

Proper seal installation will prevent premature failure

TT 08-037

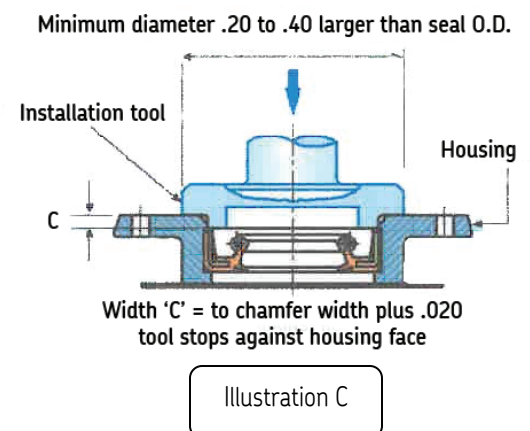
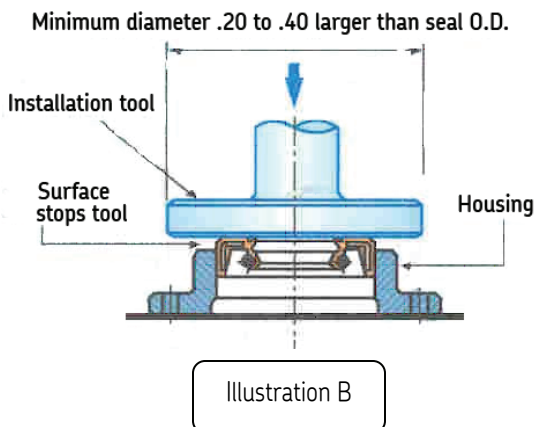
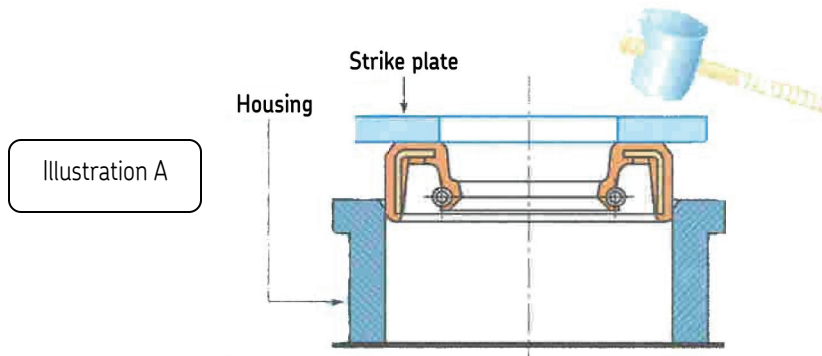
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Tech tip

Proper seal installation is generally overlooked when selecting an oil or grease seal for any given application.

To begin the seal installation, an important step is to pre-lubricate the seal with the oil or grease you are going to seal. This will reduce the “sliding” friction force that can damage the seal when installed dry. It also prevents a dry starting condition that can tear the seal material during initial run-in periods.

Acceptable installation methods used to install seals will always include supporting the seal case. Special tools are not necessarily required as long as the seal case is properly supported and an even force is uniformly applied. In each acceptable method, installation load is absorbed by either the housing or plate to prevent seal damage and to assist in properly locating the seal squarely in the bore. (See Illustrations A, B & C)



Proper seal installation will prevent premature failure – cont.

Improper methods will cause damage to the seal case which will change the geometry of the seal head in relation to the sealing surface, causing leakage. (See Illustrations D & E)

Improper methods of seal installation

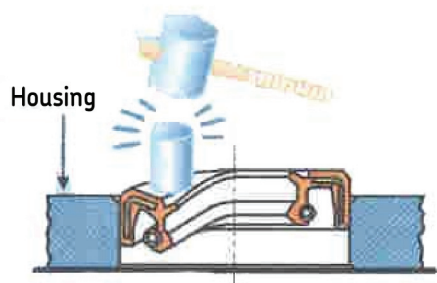


Illustration D

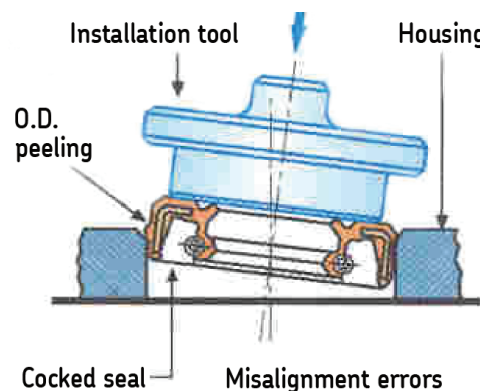


Illustration E

Proper seal maintenance and handling are critical. Follow the equipment manufacturer's installation instructions. Failure to follow proper installation methods can result in equipment failure.

Proper pinion seal installation

Tech tip

Pinion seal maintenance recommendations vary by manufacturer. Generally these seals must be replaced when leaks develop. Pinion seals should be checked and replaced whenever servicing a universal joint.

Replacement of the pinion seal usually requires removal and installation of only the pinion shaft nut and flange. Remember, a circular mounting flange, U-bolts or straps are used to hold the driveshaft in position on the differential pinion. The mounting flange attaches directly to the pinion yoke, while U-bolts/straps contact the bearing cups.

SKF recommends the following steps to achieve successful pinion seal installation:

1. Once a new seal is selected, clean and inspect the pinion yoke seal surface. If damaged, it may be repaired using an SKF Speedi-Sleeve[®].



2. Apply lubricant to the seal lips. With an SKF seal installation tool and adaptor (or similar tool), press the seal into the housing. The seal should be centered and seated squarely.
3. Check pinion shaft splines and yoke for burrs or damage. Wipe the pinion clean.
4. Apply lubricant to the outer diameter of the pinion yoke and on flange splines.
5. Replace the pinion yoke on the shaft. Match previously made marks so shaft and yoke align.

Proper pinion seal installation – cont.

6. While holding the flange, tighten the pinion nut to previously recorded disassembly or preload torque.
7. Connect rear end of the drive shaft to pinion yoke. Align previously made markings.
8. Replace the circular mounting flange or install U-bolts or straps and secure the driveshaft in position.
9. Finally, add lubricant to within 1/8" – 1/4" from the bottom of the filler hole. Do not overfill.

For more information on pinion seal installation and replacement, consult your Pole Position Seals Self-Study Guide.

