INSTALLATION INSTRUCTIONS

Operation and Maintenance

Check oil level prior to starting and ensure trouble-free water supply.

Oil: Use only 1.7 gallons (6.3 liters) of ISO VG-220 synthetic gear oil. Initial change after 50 hours and then after every 200 operating hours. If used less than this, change once per year.

IMPORTANT! When operating in humid areas (or areas with large temperature fluctuations, the oil must be changed immediately (if condensate or frothy oil occurs in the crankcase).

I**MPORTANT!** We recommend that both inlet ports be used in order to ensure cavitation-free operation and optimal suction conditions. If only one connection is use, a safety margin of 3 feet (1 meter) has to be added to the required NPSH.

IMPORTANT! If the pump is mounted on a vehicle with the possibility of unlevelness and/or the pump speed is between 300 & 500 RPM, the volume of oil should be 1.93 gallons (7.3 liters). To check, put the oil dipstick in the bore situated next to the eye bolt.

IMPORTANT! The GP7636GBHS-2.4 pumps has a black arrow on the reduction gear, which shows the preferred direction of rotation. The pump can be delivered either with the gear on the left side or right side (when facing the front of the pump), which eases planning assembled units with regard to the desired direction or rotation. **In either case, the larger gear wheel must rotate towards the front-end of the pump.**

The preferred/optimal direction of rotation ensures that the oil is correctly splashed on the crosshead guides via the motion of the connecting rods, which is a particular advantage where continuous operation is involved.

The pump can also be run against the recommended direction of the rotation if operated periodically or at reduced pressure. If this is the case, the pump has to be run in this direction to smoothen the bearing areas. This is done by a one-time operation at zero pressure for at least 30 minutes; thereafter, the pressure must be slowly increased over the next hour to the desired maximum operating pressure. This should run-in the pump, but you should also check the oil temperature, which should not exceed 140 ° F (60 °C).

The torque tension on the valve casing nuts (49A) is to be checked after approximately 200 hours. Please see page 7 for torque values.

IMPORTANT! The service life of the seals is maximized if a minimal amount of leakage is present. A few drops of water can drip from each plunger every minute. Leakage has to be examine every day. If the leakage becomes excessive (constant dripping), the plunger seals must be changed.

Safety Rules

The operating instructions must be read and adhered to before performing any work on the pump or complete assembled unit. No responsibility will be carried by us for damage to materials or persons caused by improper handling of our pumps.

Access to the pump is not allowed by unauthorized personnel. As safety valve is to be installed in accordance with the guidelines for liquid spraying units, so that the admissible operating pressure cannot be exceeded by more than 10%. Pumps operating without a safety valve as well as any excess in temperature or speed limits automatically voids the warranty. When the pump is in operating, the exposed shaft side, the driven shaft side and its coupling must be covered by a protective guard. The plunger area must also be covered by the protective plate (30). Do not step onto the protective plate (30) or put weight on it.

Before carrying out any maintenance work to the pump or pump unit, the pressure in the discharge line and pump must be at zero. Close off the suction line. Disconnect fuses to ensure that the driving motor cannot accidently get switched on. Before starting the pump, make sure that the pump, the cooling system and all parts on the pressure side of the unit are vented and refilled with pressure at zero.

In order to prevent air or air/water-mixture being absorbed and cavitation occurring, the pump NPSHR (Net Positive Suction Head Required) and water temperature must be adhered to.

Cavitation and/or compression of gases lead to uncontrollable pressure kicks, which can ruin the pump and unit parts and also be dangerous to the operator or anyone standing nearby.

Giant plunger pumps are only suitable for pumping fresh clean water.