LUBRICATION ORDER

LO 10-3930-233-12

20 JULY 1984 (Supersedes LO 10-3930-233-20, 2 DECEMBER 1963)

TRUCK, LIFT, FORK, GASOLINE, SOLID RUBBER TIRED WHEELS, 2,000 LB CAPACITY (ALLIS-CHALMERS MODEL FT 20-24PS-100), (NSN 3930-00-958-3682) AND (ALLIS-CHALMERS MODEL FT 20-24PS-127) (NSN 3930-00-958-3683) (ARMY MODEL MHE-182)

Reference: TM 10-3930-233-10, -20, and FEDERAL SUPPLY CATALOG C9100-1L.

Hard time intervals and the related manhour 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. 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 calendar time interval may be extended during periods of low activity. If extended, adequate preservation precautions must be taken.

WARNING

Dry cleaning fluid is flammable. Do not use near a flame or excessive heat. Use only with adequate ventilation. Avoid prolonged breathing of vapors and minimize skin contact.

Clean parts or fittings with dry cleaning solvent (SD), Type II or equivalent. Dry before lubricating. Dotted arrow shafts indicate lubrication on both sides of equipment. A dotted circle indicates a drain below. Relubricate all items found contaminated after fording or washing.

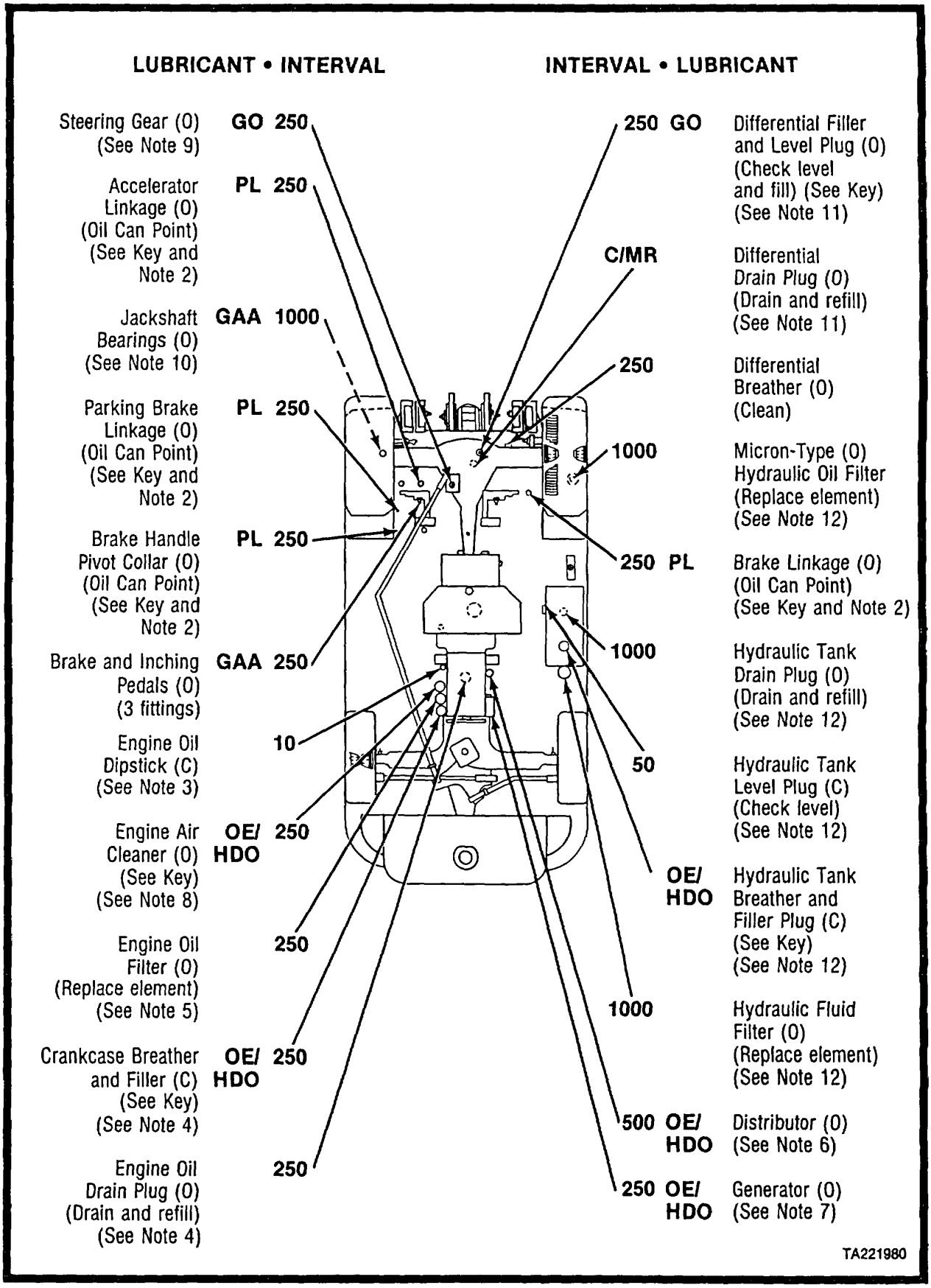
The lowest level of maintenance authorized to lubricate a point is indicated by one of the following symbols as appropriate: Operator/Crew (C); and Organizational Maintenance (O).

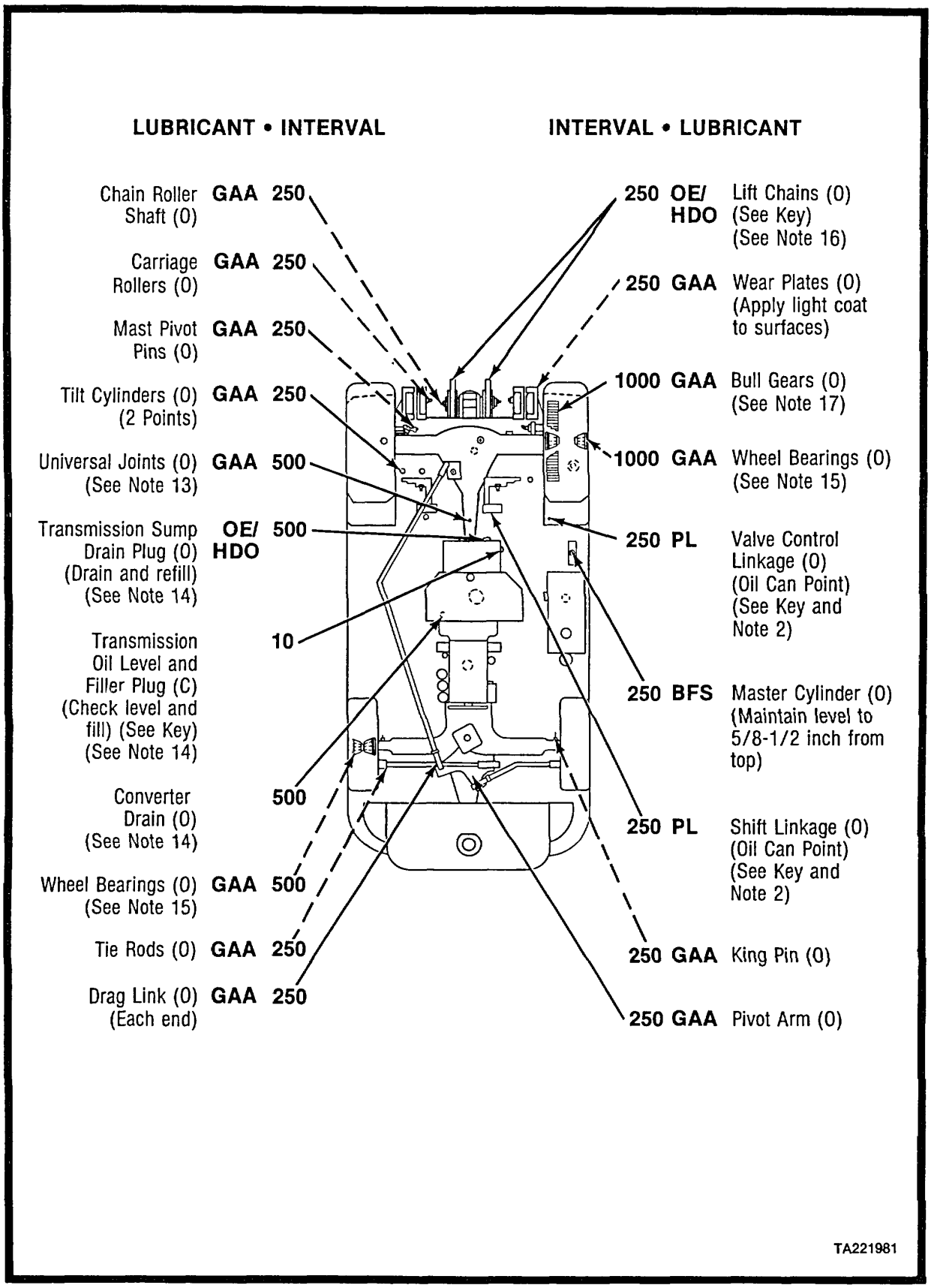
Reporting errors and recommending improvements. You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, US Army Tank-Automotive Command, ATTN: DRSTA-MB, Warren, MI 48090. A reply will be furnished to you.

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

*TOTAL MAN-HOURS		*TOTAL MAN-HOURS	
INTERVAL	**MAN-HOURS**	**INTERVAL**	**MAN-HOURS**
10	0.2	500	1.0
50	0.1	1000	4.1
250	2.0		

TA221979


LUBRICANT • INTERVAL
INTERVAL • LUBRICANT
Steering Gear (O) (See Note 9)
GO 250
Accelerator Linkage (O) (Oil Can Point) (See Key and Note 2)
PL 250
Jackshaft Bearings (O) (See Note 10)
GAA 1000
Parking Brake Linkage (O) (Oil Can Point) (See Key and Note 2)
PL 250
Brake Handle Pivot Collar (O) (Oil Can Point) (See Key and Note 2)
PL 250
Brake and Inching Pedals (O) (3 fittings)
GAA 250
Engine Oil Dipstick (C) (See Note 3)
10
Engine Air Cleaner (O) (See Key) (See Note 8)
OE/ HDO 250
Engine Oil Filter (O) (Replace element) (See Note 5)
250
Crankcase Breather and Filler (C) (See Key) (See Note 4)
OE/ HDO 250
Engine Oil Drain Plug (O) (Drain and refill) (See Note 4)
250
250 GO
Differential Filler and Level Plug (O) (Check level and fill) (See Key) (See Note 11)
C/MR
Differential Drain Plug (O) (Drain and refill) (See Note 11)
250
Differential Breather (O) (Clean)
1000
Micron-Type (O) Hydraulic Oil Filter (Replace element) (See Note 12)
250 PL
Brake Linkage (O) (Oil Can Point) (See Key and Note 2)
1000
Hydraulic Tank Drain Plug (O) (Drain and refill) (See Note 12)
50
Hydraulic Tank Level Plug (C) (Check level) (See Note 12)
OE/ HDO
Hydraulic Tank Breather and Filler Plug (C) (See Key) (See Note 12)
1000
Hydraulic Fluid Filter (O) (Replace element) (See Note 12)
500 OE/ HDO
Distributor (O) (See Note 6)
250 OE/ HDO
Generator (O) (See Note 7)
TA221980



LO 10-3930-233-12

*KEY -							
			EXPECTED TEMPERATURES				
	LUBRICANTS	CAPACITY	Above + 15°F (Above -9°C)	+40° to -15°F (+4°to -26°C)	+40°to -65°F (+4°to -54°C)	For Arctic operation refer to FM 9-207	INTERVALS
OE/ HDO	- Lubricating Oil, Internal Combustion Engine, Tactical Service		**OEIHDO** 30	**OEIHDO** 10			CIMR - Condition Monitor
OEA	- Lubricating Oil, Internal Combustion, Arctic				**OEA** (See Note 1)		
	- Engine Crankcase W/Filter	6 qts. (5.67 L)					Intervals
	- Distributor - Lift Chains						given are
	- Transmission	10 qts. (9.46 L)					in hours
	- Hydraulic Tank	15 qts. (14.19 L)					of normal
	- Engine Air Cleaner	1 pt. (0.473 L)					operation.
PL	- Lubricating Oil, Preservative		**PL**-Medium	**PL**-Special	**PL**-Special		
	- Oil Can Points (See Note 2)						
GO	- Lubricating Oil, Gear		**GO** 85W/140	**GO** 80W/90	**GO** 75W		
	- Differential	3 qts. (2.83 L).					
BFS	- Brake Fluid, Silicone, Automotive		**ALL TEMPERATURES**				
	- Master Cylinder	1/2 pt. (0.24 L)					
GAA	- Grease, Automotive and Artillery		**ALL TEMPERATURES**				

***See Note 18 for lubricant specification number.** **TA221982**

NOTES:

1. FOR OPERATION OF EQUIPMENT IN PROTRACTED COLD TEMPERATURES BELOW -15°F (-26°C). Remove lubricants prescribed in Key for temperatures above -15°F (-26°C). Relubricate with lubricants specified in Key for temperatures below -15°F (-26°C). If OEA lubricant is required to meet the temperature ranges prescribed in the Key, OEA lubricant is to be used in place of OE/HDO-10 lubricant for all temperature ranges where OE/HDO-10 is specified in the Key.

2. OIL CAN POINTS. Each 250 operating hours apply a few drops of PL to all linkage, clevises, and bushings not equipped with fittings or oil cups.

3. ENGINE OIL LEVEL HOT OR COLD CHECK. Cold engine, oil level should be at high mark on dipstick. Hot engine, oil level must be between high and low marks on dipstick (allow to set 5 minutes before checking).

4. ENGINE OIL DRAIN. Each 250 operating hours change oil. Drain when lubricant is warm. Clean breather and blow out with compressed air.

5. ENGINE OIL FILTER. Each 250 operating hours remove filter element, clean filter housing and install new filter element and gasket. After installing new filter element, fill crankcase, operate engine 5 minutes, check filter housing for leaks, check crankcase oil level and bring to "FULL" mark on dipstick.

6. DISTRIBUTOR. Each 500 operating hours remove filler plug from side of drive shaft housing and add OE/HDO 10 to bring level to filler plug opening. Lubricate rotor wick with 3 or 4 drops of OE/HDO 10. Apply very light coat of GAA to breaker cam.

7. GENERATOR.

CAUTION
Do not over-lubricate generator and do not use PL.

Each 250 operating hours place 3 or 4 drops of OE/HDO 10 in each of 2 oil cups.

8. ENGINE AIR CLEANER. Each 250 operating hours remove and disassemble air cleaner. Clean all parts, assemble, reoil and install. Make sure all hose connections are tight.

9. STEERING GEAR. Each 250 operating hours check for oil level at filler plug opening. Check for leaks around lever shaft and cover if frequent adding of oil is necessary. Change gear lubricant only when required by maintenance repair action, contamination by water, or other foreign material. To drain, remove filler plug and lower cover mounting screw. After refill, operate for 5 minutes, check for leaks and bring oil level to filler plug opening.

10. JACKSHAFT BEARINGS. Each 1000 operating hours remove drive wheels, then remove jackshafts. Remove jackshaft bearings, clean and inspect, replace damaged or worn parts. Repack bearings and assemble.

11. DIFFERENTIAL. Each 250 operating hours check oil level. Change gear lubricant only when required by maintenance repair action, contamination by water, or other foreign material. After refill, operate for 5 minutes, check for leaks and bring oil level to level plug opening.

12. HYDRAULIC TANK, OIL FILTERS AND BREATHER. Each 50 operating hours check oil level at level plug opening. Make sure area surrounding level

TA221983

NOTES - CONTINUED:

plug is clean, make sure truck is level and mast is lowered before removing level plug. If oil is contaminated, drain system and tank and refill with clean oil. Each 1000 operating hours drain tank, remove and clean breather element. Remove filter elements, clean filter shells, and install new filter elements. Refill tank and operate hydraulic system for 5 minutes, check for leaks, check oil level, and bring to level plug opening.

13. UNIVERSAL JOINTS. Each 500 operating hours remove and disassemble universal joints. Clean and inspect all parts, replace damaged or worn parts, repack bearings, assemble and install.

14. TRANSMISSION AND CONVERTER. Each 10 operating hours check oil level with engine running at idle speed, oil at operating temperature and transmission in neutral. Maintain oil level at "FULL" mark. Each 500 operating hours drain all oil from transmission and converter. Access to converter drain plug is gained through timing cover opening in engine flywheel housing. Rotate flywheel until drain plug is in opening, remove plug and rotate flywheel until plug opening is aligned with drain opening at bottom of flywheel housing. Refill transmission to low mark. With engine running at idle speed, oil at operating temperature, and transmission in neutral (to fill lines and converter), add oil to "FULL" mark. Operate for 5 minutes and check for leaks.

15. WHEEL BEARINGS. Each 500 operating hours remove wheels, clean and inspect all parts, replace damaged or worn parts, repack bearings, assemble and install.

16. LIFT CHAINS. Each 250 operating hours clean chains and brush on coat of OE/HDO 10. Each 500 operating hours remove chains, clean and dry with compressed air. Inspect for damage or excessive wear. Brush on coat of OE/HDO, install and adjust.

17. BULL GEARS. Each 1000 operating hours remove drive wheels, clean bull gears and dry with compressed air. Inspect for damage or excessively worn teeth. Lubricate gears sparingly with GAA and Install drive wheels.

18. LUBRICANTS. The following is a list of lubricants with military symbols and applicable specification numbers.

OEIHDO	MIL-L-2104
OEA	MIL-L-46167
GO	MIL-L-2105
BFS	MIL-B-46176
GAA	MIL-G-10924
PL	MIL-L-3150
PL	VV-L-800
(SD), Type II	P-D-680

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 12-25A, Operator and Organizational maintenance requirements for Warehouse Equipment.

TA221984

☆ U.S. GOVERNMENT PRINTING OFFICE: **1984-420-903/278**

PIN: 056130-000