

TM 10-3930-243-12

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

TECHNICAL MANUAL

**OPERATOR AND ORGANIZATIONAL
MAINTENANCE MANUAL**

**TRUCK, LIFT, FORK, DIESEL ENGINE,
PNEUMATIC TIRED WHEELS, ROUGH TERRAIN
10,000 LB. CAPACITY, 24 INCH LOAD CENTER**

**(PETTIBONE - MULLIKEN MODEL RTL10,
ARMY MODEL MHE 199)**

FSN 3930-903-0899

**(PETTIBONE - MULLIKEN MODEL RTL10-1;
ARMY MODEL MHE 215)**

FSN 3930-465-5869

HEADQUARTERS, DEPARTMENT OF THE ARMY

This copy is a reprint which includes current
pages from Changes 1 through 6.

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DEPARTMENT OF THE ARMY
WASHINGTON, D. C., 3 June 1971

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

a. These instructions are published for the use of the personnel to whom the Pettibone-Mulliken Forklift Truck Model RTL10 and Model RTL10-1 is issued. They provide information on the operation and organizational maintenance of the equipment. Also included are descriptions of the main units and their functions in relationship to other components.

b. Refer to TM740-90-1 (Administrative Storage of Equipment), for information and instructions pertaining to organizational administrative storage.

c. Refer to TM750-244-3 (Procedures for Destruction of Equipment to Prevent Enemy Use), for information and instructions on destruction of equipment to prevent enemy use.

1-2. Forms and Records

a. DA forms and records used for equipment maintenance will be only those prescribed in TM 38-750.

b. Report of errors, omissions and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to Commanding General, U. S. Army Mobility Equipment Command, ATTN: AMSME-MPP, 4300 Goodfellow Boulevard, St. Louis, Mo. 63120.

1-3. Equipment Serviceability Criteria

Refer to TM10-3900-203-ESC for information on equipment serviceability criteria.

Section II. DESCRIPTION AND DATA

1-4. Description

The Pettibone-Mulliken Rough Terrain Forklift Truck Models RTL10 and RTL10-1 is capable of operating over all types of terrain, and may be operated for three types of material handling. The truck may be used as a forklift or as a towing truck. As a forklift the truck has a rated capacity of 10,000 pounds at a 24 inch load center. As a towing truck, it has a maximum drawbar pull of 19,000 pounds. Over a smooth level surface the truck can pull a load 20 times its drawbar pull. The truck may be used in fording operations when the depth of the surf does not exceed 5 feet to the crest of the waves. The truck is equipped with front and rear axle steering which gives the truck a shorter turning radius. The truck is also equipped with two-wheel and four-wheel drive, enabling it to transverse mud, snow, sand, and steep grades with equal ease. The body and forks of the truck may be tilted right or left in relation to front axle. The forks are extended by hydraulically operated telescoping arms which reach out, up or down to handle loads. A hydraulic cylinder moves the forks right or left from center to lift-off center loads. The truck has hydraulic brakes, hydraulic-operated power steering and a torque converter. It is powered by a

six-cylinder, V-type overhead valve, liquid cooled, diesel engine.

1-5. Identification and Tabulated Data

a. *Identification.* The forklift has two identification plates mounted on the right of the hull and engine. They specify the nomenclature, shipping dimensions, model number, and engine manufacturer. The data from these plates can be found under b below.

b. *Tabulated Data.*

(1) *Identification plates.*

(a) *Engine identification plate.*

Manufacturer Detroit Diesel Engine
Division, Detroit,
Michigan, U.S.A.
Model 5063-5200
Max. RPM No Load 3010

(b) *Forklift truck identification plate.*

Stock No.:
Model RTL10 3930-903-0899
Model RTL10-1 3930-465-5869
Manufacturer PM Corp.
Model RTL10, RTL10-1
Contract No.:
Model RTL10 DA-11-184-AMC-597
DA-23-195-AMC-916
Model RTL10-1 DSA-400-69C-5415

Length 202 inches
 Width 110 inches
 Height 115 inches
 Capacity or pay load 10,000 pounds
 Shipping weight 33,500 pounds
 Cubage 1479 cubic feet
 Engine manufacturer Detroit Diesel
 Series 6V-53

(2) *Engine.*

Manufacturer Detroit Diesel Engine,
 Division of General
 Motors Division
 Number of cylinders 6
 Bore 3.875 inch
 Stroke 4.5 inch
 Compression ratio
 (nominal) 17 to 1
 Total displacement-
 cubic inches 318.6
 Firing order - R / H
 rotation 1L-3R-3L-2R-2L-1R
 Number of main bearings 4

(3) *Generator.*

(a) *RTL10.*

Manufacturer Delco Remy
 Part no. 1117495
 Volts 24V, DC

(b) *RTL10-1.*

Manufacturer Prestolite
 Part No GHA804UT
 Volts 24 V, DC

(4) *Starter*

Manufacturer Delco-Remy
 Part No 1113847
 Volts 24 V, DC

(5) *Generator regulator.*

Manufacturer Delco-Remy
 Model No 111856
 Rating 24V, 25 amps, negative
 ground

(6) *Fuel filters.*

(a) *Fuel filter, primary.*

Manufacturer AC Spark Plug
 Part No 5577342
 Element 1595655

(b) *Fuel filter, secondary,*

Manufacturer AC Spark Plug
 Part No 5574533
 Element TP504MS

(7) *Oil/filter.*

Manufacturer AC Spark Plug
 Part No 5134392
 Element MS35802-3

(8) *Batteries.*

Number 2
 Volts 12V, DC
 Unit Polarity Negative Ground

(9) *Air cleaner.*

Manufacturer Donaldson
 Type Dry
 Element P10-4986

(10) *Ether primer (quick start).*

Manufacturer Turner Corporation
 Replacement Cylinder No. LP535

(11) *Fuel pump.*

Manufacturer Detroit Diesel
 Part No 5134717

(12) *Governor.*

Manufacturer Detroit Diesel Motors
 Idle Range 500 to 600
 Part No 5116006

(13) *Headlights.*

(a) *Blackout, headlight.*

Manufacturer Guide Co.
 Volts 24 V, DC
 Part No MS51318

(b) *Headlights.*

Manufacturer Hobbs Co.
 Volts 24V, DC
 Part No M4212

(c) *Blackout clearance.*

Manufacturer Guide Co.
 Volts. 24V, DC
 Part No MS51303-2

(14) *Taillight-stoplight.*

Manufacturer Do-Ray
 Volts 24 V, DC
 Part No 935ST

(15) *Horn.*

Manufacturer Spartan
 Part No 51074

(16) *Floodlight.*

Manufacturer Hobb Co.
 Volts 24 V, DC
 Part No M4211

(17) *Hydraulic steering pump.*

Manufacturer Borg -Warner
 Part No MHD3-23-EH5-1-R-01
 Rating 30Ghm @ 2800 RPM and
 1600 PSI

(18) *Hydraulic system pump, main.*

Manufacturer Borg-Warner
 Part No MHD 3&3-28&12EZ5-1
 R-01