

BEARLOK PRECISION RETAINING DEVICES

INSTALLATION INSTRUCTIONS FOR 4 SCREW BEARLOKS

Ideal Tools:

- Hex wrench
- Torque screwdriver or torque wrench with hex driver
- BLAS Assembly Socket or Whittet-Higgins PAS Spanner Wrench for preloading bearing

Assembly instructions:

- 1) Check the BEARLOK adjustable retaining device. Make sure the BEARLOK ring is squarely seated on the BEARLOK nut. If not, loosen the cap screws, seat the ring with light finger pressure, and retighten the cap screws into the ring until resistance occurs.
- 2) Assemble the BEARLOK onto the shaft threads so the BEARLOK threads are fully engaged for its full length. **FAILURE TO DO THIS WILL DISTORT THE BEARLOK DURING TIGHTENING AND PREVENT PROPER ASSEMBLY.** Do not bring the BEARLOK against the bearing components as it must be able to rotate on the shaft threads.
- 3) Centralize the BEARLOK retaining device relative to the shaft thread by tightening each cap screw 1/6 turn (one flat) with the hex wrench in an alternating sequence (see figure 1). Initially the #3 and #4 screws may become loose because of the pressure load placed on the #1 and #2 screws. Rotate the BEARLOK back and forth on the external thread through about 45 degrees to check for a slight drag. If no drag is felt, repeat this process (beginning again with the #1 screw) until the BEARLOK rotates with a drag. Note that this process will have to be repeated more than once depending on shaft pitch diameter and thread size.
- 4) Now the centralized and best balanced BEARLOK adjustable retaining device can be adjusted and/or preloaded against the adjoining retained components. This is done with a Whittet-Higgins BEARLOK Assembly Socket or your design of tool. For accurate and effective assembly, assure that the tool engages the slots in the BEARLOK body section and not just the ring slots.
- 5) After the assembled components are correctly adjusted in position, secure the BEARLOK by tightening the cap screws using a torque screwdriver or torque wrench. Follow the same procedure as in sequence 3 above, tightening the screws 1/6 turn (one flat of the wrench) at a time in alternating sequence. You will not reach the maximum torque the first time. Repeat the tightening sequence until the torque on screw #1 is up to or slightly less than the maximum cap screw torque (from table 1) Finish torquing screws #2-#4 and repeat the tightening sequence twice more. Do not overtighten any one screw for it may distort the balance.

Be sure the torque screwdriver or wrench is properly calibrated and set to the tightening torque listed in Table 1 below.

Be careful that the hex driver of the torque tool is fully engaged straight in the screw socket before applying torque.

- 6) Double check the torque reading on each cap screw. If accurate, a proper and effective assembly is now completed.

FIGURE 1
(Tighten in sequence shown)

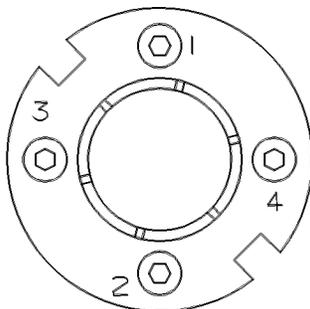


TABLE 1

| BEARLOK SIZE | CAP SCREW | TORQUE In-lb. |
|-----------------|--------------|------------------|
| BL02-BL03 | M3 | 17 |
| BL04-BL08 | M4 | 24 |
| BL09-BL13 | M5 | 35 |
| BL14 | M6 | 70 |