

LUBRICATION ORDER

4 APRIL 84

(Supersedes LO 10-3930-222-20, 5 DECEMBER 1962)

**TRUCK, LIFT, FORK, GASOLINE; PNEUMATIC
TIRED WHEELS; 15, 000 LB CAPACITY, 210-INCH
LIFT HEIGHT (HYSTER MODEL H150C, ARMY MODELS
MHE-178, MHE-178A, MHE-178B AND MHE-178C)
(NSN 3930-00-897-4632) AND (MODEL H150F ARMY
MODEL MHE-223) (NSN 3930-00-151-4434)**

Reference: TM 10-3930-222-10, and -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.

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: DRSTAMB, Warren, MI 48090. A reply will be furnished to you.

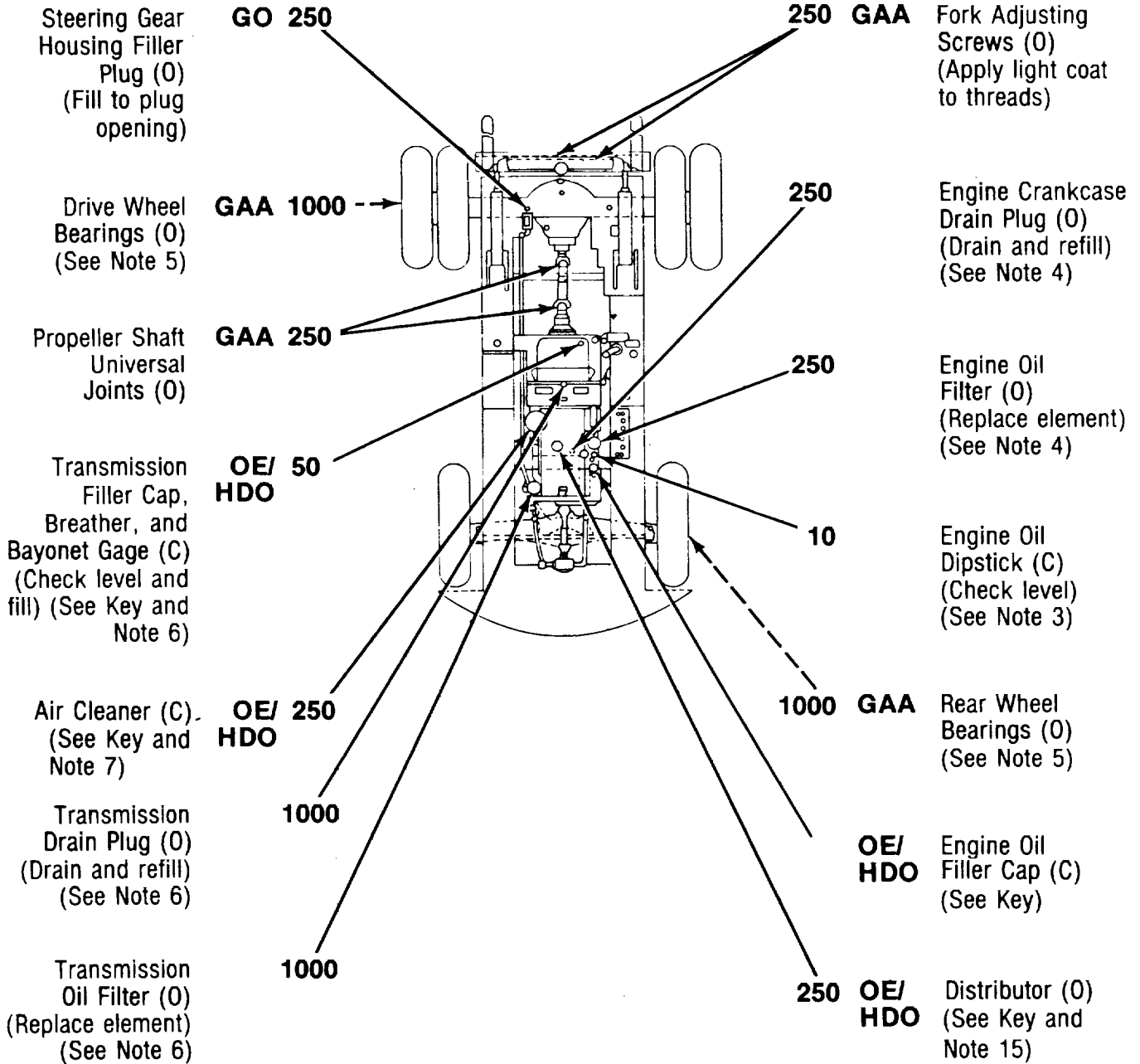
*The time specified is the time required to perform all services at the particular interval.

*TOTAL MAN-HOURS		*TOTAL MAN-HOURS	
INTERVAL	MAN-HOURS	INTERVAL	MAN-HOURS
10	0.2	250	4.9
50	0.3	1000	3.7

TA220715

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT



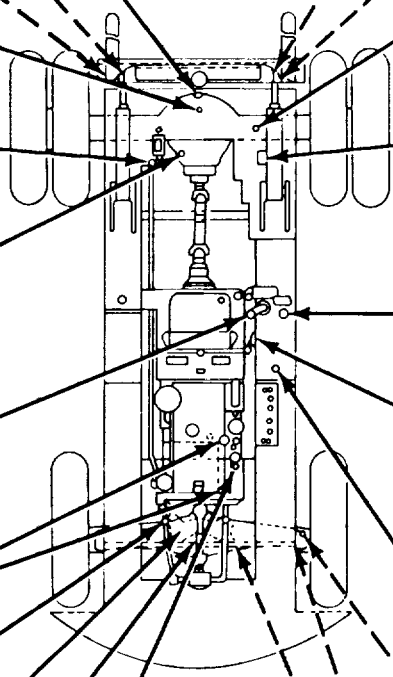
TA220716

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT

- Drive Axle Filler Plug (0)
(See Key)
- Upright Pivot Pins (0)
- Lift Chains (0)
(See Note 8)
- Drive Axle Drain Plug (0)
(See Note 9)
- Drag Link Front (0)
- Drive Axle Level Plug (0)
(Check level)
(See Note 9)
- Hydraulic Tank Filler Cap (C)
(See Key)
- Steering Booster (0)
- Drag Link Rear (0)
- Center Arm (0)
(Top and bottom points)
- Hydraulic Pump Shaft (0)
- Generator (0)
(See Note 14)

- GO 1000**
- GAA 250**
- OE/ HDO 250**
- C/MR**
- GAA 250**
- 250**
- OE/ HDO**
- GAA 250**
- GAA 250**
- GAA 250**
- GAA 250**
- OE/ HDO 250**



- 250 GGP** Upright Strip Bearings (0)
(Apply light coat to surfaces)
- 250 GAA** Tilt Cylinder Pivot Pins (0)
- 250** Drive Axle Breather (0)
(Clean)
(See Note 10)
- 250 BFS** Master Cylinder Filler Cap (0)
(Fill to 1/4 inch from top)
- 1000** Hydraulic Tank Breather (0)
(Clean)
(See Note 11)
- 50** Hydraulic Tank Oil Level Gage (C)
(Check level)
(See Note 12)
- 1000** Hydraulic Tank Drain Plug (0)
- 250 GAA** Kingpin Bearings (0)
(Top and bottom)
- 250 GAA** Tie Rod Ends (0)

TA220717

± 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 - Air Cleaner - Lift Chains - Oil Can Points (See Note 2) - Distributor, Oil Reservoir - Transmission	6 qts. (5.67 L) 1/2 pt. (0.236 L) 12 qts. (11.35 L)	OE/HDO 30	OE/HDO 10	OEA (See Note 1)	C/MR - Condition Monitor Intervals given are in hours of normal operation. For Arctic operation refer to FM 9-207
- Hydraulic Tank	60 qts. (56.67 L)	OE/HDO 10	OE/HDO 10	OE/HDO 10	
GO - Lubricating Oil, Gear, Multipurpose - Drive Axle - Steering Gear Housing	12 qts. (11.35 L)	GO 85W/140	GO 80W/90	GO 75W	
BFS - Brake Fluid, Silicone, Automotive - Brake Master Cylinder	1 pt. (0.473 L)	ALL TEMPERATURES			

*See Note 16 for lubricant specification number.

TA220718

— 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)	
GAA - Grease, Automotive and Artillery		ALL TEMPERATURES			
GGP - Grease, Graphite		ALL TEMPERATURES			

*See Note 16 for lubricant specification number.

NOTES

1. FOR OPERATION OF EQUIPMENT IN PROTRACTED COLD TEMPERATURES BELOW 150F (260C). Remove lubricants prescribed in Key for temperatures above 150F (260C). Relubricate with lubricants specified in Key for temperatures below 150F (260C). If OEA lubricant is required to meet the temperature ranges prescribed in the Key, OEA lubricant is to be used in place of OEIHDO10 lubricant for all temperature ranges where OE/HDO10 is specified in the Key.

2. OIL CAN POINTS. Each 250 operating hours lubricate accelerator linkage, rod ends, hinges and other friction points 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 CRANKCASE DRAIN AND ENGINE OIL FILTER. Each 250 operating hours drain crankcase, remove filter element, clean filter housing and install new filter element and gasket. After installing new filter element, refill crankcase, operate engine for 5 minutes, check for leaks, check crankcase oil level and bring to "FULL" mark on dipstick.

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

6. TRANSMISSION, BREATHER AND OIL FILTER. Check oil level each 50 operating hours, with engine running at idle speed, oil at operating temperature and transmission in neutral. Maintain oil level at "FULL" mark on bayonet gage. Clean breather in dry cleaning solvent. Each 6 months or each 500 operating hours, whichever occurs first, drain the transmission and converter. Remove filter element, clean filter housing and install new filter element. Refill transmission to low mark. With engine at idle speed, oil at operating temperature, and transmission in neutral (to fill lines and converter) add oil to bring to "FULL" mark on bayonet gage. Operate for 5 minutes and check for leaks.

7. AIR CLEANER. Each 250 operating hours disassemble entire unit, clean, refill and assemble.

8. LIFT CHAINS. Each 250 operating hours remove, soak and wash in dry cleaning solvent, drain and dry. Soak in OEIHDO, drain and wipe outer surface of chains.

9. DRIVE AXLE. Each 250 operating hours check level at level plug opening. Change gear lubricant only when required by maintenance repair action, contamination by water, or other foreign material. After refill, operate for 5 minutes, check for leaks and bring oil level to level plug opening.

TA220719

NOTES - CONTINUED:

10. DRIVE AXLE BREATHER. Each 250 operating hours clean breather in dry cleaning solvent.

11. HYDRAULIC TANK BREATHER. Each 1000 operating hours clean breather in dry cleaning solvent.

12. HYDRAULIC TANK. Each 50 operating hours check oil level and fill to "FULL" mark. If oil is contaminated, drain system and tank. Remove filter element, clean filter housing and install new filter element and gasket and refill with clean oil. Operate hydraulic system for 5 minutes, check for leaks, check level and bring to "FULL" mark.

13. HYDRAULIC TANK FILTER. Each 1000 operating hours, remove filter element, clean filter shell and install new filter element and gasket. After replacement, operate hydraulic system for 5 minutes, check for leaks, check level and bring to "FULL" mark.

14. GENERATOR. Each 250 operating hours place 3 drops of OE/HDO into each oiler cup. Do not over lubricate generator and do not use PL.

15. DISTRIBUTOR. Each 250 operating hours place 2 drops of OE/HDO in breaker cam wick and wipe trace of GAA on breaker cam. Remove plug at base and place nine drops of OE/HDO in opening.

16. 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
GGP	MIL-G-23549

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 1225A, Operator and Organizational maintenance requirements for Fork Lift Trucks.

TA220720

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



THEN... JOT DOWN THE DOPE ABOUT IT ON THIS FORM, CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL!

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER

PUBLICATION DATE

PUBLICATION TITLE

BE EXACT... PIN-POINT WHERE IT IS

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.

Large empty rectangular area for providing detailed feedback on the publication.

TEAR ALONG PERFORATED LINE

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE:

