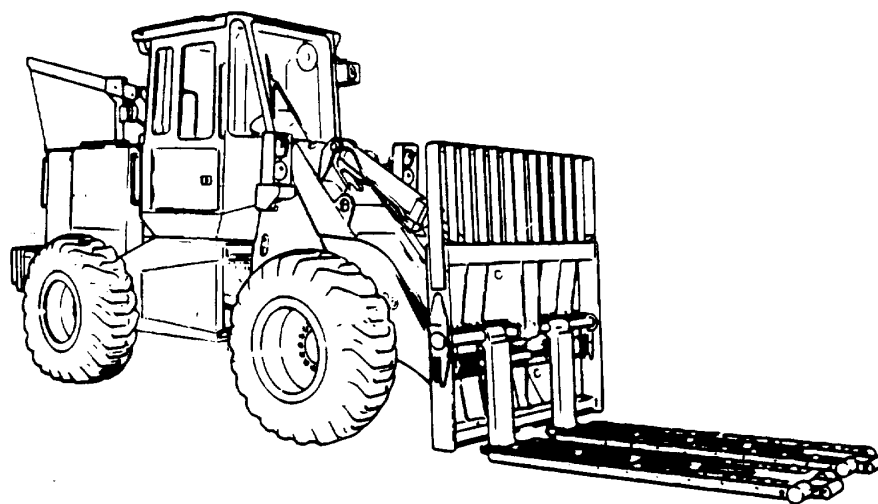


**OPERATOR'S MANUAL**  
**FOR**  
**TRUCK, FORKLIFT:**  
**ADVERSE TERRAIN,**  
**10,000 LB CAPACITY, M544E**  
**(NSN 3930-01-301-8250)**



<b>How To Use This Manual</b>	<b>iii</b>
-----------------------------------	------------

<b>Equipment Description and Data</b>	<b>1-3</b>
---	------------

<b>Operating Instructions</b>	<b>2-1</b>
-----------------------------------	------------

<b>Preventive Maintenance Checks and Services (PMCS)</b>	<b>2-11</b>
--	-------------

<b>Troubleshooting Procedures</b>	<b>3-2</b>
---------------------------------------	------------

<b>Maintenance Procedures</b>	<b>3-11</b>
-----------------------------------	-------------

**Approved for public release; distribution is unlimited.**

---

**HEADQUARTERS, DEPARTMENT OF THE ARMY**

**NOVEMBER 1993**

**OPERATOR'S MANUAL  
FOR  
TRUCK, FORKLIFT: ADVERSE TERRAIN,  
10,000 LB CAPACITY, M544E  
(NSN 3930-01-301-8250)**

**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, DA Form 2028 (*Recommended Changes to Publications and Blank Forms*), or DA Form 2028-2, located in the back of this manual, directly to: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished to you.

**TABLE OF CONTENTS**

	<b>Page</b>
How To Use This Manual .....	iii
<b>CHAPTER 1 INTRODUCTION</b> .....	<b>1-1</b>
Section I. General Information .....	1-1
Section II. Equipment Description and Data .....	1-3
Section III. Principles of Operation .....	1-10
<b>CHAPTER 2 OPERATING INSTRUCTIONS</b> .....	<b>2-1</b>
Section I. Description and Use of Operator's Controls and Indicators .....	2-1
Preventive Maintenance Checks and Services (PMCS) .....	2-1

**Approved for public release: distribution is unlimited.**

**TABLE OF CONTENTS (Con't)**

	<b>Page</b>
Section III. Operation Under Usual Conditions.....	2-34
Section IV. Operation Under Unusual Conditions.....	2-65
<b>CHAPTER 3 MAINTENANCE INSTRUCTIONS.....</b>	<b>3-1</b>
Section I. Lubrication Instructions .....	3-1
Section II. Troubleshooting Procedures.....	3-2
Section III. Maintenance Procedures.....	3-11
<b>APPENDIX A REFERENCES.....</b>	<b>A-1</b>
<b>APPENDIX B COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS.....</b>	<b>B-1</b>
<b>APPENDIX C ADDITIONAL AUTHORIZATION LIST (AAL).....</b>	<b>C-1</b>
<b>APPENDIX D EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST.....</b>	<b>D-1</b>
<b>APPENDIX E STOWAGE AND SIGN GUIDE.....</b>	<b>E-1</b>
INDEX .....	Index 1

**HOW TO USE THIS MANUAL**

---

This manual is designed to operate the M544E Forklift Truck

**FEATURES OF THIS MANUAL:**

- Bleed-to-edge Indicators on the cover and on the edge of the applicable manual pages provide quick access to chapters and sections most often used.
- WARNINGS, CAUTIONS, NOTES, subject headings, and other important information are highlighted in BOLD print as a visual aid.

**WARNING**

**A WARNING Indicates a hazard which can result in death or serious injury.**

**CAUTION**

**A CAUTION is a reminder of safety practices or directs attention to usage practices that may result in damage to equipment.**

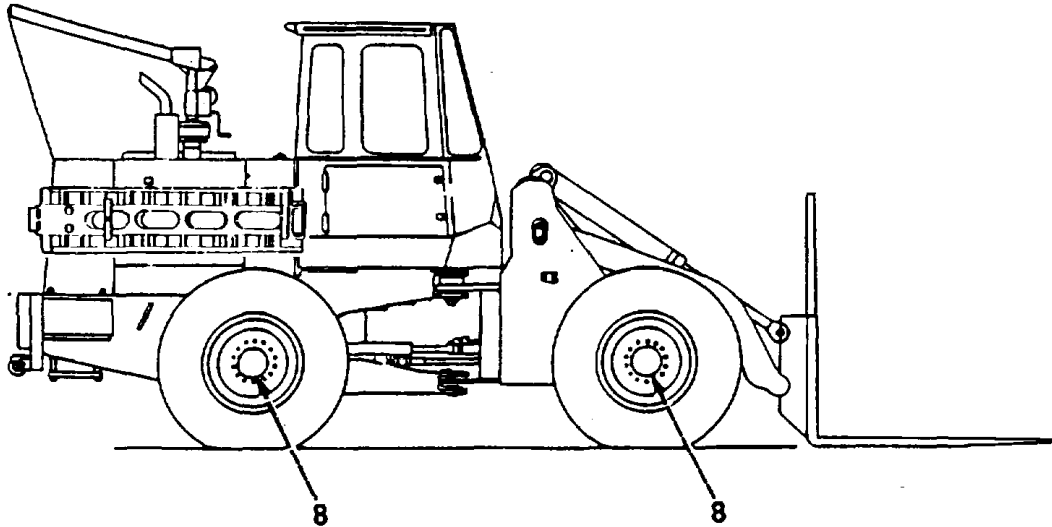
**NOTE**

**A NOTE is a statement containing information that will make the procedure easier to perform.**

- An alphabetized list of abbreviations and their meanings are included in Chapter 1 for reference purposes.

### HOW TO USE THIS MANUAL (Con't)

- Instructions are located together with illustrations that show the specific task on which the operator is working.
- Dashed leader lines used in illustrations indicate that called out items are not visible (i.e., they are located *within* the structure). The example illustrates that the drive axles (8) are located within the axle.



Dasher Leader Line Example

- An alphabetical index is provided at the end of the manual to assist in locating Information not readily found in the table of contents.
- Technical instructions Include metric units In addition to standard units. A metric conversion chart is provided on the Inside back cover.

#### **FOLLOW THESE GUIDELINES WHEN YOU USE THIS MANUAL:**

- Read through this manual and become familiar with its contents before attempting to operate this vehicle.
- A warning summary Is provided at the beginning of this manual and should be read before attempting to operate this vehicle.
- Within a chapter or section, headings are used to help group the material to assist in quickly finding tasks.

**TA704469**

FOR INFORMATION ON FIRST AID, REFER TO FM 21-11.

**WARNING**

**CARBON MONOXIDE (EXHAUST GASES) CAN KILL!**

Carbon monoxide is a colorless, odorless, deadly poisonous gas which, when breathed, deprives the body of oxygen and causes suffocation. Exposure to air containing carbon monoxide produces symptoms of headache, dizziness, loss of muscular control, apparent drowsiness, and coma. Permanent brain damage or death can result from severe exposure.

Carbon monoxide occurs in exhaust fumes of internal combustion engines. Carbon monoxide can become dangerously concentrated under conditions of inadequate ventilation. The following precautions must be observed to ensure safety of personnel when engine of forklift truck is operated for any purpose.

- (1) DO NOT operate forklift truck engine in enclosed areas.
- (2) DO NOT idle forklift truck engine with cab windows closed and without ventilator blower operating.
- (3) DO NOT drive forklift truck with inspection plates or cover plates removed.
- (4) BE ALERT at all times for exhaust odors.
- (5) BE ALERT for exhaust poisoning symptoms. They are:
  - Headache
  - Dizziness
  - Sleepiness
  - Loss of muscular control
- (6) If you see another person with exhaust poisoning symptoms:
  - Remove person from area.
  - Expose to fresh air.
  - Keep person warm.
  - Do not permit physical exercise.
  - Administer artificial respiration, if necessary.
  - Notify a medic.
- (7) BE AWARE: The field protective mask for chemical-biological-radiological (CBR) protection will not protect you from carbon monoxide poisoning.

***The Best Defense Against Carbon Monoxide Poisoning Is Good Ventilation.***

**WARNING****BATTERIES**

- **Remove all jewelry such as rings, dog tags, bracelets, etc. If jewelry contacts battery terminal, a direct short will result, causing Instant heating of jewelry which will result in severe Injury to personnel.**
- **Battery gases can explode. DO NOT smoke or allow sparks or open flames near batteries. Wear safety glasses or goggles when checking batteries. Failure to follow this warning may result in death or serious Injury to personnel.**
- **Sulfuric acid contained in batteries can cause serious burns. If battery corrosion or electrolyte makes contact with skin, eyes, or clothing, take immediate action to stop the corrosive burning effects. Failure to follow these procedures may result in death or serious injury to personnel.**
  - a. Eyes. Flush with cold water for no less than 15 minutes and seek medical attention immediately.
  - b. Skin. Flush with large amounts of cold water until all acid is removed. Seek medical attention as required.
  - c. Internal. If corrosion or electrolyte is Ingested, drink large amounts of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Seek medical attention Immediately.
  - d. Clothing/Equipment. Wash area with large amounts of cold water. Neutralize acid with baking soda or household ammonia.

**WARNING****COMPRESSED AIR**

**Compressed air used for cleaning or drying purposes, or for cleaning restrictions, should never exceed 30 psi (207 kPa). Wear protective clothing (goggles/shield, gloves, etc.) and use caution to avoid injury to personnel.**

**b**

**WARNING**

**DIESEL FUEL HANDLING**

- **DO NOT** smoke or permit any open flame in area of forklift truck while you are servicing diesel fuel system. Be sure hose nozzle is grounded against filler tube during refueling to prevent static electricity. Failure to follow this warning will result in injury to personnel or equipment damage.
- Diesel fuel is combustible. **DO NOT** smoke or allow open flame near fuel tank. Failure to follow this warning will result in death or serious injury to personnel. If you are burned, immediately seek medical aid.

**WARNING**

**ENGINE OPERATION**

Start engine only while properly seated on operator's seat, seatbelt fastened, cab door and cab right window latched in desired position, and mirror adjusted. Failure to follow this warning may result in injury or death to operator or nearby personnel.

**WARNING**

**EXHAUST PIPE AND MUFFLER**

**DO NOT** touch hot exhaust pipe or muffler with bare hands. Severe injury to personnel will result.



**WARNING**

**FORKLIFT OPERATION**

**Never allow forks or load to contact power lines. If forklift truck must be operated in vicinity of power lines, follow these safety precautions. Failure to follow these procedures may result in death or serious injury.**

- a. Contact power company and have all power lines and ground wires turned off.
- b. DO NOT allow any portion of equipment close to power lines.
- c. Know maximum height and reach of forklift truck and build a suitable barricade around all power sources.
- d. Warn all personnel in work area of power source and electrocution hazard.
- e. If contact with a power source does occur, DO NOT step off the forklift truck. Stay on the vehicle until power is turned off or equipment is lowered and clear of power source.
- f. If fire or other conditions force operator to leave the forklift truck, Jump off and away keeping all parts of body clear of the equipment.

**WARNING**

**ON-BOARD CRANE OPERATION**

**Crane is heavy. Assistant is required to raise or lower crane to various operating positions. Assistant may be required to help raise or lower load. Failure to follow this warning may result in injury to personnel.**

**WARNING**

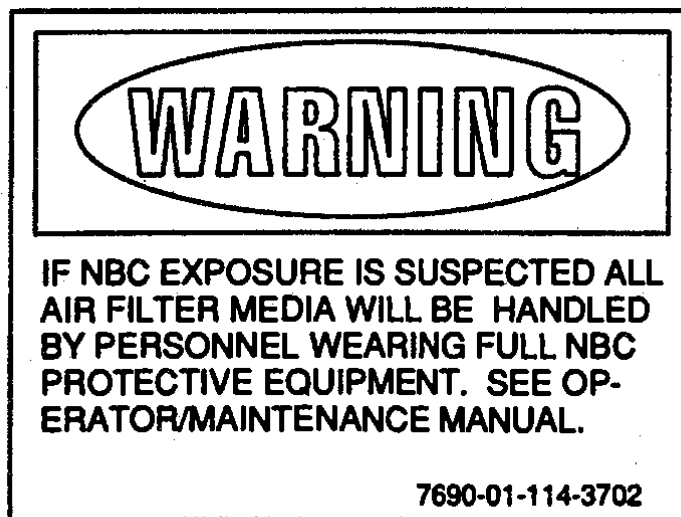
**PARKING FORKLIFT TRUCK**

**DO NOT depend on direction selector lever alone to keep forklift truck from moving. ALWAYS apply parking brake. Failure to follow this warning may result in injury to personnel.**

**WARNING**

**NBC EXPOSURE**

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



To order this NBC decal use:

National Stock Number (NSN) - 7690-01-114-3702

Part Number (PN) - 12296626

Commercial and Government Entity Code (CAGEC) - 19207

**WARNING**

**PASSENGERS**

DO NOT allow passengers to ride in cab or outside cab on forklift truck. Injury to personnel may result.

**WARNING**

**PRESSURIZED COOLING SYSTEM**

DO NOT remove radiator fill cap unless engine is cold. This is a pressurized cooling system and escaping steam, hot water, or coolant will cause serious burns.