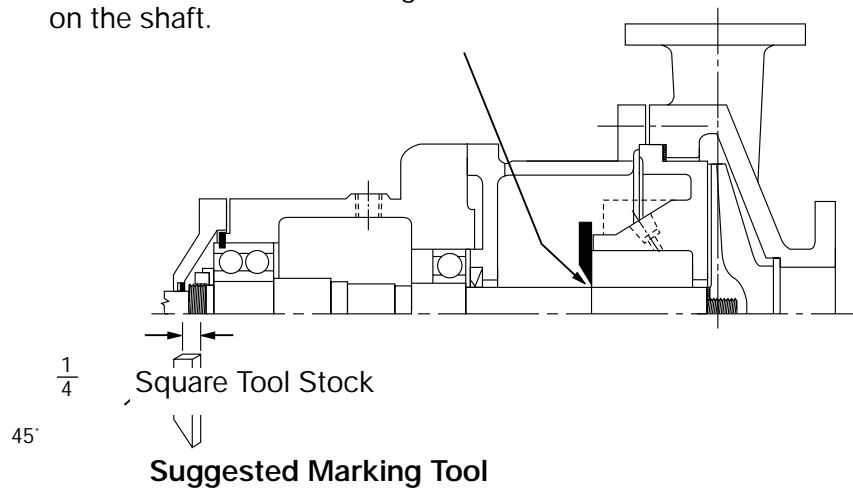




John Crane
Simple Shaft Seal
Installation and
Troubleshooting for
Types 1, 2 and 21

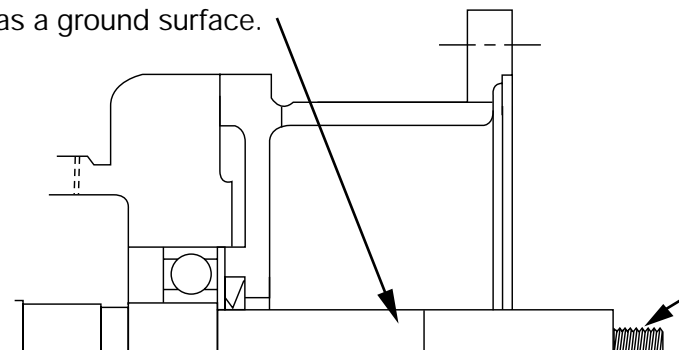
INSTALLATION

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



Step 2:

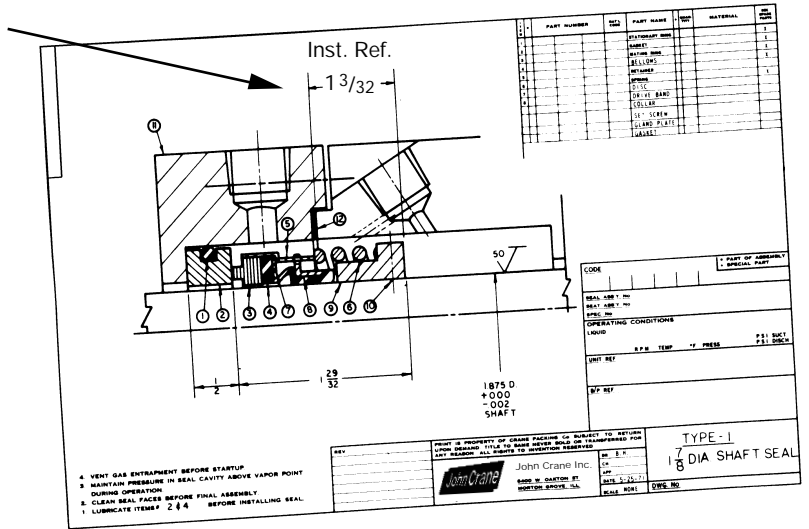
Polish shaft about the same
as a ground surface.



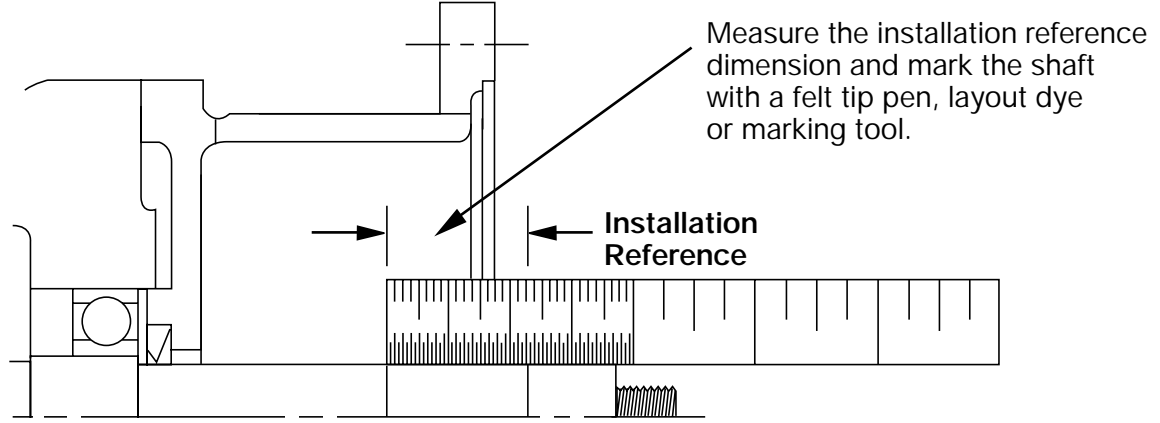
Check for proper radius or
chamfer. Remove burrs.

INSTALLATION (continued)

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

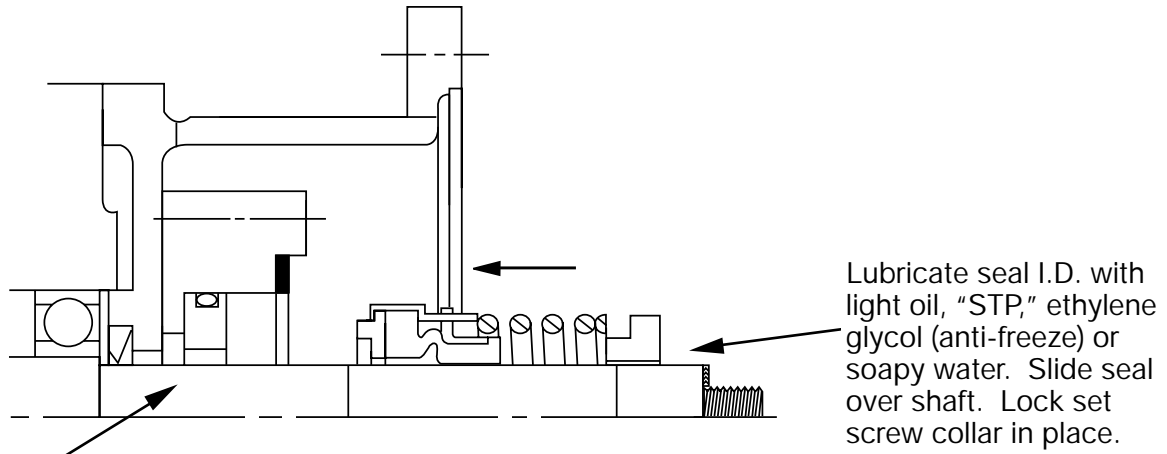


Step 4:



An alternate method is to measure from the face to the stuffing box 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.

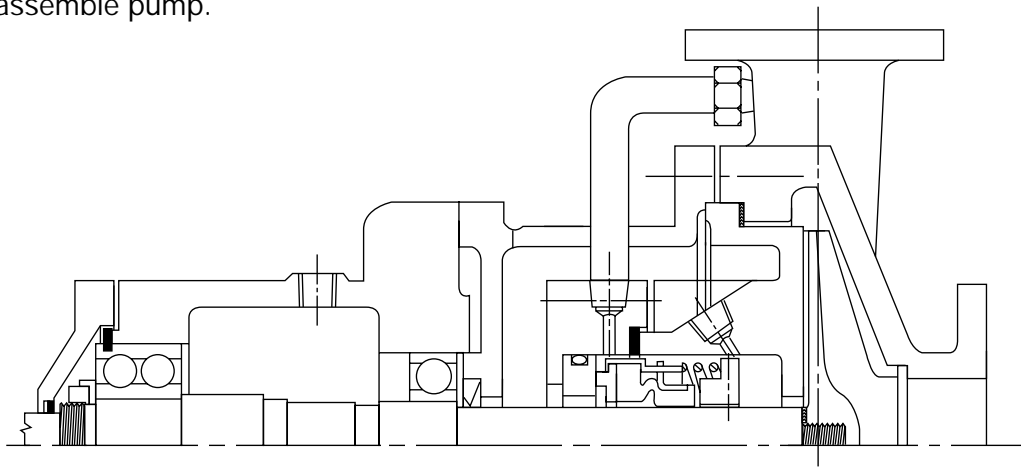
Step 5:



Put the seat and gland together and slide over shaft.

IMPORTANT: Oil is injurious to some rubbers such as ethylene propylene. Use only anti-freeze or soapy water to lubricate.

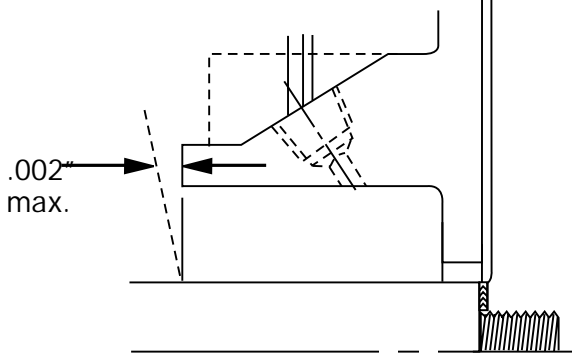
Step 6: Reassemble pump.



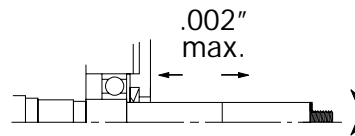
TROUBLESHOOTING

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 bearings for radial shaft movement.

.002" max.

Check shaft straightness.



.002" max.

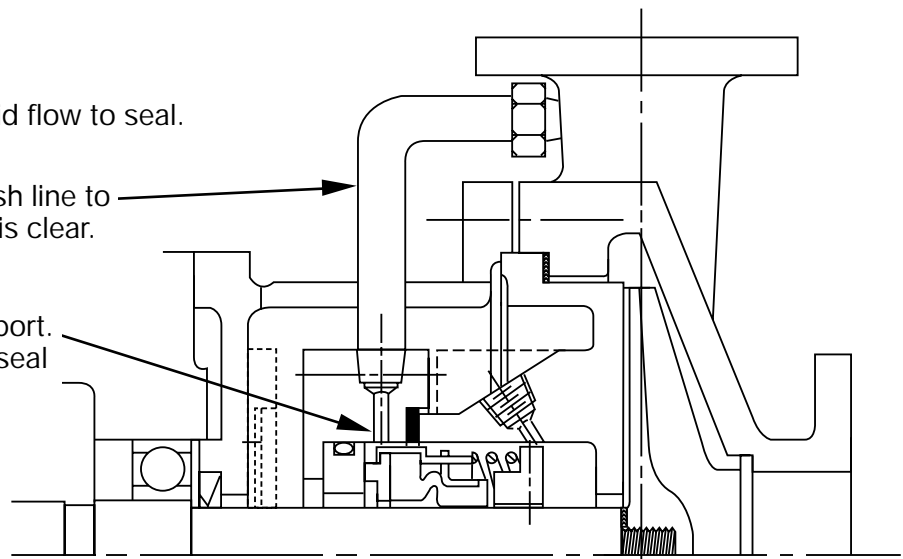
Step 2: Seal is Burned Up

Reason: Not enough liquid flow to seal.

Check flush line to be sure it is clear.

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

Did the pump cavitate or run dry?



TROUBLESHOOTING (continued)

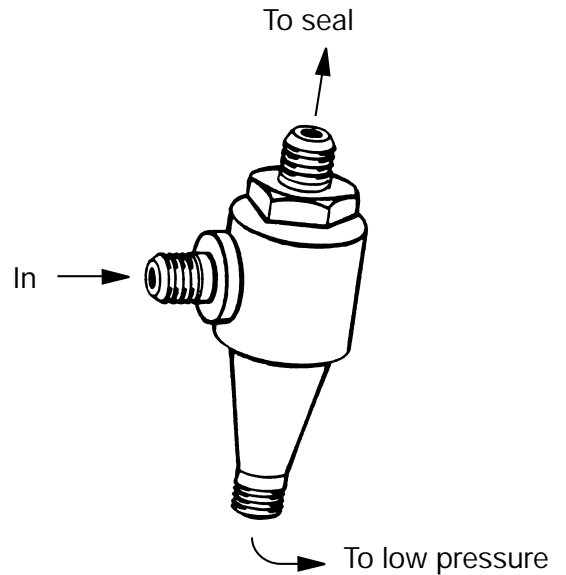
STEP 3: Seal is Worn Out

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.



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