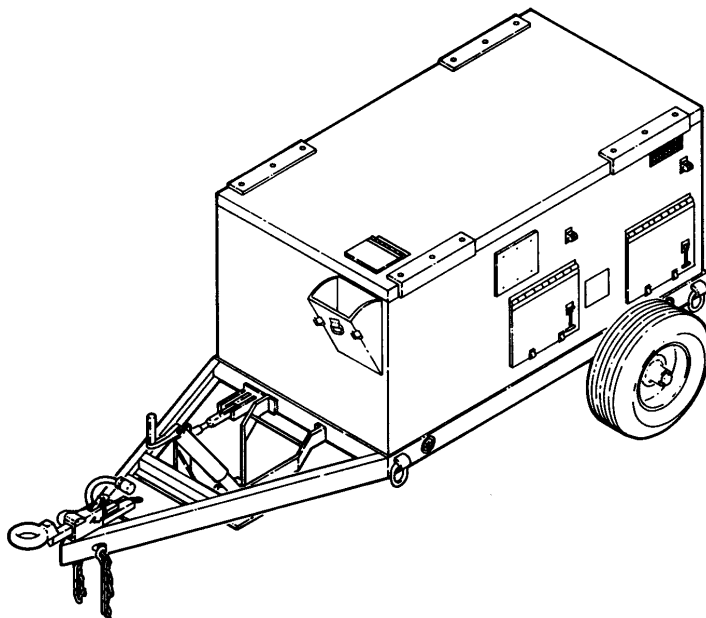


**TECHNICAL MANUAL
UNIT, DIRECT SUPPORT AND
GENERAL SUPPORT
MAINTENANCE MANUAL
PUMPING ASSEMBLY, WATER
600 GPM,
TRAILER MOUNTED
(NSN 4320-01-314-8844)**



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**HEADQUARTERS, DEPARTMENT OF THE ARMY
15 JANUARY 1993**

TECHNICAL MANUAL

NO. 10-4320-315-24

HEADQUARTERS
DEPARTMENTS OF THE ARMY
WASHINGTON, D.C., 15 JANUARY 1993

TECHNICAL MANUAL

Unit, Direct Support and General Support
Maintenance Manual

Pumping Assembly, Water
600 GPM,
Trailer Mounted
(NSN 4320-01-314-88443)

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 or 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, US Army Aviation and Troop Command, ATTN: AMSAT-I-MTS, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished directly to you.

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HOW TO USE THIS MANUAL

The manual has been divided into chapters, sections, and paragraphs which are all numbered sequentially; figures and tables have also been numbered in the same manner. The manual identifies major components and their location which will aid you, the maintainer, in performing your PMCS. Detailed lubrication instructions, which are mandatory, are also included within the operator's maintenance section.

Use the front cover locators and "marked/tabbed" pages to quickly find the parts of the manual shown on the cover. The "blocked" titles in the table of contents are the titles for these locators. These portions of the manual were chosen because they are used most often.

Maintenance procedures used by Unit, Direct Support and General Support personnel are described on a step by step manner, ensuring the correct, and safe removal or repair of equipment. An alphabetical index at the back of the manual is referenced to the appropriate paragraph in the manual for ease of locating a specific task or procedure.

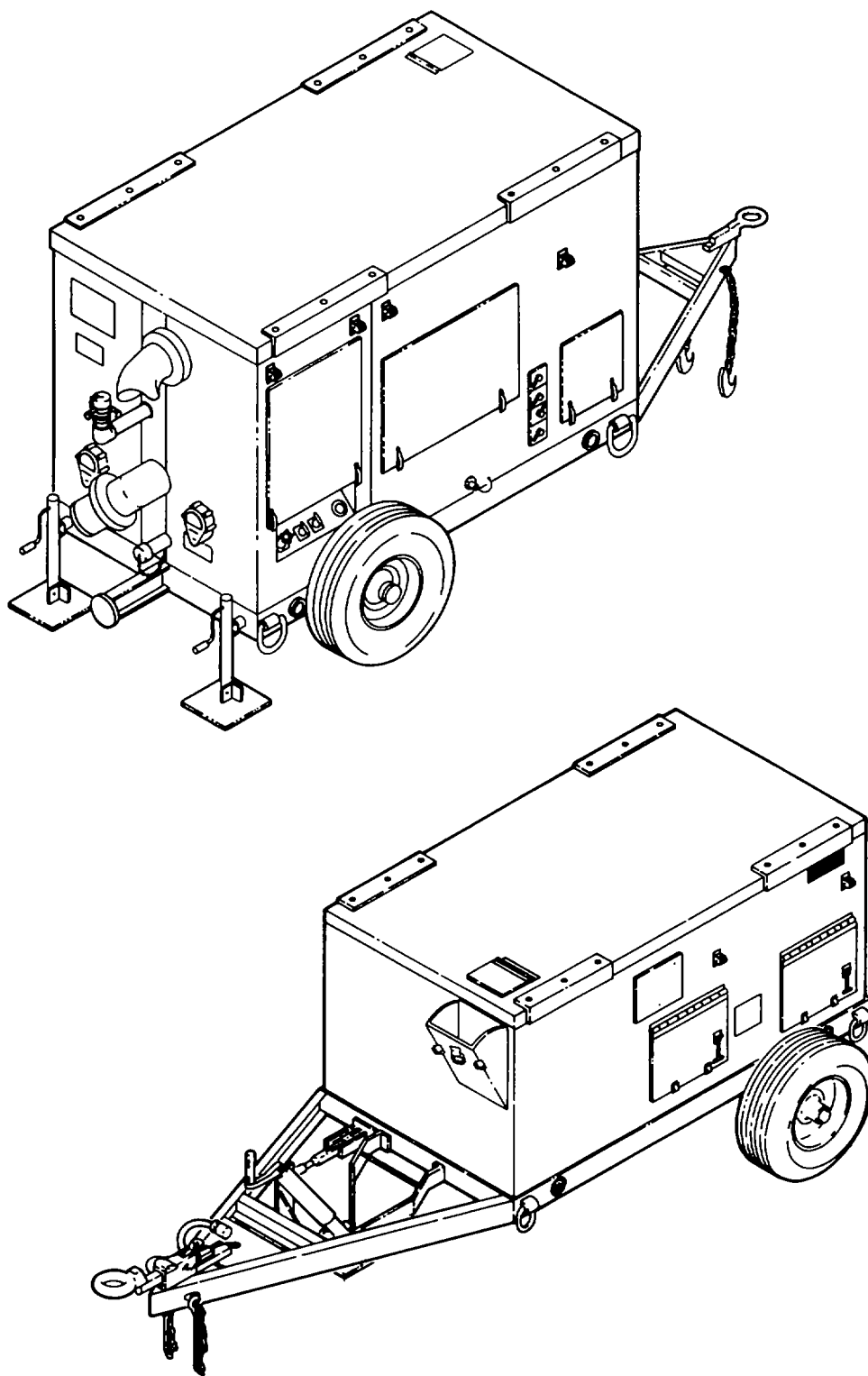


Figure 1-1. Full External View of Pumping Assembly, Water, 600 GPM, Trailer Mounted

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CHAPTER 1 INTRODUCTION

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Section I. GENERAL INFORMATION

1-1. Scope.

- a. Type of Manual. Unit, Direct Support, and General Support Maintenance Manual.
- b. Model Number and Equipment Name. Pumping Assembly, Water, 600 GPM, Model No. 6 X 6 SP6, NSN 4320-01-314-8844 (hereafter called pumping assembly).
- c. Purpose of Equipment. The pumping assembly is a component of water distribution systems. It is used either singularly or in series with other pumps to supply drinking water from a source to one or more distribution points.

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).

1-3. Destruction of Army Materiel to Prevent Enemy Use. Command decisions, according to tactical situation, will determine when destruction of the pumping assembly will be accomplished. A destruction plan will be prepared by the using organization, unless one has been prepared by higher authority. For general destruction procedures for this equipment, refer to TM 750244-3, Procedures for Destruction of Equipment to Prevent Enemy Use.

1-4. Preparation for Storage or Shipment. Refer to Sections IV and V of Chapter 2 for requirements concerning these preparations.

1-5. Quality Assurance/Quality Control (QA/QC). The quality of the pumping assembly must at all times be in compliance with the requirements set forth by AMCPM-PWL. If a discrepancy is found to exist, notify your supervisor.

1-6. Reporting Equipment Improvement Recommendations (EIRs). If your Pumping assembly 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 or performance. Put it on an SF 368 (Product Quality Deficiency Report). Mail it to us at Commander, U.S. Army Troop Support Command, ATTN: AMSAT-I-MDO 4300 Goodfellow Boulevard, St. Louis, Missouri 63120-1798. We'll send you a reply.

1-7. Safety, Care, and Handling. Safe and efficient pumping assembly operations depend on the observance of well established safety practices and a thorough knowledge of operating procedures. The operating procedures often involve using equipment and materials that are potentially hazardous. Injury to personnel and damage to equipment caused by fire, and misuse of equipment can be avoided by alert and responsible operators and technicians. Strict observance to established safety, care, and handling practices and procedures will allow personnel to perform their duties in a safe and hazard-free environment.

- a. General Precautions. The following are general safety precautions that need to be observed by all operators of the pumping assembly.

Always be mindful of operations in progress. Never allow horseplay or loud talking that would divert the attention of operators or technicians. If the pumping assembly is left unattended, be sure no safety hazard will result because of absence.

Whenever in doubt concerning this operation, consult qualified authority for advice.

Do not attempt unauthorized shortcuts to save time, as they generally are not in accordance with safe procedures.

Be prepared for any emergencies which may arise, and be familiar with the proper action to take in event of emergencies.

When ending daily operations, make a thorough and orderly check of equipment to be sure that no hazards may develop during the time that pumping assembly is unattended.

- b. Preventing Fire. The following fire prevention rules must be observed:

Do not smoke in the vicinity of the engine or fuel tank.

Never use open flames in the vicinity of the engine or fuel tank.

Clean up liquid spills immediately.

Always pour acid into water; never pour water into acid.

Store oily rags in metal, airtight container.

- c. Extinguishing Fires. Do not use water for extinguishing oil fires because it will spread the fire. Water is a conductor of electricity and should not be used on electrical fires.

- d. Electrical Safety. The following electrical safety precautions apply to all operators and maintenance personnel for the pumping assembly.

Equipment producing a tingle sensation will be reported promptly for repair.

Be sure insulation and wire size are adequate for the voltage and current to be carried.

Work on electrical devices should be done after the power has been disconnected or shut off, and suitable precautions taken to keep the power off during the work.

Never use metallic pencils or rulers, or wear rings or watches when working on electrical equipment.

Avoid using or storing flammable liquids near electrical equipment.

1-8. Nomenclature Cross-Reference List. This listing includes nomenclature cross-references used in this manual.

Common Name

Official Nomenclature

Pumping Assembly

Pumping Assembly, Water
600 GPM, Trailer Mounted

Section II. EQUIPMENT DESCRIPTION

1-9. Equipment Characteristics, Capabilities, and Features.

- a. Characteristics. The pumping assembly consists of a diesel-engine driven, self-priming centrifugal pump, control panel, and a noise enclosure mounted on a wheel-mounted trailer assembly.
- b. Capabilities and Features. The pumping assembly has an operational output of 600 gpm at 150 psig when pumping water.
 - (1) Self-priming pump.
 - (2) Air-cooled, diesel engine driven.
 - (3) Wheel-mounted trailer unit.
 - (4) Highly mobile.
 - (5) Sound attenuated to 70 db².

1-10. Location and Description of Major Components (Figure 1-2).

- a. **PUMP ASSEMBLY (1).** Rated at 600 gpm. Draws water from source or upline boost pump and feeds reservoir or next downline boost pump. Fitted with suction and discharge elbows suitable for connection to 6 in. grooved pipe couplings.
- b. **NOISE ENCLOSURE (2).** Provides for noise reduction.
- c. **DIESEL ENGINE (3).** Engine is a 4-stroke, 6 cylinder, air cooled diesel engine that drives pump. Operating mode of engine is set on control panel. Operated in manual or automatic mode.
- d. **CONTROL PANEL (4).** Controls system operations.
- e. **JACKS (5).** Used to support and level pumping assembly.
- f. **TWO-WHEEL TRAILER ASSEMBLY (6).** Transports pumping assembly.
- g. **TRIPOD ASSEMBLY (7).** Supports front of pumping station in deployment mode. Tripod assembly is raised in travel mode.
- h. **PARKING BRAKES (8).** Used to lock wheels in place when trailer is not in transit.
- i. **SURGE BRAKING SYSTEM (9).** Provides braking for the pumping assembly when being towed. Activated by stopping motion of vehicle.
- j. **RUNNING/BRAKE LIGHTS (10).** Provide visual traffic signals for in-transit use.

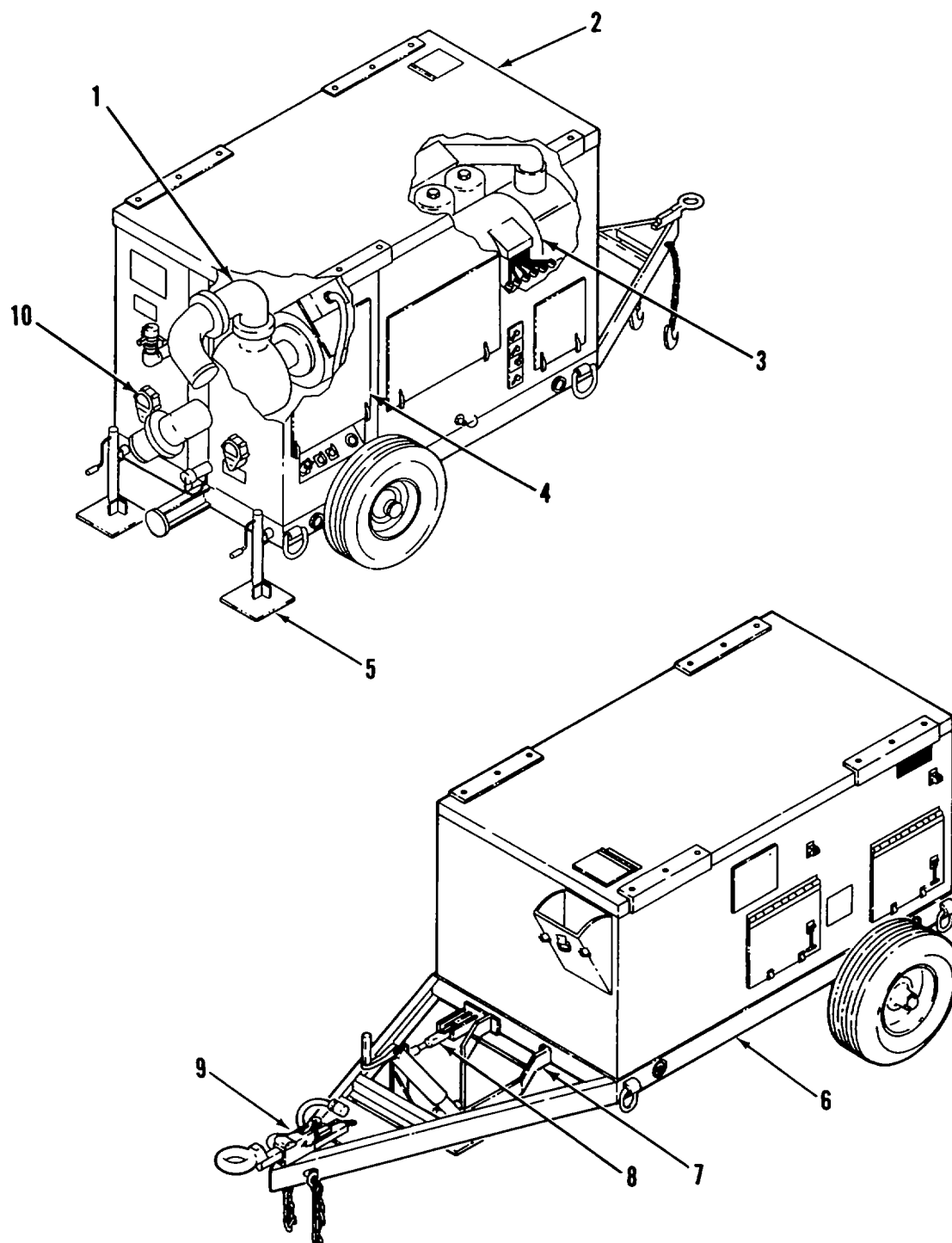


Figure 1-2. Location of Major Components