

LUBRICATION ORDER

7 March 1984

(Supersedes LO 10-3930-238-20, 4 SEPTEMBER 1964)

**TRUCK, LIFT, FORK; GASOLINE, PNEUMATIC TIRED
WHEELS; 6,000 LB CAPACITY (ARMY MODEL
MHE 193, BAKER MODEL FJF-060)
(NSN 3930-00-738-5938)**

Reference: TM 10-3930-238-10, and -20 and FEDERAL SUPPLY CATALOG C9100-IL.

Hard time intervals and the related manhour 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.

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).

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.

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.

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

*TOTAL MAN-HOURS		*TOTAL MAN-HOURS	
INTERVAL	MAN-HOURS	INTERVAL	MAN-HOURS
10	0.2	250	2.4
50	0.1	500	1.2

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LUBRICANT • INTERVAL

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Steering Gear
(Check level) (O)

GO 250

Air Cleaner
(Service) (C)
(See Key and
Note 3)

**OE/
HDO 250**

Hydraulic Tank
(Check level) (C)
(See Note 4)

50

Hydraulic Tank
Drain and Fill (O)
(Drain and refill)
(See Key and
Note 4)

**OE/
HDO 1000**

Crankcase
Ventilating Check
Valve (O)
(Clean)
(See Note 5)

250

Distributor (O)
(Service)
(See Note 6)

**OE/
HDO 250**

1000

Transmission
Drain (O)
(See Note 7)

250 BFS

Brake Master
Cylinder (O)
(Check level)

**10 OE/
HDO**

Transmission and
Torque Converter
Level Gauge
and Fill (O)
(Check level)
(See Note 7)

250

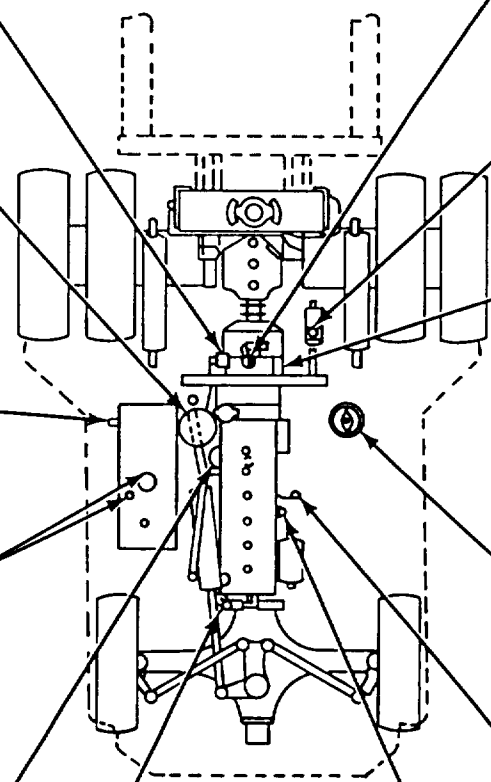
Engine Oil Filter
(Replace) (O)
(See Note 10)

10

Crankcase Oil
Level Gauge (C)
(Check level)
(See Note 8)

**250 OE/
HDO**

Crankcase Drain
and Fill (O)
(Drain and refill)
(See Key and
Note 9)



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Uprights (0)
(Brush GAA on
mating surfaces)

Carriage Rollers,
Four (0)
(Hand pack)

Tilt
Cylinders (0)
(Front)

Mast Pivot
Bearing (0)

Drag Link (0)

Power Steering
Cylinder (0)

Spindle Thrust
Bearings (0)
(Repack)

Spindle
Pins (0)
(2 fittings)

Bell Crank and
Linkage (0)
(6 fittings)

250 OE/
HDO Chain (0)
(Clean and oil)
(See Key)
Note 11)

250 GAA Crosshead (0)
(2 fittings)

250 Drive Axle (0)
(Check level at
plug)

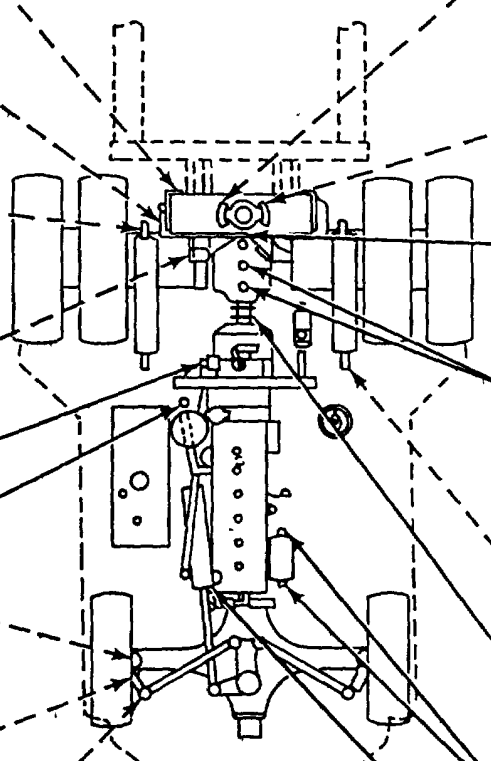
1000 OE/
HDO Drive Axle Drain
and Fill (0)
(Drain and refill)
(See Key)

250 GAA Tilt Cylinders,
Rear (0)

250 GAA Propeller
Shaft (0)
(2 fittings)

250 OE/
HDO Generator (0)
(Do not over oil)

250 GAA Power Steering
Cylinder (0)



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***-KEY-**

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS	
		Above +15°F (Above -9°)	+ 40°F to -15° F (+ 4° to -26°)	+40°F to -65°F (+4° to -54°)		
OE/ HDO - Lubricating Oil, Internal Combustion Engine, Tactical Service OEA - Lubricating Oil, Internal Combustion, Arctic - Oil Can Points (See Note 2) - Drive Axle - Crankcase	11 pts. (5.2 L) 5 qts. (4.8 L)	OE/HDO 30	OE/HDO 10	OEA (See Note 11)	For Arctic operation refer to FM 9-207	Intervals given are in hours operation.
- Chain - Hydraulic Tank - Distributor - Transmission - Air Cleaner	9.5 gals. (36 L) 10 qts. (9.5 L) 1 qts. (0.9 L)					
GO - Lubricating Oil, Gear, Multipurpose		GO 85W/140	GO 80W/90	GO 75W		
BFS - Brake Fluid, Silicone Automotive		ALL TEMPERATURES				
GAA - Grease, Automotive and Artillery		ALL TEMPERATURES				

*See Note 12 for lubricant specification number.

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 linkages, bellcranks and

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NOTES - CONTINUED:

other friction points, not equipped with oil cups or pressure fittings, with OE/HDO.

3. AIR CLEANER. Each 250 hours disassemble unit, clean, assemble and refill with OE/HDO.

4. HYDRAULIC TANK. Each 50 hours check level. Each 1000 operating hours drain tank and refill with OE/HDO 10.

After refill, operate for 5 minutes, check for leaks and bring to "FULL" mark.

5. CRANKCASE VENTILATING CHECK VALVE. Each 250 hours remove valve and clean in drycleaning solvent.

6. DISTRIBUTOR. Each 250 operating hours, remove rotor and apply OE/HDO sparingly to felt wick in center of cam. Do not over oil and keep oil from contact points.

7. TRANSMISSION. 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. Each 1000 operating hours, drain and refill with OE/HDO 10. Fill to "LOW" mark. Run engine to fill converter and lines. Add oil to bring level to "LOW" mark. With engine running at idle speed, oil at operating temperature and transmission in neutral, add oil to bring level to "FULL" mark. Operate for 5 minutes and check for leaks.

8. 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).

9. CRANKCASE. Oil is to be changed each 250 operating hours. Drain when oil is warm.

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

11. CHAIN. Each 250 hours, wire brush clean and brush on OE/HDO .

12. 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-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:
 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, Operator and Organizational maintenance requirements for Forklift Trucks

