

LUBRICATION ORDER

4 September 1986

(Supersedes: L055-1930-202-12/1/2/3/4/5, 1 December 1964)

**BARGE, DECK OR LIQUID CARGO, DESIGN 231 B
PUMPING UNIT, DIESEL-ENGINE DRIVEN
VIKING PUMP, MODEL P-332
GM DIESEL ENGINE, MODEL 4030C, MODEL 1043-7000,
MODEL 1043-7100, CONTINENTAL ENGINE, MODEL RD-572
FALK SPEED REDUCER, MODEL 7GDX, MODEL 2070 YBX**

References: TM 55-1930-202-12

Intervals (on-condition or hard time) 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. 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 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. Hard time intervals will be applied in the event AOAP laboratory support is not available.

Clean fittings before lubricating.

Clean parts with SOLVENT, dry-cleaning, (SD), type II or equivalent. Dry before lubricating.

Lubricate points indicated by dotted arrow shafts on both sides of equipment.

Drain wet crankcases, gear boxes and hydraulic reservoirs while the lubricant is still warm from previous use.

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS. You can help improve this manual. If you find any mistake 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-MCTS, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. A reply will be furnished directly to you.

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 Organizational Maintenance (O).

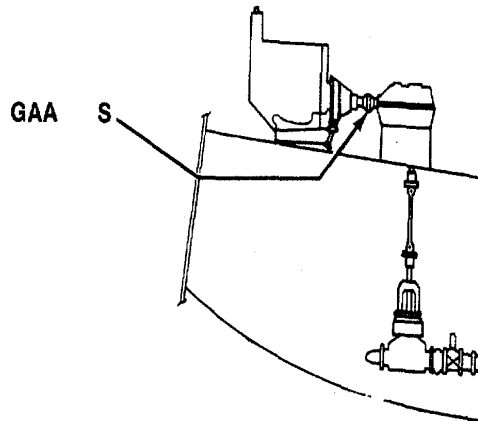
LUBRICANT

INTERVAL

INTERVAL

LUBRICANT

Flexible Coupling
(if equipped with
grease fittings
apply 1 or 2 shots
from hand grease
gun. See Note 5.)

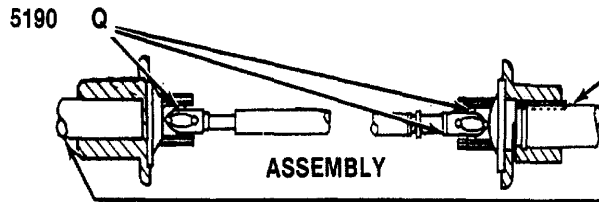


PUMPING UNIT

Speed Reducer
(Low speed shaft)

Pump Shaft

Flexible Shaft Needle Bearings and Spline (Add oil until reservoir is full. See Note 4:)



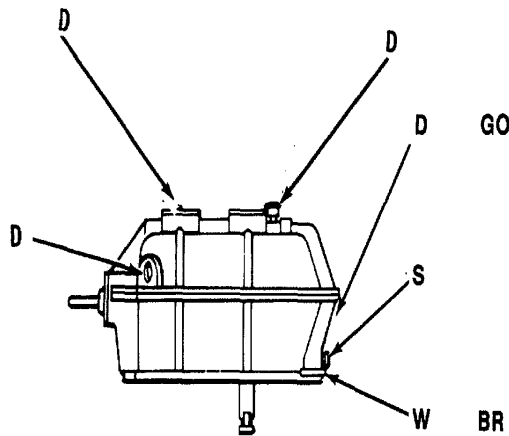
ASSEMBLY

Air Vent And Gear Case Fill (Remove foreign material).

Oil Level (Check level with unit stopped. Add oil to bring level to "FULL MARK." See Note 1.)

Oil Flow Indicator (A transparent oil sight or window-check to see if lubricant is circulating properly.)

Inspection Hole (Inspect gear teeth for undue wear).



SPEED REDUCER

Oil Drain (Remove plug. Drain, flush, and refill. See Note 3.)

Low Speed Shaft Lower Bearing (Grease fitting, 2 or 3 shots from grease gun. See Note 10.)

LUBRICANT

INTERVAL

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OE
Crankcase Fill
(With engine stopped, add sufficient oil to bring level to "FULL MARK" on dipstick. See Note 7.)

BR
Power Take-Off Main Bearing
(Grease fitting, 1 or 2 strokes from hand grease gun. See Note 8.)

BR
Power Take-Off Clutch Throw out Bearing
(Grease fitting, 1 or 2 strokes from grease gun. See Note 9.)

BR
Power Take-Off Clutch Pilot Bearing
(Grease fitting, 2 or 3 shots with hand gun. See Note 9.)

BR
Cooling Fan Bearing
(Grease fitting - Apply 2 or 3 shots with grease gun. See Note 6.)

OE
Battery Charging Generator
(Oilcup - Apply 5 or 6 drops to each cup with oil can. Warning Do not lubricate when engine is operating.)

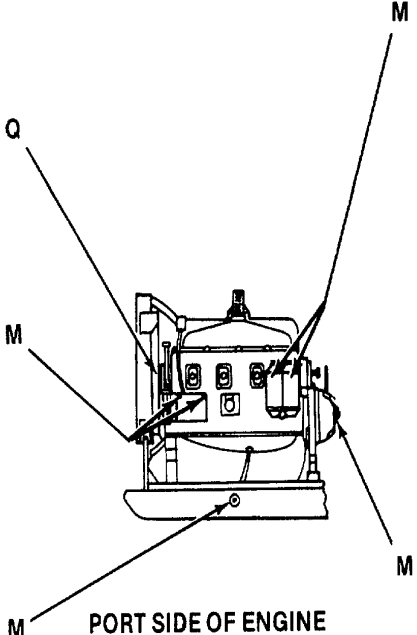
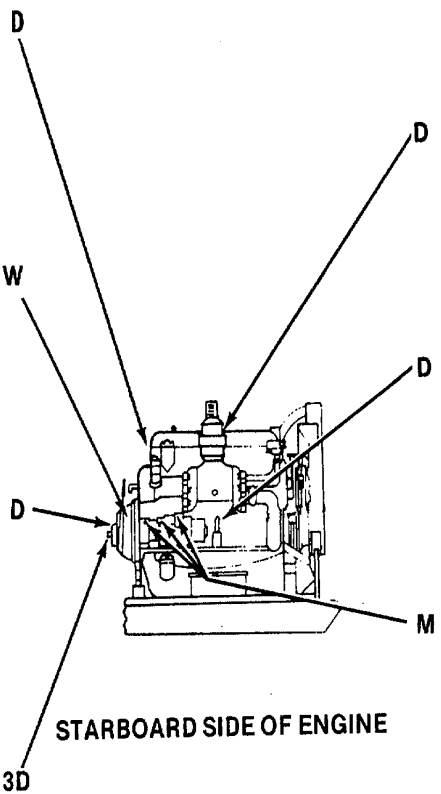
Crankcase Drain
(Remove plug, allow contaminated oil to thoroughly drain. Replace plug).

OE AirCleaner (Clean element and reservoir. Refill reservoir. See Note 2.)
Crankcase Oil Gage
(Check and maintain oil level to "FULL MARK" on dipstick. See Note 7.)

OE Starting Motor Oil Cups
(Apply 2 or 3 drops to each cup with oil can.)

Lube Oil Filters
(Remove drain plug at bottom of filter and drain. Unscrew bolt at top of each bowl and remove bowls and filtering element. Wash filter bowls with clean Diesel fuel oil. Reassembly, using NEW elements and gaskets. Replace drain plug.)

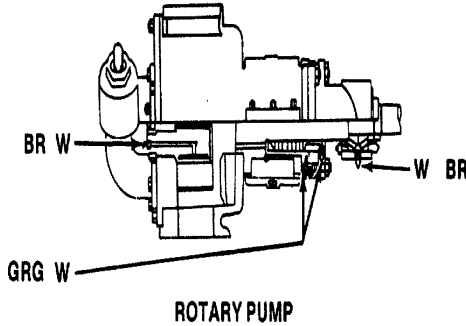
OE PowerTake-Off Clutch Cams and Toggles
(Remove cover plate, apply 5 or 6 drops to all moving parts, replace cover.)



LUBRICANT * INTERVAL INTERVAL * LUBRICANT

Idler Bearing
(Grease Fitting,
Apply 2 or 3 shots
from grease gun.)

Rotor Shaft Sleeve
Bearing (Grease fit.
ting, Apply 2 or 3
shots from grease
gun.)



Thrust Roller Bear-
ings (Grease fitting.
Apply 2 or 3 shots
from grease gun).

KEY

LUBRICANTS	EXPECTED TEMPERATURES			INTERVALS
	ABOVE+32°F	+32°F TO 0°F	BELOW 0°F	
OE -OIL, engine, heavy duty MIL-L-2104	OE-30	OE-10	OES	D - DAILY 3D - 3 DAYS
GO -LUBRICATING OIL, gear MIL-L-2105	GO-90	GO-75	GOS	W - Weekly M - MONTHLY
GAA -GREASE, Automotive and artillery MIL-G-10924	ALL TEMPERATURES			Q - QUARTERLY (3 Months)
BR -LUBRICANT, ball and roller bearing MIL-E-18709	ALL TEMPERATURES			S - SEMI-ANNUALLY (6 Months)
GRG -LUBRICATING GREASE, gasoline, and oil resistant MIL-L-6032	ALL TEMPERATURES			
5190 -LUBRICATING OIL cylinder MIL-L-15018	ALL TEMPERATURES			

TOTAL MAN-HOURS		TOTAL MAN-HOURS	
INTERVAL	MAN-HR	INTERVAL	MAN-HR
D	1.7	M	1.6
3D	0.3	Q	0.8
W	1.5	S	0.8

NOTES:

1. SPEED REDUCER, OIL LEVEL CAUTION: Do not fill above level mark.
2. AIR CLEANER Remove housing from air cleaner bowl. Clean sludge from bowl reservoir and thoroughly wash with clean Diesel fuel oil. Refill bowl reservoir D/A symbol OE to oil level. Clean element by immersing in bath of Diesel Fuel oil, allow to dry before assembling. CAUTION: Do not add oil above oil level ring.
3. SPEED REDUCER, OIL DRAIN There is no necessity for taking speed reducer apart when changing oil. Just drain, flush, and refill. CAUTION: Do not tamper with the totally enclosed grease sealed bearings.
4. FLEXIBLE SHAFT NEEDLE BEARING CAUTION: Do not use grease.
5. FLEXIBLE COUPLING (engine to speed reducer) Annually overhaul clean and then repack grid and teeth with as much grease GAA as possible. Scrape or wipe off excess grease. Flush with top of grid member.
6. COOLING FAN BEARINGS If fan is not equipped with grease fitting the bearings are packed with grease when assembled at factory and does not need further lubrication. On overhauling, clean the bearings and pack with BR grease.
7. CRANKCASE FILL AND OIL LEVEL CAUTION: Never let oil fall below LOW mark on dipstick.
8. POWER TAKE-OFF MAIN BEARING Force enough grease into the bearing to cause a small collar of grease to form around the seal as the shaft rotates.
9. POWER TAKE-OFF PILOT AND THROWOUT BEARING Lubricate sparingly to avoid grease on clutch facing.
10. SPEED REDUCER MODEL 2070YBX If reducer is taken apart for repair, add one pound of ball bearing grease through fitting after final assembly.

Copy of this lubrication order will remain with the equipment at all times; instructions contained herein are mandatory and supersede all conflicting lubrication instructions dated prior to date of this lubrication order.

By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR.
General, United States Army,
Chief of Staff.

Official:

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION:

To be distributed in accordance with DA Form 12-25A, Operator and Organizational Maintenance requirements for Barge Deck, Non-propelled, Steel, 578-T or 4160 BBL, 120 Ft, Model 231B.

* U.S. GOVERNMENT PRINTING OFFICE: 1986-490-998/40326

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AND WHAT SHOULD BE DONE ABOUT IT.**

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