

# **P-3F**

# **INSTALLATION INSTRUCTIONS**

#### PREPARE PUMP

- 1. Clean and inspect pump parts.
- 2. Replace shaft or shaft sleeve if worn in secondary sealing areas under o-rings.
- 3. Check for good starting bevel and remove all burrs that would cut secondary seal o-rings or cause misalignment.
- 4. Check shaft run out (to be within .001" TIR per inch of shaft dia.), shaft end play (not to exceed .005"), stuffing box face alignment (must be square to shaft within .003" TIR and have good sealing surface, 125 RMS min.), and condition of bearings. Replace if necessary.

## **INSTALLING SEAL**

- l. Lubricate shaft or sleeve.
- 2. Insert seal into stuffing box with barrier fluid ports facing desired location.
- 3. Loosely thread gland bolts into back plate. <u>IMPORTANT:</u> Do not tighten gland bolts at this time. Use washers if provided. Also, do not remove any setting clips at this time. <u>NOTE:</u> For larger pumps with heavy back plates, install the seal on the shaft or sleeve, then slip on the back plate and loosely thread the gland bolts.
- 4. Install and bolt back plate to pump frame.
- 5. Install and tighten impeller.
- 6. Make all necessary impeller adjustments as required. The impeller can be reset at any time, as long as the setting clips are in place and the seal set screws are loosened while the shaft is being moved.
- 7. Tighten gland bolts evenly. (See GLAND BOLT TORQUE table.)
- 8. Tighten set screws in collar.
- 9. Remove setting clips and cap screws.
- 10. Turn shaft by hand to make sure there is no rubbing between rotating and stationary parts.
- 11. Make all necessary pump connections and alignments.
- 12. Connect barrier supply system to seal gland. Adjust the pressure to the recommended pressure. **Note:** When adjusting pressure, always adjust <u>up to</u> desired setting. If adjusting from higher to lower pressure, allow pressure to fall below desired setting and then adjust <u>up to</u> final setting. Maintain barrier pressure at all times, even when pump is not running.
- 13. Run pump according to normal start up and operating procedures.

### **GLAND BOLT TORQUE**

Seal Size	Torque Value
1 to 1-3/8"	15-20 ft-lbs.
1-1/2 to 2"	25-30 ft-lbs.
2-1/8 to 3-1/4"	30-35 ft-lbs.