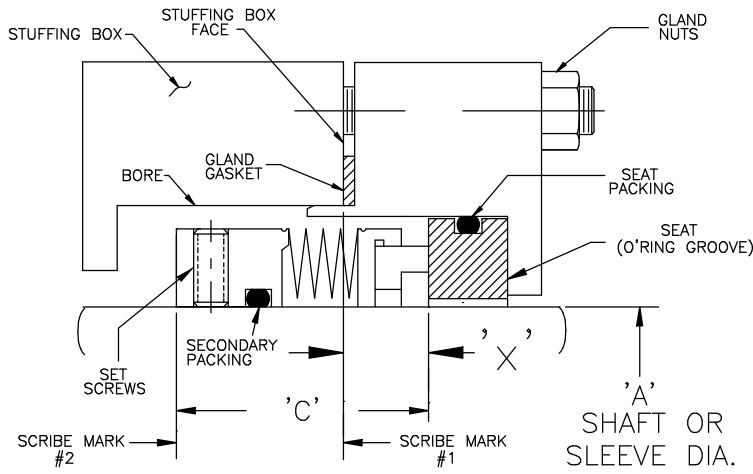
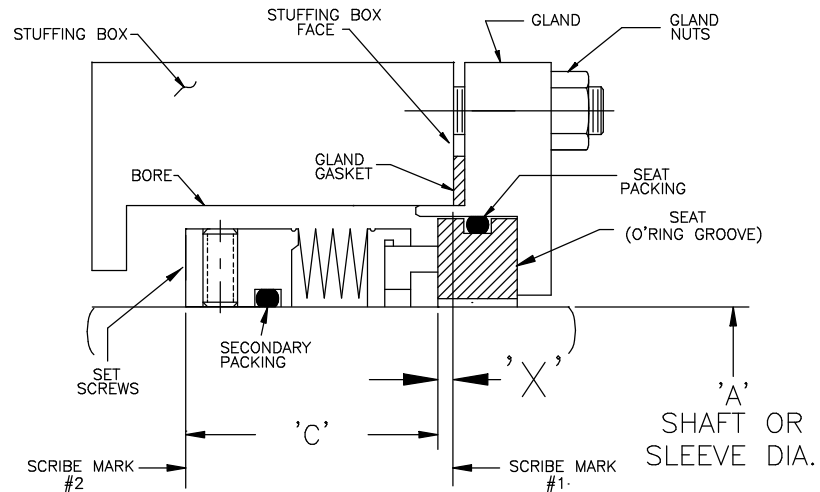


# SEAL INSTALLATION INSTRUCTIONS FOR STYLE 40, 42, AND 45 ROTARY SEALS



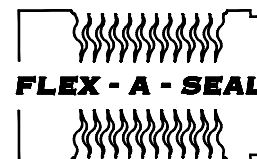
PREPARATION: FIG. 1

- (1) DISASSEMBLE THE PUMP AS FAR AS NECESSARY SO THAT THE STUFFING BOX, GLAND, SEAL, AND OR PACKING CAN BE REMOVED.
- (2) WIPE THE SHAFT OR SLEEVE CLEAN AND CHECK DIAMETER TO BE SURE IT IS WITHIN TOLERANCE (USUALLY  $\begin{matrix} +.000 \\ -.002 \end{matrix}$ ) THE SURFACE FINISH SHOULD BE 63 RMS MAX.
- (3) BE SURE THAT IF A SHAFT SLEEVE IS USED, IT IS GASKETED AND LEAK TIGHT.
- (4) TO AVOID DAMAGE TO THE SECONDARY PACKING, SLEEVE ENDS OR SHAFT SHOULDER MUST HAVE AT LEAST A 1/32 CHAMFER OR BREAK. ALL SHARP EDGES AND BURRS MUST BE REMOVED.
- (5) CHECK SHAFT END PLAY (USUALLY NOT TO EXCEED .005), AND SHAFT RUNOUT (USUALLY NOT TO EXCEED .002 TIR) WHICH MUST BE WITHIN PUMP MANUFACTURER'S LIMITS.
- (6) CAREFULLY CLEAN AND INSPECT BORE AND STUFFING BOX FACE, CHECK BORE DIMENSIONALLY AND MAKE SURE STUFFING BOX FACE IS SMOOTH AND FLAT TO GIVE A GOOD SEALING SURFACE FOR THE GLAND GASKET.
- (7) REINSTALL STUFFING BOX, AND CHECK STUFFING BOX FACE PERPENDICULARITY TO THE SHAFT AND SHAFT CONCENTRICITY TO THE BORE WHICH SHOULD BE .001 TIR PER INCH OF BORE DIA.
- (8) USE THE FOLLOWING PROCEDURE TO LOCATE THE SEAL:
  - SCRIBE MARK #1 TO SHOW THE LOCATION OF THE STUFFING BOX FACE USING A STRAIGHT EDGE.
  - DETERMINE DIMENSION 'X', BEING THE DISTANCE FROM THE STUFFING BOX FACE TO THE SEAT.
- (9) IF GLAND RESEMBLES FIG. 1:  
TO LOCATE SCRIBE MARK #2, SUBTRACT 'X' FROM OPERATING LENGTH ON DIMENSIONAL SKETCH.  
IF GLAND RESEMBLES FIG. 2:  
TO LOCATE SCRIBE MARK #2, ADD 'X' FROM OPERATING LENGTH ON DIMENSIONAL SKETCH.
- (10) CLEAN SHAFT OR SLEEVE AND LUBRICATE THE SURFACE WITH A MATERIAL COMPATIBLE WITH THE SEALED FLUID AND SECONDARY PACKING MATERIAL.



INSTALLATION: FIG. 2

- (1) INSTALL SEAT PACKING INTO SEAT, AND LUBRICATE LIGHTLY WITH A COMPATIBLE MATERIAL. CAREFULLY PRESS THE SEAT INTO THE GLAND.
- (2) BE SURE TO SEE THAT BOTH SEAL FACES ARE CLEAN, FREE OF NICKS AND SCRATCHES.
- (3) SLIDE GLAND WITH SEAT AND GLAND GASKET INSTALLED, OVER THE SHAFT OR SLEEVE.
- (4) SLIDE ROTARY HEAD WITH SECONDARY PACKING INSTALLED, OVER THE SHAFT UNTIL THE BACK OF THE SEAL LINES UP WITH SCRIBE MARK #2. TIGHTEN SET SCREWS ALTERNATELY UNTIL THEY ARE SECURE.
- (5) REINSTALL THE STUFFING BOX INTO ITS ORIGINAL POSITION AND ENGAGE THE PILOT FIT.
- (6) ALTERNATELY TIGHTEN THE GLAND NUTS EVENLY UNTIL THEY ARE SECURE.
- (7) REASSEMBLE THE PUMP AND TURN SHAFT BY HAND TO CHECK FOR FREE ROTATION. IF NOT RECHECK INSTALLATION.
- (8) CHECK TO SEE THAT ALL NECESSARY PIPING IS CONNECTED PROPERLY.
- (9) FLOOD PUMP TO INSURE THERE IS NO LEAKAGE THEN START PUMP AND OBSERVE FOR PROPER OPERATION.



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