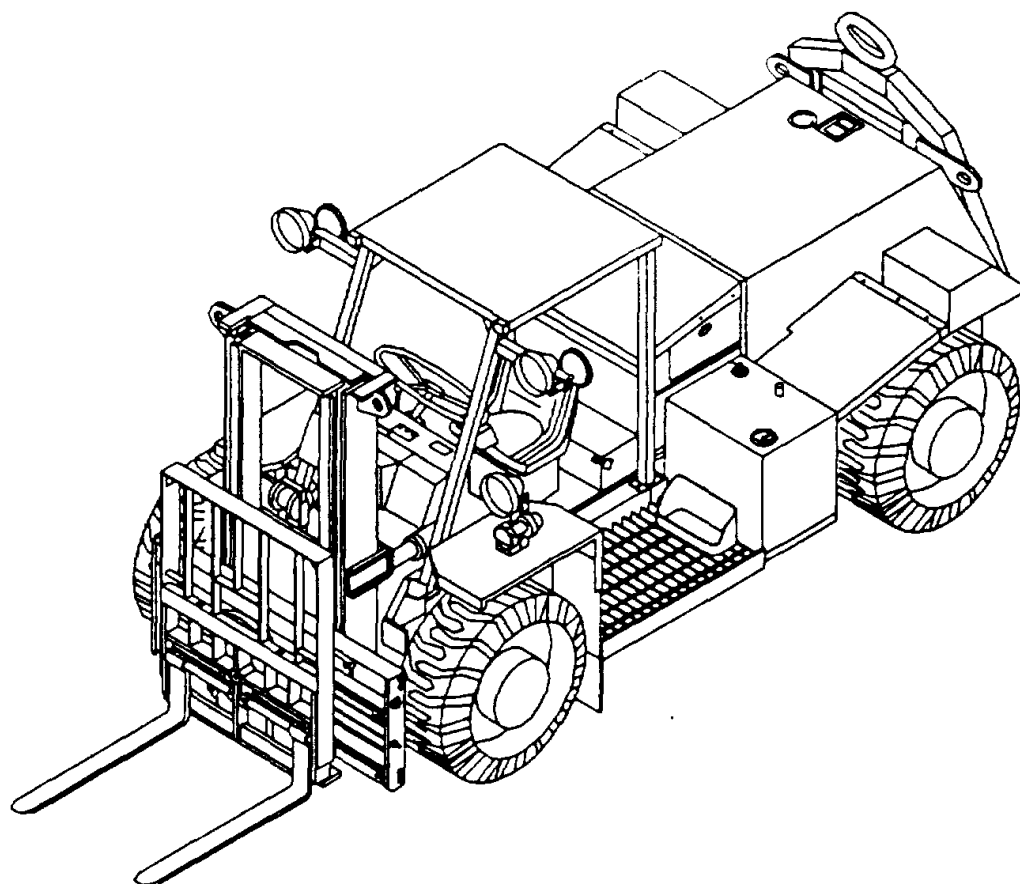


Technical Manual

OPERATOR'S MANUAL



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TRUCK, FORKLIFT, 4000 LB. CAPACITY
ROUGH TERRAIN, DED, PNEUMATIC TIRE

ARMY MODEL MHE-270 (WITHOUT CAB)
(NSN 3930-01-330-8907)

ARMY MODEL MHE-271 (WITH CAB)
(NSN 3930-01-330-8906)

Approved for public release: distribution is unlimited.



OPERATOR'S MANUAL

TRUCK, FORKLIFT, 4,000 LB. CAPACITY, ROUGH TERRAIN, DED, PNEUMATIC TIRE
ARMY MODEL MHE-270 (WITHOUT CAB)
(NSN 3930-01330-8907)

ARMY MODEL MHE-271 (WITH CAB)
(NSN 3930-01-330-8906)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help Improve this manual. If you find any mistakes, or If you know a way to Improve the procedures, please let us know. Mail your letter or DA Form 2028 (recommended changes to publications and blank forms) directly to: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MMAA, Warren, Mi. 48397-5000 A reply will be sent directly to you.

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HOW TO USE THIS MANUAL

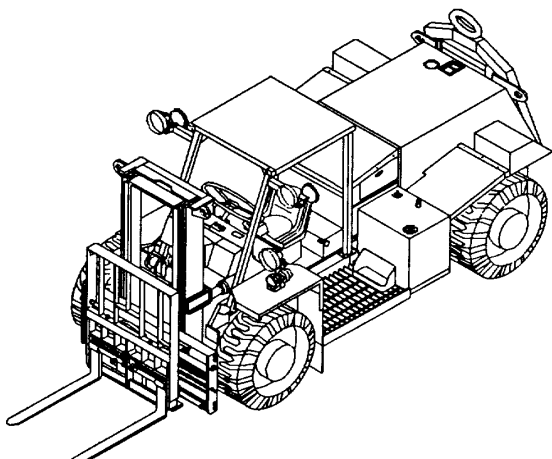
This manual (TM 10-3930-664-10) contains information which you, the operator, will need to properly operate and maintain the 4000-lb. Rough Terrain Forklift Truck (4KRTFL). This manual is divided into 3 chapters and 4 appendixes with a subject index located after the last appendix. Chapters are divided into sections and sections are further divided into paragraphs.

BEFORE YOU START

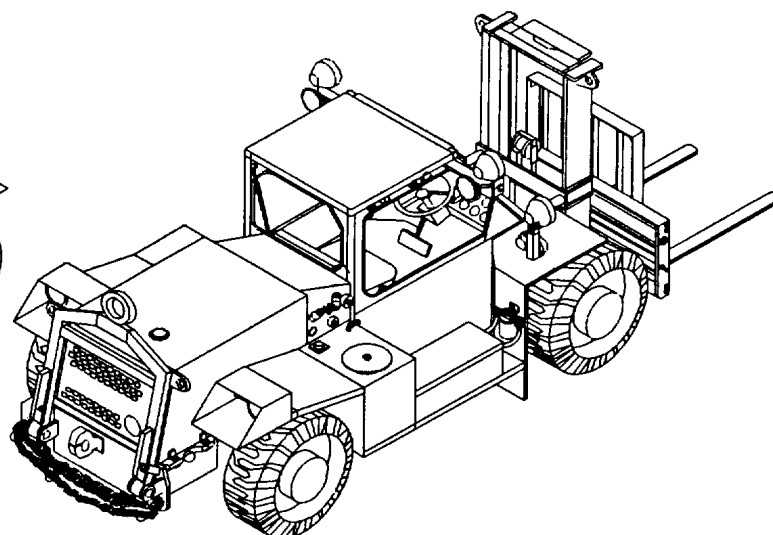
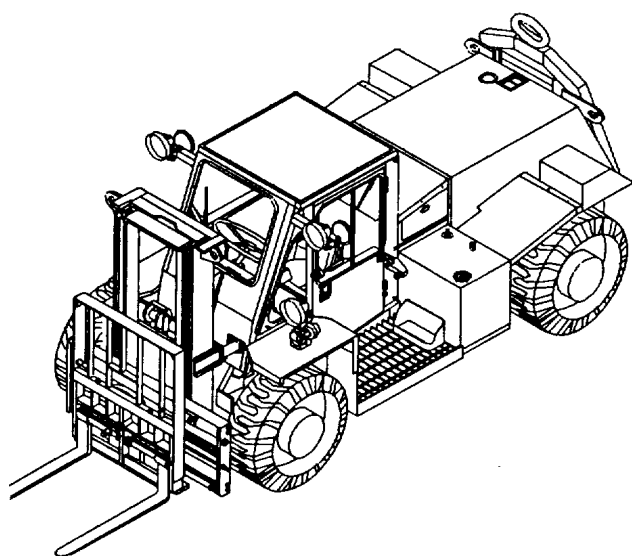
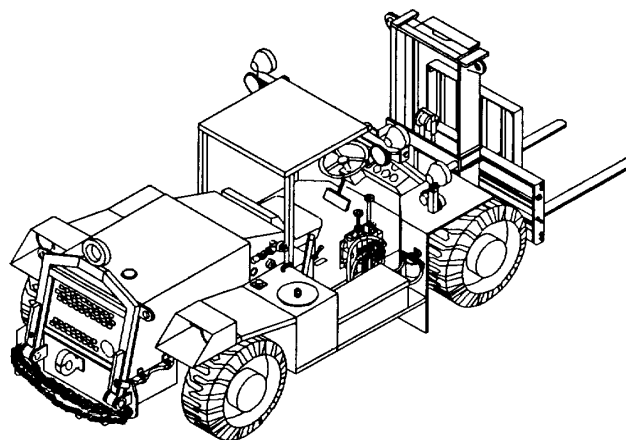
- o Read and understand all of the warnings in the front of this manual.
- o Read Chapter 1 for standard data found in all TMs. Chapter 1 will also help you to become familiar with the capabilities, features and operating principles of the 4KRTFL. All right and left indications noted in this manual are to be taken as viewed from the operator's seat.
- o Read Chapter 2 to become familiar with the operator's controls and indicators, and to learn the proper procedures for safe operation of the forklift truck in a variety of conditions. Chapter 2 also contains detailed information about your PMCS responsibilities.
- o Read Chapter 3 to become familiar with troubleshooting procedures which will help you isolate and deal with problems which occur. Chapter 3 also identifies and describes maintenance tasks you are permitted to do.

FEATURES OF THIS MANUAL

- o A front cover index of those parts of the manual you will use most often.
- o Bleeder edges (a black box) on the first page of each part of the manual in line with the bleeder edge of that same part on the front cover index for quick access to the part you need.
- o A table of contents in the front of the manual for locating any chapter, section or appendix. For quick reference, the titles of those parts of the manual included in the front cover index are identified by a box around the title.
- o An index in the back of the manual which lists all subjects in the manual in alphabetical order so that you can quickly locate the information you need.
- o WARNINGS, CAUTIONS and NOTES are used to emphasize important information you need to ensure your safety and prevent damage to the forklift truck.



MHE-270



MHE-271

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CHAPTER 1

INTRODUCTION

SECTION I. General Information

1-1. SCOPE

a. Type of Manual. This manual contains operating, preventive maintenance, troubleshooting and maintenance instructions for the 4KRTFL.

b. Equipment Name and Model Numbers. Truck, Forklift, 4000 Pound Capacity, Rough Terrain, Diesel-Engine-Driven, Pneumatic Tire, Army Models MHE-270 (without cab) and MHE-271 (with cab).

c. Purpose of Equipment. The 4KRTFL is designed to handle, transport, and stack materials in various types of terrain. It is also used to load or unload transport vehicles and containers.

d. Special Limitations on Equipment. The 4KRTFL has no special limitations. Normal limitations such as travel speed, lift capacity, etc. are given in paragraph 1-12.

1-2. MAINTENANCE FORMS AND PROCEDURES

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750 C The Army Maintenance Management System (TAMMS) (Maintenance Management UPDATE).

1-3. CORROSION PREVENTION AND CONTROL (CPC)

a. Corrosion Prevention and Control (CPC) of Army material is a continuing concern. It is important that any corrosion problems with this 4KRTFL be detected and reported so that the problem can be corrected and improvements can be made to prevent the problem in future vehicles or equipment.

b. While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

c. If a corrosion problem is identified it can be reported using Standard Form 368, Product Quality Deficiency Report. Use of key words such as "corrosion", "rust", "deterioration", or "cracking" will ensure that the information is identified as a CPC problem. The form should be submitted to the address specified in DA Pam 738-750.

1-4. DESTRUCTION OF ARMY MATERIAL TO PREVENT ENEMY USE

For destruction of the 4KRTFL to prevent enemy use, refer to TM 750-244-6, Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use.

1-5. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATION (EIR)

If your 4KRTFL needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF 368 (Product Quality Deficiency Report). Mail it to us at U.S. Army Tank-Automotive Command, Attn: AMSTA-QRT, Warren, MI 48397-5000. We will send you a reply.

1-6. WARRANTY INFORMATION

For information concerning warranty of the 4KRTFL refer to Warranty Technical Bulletin, TB 10-3930-664-14.

1-7. LIST OF ABBREVIATIONS

This list consists of special or unique abbreviations, acronyms, or descriptors not contained in MIL-STD-12.

<u>Abbreviation</u>	<u>Description</u>
4KRTFL	4000 Pound Rough Terrain Forklift
ROPS	Roll Over Protective Structure
FOPS	Falling Object Protective Structure

1-8. METRIC UNITS

The 4KRTFL described herein contains metric components and requires metric common or special tools; therefore, metric units in addition to English units will be used throughout this publication.

SECTION II. Equipment Description

1-9. EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES

a. Purpose, The 4KRTFL is designed to handle, transport, and stack materials in various types of terrain. It is also used to load or unload transport vehicles and containers.

b. Characteristics and Capabilities.

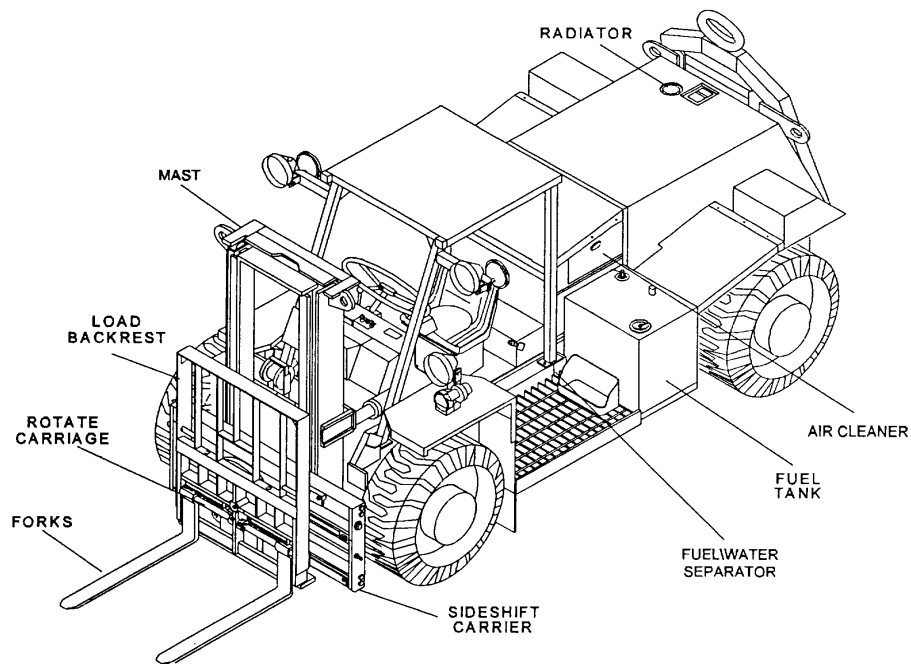
- (1) Operates over rough terrain.
- (2) Powered by a diesel engine.
- (3) Provides power assisted steering.
- (4) Lifts loads of 4000 pounds at 24 inch (61 cm) load center to a height of 120 inches (305 cm).
- (5) Forks can be shifted left or right up to 22 inches (56 cm).
- (6) Forks can be rotated clockwise or counterclockwise up to 10 degrees.
- (7) Forks can be tilted forward up to 10 degrees or rearward up to 20 degrees.
- (8) Can ford in up to 20 inches (51 cm) of water.
- (9) Can tow other vehicles.

c. Features.

- (1) Three speed ranges in both forward and reverse.
- (2) Declutching of transmission for inching or neutralizing the transmission.
- (3) Differential of front axle can be locked to prevent loss of traction.
- (4) Automatic actuation of the parking brake upon loss of power.
- (5) Three modes of steering; two wheel, four wheel, or crab wheel.

1-10. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS**a. Front and Left Side View of the 4KRTFL.**

- (1) Forks and Rotate Carriage. Supports the load during operations. Provides clockwise or counterclockwise rotation for positioning of the load.
- (2) Load Backrest. Provides additional vertical support for materials being carried on the forks. Can be removed from the rotate carriage for container operations.
- (3) Mast. Three section, telescoping mast extends or retracts to lift or lower the forks.
- (4) Radiator. Located inside the engine cover at the rear of the 4KRTFL. Contains coolant which provides engine cooling. Radiator cap is accessible through a cut out in engine cover.
- (5) Air Cleaner. Located inside transmission cover. Accessible through access door. Removes dirt and dust from intake air used in engine combustion.
- (6) Fuel Tank. Contains diesel fuel for engine operation.
- (7) Fuel/Water Separator. Removes moisture from fuel prior to delivery to the engine.
- (8) Sideshift Carrier. Provides capability to shift rotate carriage right or left for positioning of the load.



b. Rear and Right Side View of the 4KRTFL.

(1) Tow Bar. Attaches the 4KRTFL to a towing vehicle. When lowered, provides access to the radiator cap on top of the engine cover.

(2) Engine Cover. Reduces noise generated from the engine during operation and protects the engine during travel and operation.

(3) Engine. Four cylinder diesel provides power to drive the transmission and gear pump for the steering and hydraulic systems. Also contains sending units for the Simplified Test Equipment for Internal Combustion Engines (STE/ICE) diagnostics.

(4) Battery Box. Holds the batteries which provide current for the electrical system.

(5) Hydraulic Tank. Contains hydraulic oil for the steering and hydraulic systems.

(6) Oil Sampling Valves. Drain points for taking samples of engine oil, transmission oil, and hydraulic oil.

(7) NATO Slave Receptacle. Connection point for starting a disabled vehicle or for receiving starting assistance when disabled.

