

**LUBRICATION ORDER**

**LO 10-3930-630-12**

25 JAN 84

(Supersedes LO 10-3930-630-12, 13 SEPTEMBER 1976)

**TRUCK, LIFT, FORK, GASOLINE, SOLID RUBBER  
TIRED WHEELS, 4000 LB CAPACITY, 100 AND 180  
INCH LIFT, ARMY MODEL MHE-231, ALLIS CHALMERS  
MODELS ACC 40-24PS 100 AND ACC 40-24PS 180  
(NSN 3930-00-590-7814) (100 IN.)  
(NSN 3930-00-556-4955) (180 IN.)**

**Reference: TM 10-3930-630-12 and FEDERAL SUPPLY CATALOG C9100-1L.**

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 longerthan-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 it-ms found contaminated after fording or washing.

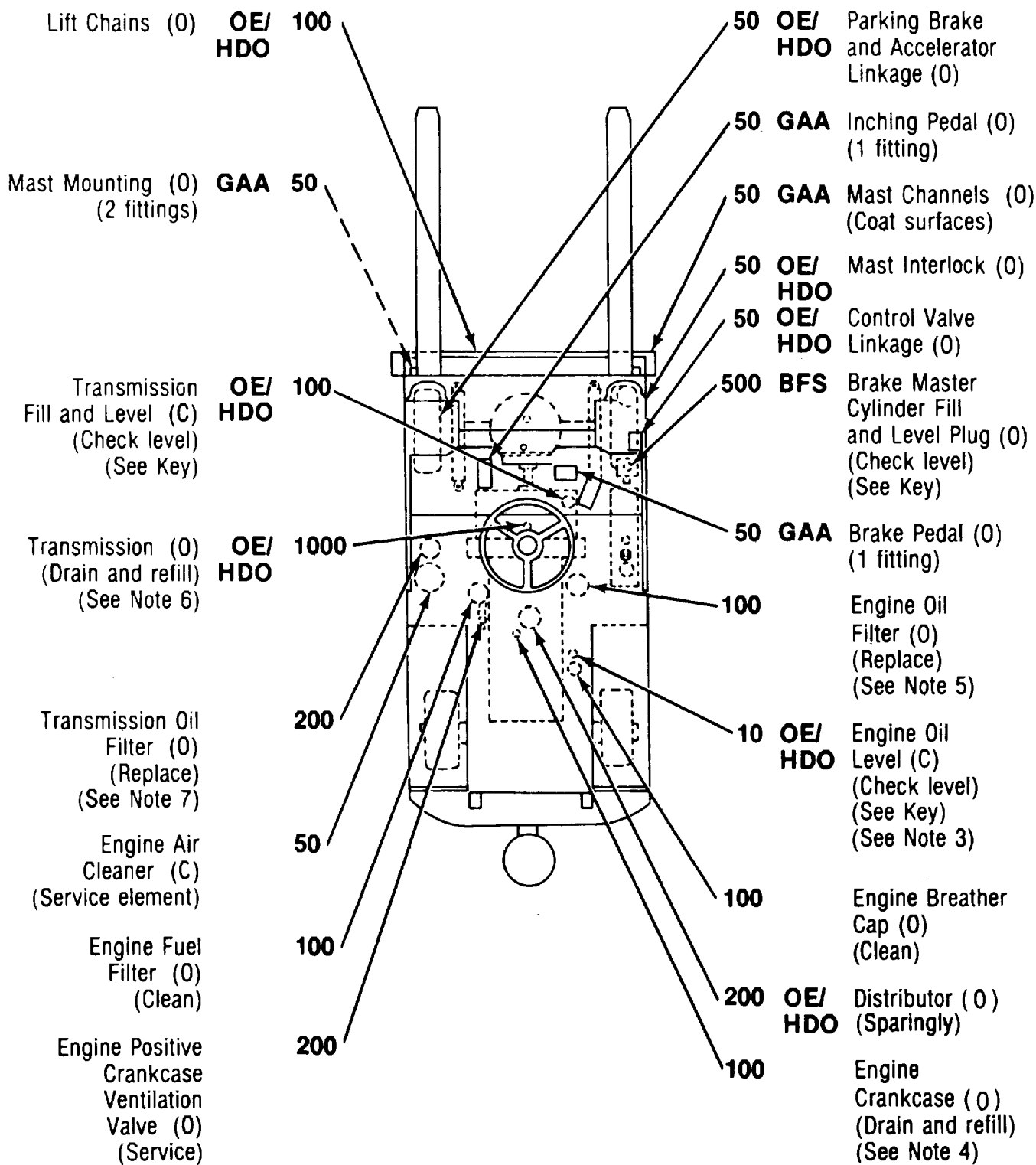
The lowest level of maintenance authorized to lubricate a point is indicated by one of the following symbols as appropriate: Operator/Crew (C); and Organizational Maintenance (O).

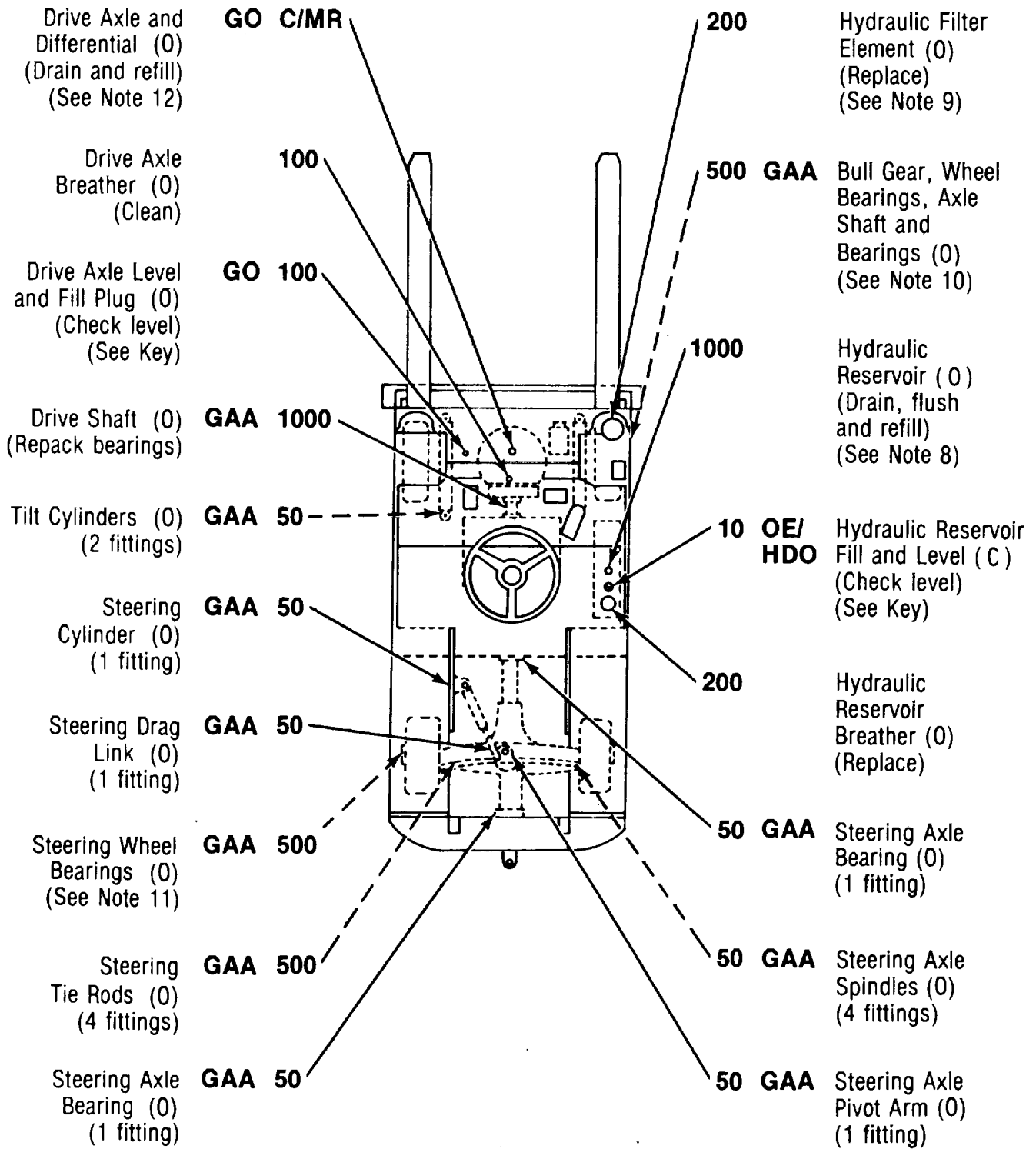
**Reporting errors and recommending improvements.** You can help us improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, US Army 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.

<b>*TOTAL MAN-HOURS*</b>		<b>*TOTAL MAN-HOURS</b>	
<b>INTERVAL</b>	<b>MAN-HOURS</b>	<b>INTERVAL</b>	<b>MAN-HOURS</b>
10	0.2	200	1.7
50	1.8	500	2.8
100	2.4	1000	1.0

TA 220510





- 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)	
<b>OE/ HDO</b> - Lubricating Oil, Internal Combustion Engine, Tactical Service  <b>OEA</b> - Lubricating Oil, Internal Combustion, Arctic  - Engine Crankcase	4 qts. (3.8 L) add 1 pt. (0.473 L) with filter change	<b>OE/HDO</b> 30	<b>OE/HDO</b> 20	<b>OEA</b> (See Note 1)	C/MR - Condition Monitor  Intervals given are in hours of normal operation.
- Transmission	11 qts. (10.4 L) add 1 qt. (0.946 L) with filter change	<b>OE/HDO</b> 10	<b>OE/HDO</b> 10		
- Hydraulic Reservoir - Oil Can Points (See Note 2)	5.9 gals. (2.3 L)				
<b>GO</b> - Lubricating Oil, Gear, Multipurpose  - Drive Axle	5 pts. (2.3 L)	<b>GO</b> 85W/140	<b>GO</b> 80W/90	<b>GO</b> 75W	
<b>BFS</b> - Brake Fluid, Silicone, Automotive  - Brake Master Cylinder	3 pts. (1.4 L)	ALL TEMPERATURES			
<b>GAA</b> - Grease, Automotive and Artillery		ALL TEMPERATURES			

For Arctic operation refer to FM 9-207

\*See Note 13 for lubricant specification number.

TA 220513

**NOTES:**

1. FOR OPERATION OF EQUIPMENT IN PROTRACTED COLD TEMPERATURES BELOW -150F (-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 50 hours lubricate accelerator and parking brake linkage, mast interlock, and control valve linkage, pins and devices 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 100 hours. Drain when lubricant is warm.

5. ENGINE OIL FILTER. Each 100 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. TRANSMISSION. Check level each 100 hours with engine running at idle speed, oil at operating temperature and transmission in neutral. Maintain oil level at "FULL" mark. Change oil each 1000 hours. Fill transmission to low mark. Run engine at idle speed to fill converter and lines. With engine running at idle speed, oil at operating temperature and transmission in neutral, add oil to bring LO 10-3930-630-12 oil level to

"FULL" mark. Operate for 5 minutes and check for leaks.

7. TRANSMISSION OIL FILTER. Each 200 hours, remove filter element, clean filter housing, install new filter element and gasket. Fill transmission to low mark. With engine running at idle speed, oil at operating temperature and transmission in neutral, add oil to bring oil level to "FULL" mark. Operate for 5 minutes and check filter housing for leaks.

8. HYDRAULIC RESERVOIR. Each 10 hours check level. Maintain oil level at "FULL" mark. Each 1000 hours, drain, flush and refill reservoir. Operate hydraulic system for 5 minutes, check for leaks, check oil level and bring to "FULL" mark.

9. HYDRAULIC FILTER. Each 200 hours, remove filter element, clean filter shell and install new filter element. After replacement, operate hydraulic system for 5 minutes, check for leaks, check oil level and bring to "FULL" mark.

10. BULL GEAR/WHEEL BEARINGS/AXLE SHAFT AND BEARINGS. Each 500 hours remove wheels, clean and inspect all parts, replace damaged or worn parts, repack bearings and reassemble. Fill bull gear spaces to three-fourths height of teeth with GAA grease.

11. STEERING WHEEL BEARINGS. Each 500 hours remove wheels, clean and inspect all parts, replace damaged or worn parts, repack bearings and reassemble.

12. DRIVE AXLE AND DIFFERENTIAL. Check level each 100 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 to "FULL" mark.

TA 220514

13. 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

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TA 220515

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