ROUGH TERRAIN CONTAINER HANDLER (RTCH): RT 240; 53,000 LB CAPACITY; 4 X 4 (NSN 3930-01-473-3998)

References: TM 10-3930-675-10, TM 10-3930-675-20, TM 10-3930-675-34, FSC C9100-IL, SF Form 368

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this publication. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Submit your DA Form 2028 (*Recommended Changes to Equipment Technical Publications*), through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is http://aeps.ria.army.mil. If you need a password, scroll down and click on "ACCESS REQUEST FORM". The DA Form 2028 is located in the ONLINE FORMS PROCESSING section of the AEPS. Fill out the form and click on SUBMIT. Using this form on the AEPS will enable us to respond quicker to your comments and better manage the DA Form 2028 program. You may also mail, fax or e-mail your letter, DA Form 2028 direct to: AMSTA-LC-CI/TECH PUBS, TACOM-RI, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. The e-mail address is: TACOM-TECH-PUBS@ria.army.mil. The fax number is DSN 793-0726 or Commercial (309) 782-

NOTE

- These instructions are mandatory.
- Do NOT sample engine and transmission oil until 50 hours after 100-hour initial break-in services.

AOAP Sampling. Engine and transmission system oil must be sampled every 50 hours of operation or 90 days, whichever occurs first, for Active Army Units. Reserve and National Guard activities will use 50 hours or 180 days, whichever occurs first, as prescribed interval. Hydraulic system oil must be sampled annually. Sampling will be performed as prescribed by DA Pam 730-750.

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 on the Lubrication Chart by either Operator/Crew (C) or Organizational Maintenance (O). Operator/Crew may lubricate points authorized for Organizational Maintenance when directed to do so by Organizational Maintenance.

Intervals. Lubrication intervals (on-condition or hard-time) and the related man-hour times are based on normal operation. 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 lubricants are contaminated or if operating the equipment under adverse operating conditions, including longer-than-usual operation hours. The 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.

Warranty Period. Hard-time intervals shall be applied during the warranty period. 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 heat or dust.

Distribution Statement. Approved for public release; distribution is unlimited.

Locators. Lubrication points indicated with dashed leader lines are lubricated on both sides of the vehicle. Reference to the appropriate localized view is given after many lubrication entries. Localized views begin on Card 10.

WARNING

Dry cleaning solvent P-D-680 type III 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 do not breathe vapors. Do not use near open flame or excessive heat. The solvent's flash point is 200°F (94°C). If you become dizzy while using dry cleaning solvent, get fresh air immediately and get medical help. If solvent contacts eyes, wash your eyes and get medical aid immediately.

Specific Lubrication Instructions.

1. Keep all lubricants in a closed container and store in a clean, dry place away from extreme heat. Keep container covers clean and do not allow dust, dirt or other foreign material to mix with lubricants. Keep lubrication equipment clean and ready for use.
2. Clean area around lubrication points with dry cleaning solvent or equivalent before lubricating equipment. Keep all external parts of equipment not requiring lubrication free of lubricants. After lubrication, wipe off excess lubricant to prevent accumulation of foreign matter.
3. Maintain record of lubrication performed and report any problems noted during lubrication. Refer to DA Pam 738-750 for maintenance forms and procedures to record and report any findings.
4. Refer to FM 9-207 for lubrication instructions in cold weather.

NOTE

DO NOT lubricate boom and tophandler wear plates.

Initial Break-in. Perform the following after the first 100 hours of operation:

- Change transmission fluid.
- Change transmission filters.
- Remove, clean, and reinstall transmission internal coarse filter.
- Check oil level in front/rear axle differential housings.
- Check oil level in front/rear axle hub ends.
- Clean and lubricate boom support locking pins.
- Drain and refill tophandler spreader and slewing motors.

Man-Hour Times. The man-hour time specified is the time needed to perform all services prescribed for a particular interval. The man-hour times for the RTCH are as follows:

Interval	Man-Hour
Daily	0.5
Weekly	0.5
200 Hours	1.0
300 Hours	2.0
1000 Hours	4.0

KEY

LUBRICANT/ COMPONENT	REFILL CAPACITY	EXPECTED TEMPERATURES*			INTERVALS
		+6°F TO +122°F (-14°C TO +50°C)	-4°F TO +50°F (-20°C TO +10°C)	-67°F TO +32°F (-55°C TO 0°C)	
OE/HDO (MIL-PRF-2104) Lubricating Oil, Tactical					**D - Daily W - Weekly HR - Hours OC - On Condition**
OEA (MIL-L-46167) Lubricating Oil, ICE, Arctic					
Engine Crankcase w/ Filters	38.6 Qt (36.5 L)	See Chart A			
Transmission	36 Qt (34 L)	See Chart B			
Hydraulic System	180 Gal. (680 L)	See Chart C			
GO (MIL-L-2105) Lubricating Oil, Gear, Multipurpose					
Front Axle Differential Housing	15.9 Gal. (60 L)	See Chart D			
Front Axle Hub End	2.64 Gal. (10 L)	See Chart D			
Rear Axle Differential Housing	11.1 Gal. (42 L)	See Chart D			
Rear Axle Hub End	2.77 Gal. (10.5 L)	See Chart D			
GAA (MIL-G-10924) Grease, Automotive and Artillery		All Temperatures			
ANTIFREEZE (MILA46153) Permanent, Ethylene Glycol, Inhibited, Heavy-Duty					
ANTIFREEZE (MILA11755) Permanent, Arctic Grace					
Engine Radiator	23.7 Gal. (90 L)	See Chart E			
*** For Arctic Operation, refer to FM 9-207.**					

CHART A—ENGINE.

Lubricant	EXPECTED TEMPERATURES																			
°F	-70	-60	-50	-40	-30	-20	-10	0	+10	+20	+30	+40	+50	+60	+70	+80	+90	+100	+120
°C	-57	-51	-46	-40	-34	-29	-23	-18	-12	-7	-1	+4	+10	+16	+21	+27	+32	+38	+49
OE/HDO (MIL-PRF-2104)	Lubricating Oil, Tactical																			
OEA (MIL-L-46167)	Lubricating Oil, ICE, Arctic																			
OE/HDO-15/40								———	———	———	———	———	———	———	———	———	———	———	———	———
OE/HDO-10*						———	———	———	———	———	———	———								
OEA *	———	———	———	———	———															

*If OEA lubricant is required to meet the low expected-temperature range, OEA lubricant is to be used in lieu of OE/HDO-10 lubricant for all expected temperatures where OE/HDO-10 is specified.

CHART B—TRANSMISSION.

Lubricant	EXPECTED TEMPERATURES																			
°F	-70	-60	-50	-40	-30	-20	-10	0	+10	+20	+30	+40	+50	+60	+70	+80	+90	+100	+120
°C	-57	-51	-46	-40	-34	-29	-23	-18	-12	-7	-1	+4	+10	+16	+21	+27	+32	+38	+49
OE/HDO (MIL-PRF-2104)	Lubricating Oil, Tactical																			
OEA (MIL-L-46167)	Lubricating Oil, ICE, Arctic																			
OE/HDO-10								———	———	———	———	———	———	———	———	———	———	———	———	———
OEA	———	———	———	———																

CHART C—HYDRAULIC, STEERING, AND BRAKE SYSTEM.

Lubricant	EXPECTED TEMPERATURES																			
°F	-70	-60	-50	-40	-30	-20	-10	0	+10	+20	+30	+40	+50	+60	+70	+80	+90	+100	+120
°C	-57	-51	-46	-40	-34	-29	-23	-18	-12	-7	-1	+4	+10	+16	+21	+27	+32	+38	+49
OE/HDO (MIL-PRF-2104)	Lubricating Oil, Tactical																			
OEA (MIL-L-46167)	Lubricating Oil, ICE, Arctic																			
OE/HDO-10							———	———	———	———	———	———	———	———	———	———	———	———	———	———
OEA	———	———	———	———																