

LUBRICATION ORDER

LO 10-3930-235-12

19 July 1984

(Supersedes LO 10-3930-235-12-1 and -2, 25 AUGUST 1972)

TRUCK, LIFT, FORK, GASOLINE; 4,000 LB CAPACITY, TOWMOTOR, (MODEL 462SG4024-100, SRT, ARMY MODEL MHE-191, NSN 3930-00-781-3856), (MODEL 462SG4024-144, SRT, ARMY MODEL MHE-191, NSN 3930-00-781-3855), (MODEL 502PG4024-100, PRT, ARMY MODEL MHE-190, NSN 3930-00-926-3807), (MODEL 502PG4024-144, PRT, ARMY MODEL MHE-190, 190A & 190B, NSN 3930-00-073-9222), (MODEL 502PG4024-144, PRT, ARMY MODEL MHE-220, NSN 3930-00-419-5738)

Reference: TM 10-3930-235-10, -20, and FEDERAL SUPPLY CATALOG C9100-IL.

Hard time intervals and the related man-hour times are based on normal operation. The man-hour time specified is the time you need to do all the services prescribed for a particular interval. Change the hard time interval if your lubricants are contaminated or if you are operating the equipment under adverse operating conditions, including longer-than-usual operating hours. The hard time interval may be extended during periods of low activity. If extended, adequate preservation precautions must be taken.

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.

- The time specified is the time required to perform all services at the particular interval.

Clean parts or fittings with dry cleaning solvent (SD), Type II or equivalent. Dry before lubricating. Dotted arrow shafts indicate lubrication on both sides of equipment. A dotted circle indicates a drain below. Relubricate all items found contaminated after fording or washing.

The lowest level of maintenance authorized to lubricate a point is indicated by one of the following symbols as appropriate: Operator/Crew (C); and Organizational Maintenance (O).

Reporting 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 procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, US Army Tank-Automotive Command, ATTN: DRSTA-MB, Warren, MI 48090. A reply will be furnished to you.

● TOTAL MAN-HOURS		● TOTAL MAN-HOURS	
INTERVAL	MAN-HOURS	INTERVAL	MAN-HOURS
10	0.2	500	0.5
50	0.5	1000	3.5
250	3.6		

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LUBRICANT • INTERVAL

INTERVAL • LUBRICANT

Hydraulic Bleeder Valve (O)
(See Note 11)

C/MR

250

**OE/
HDO**

Lift Chains (O)
(Clean and coat every 1000 hours)

Drive Axle Drain Plug (O)
(Drain and refill)
(See Note 9)

C/MR

GO

Drive Axle Fill Plug and Breather (O)
(See Key) (Clean breather every 500 hours)

Drive Gears (O)

GAA 1000

250

Drive Axle Level Plug (O)
(Check level)

Front Wheel Bearings (O)
(See Note 7)

GAA 1000

**OE/
HDO**

Transmission Fill (C) (See Key)
(See Note 10)

Hydraulic Tank Fill and Level (C)
(Check level and fill) (See Key and Note 11)

**OE/
HDO**

50

Hydraulic Oil Filter (O)
(Replace element)
(See Note 12)

Air Cleaner (O)
(See Note 6)

**OE/
HDO**

250

Engine Crankcase Drain Plug (O)
(Drain and refill)
(See Note 4)

Transmission Level Plug (C)
(Check level)

10

500

**OE/
HDO**

Engine Crankcase Fill (C)
(See Key)

Engine Oil Filter (O)
(Replace element)
(See Note 5)

250

**OE/
HDO**

Engine Crankcase Level Gage (C)
(Check level)
(See Note 3)

Rear Wheel Bearings (O)
(See Note 7)

GAA 1000

10

**OE/
HDO**

Transmission Drain Plug (O)
(Drain and refill)
(See Note 10)

1000

250

**OE/
HDO**

Generator (O)
(5 drops in oil cups)

Torque Converter Drain & Fill (O)
(See Note 10)

**OE/
HDO 1000**

250

**OE/
HDO**

Spring Leaves (O)

Power Steering Reservoir (O)
(See Note 8)

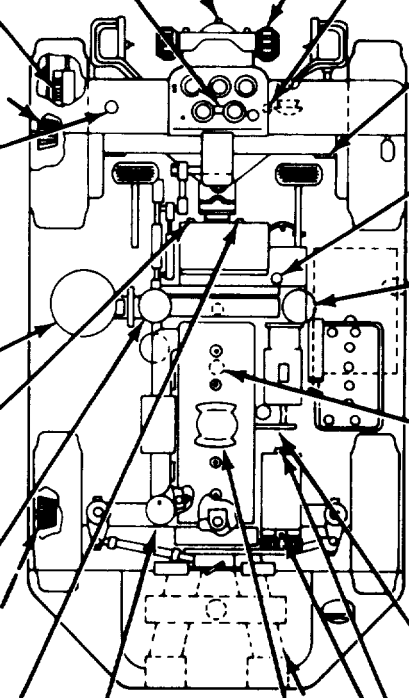
**OE/
HDO**

50

500

**OE/
HDO**

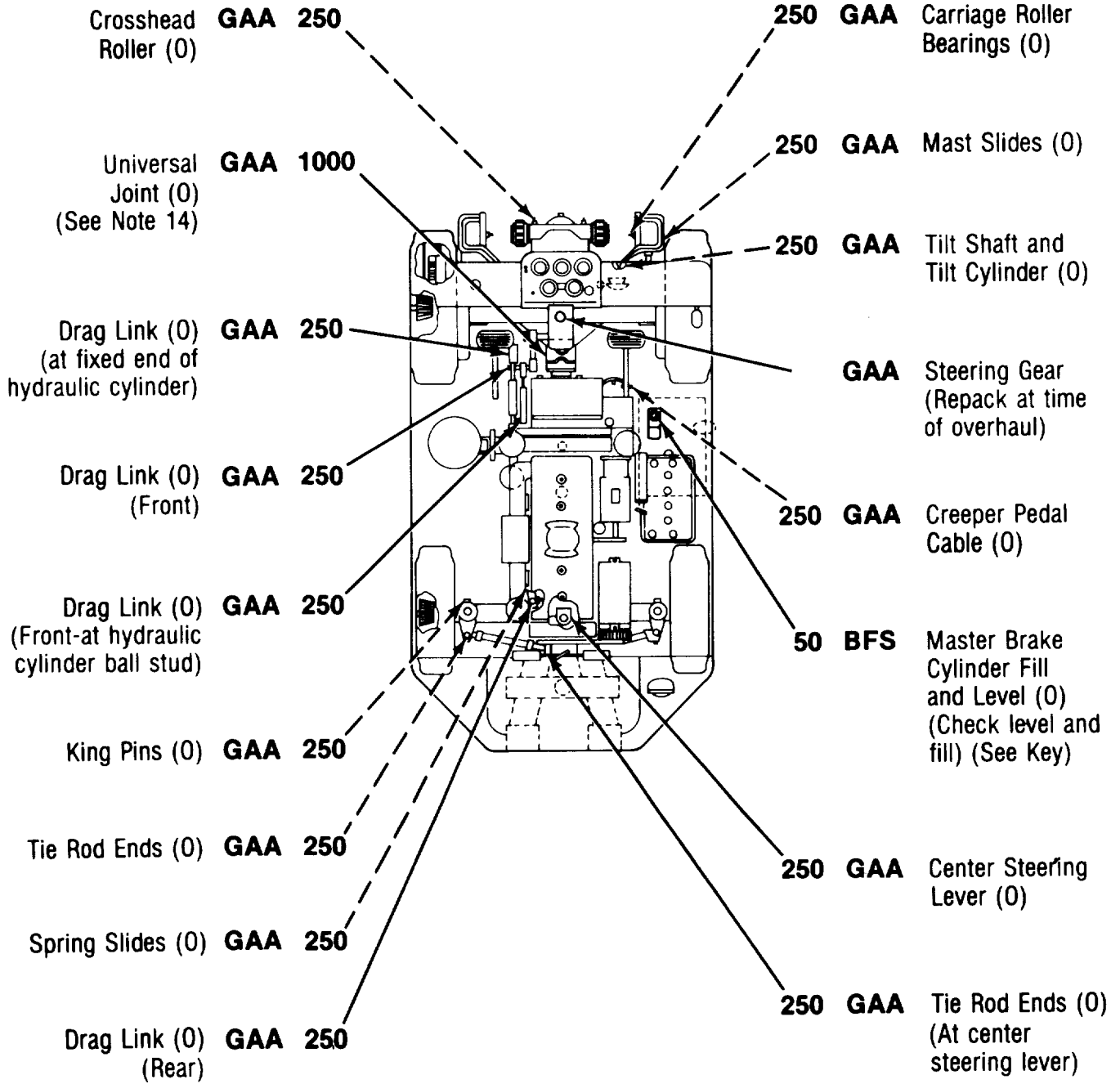
Distributor (O)
(See Note 13)



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LUBRICANT • INTERVAL

INTERVAL • LUBRICANT



* 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/ - Lubricating HDO Oil, Internal Combustion Engine, Tactical Service OEA - Lubricating Oil, Internal Combustion, Arctic - Engine Crankcase - Air Cleaner - Oil Can Points (See Note 2)	5 qts. (4.73 L) 1 pt. (0.472 L)	OE/HDO 30	OE/HDO 10	OEA (See Note 1)	C/MR-Condition Monitor Intervals given are in hours of normal operation,
- Hydraulic Tank - Power Steering Reservoir - Transmission/Torque Converter	6-1/2 gal, (13.24 L) 1 qt. (0.946 L) 12 qts. (11.35 L)				
GO - Lubricating Oil, Gear - Drive Axle		GO 85W/140	GO 80W/90	GO 75W	
BFS - Brake Fluid, Silicone, Automotive - Brake Master Cylinder	1/2 pt. (0.236 L)	ALL TEMPERATURES			
GAA - Grease, Automotive and Artillery		ALL TEMPERATURES			

For Arctic operation refer to FM 9-207

See Note 15 for lubricant specification number.

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NOTES:

1. 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.

2. OIL CAN POINTS. Each 250 operating hours, lubricate clutch pedal linkage, transmission shift linkage, door latches and hinges, pins, and clevises, and all exposed adjusting threads with OE/HDO.

3. 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).

4. ENGINE. Oil is to be changed each 250 operating hours. Drain when lubricant is warm.

5. ENGINE OIL FILTER. Each 250 operating hours, remove filter element, clean housing and install new filter element. After installing new filter element, fill crankcase, operate engine for 5 minutes, check housing for leaks, check crankcase oil level and bring to "FULL" mark.

6. AIR CLEANER. Each 250 operating hours, disassemble entire unit, clean, re-oil and assemble. Under extremely dusty or other unusual conditions service each 10 operating hours.

7. WHEEL BEARINGS. Each 1000 operating hours, remove wheels, clean and inspect all parts, replace damaged or worn parts, repack bearings, and assemble.

8. POWER STEERING RESERVOIR. Each 50 operating hours check oil level

and maintain to "FULL" mark. Change the element each 1000 operating hours.

9. DRIVE AXLE. Check level each 250 operating 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.

10. TRANSMISSION AND TORQUE CONVERTER. Check level each 10 operating hours with oil at operating temperature. Maintain oil level at level plug opening. Each 250 hours clean breather cap, lubricate with OE/HDO oil and reinstall. To drain, remove transmission and torque converter drain plugs. Crank engine to move torque converter drain to bottom. Drain and replace plugs. Drain when lubricant is warm. Fill transmission to level plug opening. Operate for 5 minutes, check for leaks and bring oil level to level plug opening.

11. HYDRAULIC SYSTEM. Check level each 50 operating hours. Change hydraulic oil 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. Bleed system if necessary.

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

13. DISTRIBUTOR. Each 250 operating hours apply GAA sparingly to breaker cam. Lubricate the breaker cam pivot and rotor wick with 2 drops of OE/HDO. Clean vents. Add 6 drops of OE/HDO to oil cup.

14. UNIVERSAL JOINT. Each 1000 operating hours, remove joint, disassemble, clean and inspect all parts, replace damaged or worn parts, repack bearings and assemble.

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NOTES - CONTINUED:

15. 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
OEA	MIL-L-46167
BFS	MIL-B-46176
(SD), Type II	P-D-660

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:

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

OFFICIAL:

ROBERT M. JOYCE
Major General, United States Army
The Adjutant General

DISTRIBUTION:

To be distributed in accordance with DA Form 12-25A Operational Maintenance requirements for Warehouse Equipment.

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