

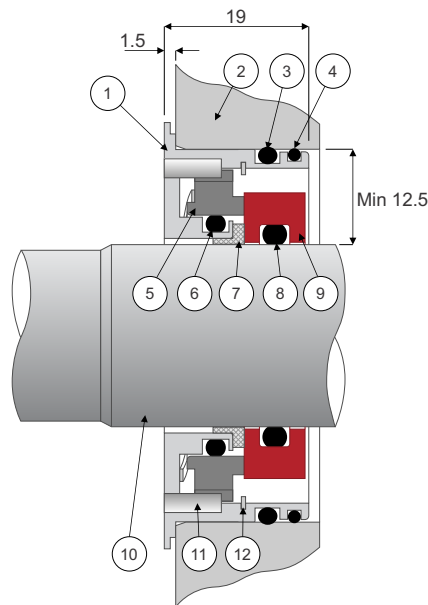
Gearbox Seal Installation and Operation

Items:

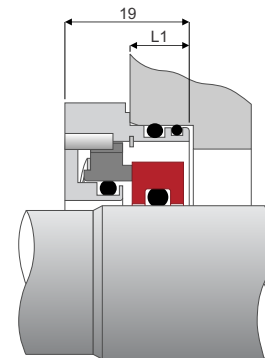
1. Stationary Housing
2. Bearing Housing
3. Static Stationary O-ring
4. Static Stationary O-ring
5. Stationary Face
6. Dynamic Stationary O-ring
7. Setting Ring (Only used in installation)
8. Rotary O-ring
9. Rotary Face
10. Shaft
11. Stationary Anti-rotation Pins
12. Circlip

Working Conditions

- Pressure $\leq 50\text{kpa}$
 Surface Speed $\leq 15\text{ m/s}$
 Temperature $\leq 100^\circ\text{C}$
 Max allowable axial movement $\pm 0.1\text{mm}$



Other Design Options



L1 is application dependent, ranging from 8mm to 17.5mm

The SGBX is a gearbox mechanical seal specifically designed for effective sealing in fully or partially flooded applications. The versatile seal design allows for the short installation length to be manufactured according to the axial space limitations of the required application; with available variations offering as little as 8mm protruding into the bearing housing or a minimum external length of 1.5mm. Unlike a lip seal, the advantage of the SGBX being a "stationary design" mechanical seal is that damage to the shaft surface is prevented.

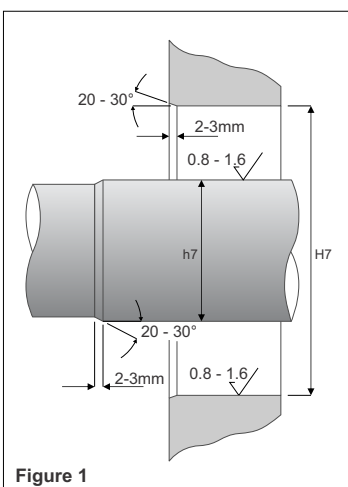


Figure 1

Step 1:

- Inspect the surface finish of the shaft and bearing housing to make sure that it is suitable for O-ring sealing.
- With a dial indicator, ensure that shaft run out is less than 0.1mm T.I.R.
- Ensure that the dimensions and tolerances specified in **Figure 1** are adhered to.
- Make sure that there are no sharp edges over which the seal O-Rings (3,4 & 8) must pass, and that the shaft and bearing housing have been cleaned before installation.

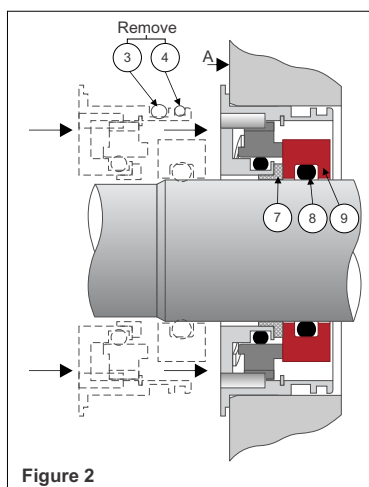


Figure 2

Step 2:

- Slide rotary face with o-ring (Items 8 & 9) onto the shaft without the use of lubrication grease.
- Ensure that the rotary and stationary faces have been wiped clean.
- With the setting ring (item 7) installed into the stationary assembly and the stationary o-rings (items 3 & 4) removed, assemble the stationary unit onto the shaft allowing the rotary and stationary faces to make contact. Note that this must be done slowly and carefully to avoid damaging the seal faces.
- Carefully push the stationary assembly into the bearing housing until the flange of the stationary housing makes contact with the bearing housing (Surface A - **Figure 2**).

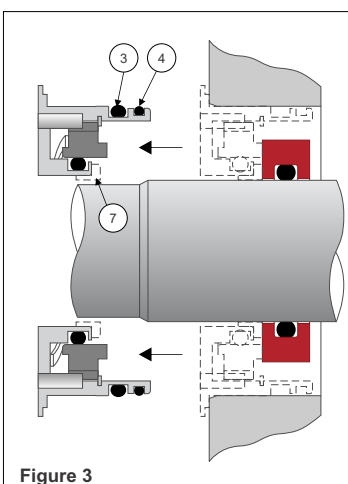


Figure 3

Step 3:

- Remove the stationary assembly from the bearing housing by using two screwdrivers or flat edges to wedge between the stationary housing and the bearing housing.
- Remove the setting ring (Item 7) from the stationary assembly and store it in a safe place for possible future use.
- Place the two stationary o-rings (Items 3 & 4) into their respective grooves on the outer surface of the stationary housing. Ensure that the o-rings are free from debris before installation.

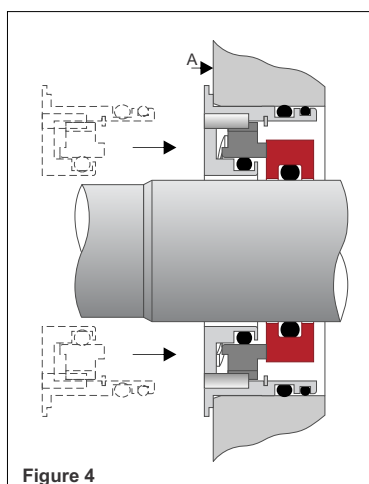


Figure 4

Step 4:

- With the stationary o-rings installed and the setting ring removed, the stationary assembly can be pushed into the bearing housing until the flange of the stationary housing makes contact with the bearing housing (Surface A - **Figure 4**). It is advisable to not use lubrication of any kind on the stationary housing o-rings or on the bearing housing.
- Once the seal is in place, turn the shaft by hand, listen and feel for any shaft binding. If the shaft turns smoothly the equipment is ready to be commissioned.