

TECHNICAL MANUAL

SCHEDULED MAINTENANCE

OPERATOR LEVEL

5-TON, 6X6, M39 SERIES TRUCKS  
(MULTIFUEL)

TRUCK, CHASSIS: M40A2C,  
M61A2, M63A2; TRUCK, CARGO:  
M54A2, M54A2C, M55A2; TRUCK,  
DUMP: M51A2; TRUCK, TRACTOR:  
M52A2; TRUCK, WRECKER, MEDIUM: M543A2

Chapter 1  
Preventive  
Maintenance

Chapter 2  
Checkout,  
Alinement, and  
Adjustment

Chapter 3  
Lubrication

Chapter 4  
Scheduled  
Maintenance of  
Material Used  
in Conjunction  
with Major  
Items

## WARNING

### EXHAUST GASES CAN BE DEADLY

Exposure to exhaust gases produces symptoms of headache, dizziness, loss of muscular control, apparent drowsiness, and coma. Permanent brain damage or death can result from severe exposure.

Carbon monoxide occurs in the exhaust fumes of fuel burning heaters and internal combustion engines, and becomes dangerously concentrated under conditions of inadequate ventilation. The following precautions must be observed to insure the safety of personnel whenever fuel burning heater(s) or engine of any vehicle is operated for maintenance purposes or tactical use.

Do not operate heater or engine of vehicle in an enclosed area unless it is adequately ventilated.

Do not idle engine for long periods without maintaining adequate ventilation in personnel compartments.

Do not drive any vehicle with inspection plates or cover plates removed unless necessary for maintenance purposes.

Be alert at all times during vehicle operation for exhaust odors and exposure symptoms. If either are present, immediately ventilate personnel compartments. If symptoms persist, remove affected personnel from vehicle and treat as follows: expose to fresh air; keep warm; do not permit physical exercise; if necessary, administer artificial respiration.

If exposed, seek prompt medical attention for possible delayed onset of acute lung congestion. Administer oxygen if available.

The best defense against exhaust gas poisoning is adequate ventilation.

Use extreme care when removing radiator cap, especially when temperature gage shows above 180°F.

Always wear leather gloves when handling winch cable never allow cable to slip through hands. Do not operate winch with less than four turns of cable drum.

Do not drive truck until the low air pressure warning buzzer is silent and the air pressure gage shows at least 65 PSI. This is the minimum pressure required for safe braking action.

Do not use hand throttle to drive the vehicle.

Do not park truck with front transmission gearshift lever in gear.

When used to carry flammables, explosives, or other hazardous material, equip truck with a fire extinguisher.

If your vehicle class number is greater than the bridge class number, your vehicle is too heavy for the bridge; DO NOT CROSS.

CHANGE

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington D. C., 7 June 1993

No. 2

TECHNICAL MANUAL  
**SCHEDULED MAINTENANCE**

OPERATOR LEVEL

**5-TON, 6X6, M39 SERIES TRUCKS  
(MULTIFUEL)**

**TRUCK, CHASSIS: M40A2C,  
M61A2, M63A2, TRUCK, CARGO:  
M54A2, M54A2C, M55A2: TRUCK,  
DUMP: M51A2; TRUCK, TRACTOR.  
M52A2; TRUCK, WRECKER, MEDIUM: M54A3**

TM 9-2320-211-10-2, dated 5 September 1980 is changed as follows:

1. Remove old pages and insert new pages as indicated below.
2. New or changed material is indicated by a vertical bar in the margin of the page.
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1-31 and 1-32

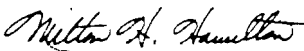
1-31 and 1-32

4. File this change sheet in front of the publication for reference purposes.

By Order of the Secretary of the Army:

GORDON R. SULLIVAN  
*General, United States Army  
Chief of Staff*

Official:

  
MILTON H. HAMILTON  
*Administrative Assistant to the  
Secretary of the Army*

04465

By Order of the Secretary of the Air Force:

MERRILL A. McPEAK  
*General, United States Air Force  
Chief of Staff*

CHARLES C. MCDONALD  
*General, United States Air Force  
Commander, Air Force Logistics Command*

Distribution:

To be distributed in accordance with DA Form 12-38-E (Block 0509) requirements for TM9-2320-211-10-2.

Approved for public release; distribution is unlimited.



**CHANGE  
NO. 1**

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington D.C., 25 March 1992

TECHNICAL MANUAL

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OPERATOR LEVEL

**5-TON, 6X6, M39 SERIES TRUCKS  
(MULTIFUEL)**

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M61A2, M63A2, TRUCK, CARGO:  
M54A2, M54A2C, M55A2: TRUCK,  
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M52A2; TRUCK, WRECKER, MEDIUM: M543A2**

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none  
1-5 through 1-16

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1-5 through 1-16

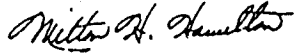
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*Commander, Air Force Logistics Command*

**Distribution:**

To be distributed in accordance with DA Form 12-38-E (Block 0509) Operator maintenance requirements for TM9-2320-211-10-2.

**WARNINGS (CONT)**

If NBC exposure is suspected, all air filter media should be handled by personnel wearing protective equipment. Consult your Unit NBC Officer or NBC NCO for appropriate handling instructions.

Wear safety glasses or goggles when checking batteries. Always check electrolyte level with engine stopped. Do not smoke or use exposed flame when checking battery, explosive gases are present and severe injury to personnel can result.

Remove all jewelry such as rings, dog tags, bracelets, etc. If jewelry contacts battery terminal, a direct short will result in instant heating of tools, causing damage to equipment and injury to personnel.

Do not perform fuel filter checks, inspections, or draining while smoking or near fire, flames, or sparks. Fuel may ignite causing injury or death to personnel.

Do not touch hot exhaust pipes with bare hands. Injury to personnel may result.

If buzzer stops and air pressure reading is below 65 psi, there maybe no braking action. Shut down engine and check to see what is wrong. Failure to do so may result in injury or death to personnel.





TECHNICAL MANUAL  
NO . 9-2320-211-10-2  
TECHNICAL ORDER  
NO. 36A12-1C-421-2

DEPARTMENTS OF THE ARMY  
AND  
THE AIR FORCE  
Washington, DC, 5 September 1980

TECHNICAL MANUAL

SCHEDULED MAINTENANCE

OPERATOR LEVEL

5-TON, 6X6, M39 SERIES TRUCKS  
(MULTIFUEL)

Model		NSN without Winch	NSN with Winch
Chassis	M40A 2C	2320-00-969-4114	
	M61A2	2320-00-055-9264	2320-00-965-0321
	M63A2	2320-00-226-6251	2320-00-285-3757
Truck, Cargo	M54A2	2320-00-055-9266	2320-00-055-9265
	M54A 2C	2320-00-926-0874	2320-00-926-0874
	M55A2	2320-00-073-8476	2320-00-055-9259
Truck, Dump	M51A2	2320-00-055-9262	2320-00-055-9263
Truck, Tractor	M52A2	2320-00-055-9260	2320-00-055-9261
Truck, Wrecker, Medium	M543A2		2320-00-055-9258

Current as of 25 March 1980.

\*This manual, together with TM 9-2320-211-10-1, 5 September 1980; -10-3, 5 September 1980; and -10-4, 5 September 1980 supersedes so much of TM 9-2320-211-10, 20 November 1977 as pertains to multifuel vehicles.

## REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedure, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publication and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Tank Automotive Materiel Readiness Command, ATTN: DRSTA-MB, Warren, Michigan 48090. A reply will be furnished to you.

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# CHAPTER 1

## PREVENTIVE MAINTENANCE

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### 1-1. GENERAL.

Maintenance Forms and Records. Every mission begins and ends with the paperwork. There isn't much of it, but you have to keep it up. The forms and records you fill out have several uses; they are a permanent record of the services, repairs, and modifications made on your vehicle; they are reports to Organizational Maintenance and to your Commander; and they are a checklist for you when you want to know what is wrong with the vehicle after its last use, and whether those faults have been fixed. For the information you need on forms and records, see TM 38-750.

#### b. Preventive Maintenance Checks and Services. (Table 1-1).

(1) Do your (B) PREVENTIVE MAINTENANCE just before you operate your vehicle. Pay attention to the CAUTIONS and WARNINGS.

(2) Do your during (D) PREVENTIVE MAINTENANCE while the vehicle and /or its component systems are in operation.

(3) Do your after (A) PREVENTIVE MAINTENANCE right after operating the vehicle. Pay attention to the CAUTIONS and WARNINGS.

(4) Do your (W) PREVENTIVE MAINTENANCE weekly.

(5) Do your (M) PREVENTIVE MAINTENANCE once a month.

(6) If something doesn't work, troubleshoot it with the instructions in this manual and notify your supervisor.

(7) Always do your PREVENTIVE MAINTENANCE in the same order until it gets to be a habit. Once you've had some practice, you'll spot anything wrong in a hurry.

(8) If anything looks wrong and you can't fix it, write it on your DA Form 2404. If you find something seriously wrong, report it to Organizational Maintenance RIGHT NOW.

(9) When you do your PREVENTIVE MAINTENANCE take along the tools you need to make all the checks. You always need a rag or two, also.

### 1-2. GENERAL MAINTENANCE PROCEDURES.

a. Cleanliness. Dirt, grease, oil, and debris only get in the way and may cover up a serious problem. Clean as you work and as needed. Use dry cleaning solvent (SD-2) on all metal surfaces.

### **WARNING**

Dry cleaning solvent, SD-2, used to clean parts is potentially dangerous to personnel and property. Do not use near open flame or excessive heat. Flash point of solvent is 100° F.

- b. Bolts, Nuts, and Screws. Check them all for obvious looseness, missing, bent, or broken condition. You can't try them all with a tool, of course, but look for chipped paint, bare metal, or rust around bolt heads. If you find one you think is loose, tighten it, or report it to Organizational Maintenance.
- c. Welds. Look for loose or chipped paint, rust, or gaps where parts are welded together. If you find a bad weld, report it to Organizational Maintenance.
- d. Electric Wires and Connectors. Look for cracked or broken insulation, bare wires, and loose or broken connectors. Tighten loose connectors and make sure the wires are in good shape.
- e. Hydraulic Lines and Fittings. Look for wear, damage, leaks, and make sure clamps and fittings are tight. Wet spots show leaks, of course, but a stain around a fitting or connector can mean a leak. If a leak comes from a loose fitting or connector, tighten it. If something is broken or worn out, report it to Organizational Maintenance.

1-3. FLUID LEAKAGE. It is necessary for you to know how fluid leakage affects the status of the hydraulic system. The following are definitions of the types/classes of leakage you need to know to be able to determine the status of your vehicle. Learn, then be familiar with them and REMEMBER -- WHEN IN DOUBT, NOTIFY YOUR SUPERVISOR!

### **CAUTION**

Equipment operation is allowable with minor leakages (Class I or II). Of course, consideration must be given to the fluid capacity in the item/system being checked /inspected. When in doubt, notify your supervisor.

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

Class III leaks should be reported to your supervisor or to Organizational Maintenance.

- a. Class I. Seepage of fluid (as indicated by wetness or discoloration) not great enough to form drops.
- b. Class II. Leakage of fluid great enough to form drops but not enough to cause drops to drip from item being checked/inspected.
- c. Class III. Leakage of fluid great enough to form drops that fall from the item being checked/inspected.

Table 1-1. Operation/Crew Preventive Maintenance Checks and Services

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operation

A-After operation  
W-Weekly

M-Monthly

Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
1	•	•				<p>NOTE</p> <p>Perform WEEKLY (W) as well as BEFORE (B) PMCS if: (1) You are the assigned operator but have not operated the vehicle since the last weekly PMCS ; or (2) you are operating the vehicle for the first time.</p> <p><u>MAKE THE FOLLOWING WALK-AROUND CHECK :</u></p> <p>EXTERIOR</p> <p>a. Visually check for obvious damage to body and cab that would impair operations.</p> <p>b. Check tires for cuts, gouges, or cracks. Remove all penetrating objects.</p> <p>c. Look under vehicle for evidence of fluid leakage (fuel, oil, and coolant).</p> <p>d. Check condition of:</p> <p>(1) Mirrors</p> <p>(2) Windshield and windows</p> <p>(3) Windshield wiper arms and blades</p> <p>(4) Check operation of doors and windows</p> <p>(5) Check operation of headlights, taillights, and turn signals</p> <p>(6) All locking and fastening devices</p> <p>(7) Spare tire mounting</p>	<p>Tires have cuts, gouges, or cracks which would cause tire failure, during operation. Three or more tires missing or flat.</p>

Table 1-1. Operator/Crew Preventive Maintenance Checks and Services - Cont

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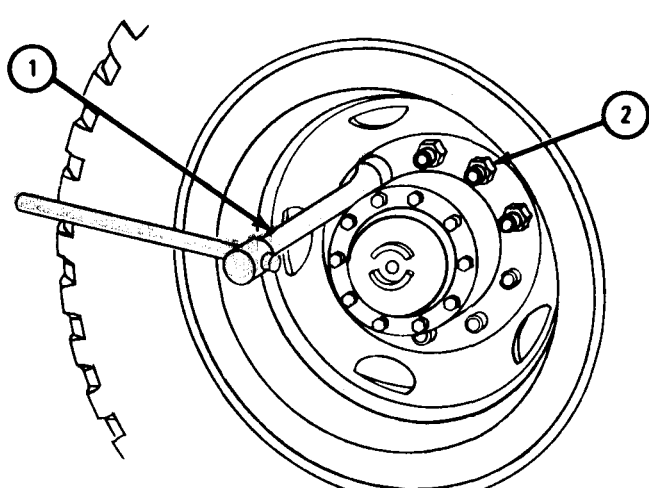
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:															
	B	D	A	W	M																	
2				•		<p>TIRES</p> <p>a. Gage tires for correct air pressure, using tire inflation gage and hose assembly. Adjust as necessary.</p> <table><tr><th colspan="3">TIRE PRESSURE</th></tr><tr><th></th><th>Standard (psi)</th><th>Metric (kPa)</th></tr><tr><td>Highway</td><td>70</td><td>482</td></tr><tr><td>Cross-country</td><td>35</td><td>241</td></tr><tr><td>Mud, sand, and snow without chains</td><td>25</td><td>172</td></tr></table> <p>b. Use wheel stud nut wrench and handle (1) to make sure all wheel stud nuts (2) are tight.</p>  <p>TA 114017</p>	TIRE PRESSURE				Standard (psi)	Metric (kPa)	Highway	70	482	Cross-country	35	241	Mud, sand, and snow without chains	25	172	
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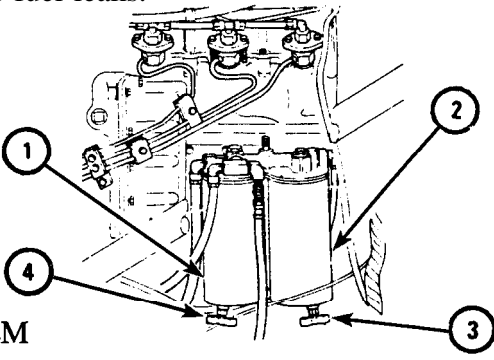
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if
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3	●					<p><b>SECONDARY AND FINAL FUEL FILTERS</b></p> <p><u><b>WARNING</b></u></p> <p>Do not perform fuel filter checks, inspections, or draining while smoking or near fire, flames, or sparks. Fuel may ignite, causing injury or death to personnel.</p> <p><u><b>CAUTION</b></u></p> <p>If one pint (0.473 L) of fuel is drained and fuel is still unclear, notify your supervisor.</p> <p>Open draincocks (4) and (3) at bottom of secondary fuel filter (1) and final fuel filter (2). Drain approximately one pint (0.473 L) of fuel from each into a container. If there are large amounts of water or impurities, notify your supervisor. Close draincocks (4) and (3). Check for fuel leaks.</p> 	
4						<p><b>FUEL SYSTEM</b></p> <ul style="list-style-type: none"> <li>● a. Inspect fuel tank(s) for leaks or broken supports.</li> <li>● b. Check fuel lines and hoses for leakage and damage. Make sure all connections are secure.</li> </ul>	<p>Any class III fuel leakage, any water or contaminants in final fuel filter.</p> <p>Fuel tank(s) or lines are damaged or any broken supports.</p>

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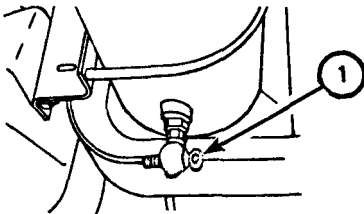
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5						<b>AIR RESERVOIR DRAIN COCK</b> <b>NOTE</b> If any evidence of oil contamination is found during draining of tanks, notify organizational maintenance for determination of vehicle mission capability.  Open air reservoir drain valve (1) under left hand running board to release pressure from the air system and drain accumulated water. Make certain drain valve is closed tight before next operation of the vehicle.  	Any reservoir line or hose missing, leaking or damaged. Any broken supports.
6						<b>BATTERIES</b> <u><b>WARNING</b></u> <ul style="list-style-type: none"> <li>Wear safety glasses or goggles when checking batteries. Always check electrolyte level with engine stopped. Don't smoke or use exposed flame when checking battery: explosive gases are present and severe injury to personnel can result</li> <li>Remove all jewelry such as rings, dog tags, bracelets, ect. If jewelry contacts battery terminal, a direct short will result in instant heating of tools, damage to equipment, and injury to personnel.</li> </ul> <ol style="list-style-type: none"> <li>Open battery compartment (1) for access to batteries.</li> <li>Remove filler caps (2) to check fluid level.</li> </ol>	



Table 1-1. Operator/Crew Preventive Maintenance Checks and Services - Cont

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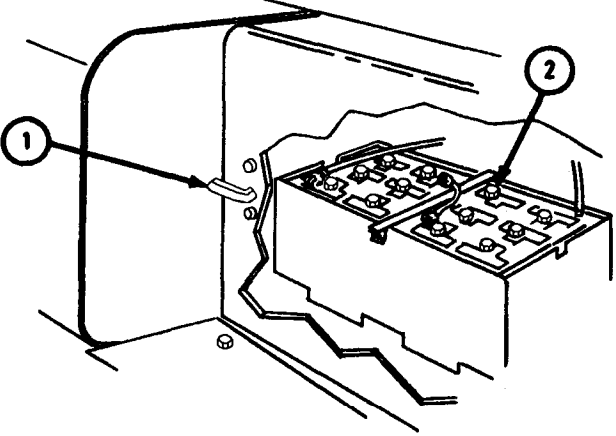
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6 (cont)						 <p style="text-align: center;">NOTE</p> <p>Notify organizational maintenance if fluid level is low or is boiling. When temperature drops below freezing, run engine 15 minutes to allow water added to battery, by organizational maintenance, to mix with electrolyte.</p> <ul style="list-style-type: none"> <li>• c. Visually check terminals and posts for tightness, damage and corrosion.</li> <li>• d. Inspect batteries for cracked or leaking casing, broken, burnt or loose battery terminal posts.</li> <li>• e. Inspect battery compartment for corrosion.</li> </ul>	

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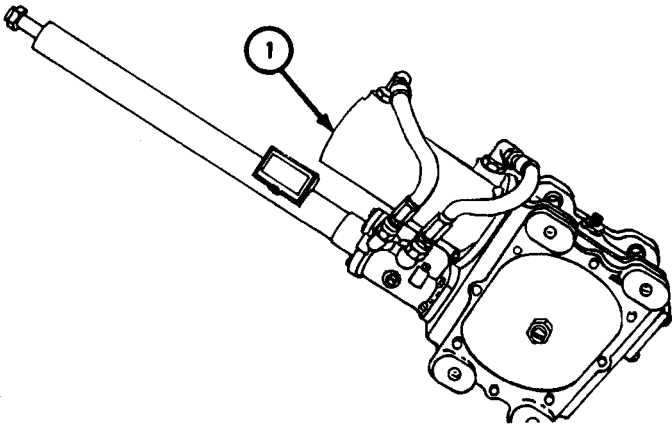
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7						<b><u>UNDERBODY</u></b> <b>POWER STEERING ASSIST CYLINDER</b> <ul style="list-style-type: none"> <li>a. Inspect power steering assist cylinder (1) for damage and leaks.</li> <li>b. Check fluid lines for defects and leaks.</li> <li>c. Inspect for loose or missing hardware on vehicles equipped with M818 steering conversion kit.</li> </ul> 	Evidence of Class III leaks.
						<b>FRAME</b> <ul style="list-style-type: none"> <li>Visually inspect frame side rails, cross-members and underbody supports for loose or broken bolts, cracks, breaks, broken welds, and rusted-through conditions.</li> </ul> <b>DIFFERENTIALS</b> <ul style="list-style-type: none"> <li>Visually inspect front and rear differentials for oil leaks.</li> </ul>	Any obvious loose or broken side rails, cross members, broken welds, bolts or rivets.  Evidence of Class III leaks.

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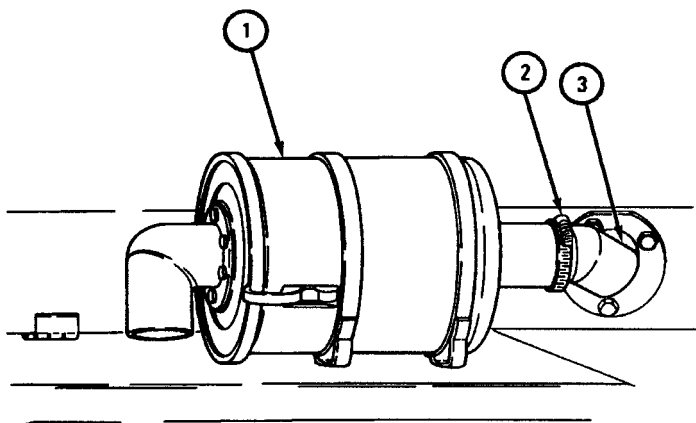
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10						<p><b>TRANSMISSION AND TRANSFER</b></p> <ul style="list-style-type: none"> <li>a. Visually inspect transmission and transfer for leakage.</li> <li>b. Visually check for loose or damage hoses and connections leading to and from transmission and transfer.</li> </ul>	Evidence of damage or Class III leaks.
10.1						<p><b><u>ENGINE COMPARTMENT</u></b></p> <p><b><u>AIR INTAKE SYSTEM</u></b></p> <p><b><u>WARNING</u></b></p> <p>If NBC exposure is suspected, all air filter media should be handled by personnel wearing protective equipment. Consult your unit NBC Officer or NBC NCO for appropriate handling or disposal instructions.</p> <ul style="list-style-type: none"> <li>Check clamps (1), hose (2), and air cleaner assembly (3) for tightness or openings which would allow foreign materials to enter engine.</li> </ul> 	Leaks or openings which will allow foreign material to enter engine are evident.

Table 1-1. Operator/Crew Preventive Maintenance Checks and Services – Cont

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11						<b>RADIATOR</b>  <u><b>WARNING</b></u>  Use care when removing radiator filler cap. Coolant is under pressure, and can cause severe burns when cap is removed while engine is hot.  a. Remove radiator cap (1) and check coolant level. Add coolant as required. Coolant should be seen in filler tube.  b. Check all hoses for deterioration, leakage, and secure connections.	Any Class III leaks.
12						<b>ENGINE OIL LEVEL</b>  Check engine oil level as follows:  a. When checking COLD, oil level should be approximately 1.0 in. to 1–1.5 in. (25.4 to 38.1 mm) above full mark. Add oil as necessary. Do not overfill.  b. When checking HOT, oil level should be between the "ADD" and "FULL" marks. Add oil as necessary. Do not overfill.	

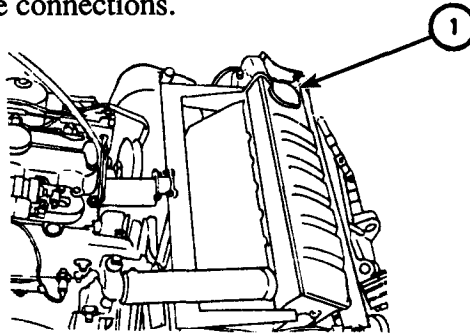


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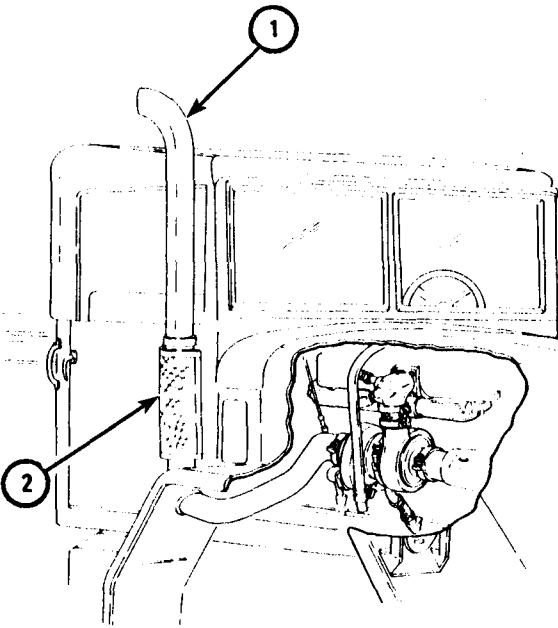
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
12.1						<p><b>EXHAUST SYSTEM</b></p> <p><u><b>WARNING</b></u></p> <p>Exhaust gases can kill. Operate only in a well ventilated area . Failure to do this may result in injury or death to personnel.</p> <p>Do not touch hot exhaust pipes with bare hands. Injury to personnel may result.</p> <p>Start engine, and after system has warmed up, check exhaust pipes (1) and couplings (2) for leaks and loose clamps.</p> 	Any cracked, broken, or missing parts, and obvious exhaust leaks are evident.

Table 1-1. Operator/Crew Preventive Maintenance Checks and Services-Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation

A-After operation

M-Monthly

D-During operation

W-Weekly

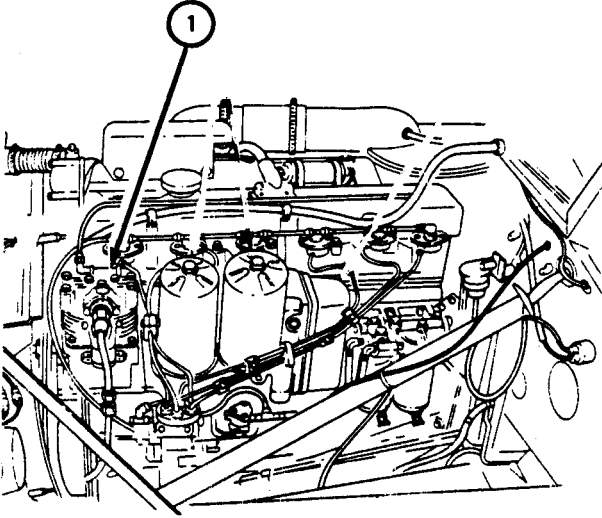
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
13						<b>AIR COMPRESSOR</b> <ul style="list-style-type: none"> <li>Check compressor (1) for loose bolts and air leaks.</li> </ul> 	Any hose lines missing, leaking, or damaged. Any air leaks.
14						<b>DRIVE BELTS</b> <ul style="list-style-type: none"> <li>Check for missing belts (1), broken, cracking, and fraying.</li> </ul>	Any drivebelt is missing, broken, cracked to the belt fiber, has more than one crack (1/8 in. depth or 50% of belt thickness) with in a 6 in. area or has frays more than 2 in. long.

Table 1-1. Operator/Crew Preventive Maintenance Checks and Services - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operation

A-After operation  
W-Weekly

M-Monthly

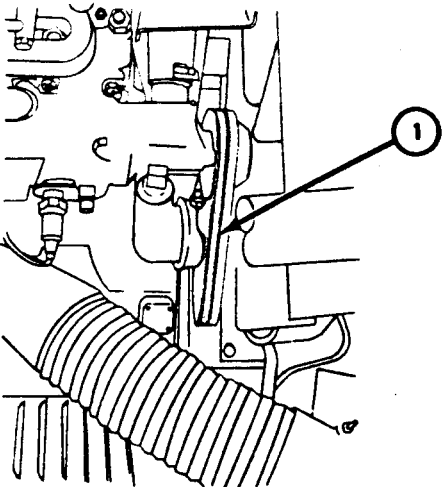
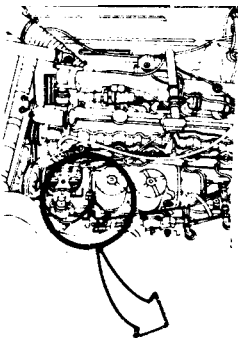
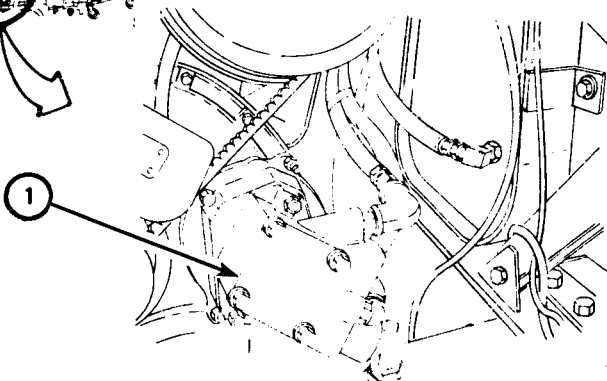
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, Or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
15						 <p><b>POWER STEERING PUMP</b></p> <ul style="list-style-type: none"> <li>• Check pump (1) for leakage. Visually inspect pump hoses for deterioration and leaks.</li> </ul>  	Evidence of Class III leaks.

Table 1-1. Operator/Crew Preventive Maintenance Checks and Services - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operationA-After operation  
W-Weekly

M-Monthly

Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
16						<b>WINDSHIELD WASHER RESERVOIR</b>  <b>NOTE</b>  Reservoir is on right side of engine compartment.  Check fluid level in reserovir (1). If less than half full, fill with washer fluid. <div data-bbox="619 932 977 1336" data-label="Image"> </div>	
17						<b>ALCOHOL EVAPORATOR IN FREEZING TEMPERATURES</b>  Check fluid level. Fill through filler cap (1) with alcohol if bottle (2) is less than two-thirds full.	Bottle is empty.



Table 1-1. Operator/Crew Preventive Maintenance Checks and Services-Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operationA-After operation  
W-Weekly

M-Monthly

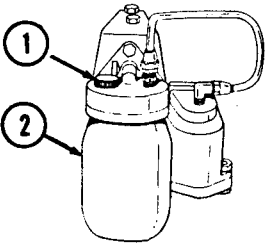
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
18						 <p><u>INTERIOR OF VEHICLE INSTRUMENTS</u></p> <p><u>WARNING</u> If buzzer stops and air pressure reading is below 65 psi, there may be no braking action. Shut down engine and check to see what is wrong. Failure to do so may result in injury or death to personnel.</p> <p>a. Start engine and run at idle speed (650-850) to let it warm up, and listen for air buzzer.</p> <p>b. Listen for unusual noise or vibration.</p> <p><u>CAUTION</u> If oil pressure reading is below normal, or if temperature reading is over 210° F, shut down engine at once, or engine may be damaged.</p>	<p>Engine is inoperative.</p> <p>Air buzzer will not come on.</p> <p>Air buzzer will not shut off above 66 psi or will not come on at approximately 60 psi and remain on with decreasing air pressure.</p> <p>There is unusual noise or vibration.</p>

Table 1-1. Operator/Crew Preventive Maintenance Checks and Services-Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B—Before operation

A—After operation

M—Monthly

D—During operation

W—Weekly

Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
1 8 (cont)						<p><b>NOTE</b></p> <p>Normal oil pressure with engine running at idle speed is about 10 psi. With engine running at road speeds, engine oil pressure should read about 45 to 75 psi.</p> <p>Some engines have normal oil pressure readings between 40 and 75 psi at road speeds. If your oil pressure gage has a maximum reading of 60 psi and the needle peaks at 60 psi, notify your supervisor.</p> <p>c. Check engine instruments on instrument panel for steady, normal reading as follows:</p> <p>Fuel gage (1) —Indicates fuel level</p> <p>Tachometer (2) —Idle: 600–700 RPM</p> <p>Temperature (3) —160–190° F</p> <p>Battery gen. indicator (4) —In green area</p> <p>Air pressure gage (5) —85–120 psi</p> <p>Oil pressure gage (6) —15–75 psi</p> <p><b>CAUTION</b></p> <p>Do not attempt to force cable handle inward while serrations are interlocked. This will strip the serrations on the cable and render the vehicle inoperative. Handle must be turned 1/4 turn to disengage serrations.</p> <p>d. Engine stop cable</p>	<p>Tachometer gage reads less than 600 RPM, or more than 700 rpm at idle</p> <p>Temperature reads more than 210° F. Gage needle reads in red area.</p> <p>Air pressure gage reads 60 psi or below.</p> <p>Oil pressure reads less than 15 psi.</p> <p>Inoperative or will not lock in the out position.</p>

Table 1-1. Operator/Crew Preventive Maintenance Checks and Services-Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operationA-After operation  
W-Weekly

M-Monthly

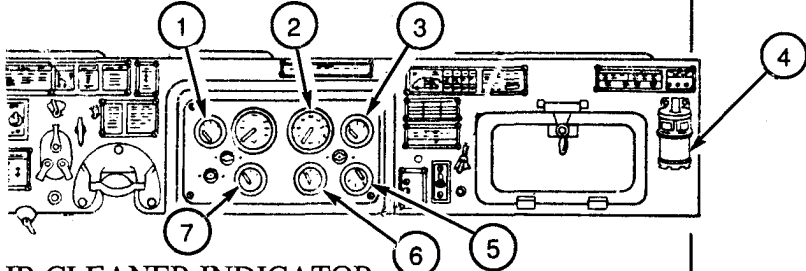
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
18.1						 <p><b>AIR CLEANER INDICATOR</b></p> <p><b>WARNING</b> If NBC exposure is suspected, all air filter media should be handled by personnel wearing protective equipment. Consult your unit NBC Officer or NBC NCO for appropriate handling or disposal instructions.</p>	
19	•					<p>Check air cleaner indicator (7) on instrument panel. A red band means filter element needs to be cleaned or replaced.</p> <p><b>BRAKE SYSTEM</b></p> <ol style="list-style-type: none"> <li>With engine running and parking brake engaged, walk around vehicle and visually check: <ul style="list-style-type: none"> <li>(1) Air reservoirs (under left running board) for leaks.</li> <li>(2) All brake lines and hoses (air and hydraulic) for deterioration and leaks.</li> </ul> </li> <li>Operate service brakes to determine stopping ability. Check for any pulling to one side, grabbing or other abnormal operation.</li> <li>Determine parking brake ability to hold vehicle by first engaging hand brake then engage transmission in 5th gear. Vehicle should not move when clutch is released.</li> </ol>	<p>Any reservoir line, or hose missing, leaking or damaged. Any broken supports.</p> <p>Service brakes do not operate properly</p> <p>Parking brake does not hold properly after being adjusted.</p>

Table 1-1. Operator/Crew Preventive Maintenance Checks and Services – Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B–Before operation  
D–During operationA–After operation  
W–Weekly

M–Monthly

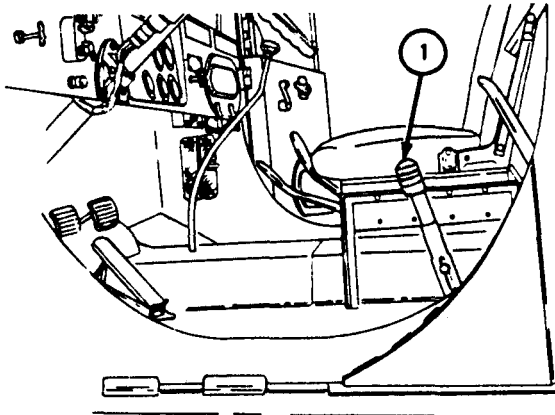
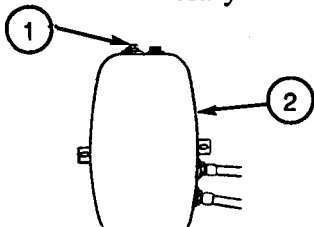
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
19 (cont)		•				<p>d. Adjust hand brake as required by moving knob on top of brake handle (1) clockwise to increase parking brake action, counterclockwise to decrease braking action.</p> 	Parking brake does not hold properly after being adjusted.
20		•				<p><b>STEERING SYSTEM</b></p> <p><u>CAUTION</u> Do not overfill power steering reservoir</p> <p>a. Stop engine and open hood. Remove filler plug (1) and check oil level. Reservoir (2) should be 3/4 full. Add as necessary.</p>  <p>b. Check for unusual free play, binding, wander, or shimmy.</p>	Loose or binding steering action. Steering wheel difficult to turn or shimmies. Steering is inoperative.

Table 1-1. Operator/Crew Preventive Maintenance Checks and Service - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operation

A-After operation  
W-Weekly

M-Monthly

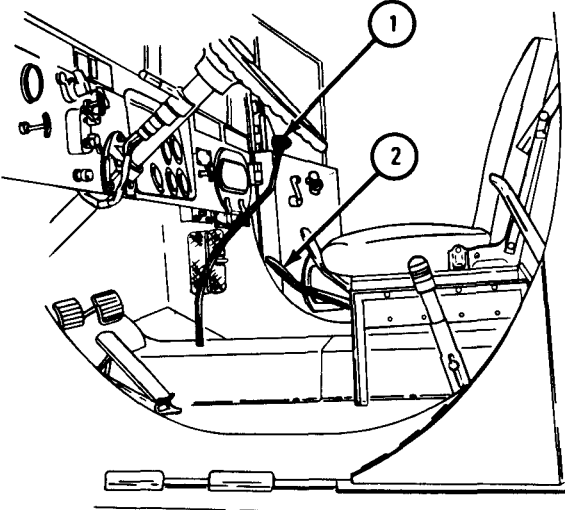
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
21		•				<p><b>TRANSMISSION</b></p> <p>Check transmission selector lever (1) for operation through gear ranges. Look for stiffness, unusual noises, or tendency to slip out of gear with transfer selector lever (2) in Neutral.</p>  <p style="text-align: right;">TA 114026</p>	Transmission is inoperative.
22		•				<p><b>TRANSFER</b></p> <p>Check transfer selector lever (2) action for unusual noises, stiffness, or jumping out of gear.</p>	Transfer is inoperative.

Table 1-1. Operator/Crew Preventive Maintenance Checks and Services - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operationA-After operation  
W-Weekly

M-Monthly

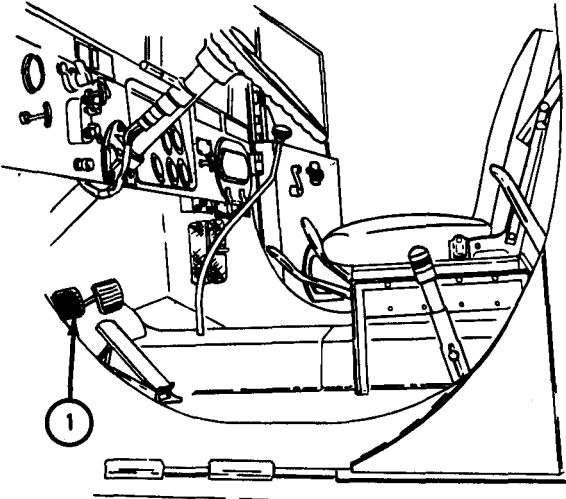
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
23		•				<p>CLUTCH</p> <p>Check clutch (1) for drag, noise, chatter, grab, slippage, and clashing of gears.</p>  <p>TA 114028</p>	Clutch is inoperative, slipping or definite grab or chatter.
24		•				<p>FRONT AND REAR DRIVE AXLES AND PROPELLER SHAFTS.</p> <p>Listen for unusual noises or vibrations. Vibrations, clinking or clunking noises indicate worn U-joints or damaged propeller shafts.</p>	Rear propeller shaft missing or damaged, unusual noises or vibrations.
25		•				<p>HORNS</p> <p>Check for operation if tactical situation permits.</p>	

Table 1-1. Operator/Crew Preventive Maintenance Checks and Services - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operation

A-After operation  
W-Weekly

M-Monthly

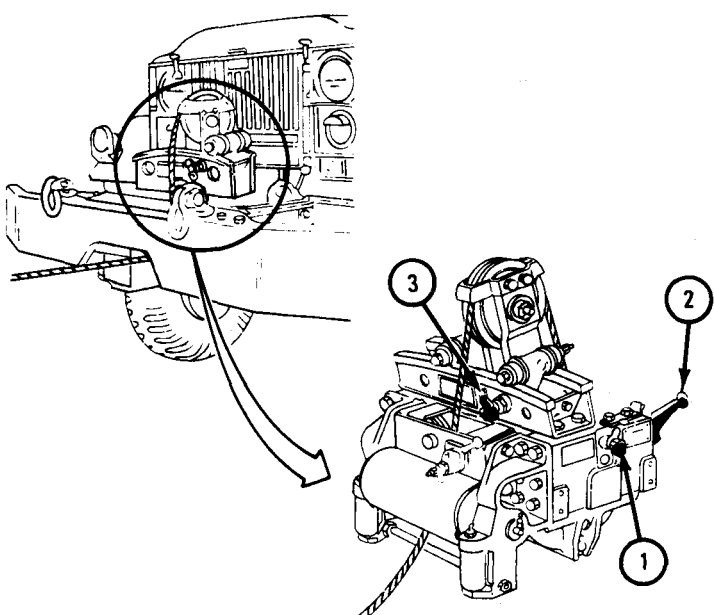
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
26						<p><b><u>SPECIAL BODY EQUIPMENT</u></b></p> <p><b>FRONT WINCH</b></p> <p>a. While operating front winch, check condition of wire rope, hooks, and cable chain installation.</p> <p>b. While operating front winch, check that drum lock knob (1) and drum clutch lever (2) operate properly. Also, that level wind lock knob (3) on winches so equipped, operates properly.</p>  <p>TA 114029</p>	<p>Cable frayed, kinked, or broken.</p> <p>Winch does not operate properly.</p>

Table 1-1. Operator/Crew Preventive Maintenance Checks and Services - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operation

A-After operation  
W-Weekly

M-Monthly

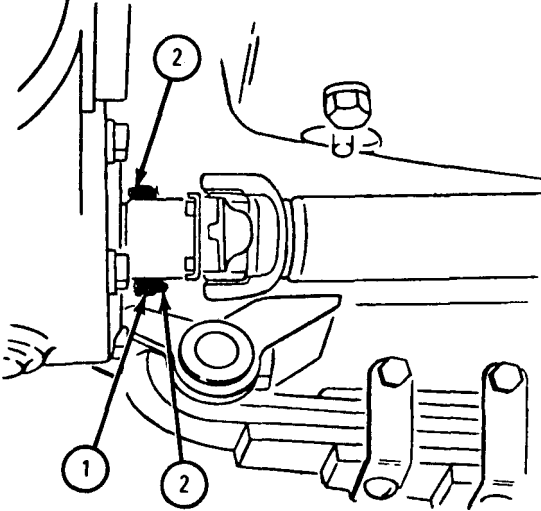
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
26 (cont)				•		<p>Clean wire rope and check shearpin (1) for presence and condition. (Shearpin connects U-joint yoke and winch drive shaft. It is retained with cotter pins (2)).</p>  <p style="text-align: right;">TA 114030</p> <p>d. Check PTO and drive shaft for mounting and completeness.</p>	



Table 1-2. Operator/Crew Preventive Maintenance Checks and Services for  
M543A2 Medium Wrecker Truck

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operation

A-After operation  
W-Weekly

M-Monthly

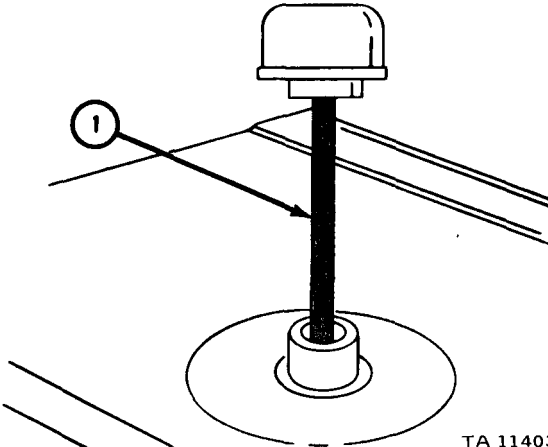
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
1	•					<p>M543A2 WRECKER CRANE</p> <p>a. Before using crane, measure reservoir oil level with dip stick (1) on reservoir top. Add oil as required. (See LO 9-2320-211-12.)</p>  <p>TA 114031</p> <p><b>WARNING</b></p> <p>Always position the outriggers (1) before operating the crane, and use boom jacks (2) with heavy lifts.</p>	

Table 1-2. Operator/Crew Preventive Maintenance Checks and Services for M543A2 Medium Wrecker Truck - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operationA-After operation  
W-Weekly

M-Monthly

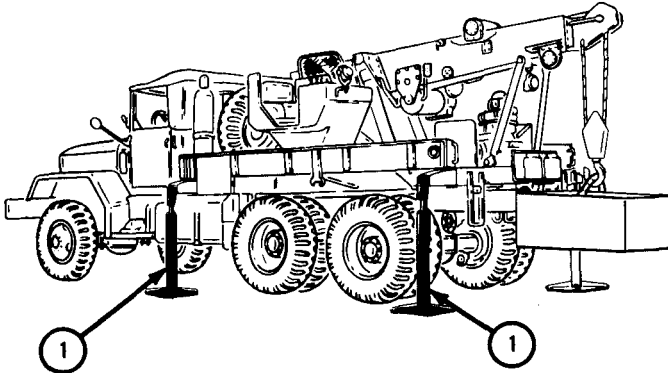
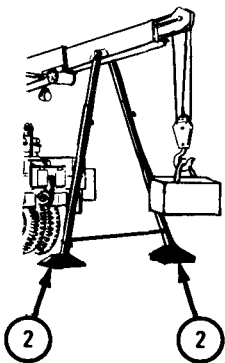
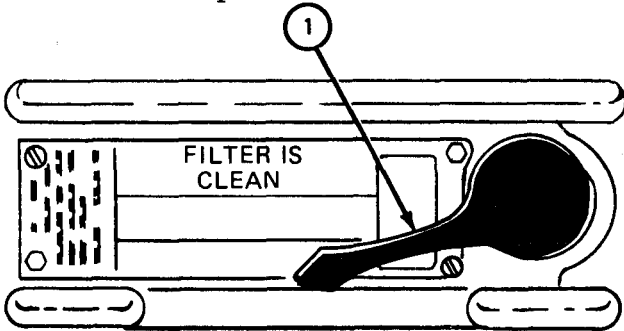
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
1 (cont)						  <p>TA 114032</p> <p>b. While operating crane check filter indicator (1) on front of crane oil reservoir. Filter should point to CLEAN.</p>  <p>TA 114076</p>	

Table 1-2. Operator/Crew Preventive Maintenance Checks and Services for  
M543A2 Medium Wrecker Truck - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operation

A-After operation  
W-Weekly

M-Monthly

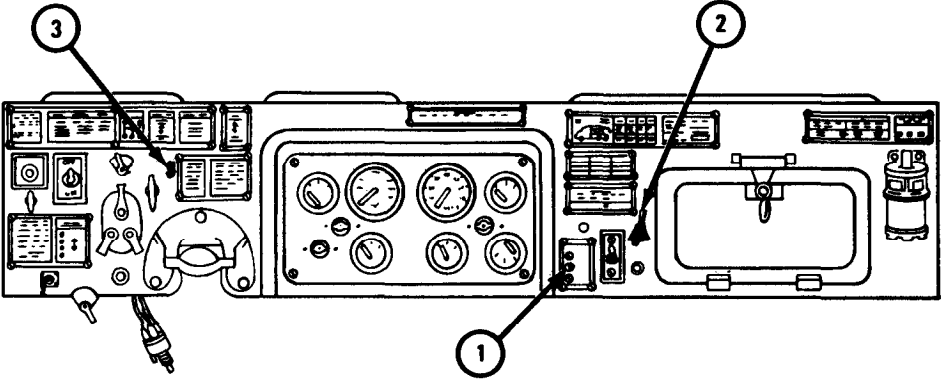
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
1 (cont)		•				<p>c. Check brake lock switch (1), flood-lights and switch (2) and amber warning light (on left front fender), and switch (3) for proper operation.</p> 	
		•				<p>d. Operate crane through full range of elevation, rotation and boom extension to check performance of crane and hoist, pump control linkage, and controls:</p> <ul style="list-style-type: none"> <li>(1) Boom control lever.</li> <li>(2) Hoist control lever.</li> <li>(3) Crowd control lever.</li> <li>(4) Swing control lever.</li> </ul>	<p>TA 114033</p> <p>Crane is inoperative.</p>

Table 1-2. Operator/Crew Preventive Maintenance Checks and Services for  
M543A2 Medium Wreck Truck - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operation

A-After operation  
W-Weekly

M-Monthly

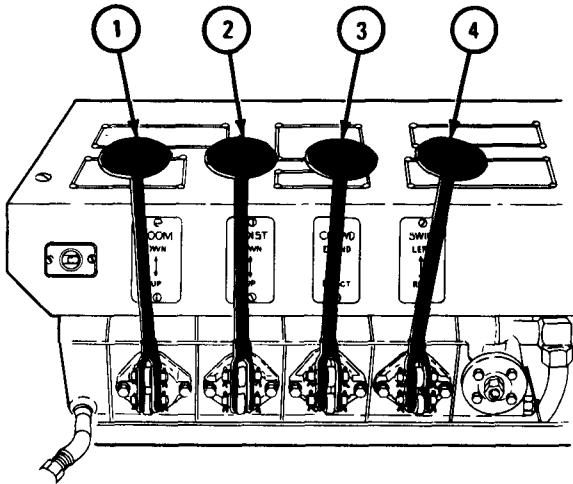
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
1 (cont)						 <p style="text-align: right;">TA 114034</p> <ul style="list-style-type: none"> <li>• e. Inspect all hydraulic lines, hoses, and fittings for leaks, abrasions, and damaged fittings.</li> <li>• f. Inspect crane cab (1) for damage.</li> </ul>	Evidence of Class III leaks.

Table 1-2. Operator/Crew Preventive Maintenance Checks and Services for M543A2 Medium Wrecker Truck - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operation

A-After operation  
W-Weekly

M-Monthly

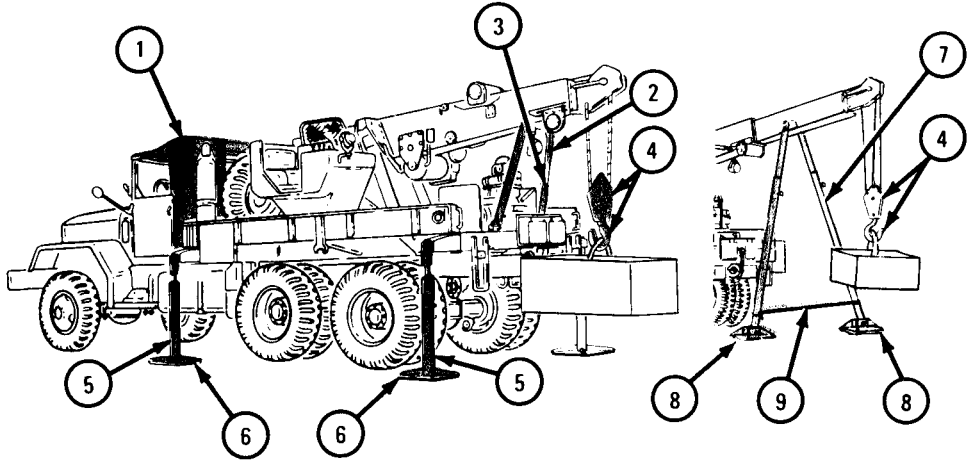
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
1 (cont)						 <p style="text-align: right;">TA 114035</p> <ul style="list-style-type: none"> <li>g. Check condition of shipping brace assemblies (2), retaining pins (3), hook and block (4), outriggers (5) and base plates (6), boom jacks (7) and base plates (8), and boom jack tie bars (9).</li> <li>h. Visually inspect vehicle for condition of ground spades, support jacks, and other items used in crane operation.</li> </ul>	

Table 1-3. Operator/Crew Preventive Maintenance Checks and Services for M51A2 Dump Truck

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operationA-After operation  
W-Weekly

M-Monthly

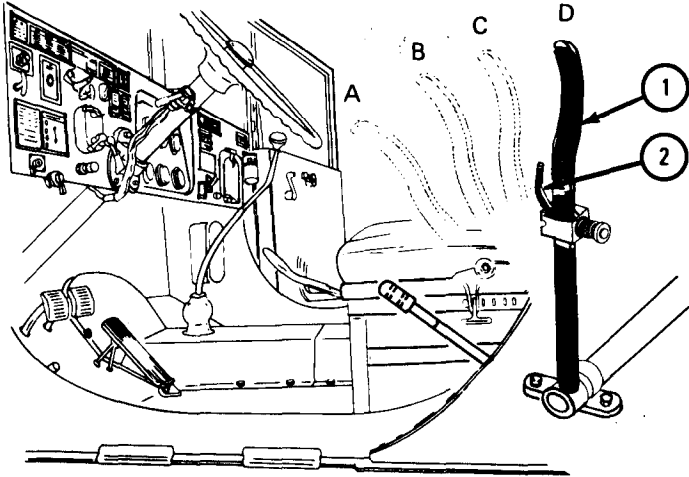
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
1	•					<p><b>M51A2 DUMP TRUCK</b></p> <p>a. Before operating dump truck hoist, inspect hydraulic lines and hoses for signs of leakage or deterioration.</p> <p style="text-align: center;"><u>WARNING</u></p> <p>Stay clear of dump body and cab protector at all times during loading and unloading operations. The dump body can raise accidentally when overloaded or when a heavy load is dumped into the dump body. This can result in serious injury.</p> <p>b. Operate dump hoist control (1) through raising (a), holding (b), and lowering (c) positions to check performance. Make sure lock (2) on control lever (1) holds control in Neutral position (d).</p>  <p style="text-align: right;">TA 114036</p>	<p>Evidence of Class III leaks.</p> <p>Dump hoist inoperative.</p>

Table 1-3. Operator/Crew Preventive Maintenance Checks and Services for  
M51A2 Dump Truck - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operation

A-After operation  
W-Weekly

M-Monthly

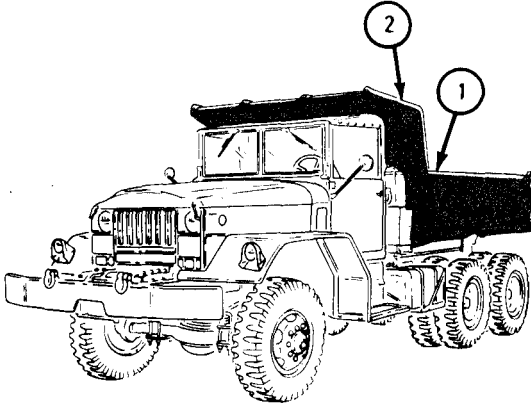
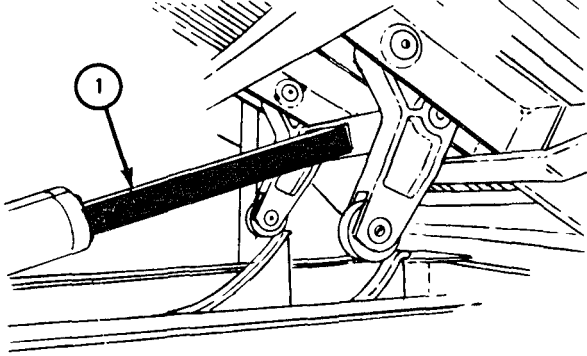
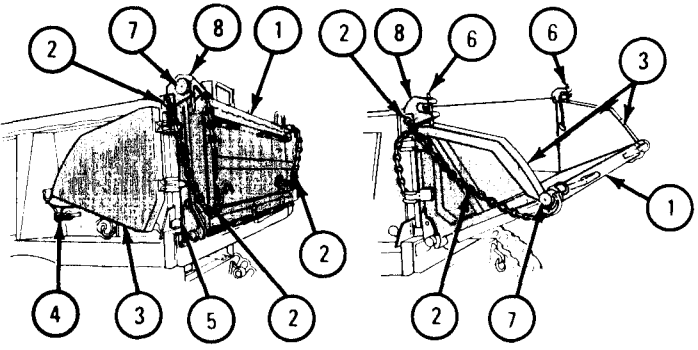
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
1 (cont)						<ul style="list-style-type: none"> <li> <p>c. Inspect dump body (1) and cab protector (2) for dents, cracks, broken welds, loose or broken bolts, and rusted-through conditions. Make sure all bolts securing cab protector to dump truck are tight.</p>  <p>TA 114037</p> </li> </ul>	Evidence of Class III leaks.
						<ul style="list-style-type: none"> <li> <p>d. Inspect cylinders (1) for damage, leaks, and security of mounting to subframe.</p>  <p>TA 114038</p> </li> </ul>	
						<ul style="list-style-type: none"> <li> <p>e. Check PTO, drive shaft, hydraulic pump and control valve for damage, leaks, and security of mounting.</p> </li> </ul>	Class III leaks evident.

Table 1-3. Operator/Crew Preventive Maintenance Checks and Services for M51A2 Dump Truck - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operationA-After operation  
W-Weekly

M-Monthly

Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
1 (cont)					•	<p>f. Inspect tailgate (1) for damage, security, and ease of movement. Also check condition and security of tailgate chains (2), wings (3), harness hooks (4), latches and braces (5), retaining pins (6) and hinge pins (7), and brackets (8).</p> 	

TA 114039



Table 1-3. Operator/Crew Preventive Maintenance Checks and Services for M51A2 Dump Truck - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operation

A-After operation  
W-Weekly

M-Monthly

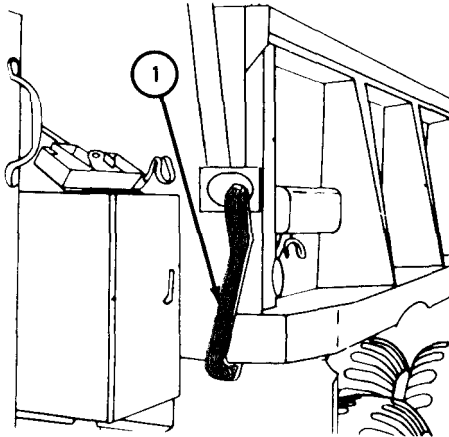
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
1 (cont)					<ul style="list-style-type: none"> <li>g. Check for proper operation of tailgate control linkage by: first, pulling tailgate control rod hand lever (1) forward and down to unlock tailgate; and second, pushing it up and back to lock tailgate.</li> </ul>	 <p>TA 114040</p>	

Table 1-4. Operator/Crew Preventive Maintenance Checks and Services for M52A2 Tractor Truck

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operationA-After operation  
W-Weekly

M-Monthly

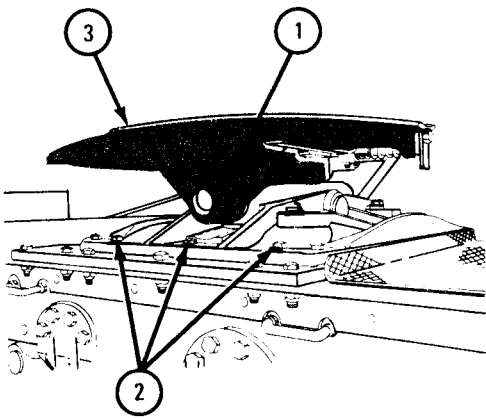
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
1	•					<p><b>M52A2 TRACTOR TRUCK</b></p> <p><b>FIFTH WHEEL</b></p> <p>a. Before using tractor, couple and uncouple trailer to determine if fifth wheel (1) works properly.</p>  <p>TA 114041</p>	Faulty coupling or uncoupling action.
						<p>b. Check fifth wheel (1) for loose or missing capscrews (2) securing fifth wheel to vehicle side rails.</p> <p>c. Inspect fifth wheel (1) and approach plates (3) for bends and damage.</p>	
2		•				<p><b>TRAILER CONNECTING ACCESSORIES</b></p> <p>a. Before using trailer, check airbrake hand control (1) for proper operation.</p>	Control does not function.

Table 1-4. Operator/Crew Preventive Maintenance Checks and Services for M52A2 Tractor Truck - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operationA-After operation  
W-Weekly

M-Monthly

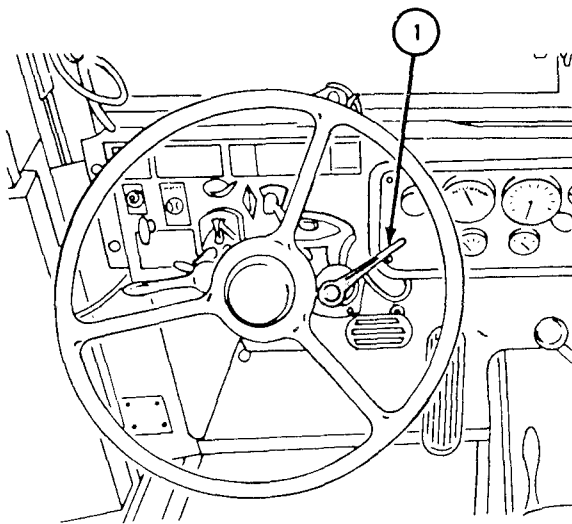
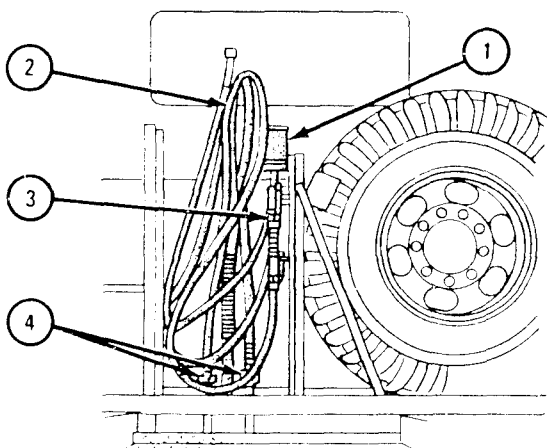
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
2 (cont)						 <p>TA 114042</p> <p>b. Inspect electric cable and connector (1) for cracks, breaks, and other damage.</p>  <p>TA 114043</p>	Cable is broken.

Table 1-4. Operator/Crew Preventive Maintenance Checks and Services for M52A2 Tractor Truck - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B - Before operation

A - After operation

M - Monthly

D - During operation

W - Weekly

Item No.	Intervals					Item to be Inspected  Procedure: Check for and have repaired, filled, or adjusted as needed.	Equipment is not ready/ available If:
	B	D	A	W	M		
2 (Cont)				•		c. Inspect emergency airbrake hose line and couplings (2) and service line and coupling (3) for damage, deterioration, and leakage.  d. Inspect airbrake hose coupling shutoff cocks (4) for damage, leaking, and proper operation.	Hose or couplings damaged or leaking.
3						TRAILER BRAKES  <b>NOTE</b>  Perform this check with the trailer empty and the trailer loaded after the tractor/trailer are coupled.  a. Check for air leaks at the inter-vehicular connecting hoses, relay valve and air reservoirs.  b. Apply trailer brakes only and attempt to move the tractor/trailer combination.	a. Any air leaks are present.  b. Brakes fail to hold tractor/trailer combination from moving.

## **CHAPTER 2**

### **CHECKOUT, ALINEMENT, AND ADJUSTMENT**

---

There are no scheduled checkout, alinement, or adjustment procedures to be done at the operator's level of maintenance.

## **CHAPTER 3**

### **LUBRICATION**

---

3-1. GENERAL. Refer to LO 9-2320-211-12 for lubrication of the vehicle.

3-2. SPECIAL INSTRUCTIONS. There are no special instructions for lubrication of the vehicle by the operator when operating under unusual conditions.

## **CHAPTER 4**

### **SCHEDULED MAINTENANCE OF MATERIAL USED IN CONJUNCTION WITH MAJOR ITEMS**

---

4-1. GENERAL. These preventive maintenance checks and services (PMCS) cover the special purpose kits and miscellaneous equipment supplied as part of the vehicle. The special purpose kits include the A-frame kit, airbrake kit, electric brake kit, troopseat and covering, bow and tarp kits, arctic winterization kit hot water personnel heater kit, and the deep water fording kit. Miscellaneous equipment includes a fire extinguisher and a first aid kit.

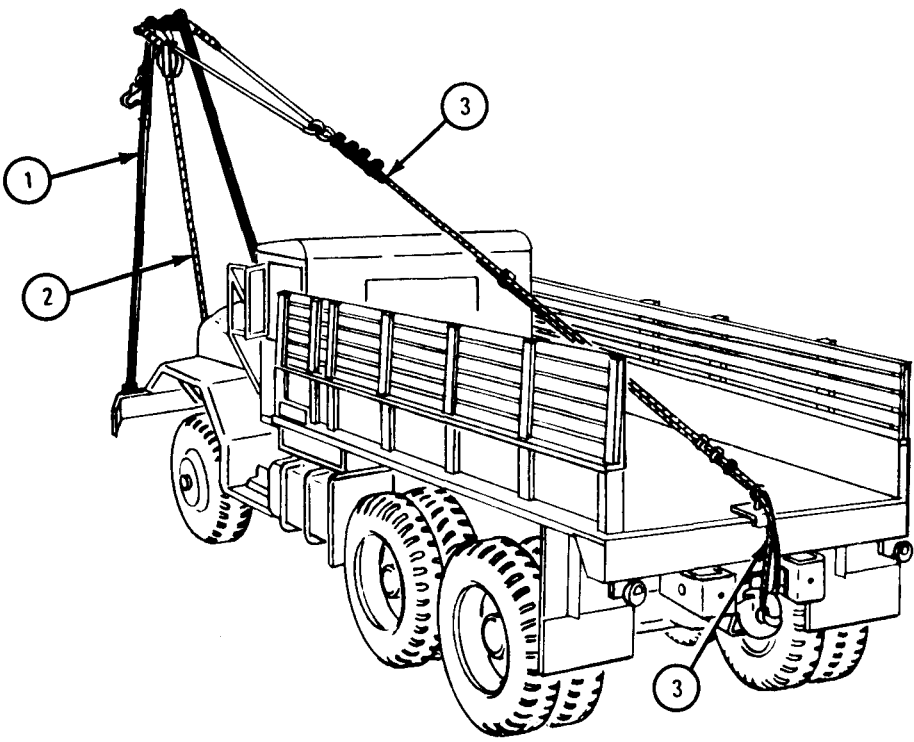
4-2. PMCS PROCEDURES.

Table 4-1. Operator/Crew Preventive Maintenance Checks and Services for Special Purpose Kits

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operationA-After operation  
W-Weekly

M-Monthly

Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
1				•		<p><b>SPECIAL PURPOSE KITS</b></p> <p><b>A-FRAME KIT</b></p> <p>Visually inspect A-Frame (1) for bends and winch cable (2) and chains (3) for kinks, frays, or breaks.</p> 	Winch cable is frayed or broken.

TA 114044

Table 4-1. Operator/Crew Preventive Maintenance Checks and Services for  
Special purpose Kits - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operation

A-After operation  
W-Weekly

M-Monthly

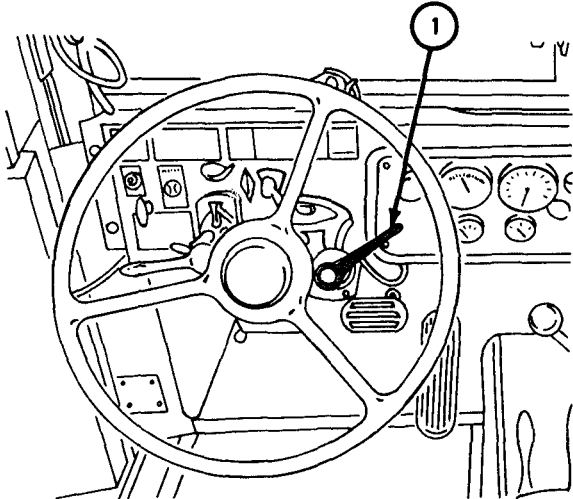
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
2		•				<p><b>AIR BRAKE KIT</b></p> <p>Before moving with any towed vehicle, make sure air brake control lever (1) is working properly by moving lever down to apply brakes to towed vehicle, up to release brakes.</p>  <p>TA 114045</p>	Trailer brakes do not apply.
3		•				<p><b>ELECTRIC BRAKE KIT</b></p> <p>Make sure rheostat (1) is set properly by depressing service brake pedal to determine if electric brakes on towed vehicle are applied. Adjust rheostat setting as required.</p>	Trailer brakes do not apply.

Table 4-1. Operation/Crew Preventive Maintenance Checks and Services for Special Purpose Kits - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operationA-After operation  
W-Weekly

M-Monthly

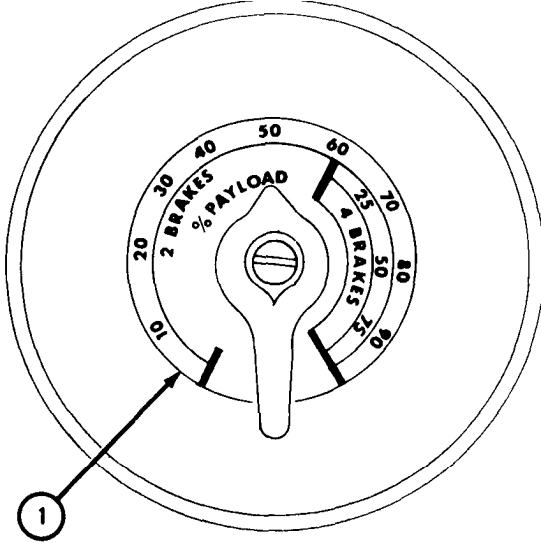
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
3 (cont)							
4						<p style="text-align: right;">TA 114046</p> <p>TROOP SEAT AND COVERING, BOW AND TARP KITS</p> <ul style="list-style-type: none"> <li>• a. Inspect tarp (1) and end curtain (2) for tears and holes.</li> <li>• b. Inspect lashing hooks (3) and rope (4) for ability to secure tarp and end curtain.</li> <li>• c. Check stave (5) and cross bow (6) assemblies for war page and breaks.</li> <li>• d. Check troop seats (7) for cracked or broken wood. Make sure troop seat retainers are present and secure.</li> </ul>	



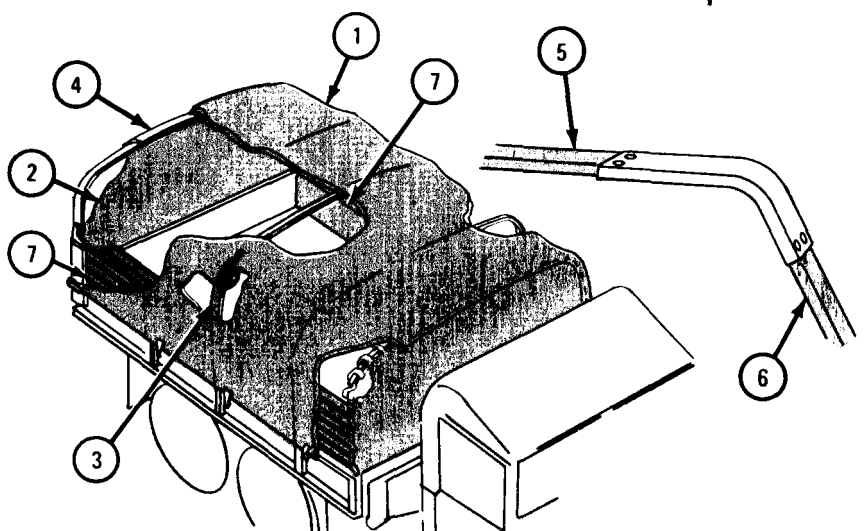
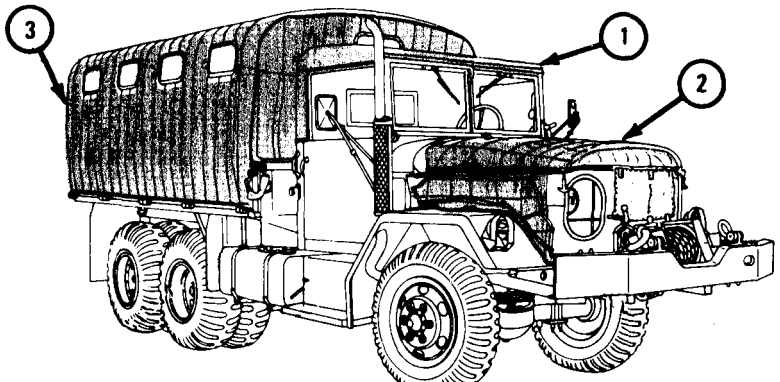
Table 4-1. Operation/Crew Preventive Maintenance Checks and Services for Special Purpose Kits - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operation

A-After operation  
W-Weekly

M-Monthly

Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
4 (cont)							
5						<p>ARCTIC WINTERIZATION KIT</p> <p>a. Inspect hardtop closure (1), quilted engine compartment (2) and cargo compartment (3) covers for secure mounting and good condition.</p> 	

TA 114048

Table 4-1. Operation/Crew Preventive Maintenance Checks and Services for Special Purpose Kits - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operationA-After operation  
W-Weekly

M-Monthly

Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
5 (cont)	•					<p>b. Inspect fuel burning personnel and engine coolant heaters for the following:</p> <p>(1) Before operating heaters, depress indicator lamps (1) to make sure they illuminate.</p> <div data-bbox="660 870 1080 1125" data-label="Diagram"> </div> <p style="text-align: center;">TA 114049</p> <p>(2) Make sure all coolant shutoff cocks (1) are open, also fuel inlet cocks (2).</p>	
	•						

Table 4-1. Operation/Crew Preventive Maintenance Checks and Services for Special Purpose Kits - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation

D-During operation

A-After operation

W-Weekly

M-Monthly

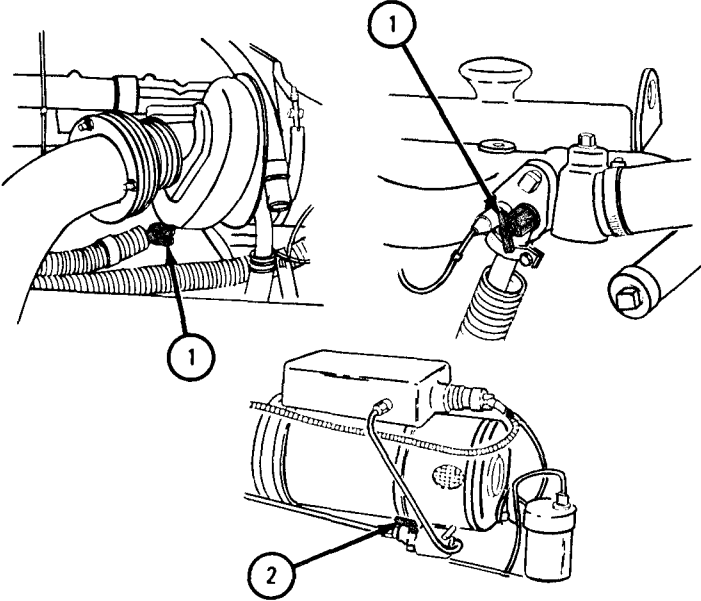
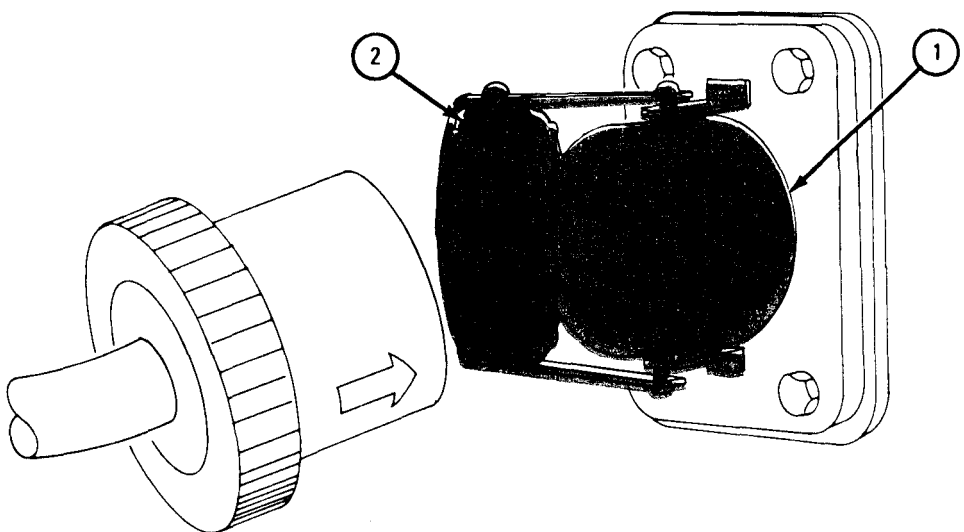
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
5 (cont)						 <p style="text-align: right;">TA 114050</p> <p>(3) Listen for unusual heater noises during operation.</p> <p>(4) Check heater fuel lines and connections for leaks.</p> <p>(5) Check engine coolant heater hoses for abrasions and leakage.</p> <p>(6) Make sure intake and exhaust tubes are not damaged and are free from obstructions.</p>	<p>Heaters making unusual noises. Any fuel leakage.</p> <p>Evidence of Class III leakage.</p>

Table 4-1. Operation/Crew Preventive Maintenance Checks and Services for Special Purpose Kits - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operationA-After operation  
W-Weekly

M-Monthly

Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
5 (cont)						<p><u>WARNING</u></p> <p>Exhaust fumes are hazardous.</p> <p>(7) Be alert for any interior exhaust leakage while operating heaters.</p> <p>c. Inspect slave receptacle (1) to be sure cover (2) turns freely, and receptacle is not damaged.</p>  <p>d. Inspect slave receptacle battery cables to be sure connections are tight and not corroded.</p>	Any exhaust leakage.

TA 114051

Table 4-1. Operation/Crew Preventive Maintenance Checks and Services for Special Purpose Kits - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operation

A-After operation  
W-Weekly

M-Monthly

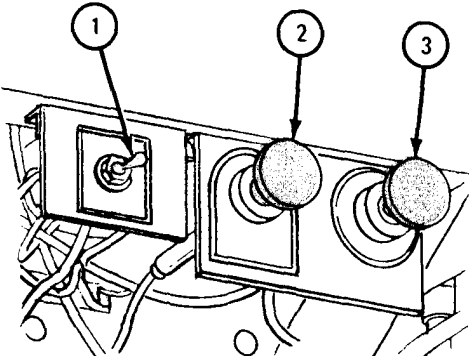
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
6		•				<p><b>HOT WATER PERSONNEL HEATER KIT</b></p> <p>a. Check motor switch (1), air (2) and defroster (3) control handles for proper operation.</p>  <p>TA 114052</p> <p>b. Listen for unusual noises during operation.</p> <p>c. Check heater hoses and connections for leaks.</p>	Evidence of Class III leaks.
7	•					<p><b>DEEP WATER FORDING KIT</b></p> <p>Before beginning fording operation:</p> <p>a. Check that flywheel drain plug (1) and pipe plugs (2) on tractor wreckers are properly installed.</p>	

Table 4-1. Operation/Crew Preventive Maintenance Checks and Services for Special Purpose Kits - Cont

NOTE: These checks are to be made in the order listed, within designated interval,

B-Before operation  
D-During operation

A-After operation  
W- Weekly

M- Monthly

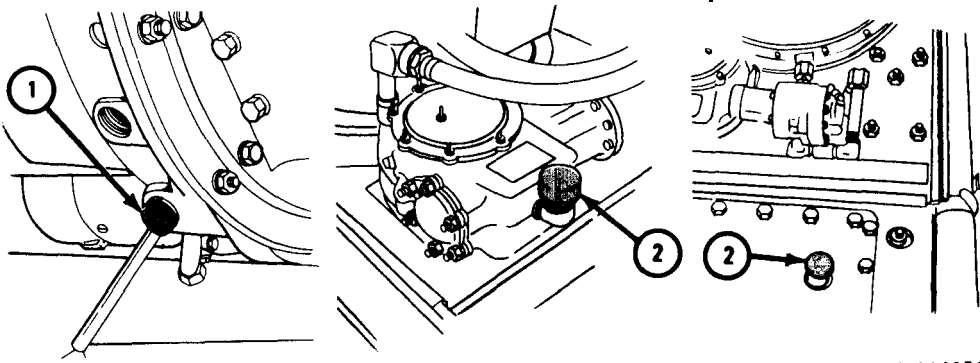
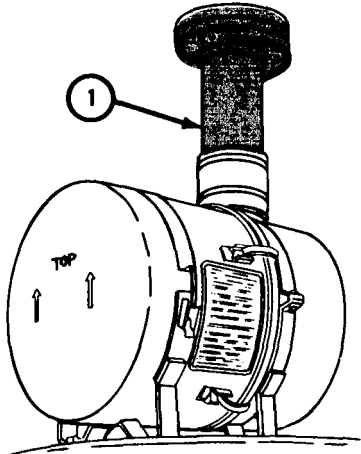
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
7 (cont)						 <p style="text-align: right;">TA 114053</p> <p>b. Check air intake (1) and exhaust systems for complete, secure assembly.</p>  <p style="text-align: right;">TA 114054</p> <p>c. Check operation of control handle (1), to be sure fording valves open and close.</p>	

Table 4-1. Operation/Crew Preventive Maintenance Checks and Services for Special Purpose Kits - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operationA-After operation  
W-Weekly

M-Monthly

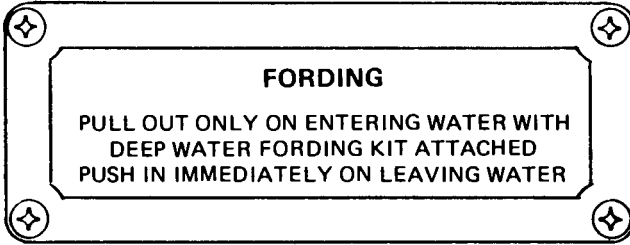
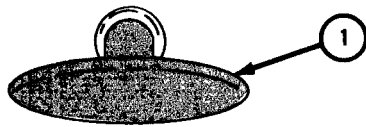
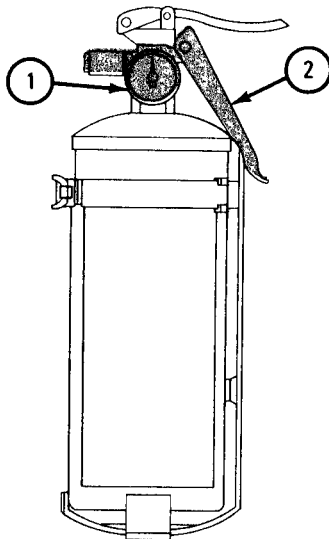
Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	A	W	M		
7 (cont)						  TA 114055	
8						MISCELLANEOUS EQUIPMENT FIRE EXTINGUISHERS • Check level of contents (1), and that valve (2) is undamaged.  TA 114056	

Table 4-1. Operator/Crew Preventive Maintenance Checks and Services for  
Special Purpose Kits - Cont

NOTE: These checks are to be made in the order listed, within designated interval.

B-Before operation  
D-During operation

A-After operation  
W-Weekly

M-Monthly

Item No.	Interval					Item to be Inspected Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
9				•		FIRST AID KITS Check per AR 385-55.	



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PAGE NO	PARA- GRAPH	FIGURE NO	TABLE NO
1-21			1-2
1-30			1-4
4-9			4-1

Item 1, M543A2 WRECKER CRANE, step a.  
Add a sentence "(See LO 9-2320-211-12.)" to  
follow "Add oil as required."

Item 1, FIFTH WHEEL  
Change illustration callouts.  
Reason: callouts for fifth wheel (1) and  
approach plates (3) are reversed

Item 6, HOTWATER PERSONNEL HEATER KIT, step a.  
reads "Check motor switch (1) and defroster (2)  
control handles for proper operation." Should  
read "Check motor switch (1), air (2) and  
defroster (3) control handles for proper  
operation." Change illustration callouts to match.

# SAMPLE

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NO

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GRAPH

FIGURE  
NO

TABLE  
NO

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## THE METRIC SYSTEM AND EQUIVALENTS

### LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.39371 Inches  
 1 Meter = 100 Centimeters = 1,000 Millimeters = 39.37 Inches  
 1 Kilo Meter = 1,000 Meters = 0.621 Miles

### WEIGHTS

1 Gram = 0.001 Kilograms = 1,000 Milligrams = 0.035 Ounces  
 1 Kilogram = 1,000 Grams = 2.2 Lb  
 1 Metric Ton = 1,000 Kilograms = 1 Megagram = 1.1 Short Tons

### LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces  
 1 Liter = 1,000 Milliliters = 33.82 Fluid Ounces

### SQUARE MEASURE

1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inches  
 1 Sq Meter = 10,000 Centimeters = 10.76 Sq Feet  
 1 Sq Kilometer = 1,000,000 Sq Meters = 0.386 Sq Miles

### CUBIC MEASURE

1 Cu Centimeter = 1,000 Cu Millimeters = 0.06 Cu Inches  
 1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

### TEMPERATURE

$5/9(^{\circ}\text{F}-32)=^{\circ}\text{C}$   
 212° Fahrenheit is equivalent to 100° Celsius  
 90° Fahrenheit is equivalent to 32.2° Celsius  
 32° Fahrenheit is equivalent to 0° Celsius  
 $9/5\text{ }^{\circ}\text{C}+32=\text{ }^{\circ}\text{F}$

## APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches . . . . .	Centimeters . . . . .	2.540
Feet . . . . .	Meters . . . . .	0.305
Yards . . . . .	Meters . . . . .	0.914
Miles . . . . .	Kilometers . . . . .	1.609
Square Inches . . . . .	Square Centimeters. . . . .	6.451
Square Feet . . . . .	Square Meters . . . . .	0.093
Square Yards . . . . .	Square Meters . . . . .	0.836
Square Miles . . . . .	Square Kilometers . . . . .	2.590
Acres . . . . .	SquareHectometers . . . . .	0.405
Cubic Feet . . . . .	Cubic Meters . . . . .	0.028
Cubic Yards . . . . .	Cubic Meters . . . . .	0.765
Fluid Ounces . . . . .	Milliliters . . . . .	29.573
Pints . . . . .	Liters . . . . .	0.473
Quarts . . . . .	Liters . . . . .	0.946
Gallons . . . . .	Liters . . . . .	3.785
Ounces . . . . .	Grams . . . . .	28.349
Pounds . . . . .	Kilograms . . . . .	0.454
Short Tons . . . . .	Metric Tons . . . . .	0.907
Pound-Feet . . . . .	Newton-Meters . . . . .	1.356
PoundsPerSquareInch . . . . .	Kilopascals . . . . .	6.895
Miles Per Gallon . . . . .	Kilometers Per Liter . . . . .	0.425
Miles Per Hour . . . . .	Kilometers Per Hour . . . . .	1.609
TO CHANGE	TO	MULTIPLY BY
Centimeters . . . . .	Inches . . . . .	0.394
Meters . . . . .	Feet . . . . .	3.280
Meters . . . . .	Yards . . . . .	1.094
Kilometers . . . . .	Miles . . . . .	0.621
Square Centimetres . . . . .	Square Inches . . . . .	0.155
Square Meters . . . . .	Square Feet . . . . .	10.764
SquareMeters. . . . .	Square Yards . . . . .	1.196
Square Kilometers . . . . .	Square Miles . . . . .	0.386
SquareHectometers . . . . .	Acres . . . . .	2.471
Cubic Meters . . . . .	Cubic Feet. . . . .	35.315
Cubic Meters . . . . .	Cubic Yards . . . . .	1.308
Millimeters . . . . .	Fluid Ounces . . . . .	0.034
Liters . . . . .	Pints . . . . .	2.113
Liters . . . . .	Quarts . . . . .	1.057
Liters . . . . .	Gallons . . . . .	0.264
Grams . . . . .	Ounces . . . . .	0.035
Kilograms . . . . .	Pounds . . . . .	2.205
Metric Tons . . . . .	Short Tons . . . . .	1.102
Newton-Meters . . . . .	Pound-Feet . . . . .	0.738
Kilopascals . . . . .	Pounds Per Square Inch . . . . .	0.145
Kilometers per Liter . . . . .	Miles Per Gallon . . . . .	2.354
Kilometers Per Hour . . . . .	Miles Per Hour . . . . .	0.621



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