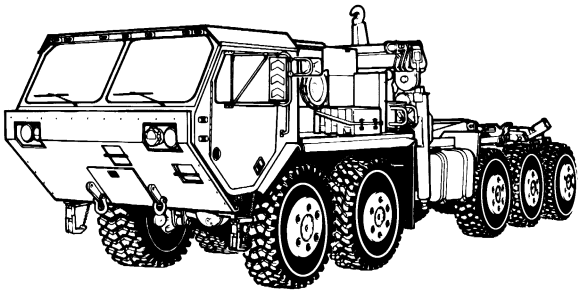
TM 9-2320-364-20-1

THIS MANUAL SUPERSEDES TM 9-2320-364-20-1 DATED 25 FEB 1994, INCLUDING ALL CHANGES.

TECHNICAL MANUAL

UNIT MAINTENANCE VOLUME I

PALLETIZED LOAD SYSTEM



MODEL M1074/M1075

NSN 2320-01-304-2277
NSN 2320-01-304-2278

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HEADQUARTERS, DEPARTMENT OF THE ARMY

AUGUST 1999

TECHNICAL MANUAL

No. 9-2320-364-20

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C. 01 August 1999

Unit Maintenance Manual

PALLETIZED LOAD SYSTEM

MODEL M1074/M1075
NSN 2320-01-304-2277
NSN 2320-01-304-2278

Current as of 01 August 1999

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

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* This manual supersedes TM 9-2320-364-20-1, 25 February 1994.

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HOW TO USE THIS MANUAL

This manual is designed to help maintain the Model M1074/M1075 Palletized Load System (PLS) truck. Listed below are some special features included in this manual to help locate and use the needed information:

- A front cover table of contents is provided for quick reference to chapters and sections that will be used often.
- WARNING, CAUTION, and NOTE headings, subject headings, and other essential information are printed in bold type making them easier to see.
- The maintenance tasks describe what must be done to the truck before starting the task (Equipment Condition), and what must be done to return the vehicle to operating condition after the task is finished (Follow-On Maintenance).
- The Appendixes are located at the end of the manual. They contain a reference guide to other manuals, the Maintenance Allocation Chart (MAC), a list of expendable supplies and materials, and other material for maintaining the PLS truck.
- In addition to text, there are exploded-view illustrations showing how to take a component off and put it back on. Cleaning and inspection procedures are also included as required.
- Chapter 2 of this manual covers Unit level Preventive Maintenance Checks and Services (PMCS) and basic troubleshooting, as well as general maintenance.

Follow these guidelines when using this manual:

- Read all WARNINGS and CAUTIONS before performing any procedure.
- The equipment conditions found in the maintenance procedures are of a general nature and the mechanic may be able to perform only certain steps within a procedure to accomplish the equipment condition.

CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

1-1. SCOPE.

This chapter provides general information, equipment descriptions and principles of operation for the M1074/M1075 Palletized Load System (PLS). The PLS will herein be referred to as the truck.

a. Type of Manual. Unit Maintenance Instructions, TM 9-2320-364-20.

b. Model Numbers and Equipment Names. The different truck models are listed below:

M1074	Truck with crane (Figure 1-1)
M1075	Truck without crane (Figure 1-2)
M1076	Trailer (Figure 1-3)
M1077	Flatrack (Figure 1-4)

c. Purpose of Equipment. The PLS is an ammunition-hauling tactical wheeled truck and trailer combination with integral self-load/unload capability using the PLS flatrack (FR).

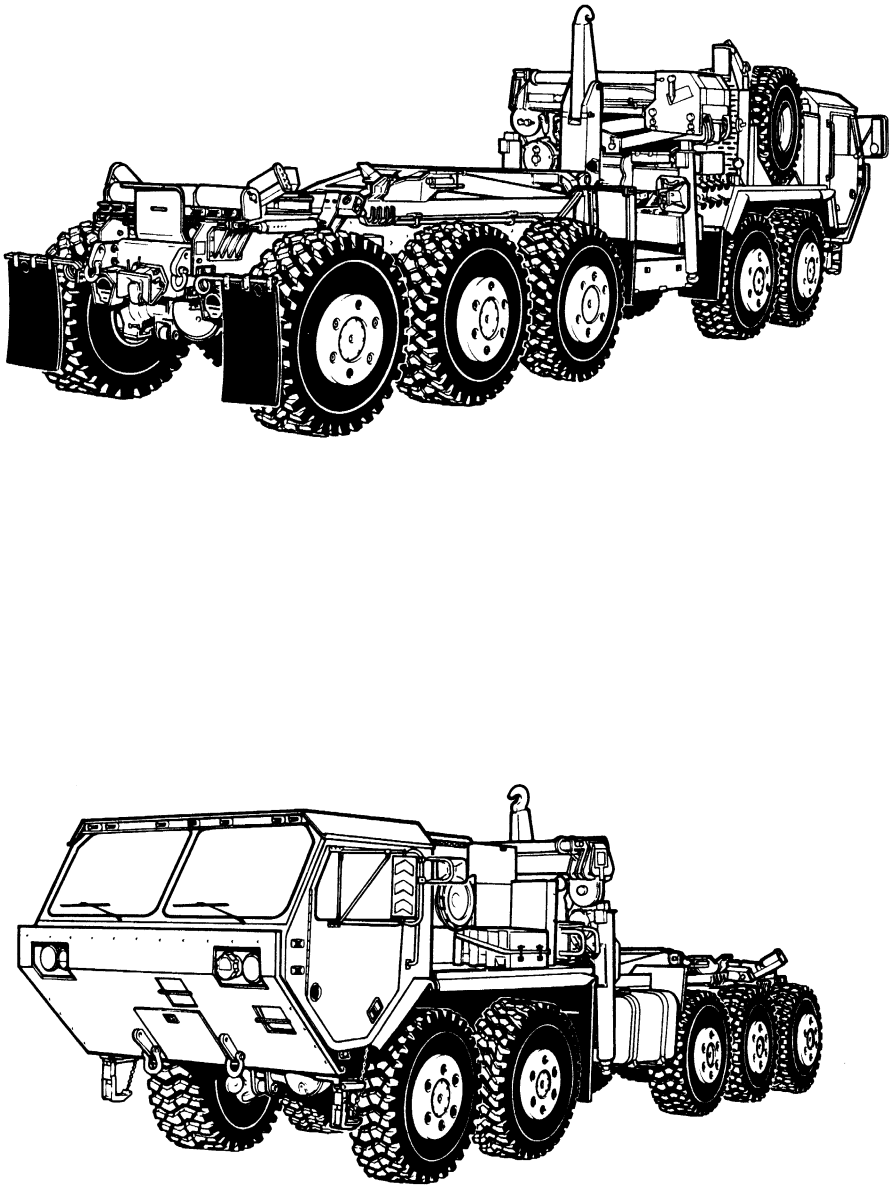

Figure 1-1. M1074 Palletized Load System Truck (With Crane)

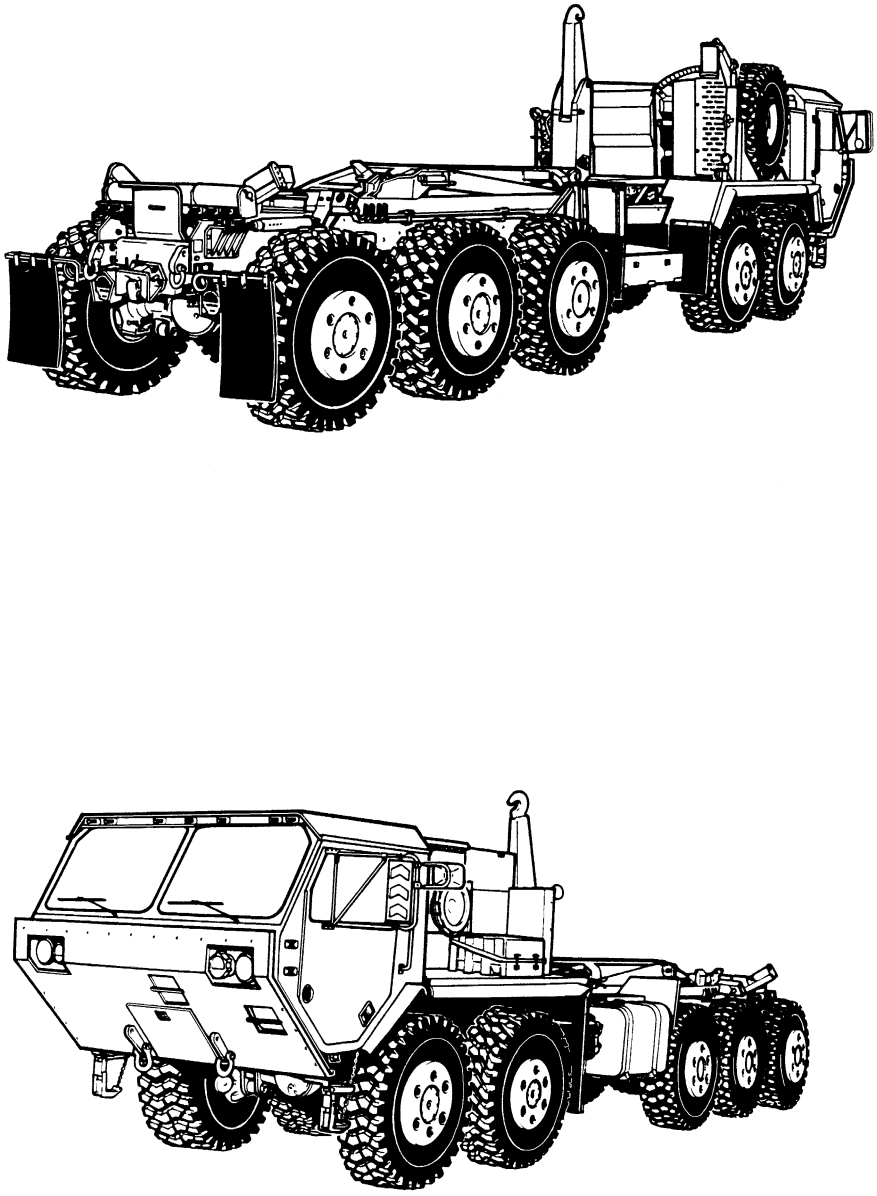

Figure 1-2. M1075 Palletized Load System Truck (Without Crane)

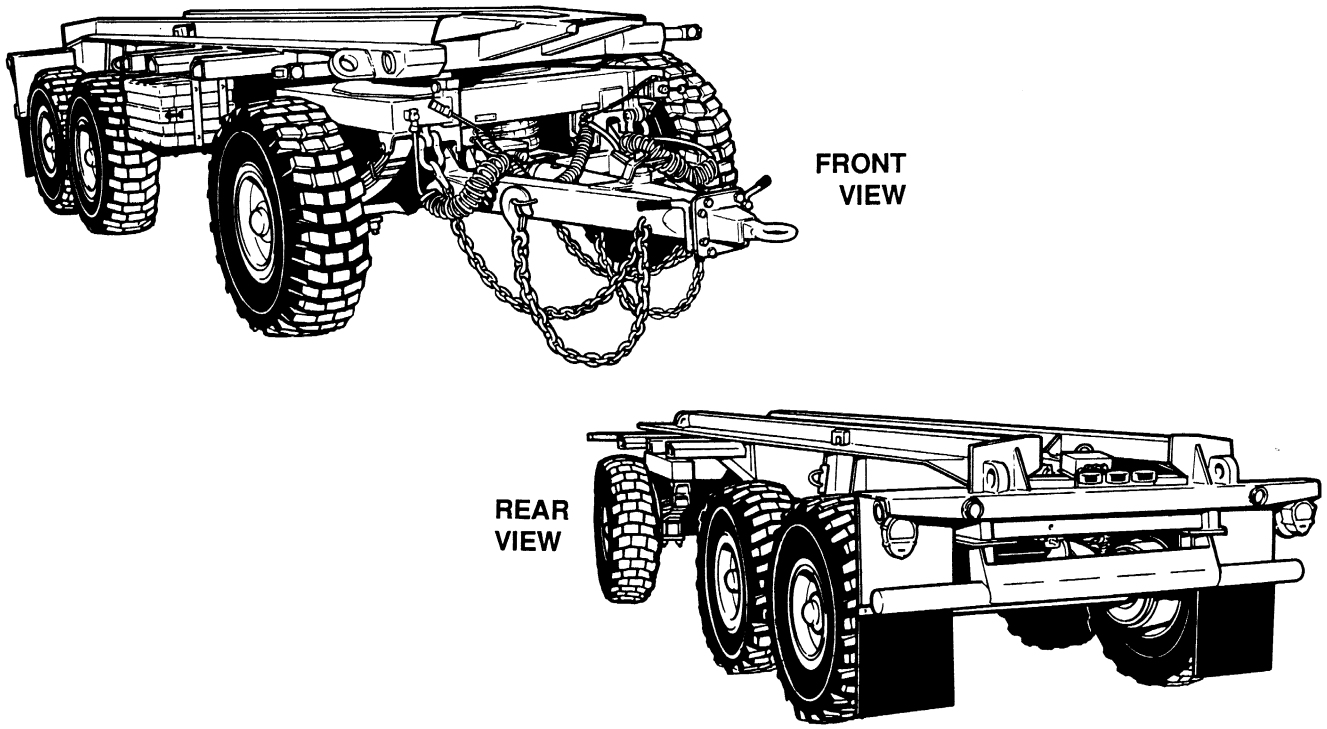

Figure 1-3. M1076 PLS Trailer

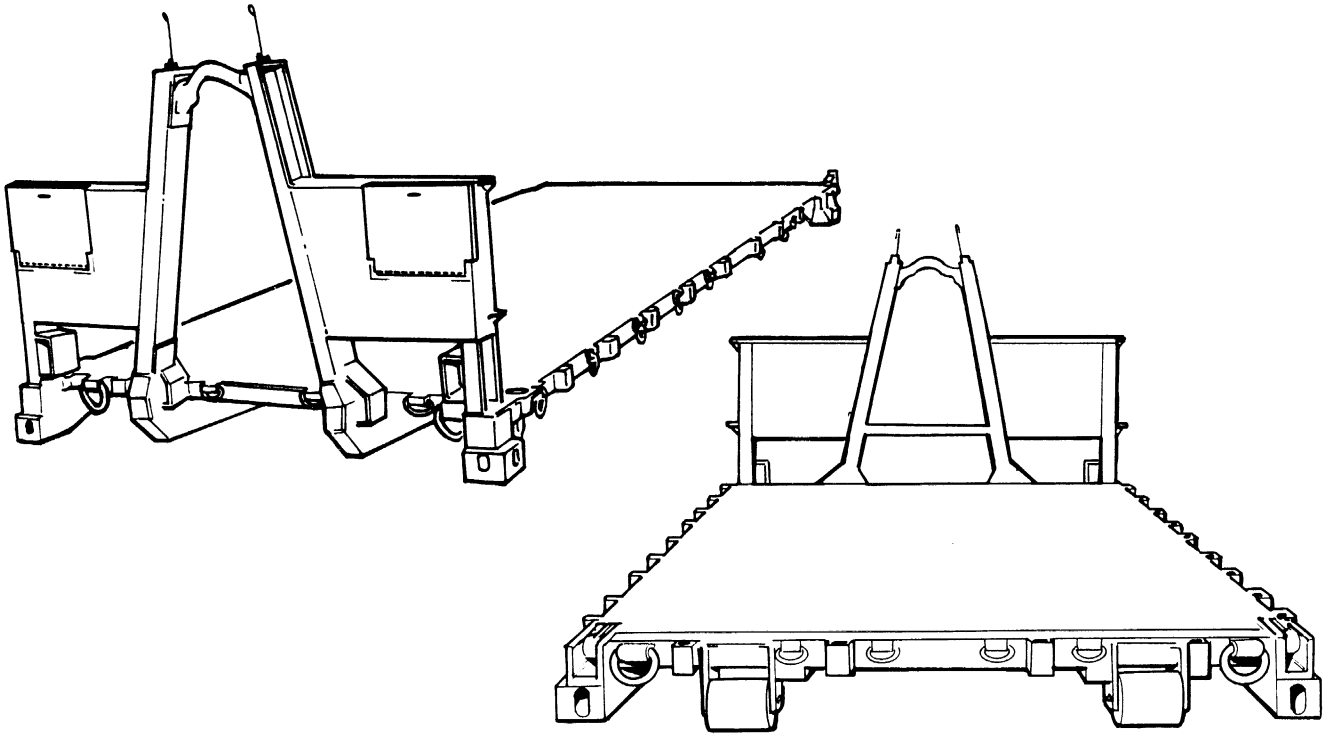

Figure 1-4. M1077 PLS Flatrack

1-2. MAINTENANCE FORMS, RECORDS AND REPORTS.

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) (Maintenance Management UPDATE).

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

Command decision, according to tactical situation, will determine when the destruction of the truck will be accomplished. A destruction plan will be prepared by the using organization unless one has been prepared by a higher authority. For general destruction procedures for this truck, refer to TM 750-244-6, Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use (US Army Tank-Automotive Command).

1-4. OFFICIAL NOMENCLATURE, NAMES AND DESIGNATIONS.

Table 1-1 lists the nomenclature cross-references used in this manual.

Table 1-1. Nomenclature Cross-Reference

Common Name	Official Nomenclature
Cable	Wire rope
Cold Start System	Ether quick-start system
Engine Coolant	Antifreeze, ethylene glycol mixture
Gladhand	Quick-disconnect coupling
Truck	Palletized Load System
Jacobs Brake	Engine Retarder

1-5. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR).

If your Palletized Load System 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. Put it on an SF368 (Quality Deficiency Report). Mail it to us at: Commander, U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-TR-E-MPA; Warren, Michigan 48397-5000. We'll send you a reply.

1-6. WARRANTY INFORMATION.

Refer to PLS Warranty Technical Bulletin, TB 9-2320-364-15 for complete warranty information covering the truck. Warranty starts on the date found in block 23, DA Form 2408-9, in the logbook. Report all defects in material or workmanship to the supervisor, who will take appropriate action.

SECTION II. EQUIPMENT DESCRIPTION AND DATA

1-7. EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES.

Refer to TM 9-2320-364-10 for equipment characteristics, capabilities and features.

1-8. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

Refer to TM 9-2320-364-10 for location and description of major components.

1-9. EQUIPMENT DATA.

Refer to TM 9-2320-364-10 for equipment data.

Section III. PRINCIPLES OF OPERATION

1-10. POWER TRAIN.

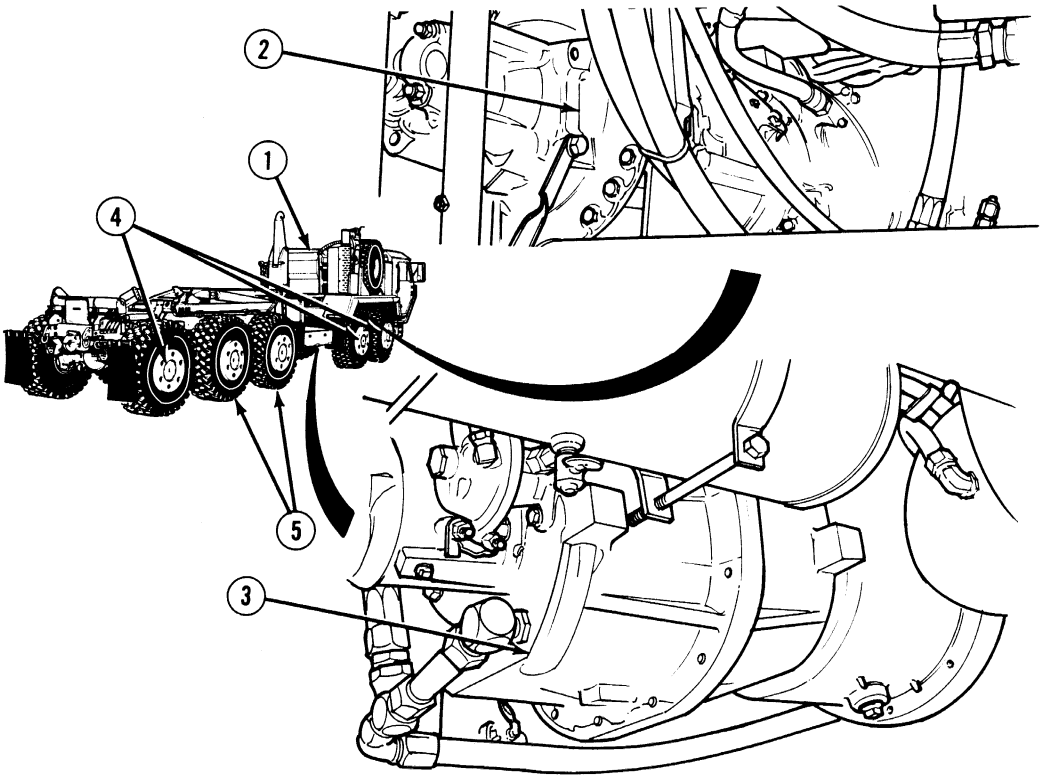

Figure 1-5. Power Train

Power for the truck is provided by a diesel engine (1, Figure 1-5) which is coupled directly to an automatic transmission (2). Power from the transmission is transferred to the transfer case (3) and on to the drive and steering axles (4) and the drive only axles (5) through a series of drive shafts and universal joints. The truck drive train is enhanced through the use of the Detroit Diesel Electronic Control II (DDEC II), or Detroit Diesel Electronic Control III (DDEC III) electronic engine controller and the Allison Transmission Electronic Control (ATEC) electronic transmission controller. The primary components of the ATEC system are an Electronic Control Unit (ECU) and shifter in the truck cab, an electrohydraulic valve module beneath the transmission gearing section that contains solenoid valves for clutch control, a throttle sensor that is activated by the accelerator pedal and an output speed sensor that relays the transmission out speed to the ECU for shifting and control functions.