</p> <p>c. (TOW vehicles only) Check inclinometer for proper operation. Check level vial for breaks and/or bubbles.</p>	<p>Flow of air not steady or no flow of air.</p> <p>Weapon station binds.</p> <p>Armament weapons required for missions: Mounting plate or bearing sleeve missing or any damage that prevents or impair mounting of armament weapons.</p> <p>Level vial is broken or no bubble is present.</p>

**END OF WORK PACKAGE**



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

**INITIAL SETUP: NOT APPLICABLE**

**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	<b>DRIVER</b> a. Monitor all gauges.	Engine oil pressure gauge reads less than approximately 25 psi (172 kPa) under normal driving conditions or less than 10 psi (69 kPa) at idle. Coolant temperature gauge reads greater than 240° F (116° C). Air restriction gauge indicates restriction in air cleaner. Voltmeter indicates loss of voltage.
			b. Check speedometer operation.  c. (Marine Corps Only) Check hour/tachometer operation.	Speedometer not operational.  Hour/tachometer not operational.
2.	During	Brakes	<b>DRIVER</b> Check brakes for pulling or grabbing.	Brakes pull or grab.
3.	During	Steering	<b>DRIVER</b> Be alert for 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	<b>DRIVER</b> Check response to accelerator feed. Check for sticking or binding pedal.	Pedal sticking or binding.

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

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/AVAILABLE IF:</b>
5.	During	Powertrain	<p><b>DRIVER</b></p> <p>Be alert for unusual noises or vibrations from engine, transmission, transfer case, differentials, propeller shafts (especially under load), axle shafts, or wheels.</p>	Unusual noise or vibration detected.
6.	During	Transmission	<p><b>DRIVER</b></p> <p>Check transmission for proper operation.</p>	Transmission slips or will not shift.
7.	During	Air Conditioner (M997, M997A1, M997A2)	<p><b>NOTE</b></p> <p>Perform following inspection only if air conditioner is required for climatic conditions.</p> <p>Turn air conditioner on and set blower to maximum cooling speed settings. Wait 5 minutes to allow temperature to stabilize. Check outlet ducts for cool air.</p>	Climatic conditions require air-conditioning and A/C is inoperable, or outlet duct air is not cooler than ambient temperature.

**END OF WORK PACKAGE**

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

**INITIAL SETUP:****References**

AR 385-10

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

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

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

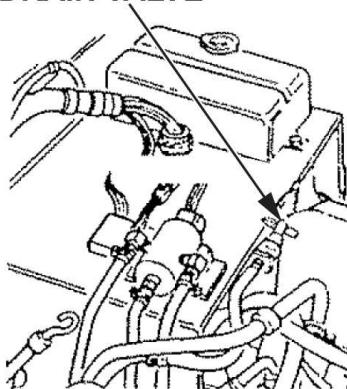
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
2.	After	Transmission Fluid	<p><b>DRIVER</b></p> <p><b>CAUTION</b></p> <ul style="list-style-type: none"> <li>• Do not permit dirt, dust, fluid or grit to enter transmission oil dipstick tube. Internal transmission damage will result if transmission oil becomes contaminated.</li> <li>• 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.</li> </ul> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• With foot on brake, move shift lever through each gear range. Pause for about three seconds in each range, ending in park (P) for vehicles that have 4L80-E/4L85-E transmission and in neutral (N) for vehicles that have 3L80 transmission.</li> <li>• Transmission fluid level should be checked with engine running, parking brake set, transmission shift lever in park (P) for vehicles that have 4L80-E/4L85-E transmission and in neutral (N) for vehicles that have 3L80 transmission, and vehicle on level ground. Fluid level should be at crosshatch marks on dipstick.</li> <li>• Let vehicle idle with all accessories off for three minutes.</li> <li>• Engine operating temperature of 190–240° F (88–116° C) must be reached before performing AFTER checks.</li> </ul> <p>Check transmission fluid level. If level is below crosshatch marks, add sufficient fluid to bring level to crosshatch marks.</p>	

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

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
				
3.	After	Fuel Filter	<p><b>DRIVER</b></p> <p><b><u>WARNING</u></b></p>  <p>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.</p> <p><b>NOTE</b></p> <p>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.</p> <p>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.</p>	<p>Fuel is not clear after draining 1 pt (0.47 L).</p>

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

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
			<p><b>NOTE</b></p> <p>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.</p> <p>b. Check for leaks.</p> <p>c. Stop engine and remove rubber hose from drain valve, if installed.</p>	Any Class III leakage evident.

**DRAIN VALVE***Figure 2. Fuel Filter Drain Valve.*

4.	After	Left Side Tires	<p><b>DRIVER</b></p> <p><b>WARNING</b></p> <p>Operating a vehicle with a tire in an underinflated condition or with a questionable defect may lead to premature tire failure. Failure to comply may result in equipment damage and injury or death to personnel.</p> <p>Visually check tires for underinflation, cuts, gouges, cracks, or bulges. Remove all penetrating objects.</p>	Tires deflated or otherwise unserviceable.
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**Table 1. Preventive Maintenance Checks and Services - After - Continued.**

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/AVAILABLE IF:</b>
5.	After	Left Side Mirror	<p><b>DRIVER</b></p> <p><b>NOTE</b></p> <p>Vehicle operation with damaged or missing outside rearview mirrors may violate AR 385-10.</p> <p>Check mirror for defects, cracks, and serviceability.</p>	
6.	After	Left Front, Side Exterior	<p><b>DRIVER</b></p> <p><b>NOTE</b></p> <p>If leakage is detected, further investigation is needed to determine location and cause of leak.</p> <ul style="list-style-type: none"> <li>a. Visually check underneath vehicle for evidence of fluid leakage.</li> <li>b. Visually check halfshaft cv boots and ball joint boots for rips, tears, or cuts.</li> <li>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.</li> <li>d. Visually check for body damage that would impair operation of vehicle.</li> </ul>	Any brake fluid leaks; Class III leak of oil, fuel, or coolant.  Crossmembers or underbody support are missing any hardware, are cracked, broken, or bent or rusted-through condition is present that would affect vehicle operation.  Any damage that prevents operation.
7.	After	Rear Exterior	<p><b>DRIVER</b></p> <p><b>NOTE</b></p> <p>If leakage is detected, further investigation is needed to determine location and cause of leak.</p>	

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

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/AVAILABLE IF:</b>
8.	After	Patient Compartment (M996, M996A1, M997, M997A1, M997A2)	<p>a. Visually check underneath vehicle for evidence of fluid leakage.</p> <p>b. Visually check halfshaft cv boots and ball joint boots for rips, tears, or cuts.</p> <p>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.</p> <p>d. Inspect bumper or crossmember and inner braces in area around towing pintle for cracks or breaks.</p> <p><b>DRIVER</b></p> <p>a. Check presence and operation of ceiling white lights, blackout lights, and spotlights.</p> <p>b. Check operation of blackout switches at rear step, rear doors, and bulkhead door.</p> <p>c. Inspect condition and security of litter racks and components.</p> <p>d. Inspect upper litter rack hinges and latches for proper operation, damage, and missing components.</p> <p>e. Inspect tension straps, support straps, litter straps, and footman loops for security of mounting, damage, and missing components.</p>	<p>Any brake fluid leaks; Class III leak of oil, fuel, or coolant.</p> <p>Crossmembers or underbody support are missing any hardware, are cracked, broken, or bent or rusted-through condition is present that would affect vehicle operation.</p> <p>Bumper, crossmember, or an inner brace is cracked or broken.</p> <p>One or more lights inoperative or unserviceable.</p> <p>Any blackout switch inoperable.</p> <p>Hinges or latches inoperative, damaged, or missing.</p>

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

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
9.	After	Right Side Tires	<p>f. Inspect oxygen bottles and mounting components for security of stowage when oxygen bottles are in stowed position.</p> <p>g. Inspect IV straps and hangers for security of mounting, damage, and missing components.</p> <p>h. Check operation of rear doors, handles, and latching mechanisms. Check for loose or missing components. Door should not bind and should close securely when latched shut.</p> <p>i. Inspect rear door seals, step seals, bulkhead door and rear door vent seals (M996 and M996A1 only) for proper installation and condition. Door seals must not allow emission of light signature under blackout conditions.</p> <p><b>DRIVER</b></p> <p><b><u>WARNING</u></b></p> <p>Operating a vehicle with a tire in an underinflated condition or with a questionable defect may lead to premature tire failure. Failure to comply may result in equipment damage and injury or death to personnel.</p> <p>Visually check tires for underinflation, cuts, gouges, cracks, or bulges. Remove all penetrating objects.</p>	<p>Rear door handles and latching mechanisms do not operate properly.</p> <p>Door seals allow emission of light signature under blackout conditions (detectable from 50 ft [15 mi] of vehicle).</p>
10.	After	Right Side Mirror	<p><b>DRIVER</b></p> <p><b><u>NOTE</u></b></p> <p>Vehicle operation with damaged or missing outside rearview mirrors may violate AR 385-10.</p>	Tire deflated or otherwise unserviceable.

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

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/AVAILABLE IF:</b>
11.	After	Right Front, Side Exterior	<p>Check mirror for defects, cracks, and serviceability.</p> <p><b>DRIVER</b></p> <p><b>NOTE</b></p> <p>If leakage is detected, further investigation is needed to determine location and cause of leak.</p> <p>a. Visually check underneath vehicle for evidence of fluid leakage.</p> <p>b. Visually check halfshaft cv boots and ball joint boots for rips, tears, or cuts.</p> <p>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.</p> <p>d. Visually check front and right side of vehicle for obvious damage that would impair operation.</p>	Any brake fluid leaks; Class III leak of oil, fuel, or coolant.
12.	After	Engine Oil	<p><b>DRIVER</b></p> <p><b>CAUTION</b></p> <ul style="list-style-type: none"> <li>• Do not permit dirt, dust, or grit to enter engine oil dipstick tube. Internal engine damage will result if engine oil becomes contaminated.</li> <li>• Do not overfill engine crankcase. Damage to engine will result.</li> </ul>	Crossmembers or underbody support are missing any hardware, are cracked, broken, or bent or rusted-through condition is present that would affect vehicle operation.

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

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
			Check engine oil level. Level should be between <b>ADD</b> and <b>FULL</b> . If level is below <b>ADD</b> , add oil to bring level between <b>ADD</b> and <b>FULL</b> marks.	Oil appears milky.
				
13.	After	Power Steering Lines and Fittings	<b>DRIVER</b> <b>CAUTION</b> Notify field maintenance if power steering system has class III leak. Loss of power assist could occur if this condition exists.	
14.	After	Cooling System	Check power steering lines and fittings for leaks. <b>DRIVER</b> Inspect radiator hoses for leakage.	Class III leakage evident. Class III leakage evident.
15.	After	Master Cylinder	<b>DRIVER</b> Visually check master cylinder lines for leaks and security of cover.	Any leak, or cover missing.
16	After	Windshield Washer Bottle	<b>DRIVER</b> a. Visually check windshield washer bottle for damage. b. Check windshield washer fluid level.	

*Figure 3. Engine Oil Dipstick.*

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

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/AVAILABLE IF:</b>
17.	After	Lights	<p><b>DRIVER W/ASSISTANT CAUTION</b></p> <p>Never set rotary switch to <b>RUN</b> to check lights. This drains batteries and can burn out glow plugs and control box.</p> <p><b>NOTE</b></p> <p>Vehicle operation with damaged or inoperable headlights may violate AR 385-10.</p> <p>a. Check for presence and operation of service drive, turn signal, blackout marker, marker, blackout drive, and side marker lights.</p> <p>b. Check operation of tail/stoplights. Push down brake pedal approximately 1/4 in. (6.4 mm). Tail/stoplights should come on.</p>	
18.	After	Horn	<p><b>DRIVER</b></p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• Vehicle operation with inoperative horn may violate AR 385-10.</li> <li>• Ensure all light switches are in <b>OFF</b> position when complete.</li> </ul> <p>Check operation of horn if tactical situation permits.</p>	
19.	After	Windshield and Wipers	<p><b>DRIVER</b></p> <p><b>NOTE</b></p> <p>Vehicle operation with damaged windshield may violate AR 385-10.</p> <p>a. Check windshield for damage that would impair operator's vision.</p>	Windshield is cracked, broken, or discolored (cloudy) sufficiently to impair operator's vision.

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

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
			<p style="text-align: center;"><b>NOTE</b></p> <p>Vehicle operation with inoperative wipers may violate AR 385-10.</p> <ul style="list-style-type: none"> <li>b. Check windshield wiper and blade for defects, damage, and proper operation.</li> <li>c. Check windshield wipers and washer for proper operation.</li> </ul>	

**END OF WORK PACKAGE**



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

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**INITIAL SETUP:****Materials/Parts**

Distilled Water (WP 0107, Item 12)

**References**

WP 0002

WP 0072

WP 0100

DA Form 2404

TM 9-2610-200-14

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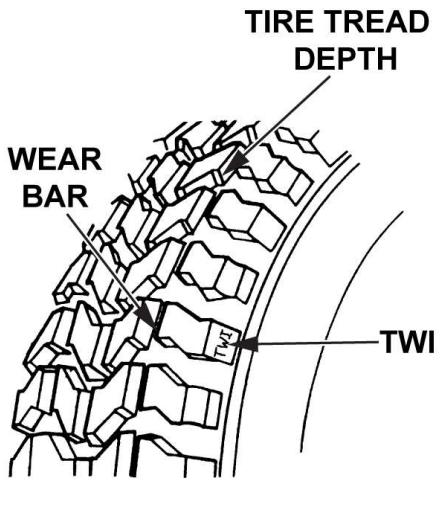
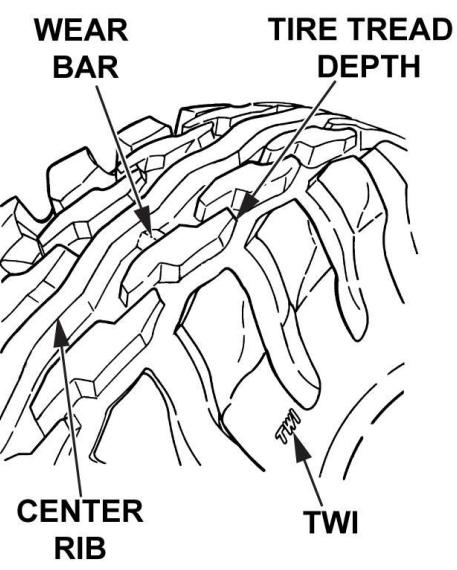
**Table 1. Preventive Maintenance Checks and Services - Weekly.**

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

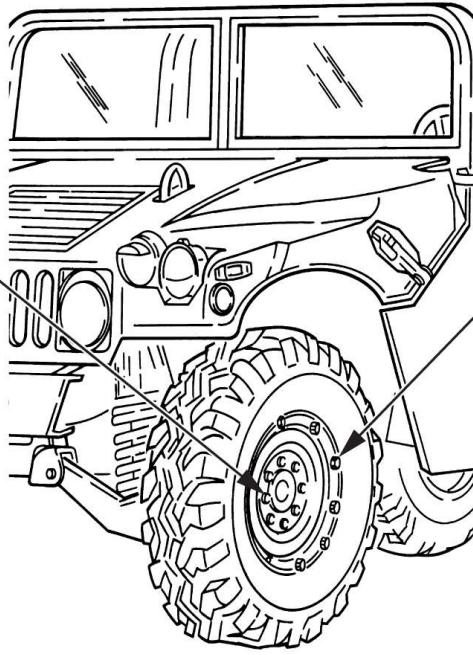
**Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.**

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
2.	Weekly	Tires	<p><b>DRIVER</b></p> <p><b>WARNING</b></p> <ul style="list-style-type: none"> <li>• Do not exceed 30 psi (207 kPa) cold bias tire inflation pressure. Overinflation of tire may result in damage to equipment and injury or death to personnel.</li> <li>• 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.</li> <li>• Goodyear MT radial tires are not to be mixed with either Goodyear MT/R radial tire or Goodrich Baja radial tire. Failure to comply may result in injury to personnel or damage to equipment. Goodyear MT/R tire and Goodrich Baja tire are compatible and can be mixed in any combination on vehicles.</li> </ul> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• Check tire size designator on sidewall for tire construction identification: 36x12.50-16.5 LT-Bias ply, 37x12.50R 16.5 LT-Radial.</li> <li>• Both radial and bias tires are non-directional. They provide equal traction and performance when installed in either direction.</li> <li>• Refer to TM 9-2610-200-14 for additional tire information.</li> <li>• Refer to Table 24. Tire Pressure (Bias Tires) (WP 0002) or Table 25. Tire Pressure (Radial Tire) (WP 0002) for vehicle tire pressures.</li> </ul>	

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

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:			
			<p>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.</p>	<p>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 and outer wear or balance.</p>			
 <b>RADIAL</b>				 <b>BIAS</b>			
<p><b>NOTE</b></p> <p>Wear bars are not evident on new or very low mileage tires. Wear bars will appear after usual use.</p> <p>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.</p>				Any wheel stud nut or lug nut is missing or broken.			

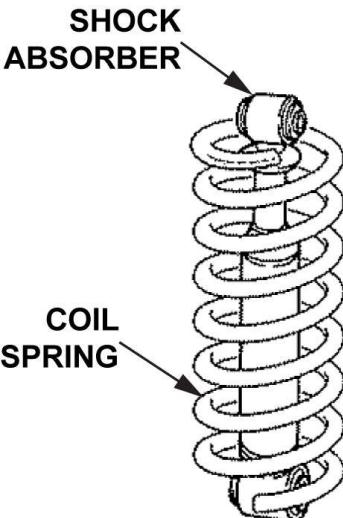
**Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.**

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
		 <p>The diagram shows the front left wheel of a vehicle. It features a multi-hole hubcap with several lug nuts. A single stud nut is visible at the top of the wheel assembly. Labels point to these components: 'LUG NUTS' points to the hubcap area, and 'STUD NUT' points to the top of the wheel.</p>	<p><b>WARNING</b></p> <p>Do not exceed 30 psi (207 kPa) cold radial tire inflation pressure. Overinflation of tire may result in damage to equipment and injury or death to personnel.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• Perform Step c for bias tires only.</li> <li>• Check tire size designator on sidewall for tire construction identification: 36x12.50-16.5 LT-Bias ply.</li> <li>c. Gauge tires for correct air pressure using tire inflation gauge. Adjust as necessary. Refer to Table 24. Tire Pressure (Bias Tires) (WP 0002) for vehicle tire pressures.</li> </ul>	

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

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
			<p style="text-align: center;"><b>WARNING</b></p> <p>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.</p> <p style="text-align: center;"><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• Perform Step d for radial tires only.</li> <li>• Check tire size designator on sidewall for tire construction identification: 37x12.50R- 16.5 LT-Radial.</li> <li>d. Gauge tires for correct air pressure using tire inflation gauge. Adjust as necessary. Refer to Table 25. Tire Pressure (Radial Tire) (WP 0002) for vehicle tire pressures.</li> </ul>	
3.	Weekly	Exhaust System	<p style="text-align: center;"><b>DRIVER</b></p> <p>Check exhaust system for security of all mounts, tightness of clamps and bolts, rusted conditions, damaged pipes, and any indication of an exhaust leak.</p>	Any mounts are broken, pipes are rusted through or broken, or any indication of an exhaust leak.
4.	Weekly	Shock Absorbers	<p style="text-align: center;"><b>DRIVER</b></p> <ul style="list-style-type: none"> <li>a. Visually inspect shock absorbers for leaks, damage, and security of mounting.</li> <li>b. Check that coil spring is centered on shock absorber.</li> </ul>	<p>Class III leakage or damage is evident; mounting damaged or loose.</p> <p>Coil spring has shifted off center.</p>

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

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
			 <p style="text-align: center;"><b>SHOCK ABSORBER</b> <b>COIL SPRING</b></p>	
5.	Weekly	Doors and Windows	<b>DRIVER</b> Check operation of doors and windows.	
6.	Weekly	Tailgate	<b>DRIVER</b> Check operation of tailgate. Check that tailgate latches securely and operates properly.	
7	Weekly	Armament Carriers (M966, M966A1, M1045, M1045A1, M1045A2, M1046, M1046A1, M1025, M1025A1, M1025A2/R1, M1026, M1026A1, M1043, M1043A1, M1043A2, M1044, M1044A1, M1121)	<b>DRIVER (TOW and Armament Carriers)</b> a. 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.	

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

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/AVAILABLE IF:</b>
8.	Weekly	Patient Compartment (M996, M996A1, M997, M997A1, M997A2)	<p>b. Inspect retaining wire rope for damage and security of mounting.</p> <p>c. Inspect strap assembly for frays and security of mounting.</p> <p>d. Check cargo shell door for alignment as follows:</p> <ol style="list-style-type: none"> <li>1. Insert a piece of paper between door seal and door opening.</li> <li>2. With door closed, seal should offer resistance to pulling out paper. If door seal does not offer resistance, adjustment is required.</li> </ol> <p><b>DRIVER</b></p> <p><b><u>WARNING</u></b></p> <p>Be sure cables are securely connected to steps before using. Failure to comply may result in injury to personnel.</p> <p>a. Inspect step assembly.</p> <p>b. Check operation of step latch. Latch should securely engage step striker to secure step assembly in stowed position.</p> <p>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 seatbelt.</p> <p>d. (M996, M996A1 only) Check operation of ambulatory patient seat. Check for damage or missing components.</p>	Retaining wire rope is damaged, missing, or not secured.  Seatbelt, attendant seat, or rail is broken or missing.

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

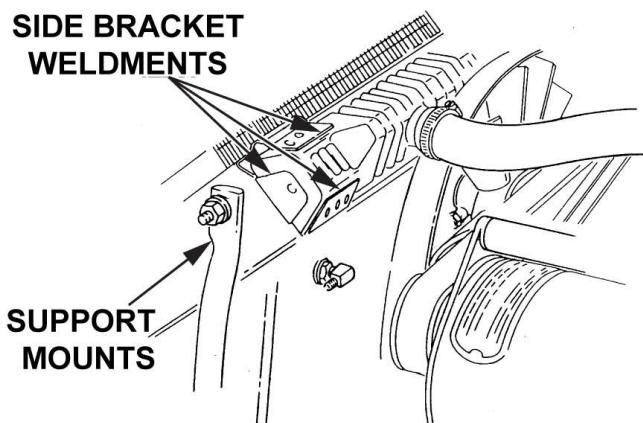
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
9.	Weekly	Front Arctic Heater and/or Rear Troop/Cargo Heater/Ambulance Patient Compartment Heater (M996, M966A1, M996, M996A1, M997, M997A1, M997A2)	<p>e. (M996, M996A1 only) Inspect handheld straps and footman loops for security, damage, or missing components.</p> <p><b>DRIVER (Vehicle w/Arctic Winterization Kit and/or Troop/Cargo Winterization Kit)</b></p> <p>a. Check heater and heater controls for proper operation.</p> <p>b. Check fuel lines and fittings for leaks, cracks, or breaks.</p> <p>c. Check electrical cables and connections for security of mounting, and missing components.</p> <p>d. Check heater exhaust pipe for damage, security of mounting, and missing components.</p> <p>e. Check fuel filter for leaks or damage.</p>	Heater inoperable and mission requires heater.  Any fuel leakage is evident and mission requires heater.  Frayed or broken wires.  Heater exhaust damaged or components missing.  Any fuel leak evident.
10.	Weekly	Crew Door (M966, M966A1, M996, M996A1, M997, M997A1, M997A2, M1025, M1025A1, M1025A2/R1, M1026, M1026A1, M1121)	<p><b>DRIVER</b></p> <p>a. Check crew door assembly for visible cracks that would make door unserviceable or unable to secure properly.</p>	Visible cracks, or door does not secure properly.

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

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/AVAILABLE IF:</b>
11.	Weekly	Air Cleaner	<p>b. Check crew door assembly latch, hinges, and door handle for damage, looseness, or missing parts.</p> <p><b>DRIVER</b></p> <p><b>WARNING</b></p>  <p>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.</p> <p>Check air cleaner weathercap, air cleaner assembly, air intake hose, and air horn for security of mounting and damage.</p>	Loose, missing, or unserviceable parts.
12.	Weekly	Alternator Brackets	<p><b>DRIVER</b></p> <p>Visually check power steering and alternator brackets for cracks, damage, or loose bolts.</p>	Damage to air cleaner weathercap, body, air intake hose, or mounting allows unfiltered air to enter engine.
13.	Weekly	Cooling System	<p><b>DRIVER</b></p> <p>a. Check fan and fan pulley for damage.</p> <p>b. Check radiator for damaged fins, leaks, clogged or damaged hoses to and from engine.</p>	<p>Bracket is cracked or bolts damaged, loose, or missing.</p> <p>Fan blade or pulley is bent, broken, cracked, or loose.</p> <p>Class III leakage evident.</p>

**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 or two or more weldments broken, allowing movement of radiator.

*Figure 4. Cooling System Side Bracket and Support Mounts.*

		<p><b>NOTE</b></p> <p>Belt flutter at idle is normal in HMMWV belt drive system. It does not necessarily indicate that belts are loose. Belt flutter should disappear as engine is accelerated.</p> <p>d. (All models except A2, R1, and M1123 only) Check for loose, missing, broken, cracked, or frayed drivebelts. Notify supervisor if loose drivebelts are suspected.</p>	<p>Any drivebelt is missing, broken, or frayed (fibers exposed). Belt fiber has more than one crack <math>1/8</math> in. (<math>3.18</math> mm) in depth or 50% of total belt thickness or frays more than 2 in. (<math>5.1</math> cm) long.</p>
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**Table 1. Preventive Maintenance Checks and Services - Weekly - Continued.**

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
			<p style="text-align: center;"><b>NOTE</b></p> <p>Belt flutter at idle is normal in HMMWV belt drive system. It does not necessarily indicate that belts are loose. Belt flutter should disappear as engine is accelerated.</p> <p>e. (A2, R1, and M1123 models only) Check for looseness, misalignment, breaks, splits, or frayed serpentine belt.</p> <p>f. Check fan shroud for damage.</p> <p>g. Check engine oil cooler and hoses for damage and leaks.</p>	<p>Serpentine belt is loose, misaligned (off one or more grooves on any pulley), breaks, or splits in outer surface, frays on either edge if cord is broken.</p> <p>Fan shroud broken, cracked, or loose that would affect its intended function or mounting.</p> <p>Class III leak evident.</p>

**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	<p><b>DRIVER</b></p> <p><b>WARNING</b></p>  <p>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.</p> <p><b>WARNING</b></p>  <p>Remove all jewelry such as rings, identification tags, bracelets, etc. If jewelry contacts battery terminal, a direct short may result, causing severe injury to personnel, or damage to equipment.</p> <p>a. Remove commander seat and check batteries for damaged casing, terminal posts, and security of mounting. Notify field maintenance if any defects are found.</p> <p>b. Electrolyte should be filled to level/split ring in the battery filler opening (vent). If fluid is low, fill with distilled water (WP 0107, Item 12) to split ring. If fluid is gassing (boiling), notify field maintenance.</p>	One or more batteries missing, unserviceable, or leaking; terminal or cables loose, corroded, or holdowns not secure or missing.

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

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/AVAILABLE IF:</b>
15.	Weekly	Weapon Station (M966, M966A1, M1045, M1045A1, M1045A2, M1046, M1046A1, M1025, M1025A1, M1025A2/R1, M1026, M1026A1, M1043, M1043A1, M1043A2, M1044, M1044A1, M1121)	<p><b>NOTE</b></p> <p>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.</p> <p>c. Check battery box for corrosion or water on bottom of battery tray.</p> <p><b>DRIVER</b></p> <p>a. Inspect weapon station hatch and hinge for bends, cracks, warped, or damaged areas.</p>	Hatch or hinges inoperable.
16.	Weekly	TOW Missile Rack (M966, M966A1, M1045, M1045A1, M1045A2, M1046, M1046A1, M1121)	<p>b. Inspect brake handle for ease of operation.</p> <p>c. Inspect gunner's sling for tears, frays, or damaged hook.</p> <p><b>DRIVER</b></p> <p>a. Inspect TOW missile rack latch assembly and support braces for presence and ease of operation.</p> <p>b. Inspect straps for tears and frays.</p>	<p>Brake handle does not operate.</p> <p>Sling is torn, shows wear, or hook is damaged.</p> <p>Rack will not support or stow six TOW missiles.</p>

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

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/AVAILABLE IF:</b>
17.	Weekly	Floorboard	<b>DRIVER</b> Check for presence of TU adapter.	TU adapter missing or damaged.
18.	Weekly	Gunner's Platform	<b>DRIVER</b> Inspect gunner's platform riser for binding, ease of operation, or missing lockpins.	Gunner's platform cannot be adjusted or lockpins are missing.
19.	Weekly	Tiedowns	<b>DRIVER</b> 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.	
20.	Weekly	Bulkhead Doors (M996, M996A1, M997, M997A1, M997A2)	<b>DRIVER</b> Check operation of bulkhead doors. Door should securely latch when closed or fully opened. Inspect all door components for damage, adjustment, or missing component.	
21.	Weekly	Environment Control System (M996, M996A1, M997, M997A1, M997A2)	<b>DRIVER</b> a. Check security of A/C heater control box mounting.  b. Check Heating, Ventilation and Air Conditioning (HVAC) filter (WP 0100) for dirt or debris. Clean filters of dirt and debris that would restrict air flow.	

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

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/AVAILABLE IF:</b>
22.	Weekly	NBC (CBRN) System (M996, M996A1, M997, M997A1, M997A2)	<p>c. Inspect exposed HVAC system ducts, hoses, fitting lines, vents, and mounting hardware for damage, leaks, missing components, and security of mounting.</p> <p>d. Inspect exposed wiring harnesses for breaks, frayed insulation, loose or damaged connectors, and loose, damaged, or missing mounting hardware.</p> <p><b>DRIVER</b></p> <p>a. Inspect exposed NBC (CBRN) equipment for security of mounting, damage, and missing components.</p> <p>b. Inspect NBC (CBRN) stowage compartment door seals, hinges, latches, and straps for proper operation, damage, and missing components.</p> <p>c. Inspect M13 patient protective mask, hoses, and end connectors for damage, leaks, or missing components. Inspect adapter for stripped threads or other damage.</p>	<p>A/C inoperable or any leaks evident.</p> <p>Wiring harness broken, frayed, or damaged.</p> <p>Mounting hardware missing.</p>
23.	Weekly	Canvas and Bows (M998, M998A1, M1038, M1038A1)	<p><b>DRIVER (W/Soft Top Enclosure)</b></p> <p>a. Inspect cargo cover for tears, punctures, and ripped seams.</p> <p>b. Inspect windows for cracks and scratches.</p> <p>c. Inspect bows and mounting brackets for damage and security of mounting.</p> <p>d. Inspect footman loops and straps for tears, frays, and security of mounting.</p>	

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

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/AVAILABLE IF:</b>
24.	Weekly	Tow Pintle	<b>DRIVER</b> <b>WARNING</b> If tow pintle is damaged, do not tow trailer. Failure to comply may result in damage to equipment or injury to personnel.  Check pintle hook for looseness, damaged locking mechanism, and presence of cotter pin.	
25.	Weekly	Tow Hooks	<b>DRIVER</b> Check presence and condition of tow hooks (front and rear).	
26.	Weekly	Trailer Electrical Connector	<b>DRIVER</b> Check trailer electrical connector for damage.	
27.	Weekly	Parking Brake	<b>DRIVER</b> 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.

**END OF WORK PACKAGE**

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

**INITIAL SETUP:****Materials/Parts**

Lubricant (WP 0107, Item 31)

**References**

WP 0027

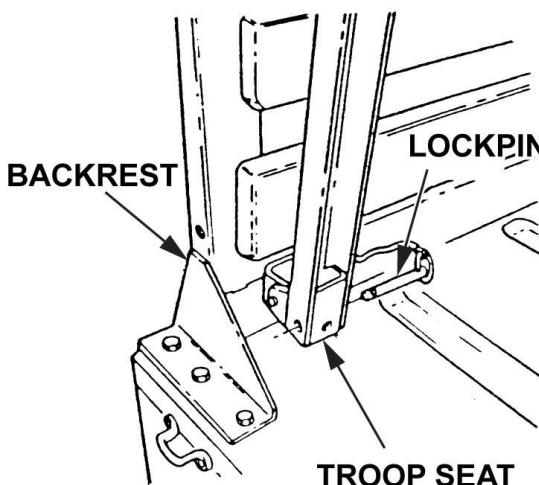
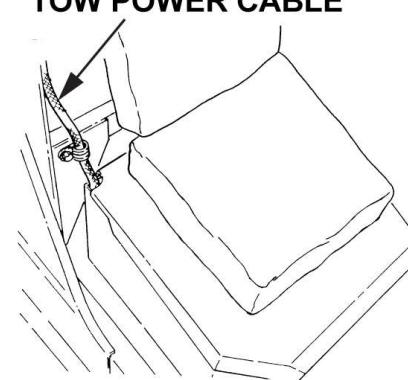
**Table 1. Preventive Maintenance Checks and Services - Monthly.**

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/AVAILABLE IF:</b>
1.	Monthly	Corrosion	<b>DRIVER</b> Visually inspect vehicle body for indication of corrosion, cracks, and/or breaks.	Any corroded-through condition, cracks or breaks that would affect vehicle operation.
2.	Monthly	Tailgate	<b>DRIVER</b> 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	Red Cross Plate (M996, M996A1, M997, M997A1, M997A2)	<b>DRIVER</b> a. Check cross marking latches and hinges for proper operation, security of mounting, damage, or missing components.  b. Inspect stowage component door hinge, seal, and latch for proper operation, damage, or missing components.	
4.	Monthly	Shelter Mount Kit (M1037, M1042, M1097, M1097A1, M1097A2, M1097R1, M1123)	<b>DRIVER</b> Inspect shelter mounting bracket for security of mounting and loose or missing bolts.	Any mounting bolt loose or missing.

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

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/AVAILABLE IF:</b>
5.	Monthly	Winch	<p><b>DRIVER (Vehicles W/Winch)</b></p> <p><b>WARNING</b></p> <p>Do not operate winch with damaged cable. Failure to comply may result in damage to equipment or injury to personnel.</p> <p>a. Check winch controls for proper operation.</p> <p><b>NOTE</b></p> <p>Pull out cable leaving four windings on spool.</p> <p>b. Check winch cable for kinks, frays, or breaks.</p> <p>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.</p> <p>d. If it is known strap has been overloaded, notify field maintenance for replacement of strap.</p> <p>e. Wrap winch cable (WP 0027).</p>	
6.	Monthly	Troop Seats (M998, M998A1, M1038, M1038A1)	<p><b>DRIVER (W/Troop Seat Kit)</b></p> <p>a. Inspect troop seats for missing or damaged lockpins.</p> <p>b. Inspect troop seats and backrest for security of mounting.</p>	Mission requires troop seats and troop seats are inoperative or damaged.

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

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
7.	Monthly	TOW Power Cable (M966, M1025, M1046)	<p>c. Inspect troop seat straps for frays or damage.</p> <p><b>DRIVER (Serial Numbers 19,410 and Below)</b> Inspect TOW power cable at the point where it exits the battery box. Chafing of the nylon braid that covers the cable is acceptable. If there is evidence that the wire inside is exposed, notify field maintenance.</p>  <p><b>TOW POWER CABLE</b></p> 	Troop seat straps are frayed or damaged.

*Figure 1. Troop Seats.*

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

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
8.	Monthly	Zippers	<p><b>DRIVER</b></p> <ul style="list-style-type: none"> <li>a. Check canvas top and door zippers for corrosion and/or damage.</li> <li>b. Clean zippers with toothbrush. Apply interlock lubricant (WP 0107, Item 31) to canvas top and door zippers.</li> </ul>	
9.	Monthly	Skid Plates	<p><b>DRIVER</b> <b>(Vehicles Equipped W/Skid Plate)</b></p> <ul style="list-style-type: none"> <li>a. Inspect skid plate and shield for bends, breaks, or cracks.</li> <li>b. Inspect shields for loose fasteners, or damaged or missing components. Tighten loose fasteners, or replace damaged or missing components.</li> </ul>	

The diagram illustrates the underside of a vehicle with several protective components labeled:

- FRONT SKID PLATE**: Located at the front left.
- FRONT SHIELD**: Located centrally below the engine.
- TRANSFER CASE SHIELD**: Located at the rear right.
- FUEL TANK SHIELD**: Located at the front right.
- INTERMEDIATE SHIELD**: Located centrally below the transmission.
- REAR SHIELD**: Located at the rear center.

*Figure 3. Skid Plates.*

**END OF WORK PACKAGE**