

CHANGE

No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC 28 April 1992

LUBRICATION ORDER

HOWITZER, HEAVY, SELF-PROPELLED:
8 INCH, MI 1 OA2
(2350-01-041-4590)

LO 9-2350-304-1 2, 27 April 1 990, is changed as follows:

1. Remove old pages and insert new pages as indicated below.
2. New or changed material is indicated by a vertical bar in the margin of the page.
3. Revised illustrations are indicated by a miniature pointing hand

Remove Pages

Card 1 of 44 through Card 10 of 44
Card 33 of 44 through Card 36 of 44
Card 43 of 44/(Card 44 Blank)

Insert Pages

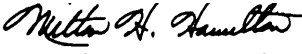
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4. File this change sheet in the front of the publication for reference purposes.

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:


MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army
01212

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27 April 1990

(Supersedes LO 9-2350-304-12; 25 December 1984)

**HOWITZER, HEAVY, SELF-PROPELLED: 8-INCH, MI 1 0A2
(2350-01-041-4590)**

Reference: TM 9-2350-304-10, TM 9-2350-304-20

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This lubrication order is divided into seven sections based on lubrication intervals (daily, weekly, quarterly (3 months), semiannually (6 months), annually (12 months), 11/2 years (18 months), and on-condition).

An overall view showing lubrication points precedes each set of detailed notes.

A broken leader line (- - -) means there are lubrication points on both sides of the vehicle.

Intervals are based on normal operation.

- Lubricate more during constant operation.
- Perform a quarterly lubrication as soon as possible after water fording operation.
- On-condition intervals for oil changes shall be determined by the Army Oil Analysis Program (AOAP) laboratory and shall be applied unless otherwise notified.
- For operation of vehicle in protracted cold temperatures below ^{00F} (-180C), remove lubricants prescribed in the key for temperatures above ^{00F} (-180C), clean parts with dry cleaning solvent, and relubricate with lubricants specified in the key for temperatures +400F to -700F (+40C to -57'C).

MAN-HOUR TIMES

The man-hour time specified is the time you need to do all the services prescribed for a particular interval.

LEVEL OF MAINTENANCE:

- C-Operator/Crew
- O-Unit Maintenance

LUBRICATION POINTS

Type of lubricants used at each point are identified by arrows:

CLP

GAA

OBSERVE THE FOLLOWING:

- NEVER use the wrong type lubricant.
- NEVER use too much lubrication.
- ALWAYS clean grease fittings before lubrication.
- ALWAYS use the lubrication order.

LO 9-2350-304-12

KEY

LUBRICANTS	CAPACITIES	EXPECTED TEMPERATURES		INTERVALS			
		Above 0 °F (Above -18 °C)	Below +40 °F (Below +4 °C)				
OE/HDO (MIL-L-2104D)	LUBRICATING OIL, Internal Combustion Engine, Tactical Service			D - Daily W - Weekly Q - Quarterly 750 mi (1207 km), or 75 hr of operation, whichever occurs first S - Semiannually, 1500 mi (2414 km), or 150 hr of operation, whichever oc- curs first A - Annually B - 18 months OC - On-Condition			
OEA (MIL-L-46167)	LUBRICATING OIL, Internal Combustion Engine, Arctic						
	Engine Crankcase, Add Three Additional Quarts (2.8 l) for Filters.	Refill 28 qt (26.5 l) Dry 38 qt (35.9 l)	OE/HDO-15/40		OEA		
	Auxiliary Drive	Refill 4 qt (3.8 l) Dry 4 1/2 qt (4.2 l)					
	Final Drive (Left)	13 qt (12.35 l)					
	Final Drive (Right)	7 qt (6.65 l)					
	Auxiliary Drive Clutch Housing	Refill 3/4 pt (0.35 l) Dry 7/8 pt (0.40 l)					
	Road Wheel Hub Bearing and Trailing Idler Hub Bearing					"O" Vehicles OE/HDO-15/40	"O" Vehicles OEA
						"N" Vehicles GAA	"N" Vehicles GAA
Transmission	Refill 12 gal (45.4 l) Dry 19 gal (72 l)	OEA OE/HDO-15/40				OEA	
Elevating Gearcase	2 qt (1.9 l)	OEA	OEA				
Traversing Gearcase	3 qt (2.8 l)						
OHT (MIL-H-6083)	FLUID, HYDRAULIC, PETROLEUM BASE, PRESERVATIVE			For Arctic operation refer to FM 9-207.			
	Hydraulic Reservoir	27 gal (102.2 l)	OHT		OHT		
GAA (MIL-G-10924)	GREASE, Automotive and Artillery		ALL TEMPERATURES				
CLP (MIL-L-63460)	LUBRICANT, CLEANER and PRESERVATIVE						
	Cannon Bore and Breech Mechanism Oil Can Points		CLP		CLP		
SD2 (P-D-680)	SOLVENT, Dry Cleaning		ALL TEMPERATURES				

TOTAL MAN-HOURS		TOTAL MAN-HOURS	
Interval	Man-Hours	Interval	Man-Hours
D	2	A	5
W	5	B	50
Q	14	OC	2
S	12		

DAILY NOTES

This page shows what to check or lubricate each day the weapon is fired or operated.

LUBRICANT-INTERVAL

INTERVAL-LUBRICANT

Final Drive Fill
and Level
(See Note 1) (C)

OE/HDO
OEA

D

CLP

Cannon Bore
(See Note 3) (C)

Gun Slide Rails
(See Note 2) (C)

GAA

D

OE/HDO
OEA

Transmission
Fill and Level
(See Note 4) (C)

Breechblock and
Firing Mechanism
(See Note 3) (C)

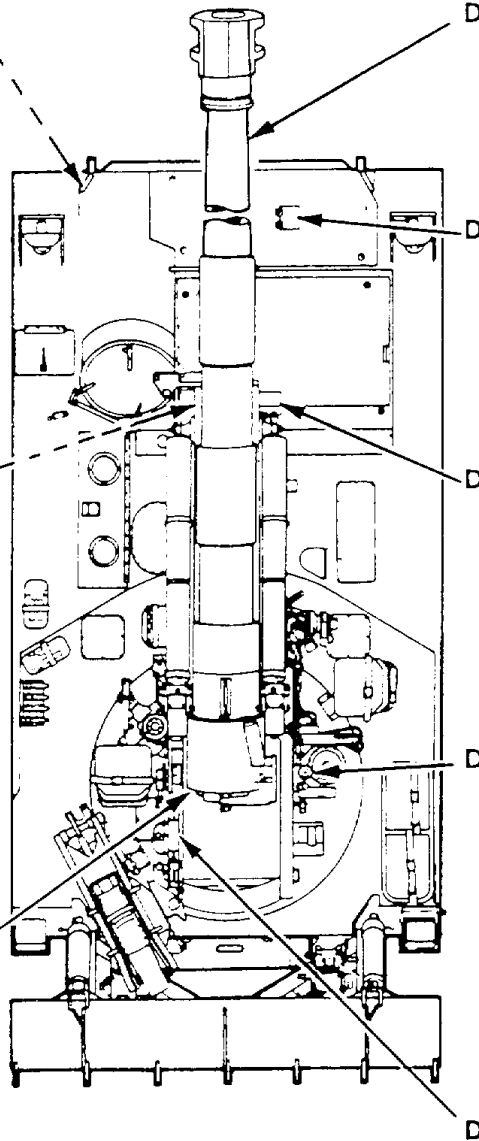
CLP

D

OHT

Hydraulic Reservoir
(See Note 6) (C)

Hydraulic Pump
Pressure Filter
(See Note 7) (C)



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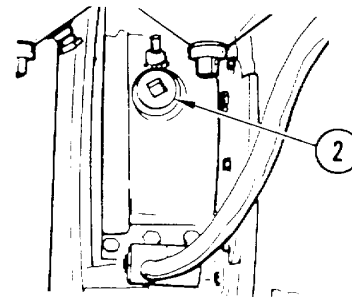
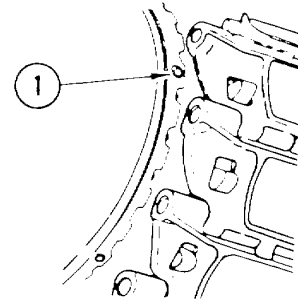
DAILY NOTES (CONTINUED)

Note 1

FINAL DRIVE FILL AND LEVEL

Check oil level from outside vehicle F 11 plug access 15 under transmission deck

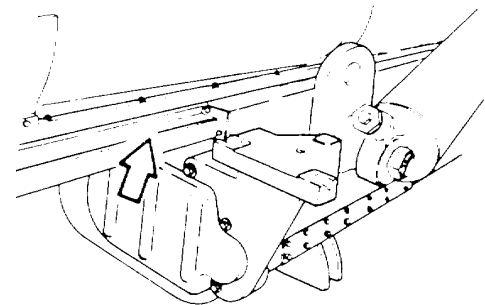
- A Remove level check plug (1)
- B Check that oil is level with bottom of opening . If not, remove transmission deck and remove; fill plug (2) in final drive saddle.
- C Add oil (OE, HDO or OEA), slowly until oil flows from check plug (1) opening
- D Clean level check plug (1) and fill plug (2) with solvent SD2 and install.
- E Repeat steps A through D for opposite side.



Note 2

GUN SLIDE RAILS

Clean with CLP and coat with GAA before and after firing.



DAILY NOTES (CONT)

Note 3

CANNON BORE, BREECH BLOCK, AND FIRING MECHANISM

Day of Firing:

A Cannon Tube:

- 1 Pour approximately 8 oz (240 ml) of CLP on a bore brush and wet punch the tube once forward and once back.
- 2 Pour an additional 4 oz of CLP on the bore brush and scrub the entire length of the tube with a back and forth motion. Repeat this step as necessary.
- 3 Pour an additional 4 oz of CLP on the bore brush. Again wet punch the entire length of the tube, once forward and once back. Do not wipe dry.

B Breech and Muzzle Brake:

Note

Do not clean obturator pad with CLP. Use soap and water only.

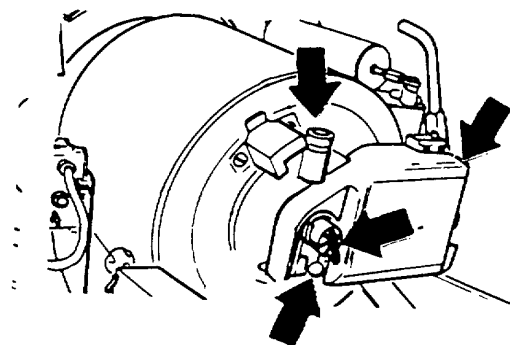
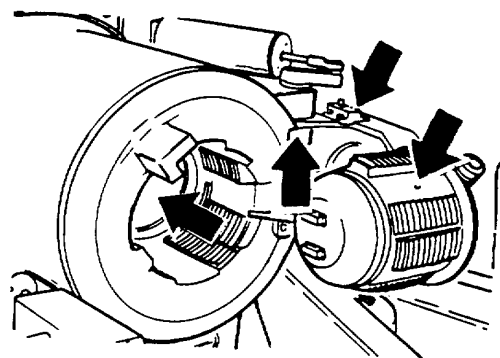
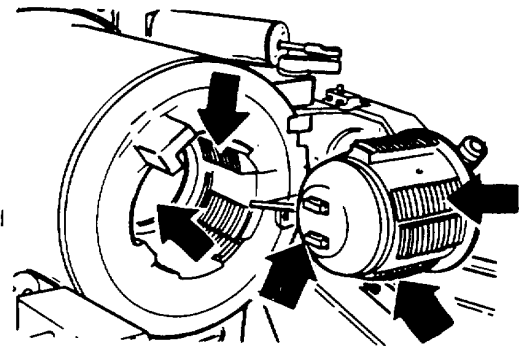
- 1 Remove and disassemble the M35 Firing Mechanism and Obturator Group.
- 2 Thoroughly wet all breech components with CLP and let soak for 10-15 minutes then brush or wipe dry. Reapply light coat of CLP to all breech surfaces.
- 3 Thoroughly wet the internal surfaces of the muzzle brake with CLP and let soak for 30-40 minutes. Wipe off and reapply a light coat of CLP.
- 4 Apply CLP to the primer vent and thoroughly brush with primer vent brush.
- 5 Thoroughly wet firing locks with CLP and wipe off all carbon and firing residue. Reapply a light coat of CLP.

On Day After Firing:

- 1 Wet punch the tube following the procedures for day of firing.
- 2 Wrap the brush with a new disposable cleaning sleeve and dry punch the entire length of the tube once forward and back.
- 3 Wrap the brush with a new disposable cleaning sleeve and wet punch the entire length of the tube once forward and once back.
- 4 With new cleaning sleeve, repeat wet punching the tube at least two more times, or until tube is clean.

Note

When weapon is not fired, clean and lubricate weekly with CLP. Wipe dry before firing.



DAILY NOTES (CONTINUED)

Note 4

TRANSMISSION FILL AND LEVEL

Access is through door in transmission deck

CAUTION

- Do NOT check oil with engine running-
- Do NOT overfill.

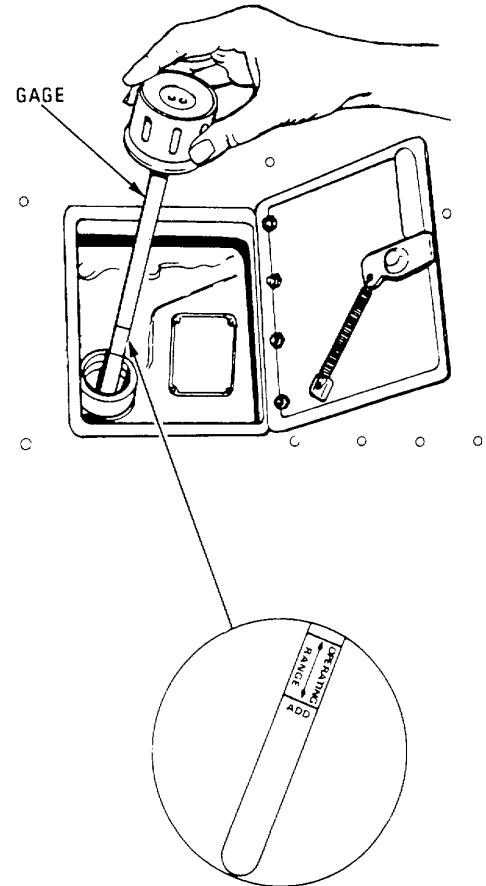
Note

Always think about oil temperature when adding oil. The oil level will vary within OPERATING RANGE due to oil temperature.

- A** Check that oil level is within OPERATING RANGE on gage. Do not add or drain oil if in this range. Add oil only when below ADD mark.
- B** Add or drain oil (OEA or OE/HDO) as required. See Note 63 for drain procedures.
- C** Take oil sample every 25 hours of operation or every 60 days, whichever occurs first. Refer to DA PAM 738-750 for sampling requirements.

Note

New transmissions are delivered with preservative oil MIL- L-21 260. Until first scheduled oil change, maintain proper oil level by adding OE/HDO or OEA.



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