

**LUBRICATION ORDER**17 September 1991

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**PUMPING ASSEMBLY, FLAMMABLE LIQUID, BULK TRANSFER  
DIESEL ENGINE DRIVEN, WHEEL MTD, 350 GPM, 275 FT. HEAD,  
MODEL 13229E8400 (97403) (FUEL USE ONLY)**

**AND**

**PUMP UNIT, CENTRIFUGAL, DIESEL ENGINE DRIVEN,  
WHEEL MTD, 350 GPM, 275 FT. HEAD,  
MODEL 13229E8401 (97403) (WATER USE ONLY)**

(References: TM 10-4320-324-14 and C9100-IL)

**REPORTING OF ERRORS**

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) directly to: Commander, U. S. Army Troop Support Command, ATTN: AMSTR-MMTS, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. A reply will be furnished to you.

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Intervals (on-condition or hard time) and the related work-hour times are based on normal operation. The work-hour time specified is the time you need to do all the services prescribed for a particular interval. On-condition (OC) oil sample intervals shall be applied unless changed by the Army Oil Analysis Program (AOAP) laboratory. Change the hard time interval if your lubricants are contaminated or if you are operating the equipment under adverse 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. Hard time intervals will be applied in the event AOAP laboratory support is not available.

Ensure pumping assembly is level before checking oil levels.

Lubricate immediately after fording, or as soon after as unit movement permits.

Clean fittings before lubricating. Clean parts with dry cleaning solvent (SD), type II, or equivalent. Dry fitting before lubricating. Dotted arrow points indicate lubrication on both sides of the equipment.

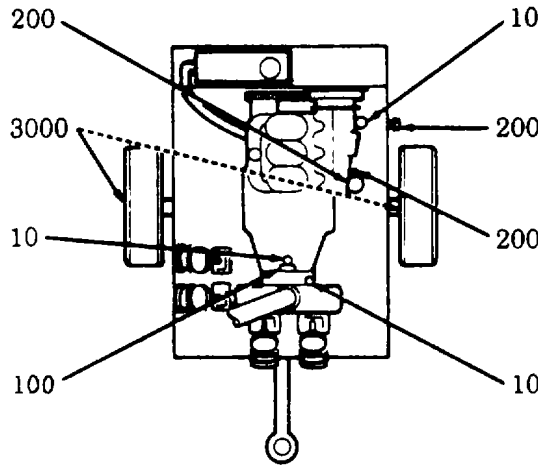
Level of maintenance. The lowest level of maintenance authorized to lubricate a point is indicated by one of the following symbols as appropriate: Operator/Crew (C), and Unit Maintenance (O).

**DISTRIBUTION STATEMENT A** - Approved for public release; distribution is unlimited.

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT

- Oil Filter (0)  
(See note 2)
- Wheel Bearings (0) GAA  
(see note 5)
- Pump Bearing  
Cavity Fill (0)  
(See note 4)
- Pump Bearing OE/HDO  
Cavity Oil  
Drain (0)  
(See note 8)



- OE/HDO Crankcase Oil  
Fill (0)
- Crankcase Oil Drain  
(0) (See note 3)
- Crankcase Oil Level  
Dipstick (C) (Check  
level)
- OE/HDO Pump bearing  
cavity Sight Gage  
(C) (Check level )  
(See note 4)

TOTAL WORK-HR		TOTAL WORK-HR	
INTERVAL	WORK-HR	INTERVAL	WORK-HR
10	0.1	200	1.0
100	0.5	3000	1.5

KEY

LUBRICANTS	CAPACITIES	EXPECTED TEMPERATURES			INTERVALS
		Above +32°F (Above 0°C)	40°F to -10°F (-5°C to -23°C)	0°F to -65°F (-18°C to -50°C)	
<b>OE/HDO</b> (MIL-L-2104) LUBRICATING Oil Engine Engine Crankcase  Oil Can Points	8.5 qts (8.04L)	OE/HDO 30 OE/HDO 15/40 OE/HDO 40	OE/HDO 10 OEA	OEA	Intervals given are in hours of normal operation
<b>OEA</b> MIL-L-46167 Oil Engine, Subzero	8 ounces				
<b>OE/HDO</b> (MIL-L-2104) Oil, Pump Bearing Housing					
<b>GAA</b> (MIL-G-10924) GREASE, Automotive and Artillery  WHEEL bearings	As required	ALL TEMPERATURES			

NOTES:

1. FOR OPERATION OF EQUIPMENT IN PROTRACTED EXTENDED COLD TEMPERATURE BELOW -10°F (-23°C). Remove lubricants prescribed in key for temperatures above -10°F (-23°C). Clean parts with drycleaning solvent. Relubricate with lubricant specified in the key for temperatures below -10°F (-23°C).

2. OIL FILTER. Replace oil filter with every oil change. Unscrew element, clean seat, and install new element. After servicing crankcase, operate engine for 5 minutes and check oil filter for leakage. Check oil level and bring to FULL mark on dipstick.
3. ENGINE CRANKCASE. Drain after operation when hot. To drain, remove cap at side of pump to rear of wheel. Clean and install cap. Remove filler cap, fill sump with 8.5 qts (8.04L) of oil to bring level to FULL mark on dipstick. On new or overhauled engines, drain oil after 50 hours of operation. Reservice crankcase.
4. PUMP BEARING CAVITY. Check oil quantity gage for FULL indication. To add oil, remove vent fitting, add oil to bring level to FULL line. Install vent fitting.
5. WHEEL BEARING. Pack wheel bearings as follows: Position assembly on jack stands, remove grease cap, cotter pin, axle nut, and washer. Remove outer bearing, hub, grease seal, and inner bearing. Degrease all parts. Pack bearings, install inner bearings and seal. Install hub, outer bearing, washer, nut, cotter pin, and grease cap.
6. OIL CAN POINTS. Every 50 hours clean and lightly oil access door hinges and latches, rear panel hinges, control panel hinge and locks, tool box hinges and latches and battery cover latches.
7. PUMP BEARING CAVITY. To drain, remove drain plug at bottom of intermediate bracket. Clean and install drain plug. Remove vent fitting and fill with 8 ounces (0.24 liters) of oil. Bring oil level even with line on sight gauge. Reinstall vent fitting.

A 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:

GORDON R. SULLIVAN  
*General, United States Army*  
*Chief of Staff*

Official:

**PATRICIA P. HICKERSON**  
*Brigadier General, United States Army*  
*The Adjutant General*

DISTRIBUTION:

To be distributed in accordance with DA Form 12-25A, (Qty rqr block nos. 1429 and 1430)

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