

**LUBRICATION ORDER**

**LO 10-3930-628-12**

**(Supersedes LO 10-3930-628-12, 18 NOVEMBER 1972)**

**TRUCK, LIFT, FORK, EMD, SOLID RUBBER  
TIRED WHEELS, 2, 000 LBS CAPACITY,  
144-INCH LIFT, ARMY MODEL MHE-219  
(ALLIS CHALMERS MODEL FE20-24EE AND  
ACE 20-24EE) (NSN 3930-00-151-4432)**

Reference: TM 10-3930-628-12, 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 calendar 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: 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
50	0.2	500	0.2
250	2.0	1000	3.0

TA 221842

**LUBRICANT•INTERVAL**

**INTERVAL•LUBRICANT**

Fork Carriage (0) **GAA 250**  
(Sparingly)

Upright Rollers  
(No lubrication  
required)

Tilt Cylinder (0) **GAA 250**

Bull Gears (0) **GMD 1000**  
(See Note 4)

Wheel **GAA 1000**  
Bearings (0)  
(See Note 3)

Jackshaft **GMD 1000**  
Bearings (0)

Drag Link (0) **GAA 250**

Differential Drain **C/MR**  
Plug (0)  
(Drain and refill)  
(See Note 5)

Steering Gear Fill **GO 250**  
and Level Plug (0)

Wheel **GAA 1000**  
Bearings (0)  
(See Note 3)

Steer Axle **GAA 250**  
Mounting (0)  
(2 fittings)

Drag Link (0) **GAA 250**

Pivot Arm (0) **GAA 250**

**250 OE/ HDO** Lift Chains (0)  
(Clean and coat)

**250 GAA** Uprights (0)  
(Clean and coat  
surfaces)

**250 GO** Differential Fill  
and Level Plug (0)  
(Check level-  
add oil)  
(See Key)

**250 GAA** Pivot Pins (0)

**500 BFS** Master Brake  
Cylinder Fill  
and Level (0)  
(Check level)  
(See Key)

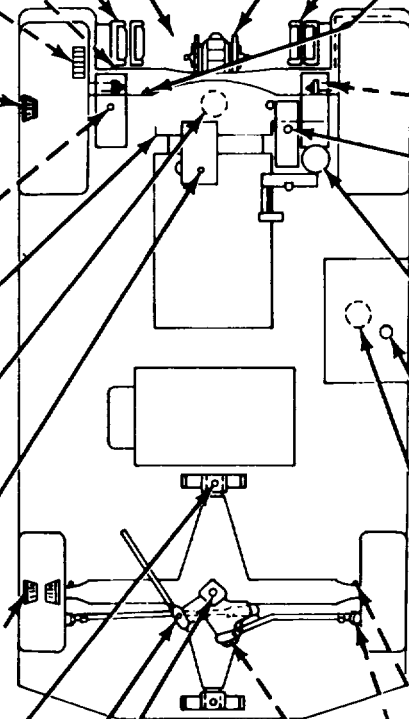
**250** Hydraulic Oil  
Filter (0)  
(Replace element)  
(See Note 7)

**50 OE/ HDO** Hydraulic Reservoir  
Fill and Level  
Gauge (C)  
(Check level-add  
oil) (See Key)

**1000** Hydraulic Reservoir  
Drain Plug (0)  
(Drain and refill)  
(See Note 6)

**250 GAA** King Pins (0)  
(4 fittings)

**250 GAA** Tie Rod Ends (0)  
(4 fittings)



TA 221843

- 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 Engine, Arctic  - Oil Can Points (See Note 2)		OE/HDO 30	OE/HDO 10	OEA (See Note 1)	C/MR - Condition Monitor     Intervals given are in hours of normal operation.
- Hydraulic Oil Reservoir W/Filters	17 qts. (16 L)				
<b>GO</b> - Lubricating Oil, Gear, Multipurpose  - Differential Axle  - Steering Gear	5 pts. (2.36 L)  1/2 pt. (0.23 L)	GO 80W/90	GO 80W/90	GO 75W	
<b>BFS</b> - Brake Fluid, Silicone, Automotive  - Brake Master Cylinder		ALL TEMPERATURES			
<b>GMD</b> - Grease, Molybdenum Disulfide		ALL TEMPERATURES			
<b>GAA</b> - Grease, Automotive and Artillery		ALL TEMPERATURES			

For Arctic operation refer to FM 9-207

NOTES:

1. FOR OPERATION OF EQUIPMENT IN PROTRACTED COLD TEMPERATURES BELOW -15°F (-26°). 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 hours, lubricate control linkage, pins and clevises, and all exposed adjusting threads exposed with OE/HDO.

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

4. BULL GEARS. Each 1000 hours, remove wheels, clean, inspect and coat pinion and bull gear.

5. DIFFERENTIAL. Each 250 hours check level. 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 fill and level plug opening.

6. HYDRAULIC RESERVOIR. Each 50 hours check oil level. Each 1000 hours drain reservoir. Remove filter element, clean filter shell and install new filter element. After replacement, refill reservoir and operate lift for 5 minutes, check for leaks, check oil level and bring to "FULL" mark.

7. HYDRAULIC OIL FILTER. Each 250 hours, remove element, clean filter shell and install new element. After replacement, operate lift for 5 minutes, check for leaks, check level and bring to "FULL" mark.

8. 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
GMD	MIL-G-21164
(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 221845

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

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DA FORM 2028-2 JUL 79

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.—IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

**PIN: 011950-000**