TM 10-3930-618-10

TECHNICAL MANUAL

OPERATOR'S MANUAL
TRUCK, LIFT, FORK;
GASOLINE ENGINE DRIVEN;
PNEUMATIC TIRED WHEELS;
6000-LB CAPACITY;
168-INCH LIFT;
ALLIS-CHALMERS
MODEL FP60-24PS;
ARMY MODEL MHE-213,
FSN 3930-935-7919

HEADQUARTERS. DEPARTMENT OF THE ARMY

NOVEMBER 1971

This copy is a reprint which includes current pages from Changes 3 and 4.

WARNING

Batteries generate hydrogen, a highly explosive gas. Do not smoke or have open flame in the area where batteries are being serviced.

Do not fill fuel tank while engine is running. Provide metal-to-metal contact between fuel container and fuel tank to prevent static spark when fueling tank.

Do not remove radiator cap when engine is overheated. Stop engine and allow radiator to cool before removing cap. Do not add coolant to hot radiator to prevent dam-age to cylinder head or engine block.

Do not shift transmission shiftlever when truck is in motion.

Do not tilt mast forward until load is lowered to lowest possible position before tilting.

Travel in reverse when transporting heavy loads.

Sound horn at exits, corners, elevators, and when approaching pedestrians.

Always shut off engine and set hand brake before leaving truck.

Change In force: C3 and C4

TM 10-3930-618-10
C4

CHANGE

NO. 4

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington D.C., *30 September 1991*

OPERATOR'S MANUAL
TRUCK, LIFT, FORK: GASOLINE ENGINE DRIVEN; PNEUMATIC TIRED WHEELS; 6000-LB. CAPACITY; 168-INCH LIFT; ALLIS-CHALMERS MODEL FP60-24PS; ARMY MODEL MHE-213, NSN 3930-00-935-7979

TM 10-3930-618-10, 22 November 1971, is changed as follows:
page 1-1, the following paragraph is added after Section II. "DESCRIPTION AND DATA:"

page 3-5, table 3-1, Preventive Maintenance Checks And Services, preceding "AIR CLEANER;"

page 3-6, preceding paragraph 3-1 "Air Cleaner;"

page B-1, MAINTENANCE AND OPERATING SUPPLIES, preceding "AIR CLEANER:"

WARNING

If NBC exposure is suspected, all air filter media should be handled by personnel wearing protective equipment. Consult your unit NBC Officer or NBC NCO for appropriate handling or disposal instructions.

A decal has been developed that warns of NBC exposure. It is to be positioned in a noticeable place on or near the air cleaner or air filter housing. You may order the decal using part number 12296626, CAGEC 19207. Refer to TB 43-0219 for further information. Add the decal to the air *cleaner (page 3-7, figure 3-2 Engine air cleaner).*

WARNING

IF NBC EXPOSURE IS SUSPECTED ALL AIR FILTER MEDIA WILL BE HANDLED BY PERSONNEL WEARING FULL NBC PROTECTIVE EQUIPMENT. SEE OPERATOR/MAINTENANCE MANUAL.

7690-01-114-3702

Add the following WARNING to the following locations;

inside front cover, after the list of WARNINGS;

page 3-2, preceding "OE/HDO Air Cleaner;" and in the key preceding "Air Cleaner;"

By Order of the Secretary of the Army:

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

Official:

PATRICIA P. HICKERSON
Brigadier General, United States Army
The Adjutant General

Distribution:
To be distributed in accordance with DA Form 25-E, block 2212 Operator maintenance requirements for TM 10-3930418-10.

Change in force: C 3

CHANGE
NO. 3

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 29 *Nov 1984*

OPERATOR'S MANUAL
TRUCK, LIFT, FORK: GASOLINE ENGINE DRIVEN; PNEUMATIC TIRED WHEELS; 6000-LB. CAPACITY; 168-INCH LIFT; ALLIS-CHALMERS MODEL FP60-24PS; ARMY MODEL MHE-213, NSN 3930-00-935-7979

TM 10-3930-618-10, 22 November 1971, is changed as follows:

Front Cover. Change "FSN 3930-935-7979" to read "NSN 3930-00-935-7979".

Inside Front Cover. Add the following warnings to the list of safety precautions:

WARNING

Operation of this equipment presents a noise hazard to personnel in the area. The noise level exceeds the allowable limits for unprotected personnel. Wear ear muffs or ear plugs which were fitted by a trained professional.

'This change supersedes C 2, 9 May 1974.

WARNING

Drycleaning solvent, SD-2, used to clean parts, is potentially dangerous to personnel and property. Do not use near an open flame or excessive heat. The flash point of solvent is 590C (1380F).

Page i. Change "FSN 3930-935-7979" on line 13 to read "NSN 3930-00-935-7979."

Page i. The table of contents is superseded as follows:

Page 1-1. Paragraph 1-3 is superseded as follows:

1-3. Reporting Errors and Recommending Improvements

You can improve this manual by recommending improvements using DA Form 2028 (Recommended Changes to DA Publications and Blank Forms) and mail form direct

to Commander, US Army Tank-Automotive Command, ATTN: DRSTA-MB, Warren, MI 48090. A reply will be furnished to you.

Page 2-1. In chapter 2, immediately below the title, the following warning is added:

WARNING

Operation of this equipment presents a noise hazard to personnel in, the area. The noise level exceeds the allowable limits for unprotected personnel. Wear ear muffs or ear plugs which were fitted by a trained professional.

Paragraph 2-1 is superseded as follows:

2-1. Starting

a. Maintenance and Operating Supplies. Maintenance and operating supplies required for the initial 8 hours of operation of the fork lift truck are contained in table 2-1.

b. Perform the daily preventive maintenance procedures described in table 3-1.

c. Start the engine as follows:

(1) Engage the parking brake, if not previously engaged, by pulling up on lever.
(2) Transmission shift lever must be in NEUTRAL position.
(3) Pull choke out halfway.
(4) Depress accelerator pedal slightly.

(5) Turn ignition switch to ON position; press starter button. Release button when engine starts. If engine fails to start when starter button is pressed, pull choke out all the way. Do not press starter button more than 3 to 4 seconds at a time.

(6) Check oil pressure gage. Pressure should be between 20 and 30 pounds

(7) Check ammeter. Ammeter should indicate charge (+) at above idle speed.

(8) After engine is warm, push choke button in.

Table 2-1. Maintenance and operating supplies

(1) Component application	(2) National stock number	(3) Description	(4) Quantity required for initial operation	(5) Quantity required for 8 hrs operation	(6) Notes
AIR CLEANER		Oil, Lubricating (2) 5 gal drum as follows			(1) Includes quantity oil to fill engine oil system as follows
	9150 00 188 9858 9150 00 186 6668 9150004022372	OE/HDO 30 OE/HDO 10 OEA			6 qts - Crankcase 1 qt --011 Filter
CRANKCASE		Oil. Lubricating: (3)			(2) See C9100 IL for additional data and requisitioning procedures
	9150 00 188 9858 9150 00 186 6668 9150 00 402 2372	OE/HDO 30 OE, /HDO 10 OEA	7 qts (1)		(3) See current LO for grade application and replenishment intervals

Table 2-1. Maintenance and operating supplies (continued)

(1) Component application	(2) National stock number	(3) Description	(4) Quantity required for initial operation	(5) Quantity required for 8 hrs operation	(6) Notes
HYDRAULIC BRAKE CYLINDER		Brake Fluid. Silicone Auto motive. 1 gal can as follows'			
	9150-01 059-2586	HBA			
HYDRAULIC RESERVOIR		01, Lubricating: (2) 55gal drum as follows:			
	9150-00.191-2772 9150-00 402 2372	OE/HDO 10 OEA	**7**		

Table 2-1. Maintenance and operating supplies (continued)

(1) Component application	(2) National stock number	(3) Description	(4) Quantity required for initial operation	(5) Quantity required for 8 hrs operation	(6) Notes
RADIATOR		Antifreeze 5 gal can as follows:			
	6850-00-181-7933	Ethylene Glycol, type 1 Antifreeze: 55 gal. drum as follows			
	6850-00.17481806	Arctic grade			
FUEL TANK		Fuel, Gasoline: (21 Bulk as follows			
	9130 00o160-1818	Automotive, Combat 91A			
	9130 00-160-1830	Automotive, Combat 91C			
			8		

Table 2-1. Maintenance and operating supplies (continued)

(1) Component application	*(2)* National stock number	(3) Description	(4) Quantity required for initial operation	*(5)* Quantity required for 8 hrs operation	(6) Notes
TORQUE CONVERTER. TRANSMIS-SION, AND DIFFEREN TIAL	9150-00-191-2772 9150-00-402 2372	**Oil.** Lubricating (2) 55 gal drum as follows: OE/HDO 10 OEA			
GREASE POINTS	9150-00-190-0905	Grease. Auto. motive and Artillery. 5 lb. can as follows: GAA	**9**		

Section II, page 3-3, is superseded as follows:

Section II. OPERATOR/CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES

3-0. Introduction

To insure that the truck is ready for operation at all times, it must be inspected systematically so that defects may be discovered and corrected before they result in serious damage or failure. The preventive maintenance services to be performed are listed in table 3-1. Defects discovered during operation of the truck will be noted for future correction. Stop operation immediately if a deficiency is noted which would damage the equipment if operation were continued. All deficiencies will be recorded with corrective action taken on DA Form 2404 (Equipment Inspection and Maintenance Worksheet) at the earliest possible opportunity.

a. Do your before (B) PREVENTIVE MAINTENANCE just before you operate the vehicle. Pay attention to the CAUTIONS and WARNINGS.

b. Do your (D) PREVENTIVE MAINTENANCE during operation. (During operation means to monitor the forklift and its components/systems while they are actually being operated.)

c. Do your after (A) PREVENTIVE MAINTENANCE right after operating the vehicle. Pay attention to the CAUTIONS and WARNINGS.

d. Do your weekly (W) PREVENTIVE MAINTENANCE weekly.

e. Do your monthly (M) PREVENTIVE MAINTE-NANCE once a month.

f. If something doesn't work, troubleshoot it with the instructions in your TM 10-3930-618-10, or notify your supervisor.

g. Always do your PREVENTIVE MAINTENANCE in the same order so it gets to be a habit. Once you've had some practice, you'll spot anything wrong in a hurry,

h. If anything looks wrong and you can't fix it, write it on your DA Form 2404. If you find something seriously wrong, report it to Organizational Maintenance RIGHT NOW.

i. When you do your PREVENTIVE MAINTENANCE, take along the tools you will need to make all the checks. Take along a rag; you'll always need at least one.

WARNING

Dry cleaning solvent SD-2 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. If you become dizzy while using cleaning solvent, get fresh air immediately and get medical aid. If contact with skin or clothing is made, flush with water. If contact with eyes is made, wash your eyes with water and get medical aid immediately.

(1) Keep it clean: Dirt, grease, oil and debris only get in the way and may cover up a serious problem. Clean as you work and as needed. Use dry cleaning solvent (SD-2) on all metal surfaces. Use soap and water when you clean rubber or plastic material.

(2) Bolts, nuts and screws: Check them all for obvious looseness, missing, bent or broken condition. You can't try them all with a tool, of course, but look for chipped paint, bare metal, or rust around bolt heads. If you find one you think is loose, tighten it, or report it to Organizational Maintenance if you cannot tighten it.

(3) Welds: Look for loose or chipped paint, rust or gaps where parts are welded together. If you find a bad weld, report it to Organizational Maintenance.

(4) Electric wires and connectors: Look for cracked or broken insulation, bare wires, and loose or broken connectors. Tighten loose connectors and make sure the wires are in good shape.

(5) Hoses and fluid lines: Look for wear, damage and leaks and make sure clamps and fittings are tight. Wet spots show leaks, of course, but a stain around a fitting or connector can mean a leak. If a leak comes from a loose fitting or connector, tighten it. If something is broken or worn out, report it to Organizational Maintenance. Z. It is necessary for you to know how fluid leakage affects the status of your vehicle. The following are definitions of the types/classes of leakage you need to know to be able to determine the status of your vehicle. Learn, then be familiar with them and REMEMBER - WHEN IN DOUBT, NOTIFY YOUR SUPERVISOR!

Leakage Definitions for Organizational PMCS

Class I Seepage of fluid (as indicated by wetness or discoloration) not great enough to form drops.
Class II Leakage of fluid great enough to form drops but not enough to cause drops to drip from item being checked/inspected.

Class III Leakage of fluid great enough to form drops that fall from the item being checked/inspected

CAUTION

Equipment operation is allowable with minor leakages (Class I or II). Of course, consideration must be given to the fluid capacity in the item/ system being checked/inspected. When in doubt, notify your supervisor. Exceptions are fuel and brake system, where no leakage is allowable.

CAUTION

When operating with Class I or II leaks, continue to check fluid levels as required in your PMCS.

Class III or fuel and brake system leaks should be reported to your supervisor or Organizational Maintenance.

k. Asterisks (*) will be used to identify Make, Model, and Characteristic of the engine on the Forklift Model No. F60-24PS.

(*) Make: Allis-Chalmers, Model: 6MB-230, Characteristic: Oil base air cleaner.

(**) Make: Teledyne Continental, Model: F245-8518, Characteristic: Air cleaner element (Engine Replacement Kit).

Table 3-1. Operator/crew preventive maintenance checks and services

NOTE: Within designated interval, these checks are to be performed In the order listed.

B - Before D - During A - After W - Weekly Monthly

ITEM NO.	INTERVAL B	D	A	W	M	ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
						PERFORM WEEKLY (W) AS WELL AS BEFORE (B) OPERATOR PMCS IF.	
						1. You are the assigned operator and have riot operated the vehicle since the last weekly.	
						2. You are operating the vehicle for the first time	
1						EXTERIOR OF VEHICLE	
	•					a. Check for leaks or appearance of leaks	Any Class III or any fuel or brake system leaks
	•					b. Visually check overhead guard for bends. damage and obvious cracks in weldments	Obvious cracks in welds, bends or damage

Table 3-1. Operator/crew preventive maintenance checks and services (continued)

B - Before D - During A - After W - Weekly Monthly

ITEM NO.	INTERVAL B	D	A	W	M	ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
2		•				ENGINE OIL LEVEL Check oil dipstlck. Add oil to raise level between ADD and FULL mark on the dipstick.	
3		•				LIGHTS Check that lights are working.	
4		•				BRAKES Check for chatter, rubbing, uneven stopping and/or unusual noise.truck.	Service brake will not stop
		•				STEERING Check that truck steers free and easy.	Steering stuck or truck is hard to steer

Table 3-1. Operator/crew preventive maintenance checks and services (continued)

B - Before D - During A - After W - Weekly Monthly

ITEM NO.	INTERVAL B	D	A	W	M	ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
6		•				ACCELERATOR Check that the truck accelerator operates smoothly	Pedal stacks
7		•				HYDRAULIC CONTROLS a. Check that lifting and lowering is smooth.	Lifting and lowering jerky or uncontrollable,
		•				b. Forward and backward tilt is smooth and immediate.	Tilt does not operate.
8						INSTRUMENTS Observe the following instrument readings after achieving normal operating temperature.	

Table 3-1. Operator/crew preventive maintenance checks and services (continued)

B - Before D - During A - After W - Weekly Monthly

ITEM NO.	INTERVAL B	D	A	W	M	ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
		•				a. 0il pressure gauge- (1) (*) 25 to 30 PSI (2) (**) 30 to 40 PSI	Reading on gauges do not fall within specified ranges
		•				b. Ammeter indicates charge I+) at above idle speed.	Continuous high rate of charge or discharge. or erratic.
		•				c. Water temperature gauge - (1) (*) 160° - 180° (2) (**) 178° - 205°	Exceeds the maximum temperature ranges.

Table 3-1. Operator/crew preventive maintenance checks and services (continued)

B - Before D - During A - After W - Weekly Monthly

ITEM NO.	INTERVAL B	D	A	W	M	ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
9		•				HORN Check horn by pressing button,	
10				•		RADIATOR Check coolant level - should be 1 inch from bottom of f1ll neck	
11				•		AIR CLEANER a. Check and clean air cleaner element as necessary. Have Organizational Mainte nance replace as required -	
						(**) Engine	
				•		b. Refill oil reservoir to level mark -	

Table 3-1. Operator/crew preventive maintenance checks and services (continued)

B - Before D - During A - After W - Weekly Monthly

ITEM NO.	INTERVAL B	D	A	W	M	ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
						(*) Engine	
				•		TIRE Check for excessive wear, cut. cracks. abrasions or low or flat tire (Correct tire pressure is 100 PSI) failure during operation	Tires worn, cut, abraded which would result In tire One or more tires missing, unserviceable or flat
13						BATTERY **WARNING** Do not smoke or allow any flame or spark in the vicinity while checking the battery. The battery generates hydrogen, a highly explosive gas	
				•		a. Inspect level of electrolyte Level should be 1/2 inch above plates.	Battery cracked or discharged

Table 3-1. Operator/crew preventive maintenance checks and services (continued)

B - Before D - During A - After W - Weekly Monthly

ITEM NO.	INTERVAL B	D	A	W	M	ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
				•		b. Check battery post and terminals for corrosion If present, notify Organizational Maintenance,	
14						HYDRAULIC RESERVOIR	
				•		Lower mast and have all cylinders retracted Check reservoir fluid level on dipstick, add oil, if needed, to raise to FULL mark	Class III leak.
15						FAN BELT	
				•		Inspect for loose or frayed condition.	Belt slips, broken or damaged

Table 3-1. Operator/crew preventive maintenance checks and services (continued)

B - Before D - During A - After W - Weekly Monthly

ITEM NO.	INTERVAL B	D	A	W	M	ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
16						TRANSMISSION OIL	
				•		Check fluid level on dipstick on filler cap on axle housing. Add transmission fluid as necessary to bring level between ADD and FULL mark on dipstick.	Class III leak

Page A-1. Appendix A, change "TM 9-6140-200-15" to read "TM 9-6140-200-14". After section A-3, Maintenance, add the following:

A-3. Maintenance
Change "TM 38-750" to read "DA PAM 735-750". After section A-3, Maintenance, add the following:

A-4. Environmental Health
TB MED 501Occupational and Environmental Health Hearing Conservation

Page B-1. Appendix B is superseded as follows:

APPENDIX B
BASIC ISSUE ITEMS LIST AND ITEMS
TROOP INSTALLED OR AUTHORIZED LIST
Section I. INTRODUCTION

B-1. Scope. This appendix lists items required by the operator for operation of the fork lift truck.
B-2. General. This list is divided into the following sections:
a. Basic Issue Items List - Section III. Not applicable.
b. Items Troop Installed or Authorized List- Section Il/.
A list of items in alphabetical sequence, which at the discretion of the unit commander, may accompany the fork lift truck. These items are not subject to turn-in with the truck when it is evacuated.

B-3. Explanation of Columns. The following provides an explanation of columns in the tabular list of items troop installed or authorized, section III.

a. Source, Maintenance, and Recoverability Code(s) (SMR).

(1) Source code indicates the source for the listed item. Source codes are:

Code	*Explanation*
P	Repair parts, special tools and test equipment supplied from GSA/DSA or Army supply system and authorized for use at indicated maintenance levels.

Code	*Explanation*
P	2Repair parts, special tools, and test equipment which are procured and stocked for insurance purposes - s because the combat or military essentiality ot the end item dictates that a minimum quantity be available in the supply system.

(2) Maintenance code, indicates the lowest level of maintenance authorized to install the listed item. The maintenance level code is:

Code	*Explanation*
C	Crew/Operator

(3) Recoverability code indicates whether unserviceable items should be returned for recovery or salvage. Items not coded are unrecoverable. Recoverability codes are:

Code	*Explanation*
R	Applied to repair parts (assemblies and components), special tools, and test equipment which are considered economically repairable at direct support and general support maintenance levels.
S	Repair parts, special tools, test equipment, and assemblies which are economically repairable at DSU and GSU activities and which normally are furnished by supply on an exchange basis.

b. National Stock Number. This column indicates the National stock number assigned to the item which will be used for requisitioning purposes.

c. Description. This column indicates the National item name and any additional description of the item required.

d. Unit of Measure (U/Mi. A 2-character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based; e.g., ft, ea, pr; etc.

e. Quantity Authorized. This column indicates the quantity of the item authorized to be used with the equipment.

Section III. ITEMS TROOP INSTALLED OR AUTHORIZED LIST

National stock number	*Description*	*U/M*	*Qty auth*
7510-00-b883494	BINDER, LSE LF-3RNG-GR	EA	1
752000-659-9618	CASE, MAINTENANCE AND OPERATION MANUAL	EA	1
4210-00-889-2221	EXTINGUISHER, FIRE, D	EA	1

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's Maintenance requirements for Warehouse Equipment.

***TM 10-3930-618-10**

Technical Manual
No 10-3930-61S8-10

Headquarters
Department or the Army
Washington, D. C, *22 November 1971*

OPERATOR'S MANUAL

TRUCK, LIFT, FORK; GASOLINE ENGINE DRIVEN; PNEUMATIC TIRED WHEELS; 6000-LB CAPACITY; 168-INCH LIFT; ALLIS-CHALMERS MODEL FP60-24PS; ARMY MODEL MHE-213, FSN 3930-935-7979

*This manual supersedes TM 10-3930-618-10, 2 February, 1971

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1-1. Purpose and Scope
This manual is for your use in operating the Allis-Chalmers 6, 000-lb. forklift truck, Army Model MHE-213.

1-2. Maintenance Forms and Records
Maintenance forms and records you are required to use are explained in TM 38-750.

1-3. Recommending Improvements
You can improve this manual by recommending improvements, using DA Form 2028 (Recommended Changes to Publications) or a letter and mail direct to Commanding General, U. S. Army Mobility Equipment Command, ATTN. AMSME-MPP, 4300 Goodfellow Boulevard, St. Louis, Mo. 63120 A reply will be furnished direct to you
Section II. DESCRIPTION AND DATA

1-4. Description
The forklift truck is powered by a 6-cylinder gasoline engine; it has a lifting capacity of 6, 000 pounds; and a

lifting height of 168 inches. The truck is designed primarily for use in a warehouse or on a hard surface pavement. A power-steering booster cylinder provides maximum steering control of the truck. A single lever shift control mounted on the steering column is used to control the direction of travel. Lift and tilt cylinder controls are located to the right of the operator. If you need a detailed description of any component of the truck, refer to TM 10-3930-618-20 which is available at organizational maintenance

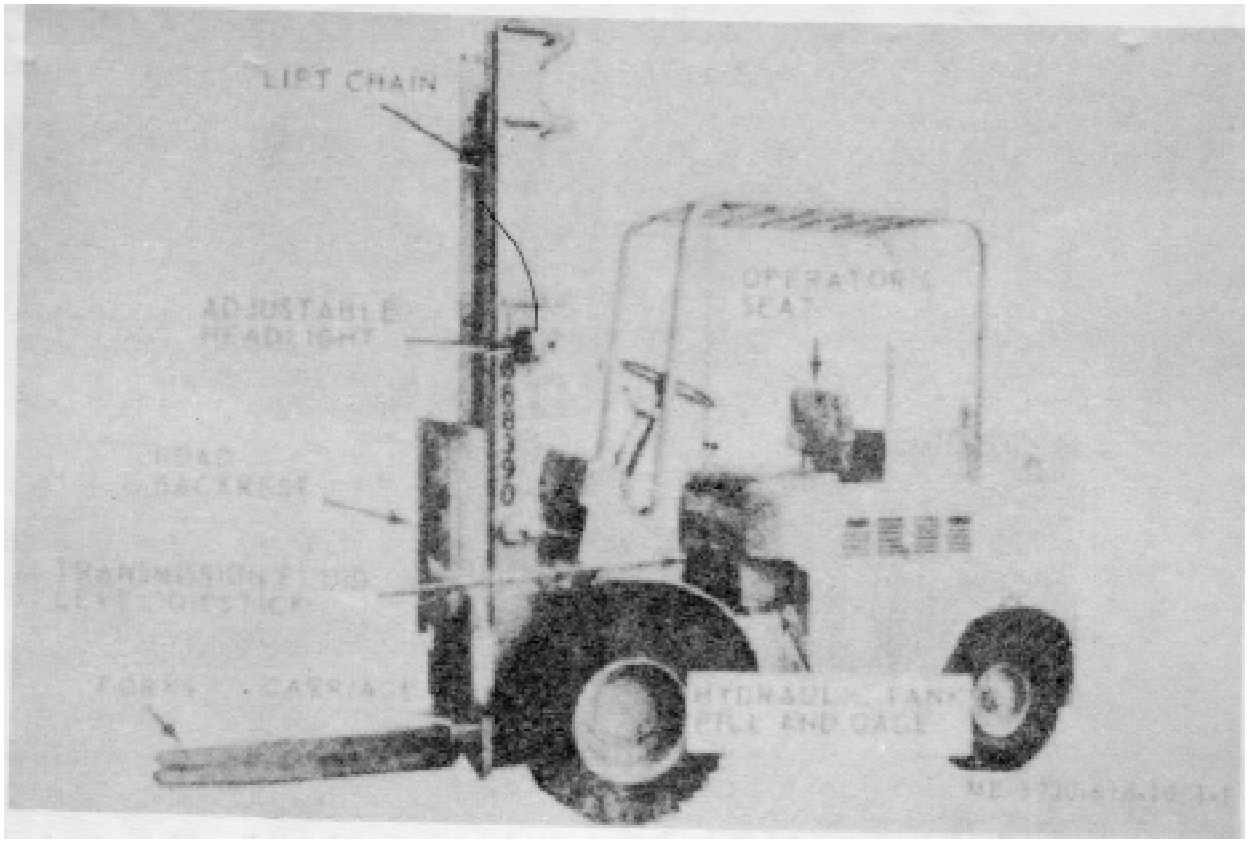


Figure 1-1. Left-front view of truck.

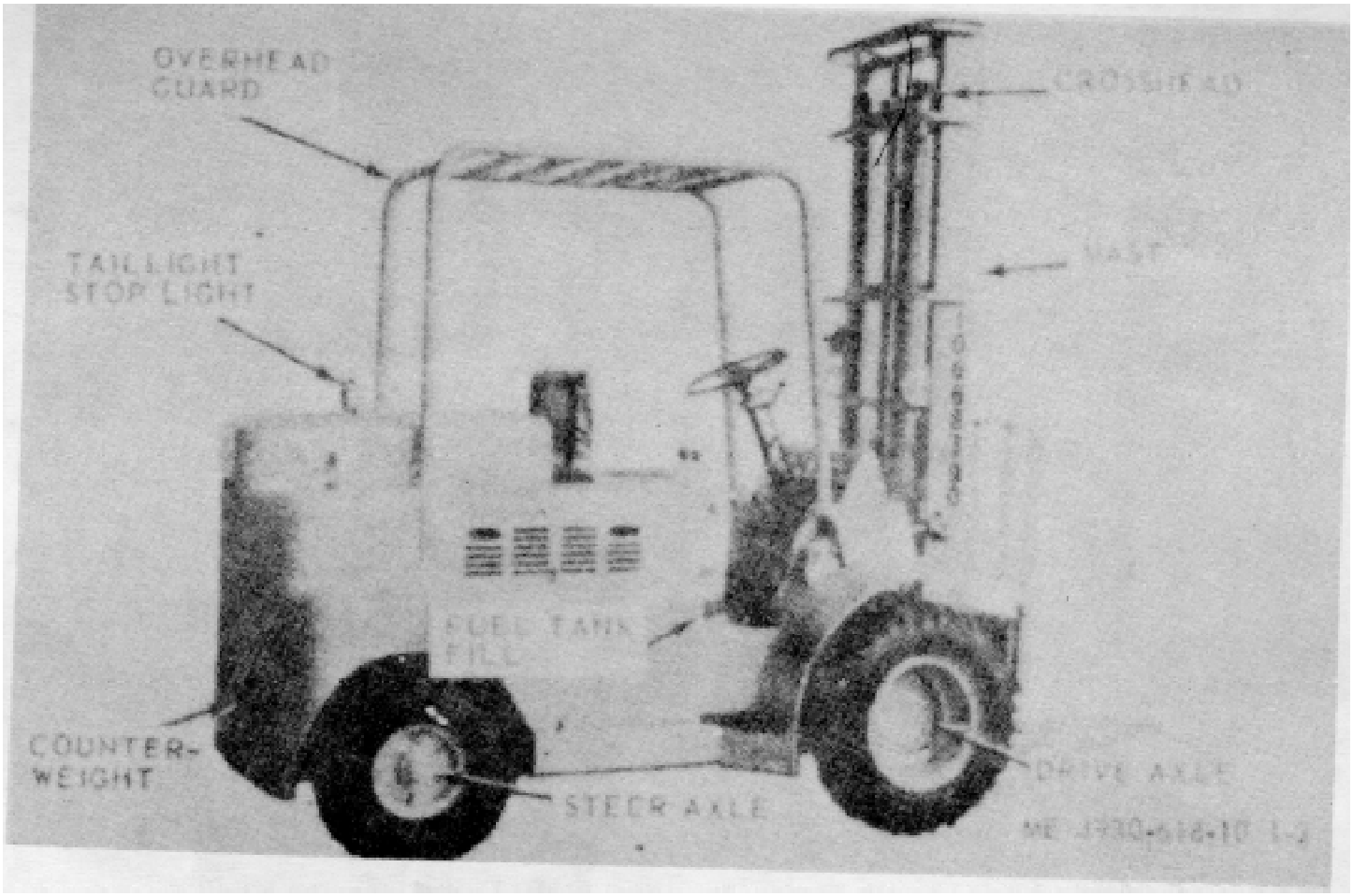


Figure 1-2. Right-rear view of truck

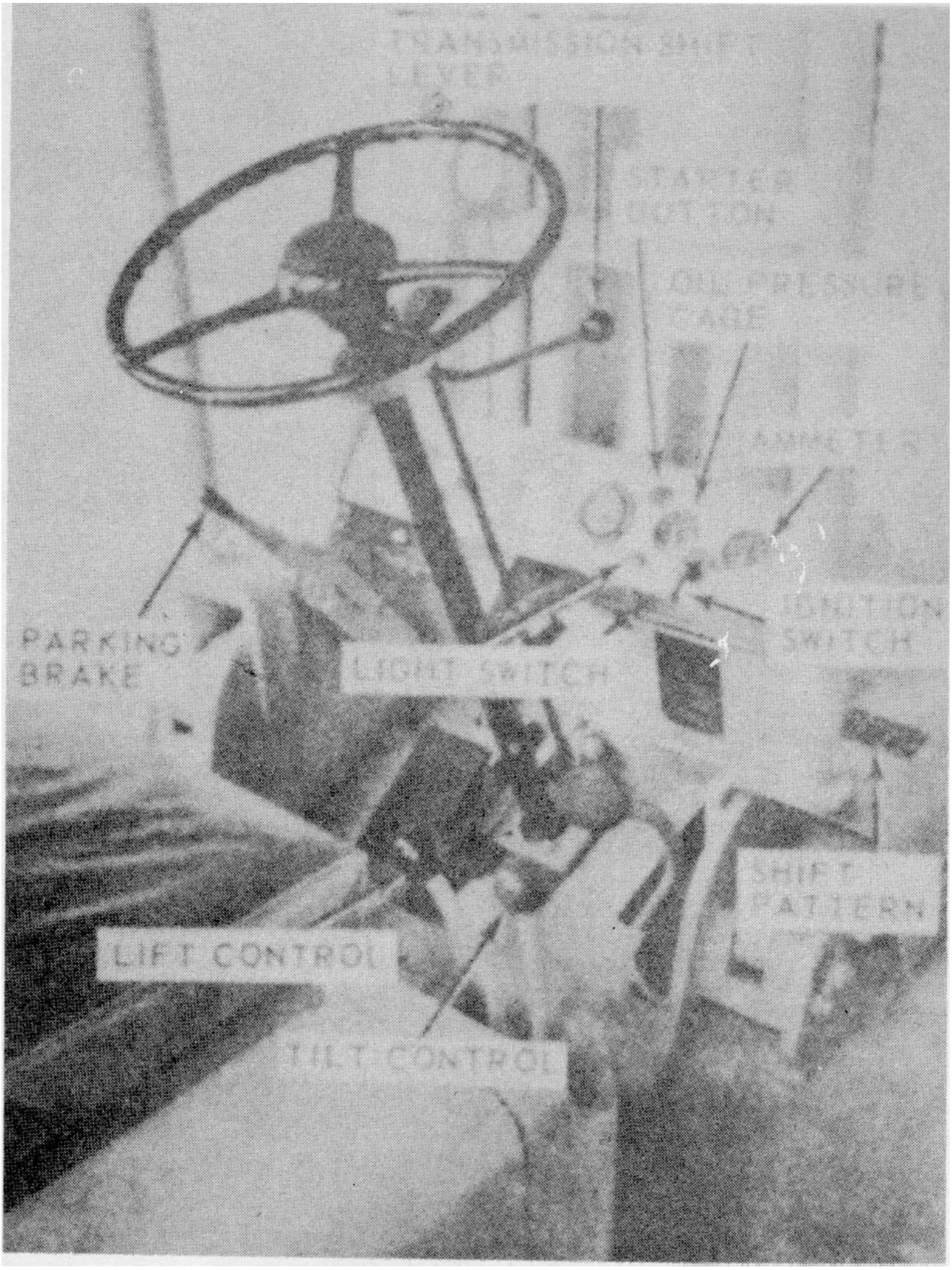


Figure 1-3. Controls and instruments, right-hand view.

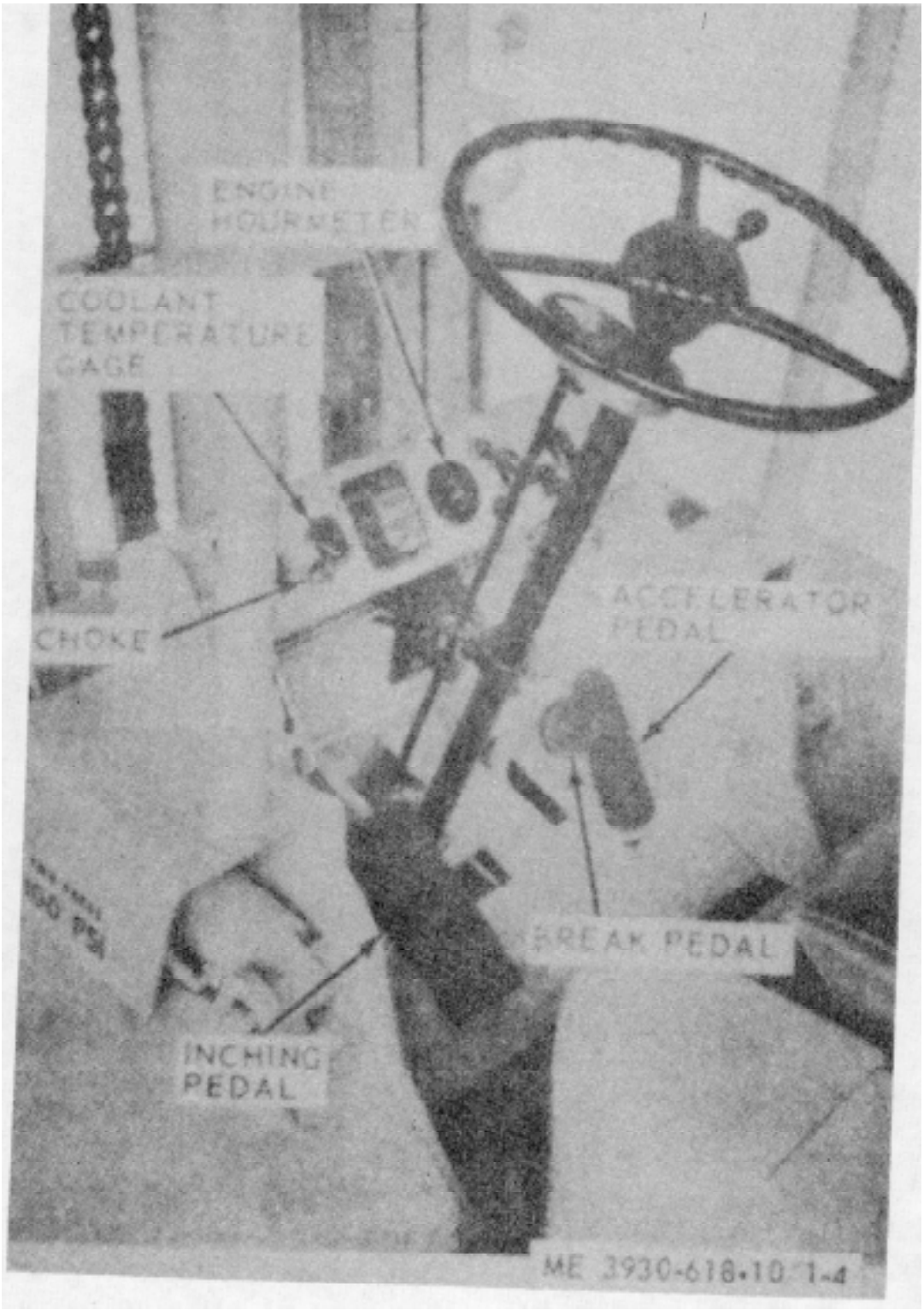


Figure 1-4. Controls and instruments, left-hand view.

1-5. Tabulated Data

a. Component Capacities (approx)

Radiator	16 qts.
Transmission.	10 qts
Drive axle	5 pts
Hydraulic tank	7 2 gal
Fuel tank	14 5 gal

b. Truck Characteristics.

Length including forks	12 ft 4 in
Forward speed	12 mph
Reverse speed	12 mph
Lift height .	168 in
Forward mast tilt	3°
Reverse mast tilt	10°
Turning radius	8 ft 2 in
Under clearance or mast	6 in

CHAPTER 2
OPERATING INSTRUCTIONS

NOTE

The operator must possess a valid SF-46 (U. S. Government Vehicle Operators Identification Card) be-fore operating this truck.

2-1. Starting

a. Perform the daily preventive maintenance procedures described in table 3-1.

b. Start the engine as follows:

(1) Engage the parking brake, if not previously engaged, by pulling up on lever.

(2) Transmission shift lever must be in NEUTRAL position.

(3) Pull choke out half-way.

(4) Depress accelerator pedal slightly.

(5) Turn ignition switch to ON position; press starter button. Release button when engine starts. If engine fails to start when starter button is pressed, pull choke out all the way. Do not press starter button more than 3-to-4-seconds at a time.

(6) Check oil pressure gage. Pressure should be between 20- and 30-pounds

(7) Check ammeter. Ammeter should indicate charge (+) at above idle speed.

(8) After engine is warm, push choke button in.

2-2. Operating the Truck

a. Lift and Tilt Controls.

(1) To raise the forks, pull the lift control lever back. Push the lift control lever forward to lower the forks. When the lift control level is released, it will re-turn automatically to hold position and lifting or lower-ing operation will stop.

(2) To tilt the mast forward, push the tilt control lever forward. Pull the tilt control lever back to tilt the forks back. When the tilt control lever is released, it will return automatically to hold position and tilting operation will stop.

(3) Raise the forks high enough from the surface to prevent dragging when moving before putting truck in motion.

b. Truck Operating Controls.

(1) Move transmission shift lever UP for forward motion and DOWN for reverse motion.

(2) Release parking brake by pushing forward on lever. Hold truck in place with foot brake pedal.

(3) Depress accelerator to increase engine speed and move truck in direction selected.

(4) Depress brake pedal to stop truck.

CAUTION

Come to a complete stop before changing direction.

(5) The inching control pedal permits smooth maneuvering of the truck when high engine speeds are

necessary to perform lifting or tilting operations. When depressed, the inching pedal can be used to reduce traveling speed to a stop if required.

c. Lifting the Load.

(1) Move truck slowly and carefully into position and engage load properly. Truck should be square with load; forks spaced evenly between pallet stringers, and apart as far as possible.

(2) Move forward until load touches carriage.

(3) Tilt mast back; then lift load smoothly. Lifting speed is controlled by engine speed.

(4) When lifting drums or round objects, tilt mast forward and slide fork tips along floor to get under drum. Tilt mast backward until drum is cradled before lifting. Drums with large ribs may be lifted in upright position if forks can be spaced accurately enough for good safe grip under ribs.

d. Traveling with Load.

(1) Tilt mast back to cradle load. Lift load only as high as required to maintain clearance from floor.

(2) Operate forward on up grades and in reverse on down grades. For better vision, operate in reverse when carrying bulky loads

(3) When turning sharp corners, keep close to in-side corner and begin turn when inside drive wheel meets corner. When turning in narrow aisles keep as far from stockpiles as possible when turning into aisle.

(4) Always enter railway cars at an angle; never

go straight in.

e. Unloading.

(1) Move truck into unloading position, tilt mast forward only when directly over unloading area.

(2) Deposit load; then back away carefully to dis-
engage forks.

2-3. Stopping the Truck

a. Park truck only in authorized areas.

b. Place transmission shift lever in NEUTRAL position.

c. Engage parking brake.

d. Lower forks to floor.

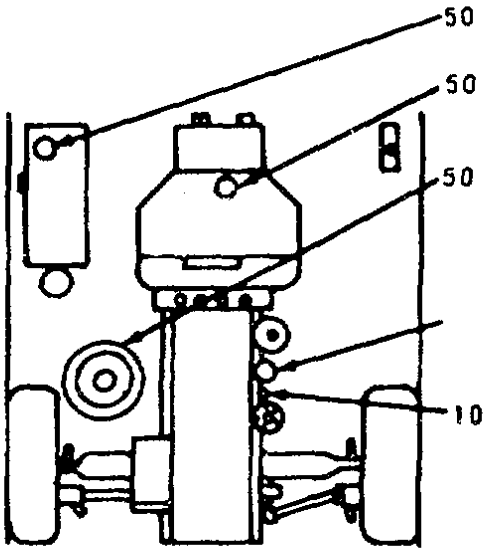
e. Turn ignition switch to OFF position to stop the engine.

f. Chock the wheels when parking on an incline.

CHAPTER 3
MAINTENANCE INSTRUCTIONS

Section I. LUBRICATION

Lubrication of the truck is the responsibility of organizational maintenance. The operator will perform those lubrication services necessary to keep the truck in operation. Figure 3-1 locates the check points and types of lubricants to be used.



--KEY--

OE/HDO Hydraulic Reservoir Fill and Level (Check level) (See key)

OE/HDO Transmission Fill and Level (Check level)

OE/HDO Air Cleaner (See key) (Refill oil reservoir to level mark)

OE/HDO Engine Oil Fill Cap (See key)

Engine Oil Level Gage (Check level) CAUTION: When OES oil is used the level will be checked more often.

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES		
		Above +32°F	+40°F to -10°F	0°F to -65°F
OE-OIL, Engine, Heavy Duty		OE/HDO 30	OE/HDO 10	OES
Engine Crankcase	8 qt			
Air Cleaner	1/2 qt			
Hydraulic Reservoir	28 qt	OE/HDO 10		
Transmission	11 qt			
OES-OIL, Engine, Sub-zero				

NOTES:
1. LUBRICANTS. The following is a list of lubricants with the Military Symbols and applicable Specification numbers.
OE/HDO MIL-L-2104 OES MIL-L-10295

NOTE: OE/HDO 10 is compatible with hydraulic oil used in hydraulic reservoir and may be intermixed.

ME 3930-818-10/3-1

Figure 3-1. Lubrication instructions

Section II. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

To insure that the truck is ready for operation at all times, it must be inspected systematically so that defects may be discovered and corrected before they result in serious damage or failure. The preventive mainte-nance services to be performed are listed in table 3-1. Defects discovered during operation of the truck will be noted for future correction. Stop operation immediately if a deficiency is noted which would damage the equip-ment if operation were continued. All deficiencies will be recorded with corrective action taken on DA Form 2404 (Equipment Inspection and Maintenance Work-sheet) at the earliest possible opportunity.

Table 3-1. Preventive Maintenance Checks and Services

Interval and Sequence No			Item to be Inspected Procedure
Before operation	During operation	After operation	
1			RADIATOR Check level, add coolant as required
2		7	FUELTANK Check level, add fuel as required
3			ENGINE Check oil level, fill as required.
4			TIRES Inspect for unusual wear, cuts, and presence of foreign objects Check tires for proper inflation of 100 psi
5			LIGHTS Check all lights to be sure they operate properly
	6		INSTRUMENTS With engine running, check for normal operating readings Ammeter-slight positive charge Oil pressure gage-25-30 psi Temperature gage -- 160’ to 180’ F

Interval and sequence No			Item to be inspected Procedure
Daily		Weekly	
		1	HYDRAULIC OIL TANK Check for proper oil level, add oil as required
		2	TRANSMISSION Check for proper oil level, add oil to FULL mark as required
		3	FAN BELT Inspect belt for frayed condition, deterioration, and proper adjustment or /-inch deflection when pressure is applied midway between pulleys.
		4	LIFTCHAINS Inspect for cracked, broken, or excessively worn links
		5	BATTERY Check level of electrolyte Level should be ½'2 inch above plates Inspect case for cracks and leaks Inspect terminals and cables for secure mounting and deterioration
		6	AIR CLEANER Check for proper oil level and fill to FULL mark as required Check for sediment Clean as needed
		7	FUEL SEDIMENT BOWL Check bowl for sediment Clean as needed

Section III. MAINTENANCE PROCEDURES

3-1. Air Cleaner

(fig. 3-2)

The oil bath type air cleaner is mounted on the left side hood support angle. To service the air cleaner proceed as follows:

a. Loosen and remove the wingnut and washer that secures the air cleaner to the bottom of the angle.
b. Lift air cleaner baffle and air cleaner top from lower body.
c. Empty oil from lower body and clean body with solvent-saturated cloth. Dry thoroughly.
d. Fill lower body to indicated level with clean engine oil of the type used in the engine crankcase.
e. Position air cleaner and baffle in place and secure with washer and wingnut.

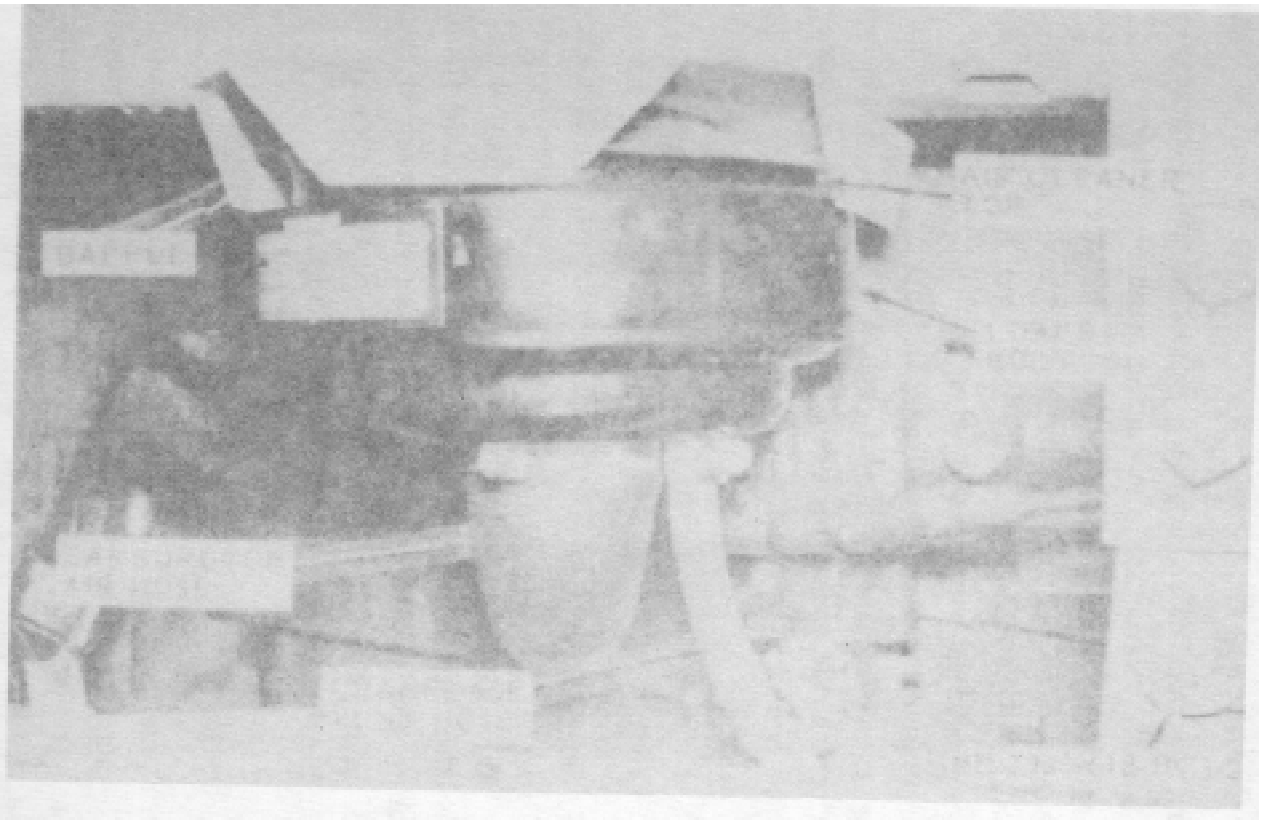


Figure 3-2. Engine air cleaner.

3-2. Crankcase Oil Level

In order to obtain an accurate measurement of the level of oil in the crankcase, the engine must be stopped and the truck parked on level ground. Allow at least 5 minutes for the oil to drain back into the oil pan. With-draw the dipstick which is located on the right side of the engine and wipe clean. Reinsert all the way and then remove for a true reading. Add oil as necessary to bring oil level up to FULL mark on stick. In cold weather sludge formation will increase and oil changes may be required more frequently to eliminate contamination.

3-3. Transmission Fluid Level

The transmission fluid dipstick is reached through the opening in the grill at the rear of the operator's right foot. With the engine running and the fluid hot, with-draw the dipstick and check the fluid level. Add fluid through the dipstick opening to raise the level to the FULL mark on the dipstick. Refer to the lubrication order for the correct transmission fluid to use.

3-4. Radiator

Check the coolant level in the radiator. Level should be 1-inch from bottom of fill neck. Use equal parts water and glycol base antifreeze when replenishing coolant. Check the area of the water pump for evidence

of leaking coolant. Refer to organizational maintenance for corrective action.

3-5. Battery

WARNING

Do not smoke or allow open flames near charging batteries. Severe injury from explosion or acid may result. Avoid contact with electrolyte or clothing or flesh.

Check the electrolyte level weekly. Add distilled water if necessary. Keep the top of the battery clean.

3-6. Fuel Filter

(fig. 3-3).

a. Loosen thumbnut on filter bail, swing bail to one side, and remove filter bowl and screen.

b. Clean bowl and screen with SD, P-D680. Be sure no sediment or lint remains in bowl or on screen.

c. Reinstall gasket, screen, and bowl. Swing bail into place and tighten nut.

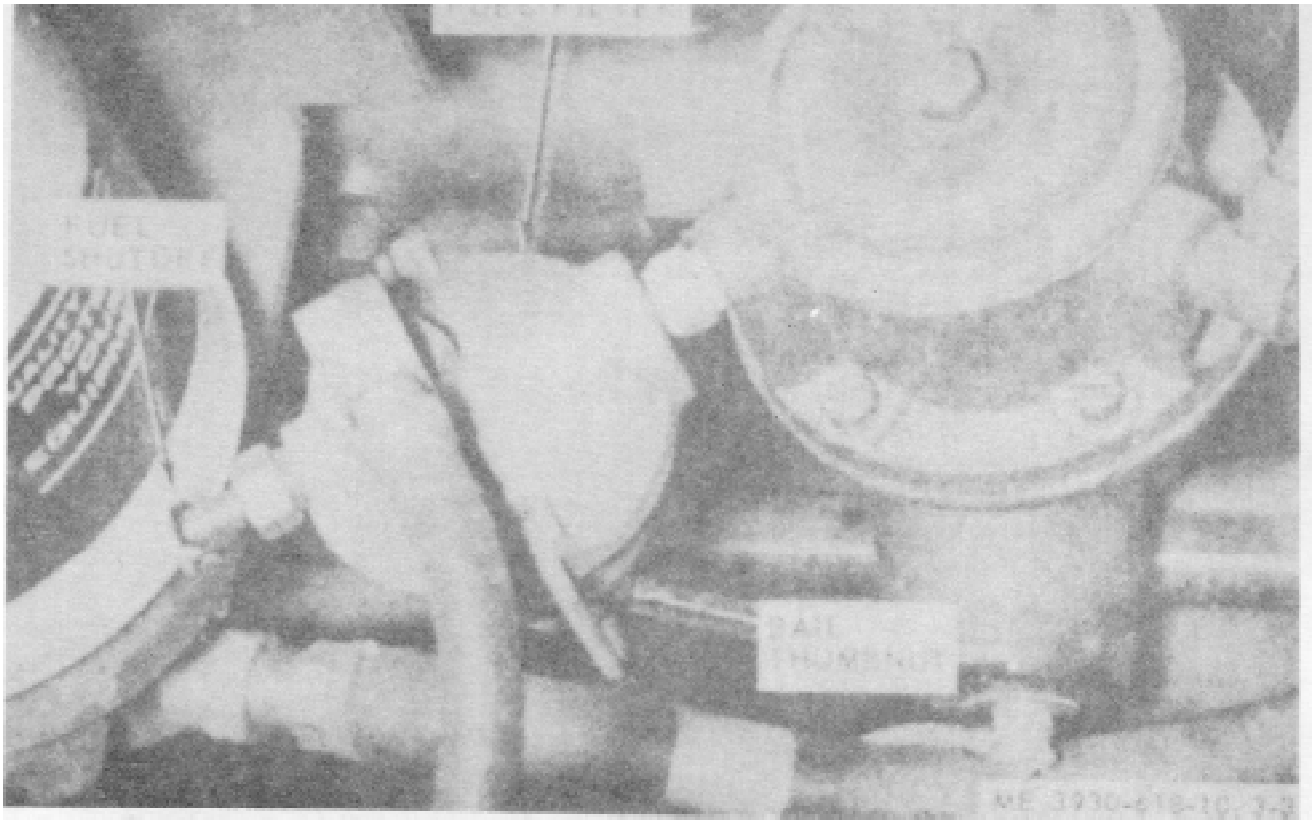


Figure 3-3. Fuel filer.

APPENDIX A
REFERENCES

A-1. Fire Protection

TB 5-4200-200-10	Hand Portable Fire Extinguishers Approved for Army Users

A-2. Lubrication

C9100IL	Fuels, Lubricants, Oils, and Waxes

A-3. Maintenance

TB750-651	Use of Antifreeze Solutions and Cleaning Compounds in Engine Cooling Systems
TM 9-6140-200-15	Operation and Organizational, Field and Depot Maintenance; Storage Batteries, Lead-Acid Type
TM38-750	The Army Maintenance Management System (TAMMS)

APPENDIX B
MAINTENANCE AND OPERATING SUPPLIES

Component Application	Federal Stock Number	Description	Quantity Required F/initial Operation	Notes
AIR CLEANER		Oil Lubricating: (2) 5 gal. drum as follows.		(1) Include quantity of oil to fill engine oil system a follows.
	9150-265-9435	OE/HDO 30		6qts. - Crankcase
	9150-265-9428	OE/HDO 10		
Filter	9150-242-7603	OES		1 qt. - Oil

Component Application	Federal Stock Number	Description	Quantity Required F/initial Operation	Notes
CRANKCASE		Oil Lubricating (3)		(2) Sec C9100IL for additional data and requisitioning procedure
	91 50265-9435 9150265-9428 91 50242-7603	OE/HDO 30 OE/HDO 10 OES	7 qts. (1)	(3) Se current L. O. for grade application and replenishment intervals.
HYDRAULIC BRAKE CYLINDER		Brake Fluid-Automotive 1 gal. can as follows:		
	915-252-6375	HBA		

Component Application	Federal Stock Number	Description	Quantity Required F/initial Operation	Notes
HYDRAULIC RESERVOIR		Oil Lubricating. (2) 55 gal drum as follows		
	9150-265-9430	OE/HDO 10		
	9150-242-7605	OES		
RADIATOR		Antifreeze: 5 gal. can as follows		
	6850-224-8730	Ethylene Glycol Type t		
		Antifreeze: 55 gal. drum as follows:		
	6850-174-1806	Artic grade		

APPENDIX B
MAINTENANCE AND OPERATING SUPPLIES

Component Application	Federal Stock Number	Description	Quantity Required F/initial Operation	Notes
FUEL TANK		Fuel Gasoline: (2) Bulk as follows		
	9130-160-1818	Automotive Combat 91A		
	9130-160-1830	Automotive Combat 91C		
TORQUE CONVERTER. TRANSMISSION, AND DIFFERENTIAL		Oil Lubricating: (2) 55 ga. drum as follows		
	9150-265-9430	OE/HDO 10		
	9150-242-7605	OES		
GREASE POINTS		Grease Automotive and Artillery 5lb can as follows		
	915O1904-0905	GAA		

By Order of the Secretary of the Army-

W. C. WESTMORELAND,
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Official *Chief of Staff*

VERN L. BOWERS
Major General, United States Army,
The Adjutant General

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