LUBRICATION ORDER

L09-1430-588-12

23 July 1984 **(Supersedes LO9-1430-588-12. 19 DECEMBER 1980)**

RADAR SET AN/MPQ-49
(NSN 1430-00-179-4199)

Reference: TM 9-1430-588-10 and TM 91430-588-20 Series

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 My 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 lubrication.

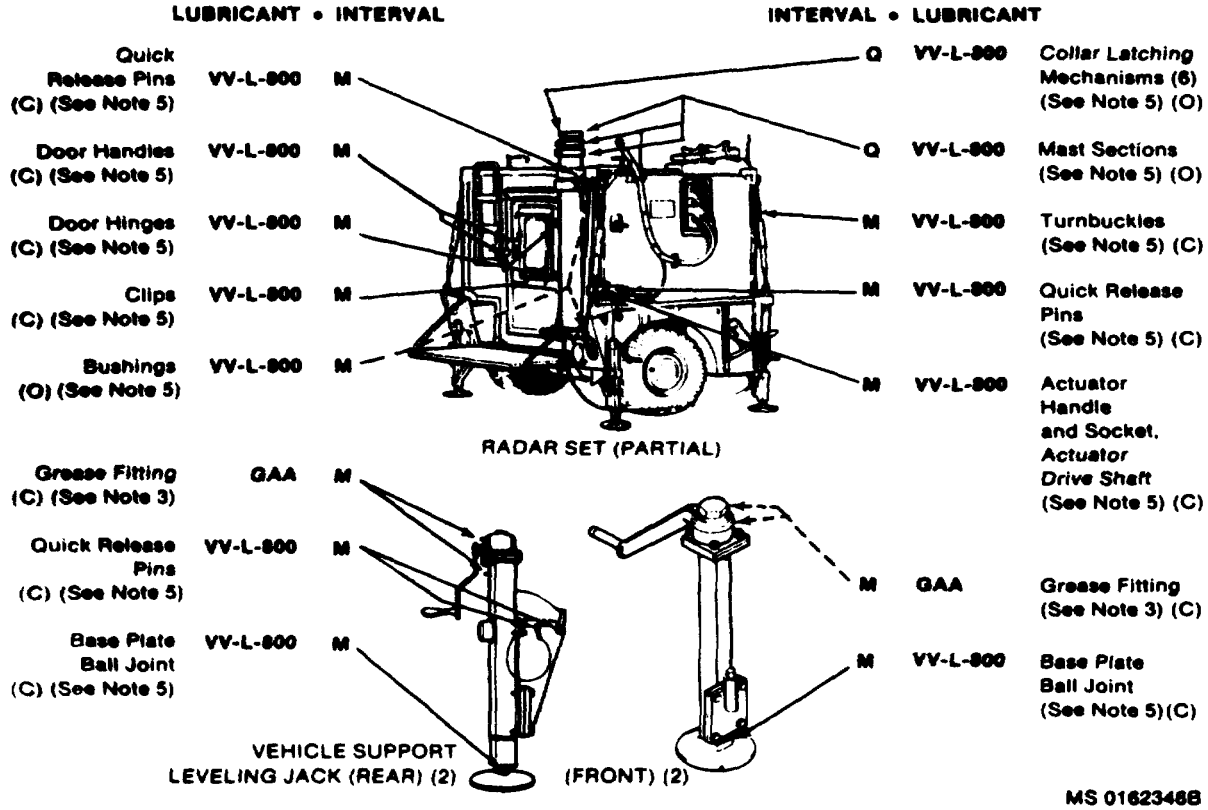
Clean parts with dry cleaning solvent (SD), type II or equivalent.

Dry before lubricating.
Lubrication on both sides or for hidden view lubrication point is indicated by dashed leader lines.

Relubricate after washing or fording.

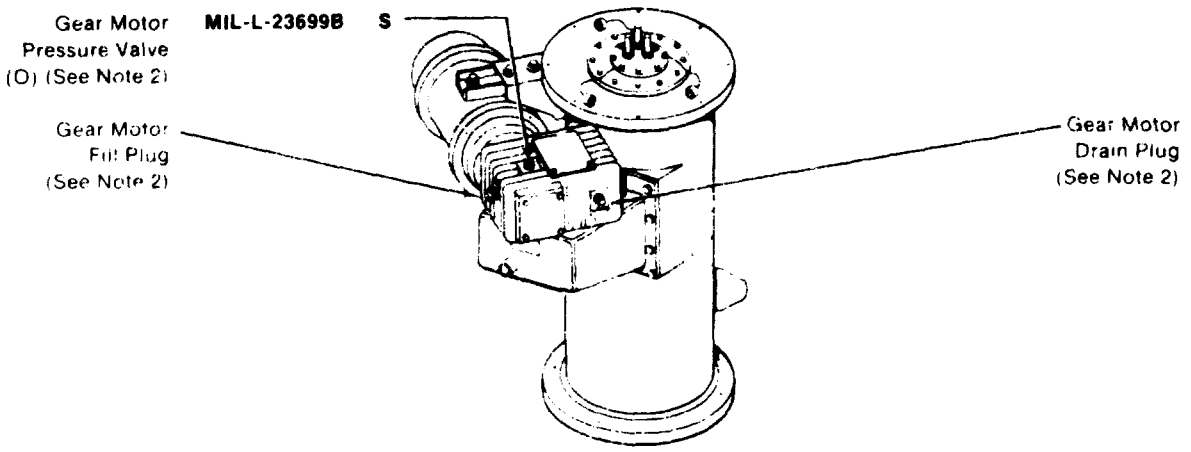
The lowest level of maintenance authorized to lubricate a point is indicated by one of the following symbols as appropriate: Operator/crew (C): and Organizational Maintenance (O).

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS. You can help improve this manual. If you find any mistakes or it 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. U.S. Army Missile Command, ATTN: DRSMI-SNPM. Redstone Arsenal. AL 35898. A reply will be furnished to you

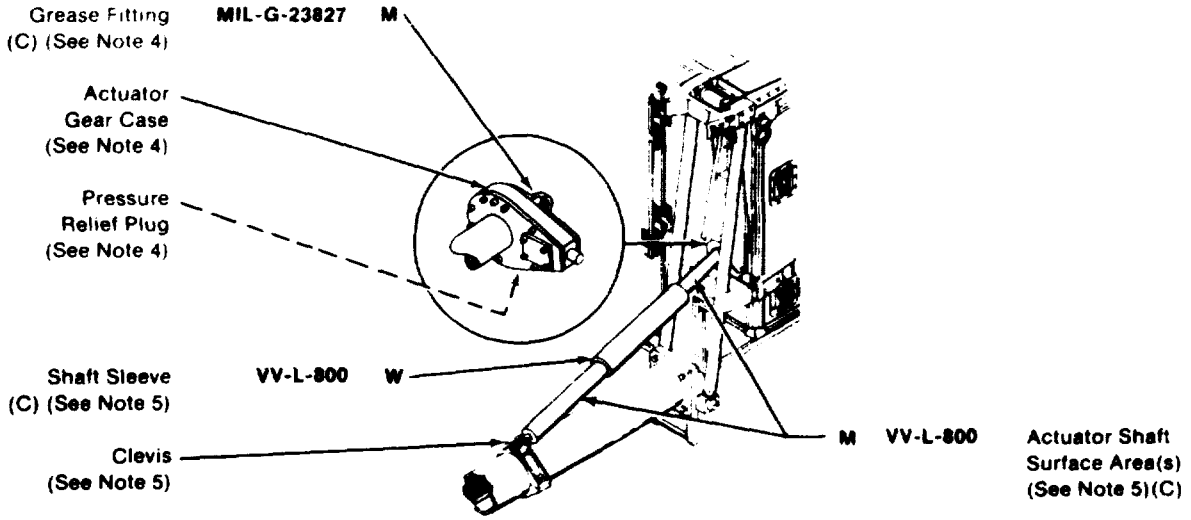


LUBRICANT • INTERVAL

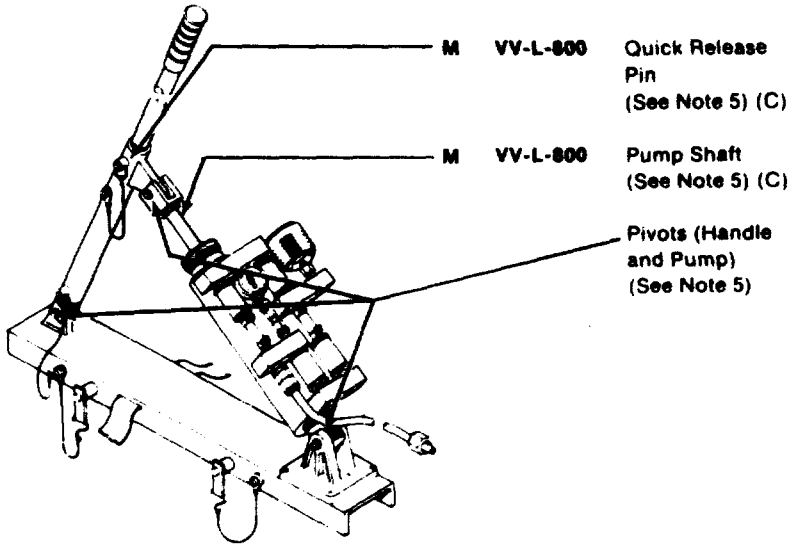
INTERVAL • LUBRICANT



PEDESTAL ASSEMBLY (GEAR BOX) (1)

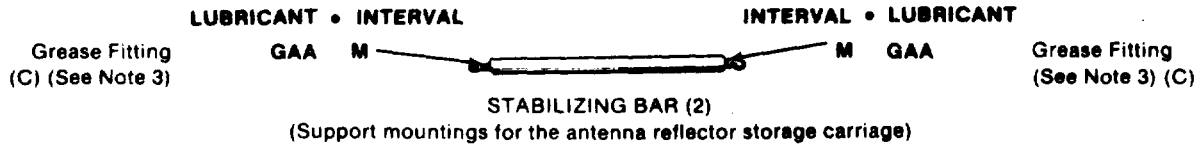


MAST ACTUATOR - HORIZONTAL POSITION

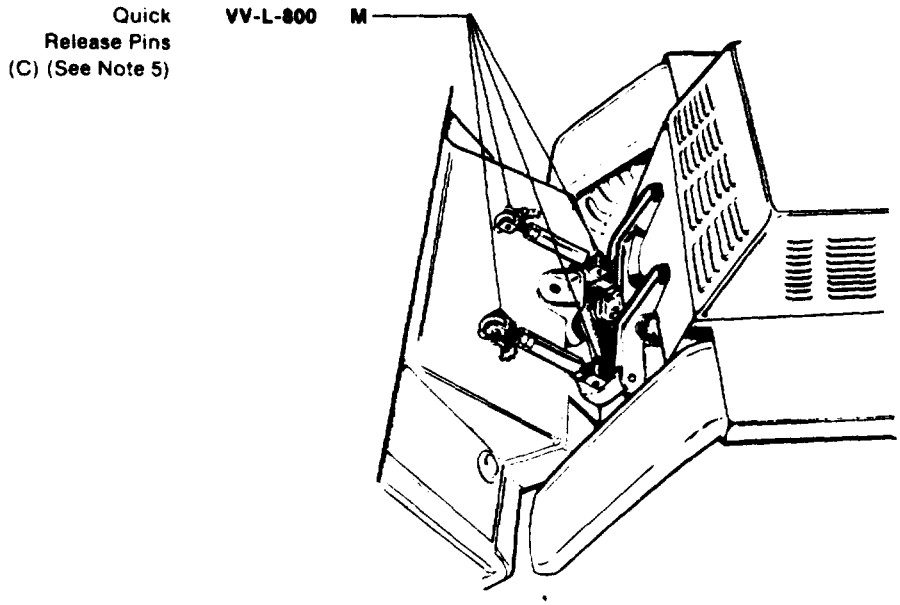


MAST SECTION, HAND PUMP (1)

MS 0162349A



STABILIZING BAR (2)
(Support mountings for the antenna reflector storage carriage)



-KEY-

LUBRICANTS	CAPACITIES	EXPECTED TEMPERATURES			For Arctic Operation Refer to FM 9-207	INTERVALS
		Above +320F (Above 0°C)	+40°F to -10°F (+50C to -23°C)	0°F to -65°F (-18°C to -54°C)		
VV-L-800, number 3 light machine		**ALL TEMPERATURES**				W-Weekly M-Monthly Q-Quarterly S-Semiannually
MIL-G-23827A, GR7G1A Grease		**ALL TEMPERATURES**				
GGA- GREASE, automotive and artillery		**ALL TEMPERATURES**				
MIL-L-23699B - LUBRICATING OIL, turbine engines, synthetic base		**ALL TEMPERATURES**				

MS 0162350B

NOTES

1. MAST SECTION. Lubricate as follows: raise each mast section separately (Ref TM 9-1430-588-10). Wipe the mast tube sections clean, free of all dirt, oil, and grease accumulations with solvent and a clean cloth. Pay particular attention to cleaning such areas as the mast tube slides and the six collar locking mechanisms Lubrication of the mast tubes is limited to oiling the pneumatic seal of each extendable mast section. To oil the pneumatic seal., apply approximately one tablespoon of lubricating oil (VV-L800), evenly distributed around the mast tube just above the collar. Lower the mast. Repeat the above for each extendable mast section. On completion, lower the mast then raise it again until fully extended. Wipe off all excess oil from the mast tube sections and collars.

2. GEAR MOTOR LUBRICANT-LEVEL MOTOR GEARCASE. Check the gear motor lubricant level monthly and add lubricant as necessary. Drain and replace the gear motor lubricant semiannually. Lubricate as follows:

Remove fill plug.

Remove drain plug. (if replacing lubricant) and drain lubricant into a container.

Replace drain plug.

Fill with oil (MIL-L-23699B) until the oil level is even with the fill plug hole when the pedestal is standing in the vertical position (approximately 26 oz.) Replace fill plug.

3. LUBRICATION FITTING. Remove bearing unit housing. Remove old grease with a rag. Replace housing and apply three full shots of grease (GAA) through grease fitting, with a hand grease gun.

4. ACTUATOR GEARCASE.

CAUTION: Overfilling the actuator gearcase will cause grease to seep out the pressure relief valve.

Lubricate as follows: Lower the mast assembly to a point midway between the horizontal and vertical positions (approximately 30 degrees).

Apply grease (MIL-G-23827A) to the gearcase through the grease fitting. with a hand grease gun.

Fill until grease comes out of the pressure relief valve. Raise the mast assembly to the vertical position in accordance with TM 9-1430-588-10.

5 OIL CAN POINTS. The following items will be wiped clean and lubricated, as indicated. wtih lubricating oil VV-L-800:

a. Actuator handle
b. Actuator shaft surface area
c. Bushings
d. Clevis
e. Door handles
f. Door latches 9. Door hinges
h Clips
i. Base plate ball joints Turnbuckles
k. Quick release pins
l. Actuator gearcase shaft
m. Pump shaft
n. Pivots (handle and pump)
o. Jack supports
p. Hose couplers
q. Mast collar latching mechanisms (6)

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:

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

Official:
ROBERT M. JOYCE
Major General, United States Army
The Adjutant General

Distribution: To be distributed In accordance with DA Form 12-32, Section II, Organizational Maintenance requirements for Forward Area Alerting Radar System.

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IN THIS SPACE, TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT.

PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER	SIGN HERE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 decagram = 10 grams = .35 ounce
1 hectogram = 10 decagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

PIN: 015694-000