
TRUCK, FORKLIFT, DED, PNEUMATIC TIRE. ROUGH TERRAIN,
4000 POUND CAPACITY

MODEL MHE - 270 (NSN 3930-01-330-8907)

MODEL MHE - 271 (NSN 3930-01-330-8906)

Reference: TM 10-3930-664-10, TM 10-3930-664-24, TB 43-0210, and Supply Catalog C9100-IL

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 (recommended changes to publications and blank forms) directly to: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MMAA, Warren, MI. 48397-5000. A reply will be sent directly to you.

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

This lubrication order is divided into two sections, based on lubrication intervals (hardtime and on-condition)

A dotted leader line (- - -) means there are lubrication points on both sides of the vehicle.
Intervals are based on normal operation.

- Lubricate more often during constant operation.
- Relubricate all items found contaminated after fording, swimming, or high-pressure washing.
- On-condition intervals for oil changes shall be determined by the Army Oil Analysis Program (AOAP) laboratory and shall be applied unless otherwise notified. If AOAP cannot be performed then hardtime intervals specified in notes should be used.
- Oil filters shall be changed at prescribed hardtime intervals or sooner when:
 - a. They are known to be contaminated, or clogged;
 - b. Services is recommended by AOAP laboratory analysis
- For equipment under manufacturer's warranty, hardtime oil service intervals shall be followed. Intervals shall be shortened if lubricants are known to be contaminated or if operation is under adverse conditions (such as longer-than-usual operating hours, extended idling periods, extreme dust).
- **WARNING: Drycleaning solvent (SD-2) is toxic and flammable. Wear protective goggles and gloves, and use only in well-ventilated area. Avoid contact with skin, eyes, and clothes, and do not use near open flame or excessive heat. If you become dizzy while using drycleaning solvent, get fresh air immediately, and get medical aid. If contact with skin or clothing is made, flush with water. If contact with eyes is made, wash your eyes with water, and get medical aid immediately.**
- For operation of vehicle in prolonged cold temperature below -10°F(-23°C): remove lubricants prescribed in the key for temperatures above -10°F (-23°C), clean parts with drycleaning solvent (SD-2), and relubricate with lubricants specified in the key temperature -10°F to -65°F (-23°C to -54°C).
- Operation in dusty or sandy areas require more frequent cleaning and servicing of filters to prevent dust from entering engine, transmission, steer unit, and hydraulic system.

MAN-HOUR TIMES

The man-hour time specified is the time you need to do all the services prescribed for a particular interval. There times are based on normal vehicle operation.

- LEVEL OF MAINTENANCE:
- C---Operator
 - O---Unit Maintenance

- OBSERVE THE FOLLOWING:
- NEVER use the wrong type grease.
 - NEVER use too much lubrication
 - ALWAYS clean grease fittings with drycleaning solvent (SD), type II or equivalent, and dry before lubricating.
 - ALWAYS use the lubrication order

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KEY

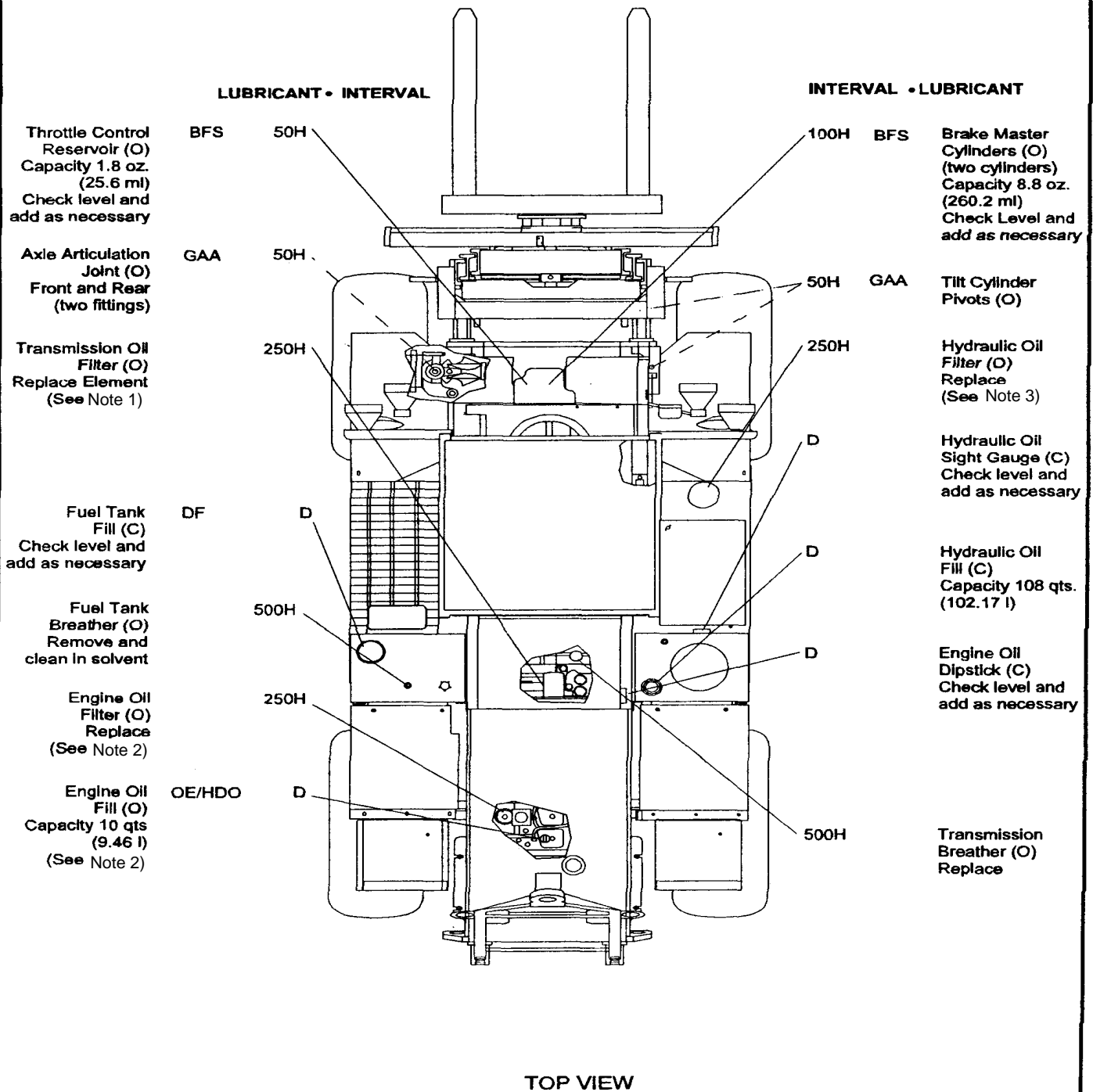
| LUBRICANT | | EXPECTED TEMPERATURE | | | INTERVALS | |
|--|--|-----------------------------|-----------------------------------|------------------------------------|--|--|
| | | Above +40°F (Above +4°C) | +40°F to -10°F (+4°C to -23°C) | -10°F to -65°F (-23°C to -55°C) | | |
| OE/HDO (MIL-L-2104) OEA (MIL-L-46167) | LUBRICATION OIL, INTERNAL COMBUSTION ENGINE, COMBAT/TACTICAL | | | | D - Daily 50H - 50hours 100 H - 100 hours 200 H - 200 hours 250 H - 250 hours 500 H- 500 hours 1000 H - 1000 hours OC - On condition | |
| | LUBRICATING OIL, INTERNAL COMBUSTION ENGINE, ARCTIC | | | | | |
| | Engine crankcase | OE/HDO-15/40 | | OEA | | |
| | Transmission and oil cooler | OE/HDO--10 | | OEA | | |
| | Hydraulic reservoir | OE/HDO 10 | | OEA | | |
| GO (MIL-L-2105) | LUBRICATING OIL, GEAR, MULTI PURPOSE | | | | | |
| | Front and rear differential | | | GO 80/90 | | |
| | Planetary gear hubs | | | G-80/90 | | |
| GAA (M)L-G-10924) | GREASE, AUTOMOTIVE AND ARTILLERY | | | | | TOTAL MANHOURS Interval Manhour |
| | Axle articulation joints, propeller shafts, mast pivot, tilt cylinder pivot, rotate carriage pin, spine bushing | | | ALL TEMPERATURES | | |
| BFS (MIL-B-46176) | BRAKE FLUID, SILICONE, AUTOMOTIVE, ALL WEATHER | | | | D .2 | |
| | Brake master cylinders, throttle control reservoir | | | ALL TEMPERATURES | 50 H 1.2 | |
| CT (MIL-C-16173) | CORROSION PREVENTIVE | | | | 100 H .2 | |
| | COMPOUND SOLVENT CUTBACK, COLD APPLICATION | | | | 200 H .3 | |
| SD-2 (P-D-680) | Mast chains | | | ALL TEMPERATURES | 250H 1.5 | |
| | SOLVENT, DRY CLEANING | | | ALL TEMPERATURES | 250 H 1.5 | |
| | | | | | 1000 H 2.0 | |
| | | | | | OC 2.0 | |

NOTES

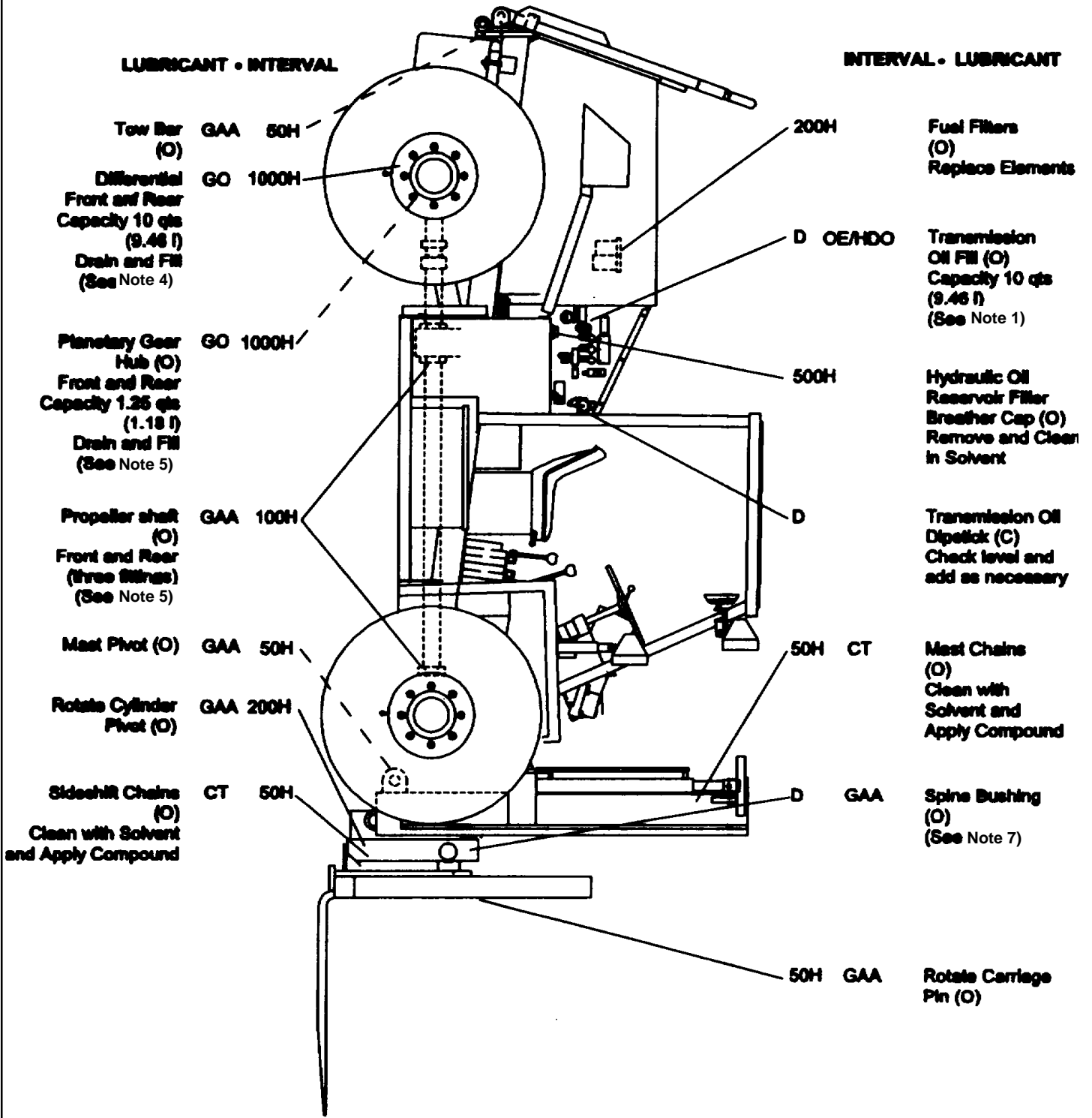
1. TRANSMISSION. If AOAP cannot be performed, drain and refill transmission every 250 hours. With engine running and oil warm check oil level daily and add OE as necessary. Drain only when oil is hot. Refill to H mark on oil dipstick. Replace oil filter with each oil change.
2. ENGINE CRANKCASE. If AOAP cannot be performed, drain and refill crankcase every 250 hours. Check oil level daily and add OE as necessary. Drain only when oil is hot. Refill to FULL mark on oil dipstick. Run engine 3-5 minutes and recheck level. Add oil as necessary. Replace oil filter element with each oil change.
3. HYDRAULIC RESERVOIR. If AOAP cannot be performed, drain and refill reservoir every 500 hours. Check level daily and add OE as necessary. Drain only when oil is hot. Refill to LOW mark on sight gauge. Replace filter cartridge with each oil change or when pressure indicator on filter head reaches RED zone.

4. DIFFERENTIAL (FRONT AND REAR). Drive vehicle for 10 minutes to warm lubricant. Clean area around drain and fill plugs before removing. After draining install drain plugs and fill to fill plug opening with GO then install plug.
5. PLANETARY GEAR HUBS. With fill/drain plug at six o'clock position remove plug and drain oil. Rotate fill/drain opening to 3 o'clock position and fill to opening with GO. Install fill/drain plug.
6. PROPELLER SHAFTS (FRONT AND REAR). Do not use high pressure gun on these fittings. Seals will rupture under pressure.
7. SPINE BUSHING. Use sideshift control to position spine to the left side s that fitting on spine bushing is accessible through hole in mud guard on rear of sideshift carrier. Grease with GAA. Move spine to the right side so that fitting is accessible through hole in mud guard and grease with GAA again.

HARDTIME INTERVALS



HARDTIME INTERVALS (Continued)



LUBRICANT - INTERVAL

INTERVAL - LUBRICANT

Tow Bar (O) GAA 50H

Differential Front and Rear Capacity 10 qts (9.46 l) Drain and Fill (See Note 4) GO 1000H

Planetary Gear Hub (O) Front and Rear Capacity 1.25 qts (1.18 l) Drain and Fill (See Note 5) GO 1000H

Propeller shaft (O) Front and Rear (three fittings) (See Note 5) GAA 100H

Mast Pivot (O) GAA 50H

Rotate Cylinder Pivot (O) GAA 200H

Sideshift Chains (O) Clean with Solvent and Apply Compound CT 50H

200H Fuel Filters (O) Replace Elements

D OE/HDO Transmission Oil Fill (O) Capacity 10 qts (9.46 l) (See Note 1)

500H Hydraulic Oil Reservoir Filler Breather Cap (O) Remove and Clean in Solvent

D Transmission Oil Dipstick (C) Check level and add as necessary

50H CT Mast Chains (O) Clean with Solvent and Apply Compound

D GAA Spine Bushing (O) (See Note 7)

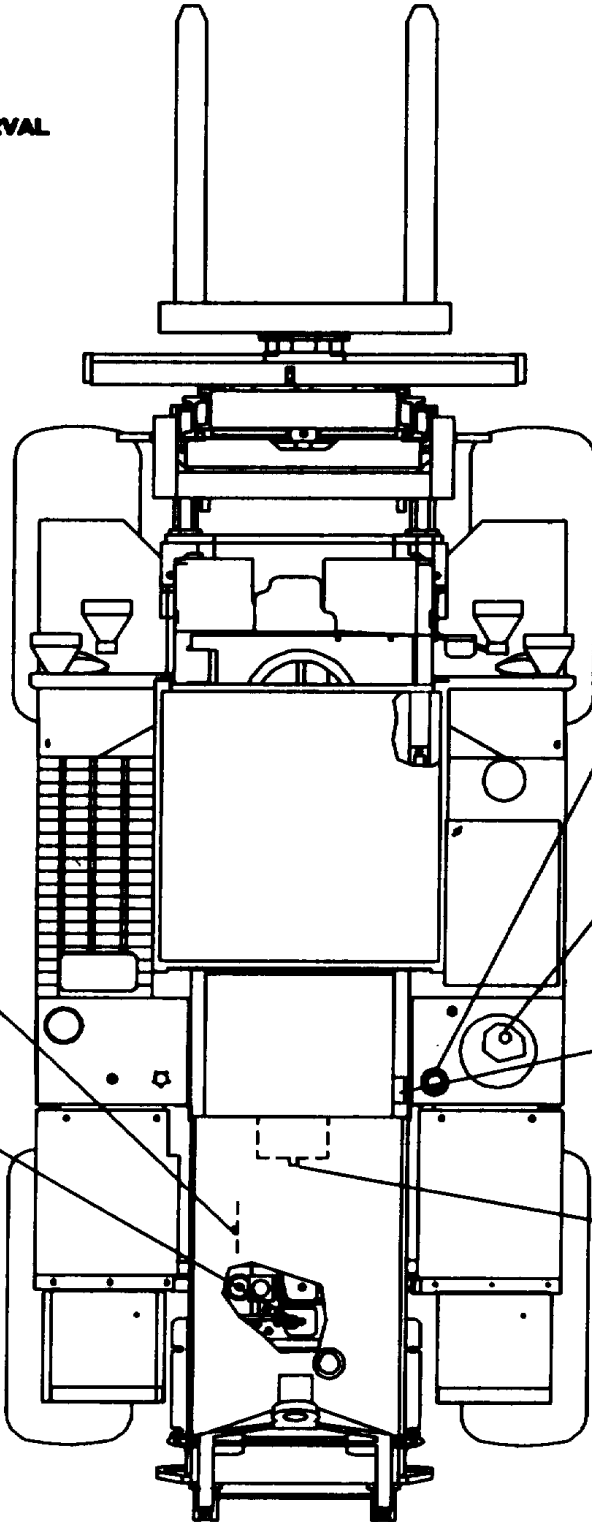
50H GAA Rotate Carriage Pin (O)

SIDE VIEW

ON-CONDITION INTERVALS

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT



Engine Crankcase
Drain (O)
Drain and Refill
(See Note 2)

Engine Crankcase
Fill (C)
Capacity 10 qts
(9.46 l)
(See Note 2)

OE/HDO Hydraulic Reservoir
Fill (C)
Capacity 108 qts
(102.17 l)
(See Note 3)

Hydraulic Reservoir
Drain (O)
Drain and Refill
(See Note 3)

OE/HDO Transmission Oil
Fill (O)
Capacity 10 qts
(9.46 l)
(See Note 1)

Transmission
Drain (O)
Drain and Refill
(See Note 1)

By Order of the Secretary of the Army:

Copy to this Lubrication Order will remain with the vehicle at all times.
Instructions contained herein are mandatory.

GORDON R. SULLIVAN
General United States Army
Chief of Staff

Official:


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

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