

TECHNICAL MANUAL

**UNIT, INTERMEDIATE DIRECT SUPPORT AND
INTERMEDIATE GENERAL SUPPORT MAINTENANCE MANUAL**

**DRILLING SYSTEM, WELL, ROTARY,
TRUCK MOUNTED, AIR TRANSPORTABLE,
600 FEET CAPACITY
MODEL LP-12
NSN 3820-01-246-4276**

This technical manual is an authentication of the manufacturer's commercial literature and does not conform with the format and content requirements normally associated with Army technical manuals. This technical manual does, however, contain all essential information required to operate and maintain the equipment.

Approved for public release; distribution is unlimited.

**HEADQUARTERS, DEPARTMENT OF THE ARMY
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CHAPTER 1

GENERAL INFORMATION

1-1 INTRODUCTION. This manual contains operation, service, and maintenance instructions for the Rig Tender Truck, a component of the 600-Foot Well Drilling System manufactured by George E. Failing Co. of Enid, Oklahoma.

1-2 TABULATED DATA. Table 1-1 contains specification and identification data pertinent to the truck and its major components.

Table 1-1. Tabulated Data

Overall Dimensions:

Length	405 in.
Width	96 in.
Height	101 in.
Max GVW	40,000 lb.

Capacities:

Waterbed	1,000 Gallons
Fuel Tank (Service)	230 Gallons
Fuel Tanks (Truck)	200 Gallons
Hydraulic Reservoir	7.5 Gallons

Truck Chassis:

Make	Navistar International
Model	F-1 954 6X6 Modified

Engine:

Make	Navistar International
Model	DT-466C
Fuel	Diesel
Horsepower	210

Displacement	466.1 Cu.
In.	

Transmission:

Make	Spicer
Model	CM5952D
Speeds	5 Forward/1 Reverse
Oil Capacity	17 Pints

Water Pump:

Make	Bowie
Model	2300/STD/F
Delivery	140 GPM @ 400 RPM

Crane:

Make	Flatwater Fleet
Model	8 K 20
Reach (Max.from Centerline of Rot.)	15'-8"
Extension	60"

Welder/Generator:

Make	Miller Electric Mfg.
Model	DEL-200
Engine Make	Deutz
Engine Model	FIL 210 D
Horsepower	13.9
Output Rating (@ 100% duty cycle)	225 Amps @ 25V AC 200 Amps @ 25V AC
Welding Range	45-225 Amps (AC) 35-200 Amps (DC)
Open Circuit Voltage	80V AC 72V DC
Power	1 kva, 11 5V, 8.7 Amps AC (welding); 4.5 kva, 120/240V, 38/19 Amps 60Hz AC as power plant

CHAPTER 2

All information in chapter 2 is contained in TM 5-3820-256-10.

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Maintenance

3-3 WATER PUMP.

3-3.1 Lubrication. The water pump requires lubrication only where grease fittings are provided. Use a good grade of gun grease. Lubrication should be done every four (4) hours of continuous operation.

3-3.2 Troubleshooting.

When the pump is requiring an excessive amount of power, the causes may be due to one of the following:

1. Pump has been run dry and gears have swelled due to heat caused by friction.
2. Liquid more viscous than anticipated.
3. Pumping against excess pressure.
4. Discharge line too small causing excess pressure.
5. Discharge line obstructed causing excess pressure.
6. Foreign matter lodged in pump.
7. Shaft bent due to dropping, etc.
8. Too great a lift causing excess pressure.
9. Removal of too many gaskets, causing drag on gears.

3-3.3 Adjustment. (Refer to figure 3-4)

3-3.3.1 Should it be necessary to adjust the pump due to excessive clearance of the impellers (4 & 5) between the front and back of housing (3) due to normal wear, remove the back (7) plate and remove one, two, or three, etc. pump gaskets (6) as may be required to take up the slack. Replace back plate, being extremely careful that the remaining gaskets do not crimp or wrinkle, and tighten bolts (14) diametrically opposed to each other, pulling each bolt up evenly.

3-3.4 Maintenance. (Refer to figure 3-4)

3-3.4.1 The pump is furnished with a high grade, braided type of asbestos packing (1 3), lubricated with graphite and impregnated with lubricant. No further lubrication is needed for normal operation of this packing. When tightening the packing nut (1) do not compress the packing too greatly and cause excessive binding on the shaft. When installing bronze or alloy bushings (9) in the pump, care must be taken to not "scar" the bushings. It is preferable to press the bushings in place rather than tap or hammer them. Bushings should be reamed for shaft clearance of .010 after they are press fit into the end plates (2 & 7).

When replacing pump gears (4 & 5), the gears come with shafts installed.

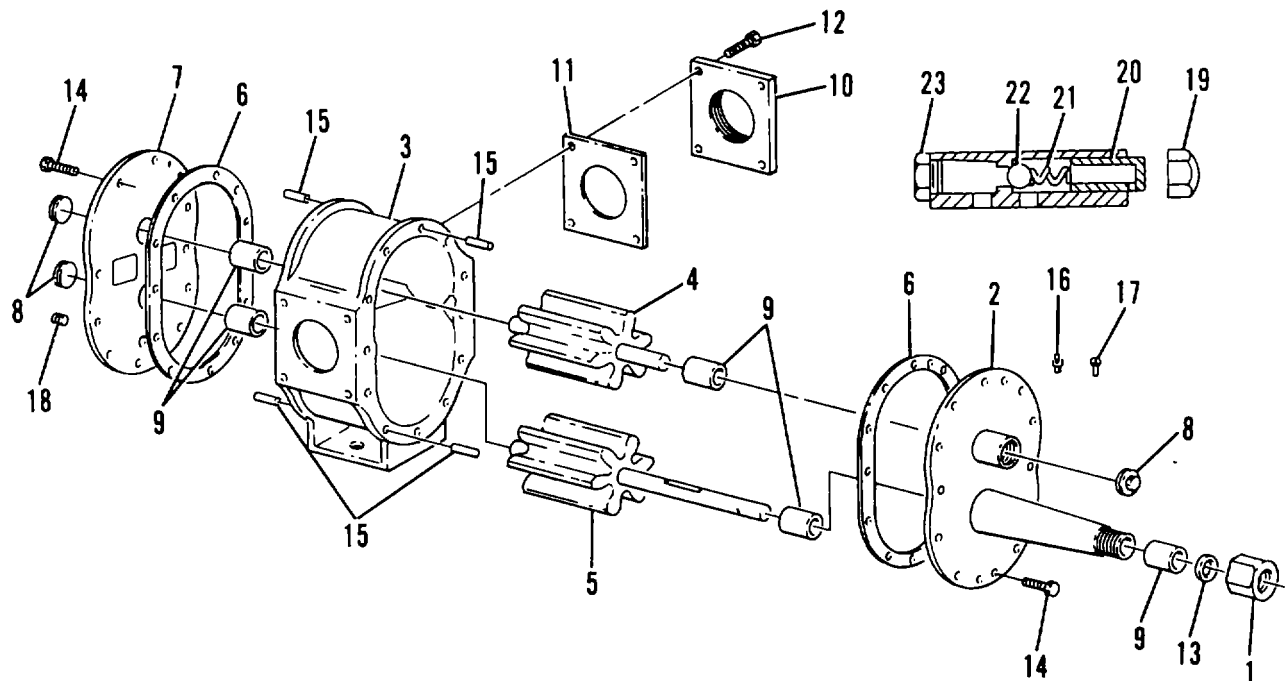


Figure 3-4. Water Pump, Exploded View