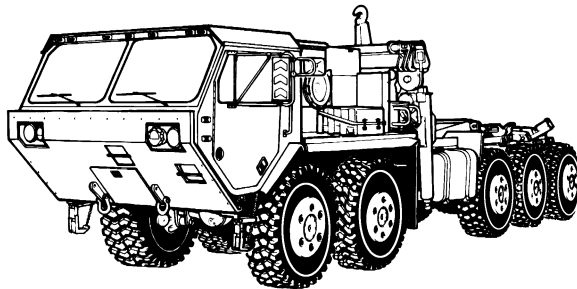


## TECHNICAL MANUAL

# DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE VOLUME IV

## 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  
Washington, D.C. 01 August 1999

## Direct Support and General Support Maintenance Manual

# PALLETIZED LOAD SYSTEM

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

Current as of 01 August 1999

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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, 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.
- Chapters 20 through 28 of this manual cover General Support Maintenance for each PLS truck system.

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 20

### ENGINE MAINTENANCE

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## **Section I. INTRODUCTION**

### **20-1. GENERAL SUPPORT ENGINE MAINTENANCE INTRODUCTION.**

This chapter contains maintenance instructions for removing, replacing, installing, repairing and testing engine components authorized by the Maintenance Allocation Chart (MAC) at the General Support level. Section II consists of a top-down breakdown of engine components with the engine on a maintenance stand.

## Section II. ENGINE REPAIR (ON-STAND)

### 20-2. INSTALLING ENGINE ON STAND.

This task covers:

- a. Installing Engine on Engine Stand
- b. Follow-On Maintenance

#### INITIAL SETUP

##### *Tools and Special Tools*

Tool Kit General Mechanic's  
(Item 240, Appendix F)  
Adapter, Engine Stand (Item 1, Appendix F)  
Jackstand (4) (Item 132, Appendix F)  
Socket Set, 3/8 in. (Item 204, Appendix F)  
Stand, Maintenance, Engine  
(Item 226, Appendix F)  
Wrench, Combination 1-7/16 in.  
(Item 259, Appendix F)  
Wrench, Combination 1-1/2 in.  
(Item 260, Appendix F)  
Wrench, Torque (0-175 lb-ft [0-237 N·m])  
(Item 277, Appendix F)  
Lifting Device, Minimum Capacity  
2600 lbs (1180 kg)

##### *Materials/Parts*

Tags, Identification (Item 72, Appendix B)

##### *Personnel Required*

Two

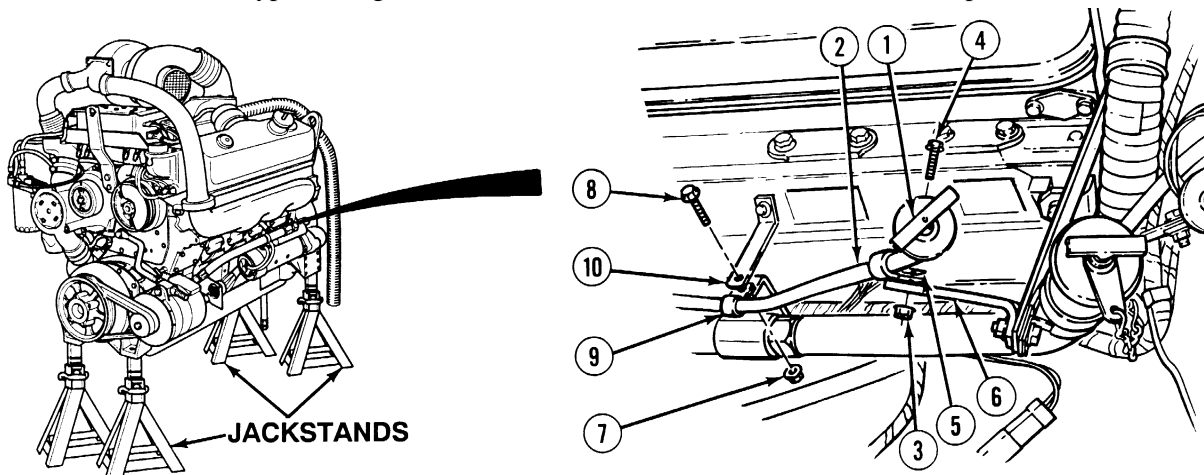
##### *Equipment Condition*

Engine removed from container, (Para 3-23)  
Left hand air box covers removed, (Para 20-17)  
Left hand exhaust manifold removed,  
(Para 20-3)  
Left hand air box drain removed, (Para 20-18)  
Remote engine oil filter manifold hoses  
and adapter removed, (TM 9-2320-364-20)

#### a. *Installing Engine on Engine Stand.*

#### NOTE

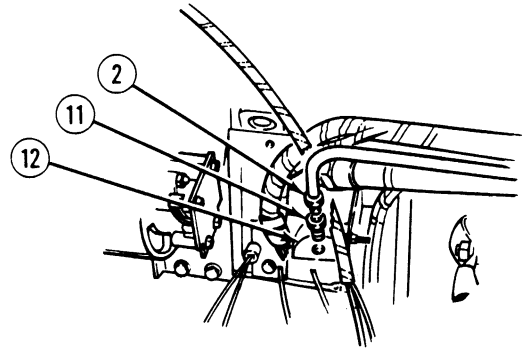
PLS has two types of engines, DDEC II and DDEC III. Both are same, except where noted.



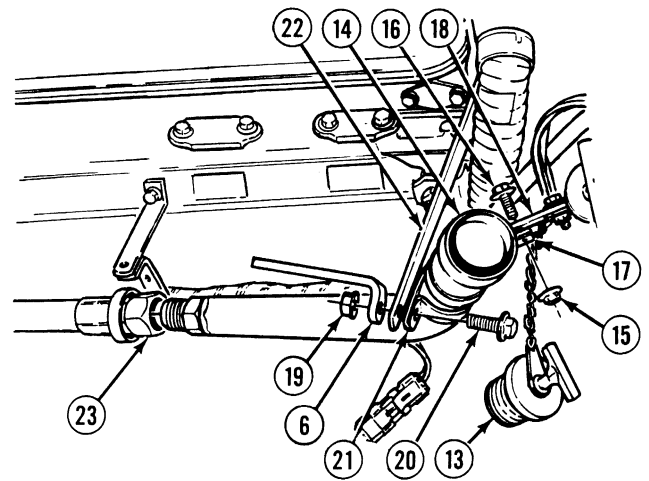
- (1) Remove engine oil dipstick (1) from filler neck (2).
- (2) Remove locknut (3), screw (4) and clamp (5) from bracket (6). Discard locknut.
- (3) Remove locknut (7), screw (8) and clamp (9) from bracket (10). Discard locknut.
- (4) Remove two clamps (5) and (9) from filler neck (2).



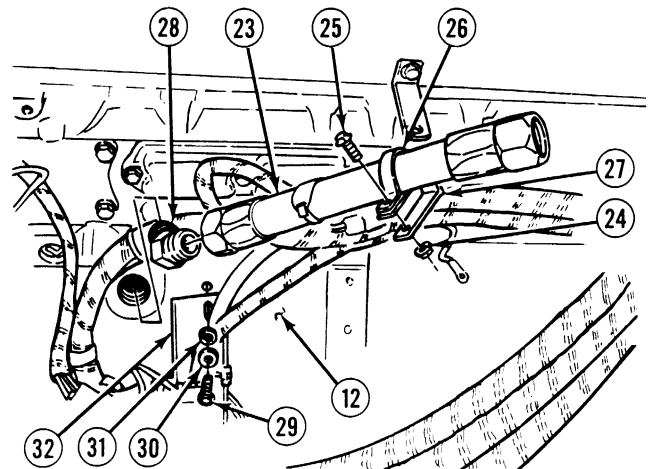
- (5) Remove filler neck (2) from adapter (11).
- (6) Remove adapter (11) from engine block (12).



- (7) Remove filler cap (13) from filler tube (14).
- (8) Remove locknut (15), screw (16) and clamp (17) from bracket (18). Discard locknut.
- (9) Remove locknut (19), screw (20), clamp (21) and bracket (6) from bracket (22). Discard locknut.
- (10) Remove filler tube (14) and two clamps (17) and (21) from filler hose 2999 (23).
- (11) Remove two clamps (17) and (21) from filler tube (14).



- (12) Remove locknut (24), screw (25) and clamp (26) from bracket (27). Discard locknut.
- (13) Remove clamp (26) from filler hose 2999 (23).
- (14) Remove filler hose 2999 (23) from elbow (28).
- (15) Remove two screws (29), lockwashers (30), washers (31) and bracket (32) from engine block (12). Discard lockwashers.



**NOTE**

Mark position of elbow prior to removal.

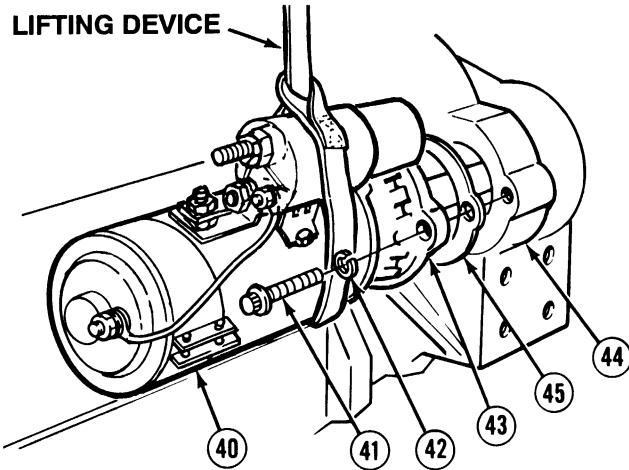
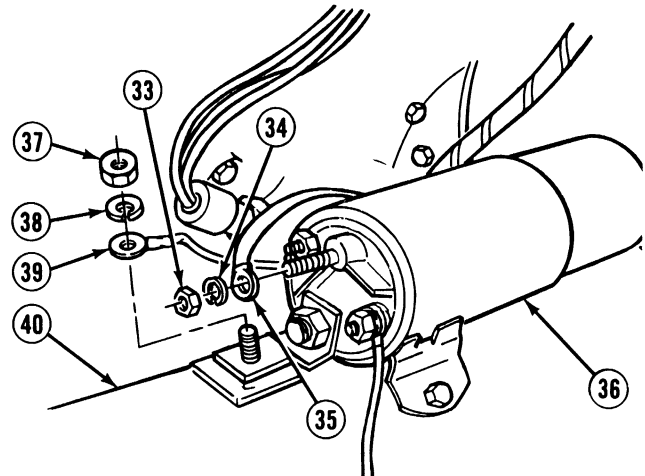
- (16) Remove elbow (28) from engine block (12).

**20-2. INSTALLING ENGINE ON STAND (CONT).**

**NOTE**

Tag and mark wires prior to removal.

- (17) Remove nut (33), lockwasher (34) and wire 1816 (35) from starter solenoid (36). Reinstall nut (33) on starter solenoid (36). Discard lockwasher.
- (18) Remove nut (37), lockwasher (38) and wire 1818 (39) from starter (40). Reinstall nut (37) on starter (40). Discard lockwasher.
- (19) Remove two of three screws (41) and lockwashers (42) from starter mounting bracket (43). Discard lockwashers.



**WARNING**

Starter weighs 73 lbs (33 kg). Attach suitable lifting device prior to removal to prevent possible injury to personnel.

- (20) Install lifting device on starter (40).
- (21) With the aid of an assistant, remove remaining screw (41) and lockwasher (42) from starter mounting bracket (43). Discard lockwasher.
- (22) Remove starter (40) from flywheel housing (44).
- (23) Remove gasket (45) from starter (40) and flywheel housing (44). Discard gasket.
- (24) Remove lifting device from starter (40).