

# POWERPUMPER

## DOUBLE/TANDEM CARTRIDGE SEAL

### 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 the pump bearings. Replace if necessary.

#### INSTALLING SEAL

1. 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. **IMPORTANT:** Do not tighten gland bolts at this time. Also, do not remove any setting clips at this time. **NOTE:** 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.
8. Tighten set screws in collar.
9. Remove setting clips and flat head screws. **NOTE:** Apply pressure to clip at the gland face, as shown, with a screwdriver or flat edge then lift rear of clip to remove. (The setting clips must be removed entirely)
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. Clean out barrier fluid lines and seal pot.
13. Connect and open barrier fluid lines to seal.
14. If a seal pot is used, fill seal pot with barrier fluid and bleed out air in lines. For API Plan 53 pressurize to 20-30 PSI above stuffing box pressure.
15. 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.

