

LO 10-3930-242-12

LUBRICATION ORDER
24 June 1991

(Supersedes LO 10-3930-242-12, 11 January 1984)

TRUCK, LIFT FORK, DED, PT WHEELS, ROUGH TERRAIN, 6000 LB CAPACITY, 24 IN LOAD CENTER, (ANTHONY MODEL MLT-6) (ARMY MODEL MHE 200) (NSN 3930-00-903-0900) (CHRYSLER MODEL MLT-6CH) (ARMY MODEL MHE 202) (NSN 3930-00-937-0220) (ATHEY MODEL ARTFT-6, ARMY MODEL MHE 222) (NSN 3930-00-419-5744)

Reference: TM 10-3930-242-12 and FEDERAL SUPPLY CATALOGUE C9100-IL.

REPORTING OF ERRORS

You can improve this publication by calling attention to errors and by recommending improvements and by stating your reasons for the recommendations. Your letter or DA Form 2028, Recommended Changes to Publications and Forms, should be mailed directly to Commander, US Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished directly to you.

NOTES

This LO is for crew (C) or unit (O) maintenance. Lube intervals (on-condition or hard time) are based on normal operation. Lube more during constant use, and less during inactive periods. Use correct grade of lubricant for seasonal temperature expected.

On the pictures a dash line(-) means lube points on both sides.

Clean parts with dry cleaning solvent (SD), type II, or equivalent. Dry before lubricating.

Before you start your lube service.

ALWAYS

- Clean grease fittings before lubrication.
- Use the lubrication order as your guide.

NEVER

- Use wrong type/grade grease
- Use too much lubricant.

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

Oil filters shall be serviced/cleaned/changed as applicable, when

- They are known to be contaminated, or clogged;
- Service is recommended by AOAP laboratory analysis, or
- At prescribed hardtime intervals.

WARNING-Dry cleaning fluid is flammable. Do not use near a flame or excessive heat. Use only with adequate ventilation. Avoid prolonged breathing of vapors and minimize skin contact.

*TOTAL MAN-HOURS		*TOTAL MAN-HOURS	
INTERVAL	MAN-HOURS	INTERVAL	MAN-HOURS
10	0.4	250	0.4
50	0.4	500	1.3
100	1.0		

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT

Shifter Sprockets (O) **GAA 10**
(See Note 16)

10 GAA Extension Cylinder
Rod End (O)

Fork Carriage **GAA 10**
Pivot (O)
(See Note 16)

10 GAA Side Shift
Slides (O)
(See Note 16)

Steering Cylinder (O) **GAA 10**
(2 places)

500 GAA Constant Velocity
Joint (O)
(See Note 13)

Steering Link (O) **GAA 10**

500 GAA Steering Trunnion
Bearing (O)

Steering Gear **GO 50**
Housing Fill and
Level Plug (O)
(Check level)
(See Key)

10 GAA Front Axle
Trunnion
Bearing (O)

Steering Gear **C/MR**
Housing Drain
Plug (O)
(Drain and refill)
(See Note 12)

50 GAA Mast Assembly
Trunnion (O)

Differential Lock **100**
Control Valve (O)
(See Note 14)

500 GAA Steering Trunnion
Bearing (O)

Parking Brake **GAA 50**
Cable (O)

500 GAA Constant Velocity
Joint (O)
(See Note 13)

Steering Link (O) **GAA 10**

10 GAA Steering Cylinder (O)
(2 places)

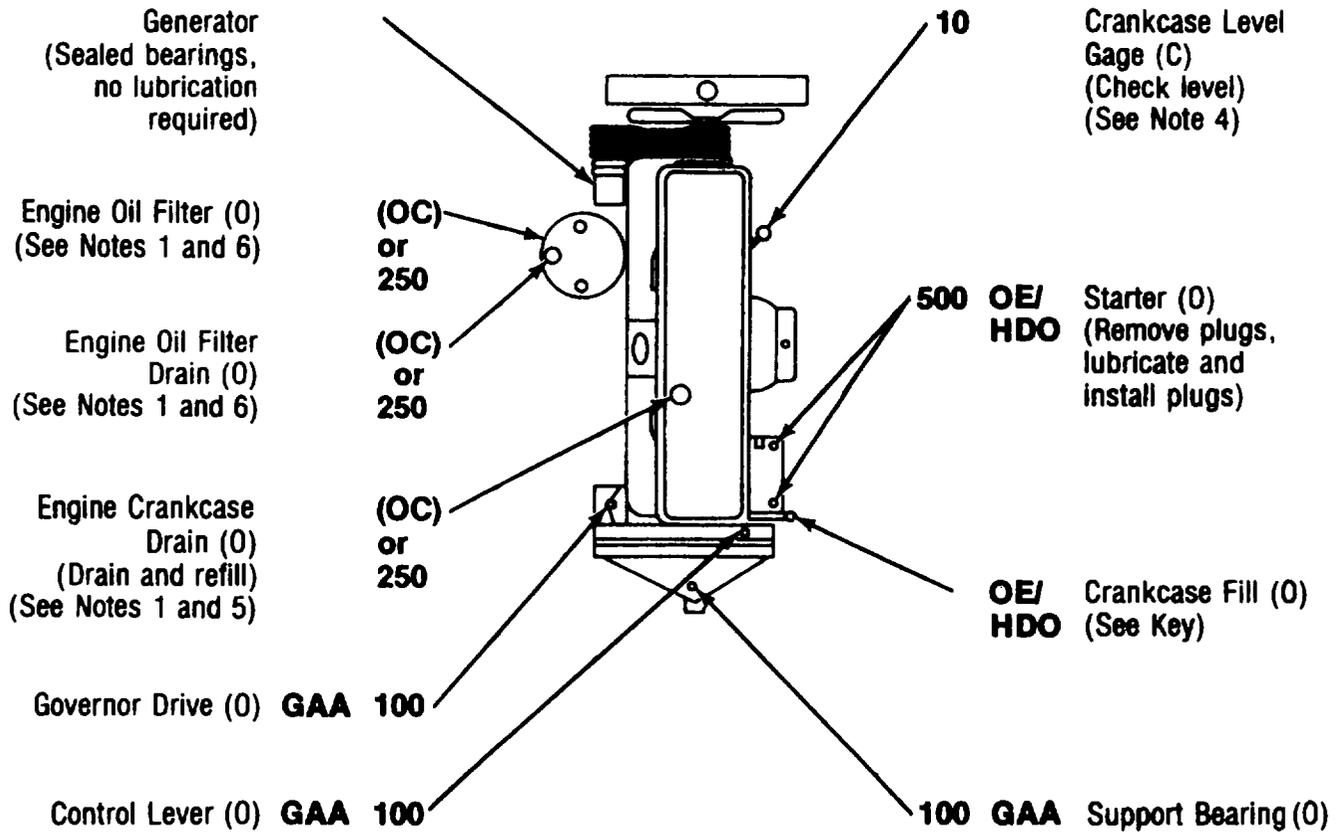
Pintle (O) **GAA 50**
(3 places)

10 GAA Rear Axle
Trunnion
Bearing (O)

PLAN VIEW

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT

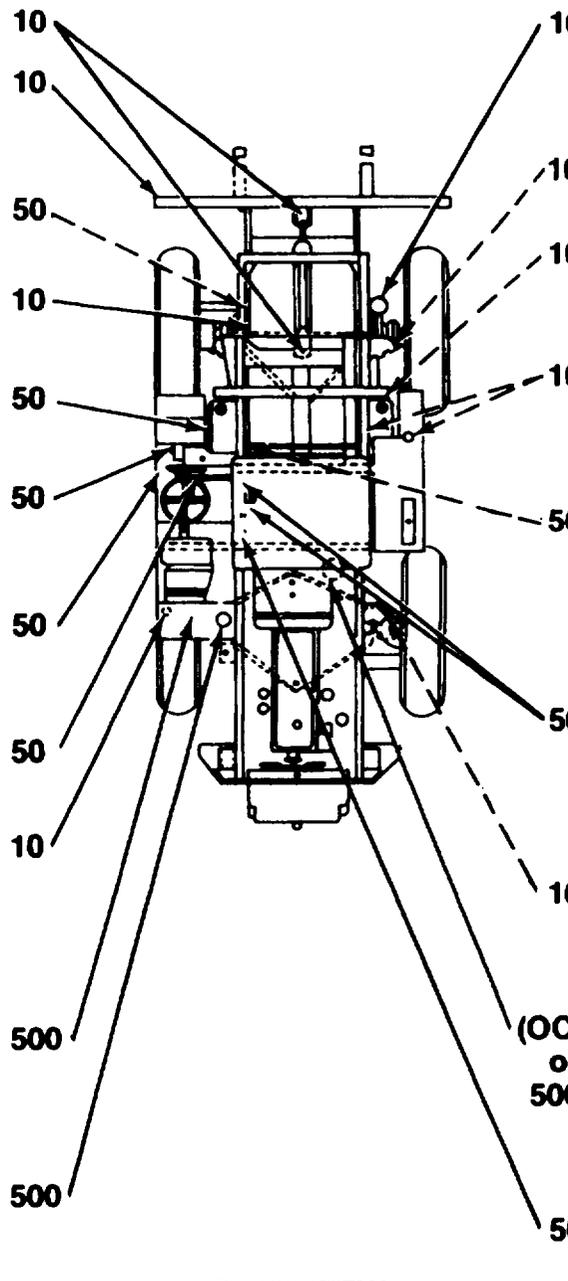


ENGINE PLAN VIEW

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT

- Tilt Cylinder (0) **GAA 10**
- Side Shifter Chain (0) **CW 10**
(See Key)
(Clean and coat)
- Slides (0) **GGP 50**
(Clean and coat)
- Slave Cylinder (0) **GAA 10**
(3 places)
- Steering Cross-Shaft (0) **GAA 50**
- Steering Linkage (0) **GAA 50**
(5 places) (Remove cover for access)
- Control Levers and Linkage (0) **OE/ HDO 50**
- Brake Pedal Shaft (0) **GAA 50**
- Hydraulic Oil Tank Fill and Level Gage (C) **OE/ HDO 10**
(Check level)
(See Key)
- Hydraulic Oil Tank Drain (0) **500**
(Drain and refill)
(See Note 10)
- Hydraulic Oil Filter (0) **500**
(See Note 9)



- 10 GAA** Oscillation Cylinder (0)
(Upper and lower)
- 10 GAA** Tie Rod Ends (0)
- 10 GAA** Lift Cylinder Rod End (0)
- 10 GAA** Lift Cylinder Trunnion Mount (0)
- 50 OE/ HDO** Control Levers and Linkage (0)
- 50 GAA** Control Lever Shaft (0)
- 10 GAA** Tie Rod Ends (0)
- (OC) OE/ or HDO 500** Transfer Case Oil Filter (0)
(See Notes 1 and 8)
- 50 GAA** Control Levers and Linkage (0)

PLAN VIEW

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT

Front Wheel Hub
Fill and Drain Plug (O)
(Drain and refill)
(See Notes 11
and 12) (See Key)

Front Wheel Hub
Level Plug (O)
(Check level)
(See Note 11)

Propeller Shaft
Splines and
Bearings (O)
(Sparingly with
hand gun)

Disconnect
Linkage (O)
(See Note 15)

Drive Shaft
Universal
Joints (O)
(3 places)

Rear Wheel Hub
Fill and Drain
Plug (O)
(Drain and refill)
(See Key)
(See Notes 11
and 12) (See Key)

Rear Wheel Hub
Level Plug (C)
(Check level)
(See Note 11)

GO C/MR

50

GAA 500

GAA 50

GAA 500

GO C/MR

50

50 GO

C/MR

(OC)
or
500

10 OE/
HDO

500 GAA

C/MR

50 GO

Front Differential
Fill and Level Plug (O)
(Check level)
(See Key)

Front Differential
Drain Plug (O)
(Drain and refill)
(See Note 12)

Transfer Case
Drain Plug (O)
(Drain and refill)
(See Notes 1 and 7)

Transfer Case
Fill and Level
Plug (O)
(Check level)
(See Note 7)

Propeller Shaft
Splines and
Bearings (O)
(Sparingly with
hand gun)

Rear Differential
Drain Plug (O)
(Drain and refill)
(See Note 12)

Rear Differential
Fill and Level
Plug (O)
(Check level)
(See Key)

**RIGHT SIDE VIEW
(PANEL REMOVED)**

* KEY -

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above +15°F (Above -9°C)	+40° to -15°F (+4° to -26°C)	+40° to -65°F (+4° to -54°C)	
OE/ HDO - Lubricating Oil, Internal Combustion Engine, Tactical Service OEA - Lubricating Oil, Internal Combustion, Arctic - Engine Crankcase - Transfer Case - Oil Can Points (See Note 3)	16 qts. (15.13 L) 24 qts. (22.70 L)	OE/HDO 30	OE/HDO 10	OEA (See Note 2)	C/MR - Condition Monitor OC - On Condition (AOAP) Intervals given are in hours of normal operation.
- Differential Lock Control Valve (See Note 14) - Hydraulic Tank	200 qts. (189.2 L)				
GO - Lubricating Oil, Gear, Multipurpose - Front and Rear Wheel Hub - Front and Rear Differential - Steering Gear Housing	4 qts. ea (3.82 L) ea 10 qts. ea (9.46 L) ea 1 qt. (0.946 L)	GO 85W/140	GO 80W/90	GO 75W	
GGP - Grease General Purpose - Slides		ALL TEMPERATURES			

For Arctic operation refer to FM 9-207

*See Note 17 for lubricant specification number.

***-KEY-**

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above +15° F (Above -9° C)	+40° to -15° F (+4° to -26° C)	+40° to -65° F (+4° to -54° C)	
CW-II - Lubricating Oil, Chain, Wire Rope, Exposed Gear - Side Shifter Chain		II B	II B	II A	For Arctic operation refer to FM 9-207 C/MR-Condition Monitor OC-On Condition (AOAP) Intervals given are in hours of normal operation.
BFS - Brake Fluid, Automotive, -Differential Lock Control Valve (See Note 14)		ALL TEMPERATURES			
GAA -Grease, Automotive and Artillery		ALL TEMPERATURES			

*See Note 17 for lubricant specification number.

NOTES:

1. ARMY OIL ANALYSIS PROGRAM (AOAP). For Active Army units, obtain samples from engine and automatic transmission every 50 hours of operation or 60 days (whichever comes first). Reserve and National Guard activities will use 50 hours or 120 days as the prescribed sample intervals. Reserve and National Guard equipment in frequent use during active training period will adhere to the schedule for Active Army units. As a minimum, one sample from each unit's two week active training period will be submitted for each item of equipment. Send these samples to the nearest AOAP laboratory. Refer to TB 43-0210 for sampling instructions. When or if AOAP laboratory support is unavailable, hard time intervals will apply.

NOTE

Do not hold oil samples. Submit oil samples as soon as they have been taken. Seasonal oil changes will be made due to expected temperatures. (See Key.)

2. FOR OPERATION OF EQUIPMENT IN PROTRACTED COLD TEMPERATURES BELOW -15°F (-26°C). Remove lubricants prescribed in Key for temperatures above -15° F (-26° C). Relubricate with lubricants specified in Key for temperatures below -15° F (-26° C). If OEA lubricant is required to meet the temperature ranges prescribed in the Key, OEA lubricant is to be used in place of OE/HDO-10 lubricant for all temperature ranges where OE/HDO-10 is specified in the Key.

3. OIL CAN POINTS. Each 50 hours lubricate accelerator, bellcrank, brake, throttle, hydraulic valve linkages, control linkage, pins, clevises, and all exposed adjusting threads with OE/HDO.

4. ENGINE OIL LEVEL HOT OR COLD CHECK. Cold engine, oil level should be at high mark on dipstick. Hot engine, oil level must be between high and low marks on dipstick (allow to set 5 minutes before checking).

NOTES - CONTINUED:

5. ENGINE CRANKCASE. Oil is to be changed each time an engine oil change is directed by AOAP laboratory. When AOAP laboratory support is not available, change oil each 250 hours. Drain when lubricant is warm.

6. ENGINE OIL FILTER. Filter is to be replaced each time an engine oil change is directed by AOAP laboratory. After installing new filter element, fill crankcase, operate engine 5 minutes, check housing for leaks, check crankcase oil level and bring to full mark. When AOAP laboratory support is not available, install new filter element each 250 hours.

7. TORQUE CONVERTER, TRANSMISSION, AND TRANSFER CASE. Check level each 10 hours with engine running at idle speed, oil at operating temperature and transmission in neutral. Maintain oil level to "FULL" mark. Oil is to be changed each time a transmission oil change is directed by AOAP laboratory. After draining oil, remove oil screen (located on front side of the oil galley), clean and install. Fill transfer case to full mark. With engine running at idle or fast idle, oil at operating temperature and transmission in neutral, fill sump to "FULL" mark on gage. Operate for 5 minutes and check for leaks. When AOAP support is not available, change torque converter, transmission and transfer case oil each 500 hours.

8. TRANSFER CASE OIL FILTER. Filter element is to be replaced each time a torque converter, transmission and transfer case oil change is directed by AOAP laboratory. Remove filter element, clean filter housing, install new filter element and seal. After replacement fill transfer case to full mark. With engine running, oil at operating temperature and transmission in neutral, fill sump to "FULL" mark on gage. Operate for 5 minutes and check for leaks. When AOAP laboratory support is not available, install new filter element each 500 hours.

9. HYDRAULIC OIL FILTER. Each 500 hours, remove element, clean filter housing and install new element. After replacement, operate hydraulic system for 5 minutes, check for leaks, check level and bring to "FULL" mark.

10. HYDRAULIC OIL TANK DRAIN. Each 500 hours drain tank. Refill tank to "FULL" mark. Operate hydraulic system for 5 minutes, check for leaks and bring oil to "FULL" mark.

11. FRONT AND REAR WHEEL HUB FILL AND DRAIN PLUGS. To drain, turn wheel until fill and drain plug is at bottom center. Fill housing by turning wheel until fill and drain plug is in an upward position. Check level with arrow pointing straight down. Fill until lubricant extrudes from level plug (lower plug opening).

12. DIFFERENTIALS/WHEEL HUBS/STEERING GEAR HOUSING.

Check level each 50 hours. Change gear lubricant only when required by maintenance repair action, contamination by water, or other foreign material. After refill, operate for five minutes, check for leaks and bring oil level to level plug opening.

13. CONSTANT VELOCITY JOINT. After operation in seawater, remove a bolt (only 1 of 4) from bottom bearing cap, drain off water, inject GAA through top fitting to remove contaminated lube. Replace bearing cap bolt. Relubricate.

14. DIFFERENTIAL LOCK CONTROL VALVE. Check level each 100 hours. Oil should be within 3/4 inch of the top of the valve. Drain only when repaired. Bleed lines at the lockout mechanism on the differential. Use BFS brake fluid (MIL-B-46176) on S/N E1468 and up. Use oil OE/HDO 10 (MIL-L-2104) for S/N below S/N E1468.

NOTES - CONTINUED:

15. DISCONNECT LINKAGE. Fittings are located at upper and lower end of linkage.

16. In sandy or desert environment, keep the carriage frame track and bushing clean and dry. Other environments apply a light coat of GAA.

17. LUBRICANTS. The following is a list of lubricants with military symbols and applicable specification numbers.

OE/HDO	MIL-L-2104
GO	MIL-L-2105
GAA	MIL-G-10924
GGP	MIL-G-23549
OEA	MIL-L-46167
BFS	MIL-B-46176
CW	FED-VV-L751
(SD),Type II	P-D-680

Copy of this Lubrication Order will remain with the equipment at all times, instructions contained herein are mandatory.

By Order of the Secretary of the Army:

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

Official:

PATRICIA P. HICKERSON
Brigadier General, United States Army
The Adjutant General

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