
INSTALLATION INSTRUCTIONS

Installation of the Giant Industries, Inc., pump is not a complicated procedure, but there are some basic steps common to all pumps. The following information is to be considered as a general outline for installation. If you have unique requirements, please contact Giant Industries, Inc. or your local distributor for assistance.

1. The pump should be installed flat on a base to a maximum of a 15 degree angle of inclination to ensure optimum lubrication. If the pump is mounted on a vehicle with the possibility of unlevelness, or the pump speed is between 300 & 500 RPM, the oil quantity should be increased to 1.9 gallons (7.0 liters). To check, put the oil dipstick in the bore next to the lifting eye bolt.
2. The inlet to the pump should be sized for the flow rate of the pump with no unnecessary restrictions that can cause cavitation. Teflon tape should be used to seal all joints. If pumps are to be operated at temperatures in excess of 140°F, it is important to insure a positive head to the pump to prevent cavitation.
3. The discharge plumbing from the pump should be properly sized to the flow rate to prevent line pressure loss to the work area. It is essential to provide a safety bypass valve between the pump and the work area to protect the pump from pressure spikes in the event of a blockage or the use of a shut-off gun.
4. Use of a dampener is necessary to minimize pulsation at drive elements, plumbing, connections, and other system areas. The use of a dampener with Giant Industries, Inc. pumps is optional, although recommend-

ed by Giant Industries, Inc. to further reduce system pulsation. Dampeners can also reduce the severity of pressure spikes that occur in systems using a shut-off gun. A dampener must be positioned downstream from the unloader.

5. Crankshaft rotation on Giant Industries, Inc. pumps should be made in the direction designated by the arrows on the pump crankcase. Reverse rotation may be safely achieved by following a few guidelines available upon request from Giant Industries, Inc. Required horsepower for system operation can be obtained from the chart on page 3. While in operation, all rotating parts must be covered. The open shaft end by the shaft protector (21), the driven shaft side and coupling by a protective guard. Plunger area must have cover plate (30) secured in place. Do not step on or place weight on the cover (30).
6. Before beginning operation of your pumping system, remember: Check that the crankcase and seal areas have been properly lubricated per recommended schedules. Do not run the pump dry for extended periods of time. Cavitation will result in severe damage. Always remember to check that all plumbing valves are open and that pumped media can flow freely to the inlet of the pump.

Finally, remember that high pressure operation in a pump system has many advantages. But, if it is used carelessly and without regard to its potential hazard, it can cause serious injury.

IMPORTANT OPERATING CONDITIONS **Failure to comply with any of these** **conditions invalidates the warranty**

1. Prior to initial operation, add oil to crankcase so that the oil level is between the two lines on the oil dipstick. **DO NOT OVERFILL.**

Use SAE 90 Gear Oil (ISO VG 220) (1.6 Gal)
SAE 80 (ISOVG 68 for 40° F or below)

Crankcase oil should be changed after the first 50 hours of operation, then at regular intervals of 500 hours or less depending on operating conditions.

2. When operating in high humidity or wide temperature fluctuations, oil must be changed, at once, when condensate or milky colored oil is found.
3. Pressure in discharge line and pump must be at zero before any maintenance is performed on the pump. Close the inlet line and disconnect the motor circuit to prevent accidental starting. Make sure that all parts on the pressure side of the unit are vented and refilled at zero pressure before restarting the pump.

In order to prevent air, or an air/water-mixture being absorbed and to prevent cavitation from occurring, the pump-npshr, positive suction head and water temperature must be controlled.

Cavitation can lead to uncontrollable pressure kicks which can damage the pump or accessories and can be dangerous to the operator or anyone standing nearby.

4. Pump operation must not exceed rated pressure, volume or RPM. A pressure relief device must be installed in the discharge of the system.
5. Acids, alkalines, or abrasive fluids cannot be pumped unless approval in writing is obtained before operation from Giant Industries, Inc.
6. Run the pump dry approximately 10 seconds to drain the water before exposure to freezing temperatures.

* **Important**-Check torque bi-weekly on item 49A