PETROLEUM SELF-PRIMING CENTRIFUGAL PUMPS

INSTRUCTION BULLETIN
SIZE: 30 AND 40

Read this bulletin in full before installing, operating or servicing this pump. If any of the warnings of this bulletin are ignored serious injury or death could occur.

WARNING!

This pump was designed to handle volatile and flammable fluids. To reduce the risk of fire or explosion keep pump in well ventilated area free of explosive atmosphere. Do not smoke where there is fuel being handled, also keep away from any sparks or open flame. Do not operate pump with either the suction or discharge valves fully closed as this will over heat the pump. If pump becomes overheated allow to cool before next use.

Do not operate the pump in a manner that it was not intended to be used.

Do not install a piping system that does not allow for any flex due to expansion from heat generated by the pumping system.

Do not allow severe temperature changes to occur in a short time period within the pumping system.

Drain pump completely before switching fuel type that is to be pumped.

Do not continue to operate the pumping system when a known leak exists or the system starts to smoke.

Do not continue to operate the pumping system when unusual noise or vibration occurs.

Do not perform service or maintenance when the pumping system is pressurized or hot.

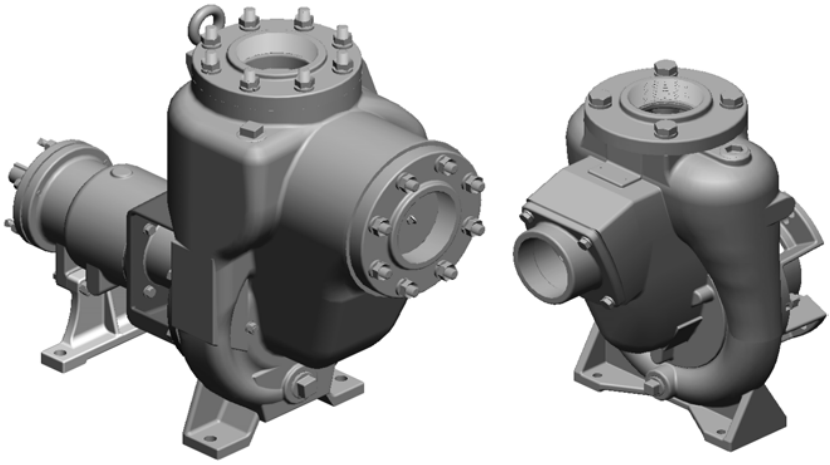
Do not mount pump in conditions that high piping loads exist on the pump flanges.

MODELS:

PO : Diesel, Biodiesel and Fuel Oil

PG : Gasoline, Kerosene, AV Gas, and Jet Fuels.

PE : Ethanol and E-85



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INSTRUCTION BULLETIN

It is important that this Instruction Bulletin be read carefully to fully familiarize yourself with the pump assembly arrangement. The instructions contained herein pertain to installation and maintenance of the PO, PG, PE 30 and 40 pump assembly only. Check unit carefully to make certain that no parts are missing or have been broken in shipment. Your pump may been provided as a pumpak assembly or included a driver such as a closed coupled electric explosion proof motor. Please verify which driver is on your pump to know which sections of this document pertain to you.

PUMPAK ASSEMBLY (SIZE 30 ONLY)

1. Loosen the drive sleeve clamp.
2. Slide the pump onto the driver by hand. This should not require extreme force.
3. Install and tighten fasteners (4 screws) into the pump adaptor securing the driver.
4. Tighten drive sleeve clamp nuts to 20-26 ft. lbs.
5. Remove the metal shim strap that spaces the impeller by pulling it out of the discharge.
6. Rotate the shaft ensuring that the pump rotates freely before putting into service.

BEARING HOUSING MOUNTING

The bearing housing must be above the pump in any non horizontal application to prevent bearing damage due to liquid leakage. The pedestal or foot mounted pumps, when provided with a driver and a coupling are mounted on a steel base plate. Recheck after unit has been set in place.

INSTALLATION

For optimum performance, place pump as close to liquid source as possible to reduce suction lift to a minimum. For best results, pump should be installed not more than 15 feet above the liquid supply. Set the unit on solid footing and as nearly level as possible.

Pipe or hose of the same size as flanges provided should be used. Reinforced suction hose is recommended because it provides greater flexibility and prevents collapsing due to vacuum in the suction line when pump is in operation. Suction line should be as short as possible to keep friction loss at a minimum. Use pipe sealant on all connections and make certain that all fittings are tight, particularly on the suction line where an air leak can prevent priming or reduce pump capacity.

OPERATION

This petroleum pump is a self-priming centrifugal pump and only requires priming prior to its initial start. The pump will retain sufficient liquid for self-priming thereaftyer. If the pump has a discharge valve it must be fully open to expel air during priming at initial start-up.

After start up check for leaks anywhere on the pump or pluming, and tighten any bolts or nuts as necessary.

If pump fails to prime or stops pumping, check for the following possible causes:

1. No liquid in the pump housing
2. Air leak in the suction line due to loose connections or pin holes in the hose.
3. Collapsed suction line or clogged strainer
4. Seal worn and leaked air.
5. Worn impeller - too much clearance between impeller and wear plate.
6. Pump not running fast enough.
7. Suction lift is too high.
8. Trying to prime against too high a discharge head.

DISASSEMBLY

Disconnect power to prevent accidentally starting. Disconnect lines and drain pump housing.

MAINTENANCE

Use the exploded parts view with these instructions and note recommended replacement parts for the pump.

Disconnect and remove the pump end from the driver. Remove and replace the suction and discharge gasket. Tighten the inlet and discharge flange to 24-ft lbs. Remove nuts from the adaptor and disassemble the rotating assembly from the housing. Inspect the wear plate for abrasive wear and replace if necessary using new screws, gaskets and acorn nuts. Remove the seal seat from the adaptor and discard. Impellers are threaded onto a drive sleeve and secured by a jam nut.

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Operating the pump dry will seriously damage the seal.

If the pump is to be left standing idle for any length of time in freezing conditions, the pump housing should be drained. Draining is provided for by a plug at the base of the pump housing.

TO REMOVE PUMP HOUSING

Remove capscrews and nuts holding pump housing to base (where used).

Remove nuts and lock washers holding pump housing to adapter.

Loosen the housing and remove carefully to prevent tearing gaskets.

REASSEMBLY

MOUNTING ADAPTER

Before mounting adapter, clean counterbore thoroughly.

Clean and lubricate the synthetic member on seal seat and press (do not drive) the assembly into the adapter counterbore, seating it firmly and squarely against the shoulder being sure that the polished side is facing up.

CAUTION

In handling, avoid dropping seat and take particular care not to scratch the lapped face.

Press the seal assembly on to the drive sleeve using a water-soluble lubricant to aid in pressing the seal assembly.

IMPORTANT

The assembly of impeller and seal to the drive shaft should take place as soon as the bellows assembly is slipped on the impeller sleeve so as to avoid bonding of the bellows to the sleeve at the impeller working working height.

This pump is equipped with a self-lubricated shaft seal. The self-lubricated seal is lubricated by the liquid in the pump.

CAUTION

Foreign matter between sealing faces will cause leakage and shorten life of the seal.

MOUNTING PUMP HOUSING

Replace gaskets on pump housing and mount housing on the adapter. Replace two lock washers and nuts on studs diagonally across from each other and tighten. Turn drive shaft over slowly by hand and listen at housing outlet opening for any impeller rubbing on the housing or wear plate.

The clearance between the impeller and wear plate can be checked with a feeler gauge. Normal clearance is .015" to .025". If clearance exceeds .025" readjust impeller. If the impeller rubs use an additional gasket to space impeller.

After clearance has been established, replace lock washers and nuts on remaining studs and tighten. If capscrew and nuts are used to hold housing to mounting base, replace these and tighten.

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