

LANDING CRAFT, UTILITY  
MARINETTE MARINE CORPORATION  
HULL NUMBERS 1671-1679  
NSN 1905-01-009-1056

References: TM 55-1905-220-14-1 Thru -11

**REPORTING OF ERRORS**

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**GENERAL NOTES**

The level of maintenance authorized to lubricate a point is indicated by the following: (C) Operator/crew; or (0) Unit Maintenance.

Intervals and related task-hour times are based on normal hours of operation. The task-hour time specified (\*) is the time you need to do all the services prescribed for a particular interval. Change the interval if your lubricants are contaminated or if you are operating the equipment under adverse operating conditions, including longer-than-usual operating hours. You may extend the interval during periods of low activity, but you must take adequate preservation precautions.

Clean fittings before lubricating. Relubricate all areas exposed to water after amphibious operation.

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

Clean parts with SOLVENT, dry cleaning, or with OIL, fuel, diesel. Dry before lubricating.

**LUBRICANT • INTERVAL**

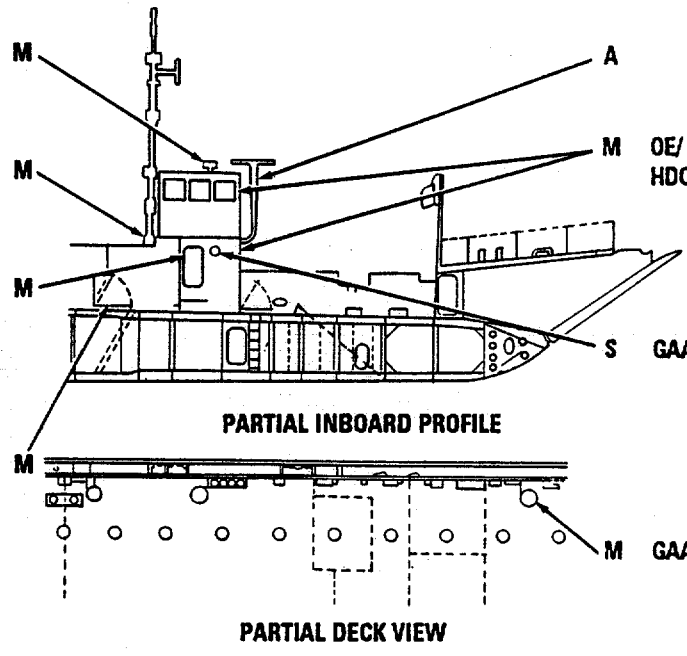
**INTERVAL • LUBRICANT**

**SEARCHLIGHT** OE/  
Grease fitting on socket HDO  
and bearing housing (C)

**MAIN MAST** GAA M  
Lubricate hinge pin,  
2 places (C)

**DOORS** GAA M  
Lubricate hinges,  
links and dogs  
(152 places).  
See NOTE 1. (C)

**HATCHES** GAA M  
Lubricate hinges,  
links and dogs  
(21 places) (C)



**RADAR ANTENNA DRIVE**  
(C). See NOTE 2

**WINDSHIELD WIPERS** OE/  
Lubricate linkages (C) HDO

**BATTLE COVERS AND AIRPORTS.** Lubricate  
dogs and hinges (40  
places on battle  
covers and 118 places  
on airports) (C) GAA

**SCUTTLES** M GAA  
Lubricate hinges,  
links and dogs  
(17 places) (C)

4957-001

*TOTAL TASK HOURS		*TOTAL TASK HOURS	
INTERVAL	TASK-HOURS	INTERVAL	TASK-HOURS
M	2.5	S	0.75
		A	.10

-KEY -

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above +32-F Above O°C	+40°Fto-10iF +5°Cto-23°C	0°F to -65°F -18°Cto-54°C	
GAA Grease, automotive (MIL-G-1 0924F) and artillery	As Required	All Temperatures			M - Monthly S Semiannually A - Annually
OE/HDO Lubricating oil, (MIL-L-2104)engine					
OEA Lubricating oil, ice, (MIL-L-1 0295) artic			OEA		

**NOTES**

1. DOORS. Clean all paint from watertight door seals as required. Lubricate watertight door seals with OE/ HDO monthly.

**WARNING**

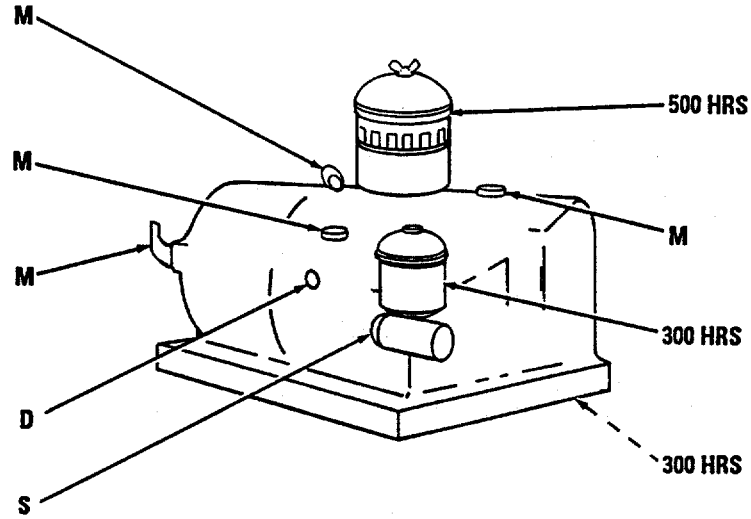
High voltage is used in the operation of this equipment. Death on contact may result if personnel fail to observe safety precautions. Deenergize the equipment before attempting to perform maintenance.

2. RADAR ANTENNA DRIVE. Add 4-6 drops of OE/HDO oil to oil can on the motor gear assembly yearly. Add teaspoonful of GM to the rotary joint seal yearly.

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT

- THROTTLE CONTROL** OE/ M  
HDO  
Lubricate Throttle  
Control Linkage (C)  
See NOTE 3
- BREATHER CAP** OE/ M  
HDO  
Clean breather with  
OE/HDO (C)
- GENERATOR BEARING** OE/ M  
HDO  
Check sight gage  
and add oil  
as required (C)
- OIL LEVEL GAGE** D  
(C) See NOTE (1)
- ALTERNATOR** OE/ S  
HDO  
Add 5 to 6 drops of  
oil at hinge cap  
oiler (C)



- AIR CLEANER** (C)  
See NOTE 5
- OIL FILLER CAP** (C)
- OIL FILTER** (C)  
See NOTE 6
- CRANKCASE DRAIN** (C)  
See NOTE 7

**SHIPS SERVICE GENERATOR  
ENGINE, DETROIT DIESEL  
MODEL 1033-7005**

4957-002

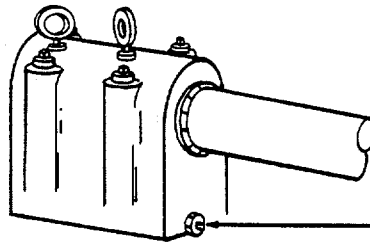
*TOTAL TASK HOURS		*TOTAL TASK HOURS	
INTERVAL	TASK-HOURS	INTERVAL	TASK-HOURS
D	0.1	Q	0.1
M	1.2	S	0.1

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above +32-F Above 0°C	+40°Fto-10iF +5°Cto-23°C	0°F to -65°F -18°Cto-54°C	
OE/HDO Lubricating (MIL-L-2104) engine	15qts  (14.19-liters)	.OE/HDO 30	OD/HDO 10	OEA	D-Daily
OE/HDO Lubricating oil, ice (MIL-L-10295)artic					M-Monthly
GAA Grease, automotive (MIL-G-10924F) and artillery	As Required	All Temperatures			Q-Quarterly S-Semiannually

3. OIL CAN POINTS. Lubricate control linkages, clevises, pins and all exposed adjusting threads with OE/HDO.
4. OIL LEVEL GAGE. Check oil level daily before starting engine. Add oil as required to bring it to full mark.
5. AIR CLEANER. Disassemble and remove dirty oil and sludge from reservoir. Wash all parts in clean fuel oil. Refill reservoir with OE/H DO.
6. OIL FILTER. Drain oil from crankcase (See note 7). Remove filter element, clean housing and install new element. Fill crankcase with 15 qts (14.19 liters) of oil (OE/HDO). Operate engine 5 minutes, check for leaks, check crankcase oil level and bring to full mark.
7. CRANKCASE DRAIN. Do not drain oil into bilges. Use oil separation system to collect drained oil.

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT

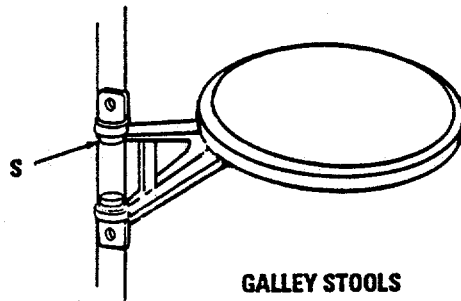


OE/  
HDO

**SHAFT STEADY BEARING**  
Check Level (C)  
See NOTE 8

**SHAFT PILLOW BLOCK IN AFT ENGINE ROOM**

**STOOLS (6)** OE/  
HDO  
Lubricate bushings,  
upper and lower  
(2) places) (C)



**GALLEY STOOLS**

4957-003

*TOTAL TASK HOURS		*TOTAL TASK HOURS	
INTERVAL	TASK-HOURS	INTERVAL	TASK-HOURS
M	0.1	S	0.1

- KEY -

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above +32-F Above 0'C	+40°Fto-100F +5°Cto-23'C	0°F to -65°F -18°Cto-54°C	
OE/HDO Lubricating oil, (MIL-L-2104) engine	As Required	All Temperatures			M - Monthly
OEA Lubricating oil, ice, (MIL-L-1 0295) artic			OEA	S - Semiannually	

**NOTES**

8. SHAFT STEADY BEARING. Remove plug from fitting and check oil level with finger. Oil level is correct if finger touches oil. Add oil as required.

**LUBRICANT • INTERVAL**

**INTERVAL • LUBRICANT**

**MAIN RUDDERS (2)** GAA M  
Lubricate upper and lower bushings at grease fittings (4) places) (C)

M GAA **FLANKING RUDDERS (4)**  
Lubricate upper and lower bushings (8 places) (C)

**RUDDER REPEATBACK TRANSMITTER** OE/HDO GAA W S  
Lubricate ball joints, weekly (2) places). Lubricate grease fitting every six months (C)

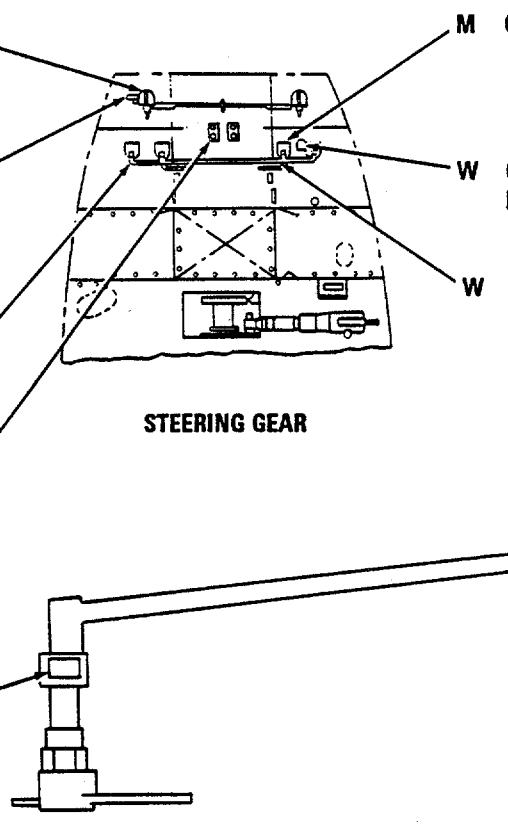
W OE/HDO **RUDDER LIMIT SWITCH**  
Lubricate ball joints (2 places) (C)

**STEERING LINKAGE** OE/HDO M  
Lubricate ball joints (12 places) (C)

W GAA **HYDRAULIC CYLINDER (4)**  
Lubricate grease fitting on each end of the hydraulic cylinders (8 places) (C)

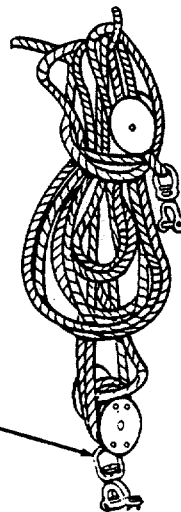
**HYDRAULIC PUMP UNIT (2)** FRH. M  
See NOTE (9) (C)

**EMERGENCY STEERING GUIDE BEARINGS** OE/HDO U  
Lubricate guide bearings (2 places) (C)



**DECK SOCKET AND EMERGENCY TILLER GUIDE BEARINGS**

**EMERGENCY STEERING BLOCKS** OE/HDO U  
Lubricate guide blocks (2 places) (C)



**EMERGENCY STEERING BLOCK AND TACKLE STOWED**



*TOTAL TASK HOURS		*TOTAL TASK HOURS	
INTERVAL	TASK-HOURS	INTERVAL	TASK-HOURS
M	0.8	W	0.2
S	2.1	U	0.2

-KEY-

**EXPECTED TEMPERATURES**

LUBRICANTS	CAPACITY	Above +32°F Above 0°C	+40°Fto-10-F + 5°C to -23°C	0°Fto-65°F -18°C to -54°C	INTERVALS
OE/HDO Lubricating oil, (MIL-L-2104)engine	As Required	OE/HDO	OE/HDO		U - Before Using
GAAgrease, automotive (MIL-G-1 0924F) and artillery	As Required	All Temperatures			W - Weekly
FRH Hydraulic Fluid, petroleum (MIL-H-46170B) (H-544) inhibited	30 gal (113.55-liters)				M - Monthly
OEALubricating oil, ice, (MIL-L-1 0295) artic	As Required			OEA	S - Semiannually

**NOTES**

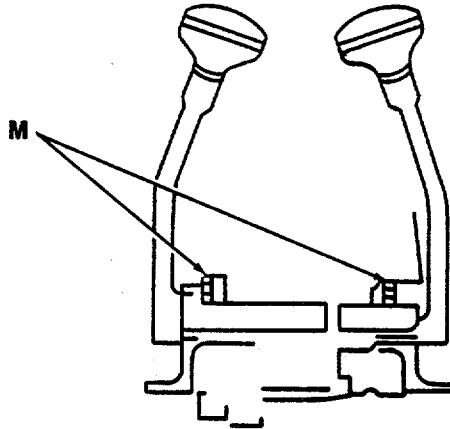
9. HYDRAULIC PUMP UNIT. Change the hydraulic fluid after the first month of operation and once a year for hard continuous service or every two years for light service. Change hydraulic fluid as follows:

- Step a. Operate the hydraulic system until the oil is warm. Stop the pump and drain all oil from tank and remainder of system.
- Step b. Remove tank access plate and clean sump. Remove strainer element and clean with diesel oil. Reinstall strainer element and access plate.
- Step c. Refill tank with clean FRH hydraulic oil, 30 gal (113.55 liters). Operate the system and maintain the tank oil level. Continue to operate system to purge air from the lines for smooth and quiet operation. Add hydraulic oil as required to maintain the proper level as system fills.

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT

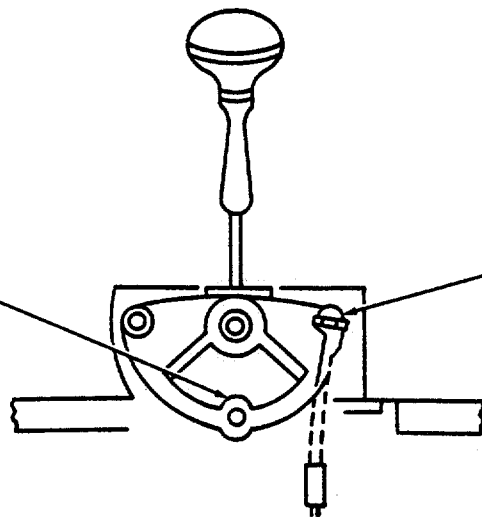
**LEVER  
HANDLE BEARINGS**  
Remove cover and  
add 2 to 4 drops of  
oil, OE/HDO 10,  
to cover screw holes  
in housing (C)



**PILOT HOUSE CONTROL LEVERS, SECTIONAL VIEW**

**CLUTCH QUADRANT CAM**  
Apply grease to cam  
(2 places) (C)

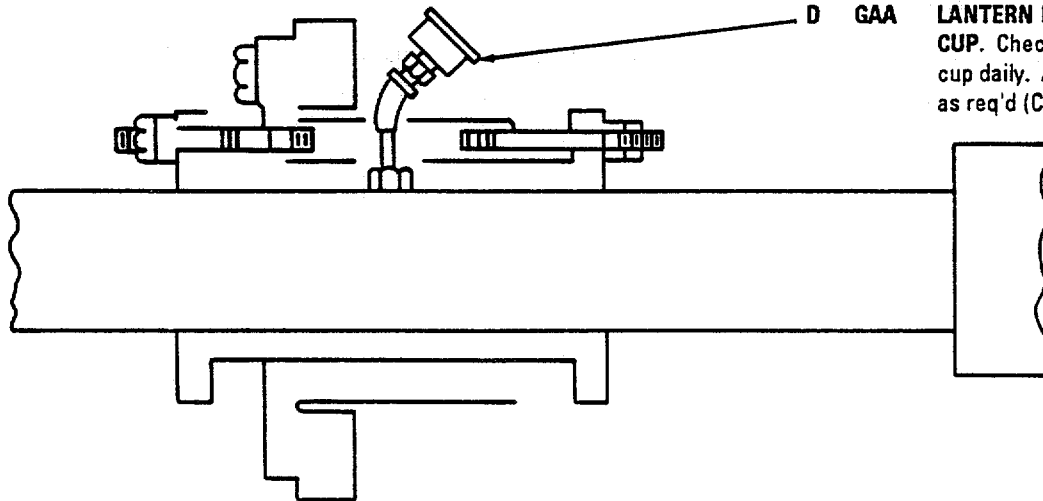
GAA M



M OE/  
HDO

**CONTROL CABLE  
SWIVEL JOINTS.** Add 2  
to 4 drops of oil,  
OE/HDO 10 to swivel  
joints (4 places) (C)

**CLUTCH CONTROL LEVER AND QUADRANT SECTIONAL VIEW**



D GAA

**LANTERN RING GREASE  
CUP.** Check grease  
cup daily. Add grease  
as req'd (C)

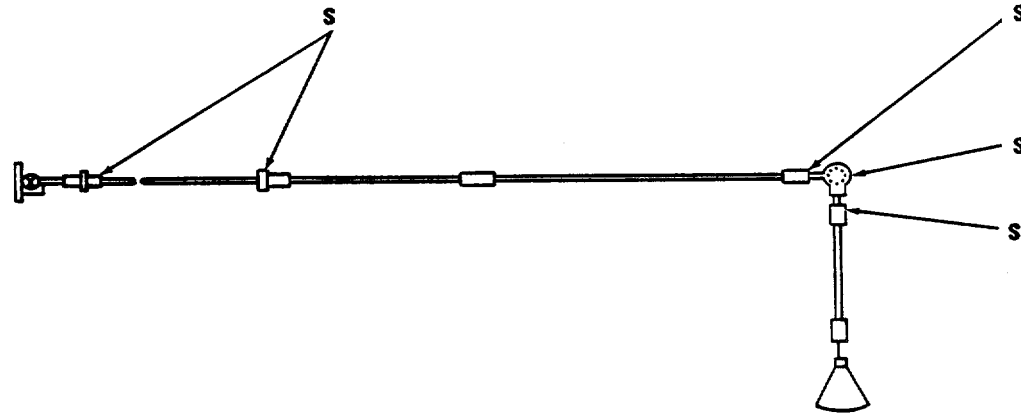
**BULKHEAD STUFFING BOX AND ENGINE COUPLING**

**LUBRICANT • INTERVAL**

**INTERVAL • LUBRICANT**

**STUFFING BOX**  
Lubricate Stuffing  
boxes (5 places) (C)

**GAA**



**GAA HINGE JOINT**  
Lubricate hinge  
joints (40 places)  
(C)

**GAA LUBE FITTING**  
(1 place) (C)

**GAA HINGE JOINT**  
Lubricate hinge  
joints (40 places)  
(C)

*TOTAL TASK HOURS		*TOTAL TASK HOURS	
INTERVAL	TASK-HOURS	INTERVAL	TASK-HOURS
D	0.1	S	1.5
M	0.5		

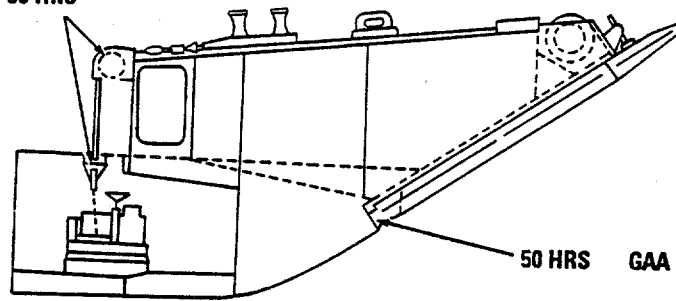
-KEY -

LUBRICANTS	CAPACITY	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 -54°C	
OE/HDO Lubricating oil, ice, (MIL-L-2104) tactical service	As Required	OE/HDO	OE/HDO		D - Daily
GAAGrease, automotive (MIL-G-1 0924F) and artillery	As Required	All Temperatures			M - Monthly
OEALubricating oil, ice, (MIL-L-1 0295) artic				OEA	S - Semiannually

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT

**BOW RAMP CABLE SHEAVES.** Lubricate grease fittings (5 places) (C)



50 HRS GAA BOW RAMP. See NOTE 11

BOW RAMP AND WINCH

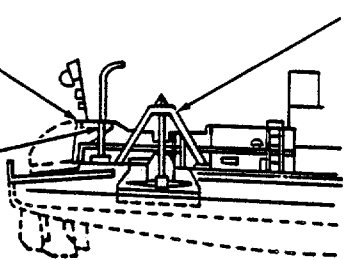
**STERN GATE** Lubricate hinges (4 places) (C)

GAA 50 HRS

U GAA ANCHOR HANDLING (C) See NOTE 12

**STERN GATE DAVITS** Lubricate upper and lower supports (4 places) (C)

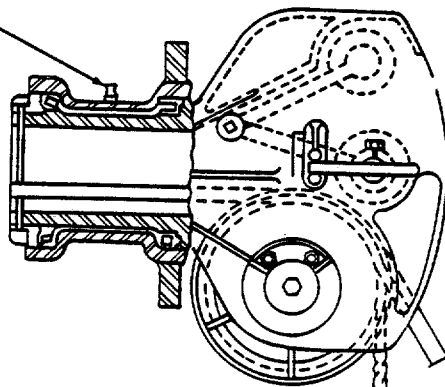
GAA 50 HRS



STERN GATE AND HINGED ANCHOR "A" FRAME

**FAIRLEADER** Lubricate grease fittings (3 places) (C)

GAA 50 HRS



SMITH BERGER FAIRLEADER MODEL 714

4957-007

*TOTAL TASK HOURS		*TOTAL TASK HOURS	
INTERVAL	TASK-HOURS	INTERVAL	TASK-HOURS
D	0.3	U	0.3
M	1.0	S	0.1

-KEY-

LUBRICANTS	CAPACITY	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 -54°C	
OE/HDO Lubricating oil, (MIL-L-2104) engine	As Required	All Temperatures			U - Before Using
G090 Lubricating oil, gear, (MIL-L-2105) multipurpose	1 gal (3.78 liters)				D - Daily
GAA Grease, automotive (MIL-G-1 0924F) and artillery	As Required				W - Weekly
OEALubricating oil, ice, (MIL-L-10295) artic	As Required		OEA	M - Monthly	
				S - Semiannually	
				A - Annually	

NOTES

10. BOW RAMP WINCH. Lubricate pawl, when used, with OE/HDO. Check reducer oil level monthly. Add G090 as required. Replace reducer oil with 1 gal (3.78 liters) every six months. Lubricate coupling with OE/HDO annually. Lubricate brake nut with OE/HDO annually.

11. BOW RAMP. Lubricate ramp hinge (10 places) with GAA. Lubricate cable and sheaves with GAA. Lubricate wildcat (2 places) with GAA. Lubricate dog assembly (2 places) with GAA.

12. ANCHOR HANDLING. Lubricate wire rope cutter, when used with GAA. Lubricate slack puller daily with GAA. Lubricate "A" frame leg hinge pin weekly (2 places) with GAA. Lubricate "A" frame fairleader weekly (2 places) with GAA. Lubricate "A" Frame Guide Sheave weekly with GAA.

**LUBRICANT • INTERVAL**

**RADIATOR**  
(C) See NOTE 13

**VENTED  
FILLER CAP**  
(C) See NOTE 13

**BLEED VALVE**  
(C) See NOTE 13

**INTERVAL • LUBRICANT**

**VENT VALVE (C)**  
See NOTE 13

**OIL LEVEL GAGE (C)**

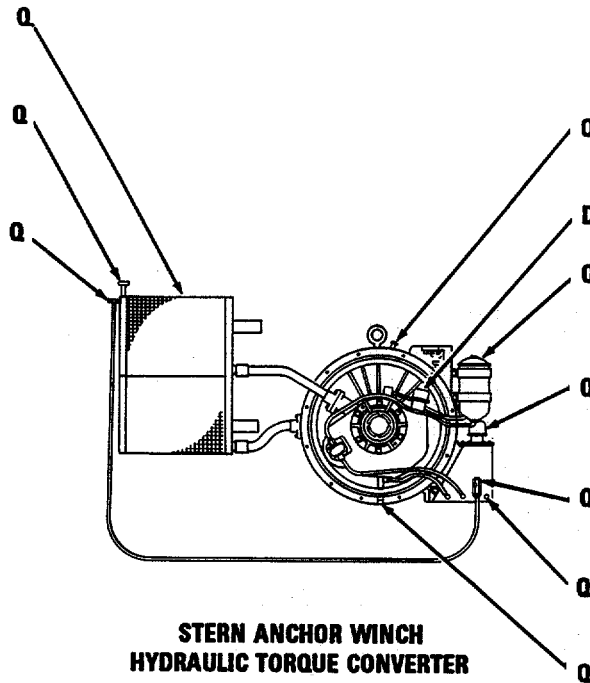
**FILTER** Replace  
filter element when  
oil is changed (C)

**OE/  
HDO** **RESERVE TANK  
FILLER CAP (C)**  
See NOTE 13

**ORIFICE ASSEMBLY (C)**  
See NOTE 13

**RESERVE TANK DRAIN (C)**  
See NOTE 13

**CONVERTER DRAIN (C)**  
See NOTE 13

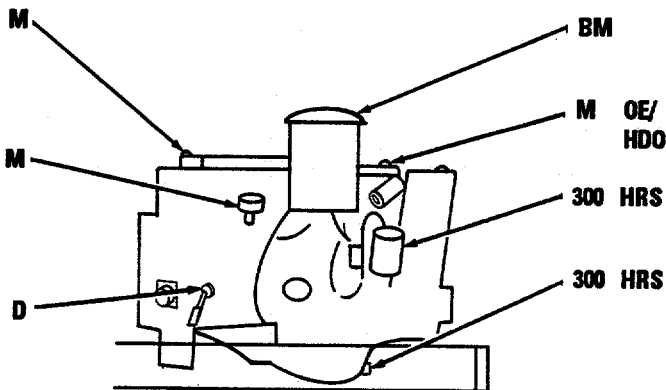


**STERN ANCHOR WINCH  
HYDRAULIC TORQUE CONVERTER**

**THROTTLE CONTROL** OE/  
HDO  
Lubricate throttle  
control linkage (C)  
See NOTE 18

**BREATHER CAP** OE/  
HDO  
Clean breather  
with  
OE/HDO (C)

**OIL LEVEL GAGE**  
(C) See NOTE 15



**AIR CLEANER (C)**  
See NOTE 14

**OIL FILTER**  
Cap (C)

**OIL FILTER (C)**  
See NOTE 16

**CRANKCASE DRAIN (C)**  
See NOTE 17

**STERN ANCHOR WINCH  
ENGINE, DETROIT DIESEL  
MODEL 1043-7000**

*TOTAL TASK HOURS		*TOTAL TASK HOURS	
INTERVAL	TASK-HOURS	INTERVAL	TASK-HOURS
BM	0.2	Q	1.0
D	0.1	M	0.5

-KEY-

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above +32-F Above 0°C	+40°Fto-10°F +5°Cto-23°C	0°Fto-65°F -18Ccto-54°C	
OE/HDO Lubricating oil, (MIL-L-21 04) engine	As Required	OE/HDO30	OE/HDO10		BM - Bi-monthly D - Daily
OEA Lubricating oil, ice, (MIL-L-10295) artic				OEA	M - Monthly
GAAGrease, automotive (MIL-G-10924F) and artillery		All Temperatures			Q - Quarterly

**NOTES**

13. CHANGING TORQUE CONVERTER FLUID. Change the torque converter fluid every three months. Make certain the winch engine is not operating. Do not drain oil into bilges; use the oil separation and recovery system to collect the drained oil. To drain converter remove plug in bottom of turbine housing. Remove plug in reserve tank. Drain radiator. Clean screen element in bottom of reserve tank and remove orifice assembly. Clean filter screen and hole in orifice. Install orifice assembly and drain plug. Open vent valve on top of the turbine housing and bleed valve on top of the radiator. Remove radiator filler cap. Add approximately 7 gallons (26.5 liters) of oil (OE/HDO) through the radiator filler opening until fluid flows from the vent on top of the turbine housing. Close vent valve and continue filling, until the oil level reaches the filler opening. Then close bleed valve. Tightly install filler cap to prevent leakage when operating. Remove filler cap from reserve tank. Fill tank with approximately 3 qts (2.84 liters) of oil (OE/HDO), to one inch below the full mark on dip stick. Install filler cap, start engine and operate at half throttle. Check all fittings for leaks. Check pressure gage for operating pressure. Normal operating pressure is 45 to 65 PSI, and fluid temperature is under 200OF when converter is properly filled and vented. The pressure gage responds instantly to full pressure upon starting engine and zero pressure upon stopping. Sluggishness indicates air trapped within unit requiring further venting at the high point bleed valve. At part-throttle operation, check reserve tank oil level frequently to ensure adequate fluid level. Add fluid as required.

14. DRY TYPE AIR CLEANER. Clean air cleaner element with compressed air every two months, and replace annually.

**CAUTION**

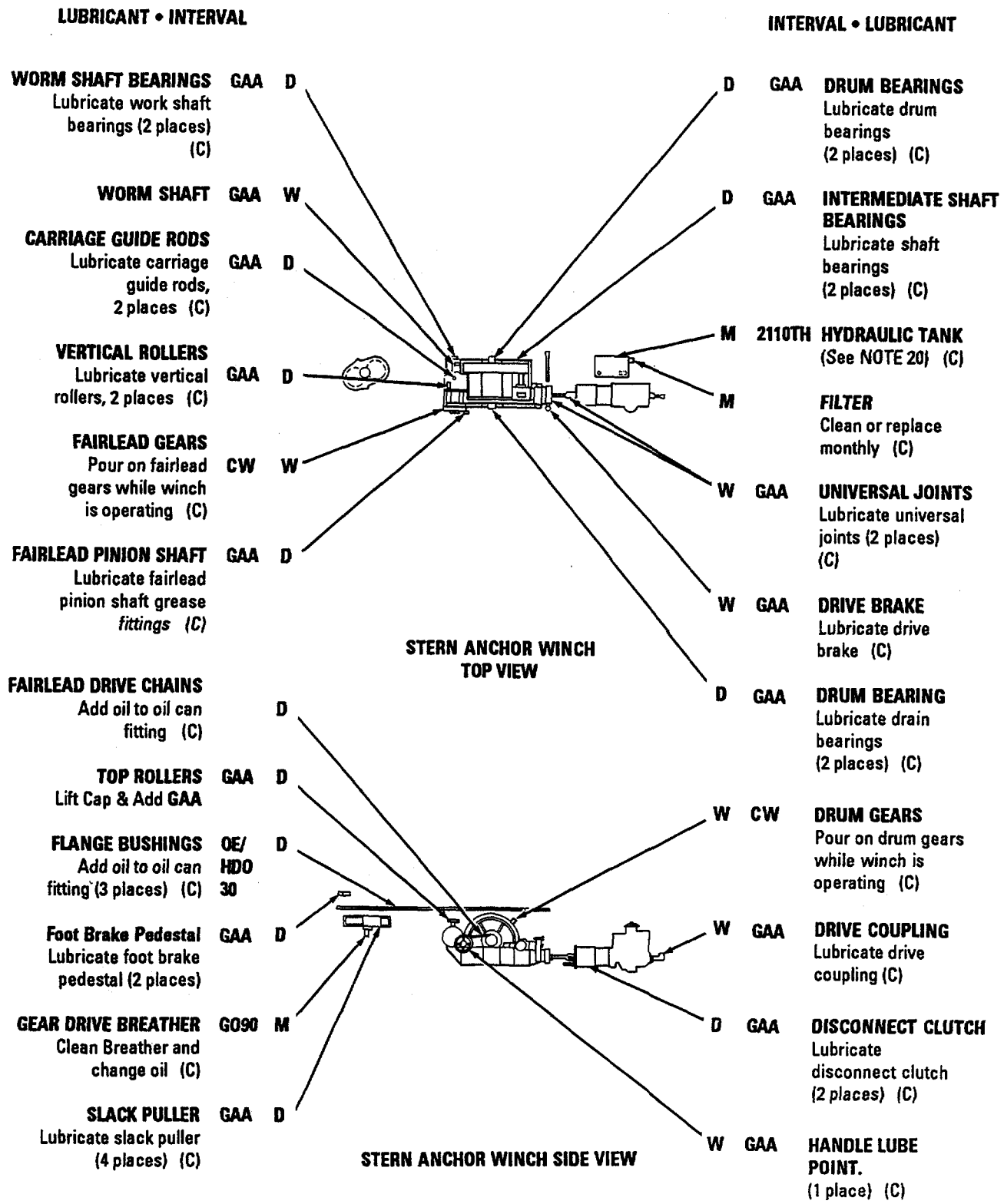
Air pressure at nozzle of air hose must not exceed 100 PSI.

Inspect cleaned element. If thin spots, pin holes or rupture is found, replace element.

**NOTES (Cont)**

15. OIL LEVEL GAGE. Check oil level daily before starting engine. Add oil as required to bring it to full level mark.
16. OIL FILTER. Drain oil from crankcase (see note 17). Remove filter element, clean housing and install element. Fill crankcase with 15 qts (14.19 liters) of oil (OE/HDO). Operate engine for 5 minutes, check for leaks, check crankcase oil level and bring to full mark.
17. CRANKCASE DRAIN. Do not drain oil into bilges; use oil separation system to collect drained oil.
18. OIL CAN POINTS. Lubricate control linkages, clevises, pins and all exposed adjusting threads with OE/HDO oil.





*TOTAL TASK HOURS		*TOTAL TASK HOURS	
INTERVAL	TASK-HOURS	INTERVAL	TASK-HOURS
D	1.0	M	1.1
W	0.3	A	2.0

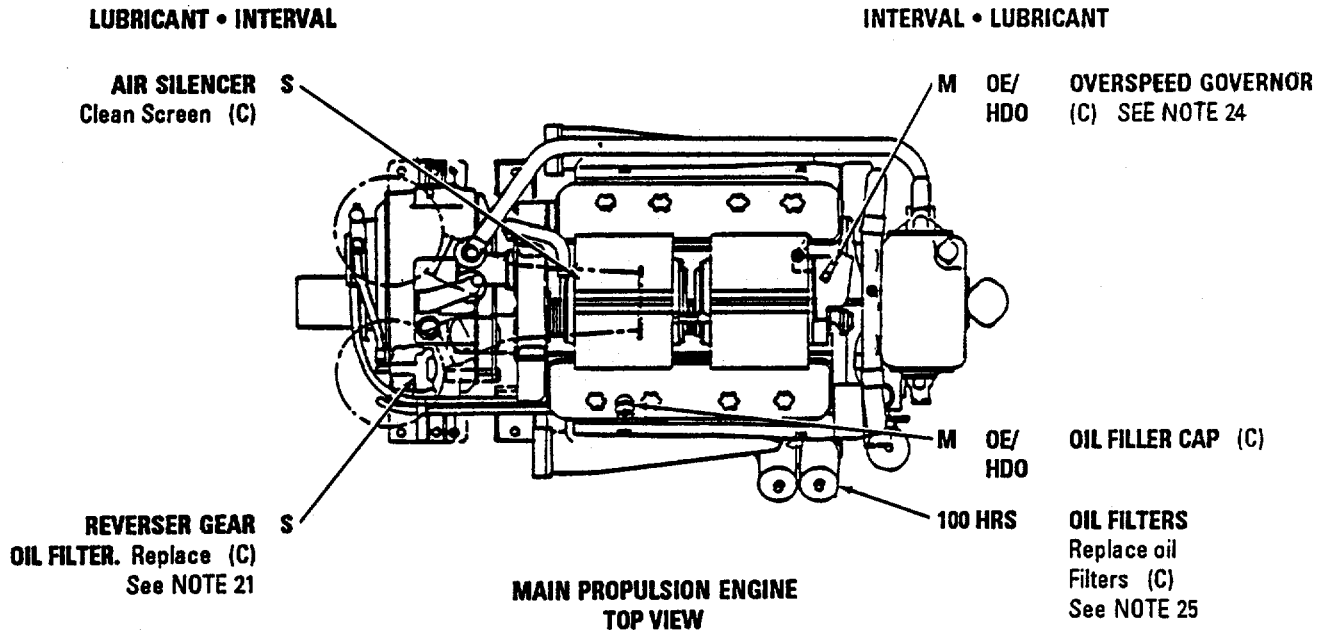
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LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above +32°F Above 0°C	+40°Fto-10°F + 5°C to -23°C	0°Fto-65°F -18°C to -54°C	
OE/HDO Lubricating oil, (MIL-L-2104) engine	As Required	All Temperatures			D-Dally  W - Weekly  M - Monthly  A - Annually
GAA Grease, automotive (MIL-G-10924F) and artillery	As Required				
GAA Grease (MIL-G-81322)	As Required				
G090 Lubricating oil, gear (MIL-L-2105) multipurpose	10 gal (37.85 liters)				
CW Lubricating oil, (W-L-751) exposed gear	As Required				
FRH Hydraulic fluid, petroleum (MIL-H-46170B) (H-544) inhibited	55 gal (208.18 liters)				
OEA Lubricating oil, ice (MIL-L-10295) artic	As Required			OEA	

NOTES

19. GEAR DRIVE ASSEMBLY. Clean breather and change G090 oil, 1 pt (.47 liters) monthly. Change GO oil, 10 gal (37.85 liters) in gear drive assembly every six months. Do not drain oil into bilges; use oil separation and recover system to collect the drained oil.

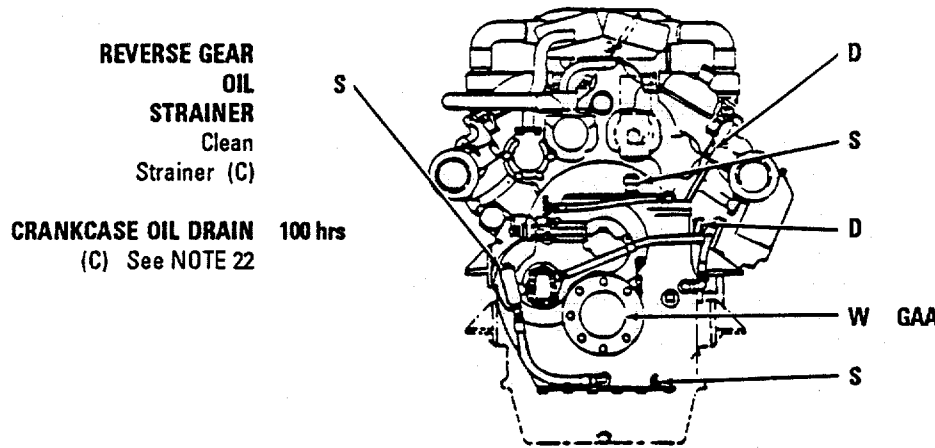
20. HYDRAULIC TANK. Clean strainer monthly. Clean breather monthly. Change FRH oil, 55 gal (208.18 liters) annually. Do not drain oil into bilges; use oil separation and recovery system to collect the drained oil.



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LUBRICANT • INTERVAL

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**ENGINE OIL LEVEL GAGE (C)**  
(C). See NOTE 2

**REVERSE GEAR OIL FILLER CAP**  
(C) Breather Type

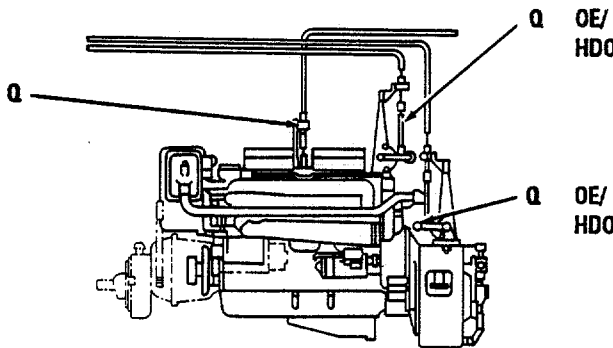
**REVERSE GEAR OIL LEVEL GAGE (C)**

**OUTPUT BEARING**

**REVERSE GEAR OIL DRAIN (C)**. See NOTE 26

**REVERSE GEAR, END VIEW**

**ENGINE EMERGENCY SHUT DOWN LINKAGE** OE/HDO  
Lubricate Control Linkage with 2 to 4 drops of oil (12 places) (C) See NOTE 23



**ENGINE CONTROL DISCONNECT.** Lubricate control disconnects (2) with 2 to 4 drops of oil (C). See NOTE 23

**ENGINE CONTROL UNIT BEARING**  
Lubricate control unit bearings (4) with 2 to 4 drops of oil (C) See NOTE 23

**ENGINE CONTROLS  
MAIN PROPULSION ENGINE  
DETROIT DIESEL MODEL 7122-700**

4957-011

*TOTAL TASK HOURS		*TOTAL TASK HOURS	
INTERVAL	TASK-HOURS	INTERVAL	TASK-HOURS
D	0.10	Q	0.5
M	1.00	S	0.80

- KEY -

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above + 32 F Above °OC	+ 40°F to -10 F + 5°C to -23°C	0 F to -65°F -18°C to -54°C	
OE/HDO Lubricating oil, (MIL-L-2104) engine  OEA Lubricating oil, ice, (MIL-L-10295) artic	58 qts (54.9 liters)	OE/HDO 30	OE/HDO 10	OEA	D- Daily M - Monthly Q - Quarterly
GAA Automotive and (MIL-G-10924F) artillery	As Required	All Temperatures			S - Semiannually

**NOTES**

21. REVERSE GEAR OIL FILTER. Drain oil from reverse gear reservoir (See Note 26). Remove filter element and install new element. Fill reverse gear reservoir with 24 qts (22.7 liters) of OE/HDO. Operate engine 5 minutes. Check for leaks, check reservoir oil level and bring to full mark.

22. CRANKCASE DRAIN. Do not drain oil into bilges; use oil separation system to collect drained oil.

23. OIL CAN POINTS. Lubricate control linkages, devises, pins and all exposed adjusting threads with OE/HDO.

24. OVERSPEED GOVERNOR. Do not lubricate the overspeed governor while the engine is operating. Avoid excessive lubrication. Add 5 or 6 drops of OE/HDO to hinge-type cap oiler or oil cups.

25. ENGINE OIL FILTERS. Drain oil from crankcase (See note 20). Remove filter elements, clean housings and install new elements. Fill crankcase with 34 qts (32.2 liters) of OE/HDO. Operate engine 5 minutes. Check for leaks, check crankcase oil level and bring to full mark.

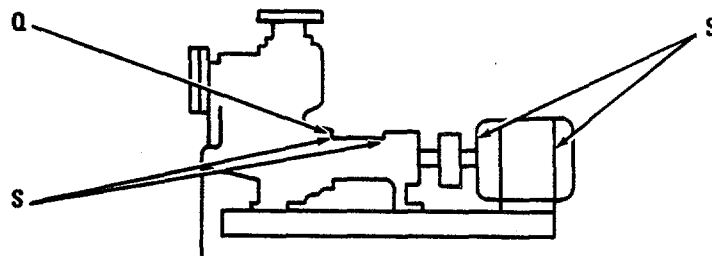
26. REVERSE GEAR OIL DRAIN. Do not drain oil into bilges. Use oil separation system to collect drained oil.

LUBRICANT · INTERVAL

INTERVAL \* LUBRICANT

Remove fill plug and check oil level add **OE/HDO** oil as required (C)  
  
Lubricate grease fittings with **GAA** (2 places) (C)

**OE/HDO** Q  
  
**GAA** S



Lubricate grease fittings with **GAA** (2 places) (C)

**SEWAGE SYSTEM  
DISCHARGE PUMP AND MOTOR**

Check sight indicator and add **OE/HDO** oil as required. (C)

**OE/HDO** W



Lubricate grease fittings with **GAA** (2 places) (C)

**SEWAGE SYSTEM  
VACUUM PUMP AND MOTOR**

*TOTAL TASK HOURS		*TOTAL TASK HOURS	
INTERVAL	TASK-HOURS	INTERVAL	TASK-HOURS
S	0.3	W	0.1
Q	0.1		

-KEY-

LUBRICANTS	CAPACITY	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 -54°C	
OE/HDO 20 (MIL-L-2104) Lubricating oil, engine	As Required	All Temperatures			W- Weekly
GAA Grease, automotive (MIL-G-10924F) and artillery					Q - Quarterly
					S -Semiannually

**LUBRICANT • INTERVAL**

Wipe with  
oil  
after use (C)

OE/  
HDO

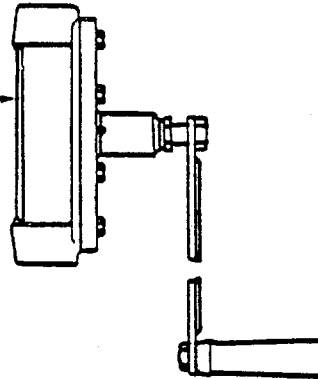


**WIRE ROPE CUTTER**

Turn pump over  
weekly. Add a few  
drops of OE/HDO to  
pump monthly (C)

OE/  
HDO

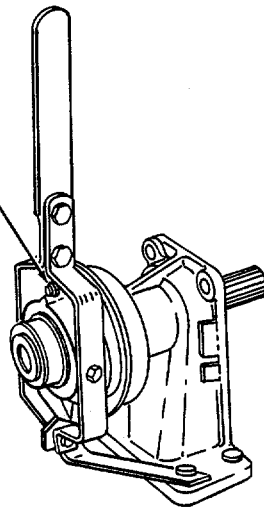
W



**LUBE OIL TRANSFER HAND PUMP**

Lubricate clutch-  
pack bearing  
fitting (C)

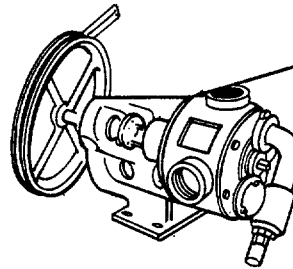
GAA S



**BILGE PUMP CLUTCHPACK**

**INTERVAL • LUBRICANT**

M GAA Keep grease  
cups filled  
(C)



**STANDBY LUBE OIL PUMP**

4957-013

*TOTAL TASK HOURS		*TOTAL TASK HOURS	
INTERVAL	TASK-HOURS	INTERVAL	TASK-HOURS
W	0.1	S	0.1
M	0.1		

-KEY -

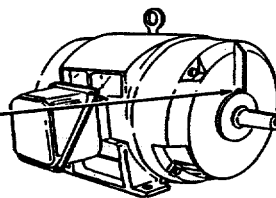
LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above +32°F Above 00C	+40°Fto-10°F + 5°C to -23°C	0°F to-65°F -18°C to -54°C	
OE/HDO Lubricating oil, (MIL-L-2104) engine	As Required	All Temperatures			W - Weekly
GAM Grease, automotive (MIL-G-10924F) and artillery					S - Semiannually
OEA Lubricating oil, ice, (MIL-L-10295) artic		OEA	M - Monthly		

**LUBRICANT • INTERVAL**

**BALL BEARINGS**  
(See NOTE 27) (C)

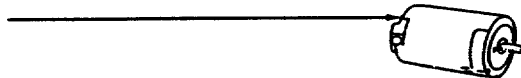
**GAA**

**S**



**STANDARD INTEGRAL HORSEPOWER INDUCTION MOTORS**  
**FIRE PUMP MOTOR, 30 HP**  
**SALT WATER CIRC. PUMP MOTOR, 5 HP**  
**RED GEAR LUBE OIL PUMP MOTOR, 1-1/2 HP**  
**AIR COMPRESSOR, 10 HP**

**BALL BEARINGS**  
(See NOTE 28)



**FRACTIONAL HORSEPOWER MOTORS**  
**FRESH WATER PUMP MOTOR, 3/4 HP**  
**FLUSH WATER PUMP MOTOR, 1-1/2 HP**  
**SEA WATER COOLING PUMP MOTOR, 3/4 HP**  
**VESTIBULE FAN MOTOR, 1/5 HP**  
**FAN MOTOR, 1-1/4 HP**  
**FAN MOTOR, 3/4 HP**  
**FAN MOTOR, 1/3 HP**  
**NAVIGATION HORN AIR COMPRESSOR MOTOR, 1/2 HP**

*TOTAL TASK HOURS		*TOTAL TASK HOURS	
INTERVAL	TASK-HOURS	INTERVAL	TASK-HOURS
S	0.1		



-KEY-

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above +32°F Above °OC	+40°Fto-10°F + 5°C to -23°C	0°Fto-65°F -18°C to -54°C	
GAA Grease, automotive (MIL-G-10924F) and artillery	As Required	All Temperatures			S - Semiannually

**NOTES**

27 BALL BEARINGS. Use only clean grease from clean container, and use care to keep it clean. Never open a bearing housing in a dusty atmosphere. Never open a bearing housing without cleaning off all dirt from adjacent surfaces.

Always protect an exposed bearing with a protective cover.

Remove plug from filling hole.

Force GAA grease through filling hole until grease appears at drain hole or along shaft.

Replace plug after motor has run for at least 2 hours.

Wipe away excess grease.

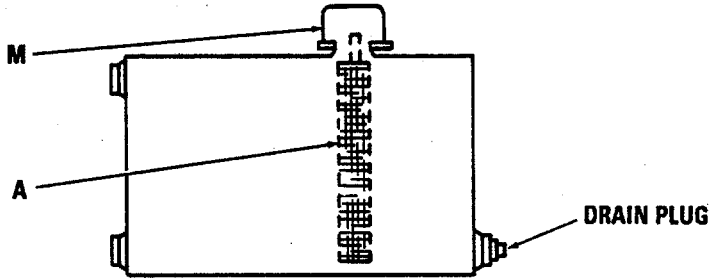
28. No lubrication is required. The initial lubrication is adequate for up to 10 years of operation under normal conditions. The initial lubricant is supplemented by a supply packed into reservoirs in the end shield at time of assembly.

**LUBRICANT • INTERVAL**

**BREATHER 2135**  
 Clean Monthly  
 and check fluid  
 level. Add fluid  
 as required (C).

**STRAINER**  
 Clean annually (C).

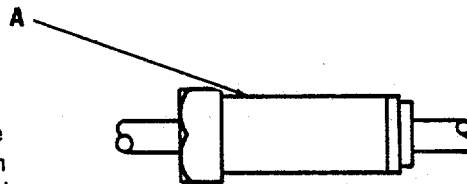
**INTERVAL • LUBRICANT**



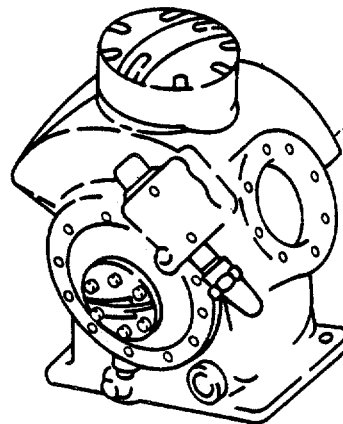
**HYDRAULIC STARTING SYSTEM RESERVOIRS**  
**AFT ENGINE ROOM**  
**FWD ENGINE ROOM**  
**ANCHOR WINCH ROOM**

**FILTER ELEMENT**  
 Replace annually (C)

**CAUTION**  
 Do not attempt to change  
 filter element until system  
 pressure has been relieved  
 to atmosphere.



**HYDRAULIC STARTING SYSTEM**  
**HIGH PRESSURE FILTER (3 PLACES)**  
**SUCTION FILTER (3 PLACES)**



**PIPE PLUG**  
 Add fluid as  
 required (C)

**AIR CONDITIONING AIR COMPRESSOR**

4957-015

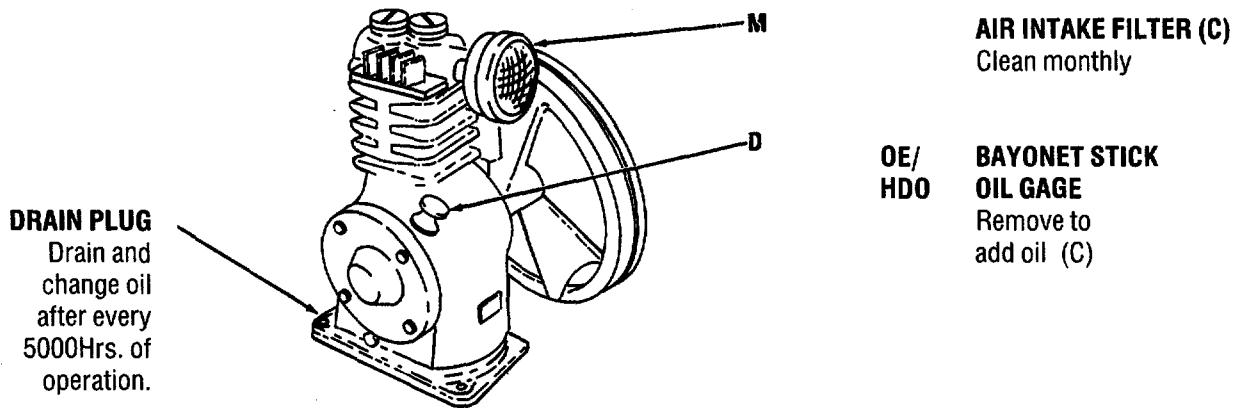
*TOTAL TASK HOURS		*TOTAL TASK HOURS	
INTERVAL	TASK-HOURS	INTERVAL	TASK-HOURS
M	0.1	A	0.1
D	0.1		

- KEY -

LUBRICANTS	CAPACITY	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 -54°C	
FRH Hydraulic fluid, (MIL-H-46170B) petroleum, inhibited (H-544) CW Lubricating oil (VV-L-825) Compressor	As Required	All Temperatures			M - Monthly A - Annually D-Daily

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT



AIR HORN AIR COMPRESSOR

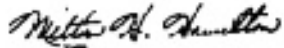
*TOTAL TASK HOURS		*TOTAL TASK HOURS	
INTERVAL	TASK-HOURS	INTERVAL	TASK-HOURS
D	0.1	M	0.2

-KEY -

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above +32°F Above 0°C	+40°Fto-10°F + 5°C to-23°C	0°Fto-65°F -18°C to-54°C	
OE/HDO 30 (MIL-L-2104) Lubricating oil, engine	As Required	All Temperatures			D- Daily

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