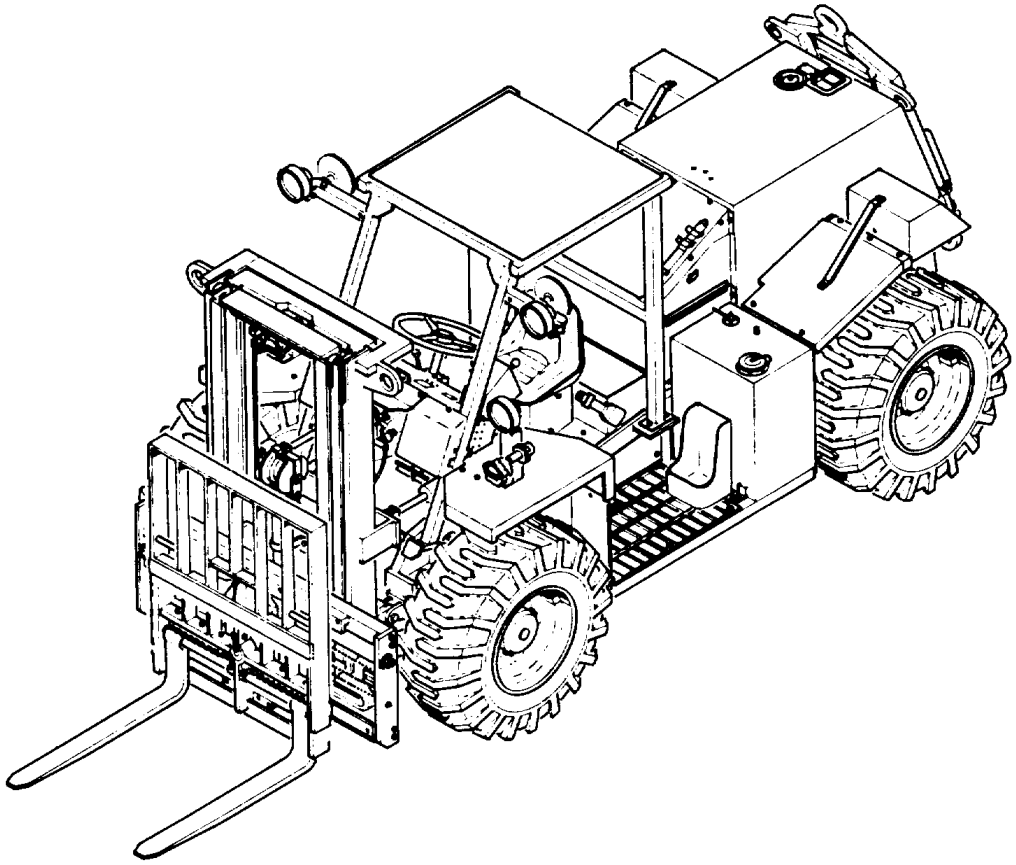
TECHNICAL MANUAL
UNIT, DIRECT SUPPORT AND GENERAL SUPPORT
MAINTENANCE INSTRUCTIONS



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

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

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

HEADQUARTER'S DEPARTMENT OF THE ARMY

JULY 1994

Unit, Direct Support and General
Support Maintenance Manual

HEADQUARTERS
DEPARTMET OF THE ARMY
Washington D.C., *19 July 1994*

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

MODEL MHE-271 (3930-01-330--8906)
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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, ATNN: AMSTA-MMAA, Warren, MI. 48397-5000 A reply will be sent directly to you.

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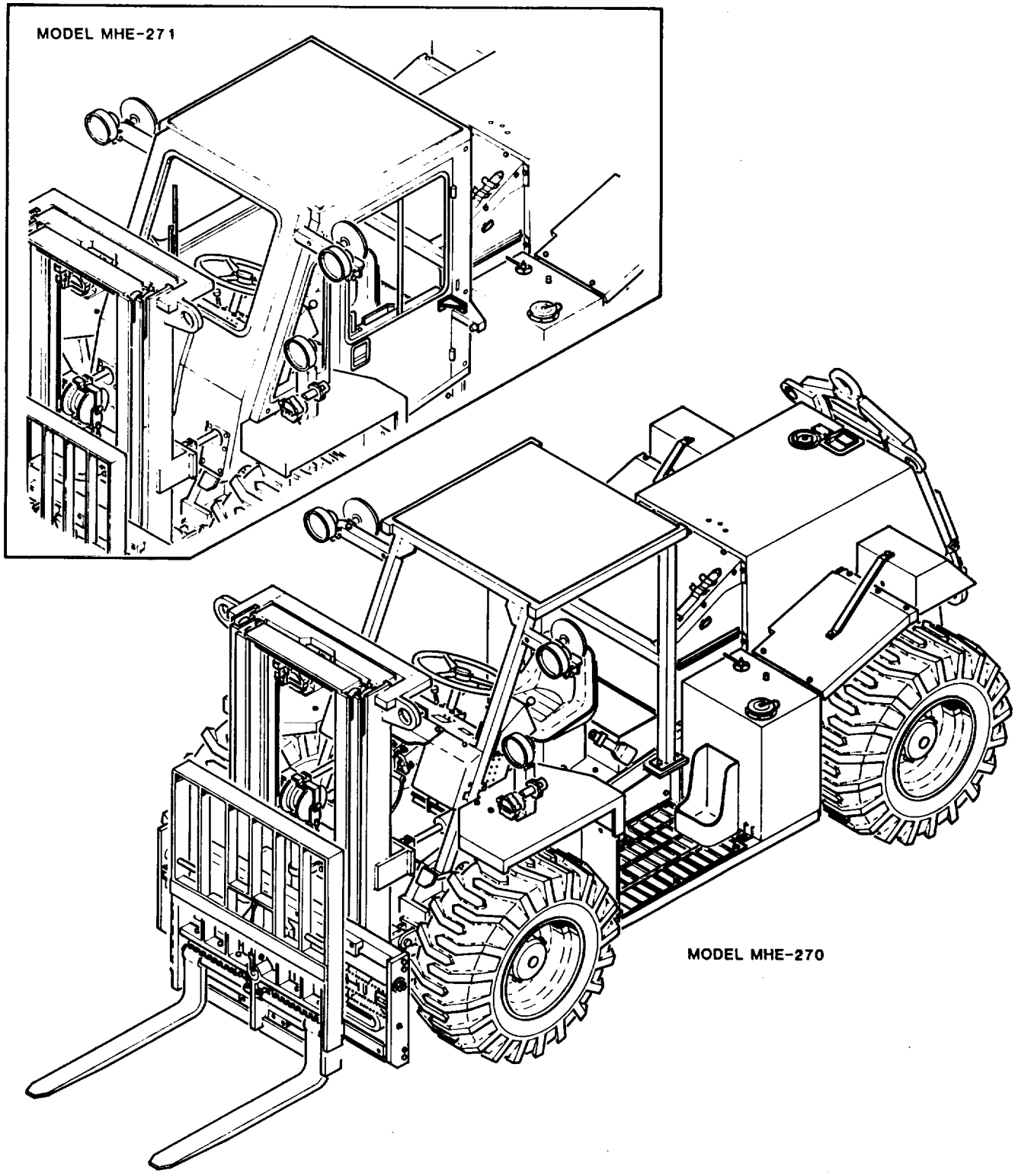

Figure 1-1. 4000 Pound Capacity Rough Terrain Forklift Truck, Models MHE-270 and MHE-271

CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

1-1. SCOPE.

a. This manual is combined Unit, Direct Support, and General Support maintenance manual for the 4000 Pound Capacity Rough Terrain Forklift Truck, 4K RTFL, Models MHE-270 and MHE-271, Figure 1-1 (hereafter referred to as forklift).

b. Information is provided on principles of operation, service upon receipt, inspection and installation, repair parts and special tools, preventive maintenance checks and services, troubleshooting, Unit, Direct Support and General Support maintenance, and preparation for shipment and storage.

c. Appendix A contains a list of reference publications applicable to this manual.

1-2. MAINTENANCE FORMS AND RECORDS.

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

1-3. DESTRUCTION OF ARMY MATERIAL TO PREVENT ENEMY USE.

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

1-4. PREPARATION FOR STORAGE OR SHIPMENT.

a. **General**. The procedures defined below are necessary to maintain the forklift in storage in such a way as to achieve the maximum Readiness Condition (REDCON). Equipment that is placed in storage should be capable of being readied to perform its mission within a 24-hour period or as otherwise may be prescribed by the approving authority.

b. Before the forklift is placed in storage, current maintenance services and equipment serviceability criteria (ESC) evaluations should be completed, shortcomings and deficiencies should be corrected, and all modification work orders (MWO's) should be applied.

c. Report equipment in storage in Material Readiness and Unit Readiness reports as prescribed for all reportable equipment. Refer to AR 220-1.

d. During the storage period appropriate maintenance records must be kept. Perform inspections, maintenance services, and lubrications in accordance with the Lubrication Order and Preventive Maintenance Checks and Services (PMCS) tables. Ten percent variance is acceptable on the time used to determine maintenance actions required.

e. Records and reports to be maintained for equipment in storage are those prescribed by TM 38-750, for equipment in use.

f. **Storage Site Selection**. Select the best available site for storage. Separate stored forklift from equipment in use. Covered storage space is preferred. Open sites should be improved hardstand. Unimproved sites should be firm, well drained, and kept free of excessive vegetation.

g. **Storage Plan**. Store the forklift so as to provide maximum protection from the elements and to provide access for inspection, maintenance, and exercise. Anticipate removal or deployment problems and take suitable precautions.

h. Take into account environmental conditions, such as extreme heat or cold; high humidity; blowing sand, dust, or loose debris; soft ground; mud; heavy snows; earthquakes; or combinations thereof and take adequate precautions.

i. **Maintenance Prior To Storage**.

(1) Maintenance Services.

(a) Prior to storage, perform the next scheduled major preventive maintenance service (monthly, quarterly, or semiannually).

(b) Fill fuel tank to maximum allowable level. Ventilate by releasing filler cap. If local fire regulations prohibit storing equipment with fuel in system, completely drain the fuel tank.

(c) Remove battery from forklift and store in a cool, well-ventilated area. Recharge and clean before reinstalling.

(2) Inspection. Inspect and approve the forklift prior to storage. When applicable, perform an ESC evaluation. Do not place the forklift in storage in RED condition unless RED condition is due only to over age.

(3) Cleaning. Clean the forklift of dirt, grease, or other contaminants in accordance with paragraph 1-23.

(4) Preservation. After cleaning and drying, immediately coat unpainted metal surfaces with an oil or grease, as appropriate. Ensure the following components are properly preserved:

(a) Mast assembly
(b) Rail assemblies
(c) Rotate carriage assembly
(d) Sideshift carrier assembly
(e) Freelift chain assembly
(f) Drive chain assembly
(g) Sideshift chain assemblies
(h) Cylinder rod ends

(5) Weatherproofing. Sunlight, heat, moisture (humidity), and dirt tend to accelerate deterioration. Install all covers authorized for the forklift. Close and secure all openings except those required for ventilation and draining. Seal openings to prevent the entry of rain, snow, or dust. Insert desiccant (item 32, App. C) when complete seal is required. Place forklift at storage site and provide blocking or framing to allow for ventilation and water drainage.

NOTE

Air recirculation under draped covers reduces deterioration from moisture and heat.

CAUTION

Place a piece of barrier material (item 31, App. C) between desiccant bags and metal surfaces. Desiccant may leak and deteriorate or corrode adjacent metal.

j. **Inspection During Storage.** Inspection will be visual and consist of a walk-around examination of the entire forklift to observe any deficiencies that may have occurred. Inspect forklifts in open storage weekly and those in covered storage monthly. Immediately after any severe storm or environmental change inspect all equipment. Conduct the following checks during visual inspection:

(1) Inspect for leaks: fuel, oil, or hydraulic fluid. Inspect all hoses, tubing, connections, fittings, seals, and gaskets for evidence of leakage.

(2) Inspect for low or flat tires. Mark reinflated and repaired tires with a crayon and ensure they are thoroughly checked at next inspection interval.

(3) Inspect for corrosion or other deterioration.

(4) Inspect for missing or damaged parts.

(5) Check for water in compartments.

(6) Look for any other recognizable shortcomings or deficiencies.

k. **Repair During Storage.** Keep the forklift in an optimum state of readiness. Accomplish required services and repairs as expeditiously as possible. Whenever possible, perform maintenance "on-site".

l. **Exercising During Storage**. Exercise the forklift in accordance with the schedule outlined in Table 1-1. Limit depreservation to removal of materials that will restrict exercising. Perform all Before, During, and After PMCS procedures (Chapter 2). Conduct applicable ESC inspections.

m. Immediately take actions to correct shortcomings and deficiencies noted. Record inspection and exercise results on DA Form 2404. Record and report maintenance actions on DA Form 2407. After exercising, restore the preservation to the original condition.

n. Replenish fuel and oil used during exercising and note the amount on DA Form 2408-1.

o. **Removal From Storage**. Restore forklift to normal operating condition. Resume the maintenance service schedule in effect at the commencement of storage or service the forklift before the scheduled dates in order to produce a staggered maintenance workload.

Table 1-1. Forklift Exercising During Storage

INFORMATION TO BE SUPPLIED
BY U.S. ARMY TACOM

1-5. NOMENCLATURE CROSS-REFERENCE LIST.

Refer to Table 1-2 for a listing of simplified and common item names used in this manual.

Table 1-2. Nomenclature Cross-Reference List

Common Name	Official Nomenclature
Forklift or 4K RTFL	Truck, Forklift, 4000 Lb Capacity, Rough Terrain, DED, Pneumatic Tire

1-6. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR's).

If your forklift 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. Put it on an SF 368 (Quality Deficiency Report). Mail it to: Commander, US Army Tank-Automotive Command, Attn: AMSTA-QRT, Warren, MI 48397. We'll send you a reply.

1-7. WARRANTY INFORMATION.

Refer to the Warranty Technical Bulletin TB 10-3930-664-14 for information on warranty policies and coverage.

1-8. USE OF METRIC UNITS.

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

1-9. CORROSION PREVENTION AND CONTROL (CPC).

a. Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with the forklift and its components be reported so that the problem can be corrected and improvements can be made to prevent the problem in future components.

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.