

TRUCK, TRACTOR, M1070, 8 X 8, HEAVY EQUIPMENT TRANSPORTER (HET)

(NSN 2320-01-318-9902)

EIC:B5C

References: TM 9-2320-360-10, TM 9-2320-360-20

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can improve this publication by calling attention to errors and by recommending improvements and by stating your reasons for the recommendations. Your letter or DA Form 2028-2, Recommended Changes to Publications and Blank Forms, should be mailed directly to Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished directly to you.

Maintenance Levels. This lubrication order (LO) is for operator/crew and organizational maintenance. The lowest level of maintenance authorized to lubricate a point is indicated by either operator/crew (C) or organizational (O). Operator/Crew may lubricate points authorized for organizational when authorized by organizational.

Lube Intervals. Lube intervals (on-condition or hardtime) and related man-hour times are based on normal operation. The man-hour time specified is the time needed to do all the services prescribed for a particular interval. The calendar interval may be extended during periods of low activity. If extended, adequate preservation precautions must be taken. Engine oil/transmission oil/hydraulic oil/steering oil must be sampled at 90-day intervals as prescribed by DA Pam 738-750. Hardtime intervals will be applied in the event AOAP laboratory support is not available. For equipment under manufacturer's warranty, hardtime oil service intervals shall be followed. Intervals shall be shortened if lubricants are known to be contaminated or if operation is under adverse conditions, such as longer-than-usual operating hours, extended idling periods, or extreme dust.

Intervals shown in this LO are based on calendar times or calendar times and mileage. An example of a calendar lubrication interval is: S, in which S stands for semiannually (every six months). An example of a mileage and calendar interval is: 9/A, in which 9 stands for 9,000 mi (14,481 km), and A stands for annual (every 12 months). Perform the lubrication at whichever interval occurs first. Special lubrication intervals and services are shown by the use of asterisk (*) symbols. Notes are located on card 32.1.

Oil Filters. 011 filters shall be serviced/cleaned/changed, as applicable, when:

- They are known to be contaminated or clogged;
- Service is recommended by AOAP laboratory analysis, or;
- At prescribed hardtime intervals.

WARNING

Dry cleaning solvent(s), type II is toxic and flammable. Wear protective goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes, and don't breathe vapors. DO NOT use near open flame or excessive heat. The flash point is 100-140°F (38-60°C). If you become dizzy while using cleaning solvent, get fresh air immediately and medical aid. If contact with eyes is made, wash your eyes with water and get medical aid immediately.

Cleaning and Fording. Clean parts with dry cleaning solvent. Dry before lubricating. After high pressure washing, lubricate all fittings and oil can points outside and underneath the HET Tractor. After fording, lubricate all fittings below fording depth and check submerged gearboxes for water. For corrosion control, refer to TM 9-2320-360-10.

Locators. Points indicated with dotted arrows are lubricated on both sides of the HET Tractor. Reference to the appropriate localized view is given after most lubrication entries. Localized views begin on card 19.

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WARNING

When servicing this vehicle, performing maintenance, or disposing of materials such as engine coolant, transmission fluid, lubricants, batteries, battery acid or CARC paint, consult your Unit/local hazardous waste disposal center or safety office for local regulatory guidance. If further information is needed, please contact the Army environmental hotline at 1-800-872-3845. Improper disposal of this material may result in damage to environment or injury to personnel.

Lube Intervals. Lube intervals shown in this LO are either on-condition or hardtime. Hardtime maintenance is done at fixed intervals such as calendar time or miles driven. On-condition maintenance is performed based on the condition of an item as seen during scheduled inspections.

An example of a hardtime calendar lubrication interval is: **S**, in which **S** stands for semiannually (every six months). An example of a hardtime mileage and calendar interval is: **9/A**, in which **9** stands for 9,000 mi (14,481 km), and **A** stands for annual (every 12 months). Perform the lubrication at whichever interval occurs first. Special lubrication intervals and services are shown by the use of asterisk (*) symbols. Notes are located on card 32.1.

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Oil Filters. Oil filters shall be serviced/cleaned/changed, as applicable, when:

- They are known to be contaminated or clogged;
- Service is recommended by AOAP laboratory analysis, or;
- At prescribed hardtime intervals.

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Locators. Points indicated with dotted arrows are lubricated on both sides of the HET Tractor. Reference to the appropriate localized view is given after most lubrication entries. Localized views begin on card 19.

Distribution Statement. This publication is required for official use or for administrative or operational purposes only. Distribution is limited to U.S. Government agencies. Other requests for this document must be referred to Commander, U.S. Army Tank-Automotive and Armaments Command, ATTN: AMSTA-QRT, Warren, MI 48397-5000.

Table 1. Lubricants

Lubricating Oil, ICE, Tactical, OE/HDO (MIL-L-2104) or Lubricating Oil, ICE, Arctic, OEA (MIL-L-46167)	Component	Approximate Capacity	Expected Temperatures	Intervals
	Engine	28 Qt (27 L)	See CHART A.	OC – ON-CONDITION D – DAILY W – WEEKLY M – MONTHLY S – SEMIANNUALLY (6 MONTHS) A – ANNUALLY 3 – 3000 MILES 6 – 6000 MILES 9 – 9000 MILES 10 – 10,000 MILES 20 – 20,000 MILES 25 – 25,000 MILES 50 – 50,000 MILES
	Transmission	33 Qt (31 L)	See CHART B.	
	Transfer Case	5 Qt (4 L)	See CHART C.	
	Power Steering Reservoir	16 Qt (15 L)	See CHART B.	
	Winch Hydraulic Reservoir	168 Qt (159 L)	See CHART D.	
	Oil Can Points	As required	See CHART A.	
Lubricating Oil, Gear, Multipurpose, GO (MIL-L-2105)	No. 1 Axle	15 Qt (14 L)	See CHART E.	
	No. 2 Axle	17 Qt (16 L)	See CHART E.	
	No. 3 Axle	17 Qt (16 L)	See CHART E.	
	No. 4 Axle	16 Qt (15 L)	See CHART E.	
	Planetary Wheel Ends	1.6 Qt (1.5 L)	See CHART E.	
	Main Winches Gearboxes	17 Qt (16 L)	See CHART F.	
	Auxiliary Winch Gearbox	4 Qt (4 L)	See CHART F.	
	Steering Reduction Gearbox	0.5 pt (0.251 L)	See CHART G.	

For arctic operation, refer to FM 9-207.

Table 2. Other Fluids

Fluid	Capacity	Temperature	For arctic operation, refer to FM 9-207.
Dry Cleaning Solvent, SD-2 (P-D-680, Type II)	As required	All Temperatures	
Antifreeze, Ethylene Glycol (MIL-A-46153)	93.8 Qt (88.8 L)	Above -50°F (-46°C)	
Antifreeze, Arctic-Type (MIL-A-11755) (Includes Arctic Kit)	112 Qt (106 L)	Use when extended periods of -40°F (-40°C) or lower are encountered.	

Table 3. Grease, Automotive and Artillery (GAA) (MIL-G-10924)

The following components are lubricated with GAA as required at all temperatures.

Propeller Shafts and U-Joints	For arctic operation, refer to FM 9-207.
Link Kits (King Pin)	
Brake Camshafts and Slack Adjusters	
Spring Eye Pins	
Pintle Hook	
Steering System (Pitman Arms, Steering Gears, Drag Links, Steering Shafts)	
Tire Davit	
Fifth Wheel Plate/Ramps	
Fifth Wheel Lubrication Fittings	
Tie Rod Ends	

Table 4. Total Man-Hours* Required for Service

TRUCK, TRACTOR, M1070	
OC	1.1
D	0.2
W	1.0
S	0.5
A	2.9
3/S	4.0
6/S	0.9
9/S	0.6
25/S	0.4
9/A	0.3
20/A	4.8
50/A	0.6

* The man-hours shown above have been established on an individual basis and, accordingly, are not applicable at maintenance facilities where production line methods are employed.

LO 9-2320-360-12

CHART A. ENGINE AND OIL CAN POINTS

EXPECTED TEMPERATURE																			
°F	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110	120	
°C	-46	-40	-34	-29	-23	-18	-12	-7	-1	4	10	16	21	27	32	38	44	49	

CHART B. TRANSMISSION AND STEERING RESERVOIR

EXPECTED TEMPERATURE																				
°F	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110	120		
°C	-46	-40	-34	-29	-23	-18	-12	-7	-1	4	10	16	21	27	32	38	44	49		
										OE/HDO-15W/40										
										OE/HDO-10										
										OE/HDO-5W/30										
										OE/HDO-5W/20										
	OE/A																			
LUBRICANTS: OE/HDO LUBRICATING OIL, ICE, TACTICAL (MIL-L-2104) OE/HDO LUBRICATING OIL, ICE, ARCTIC (MIL-L-46167)																				

CHART C. TRANSFER CASE

EXPECTED TEMPERATURE																				
°F	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110	120		
°C	-46	-40	-34	-29	-23	-18	-12	-7	-1	4	10	16	21	27	32	38	44	49		
						OE/HDO-40														
	OEA																			
LUBRICANTS: OE/HDO LUBRICATING OIL, ICE, TACTICAL (MIL-L-2104) OE/HDO LUBRICATING OIL, ICE, ARCTIC (MIL-L-46167)																				

CHART D. WINCH HYDRAULIC RESERVOIR

EXPECTED TEMPERATURE																			
°F	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110	120	
°C	-46	-40	-34	-29	-23	-18	-12	-7	-1	4	10	16	21	27	32	38	44	49	