

TM 10-3930-222-10

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S MANUAL

TRUCK, LIFT, FORK, GASOLINE,
PNEUMATIC-TIRED WHEELS,
15,000-POUND CAPACITY

(HYSTER MODEL H150C, ARMY MODEL MHE 178)

FEDERAL STOCK NUMBER 3930-897-4632

This copy is a reprint which includes current
pages from Changes 1 through 5.

HEADQUARTERS, DEPARTMENT OF THE ARMY
SEPTEMBER 1962

CHANGE

No. 6

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington D.C., 22 March 1991

Operator's Manual

**TRUCK, LIFT, FORK; GASOLINE; PNEUMATIC-TIRED WHEELS;
15,000-POUND CAPACITY; 210 IN. LIFT HEIGHT**

HYSTER MODEL H150C:

MHE 178 (NSN 3930-00-897-4632)

MHE 178A (NSN 3930-01-054-3894)

MHE 178B (NSN 3930-01-054-3895)

MHE 178C (NSN 3930-01-052-5218)

AND

HYSTER MODEL H150F: MHE 223 (NSN 3930-00-151-4434)

TM 10-3930-220-10, 17 September 1962, is changed as follows:

Inside front cover. Add the following warning:

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.

Page 1. The manual title is changed to read as shown above.

Page 2. Change the title of Appendix II to "Basic issue items list and items troop installed or authorized list".

Page 3.

Paragraphs 1 through 4 are superseded as follows:

1. Scope

This manual is for your use in operating the Hyster Forklift Truck, Models H150C, Army Models MHE 178, MHE 178A, MHE 178B, MHE 178C, and H150F, Army Model MHE 223.

2. Maintenance Forms, Records, and Reports

Maintenance forms, records, and reports which are to be used by maintenance personnel at all mainte-

nance levels are listed in and prescribed by DA Pam 738750.

3. Destruction of Materiel to Prevent Enemy use

Instructions for destruction of materiel to prevent enemy use will be found in TM 750-244-6.

4. 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, U.S. Army Tank-Automotive Command, A-1-TN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished to you.

Paragraph 6. The first sentence is changed to read as follows: "The Hyster Model H150C and Model H150F (figs. 1 and 2) are gasoline-powered, front-wheel drive, rear-wheel steer, materials-handling forklift trucks."

Page 6.

Paragraph 6. The last sentence is changed to read "The Model H150C is nonradio-suppressed. The Model H150F is radio-suppressed."

Paragraph 7c, line 20, *Towing capacity at 0° grade.* Change "395,000 lb." to "9350 lb."

*This change supersedes C 5, 5 April 1974.

Page 10. Immediately after Section III title, add the following Warning:

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.

Page 11, paragraph 14b. Subparagraphs (2) and (3) are superseded as follows:

(2) Pull back on the high-and-low speed lever (par. 11e) to obtain low speed and accelerate the engine.

(3) When the truck speed is sufficient, shift into high speed by pushing forward on the high-and-low speed lever.

Caution: Do not shift direction control lever to reverse when traveling in forward direction. Stop the truck, then shift into reverse.

Page 13.

Paragraph 21 is superseded as follows:

21. General

Refer to current Lubrication Order for lubrication requirements.

Section III is superseded as follows:

Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

23. General

Your Preventive Maintenance Checks and Services Table lists the inspections and care of your equipment required to keep it in good operating condition.

24. Operator/Crew Preventive Maintenance Checks and Services

a. The number column of your PMCS table is the source for the number used on the TM Number Column on DA Form 2404.

b. The interval column of your PMCS table tells you when to do a certain check or service.

(1) Before you operate, perform your BEFORE (B) PMCS. Always keep in mind the WARNINGS and CAUTIONS.

(2) While you operate, perform your DURING (D) PMCS. Always keep in mind the WARNINGS and CAUTIONS.

c. Once a week, perform your WEEKLY (W) PMCS. Always keep in mind the WARNINGS and CAUTIONS.

d. The procedure column of your PMCS table tells you how to do the required checks and services. Carefully follow these instructions. If you do not have the

tools, or if the procedure tells you to do so, have organizational maintenance do the work.

e. If your equipment does not perform as required, refer to the troubleshooting section of this manual for possible problems. Report any malfunctions or failures on the proper DA Form 2404 or refer to DA Pam 738-750.

Note: The terms ready/available and mission capable refer to the same status: Equipment is on hand and is able to perform its combat missions (see DA Pam 738-750).

f. Equipment is not ready/available if: column. This column tells you when and why your equipment cannot be used.

g. Always do your PMCS in the same order so it gets to be a habit. Once you have had some practice, you will spot anything wrong in a hurry.

h. When you do your PMCS, take along a rag or two.

i. While performing PMCS, observe WARNINGS and CAUTIONS preceding those operations which could endanger your safety or could result in damage to the equipment.

Warning: Dry cleaning solvent, P-D-680, is toxic and flammable. Wear protective goggles and gloves and use only in a well-ventilated area. Avoid allowing solvent to contact skin, eyes, and clothes, and do not breathe vapors. If you become dizzy while using cleaning solvent, immediately get fresh air and get medical aid. If solvent comes in contact with skin or clothing, wash with water. If solvent gets in your eyes, immediately flush eyes with water and get medical aid. Flash point of solvent is 138°F (59°C).

(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 (P-D-680) to clean metal surfaces. Use soap and water when you clean rubber or plastic material.

(2) Bolts, nuts, and screws. Check that they are not loose, missing, bent, or broken. You can't try them all with a tool, of course, but look for chipped paint, bare metal, or rust around bolt heads. Tighten any bolt, nut, or screw that you find loose.

(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) Electrical wires and connectors. Look for cracked or broken insulation, bare wires, and loose or broken connectors. Report damaged or loose wiring to organizational maintenance.

(5) Hoses and fluid lines. Look for wear, damage, and leaks. Make sure clamps and fittings are tight. Wet spots show leaks, but a stain around a fitting or connector can also mean a leak. If leakage comes from a loose fitting or connector, tighten the fitting or connector. If something is broken or worn out, report it to organizational maintenance.

(6) Vehicle must be on level ground in order to get correct fluid level measurement.

j. It is necessary for you to know how fluid leaks affect the status of your equipment. The following are definitions of the types/classes of leakage you need to know to be able to determine the status of your equipment. Learn and be familiar with them and REMEMBER-when in doubt, notify your supervisor.

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 oper-

ating with Class I or II leaks, continue to check fluid levels as required in your PMCS. Class III leaks should be reported to your supervisor or organizational maintenance. Equipment is not ready/available if any gasoline leak is present, whether Class I, II, or III (ref. AR 38555).

Leakage Definitions for Operator/Crew 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 the item being checked/inspected.

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

Operator/Crew Preventive Maintenance Checks and Services

B-Before D-During W-Weekly

Item no.	Interval			ITEM TO BE INSPECTED Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	W		
				NOTE Within designated interval, these checks are to be performed in the order listed. Important: Perform WEEKLY (W) as well as BEFORE (B) PMCS if: 1. You are the assigned operator and have not 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 leakage.	Class III leaks or any fuel leak.
2	•			ENGINE OIL LEVEL. Check crankcase oil for proper level. Maintain oil level between the add and full marks on the dipstick.	Cracks in weld.
3	•			FUEL TANK. Check level of fuel in the fuel tank. Fill tank to the prescribed level.	
4	•			TIRES. Check for excess wear, cuts, cracks, low/or flat tires (ref. TM 9-2610-201-14).	Tires worn, cut, or damaged, which could result in failure during operation. Tire missing or unserviceable.
5		•		LIGHTS. Check that lights are operative.	
6		•		HORN. Check horn by pressing horn button.	Horn does not operate.

Operator/Crew Preventive Maintenance Checks and Services-Continued

B-Before

D-During

W-Weekly

Item no.	Interval			ITEM TO BE INSPECTED Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	W		
7		•		STEERING. Check that truck steers freely and easily.	Steering sticks or truck is hard to steer.
8		•		BRAKES. Check for chatter, rubbing, uneven stopping, pulling, and/or unusual noise.	Chatter, rubbing, or unusual noise. Unable to top vehicle.
9		•		LIFT LEVER. Check that lifting and lowering is smooth and responsive.	Lift does not operate. Function jerky or uncontrollable.
10		•		TILT LEVER. Check that forward and backward tilt is smooth and responsive.	Tilt does not operate. Functions jerky or uncontrollable.
11				INSTRUMENT PANEL. NOTE After reaching operating temperature, check indicators for proper reading.	
		•		a. Ammeter needle deflection is to the charge side of "zero".	Continuous or erratic high rate of charge or discharge. Reading not within specified range. Exceeds 180°F. Red light is on.
		•		b. Engine oil pressure gage should read 20 to 30 psi.	
		•		c. Engine coolant temperature gage should read 160°F to 180°F.	
		•		d. Converter oil temperature warning light is not illuminated.	
12				TRANSMISSION. NOTE To properly check the oil level on the bayonet gage (dipstick), the engine must be operating at idle speed with the transmission in neutral position.	
		•		a. Check transmission oil level gage for proper level. Maintain the oil level between add and full marks on the dipstick.	Truck does not respond to selected gear.
		•		b. Forward/reverse lever. Check transmission for proper operation in each gear position.	
13				HYDRAULIC SYSTEM.	
		•		Check reservoir for proper level. Maintain the oil level at full mark on the dipstick.	
14				FAN BELT.	
		•		Check for loose, worn, cracked, or frayed condition.	Belt is missing, broken, or damaged.
15				RADIATOR. WARNING Cooling system is pressurized. Remove cap slowly and only when engine is cool or painful burns could result.	
		•		Check and maintain coolant level approximately 1 inch below filler neck	

Item No.	Interval			ITEM TO BE INSPECTED Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/available if:
	B	D	W		
16				<p>BATTERY.</p> <p style="text-align: center;">WARNING</p> <p>Do not smoke or allow any flame or spark in the vicinity while checking the battery. The battery generates hydrogen, a highly explosive gas.</p> <p style="text-align: center;">CAUTION</p> <p>In cold weather operation, charge battery immediately after water has been added with battery electrolyte to prevent freezing. Be careful not to overfill when servicing batteries.</p> <ul style="list-style-type: none"> • Check electrolyte level. If level of electrolyte is below the top of battery plates, notify organizational maintenance. 	

Page 19.

Appendix I is superseded as follows:

APPENDIX I REFERENCES

-
1. **Tire Protection**
TB 5-4200-200-100 Hand Portable Fire Extinguishers Approved for Army Users
 2. **Demolition**
TM 750-244-6 Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use
 3. **Operation**
TB MED 251 Noise and Conservation of Hearing
TM 5-331B Utilization of Engineer Construction Equipment: Volume B; Lifting, Loading, and Hauling Equipment
 4. **Maintenance**
TM 9-2610-201-14 Standards and Criteria for Technical Inspection and Classification of Tires
DA Pam 738-750 The Army Maintenance Management System (TAMMS)

Appendix II is superseded as follows:

APPENDIX II BASIC ISSUE ITEMS LIST AND ITEMS TROOP INSTALLED OR AUTHORIZED LIST

Section 1. INTRODUCTION

1. Scope

This appendix lists items required by the operator for operation of the forklift truck.

2. General

This list is divided into the following sections:

- a. Basic Issue Items *List—Section II*. Not Applicable.

b. Items Troop Installed or Authorized List—Section III. A list of items in alphabetical sequence, which at the discretion of the unit commander may accompany the forklift truck. These items are NOT SUBJECT TO TURN-IN with the forklift truck when evacuated.

3. Explanation of Columns

The following provides an explanation of columns in the tabular list of Basic Issue Items, Section II, and Items Troop Installed or Authorized, Section III.

- a. Source, Maintenance, and Recoverability Code (SMR).* Not Applicable.
- b. National Stock Number.* This column indicates

the National stock number assigned to the item and will be used for requisitioning purposes.

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

d. Unit of Measure (UIM). A two-character alphabetic abbreviation indicating the amount or quantity of the item upon which allowances are based (e.g., ft, ea, pr, etc.).

e. Quantity Furnished with Equipment (BILL). Not Applicable.

f. Quantity Authorized (Items Troop Installed or Authorized). This column indicates the quantity of the item authorized to be used with the equipment.

Section II. BASIC ISSUE ITEMS LIST

Not Applicable.

Section III. ITEMS TROOP INSTALLED OR AUTHORIZED LIST

National stock number	Description	U/M	Qty auth
7520-00-559-9618	CASE, TECHNICAL MANUALS	EA	1
4210-00-889-222 1	EXTINGUISHER, FIRE	EA	1

By Order of the Secretary of the Army:

CARL E. VUONO
 General, United States Army
 Chief of Staff

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

Distribution:

To be distributed in accordance with DA Form 12-25-E (Block 2251) Operator maintenance requirements for TM10-3930-22210.

TECHNICAL MANUAL }
 No. 10-3930-222-10 }

HEADQUARTERS,
 DEPARTMENT OF THE ARMY
 WASHINGTON, 25, D.C., 17 September 1962

OPERATOR'S MANUAL
TRUCK, LIFT, FORK, GASOLINE, PNEUMATIC-TIRED WHEELS,
15,000-POUND CAPACITY
(HYSTER MODEL H150C, ARMY MODEL MHE 178)

FEDERAL STOCK NUMBER 3930-897-4632

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. scope

a. This manual is for the use of personnel responsible for the operation and first-echelon maintenance of the Truck, Lift, Fork, Gasoline, Pneumatic-Tired Wheels, 15,000-Pound Capacity (Hyster Model H150C, Army Model MHE 178), Federal Stock Number 3930-897-4632, procured under contract number N600 (MIS) - 57085.

b. This manual provides the operator with the necessary instructions to operate the truck and to perform his required maintenance services. These maintenance services have been assigned to the operator within the limits of the maintenance allocation chart which will be contained in TM 10-3930-222-20.

2. Appendixes

Appendix I is a list of current references, and appendix II is the basic issue item.

3. Maintenance Forms and Records

The maintenance forms and records applicable to the operation and first-echelon maintenance of this truck are listed below. The use of these forms and records is described in TM 38-750.

a. DA Form 348 (Driver Qualification Record).

b. DA Form 2400 (Equipment Utilization Record).

c. DA Form 2401 (Organizational Control Record for Equipment).

d. SF 46 (U.S. Government Motor Vehicle Operator's Identification Card).

e. SF 91 (Operator's Report of Motor-Vehicle Accident).

4. Recommended Changes

Users of this manual are encouraged to submit recommended changes or comments to improve the manual. Comments will be submitted on DA Form 2028 (Recommended changes to DA Technical Manual Parts Lists or Supply Manual 7, 8, or 9) and will be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be forwarded direct to Commanding General, Quartermaster Center, U.S. Army, Fort Lee, Va.

5. Orientation

Throughout this manual, the use of the terms *right*, *left*, *front*, and *rear* indicates directions from the viewpoint of the operator sitting in the seat of the truck.

Section II. DESCRIPTION AND DATA

6. Description

The Hyster Model H150C (figs. 1 and 2) is a gasoline-powered, front-wheel drive, rear-wheel steer, materials-handling forklift truck.

It is equipped with six pneumatic tires and can load, unload, transport, and stack loads up to 15,000 pounds. The load center of the load is 24 inches from the heel of the forks and

the lifting height is 210 inches. The truck is powered by a six-cylinder, four-stroke cycle, L-head, gasoline engine. Power is transmitted

to the dual drive wheels by means of a power-shift transmission with a torque converter. The torque converter and transmission are attached

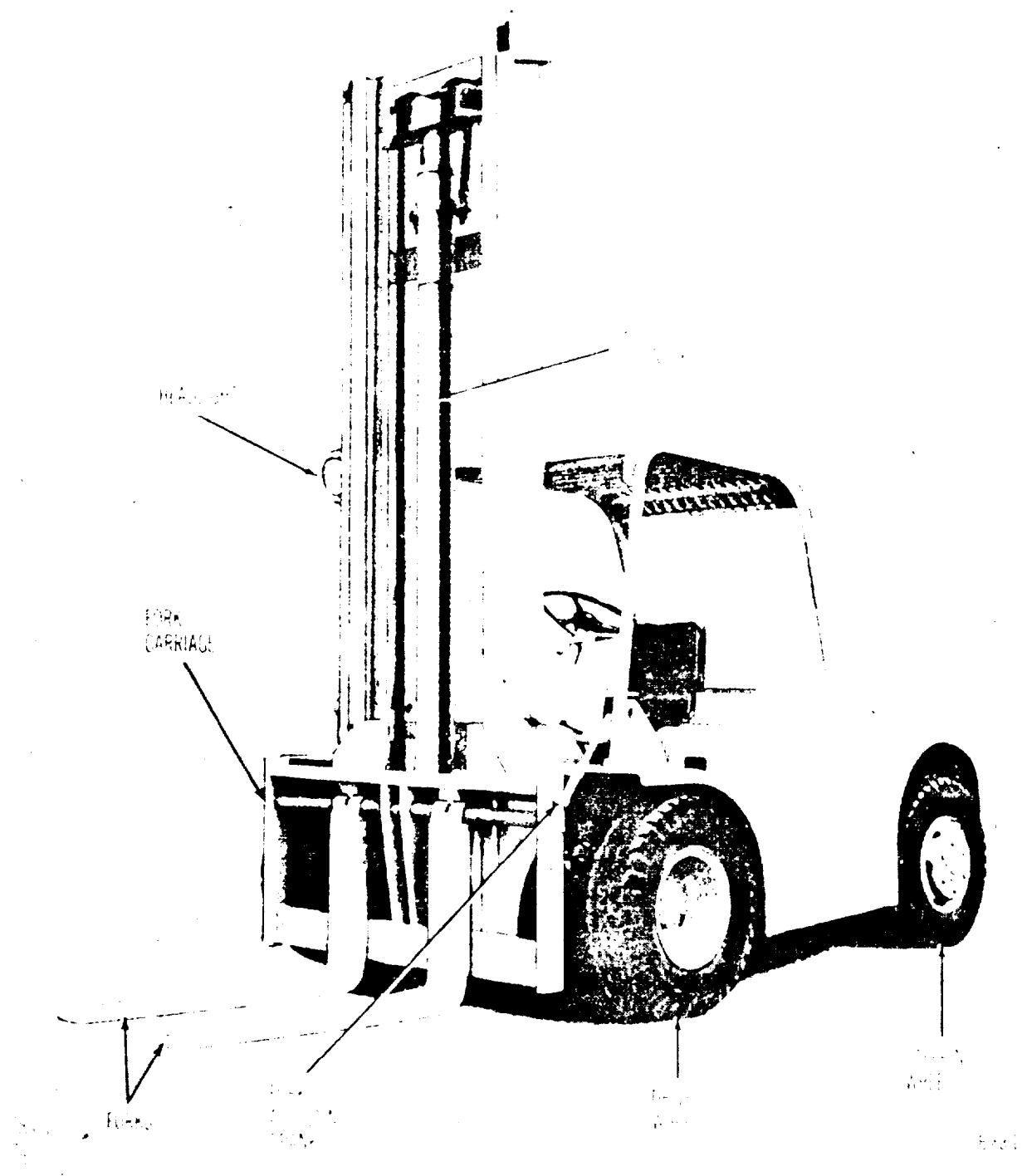
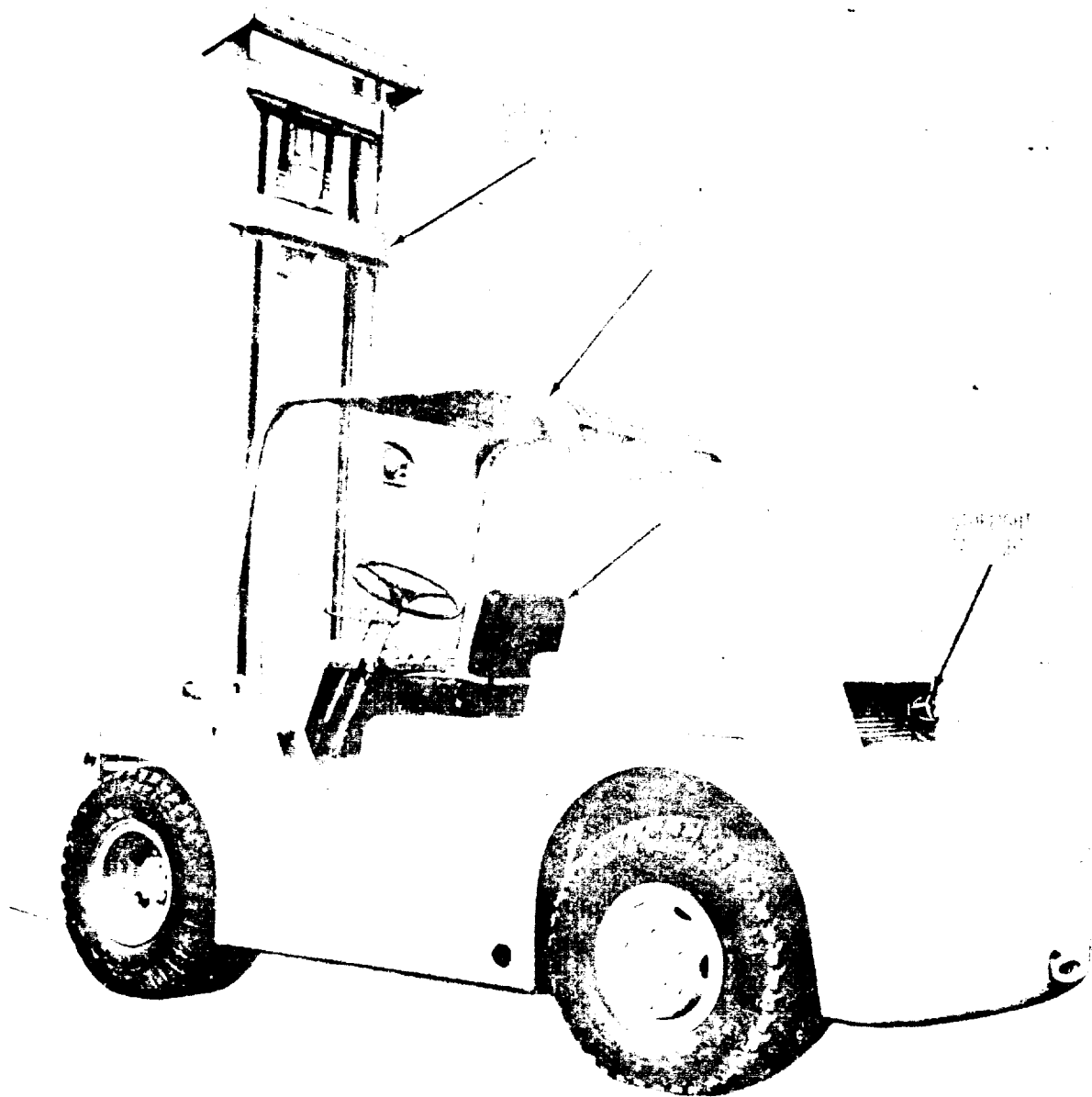


Figure 1. Hyster model H150C forklift truck, left front view.

to the engine as integral parts of the power package, supplying power through a propeller shaft to the drive axle assembly which includes a conventional type hypoid differential. The transmission provides a constant mesh with two speeds forward and two speeds reverse. The forward or reverse speeds are manually selected by two levers (figs. 6 and 7) in the

operator's compartment (fig. 3). The power steering system is the cam-and-twin lever type which is incorporated with a hydraulic cylinder mounted between the main frame and steering axle. The foot-operated automotive-type hydraulic service brakes operate on the drive wheels. The hydraulically operated lifting system consists of a tank, pump, valve, and hoist



1887

Figure 2. Hyster model HI50C for&lift truck, left rear view.

and tilt cylinders. The hydraulic steering system consists of a hydraulic pump, flow divider, and a control valve. This model is nonradio-suppressed for use in continental United States, but it may be converted to a radio-suppressed model, if desired.

7. Tabulated Data

a. Capacities.

Cooling system	14 qt.
Differential	24 pt.
Engine carburetor air cleaner	½ pt.
Engine crankcase	5 qt.
Engine oil Alter	½ qt.
Fuel tank	14 gal.

Hydraulic system :

Hydraulic master cylinder	½ pt.
Lines	5 qt.
Tank	15 gal.
Steering gear housing	1 pt.
Transmission	12 qt.

b. Dimensions and Weight.

Center line of drive wheel to face of fork	22.5 in.
Center line of steering wheel to rear of truck	37.5 in.
Ground clearance (under upright)	6.25 in.

Height:

With uprights extended	21 ft. 3 in.
With uprights retracted	12 ft. 8 in.

Length :

Fork (inside)	48 in.
Fork (overall)	50% in.
Fork spread (maximum)	58 in.
Overall truck	145 in.
Weight	19,050 lb.

c. Performance.

Aisle width (minimum) :

Intersecting	21 ft.
Right-angle stacking	21 ft. 4 in.
Free lift	2 in.
Lifting height	210 in.

Lifting speed :

Empty	58 f.p.m.
Loaded	48 f.p.m.
Load Capacity	15,000 lb.
Maximum grade loaded	16°

Maximum speed (loaded) :

Forward	16 mph
Reverse	17 mph

Number of speeds:

Forward	2
Reverse	2

Tilt limitation:

Forward	3°
Backward	10°

Towing capacity at 0° grade

	395,000 lb.
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Turning radius:

Inside	133/8 in.
Outside	139 in.
Wheelbase	85 in.

Wheel loading (no load on forks) :

Front axle	7,160 lb.
Rear axle	11,890 lb.

d. Tires.

Number	6
Pressure (all tires)	100 psi each
Size	6.25 x 15 12-ply

Tread width :

Drive (nondirectional lug)	72 in.
Steer (nondirectional lug)	59 in.
Type	Pneumatic

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF MATERIAL

8. General

The services performed upon receipt of a new or used truck are the responsibility of the using organization and will be performed by second-echelon maintenance personnel.

9. Operator Responsibilities

When directed to do so by the commanding officer, the operator will assist with the services performed upon receipt of the truck.

Section II. CONTROLS AND INSTRUMENTS

10. General

This section furnishes the operator with illustrations and sufficient information pertaining to the location and the use of the various controls and instruments to properly operate the truck.

11. Controls

a. Choke Control. The choke control (1, fig. 4) is located on the instrument panel to the left of the steering column. Pull up on the choke control to close the choke valve in the carburetor when starting a cold engine. The normal operating position for the choke control is pushed down as far as it will go.

b. Starter Switch. The started switch (10, fig. 4) is located on the instrument panel to the right of the steering column. With the ignition switch on, press the starter switch to start the engine; release pressure when the engine starts.

c. Hydraulic Control Lever. The hydraulic control lever (4, fig. 3 and fig. 5) is located to the right of the operator's seat. With the engine running, move the control lever to the right; push it forward to tilt the forks down or pull it back to tilt the forks up. Move the control lever to the left and push it forward to lower

the load; pull back on the lever to raise the load. To maintain the load in any position, release the hydraulic control lever.

d. Direction Control Lever. The direction control lever (12, fig. 3) is located to the left of the steering column, directly under the steering wheel. With the engine running, push the direction control lever forward to move the truck forward. Pull the lever back to move the truck in reverse.

e. High- and Low-Speed Lever. The high- and low-speed lever (11, fig. 3) is located to the left of the steering column, under the direction control lever. With the engine running and the direction control lever in the desired position of travel, pull the high- and low-speed lever back for low speed; push the lever forward for high speed.

f. Inching Pedal. The inching pedal (9, fig. 3) is located on the floorboard, convenient to the operator's left foot. Depress the inching pedal to control vehicle motion when higher engine speed is necessary to handle the load. When the inching pedal is completely depressed, the transmission is in neutral and the service brakes are set. When the inching pedal is released, the transmission is engaged, and the brakes are released.

g. *Brake Pedal.* The brake pedal (8, fig. 3) is located on the floorboard to the right of the steering column. Depress the brake pedal to slow down or stop the truck.

h. *Handbrake Lever.* The handbrake lever (6, fig. 3) is located to the right of the accelerator pedal. Push the handbrake lever forward to release the brakes; pull up and back to set the brakes. Adjust the handbrake by turning the knob on the upper end of the handbrake lever clockwise to tighten the brakes, or counterclockwise to loosen the brakes. Any adjustment should be made with the handbrake lever in the full release position.

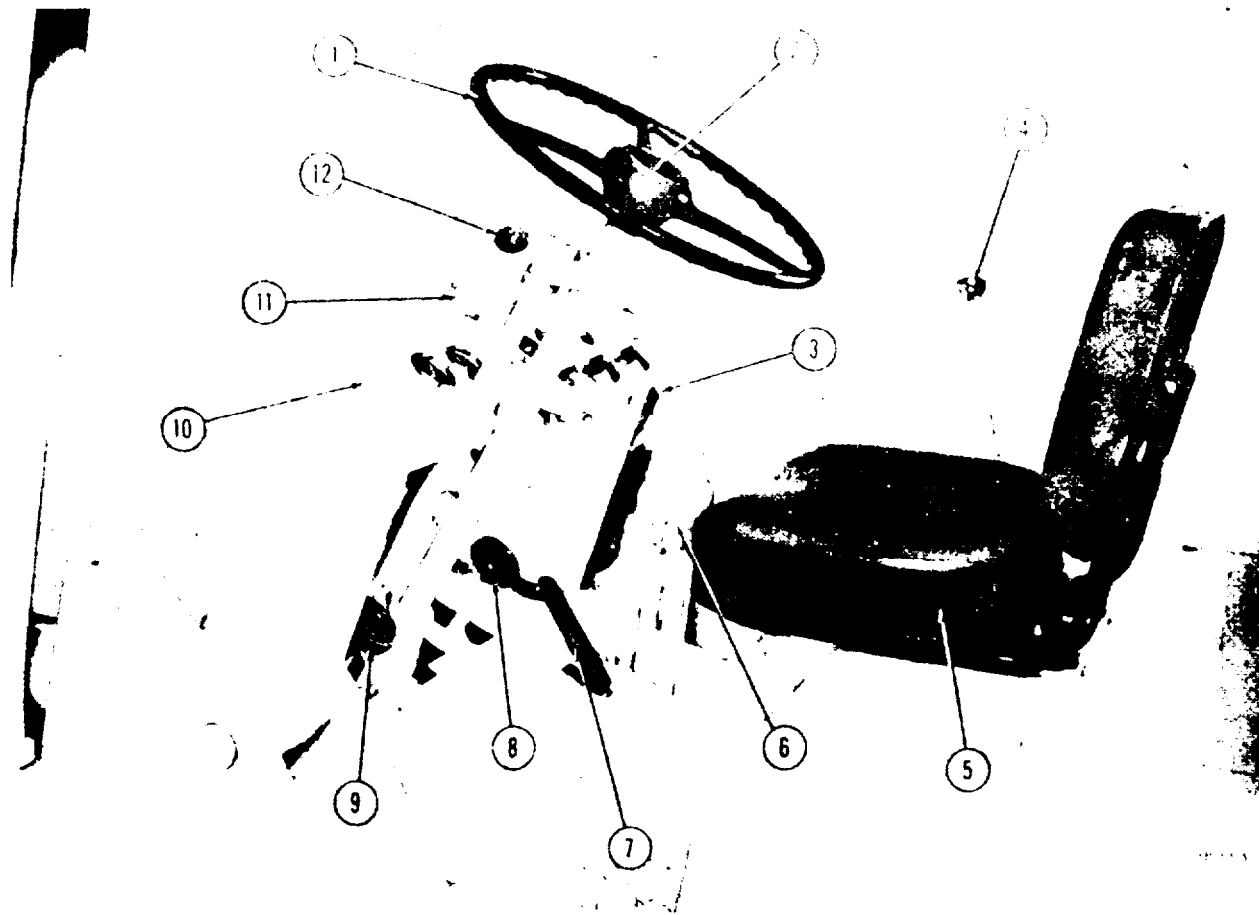
i. *Accelerator Pedal.* The accelerator pedal (7, fig. 3) is located on the floorboard, convenient to the operator's right foot. Depress ac-

celerator pedal to increase the engine speed; release the pressure on the pedal to decrease the engine speed.

i. *Horn Button.* The horn button (2, fig. 3) is located in the center of the steering wheel. Press the horn button to sound the horn.

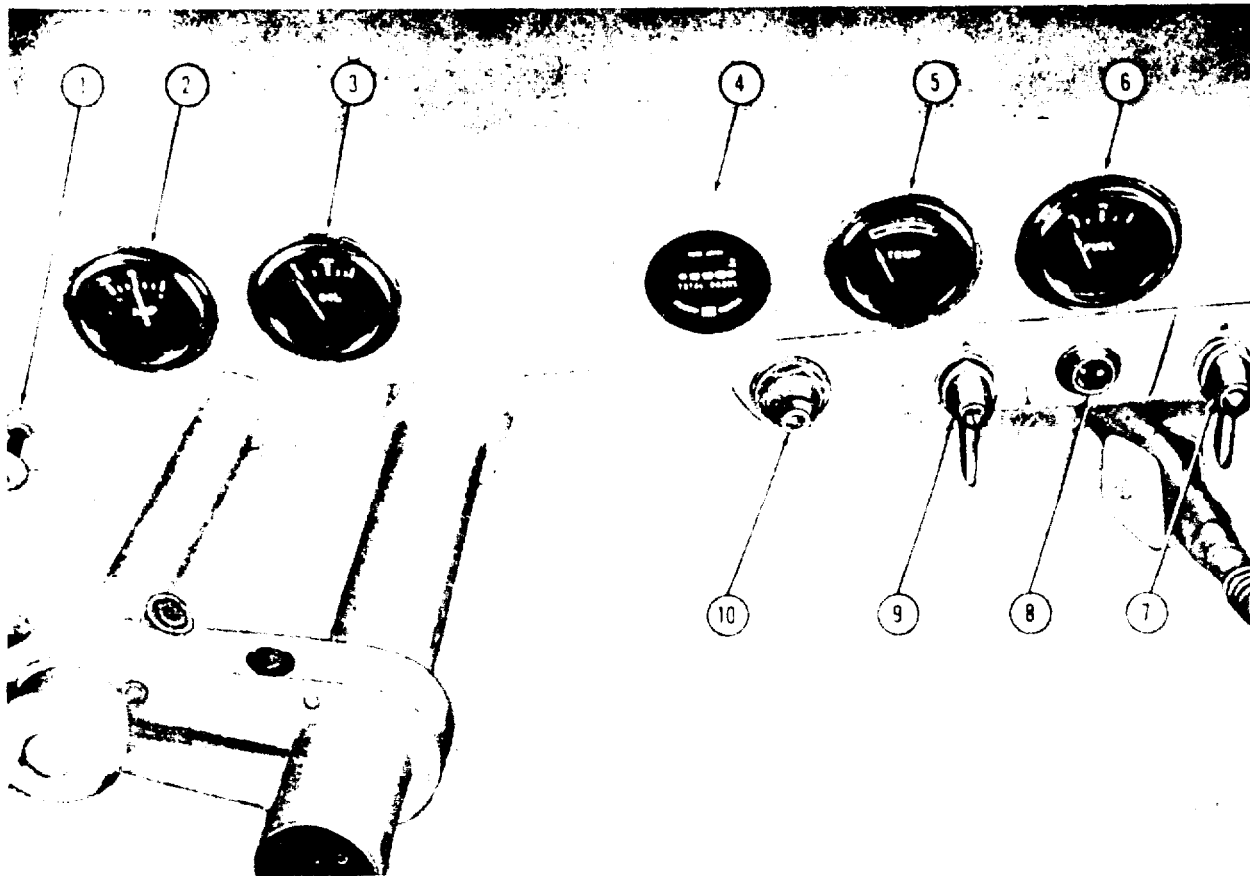
k. *Steering Wheel.* The steering wheel (1, fig. 3) controls the direction of travel of the truck. Turn the steering wheel to the right to steer the truck to the right; turn the steering wheel to the left to steer the truck to the left.

l. *Ignition Switch.* The ignition switch (9, fig. 4) is located on the instrument panel to the right of the starter switch. Turn the ignition switch clockwise to ON position to turn on the ignition system. Turn the switch counterclockwise to the OFF position to turn off



- | | | |
|---------------------------|---------------------|------------------------------|
| 1 Steering wheel | 5 Operator's seat | 9 Inching pedal |
| 2 Horn button | 6 Handbrake lever | 10 Instrument panel |
| 3 Fire extinguisher | 7 Accelerator pedal | 11 High- and low-speed lever |
| 4 Hydraulic control lever | 8 Brake pedal | 12 Direction control lever |

Figure 3. Operator's compartment.



- | | | | |
|---|------------------------|----|---|
| 1 | Choke control | 6 | Fuel gage |
| 2 | Ammeter | 7 | Light switch |
| 3 | Oil pressure gage | 8 | Converter oil temperature warning light |
| 4 | Hour meter | 9 | Ignition switch |
| 5 | Water temperature gage | 10 | Starter switch |

Figure 4. Instrument panel.

the ignition system. The ignition switch must be turned to the OFF position when the truck is not in use.

m. Light Switch. The light switch (7, fig. 4) is located on the extreme right side of the instrument panel. Turn the light switch to the right to turn on the headlight (fig. 1) and the taillight (fig. 2).

n. Seat Adjuster Assembly. An adjuster assembly is located under the operator's seat. Move the adjuster lever to the right, adjust the seat forward or backward as desired, and release the adjuster lever to secure the adjustment.

o. Fork Adjusting Crank. The fork adjusting crank (fig. 1) is located on the left side of the fork carriage. Turn the crank clockwise to

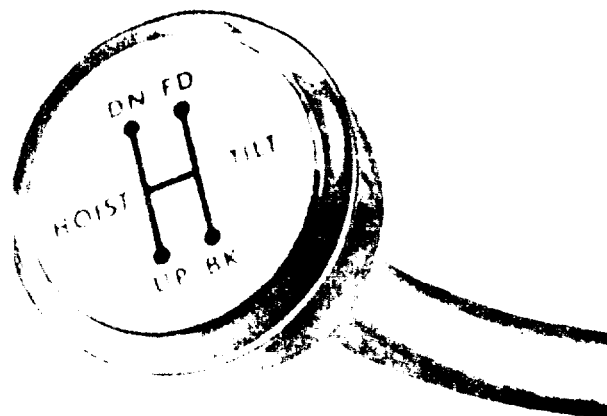


Figure 5. Hydraulic control lever.

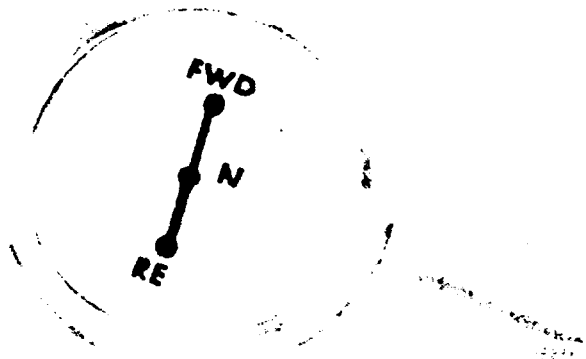


Figure 6. Direction control lever.

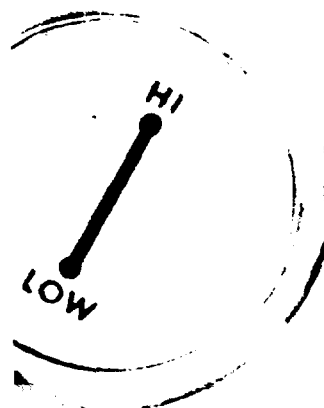


Figure 7. High- and low-speed lever.

move the forks closer together. Turn the crank counterclockwise to move the forks further apart.

12. Instruments

a. Ammeter. The ammeter (2, fig. 4) is located on the instrument panel to the left and above the steering column. The ammeter indicates the amount of current flowing to or being withdrawn from the storage battery. When the engine is started, the needle will move momentarily far to the charge side of the dial and then return to a center position or slightly to the charge side. If the ammeter shows a constant discharge, stop the engine and report the trouble to the proper authority.

b. Oil Pressure Gage. The oil pressure gage (3, fig. 4) is located on the instrument panel at the right of the ammeter. This gage indicates the pounds per square inch of oil pressure in the engine lubrication system. Normal operating pressure is 20 to 30 psi at 2,000 rpm.

c. Hour Meter. The hour meter (4, fig. 4) is located on the instrument panel to the right of the oil pressure gage. This meter indicates the total number of hours that the engine has been in operation.

d. Fuel Gage. The fuel gage (6, fig. 4) is located on the instrument panel at the right of the water temperature gage. This gage indicates the amount of gasoline in the fuel tank. The capacity of the fuel tank is 14 gallons.

e. Converter Oil Temperature Warning Light. The converter oil temperature warning light (8, fig. 4) is located on the instrument panel to the left of the ignition switch (9). The warning light glows red when the transmission temperature is too high for safe operation of the truck. If the light glows, stop the engine immediately and report the trouble to the proper authority.

f. Water Temperature Gage. The water temperature gage (5, fig. 4) is located on the instrument panel to the right of the hour meter. This gage indicates engine coolant temperature on a dial marked C, NORMAL, and H. During operation, the needle should move into the NORMAL area. If the needle fails to move into this area after the engine has been operated for a reasonable time, or moves into the H area, stop the engine and report the trouble to the proper authority.

Section III. OPERATION UNDER USUAL CONDITIONS

13. Starting

a. Before-Operation Services. Perform the before-operation services listed in the operator's checklist (par. 24).

b. Instructions.

- (1) Set the handbrake by pulling up and back on the handbrake lever (par. 11h).

- (2) Make certain that the hydraulic control lever (par. 11c), the high- and low-speed lever (par. 11e), and the direction control lever (par. 11d) are in neutral.
- (3) Turn the ignition switch (par. 11l) to ON position.
- (4) When starting a cold engine, pull the choke control (par. 11a) out. Do not use the choke when starting a warm engine without first attempting to start the engine with a normal fuel mixture.
- (5) Press the accelerator pedal (par. 11i) down about one-third the distance from its normal position.
- (6) Press the starter switch (par. 11b); release switch as soon as the engine starts.
- (7) Push the choke control in to a point at which the engine operates smoothly. Push the choke control all the way in as soon as the engine reaches normal operating temperature.
- (8) Check the gages and warning lights for indication of trouble. Stop the engine immediately if the oil pressure gage (par. 12b) shows no pressure, if the ammeter (par. 12a) indicates discharge, or if the converter oil temperature warning light (par. 12e) indicates a high temperature in the transmission.
- (9) Allow the engine to run from 2 to 5 minutes (or longer in extremely cold temperatures) to allow the engine oil and hydraulic oil to warm and circulate freely.

Caution: Fast operation of the hydraulic pumps with extremely cold oil in the hydraulic system will starve the pumps, causing damage.

14. Driving

a. During-operation Services. While operating the truck, perform the during-operation services listed in the operator's checklist (par. 24).

b. Forward or Reverse.

- (1) To put the truck in motion, push forward on the direction control lever

(par. 11d) to move forward; pull back on the direction control lever to put the truck in reverse.

- (2) Push forward on the high- and low-speed lever (par. 11e) to obtain low speed and accelerate the engine.
- (3) When the truck speed is sufficient, shift into high speed by pulling back on the high- and low-speed lever.

Caution: Do not reverse the truck when traveling in forward speed. Stop the truck; then shift into reverse.

c. Low Truck Speed With High Engine Speed. When low truck speed with high engine speed is needed, either forward or reverse, gradually depress the inching pedal until the desired truck speed is obtained.

d. High Engine Speed With Truck Stationary. If high engine speed is required with truck stationary and transmission in gear, depress the inching pedal until the service brakes are set. Then accelerate the engine.

15. Stopping

- a.* Release pressure on the accelerator pedal (par. 11i).
- b.* Bring the truck to a stop by depressing the brake pedal (par. 11g).
- c.* Set the parking brakes.
- d.* Put the high- and low-speed lever and direction control lever in neutral.
- e.* Turn the ignition switch to the OFF position to stop the engine.
- f.* When operations have been completed, perform the after-operation services listed in the operator's checklist (par. 24).

16. Handling load

a. Picking Up Load.

- (1) Approach the load squarely with the forks at the correct height and spaced to divide the load evenly.
- (2) Depress the inching pedal to control the motion of the truck until the forks are completely under the load; then stop the forward motion of the truck.
- (3) Raise the forks until the forks support the load.

- (4) Move the hydraulic control lever to the right and pull the lever back to tilt the load. When the desired tilt position is reached, return the lever to neutral.
- (5) Work the inching pedal and the hydraulic control lever together. Before applying extra engine speed to hoist the load, depress the inching pedal completely to set the service brakes and prevent the truck from moving.
- (6) Move the hydraulic control lever to the left and pull the lever back to hoist the load.
- (7) Accelerate the engine until the desired hoisting speed is obtained.
- (8) Allow the hydraulic control lever to return to neutral position when the load reaches desired height.

b. Transporting Load.

- (1) Move the hydraulic control lever to the left and push the lever forward to lower the load.
- (2) Lower the load cautiously and slowly to the desired running height.
- (3) Be sure that overhead clearance is sufficient to clear the load. When a bulky load obstructs forward view, drive the truck in reverse.

c. Depositing Load.

- (1) Carefully drive to the position at which the load is to be deposited.
- (2) Move the hydraulic lever to the right and push forward to move the up-rights to a vertical position.
- (3) Move the hydraulic lever to the left and forward to lower the load.

Section IV. OPERATION OF EQUIPMENT USED IN CONJUNCTION WITH THE TRUCK

17. General

This section contains instructions for operating the portable fire extinguisher (3, fig. 3) that is supplied with the truck.

18. Operating the Fire Extinguisher

a. Disconnect the clamp that secures the fire extinguisher to the mounting bracket, swing the clamp open, and remove the extinguisher from the truck.

b. Hold the extinguisher by its carrying handle and pull the pin which is secured to the handle by a chain.

c. Lift the nozzle on the extinguisher until it forms an approximate right angle with the extinguisher.

d. Point the nozzle at the base of the fire and depress the discharge lever above the carrying handle.

CHAPTER 3

MAINTENANCE INSTRUCTIONS

Section I. SPECIAL TOOLS AND EQUIPMENT

19. Special Tools

There are no special tools necessary for the operation or first-echelon maintenance of this truck.

20. Equipment

The items of equipment supplied with this truck are listed in the basic issue item list (app. II).

Section II. LUBRICATION

21. General

The lubrication of this truck is the responsibility of the using organization and will be performed by second-echelon personnel.

22. Operator Responsibilities

The operator will be alert to detect signs of vehicle malfunctioning from lack of lubrication. He will report these conditions immediately to the proper authority.

Section III. PREVENTIVE MAINTENANCE SERVICES UNDER USUAL CONDITIONS

23. General

a. Preventive maintenance is defined as the systematic care, inspection, and servicing of equipment to maintain it in serviceable condition, to prevent breakdowns, and to assure maximum operational capability.

b. The services described in this section are those which must be performed by the operator at regular intervals. The operator may be assisted by the organization mechanic in performing these services.

24. Operator's Checklist

a. The operator's checklist prescribes both the daily and the weekly services which will be performed by the operator at the indicated intervals.

b. The intervals for performing these daily and weekly preventive maintenance services are as follows:

B-Before operation

D-During operation

A-After operation

c. The preventive maintenance services have been fully described on the checklist. Whenever additional information about the specific component is available in the operator's manual, the appropriate paragraph has been listed in the reference column of the checklist.

d. If the operator discovers a deficiency or shortcoming which he is not authorized to correct, he will report this condition immediately to the proper authority.

Operator's Checklist

Key :

- B-Before-operation service
- D-During-operation service
- A-After-operation service

Item No.	Interval			Procedure	Paragraph reference
	B	D	A		
				DAILY SERVICES	
1	--	--	--	FUEL and COOLANT.	
	X	--	x	a. Check the level of fuel in the fuel tank. The tank should be filled to the prescribed level.	
	X	--	x	b. Check the coolant level in the radiator. If coolant level is more than one inch below neck, have coolant added to the radiator.	
	--	--	--	BODY and ENGINE COMPARTMENT.	
	X	--	X	a. Inspect the body of the truck and the truck components for fuel, oil, or water leaks. Be certain to check under the vehicle and in the engine compartment.	
	x	--	X	b. Check the truck for broken or missing components and other visible damages of any nature. Report any of these conditions to the proper authority before moving the truck.	
	X	--	X	c. Be certain that the daily lubrication services on the lubrication order have been performed.	
	X	--	X	d. Clean the truck as necessary.	
3	--	--	--	TIRES.	
	X	--	X	a. Inspect the tires for unusual wear, cuts, and the presence of foreign objects.	
	X	--	X	b. Check the tires for proper inflation of 100 psi.	
4	--	--	--	FORMS and SAFETY EQUIPMENT.	
	X	--	X	a. Be certain the necessary forms prescribed in TM 38-750 are on the truck.	
	X	--	X	b. Check the truck to be certain all safety equipment, such as the fire ex-	

Item No.	Interval			Procedure	Paragraph reference
	B	D	A		
				tinguisher and the overhead guard, is mounted properly on the truck.	
5	--	--	--	LIGHTS.	
	X	--	X	Check all lights for proper operation.	
6	--	--	--	CONTROLS and INSTRUMENTS.	
	X	--	--	a. Start the engine and check the oil pressure gage. The gage should register 10 pounds of pressure within 30 seconds. At normal operating speed, the gage should register 20 to 50 pounds of pressure at 2000 rpm.	12b
	X	X	--	b. Check the ammeter. It should indicate a high charge both when the engine is started and for a short period thereafter. At normal operating speeds, the ammeter should indicate a slight positive charge.	12a
	X	X	--	c. Be certain the hour meter begins to operate as soon as the engine is started.	12c
	X	X	--	d. Allow the engine to idle for at least 2 minutes, and check the water temperature gage. During the warmup period, the temperature reading should gradually rise to the normal operating range of 160° to 180°F.	12f
				e. Check the fuel gage to be sure it indicates a full tank of fuel.	12d
		X	--	f. Check converter oil temperature warning light. If light glows any time during operation, stop the engine and report the trouble to the proper authority.	12e

Operator's Checklist-Continued

Item No.	Interval			Procedure	Item No.	Interval			Procedure
	B	D	A			B	D	A	
	X	--	--	g. Check all controls for binding and other operadefects.			X	--	b. Check the steering wheel free play when the truck is moving straight ahead. The free play should not exceed 1 inch at the center position. 11k
	X	--	--	h. Test the horn. It should be audible at a distance of 300 feet. 11j					
	--	--	--	INSTRUMENTS.			X	--	c. Check for indications of binding or looseness when the steering wheel is rotated to either the extreme right or left positions.
		X	--	Check the instruments for any indication of malfunctioning. 12					
	--	--	--	BRAKES.					
		X	--	a. Check the footbrake to be sure it stops the truck within a reasonable distance and without side pull, chatter, or noise. 11b	13	--	--	--	LIFT and TILT CONTROLS.
	x	--	--	b. Check the brake pedal free travel. There should be 1/4 to 1/4 inch free travel.			X	--	Observe both the lift and tilt controls to be certain they operate properly. Check to be sure the load does not creep when it is lifted or tilted. 11c
		X	--	c. Check to be sure the handbrake holds the truck on a reasonable incline. 11h	14	--	--	--	UNUSUAL NOISES.
9	--	--	--	INCHING PEDAL.			X	--	Listen for unusual noises that would indicate damaged, worn, or loose engine parts; a damaged or vibrating power train; or loose body components.
		X	--	See that inching pedal operates properly. 11f					
10	--	--	--	ENGINE.	15	--	--	--	BRAKEDRUMS, WHEEL HUBS, TRANSMISSION CASE, and DIFFERENTIAL CASE.
		X	--	Observe whether the engine has adequate power and acceleration and whether it operates without unusual noises, stalling, misfiring, overheating, and heavy exhaust smoke.			X	X	At scheduled stops, inspect the brakedrums, wheel hubs, transmission case, and differential case for overheating. Also examine the engine compartment and the surface under the truck for signs of leaks.
11	--	--	--	TRANSMISSION CONTROL LEVERS and TRANSMISSION.					WEEKLY SERVICES
		X	--	a. Check the operation of the shift levers for binding, looseness, and transmission engagement. 11					FAN BELT.
			--	b. Observe the operation of transmission for slippage and proper response.	16	--	--	--	Inspect the fan belt for frayed condition, deterioration, and proper adjustment. The fan belt should deflect about one-half inch when finger pressure is applied midway between the two pulleys.
12	--	--	--	STEERING.				X	
		X	--	a. Note any tendency of the truck to wander, shimmy, or pull to one side while the truck is moving straight ahead.					

Operator's Checklist—Continued

Item No.	Interval			Procedure	Paragraph reference
	B	D	A		
17	--	--	-- X X X	BATTERY. a. Check the level of the electrolyte in the battery. The electrolyte should be one-half inch above the plates. b. Inspect the battery case for cracks and leaks. c. Inspect the battery terminals and straps for secure mounting and for deterioration.	

Item No.	Interval			Procedure	Paragraph reference
	B	D	A		
			X	d. Have the specific gravity of the electrolyte checked. e. Clean the battery and carrier as necessary.	
18	--	--	--	ANTLFREEZE (in season). Have the protective value of the antifreeze checked.	

Section IV. PREVENTIVE MAINTENANCE SERVICES UNDER UNUSUAL CONDITIONS

25. General

When the truck is operated under unusual conditions, extra care must be taken to maintain the truck in good operating condition. Certain additional services must be performed, and some of the regular preventive maintenance services must be performed more often.

26. Extreme Heat

a. Cooling System.

- (1) Check the fan belt more frequently for proper tension. The fan belt should deflect one-half inch when Anger pressure is applied midway between the pulleys.
- (2) Check the coolant level more frequently, maintaining it at the bottom of the fillercap neck. Be sure the radiator cap is secure.
- (3) Keep the external parts of the radiator clean and free of foreign matter for better air circulation.
- (4) Have the cooling system flushed and cleaned frequently.

b. Battery. Check the electrolyte level more frequently, maintaining it one-half inch above the plates. Have the specific gravity checked more frequently.

27. Extreme Cold

a. Shelter. Store the truck in a heated building or shelter, when possible, and as desig-

nated by proper authority. If shelter is not available, cover the truck with paulin or similar material. Park the truck with the front end into the wind.

b. Cooling System. If antifreeze is not available and the truck is to be at rest for an appreciable length of time, drain the radiator and cylinder block when the temperature is likely to be 32° F., or lower. Attach a tag to the steering wheel to warn personnel that the radiator has been drained. Do not add water to the radiator that contains antifreeze compound without subsequently allowing the engine to run until the solution is well mixed. Have the solution tested frequently with an antifreeze hydrometer.

c. Electrical System.

- (1) Have the specific gravity reading of the electrolyte in the battery taken more frequently.
- (2) Do not add water to a battery exposed to cold temperature unless the engine is to be operated immediately.
- (3) Have the battery removed and stored in a warm place when shelter for the parked truck is not available.

28. Sandy Terrain

Take precautions to prevent sand and dust from entering the fuel system. Tie a loose bag, made of single-layer cloth, over the entire air

cleaner during sandstorms. If necessary, clean the oil filler cap daily by dipping it several times in Solvent, dry cleaning (SD). Make certain that sand is removed from axles, wheels, steering spindles, radiator, and brake assemblies. Protect the lift and tilt mechanism from sand. During sandstorms, cover the exposed parts of the lift and tilt cylinder piston rods.

29. tropical Areas

In tropical areas, when paint is chipped or scratched from truck, corrosive action takes place almost immediately. To prevent this, have the paint removed with paint remover, sandpaper, or sandblasting equipment. Have two coats of red lead primer applied and, when dry, have a finishing coat of paint applied.

Section V. TROUBLESHOOTING

30. Purpose

Troubleshooting is the process of locating and correcting malfunctions that may occur under normal operating conditions, and it is the responsibility of the using organization.

31. Troubleshooting

In the troubleshooting chart each symptom of trouble is followed by a list of probable causes and suggested procedure for locating and remedying the trouble. Troubles which cannot be remedied by the operator should be reported to the proper authority.

Troubleshooting Chart

Symptom	Probable cause	Corrective action
1. Engine will not turn when starting motor is actuated.	(a) Defective starter system ----- (b) Mechanical seizure of parts -----	(a) Notify organizational maintenance personnel. (b) Notify organizational maintenance personnel.
2. Starter will not crank engine.	(a) Loose or corroded connections --- (b) Battery discharged -----	(a) Have cable cleaned and tightened. (b) Notify organizational maintenance personnel.
3. Slow cranking speed.	(a) Battery discharged ----- (b) Incorrect crankcase oil viscosity.	(a) Notify organizational personnel. (b) Have oil changed to correct viscosity.
4. Engine turns over but will not start.	(a) Loose or disconnected wires in ignition system (b) Fuel tank empty ----- (c) Combustion chamber flooded with fuel.	(a) Have wires replaced or connections tightened. (b) Fill fuel tank. (c) Open throttle and crank engine to expel excessive fuel.
5. Engine overheating.	(a) Low coolant level ----- (b) Loose or broken fan belt -----	(a) Add coolant to radiator. Check for leaks. (b) Have organizational maintenance personnel tighten or replace belt.
6. Lack of power.	Parking brake applied -----	Release parking brake.
7. Low or no oil pressure.	Oil low in crankcase -----	Check oil level and have oil added as necessary.
8. Truck will not move when transmission controls are engaged.	Oil low in transmission -----	Check oil level and have oil added as necessary.
9. Hard or irregular steering.	Low tire pressure -----	Inflate tires to correct pressure.
10. Hydraulic system will not lift or tilt load or lifts slowly.	Low oil level in hydraulic tank -----	Check oil level and have oil added as necessary.

CHAPTER 4

DEMOLITION OF TRUCK

32. Authority

The truck will be destroyed only if there is danger of capture and use by the aggressor, and only after the order is given by the unit commander. Destroy the same parts on all similar equipment to prevent salvage by the aggressor.

33. Methods

Warning: Observe adequate safety precautions.

a. Destruction by Hand.

- (1) Smash the items listed below with a sledge, a hammer, or an ax.
 - (a) controls
 - (b) valves
 - (c) hydraulic cylinders
 - (d) hydraulic pump
 - (e) carburetor
 - (f) manifold
 - (g) generator
 - (h) distributor
 - (i) ignition coil
 - (j) spark plugs
 - (k) battery

- (2) Smash the items listed below by using a heavy hammer to drive a pointed steel bar into the parts.

- (a) engine
- (b) drive axle and differential
- (c) gear housing
- (d) steering gear housing
- (e) radiator
- (f) oil and fuel tanks

- (3) Destroy the items listed below by cutting them or ripping them out.

- (a) wires
- (b) cables
- (c) lines

b. Destruction by Misuse.

- (1) Drain the crankcase and radiator, disconnect the radiator fan, and run the engine at full throttle.
- (2) Place sand, gravel, nuts, bolts, screws, or broken glass in the fuel tank.
- (3) Pack cloths saturated with gasoline around the engine and inside the truck, and set the cloths afire.
- (4) Remove the carburetor, the generator, and the distributor and bury them in the ground or throw them into a body of water.

APPENDIX I

REFERENCES

AR 320-5	Dictionary of United States Army Terms
AR 320-50	Authorized Abbreviations and Brevity Codes
AR 600-55	Motor Vehicle Driver-Selection, Testing, and Licensing
DA Pam 103-1	Index of Army Motion Pictures, Film Strips, Slides, and Phono-Recordings
DA Pam 310-1	Index of Administrative Publications
DA Pam 310-2	Index of Blank Forms
DA Pam 310-3	Index of Training Publications
DA Pam 310-4	Index of Technical Manuals, Technical Bulletins, Supply Bulletins, Lubrication Orders, and Modification Work Orders
FM 21-5	Military Training
FM 21-6	Techniques of Military Instruction
FM 21-30	Military Symbols
TM 21-300	Driver Selection and Training (Wheeled Vehicles)
TM 38-750	The Army Equipment Record System and Procedures

APPENDIX II

BASIC ISSUE ITEM

Section I. INTRODUCTION

1. Scope

This appendix lists the equipment and publications issued with this truck.

2. Explanation of Columns

a. Technical Service Code. The following code symbols appearing in this column indicate the supplying technical service.

- 5-Corps of Engineers
- 9-Ordnance Corps
- 10-Quartermaster Corps
- 11-Signal Corps
- 12-Adjutant General's Corps

b. *Source, Maintenance, and Recoverability Code.*

- (1) Source code. The following code symbols indicate the selection status and the source of supply for each item.

P1-applied to repair parts which are low mortality parts; procured by technical services, stocked only in and supplied from technical service key depots, and authorized for installation at indicated maintenance echelons.

X2—applied to repair parts which are not stocked. The indicated maintenance echelon requiring such repair parts will attempt to obtain them from salvage; if not obtainable from salvage, such repair parts will be requisitioned with supporting justification through normal supply channels.

(2) Maintenance code. The following code symbol indicates the lowest maintenance echelon authorized to receive these items.

O-Organizational (first-echelon) maintenance.

(3) Recoverability code. If an item has been designated as recoverable, it will be so noted in this column,

c. Federal Stock Number. This column lists the 11-digit Federal stock number for requisitioning and stockage purposes. When necessary, the manufacturer's code and part numbers will be listed in the description column (*d* below)

d. Description. This column lists the items by the nomenclature that will be used for requisitioning purposes. When necessary, it also lists the manufacturer's code and part numbers. The following code number is used in this list:

30076—Hyster Company

e. Unit of Issue. This column lists the smallest quantity in which the item will be issued.

f. Expendability. These items will be considered expendable unless otherwise noted in this column.

g. Quantity Authorized. The number reflected in this column indicates the quantity of the item authorized for issue with the equipment.

h. Illustrations.

(1) *Figure number.* This column contains the number that identifies the item on the illustration.

(2) *Item number.* This column contains the number that identifies the item on the illustration.

Section II. FUNCTIONAL PARTS LIST

Technical service	Codes			Federal stock number	Description	Unit of Issue	Expendability	Quantity authorized	Illustrations	
	Source	Maintenance	Recoverability						Figure number	Item number
11	P1	0			BATTERY, Storage, 12-volt, charged and dry type, 25 M., 40-amperes-per-hour capacity, 6-cell, overall dimensions, length 10¼ in., width 6 ¹ / ₁₆ in., height 8 ⁷ / ₈ in.	ea		1		
3	P1	0		6819-249-9354	ACID, Sulfuric, electrolyte dilute, specific gravity 1.280, 1-gallon container.	ea		1		
5	P1	0		4210-555-8837	EXTINGUISHER, Fire, 2¾-pound, monobromotrifluoromethane.	ea		1	3	
9	P1	0		6220-774-4704	HEADLIGHT -----	ea		1	1	
10	X2	0			FORK (30076) 120259W -----	ea		2	1	
					PUBLICATIONS					
					TM 10-3930-222-10 (Operator's Manual)					
					Manufacturer's Technical Manual No. 931M					
					REPAIR PARTS					
					None authorized for first-echelon maintenance.					
					SPECIAL TOOLS					
					None authorized for first-echelon maintenance.					

BY ORDER OF THE SECRETARY OF THE ARMY:

G. H. DECKER,
General, United States Army,
Chief of Staff.

Official :

J.C.LAMBERT,
Major General, United States Army,
The Adjutant General.

Distribution :

Active Army:

USASA (1)	New Cumberland Army Dep (4)
DCSLOG (1)	Ft Worth Army Dep (4)
CNGB (1)	Memphis Army Dep (4)
CARROTC (1)	Schenectady Army Dep (4)
CofEngrs (2)	Sharpe Army Dep (4)
CSigO (2)	Utah Army Dept (4)
CofT (2)	QMPA (2)
TSG (2)	POE (2)
AMC (5)	Trans Tml Comd (2)
AMC Det No. 1 (Ord) (5)	Army Tml (2)
USCONARC (2)	Arsenal (2)
ARADCOM (2)	PC (2)
ARADCOM Rgn (2)	Fld Comd, DASA (2)
OS Maj Comd (3)	QM Fld Maint Shop (2)
LOGCOMD (3)	USA Corps (10)
MDW (1)	Units org under fol TOE:
Armies (5)	Two copies each unit:
Corps (2)	9-77
Instls (2)	9-348
QMRECOMD (2)	10-337
QMEPCC (9)	10-407
Svc College (2)	10-500 (EA,EE,EG)
USAQMS (2)	29-51
USAQMTC Library (2)	33-105
USMA (1)	33-106
Army Dep (2) except	55-17
Columbus Army Dep (4)	

NC: None.

USAR: Same as active Army except allowance is one copy for each unit.

For explanation of abbreviations used, see AR 320-50.

**TM 10-3930-222-10 TRUCK, LIFT, FORK, GASOLINE, PNEUMATIC-TIRED WHEELS, 15,000-POUND
CAPACITY (HYSTER MODEL H150C, ARMY MODEL NME 170) - SEPTEMBER 1962**

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