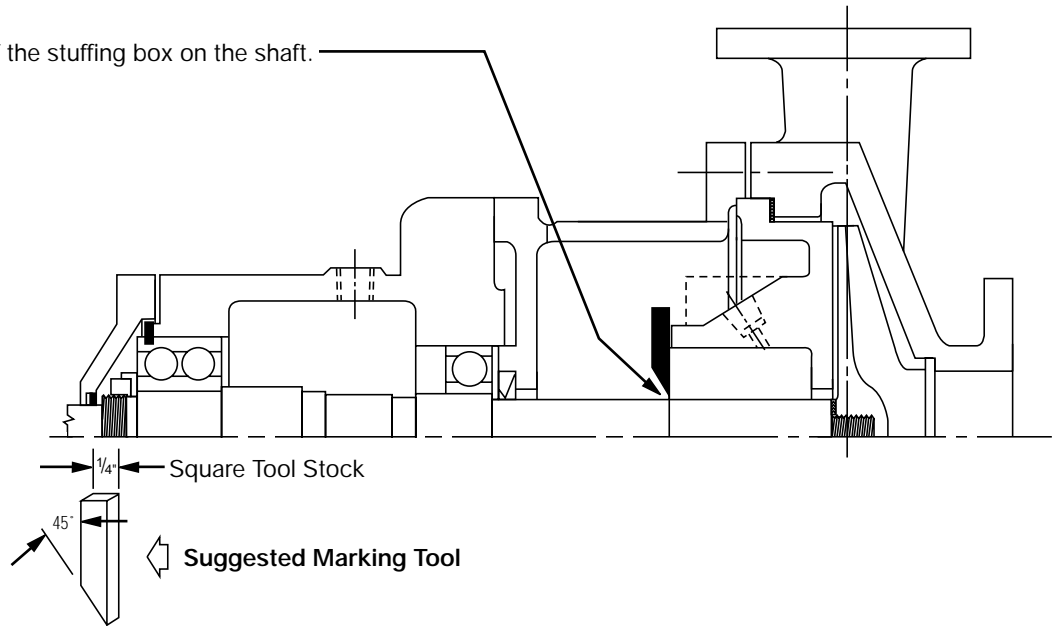




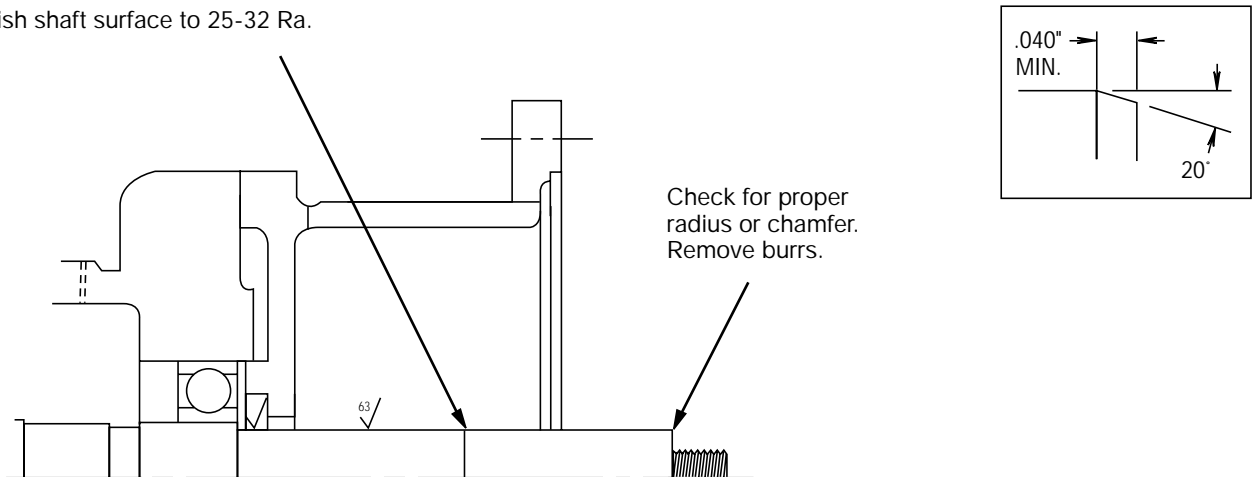
John Crane
Simple Shaft Seal
Installation and
Troubleshooting for
Type 8-1 and
Type 9 Seals

INSTALLATION

Step 1: Mark the face of the stuffing box on the shaft.

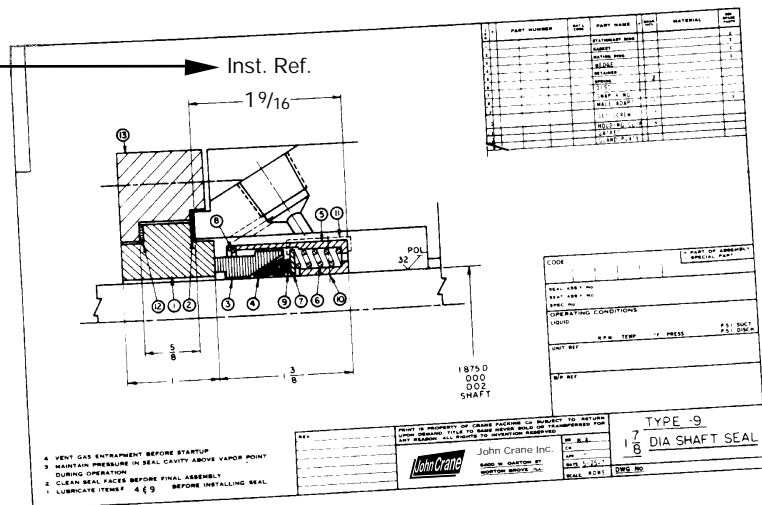


Step 2: Polish shaft surface to 25-32 Ra.

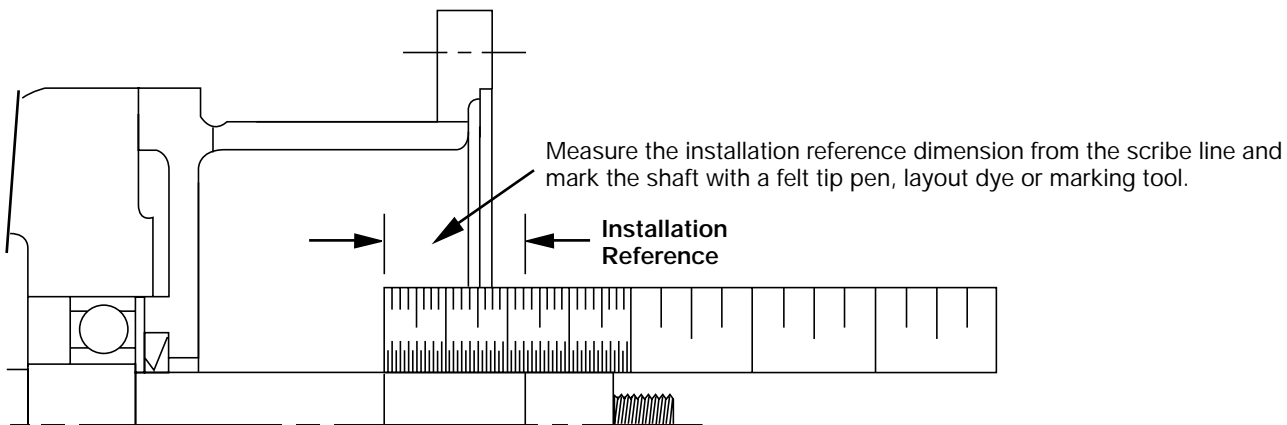


INSTALLATION (continued)

Step 3: Look at pump installation drawing. Locate installation reference dimension (the dimension from the face of the seal chamber to the rear of the seal).

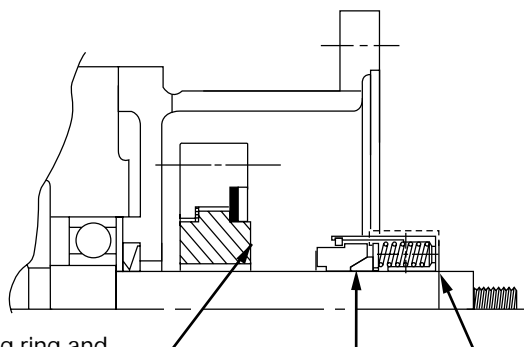


Step 4:



An alternate method is to measure from the face to the seal chamber to the end of the shaft. Then, subtract the installation dimension. This gives you the dimension from the end of the shaft to the rear of the seal.

Step 5:



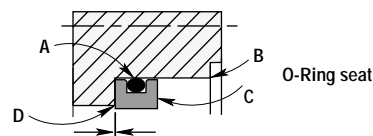
Put the mating ring and gland together and slide over shaft. Do not damage mating ring.

Lubricate the wedge or o-ring with light oil.

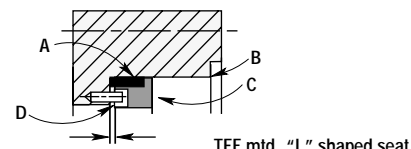
Slide seal over shaft. Locate rear on installation dimension and tighten set screws.

Some Type 8-1 and Type 9 seals may use different mating rings. If your seal does, then:

- Lubricate seal ring (A) check for corner break (B)
- Protect sealing face (C) with clean cloth and press mating ring firmly in place.
- Inspect rear of seal (D) to be sure it is properly positioned.



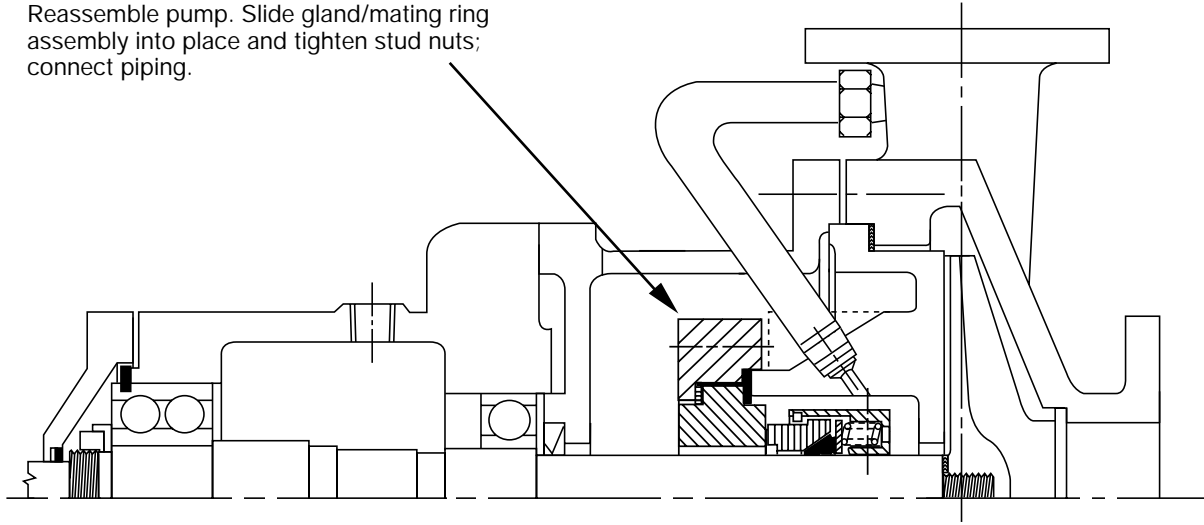
O-Ring seat



TFE mtd. "L" shaped seat

INSTALLATION (continued)

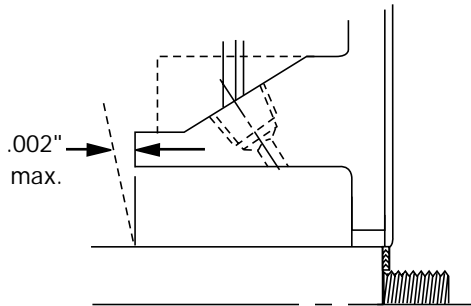
Step 6: Reassemble pump. Slide gland/mating ring assembly into place and tighten stud nuts; connect piping.



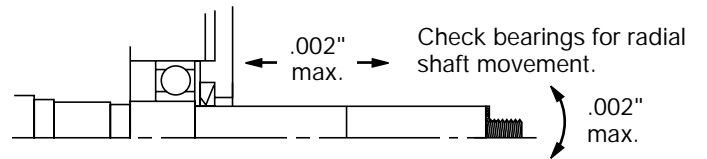
TROUBLESHOOTING

Step 1: Seal Wears Out Shaft

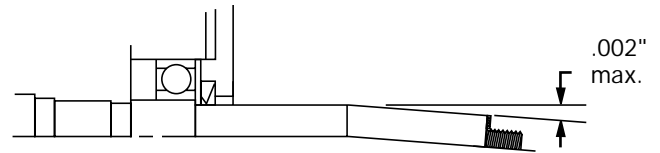
Reason - Pump is in poor mechanical condition.
Check squareness of stuffing box face to shaft centerline (.002" max. \perp).



Check bearings for shaft end play.

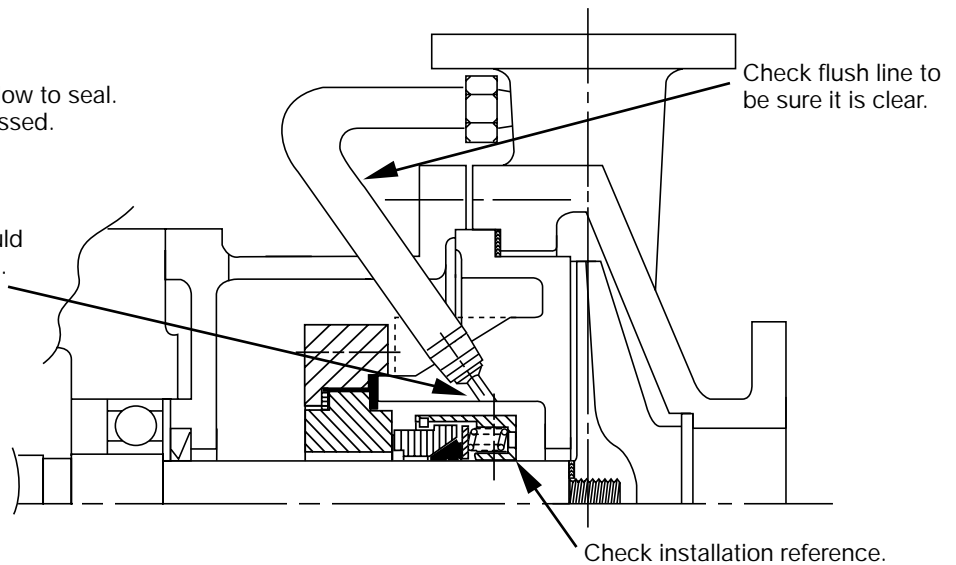


Check shaft straightness.



Step 2: Seal is Burned Up
Reason - Not enough liquid flow to seal.
- Seal is overcompressed.

Check location or flush port. It should be as close to seal face as possible.



Did the pump cavitate or run dry?

TROUBLESHOOTING (continued)

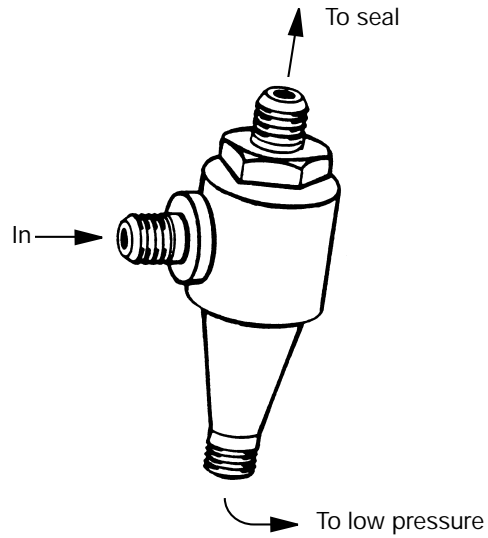
STEP 3: Seal is Worn Out

Reason - Abrasives are in the seal cavity. The pumped liquid may be carrying dirt, rust or suspended abrasive particles.

If so, install an abrasives separator in the flush line.

A filter will also work.

If the liquid carries dissolved solids, contact your local John Crane Representative.



John Crane mechanical seals are very reliable. If you are not obtaining good service life, contact your local John Crane representative.



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