## 1500 <br> SINGLE CARTRIDGE SEAL WITH BUSHING

## 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. 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 the shaft before sliding on seal. Slide the seal on the shaft by pushing on the collar \& sleeve, making sure that the set screws are engaged in the sleeve without touching the shaft.
2. Make all necessary impeller adjustments as required. The impeller can be reset at anytime, as long as the centering clips are in place and the seal set screws are loosened as the shaft is moved.
3. Tighten the gland bolts evenly.
4. Push, by hand, on the collar of the seal, not the gland, so that the centering clips are bottomed out.
5. Tighten the set screws in the collar.
6. Remove cap screws and centering clips.
7. Turn shaft by hand, there should be no metal to metal contact between the sleeve and the seal. If this exists, loosen gland bolts, then replace the spacers and re-tighten gland bolts.
8. Make all necessary pump connections and alignments. Hook up appropriate tangential flush port depending on shaft rotation. Plug other flush port. (Connect flush in the direction of shaft rotation, if the shaft rotation is clockwise, then connect flush line to the port marked with clockwise arrow.
9. Connect quench \& drain appropriately, if used.
10. The seal is ready for pump start-up procedures.


