

## SPLIT SEALS: PRE-INSTALLATION INSPECTION AND PREPARATION

Prior to the installation of any lip seal, all of the equipment must be thoroughly inspected

The following specifications are critical and must be maintained:

- » Shaft Surfaces Finish, Ra (Roughness Average or AA (Arithmetic Average))
  - › The surface finish must be within 10-20 $\mu$  in. (0.25-0.50 $\mu$  m)
  - › The surface finish lay must be perpendicular to the shaft axis of rotation
- » Bore Surface Finish, Ra (Roughness Average or AA (Arithmetic Average))
  - › The surface finish must be equal to or less than 100 $\mu$  in. (2.54 $\mu$  m)
  - › The surface finish lay must be perpendicular to the shaft axis of rotation
- » Shaft Surface Hardness, Rockwell C-Scale
  - › The surface hardness must be within 30-40
- » Both the shaft and bore should include an edge relief (preferably and edge chamfer) as shown in Figure 1
- » The shaft and bore must be free of any type of defect. Examples of defects would be spiral-machining marks (also known as "machined lead", burrs, sharp edges (corner), nicks, scratches, indentations, corrosion, etc.
- » In most cases, the shaft will have a wear groove created from the previous seals. Care must be taken to ensure the new sealing lip does not seal in the same location

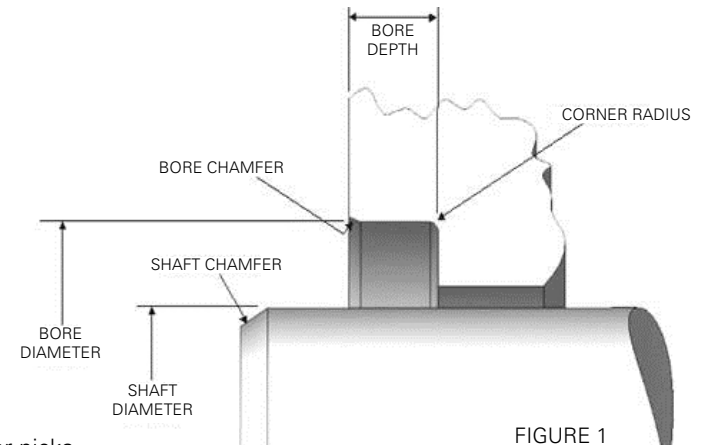


FIGURE 1

## SEAL INSPECTION

- » Sealing Lip
  - › Inspect the sealing lip, looking for any signs of damage. Damage could be in the form of cuts, indentations, and/or nicks
  - › Ensure that the spring (finger or garter type) is properly retained within the seal
- » Seal Outside Diameter
  - › Inspect the seal outside diameter, looking for any signs of damage. Damage could be in the form of indentations, scores, nicks, burrs and/or cuts

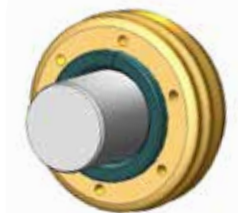
## SEAL INSTALLATION

### Splitting the Seal



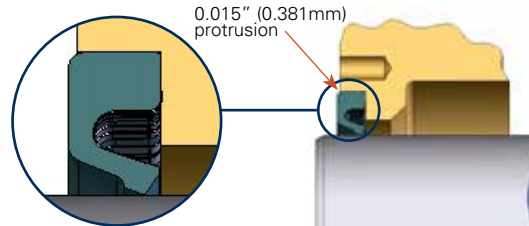
- » The seal should only be split in the axial direction, as shown above
- » Apply application lubricant to both the seal lip and the shaft
- » Wrap seal around the shaft

### Installing the Seal



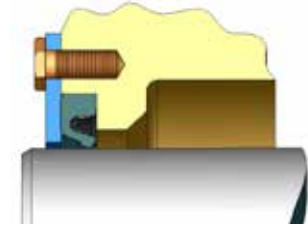
- » Orient the seal so the split end is at the highest point (12 o'clock position), as shown above
- » Starting with the split ends, insert the seal into the housing bore. Ensure the split ends of the seal are touching
- » Continue inserting the seal into the housing bore, working downward on both side and finishing at the bottom

### Seating the Seal



- » After the seal is fully seated in the housing bore, the seal should protrude from the surface of the housing by 0.015" (0.381 mm), as shown above

### Retaining the Seal



- » Install the required retaining cover plate, as shown above (although a retaining cover plate is not required for the Model 26, it is recommended that one be installed)

## POST-INSTALLATION INSPECTION

- » Once the seal has been installed, carefully inspect both sealing areas looking for leaks (pay close attention to both the sealing lip and the outside diameter of the seal)
- » Confirm that the sealing lip is not in the shaft-wearing groove of the previous seal