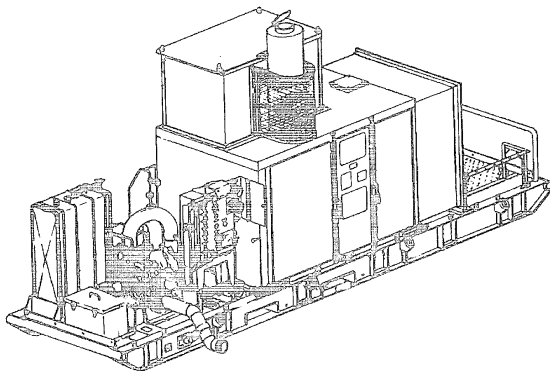


TECHNICAL MANUAL

UNIT

Direct Support, and General Support Maintenance Manual



**PUMP ASSEMBLY (MAINLINE)
DIESEL ENGINE DRIVEN, 800 GPM
NSN 4320-01-193-3430**

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This manual supersedes TM 5-4320-307-24, dated 14 August 1989.

Distribution Statement A. Approved for public release; distribution is unlimited.

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NO. 10-4320-307-24

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON D.C., 30 June 1993

**Unit, Direct Support and
General Support Maintenance Manual**

**PUMPING ASSEMBLY (MAINLINE)
DIESEL ENGINE DRIVEN, 800 GPM
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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, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished directly to you.

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Chapter 1 INTRODUCTION

Section I. GENERAL INFORMATION

1-1 SCOPE.

- a. Type of Manual: Unit, Direct Support, and General Support Maintenance.
- b. Model Number and Equipment Name: Pumping Assembly, Mainline, 800 GPM, Diesel Engine Driven, Part Number 0053009500.
- c. Purpose of Equipment: Pumps petroleum based fuels or water with specific gravities between 0.72 and 1.0.

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 MATERIAL TO PREVENT ENEMY USE. Refer to TM 750-244-3 for instructions.

1-4 PREPARATION FOR STORAGE AND SHIPMENT. Instructions for preparation for storage and shipment are in Chapter 2.

1-5 REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR'S). 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 do not like about your equipment. Let us know why you do not like the design or performance. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at: U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MIDO, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. We will send you a reply.

1-6 NOMENCLATURE CROSS-REFERENCE LIST. For precise identification, simplified nomenclature has been established for clarity and is shown in the nomenclature cross-reference list.

NOMENCLATURE CROSS-REFERENCE LIST

This listing includes nomenclature cross-references used in this manual.

Common Name

Official Nomenclature

Pumping Assembly	Pumping Assembly, Mainline, Diesel Engine Driven, 800 GPM
Engine	Engine Assembly, Dual Turbocharged Diesel, NTTA-855-P450
Pump	Pump Assembly, PN 0053000100
Power Takeoff	Speed Increaser w/Clutch, PN 0053020200
Gear Box	Speed Increaser w/Clutch, PN 0053020200

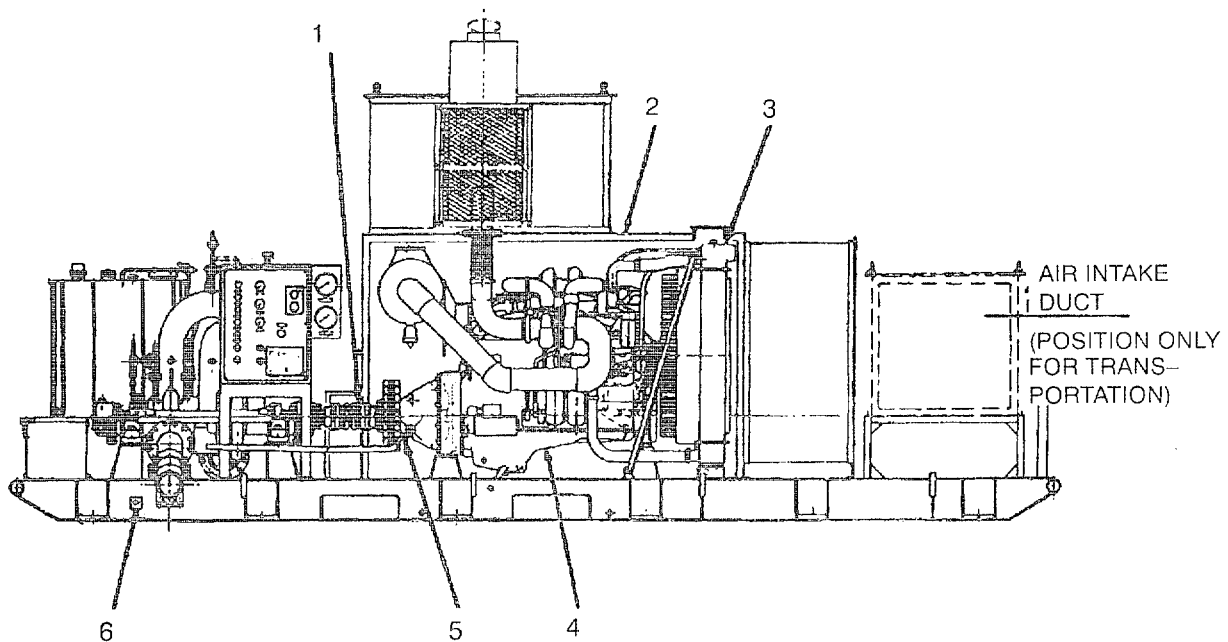
1-7 WARRANTY INFORMATION. The pumping assembly is warranted by S. P. A. Termomeccanica Italiana, C/O The Crenshaw Company, 1199 North Fairfax Street, Alexandria, VA 22314 for a period of 2 years. It starts on the date found in block 23, DA Form 2408-9, in the logbook. Report all defects in material or workmanship to your supervisor who will take appropriate action.

Section II. EQUIPMENT DESCRIPTION AND DATA

1-8 EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES.

- a. Design pumping rate of 800 gpm at 1800 Feet of head (fluids with specific gravity of 0.85).
- b. Automatic shutdown for high temperature, low lube oil pressure, overspeed, and low suction pressure.
- c. Operates in surrounding temperature between 25° and 135°F.
- d. Operates at altitudes between sea level and 9000 feet (2743.2 m) above sea level.
- e. Continuous operation during periods of blowing sand.
- f. Cold weather starting aid.
- g. Skid mounted for transport.
- h. Unit designed to limit damage caused by severe handling expected to be encountered in a battlefield environment.

1-9 LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.



RIGHT SIDE VIEW

FLEXIBLE COUPLING (1). The flexible coupling is used to connect the speed increaser to the pump.

ENGINE ENCLOSURE (2). The enclosure boxes the engine along its sides, top, and ends. Four hinged doors and two removable side panels provide accessibility to the engine. The air intake duct on top and the muffler are removable for transportation.

COOLANT RADIATOR (3). The radiator is part of the engine cooling system that maintains the engine coolant at specified temperature during operation.

ENGINE ASSEMBLY (4). The engine is a dual turbocharged diesel engine capable of providing 450 hp at 2100 rpm while in continuous operation.

SPEED INCREASER (5). The speed increaser is used to increase engine speed to optimum pump speed of 3458 rpm. A clutch lever extends from the speed increaser gear box to a position in front of the control panel.

GROUNDING ROD CONNECTION POINT (6). The grounding rod connection point provides a connection point for the grounding rod cable assemblies.