TECHNICAL MANUAL
UNIT MAINTENANCE

TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998
(2320-01-107-7155) [EIC: BBD]; M998A1 (2320-01-371-9577) [EIC: BBN];
TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, W/WINCH, M1038
(2320-01-107-7156) [EIC: BBE]; M1038A1 (2320-01-371-9578) [EIC: BBP];
TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097 (2320-01-346-9317) [EIC: BBM];
M1097A1 (2320-01-371-9583) [EIC: BBU]; M1097A2 (2320-01-380-8604) [EIC: BB6];
M1123 (2320-01-455-9593) [EIC: B6G];
TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4,
M966 (2320-01-107-7153) [EIC: BBC]; M966A1 (2320-01-372-3932) [EIC: BBX];
M1121 (2320-01-456-1282) [EIC: B6H];
TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4,
W/WINCH, M1036 (2320-01-107-7154) [EIC: BBH];
TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4,
M1045 (2320-01-146-7191); M1045A1 (2320-01-146-7190) [EIC: BBR];
M1045A2 (2320-01-380-8229) [EIC: BB5];
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4,
M1045 (2320-01-146-7191); M1045A1 (2320-01-371-9580) [EIC: BBR];
M1045A2 (2320-01-380-8229) [EIC: BB5];
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4,
W/WINCH, M1046 (2320-01-146-7188); M1046A1 (2320-01-371-9582) [EIC: BBT];
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4,
W/WINCH, M1046 (2320-01-146-7188); M1046A1 (2320-01-371-9582) [EIC: BBT];
TRUCK, UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4,
M1043 (2320-01-146-7190); M1043A1 (2320-01-372-3933) [EIC: BBY];
M1043A2 (2320-01-380-8213) [EIC: BB4];
TRUCK, UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4,
W/WINCH, M1044 (2320-01-146-7189); M1044A1 (2320-01-371-9581) [EIC: BBS];
TRUCK, UTILITY: SHELTER CARRIER, 4X4, M1037 (2320-01-146-7193) [EIC: BBK];
TRUCK, UTILITY: SHELTER CARRIER, 4X4, W/WINCH, M1042 (2320-01-146-7187);
TRUCK, AMBULANCE, 2-LITTER, ARMORED, 4X4, M996 (2310-01-111-2275)
[EIC: BB8]; M996A1 (2310-01-372-3935) [EIC: BB2];
TRUCK, AMBULANCE, 4-LITTER, ARMORED, 4X4, M997 (2310-01-111-2274) [EIC: BBA];
M997A1 (2310-01-372-3934) [EIC: BBZ]; M997A2 (2310-01-380-8225) [EIC: BB8];
TRUCK, AMBULANCE, 2-LITTER, SOFT TOP, 4X4, M1035 (2320-01-146-7194);
M1035A1 (2320-01-371-9585) [EIC: BBW]; M1035A2 (2320-01-380-8290) [EIC: BB9].

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THE AIR FORCE, AND MARINE CORPS

JANUARY 1996
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VOLUME 2 OF 3
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TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025 (2320-01-128-9551) (EIC: BBF); M1025A1 (2320-01-371-9584) (EIC: BBV); M1025A2 (2320-01-380-8233) (EIC: BB3);
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, W/WINCH, M1026 (2320-01-128-9552) (EIC: BBG); M1026A1 (2320-01-371-9579) (EIC: BBQ);
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TRUCK, AMBULANCE, 2-LITTER, SOFT TOP, 4X4, M1035 (2310-01-146-7194); M1035A1 (2310-01-371-9585) (EIC: BBW); M1035A2 (2310-01-380-8290) (EIC: BB9).

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This manual contains a table of contents and alphabetized index for chapters 3 through 9.

*This publication supersedes TM 9-2320-280-20-2 dated 19 January 1990 and all changes.
### ENGINE SYSTEMS MAINTENANCE

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Lubrication System Maintenance</td>
<td>3-1</td>
</tr>
<tr>
<td>II. Fuel System Maintenance</td>
<td>3-19</td>
</tr>
<tr>
<td>III. Accelerator System Maintenance</td>
<td>3-77</td>
</tr>
<tr>
<td>IV. Exhaust System Maintenance</td>
<td>3-86</td>
</tr>
<tr>
<td>V. Cooling System Maintenance</td>
<td>3-107</td>
</tr>
</tbody>
</table>

### ELECTRICAL SYSTEM MAINTENANCE

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Generating and Protective Control Box System Maintenance</td>
<td>4-1</td>
</tr>
<tr>
<td>I.1. Dual Voltage Alternator and Regulator System Maintenance</td>
<td>4-12</td>
</tr>
<tr>
<td>II. Starter and Starting Control System Maintenance</td>
<td>4-14</td>
</tr>
<tr>
<td>III. Instruments, Sending Units, Switches, and Horn Maintenance</td>
<td>4-23</td>
</tr>
<tr>
<td>IV. Transfer Case and Transmission Electrical Maintenance</td>
<td>4-58</td>
</tr>
<tr>
<td>V. Lighting System Maintenance</td>
<td>4-77</td>
</tr>
<tr>
<td>VI. Battery System Maintenance</td>
<td>4-113</td>
</tr>
<tr>
<td>VII. Ambulance Electrical System Maintenance</td>
<td>4-157</td>
</tr>
</tbody>
</table>

### TRANSMISSION AND TRANSFER CASE MAINTENANCE

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Transmission Maintenance</td>
<td>5-1</td>
</tr>
<tr>
<td>II. Transfer Case Maintenance</td>
<td>5-47</td>
</tr>
</tbody>
</table>

### PROPELLER SHAFTS, AXLES, AND SUSPENSION MAINTENANCE

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Propeller Shafts Maintenance</td>
<td>6-1</td>
</tr>
<tr>
<td>II. Front and Rear Axles Maintenance</td>
<td>6-16</td>
</tr>
<tr>
<td>III. Suspension Maintenance</td>
<td>6-54</td>
</tr>
</tbody>
</table>

### BRAKE SYSTEM MAINTENANCE

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Parking Brake System Maintenance</td>
<td>7-1</td>
</tr>
<tr>
<td>II. Service Brake System Maintenance</td>
<td>7-19</td>
</tr>
<tr>
<td>III. Rear Dual Service/Parking Brake System Maintenance</td>
<td>7-47</td>
</tr>
</tbody>
</table>
CHAPTER 8
WHEELS AND STEERING MAINTENANCE

Section I. Wheel and Runflat System Maintenance
Section II. Steering Components Maintenance

CHAPTER 9
FRAME MAINTENANCE

INDEX

Page

8-1
8-1
8-43
9-1
Index 1
## CHAPTER 3
### ENGINE SYSTEMS MAINTENANCE

Section I. LUBRICATION SYSTEM MAINTENANCE

### 3-1. LUBRICATION SYSTEM MAINTENANCE TASK SUMMARY

<table>
<thead>
<tr>
<th>TASK PARA.</th>
<th>PROCEDURES</th>
<th>PAGE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-2</td>
<td>Engine Oil Dipstick Tube Replacement</td>
<td>3-2</td>
</tr>
<tr>
<td>3-3</td>
<td>Engine Oil Filler Tube Replacement</td>
<td>3-4</td>
</tr>
<tr>
<td>3-4</td>
<td>Engine Oil Filter Adapter Replacement</td>
<td>3-5</td>
</tr>
<tr>
<td>3-5</td>
<td>Engine Oil Service</td>
<td>3-6</td>
</tr>
<tr>
<td>3-6</td>
<td>Oil Pan Replacement</td>
<td>3-8</td>
</tr>
<tr>
<td>3-7</td>
<td>Engine Oil Cooler Supply and Return Lines Replacement</td>
<td>3-10</td>
</tr>
<tr>
<td>3-8</td>
<td>Engine and Transmission Oil Cooler Assembly Maintenance</td>
<td>3-12</td>
</tr>
<tr>
<td>3-9</td>
<td>Crankcase Depression Regulator (CDR) Valve and Bracket Maintenance</td>
<td>3-14</td>
</tr>
<tr>
<td>3-10</td>
<td>CDR Valve Hoses Replacement</td>
<td>3-18</td>
</tr>
</tbody>
</table>
3-2. ENGINE OIL DIPSTICK TUBE REPLACEMENT

This task covers:

a. Removal
b. Installation

INITIAL SETUP:

**Tools**
- General mechanic's tool kit: TM 9-2320-280-10
  - automotive (Appendix B, Item 1)
- Hex head driver, 8 mm
  - (Appendix B, Item 156)

**Special Tools**
- Nut and lockwasher assembly (Appendix G, Item 144)
- O-ring seal (Appendix G, Item 154)
- Sealant (Appendix C, Item 38)

**Manual References**
- TM 9-2320-280-10
- TM 9-2320-280-24P

**Equipment Condition**
- Hood raised and secured (TM 9-2320-280-10).

---

**a. Removal**

1. Remove oil dipstick (5) from oil dipstick tube (4).
2. Remove nut and lockwasher assembly (3) and capscrew (13) from harness clamp (2) and upper dipstick tube bracket (6). Discard nut and lockwasher assembly (3).
3. Using hex head driver, remove socket head screw (8) and washer (7) from lower dipstick tube bracket (12) and exhaust manifold (11).
4. Remove two screw-assembled washers (1) from upper dipstick tube bracket (6) and fuel line bracket (14).
5. Remove oil dipstick tube (4) from engine oil pan (10). Remove and discard O-ring seal (9).

**b. Installation**

1. Apply RTV sealant to O-ring seal (9) and install O-ring seal (9) on oil dipstick tube (4).
2. Install oil dipstick tube (4) in engine oil pan (10).
3. Using hex head driver, secure lower dipstick tube bracket (12) to exhaust manifold (11) with washer (7) and socket head screw (8). Tighten socket head screw (8) to 25-33 lb-ft (34-45 N·m).
4. Secure upper dipstick tube bracket (6) to fuel line bracket (14) with two screw-assembled washers (1). Tighten screw-assembled washer (1) to 3 to 4 lb-ft (45 N·m).
5. Secure harness clamp (2) to upper dipstick tube bracket (6) with capscrew (13) and nut and lockwasher assembly (3).
6. Install oil dipstick (5) into oil dipstick tube (4).
FOLLOW-ON TASKS: • Start engine (TM 9-2320-280-10) and check for oil leaks.
  • Lower and secure hood (TM 9-2320-280-10).
3-3. ENGINE OIL FILLER TUBE REPLACEMENT

This task covers:

a. Removal
b. Installation

INITIAL SETUP:

**Tools**
- General mechanic's tool kit
- Automotive (Appendix B, Item 1)
- Manual References
  - TM 9-2320-280-10
  - TM 9-2320-280-24P

**Materials/Parts**
- Lubricating oil (Appendix C, Item 31)
- Equipment Condition
  - Hood raised and secured (TM 9-2320-280-10).

**a. Removal**

1. Loosen clamp (2) and disconnect CDR valve hose (1) from engine oil filler tube (3).
2. Remove two nuts (4), washers (5), and engine oil filler tube (3) from timing chain cover (7) and studs (8).
3. Inspect grommet (6) for breaks or cracks. Replace if defective.

**b. Installation**

1. Coat grommet (6) with lubricating oil.
2. Install engine oil filler tube (3) into timing chain cover (7) with two washers (5) and nuts (4). Tighten nuts (4) to 13-20 lb-ft (18-27 N·m).
3. Connect CDR valve hose (1) to engine oil filler tube (3) and tighten clamp (2).

FOLLOW-ON TASK: Lower and secure hood (TM 9-2320-280-10).