

**LUBRICATION ORDER****LO 9-2320-355-20**

24 OCTOBER 1986

**HIAB MODEL 8108 MEDIUM  
MATERIAL HANDLING CRANE (MHC)  
FOR  
M985E1 CARGO, 8 X 8****HEAVY EXPANDED MOBILITY TACTICAL TRUCK (HEMTT)****MODEL****NSN****CRANE, MEDIUM MATERIAL HANDLING 81083810-01-204-7842  
TRUCK, CARGO, WITH WINCH M985E1 2320-01-194-7032  
TRUCK, CARGO, WITHOUT WINCH M985E1 2320-01-194-7031**

Reference: LO 9-2320-279-12, TM 9-2320-355-10, and TM 9-2320-355-24&amp;P

**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.

Intervals shown in this lubrication order are based on calendar and hourly times or calendar times and mileage. An example of a calendar and hourly lubrication interval is: **M/60HR**, in which **M** stands for monthly and **60 HR** stands for 60 hours of vehicle operation. An

example of a mileage and calendar interval is: **1.5/Q**, in which **1.5** stands for 1,500 miles (2,400 k m), and **Q** stands for quarterly (every three months). The lubrication is to be performed at whichever interval occurs first for the vehicle.

**Determination of operating hours.** The reading on the vehicle hourmeter, which is part of the tachometer in the driver's instrument panel, is the basis of all lubrication intervals that are based on hours of operation. When hour-based intervals are shown for components that are operated for only part of the vehicle operating time, use the hourmeter reading to determine the interval, because the proportions of component vs vehicle operating time have already been figured into the intervals shown in this lubrication order.

**EXAMPLE:**

Slewing housing of HIAB 8108 crane shows lubrication interval of M/60 HR. This means that the slewing housing is to

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be lubricated every month or every 60 hours of vehicle operation, whichever comes first.

**WARNING**

Drycleaning solvent SD P-D-680 is toxic and flammable. Wear protective goggles and gloves and use only in a well ventilated area. Do not use near open flame or excessive heat. The flash point is 100-138° F (38-59°C). If you become dizzy while using cleaning solvent, get fresh air immediately and get medical aid. If contact with eyes is made, wash your eyes with water and get medical aid immediately.

**Clean fittings before lubricating.** Clean parts with drycleaning solvent SD P-D-680 or equivalent. Dry before lubricating.

Dotted arrow points indicate lubrication on both sides of the equipment.

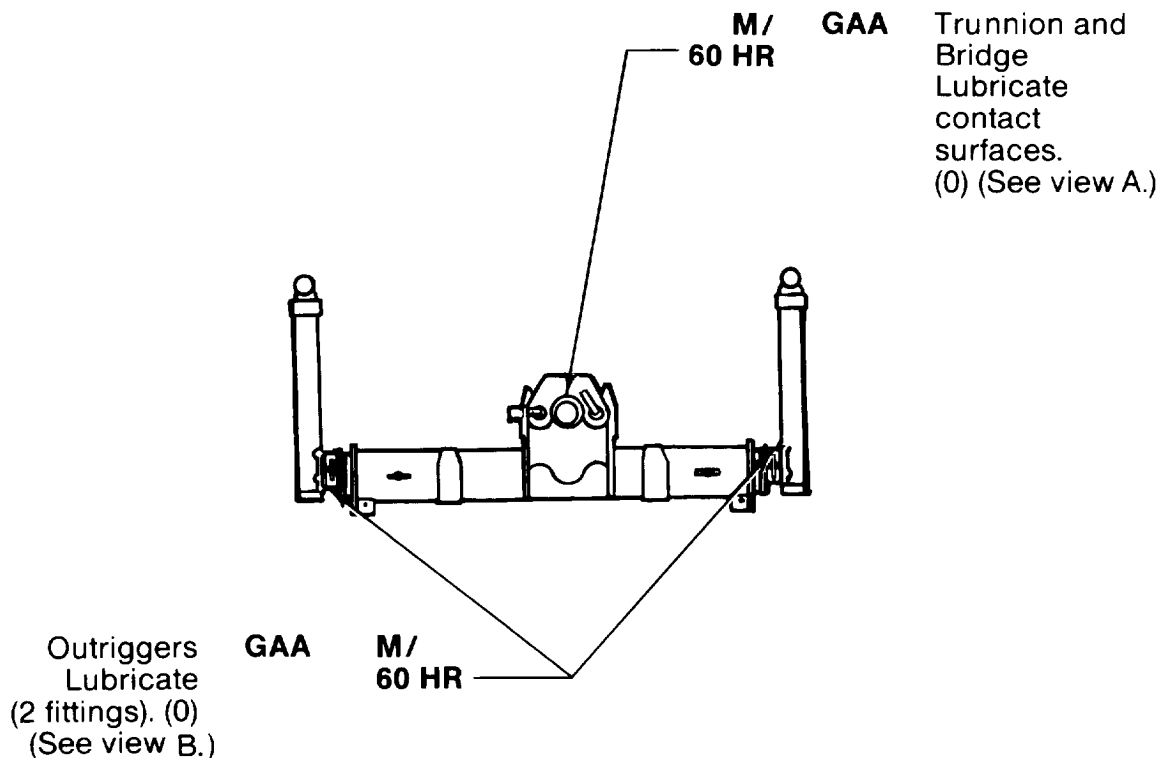
**Level of Maintenance.** The lowest level of maintenance authorized to lubricate a point is indicated by the following symbol: (O) Organizational Maintenance.

Refer to LO 9-2320-279-12 for lubrication instructions for the HEMTT vehicle and crane hydraulic system.

**Reporting errors and recommending improvements.** You can help improve this lubrication order. 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: AMSTA-MB, Warren, Michigan 48397-5000. A reply will be furnished to you.

**LUBRICANT ● INTERVAL**

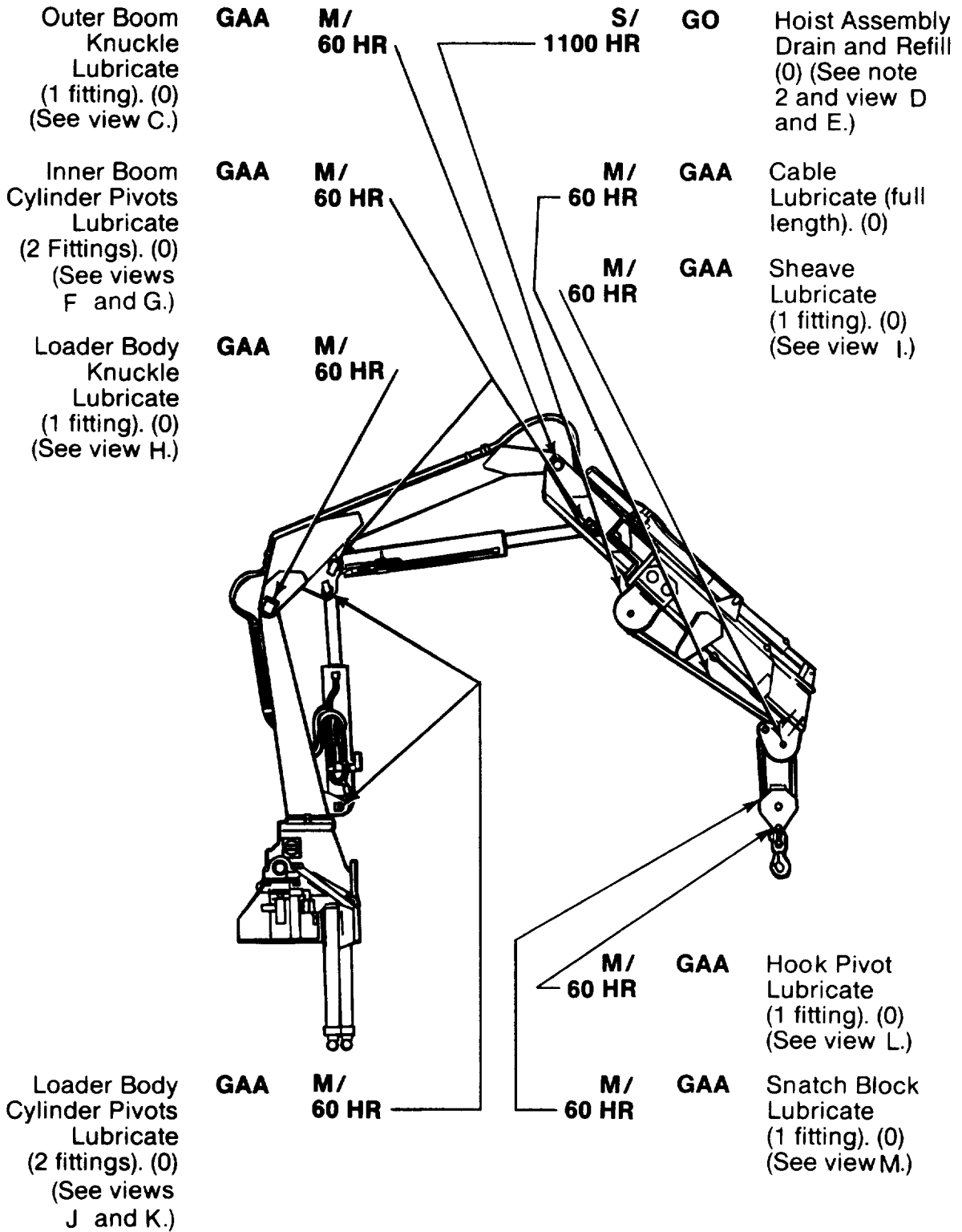
**INTERVAL ● LUBRICANT**



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**LUBRICANT ● INTERVAL**

**INTERVAL ● LUBRICANT**



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**LUBRICANT ● INTERVAL**

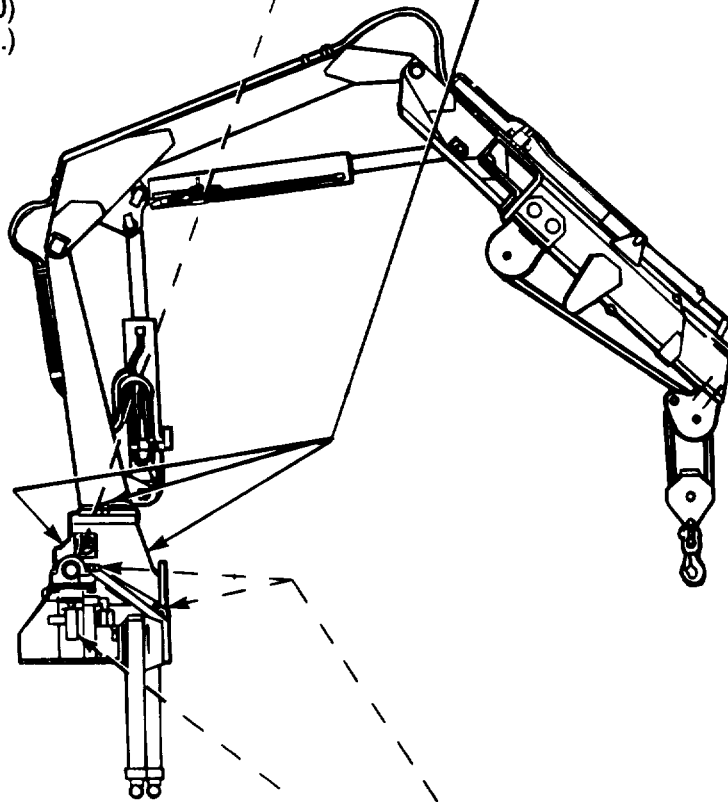
**INTERVAL ● LUBRICANT**

Pillow Block Bearings Lubricate (2 fittings). (0) (See view N.)

**GAA M/ 60 HR**

**M/ 60 HR**

**GAA** Slewing Housing Lubricate (3 fittings). (0) (See views O and P.)



Hydraulic Filters change elements (2 each). (0) (See note 3 and view Q and R.)

**GO S/ 2200 HR**

**M/ 60 HR**

**GAA** Fold Down Cylinders Lubricate (4 fittings). (0) (See view S.)

<b>*TOTAL MAN-HR</b>		<b>*TOTAL MAN-HR</b>	
<b>INTERVAL</b>	<b>MAN-HR</b>	<b>INTERVAL</b>	<b>MAN-HR</b>
60	0.5	2200	0.5
1100	2.0		

\*The time specified is the time required to perform all services at the particular hard time interval.

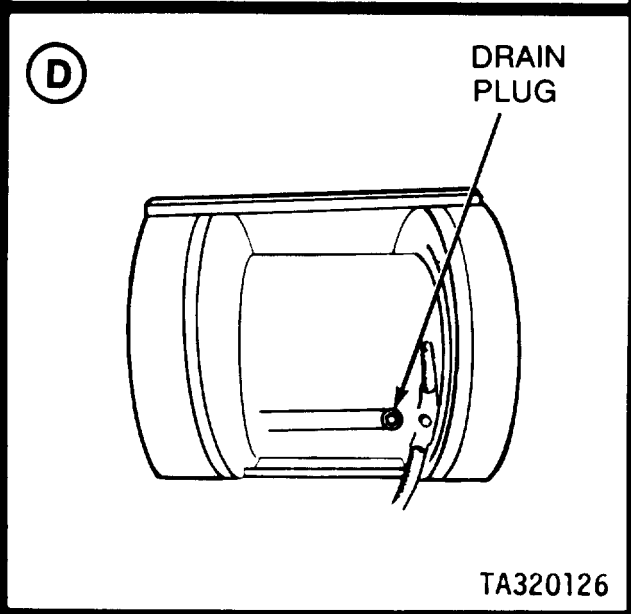
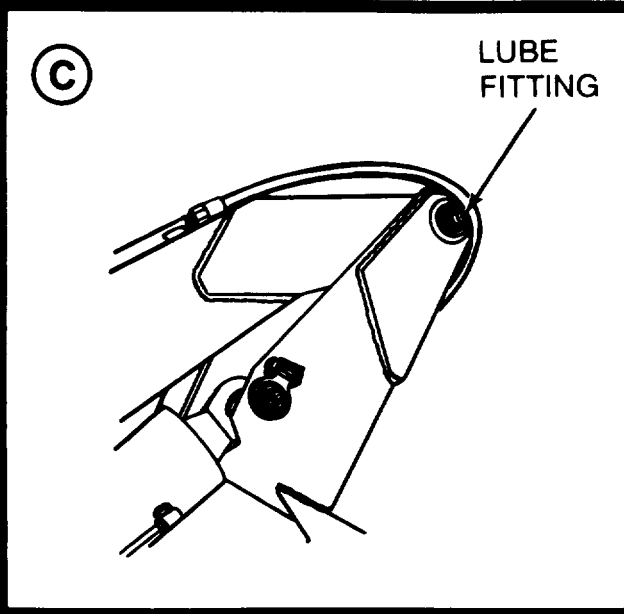
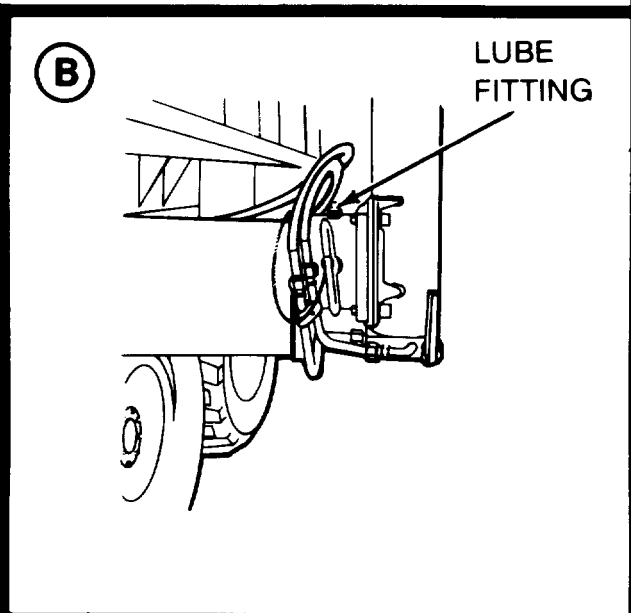
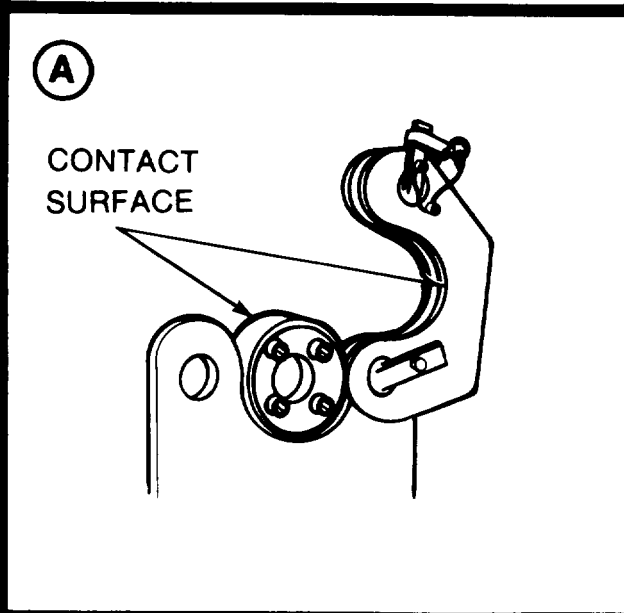
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### KEY

LUBRICANTS	CAPACITIES	EXPECTED TEMPERATURES			INTERVALS
		Above +15°F (Above -9°C)	+40°F to -15°F (+4°C to -26°C)	+40°F to -65°F (+4°C to -54°C)	
<b>GAA</b> (MIL-G-10924) Grease Automotive and Artillery  All Grease Points		ALL TEMPERATURES			Intervals given are in hours of normal operation.
<b>GO</b> MIL-L-2105 Gear Oil Hoist Assembly	1 qt (0.95L)	<b>GO 80/90</b> (0-226)	<b>GO 75</b> (0-186)		

For arctic operation refer to FM 9-207.

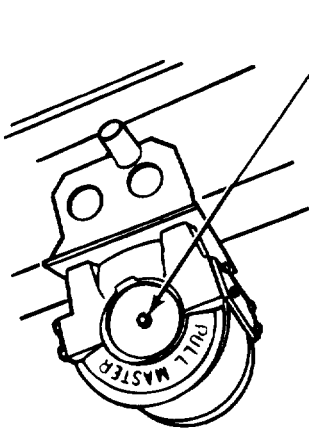
See notes 1 and 4



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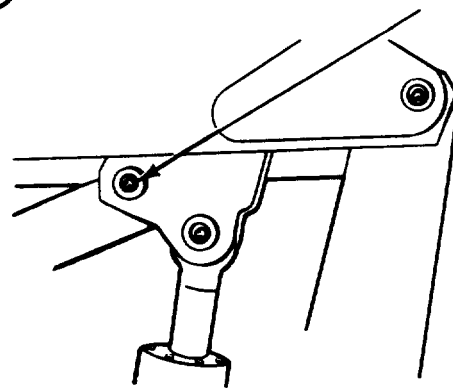
(E)

FILL  
PLUG



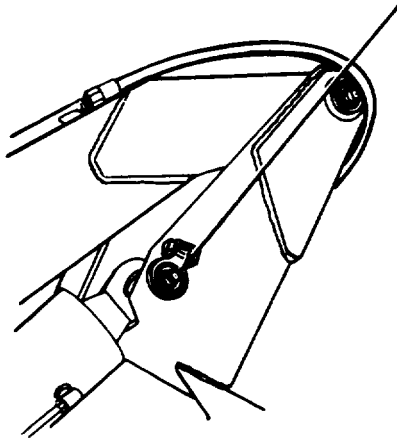
(F)

LUBE  
FITTING



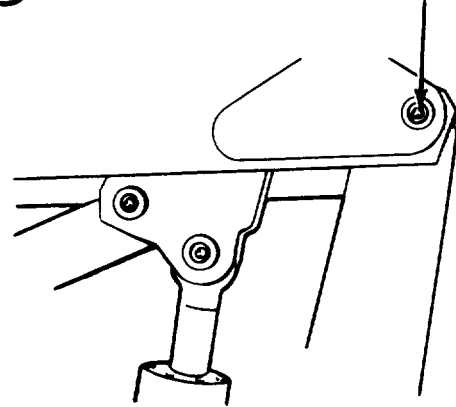
(G)

LUBE  
FITTING



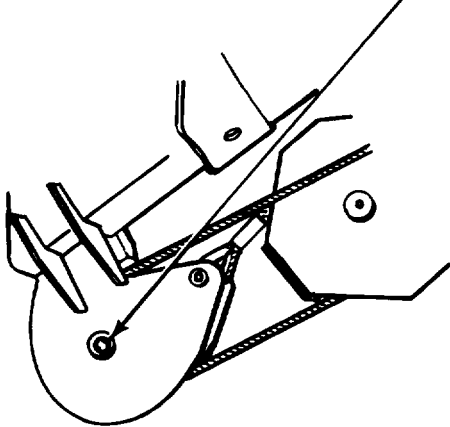
(H)

LUBE  
FITTING



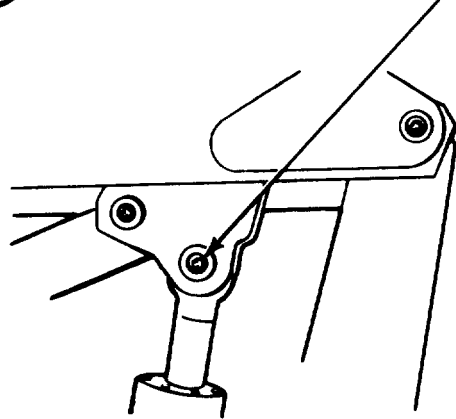
(I)

LUBE  
FITTING



(J)

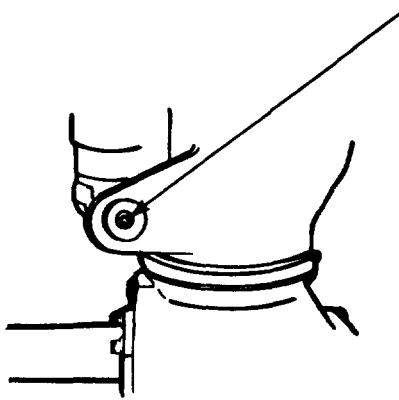
LUBE  
FITTING



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(K)

LUBE FITTING



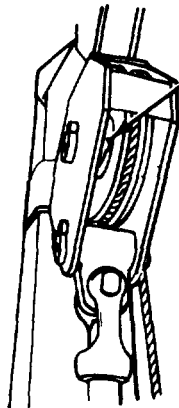
(L)

LUBE FITTING



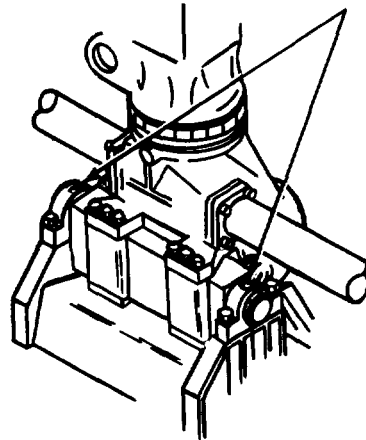
(M)

LUBE FITTING



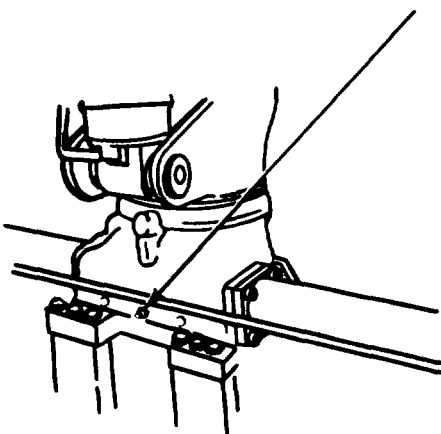
(N)

LUBE FITTING



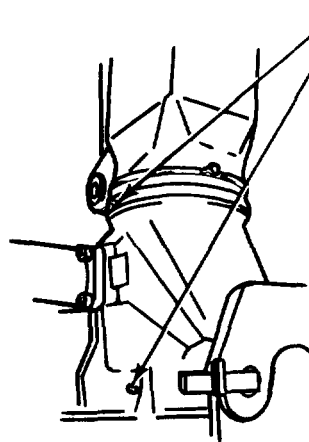
(O)

LUBE FITTING



(P)

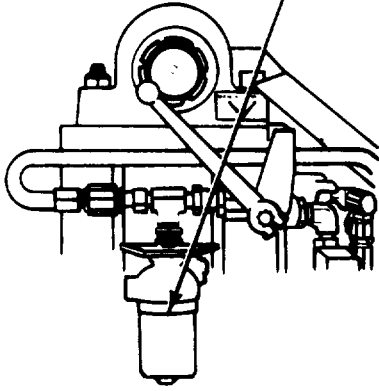
LUBE FITTING



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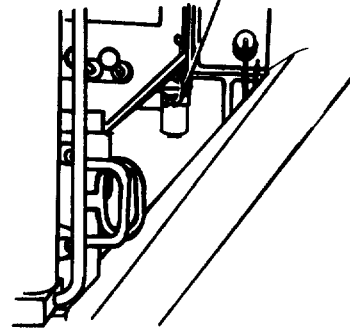
Q

PRIMARY  
FILTER



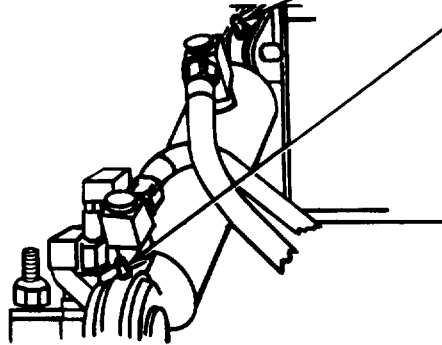
R

SECONDARY  
FILTER



S

LUBE  
FITTING



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**NOTES:**

**1. FOR OPERATION OF EQUIPMENT IN PROTRACTED COLD TEMPERATURES BELOW -10°F (-23°C).** Remove lubricants prescribed in the key for temperatures above -10°F (-23°C) and refill with lubricant specified for the range of + 40° F (4°C) to -65°F (-54°C).

**2. HOIST ASSEMBLY.** Unwind cable from hoist to expose drain plug and drain the hoist. Fill with 1 quart (0.95L) of GO to level of plug.

**3. HYDRAULIC FILTERS.** Change filter every 2200 hours or semiannually. Remove filter element, clean filter housing, and install new filter element and packing. Operate crane and check for leaks.

**4. GRADE 85W-140 (GO 85/140)** maybe used when expected temperatures are above +10°F (-12°C). NATO code for GO 85/140 is 0-228.

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

Official:

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

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

**Distribution**

To be distributed in accordance with DA Form 12-38, organizational Maintenance requirements for Truck Cargo, 10-Ton, 8x8, Heavy Expanded Mobility Tactical Truck HEMTT Controls and Equipment for M985E1 only.

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