

2077-M Rotary Bearing

Rebuild Instructions

Please Read Entirely Before Proceeding

Items Needed for Rebuild:

- (1) Appropriately Sized Rebuild Kit
- (2) Spanner Wrenches
- (3) Hydraulic or Arbor Press
- (4) Clean Rags
- (5) Means of Vacuum Testing
- (6) Krytox Oil & Grease
- (7) Fine Scotch-brite

Step 1:

Using spanner wrenches, separate the upper and lower halves of the bearing as per Figure 1.

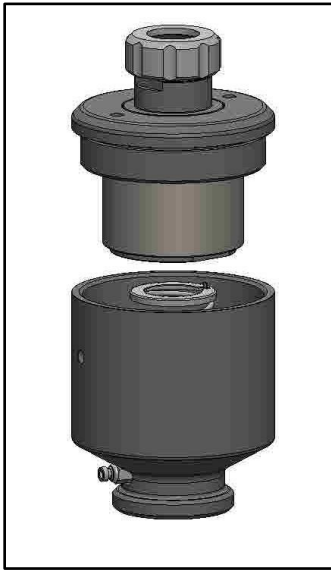


Figure 1

Step 2:

Remove upper seal assembly as per Figure 2 and discard.

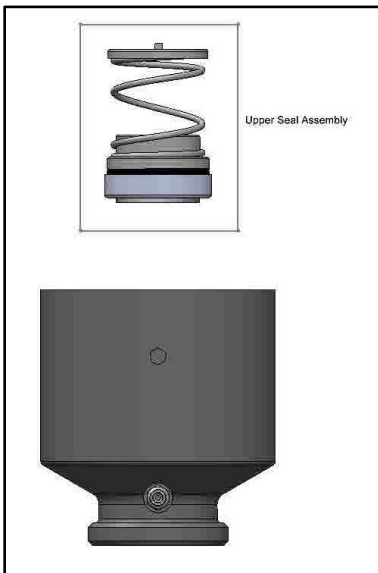


Figure 2

Step 3:

Re-install the upper half of the Rotary Bearing (without the Upper Seal Assembly) and test the rotation of the Center Shaft by hand. If the Center Shaft rotates smoothly with no grinding or binding, separate the upper and lower halves of the Rotary Bearing, and skip to Step 8. If grinding or binding occurs, separate the upper and lower halves of the Rotary Bearing, and continue to the next step.

Step 4:

Using a pair of internal snap ring pliers, unseat the snap ring from its groove as per Figure 3. Once this is completed, the center shaft, unseated snap ring and bearing can be pressed out of the Bearing Housing Cap by supporting the Housing Cap flange and applying pressure to the threaded end of the Center Shaft.

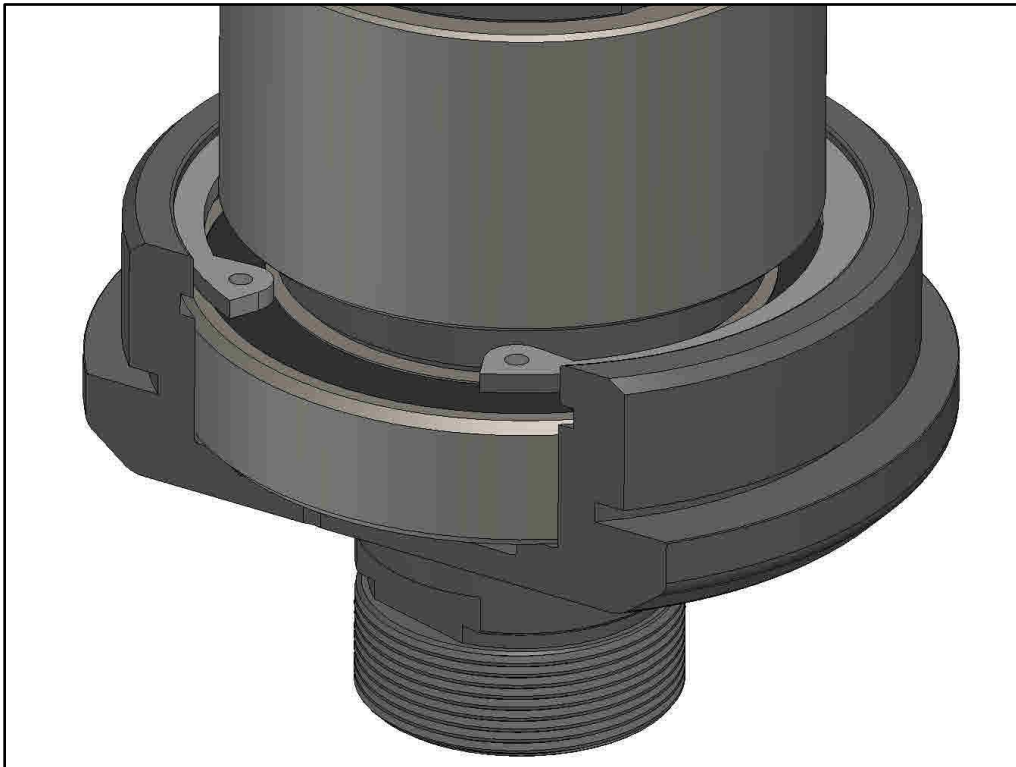


Figure 3

Step 5:

Remove the ball bearing retaining ring and press the Center Shaft out of the old Ball Bearing as per Figure 4. Remove old Krytox grease from Roller Bearing Inner Race. If you see signs of rust or corrosion on the Inner Race, remove with fine Scotch-brite. Clean thoroughly and apply a thin coating of Krytox grease to entire race surface. Reverse the bearing removal process to install the new ball bearing provided with the kit. Make sure to leave the larger retaining ring from step 4 in place.

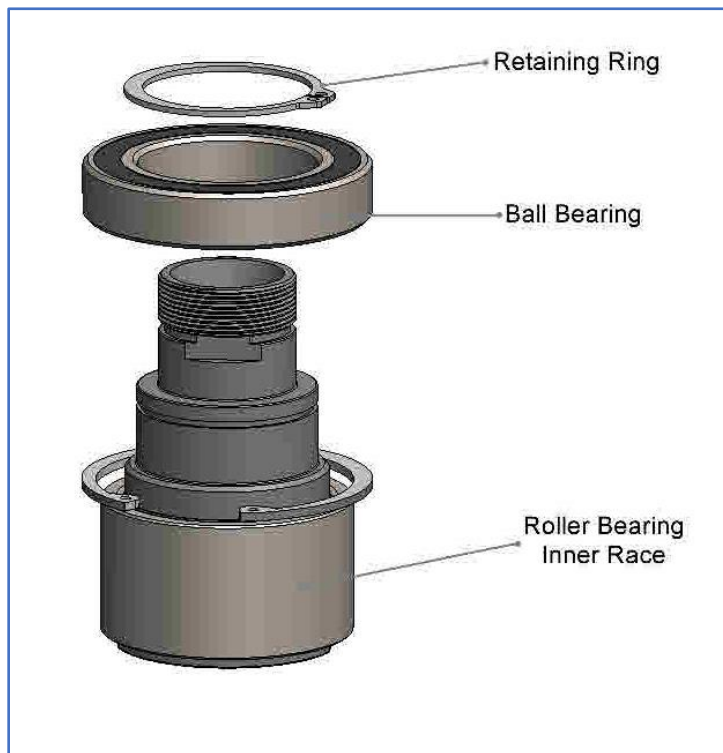


Figure 4

Step 6:

Re-install the Center Shaft assembly into the Rotary Bearing Cap. When installing the Center Shaft assembly, only press the bearing in far enough to start the Retaining Ring into the Cap as per Figure 5. Using the Internal Snap Ring Pliers, insert the Retaining Ring into the cap to the top of the bearing. Continue to press the Center Shaft assembly in to its full depth, then seat the Retaining Ring in its groove as per Figure 6. Repeat Step 3.

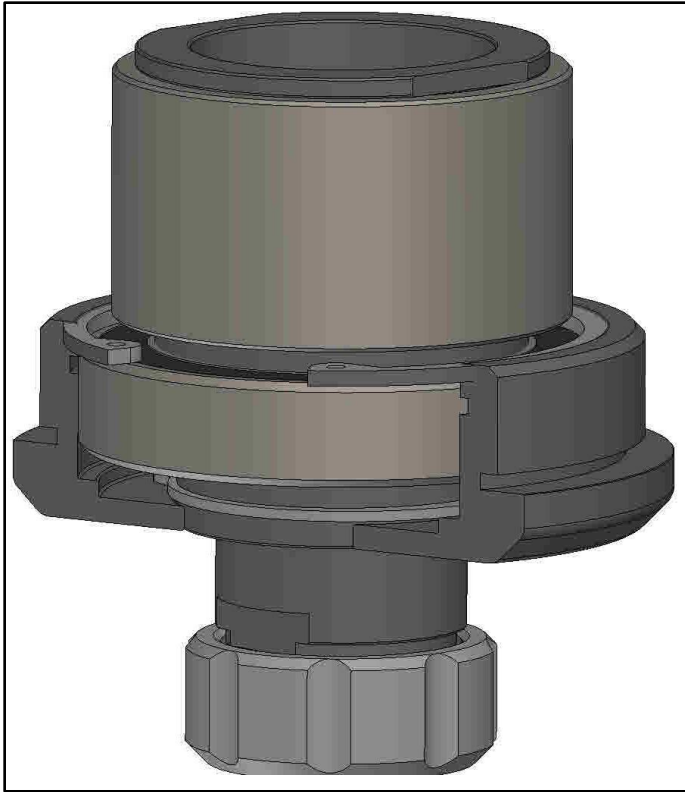


Figure 5

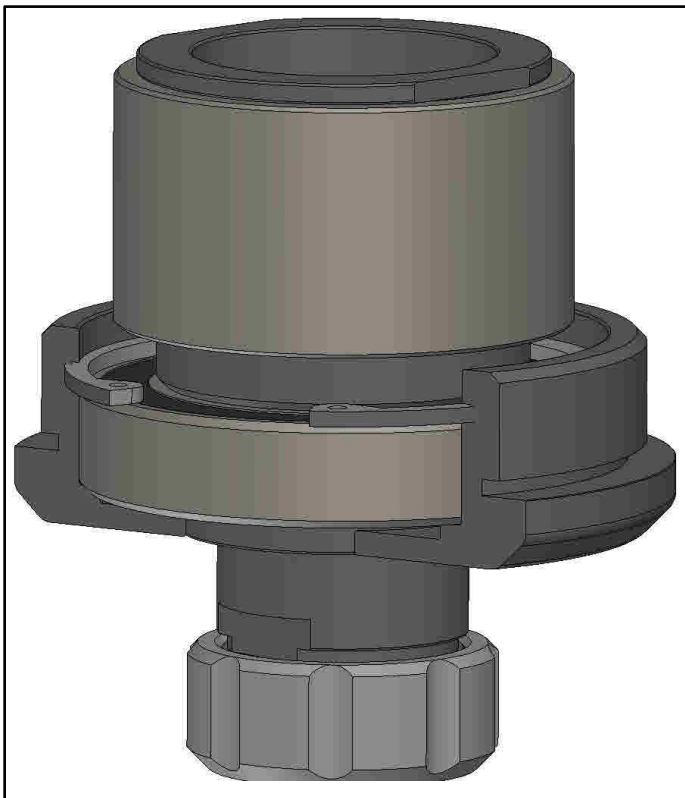


Figure 6

Step 7:

Remove Roller Bearing as per Figure 7 and replace with the new one provided with the kit. The bearing has already been lubricated with Krytox grease. No further lubrication is necessary.



Figure 7

Step 8:

With a clean rag, remove any old oil or contamination that may have settled on the Lower Ceramic Seal surface as per Figure 8. Remove protective cover from the new Upper Seal Assembly (DO NOT REMOVE OIL FROM GRAPHITE SEAL SURFACE). It is critical that the lubricated seal face remains perfectly clean. In the event the seal face becomes contaminated, wipe with a clean soft cloth and add Krytox oil to the seal surface. Invert the Upper Rotary Bearing half and install the Upper Seal Assembly ensuring the Tab seats in the Drive Hole are as per Figure 9.

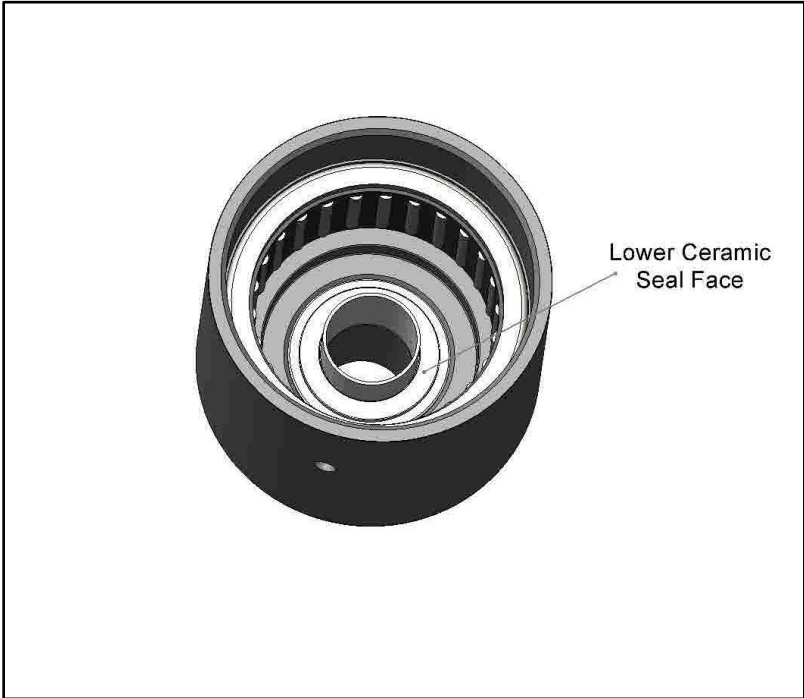


Figure 8

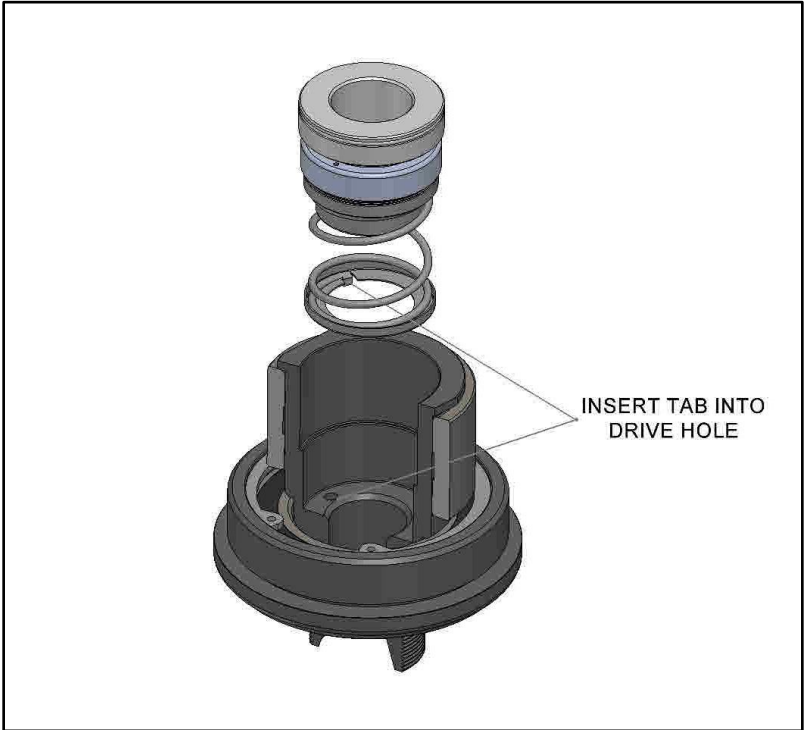


Figure 9

Step 9:

Invert Rotary Bearing Housing and install onto Rotary Bearing Cap as per Figure 10. Tighten Upper and Lower halves with Spanner Wrenches, block off purge port and vacuum test. The Rotary Bearing should fall to no less than 5 Torr within 1 minute of blocking the vacuum source. If the test fails, separate the upper and lower halves of the Rotary Bearing, carefully clean both seal surfaces with a soft clean cloth, add Krytox oil to seal surface and follow Steps 8 - 9 for re-assembly. If the vacuum test still fails, call customer service.



Figure 10