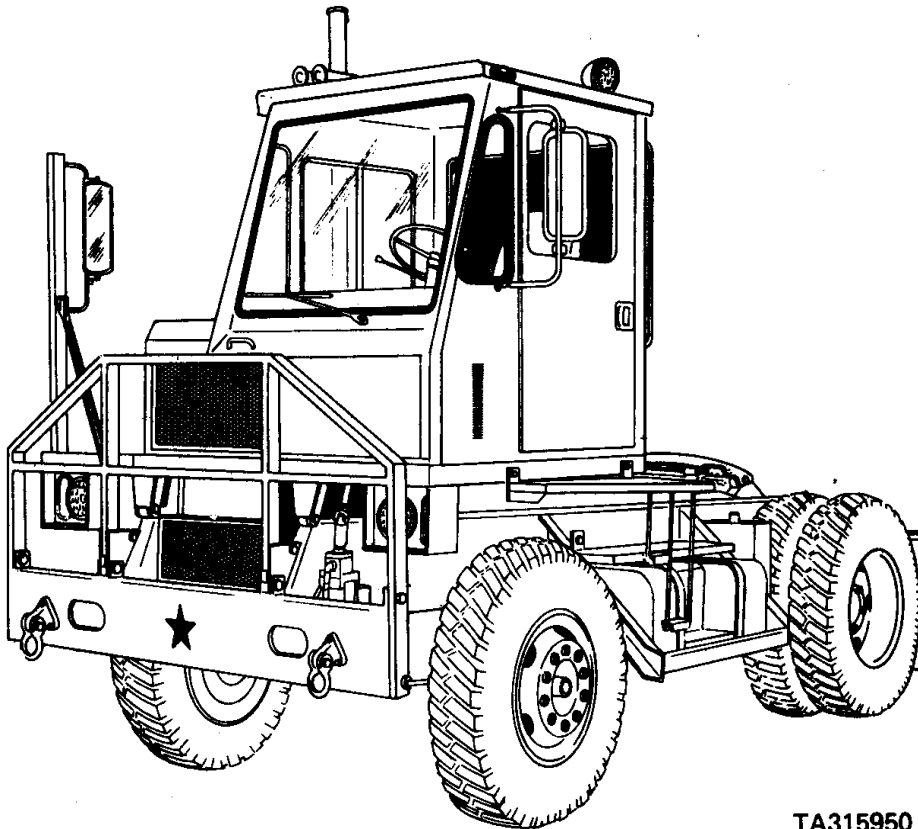


OPERATOR'S MANUAL



TRUCK TRACTOR, YARD TYPE,
43,500 LB GVW, DED, 4X2,
ARMY MODEL M878A1
(OTTAWA MODEL 50)
(NSN 2320-01-121-2102)

HEADQUARTERS, DEPARTMENT OF THE ARMY

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JUNE 1985

Technical Manual

No. 9-2320-285-10

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C. 4 June 1985

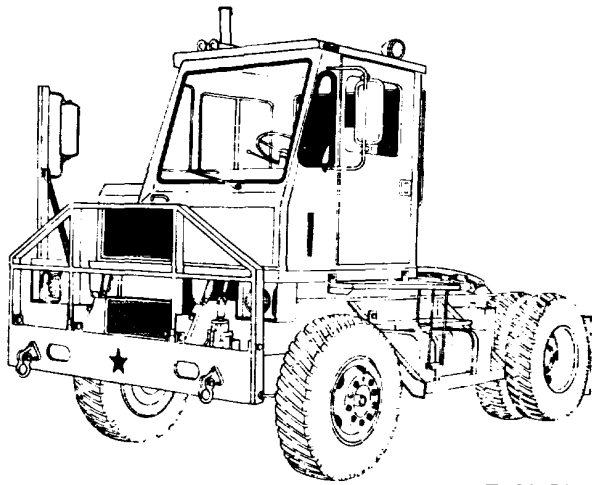
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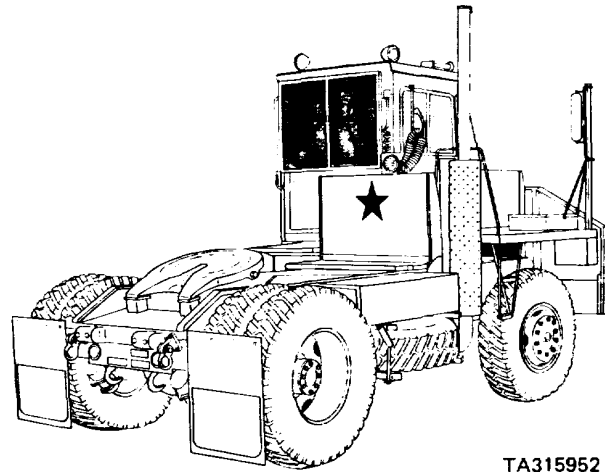
REPORTING OF ERRORS

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 back of this manual direct to: Commander, US Army Tank-Automotive Command, ATTN: DRSTA-MBP, Warren, MI 48090. A reply will be furnished to you.

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LEFT FRONT VIEW



RIGHT REAR VIEW

M878A1 Yard Tractor

HOW TO USE THIS MANUAL

This manual:

- Contains information for safe and efficient operation of your tractor. These instructions provide you with a general knowledge of the tractor, its characteristics, and usual and unusual operation procedures.
- Provides you with troubleshooting procedures, so that you can keep your tractor operating properly.
- Provides best possible operating instructions under most circumstances. Adverse weather or multiple emergencies may require modification of these procedures.
- Takes a "positive approach" and normally states only what you can do. Unusual operations or configurations are prohibited unless specifically included. Before attempting any questionable operation, which is not specifically permitted in this manual, clearance must be obtained from your supervisor.

CHAPTER 1
INTRODUCTION

CHAPTER OVERVIEW

The purpose of this chapter is to acquaint you with the maintenance forms, records, and reports that you must maintain for the M878A1 yard tractor, to familiarize you with the purpose and capabilities of the vehicle, and to give you a brief description of its different systems and components.

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Section I. GENERAL INFORMATION

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1-1. SCOPE

- a. Type of Manual. Operator's manual for M878A1 tractor.
- b. Model Number and Equipment Name. Truck Tractor, Yard Type, Diesel Engine Driven, 43,500 Pounds Gross Vehicle Weight, Model M878A1.
- c. Purpose of Equipment. Movement of truck trailers within a terminal yard.

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. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR's)

If your M878A1 tractor 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. Tell us why a procedure is hard to perform. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at: Commander, US Army Tank-Automotive Command, ATTN: DRSTA-MP, Warren, MI 48090. We'll send you a reply.

1-4. WARRANTY INFORMATION

The M878A1 tractor is warranted by Ottawa Truck Division, Ottawa, Kansas for 15 months or 1500 hours of operation. Warranty starts on the date found in block 23 on DA Form 2408-16 in the logbook. Report all defects in material or workmanship to your supervisor who will take appropriate action.

1-5. ORIENTATION

In this manual, right and left sides of the tractor are from the viewpoint of the operator when sitting in the operator's seat facing toward the front of the tractor.

1-6. LIST OF ABBREVIATIONS

A	Ampere
AR	Army regulation
ATTN	Attention
DA	Department of the Army
DD	Department of Defense
DED	Diesel engine driven
EIR	Equipment improvement recommendations
F	Fahrenheit
FM	Field Manual
FSCM	Federal Supply Code for Manufacturers
LO	Lubrication Order
MAC	Maintenance Allocation Chart
MPH	Miles per hour
N	Neutral
NSN	National stock number
Para	Paragraph
PSI	Pounds per square inch
R	Reverse
RPM	Revolutions per minute
TAMMS	The Army Maintenance Management System
TM	Technical Manual
V	Volts
Vac	Alternating current voltage
PTO	Power takeoff

Section II. EQUIPMENT DESCRIPTION

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Equipment Purpose, Capabilities,		Location and Description of	
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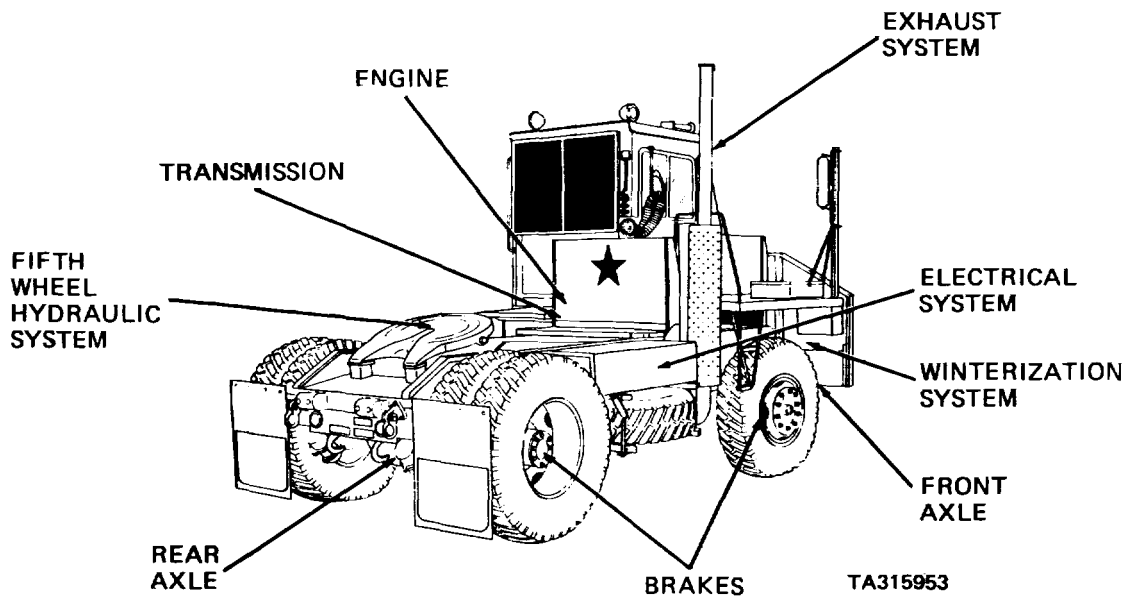
1-7. EQUIPMENT PURPOSE, CAPABILITIES, FEATURES AND CHARACTERISTICS

a. Purpose of M87AM1 Tractor. Perform terminal yard operations such as spotting and moving trailers.

b. Capabilities and Features.

- (1) Hydraulically operated fifth wheel enables lowering or raising of fifth wheel for alignment with trailers.
- (2) Pneumatically operated fifth wheel unlatch.
- (3) Hand operated cab tilt pump enables tilting of cab to 45 degrees. Cab may then be manually tilted to 90 degrees.
- (4) Six cylinder diesel engine and five speed automatic transmission.
- (5) Power steering.
- (6) Fail-safe brakes: loss of air pressure automatically allows large spring in rear axle brakes air chambers to apply parking brake.

1-8. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS



Engine - 6-cylinder turbocharged diesel.

Transmission - Automatic, with five forward speeds, neutral, and reverse.

Exhaust System - Consists of muffler and exhaust pipe.

Brakes - Drum type, pneumatic operated.

1-8. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (Continued)

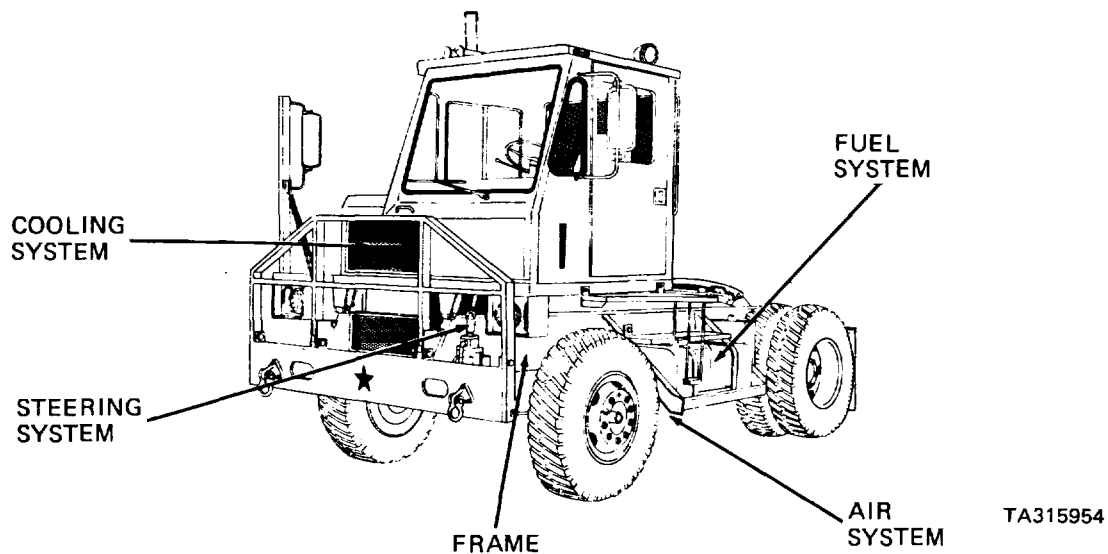
Electrical System - 12 volt. Includes four wet-cell batteries, wiring harnesses, and electrical components.

Winterization System - Consists of accessory heater systems for cold-weather operation.

Front Axle - I-beam type steerable axle.

Rear Axle - Heavy duty double-reduction drive unit.

Fifth Wheel Hydraulic System - Includes hydraulic reservoir bolted to chassis directly behind fuel tank, hydraulic pump, and fifth wheel.



Frame - Two heavy duty flange beams extending the length of the tractor.

Air System - Includes air compressor, two air reservoirs consisting of a service tank and a supply tank, and warning buzzer and light.

Steering System - Includes steering wheel and column connected at cab floor to steering gear; hydraulic power assisted.

Cooling System - Includes radiator, fan, and water pump.

Fuel System - Includes vented fuel tank mounted to left side of frame, mechanical gear pump, fuel filters, fuel injectors, connecting tubing and fittings, and air cleaner and precleaner.