

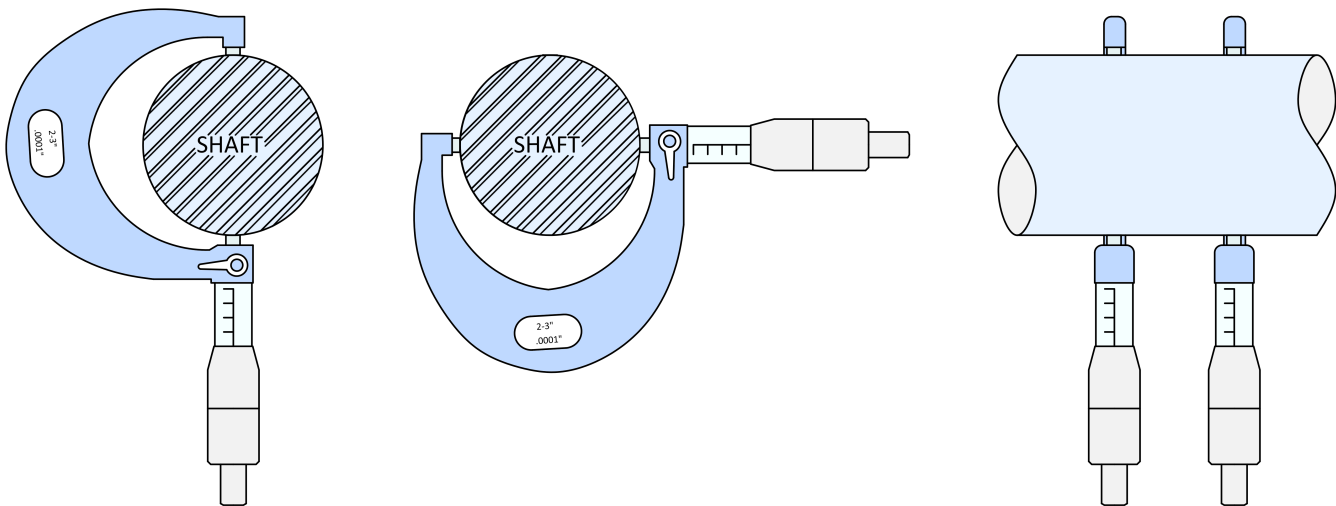
■ Tool List

- Micrometer to suit shaft size
- SAE Allen wrench set
- Torque wrench
- Anti-seize compound
- Means to lift and safely support shaft during bearing installation
- Rubber mallet
- Channel locks
- Feeler gauge set
- Strap wrench
- 1/8" diameter straight shank drift pin
- Clean, lint free cloth
- Appropriate viscosity lubricant

1 Check the Shaft

Before mounting any components, the shaft should be checked at the intended location of the bearing for diameter, roundness, taper, and conformity to a straight edge. The tolerance of the shaft's diameter is $+0.000''$ to $-0.004''$, where the $dn < 2,000$, and $+0.000''$ to $-0.002''$, where the $dn > 2,000$. The shaft's roundness and taper tolerance is $\pm 0.001''$ and the surface finish is to be 125 to 63 μin . Remove any rust, nicks, burrs, high spots, and ensure that the shaft is clean and dry before mounting any components. Use the reference images below as a reference for how to check the shaft.

INSTRUCTION #1: Check the Shaft



2 Bearing Installation Preparation

Individual bearing components should not be interchanged. The components of each bearing are matched at the factory for proper fit and internal clearance. To facilitate proper assembly, all Craft split bearings are provided with match mark numbers at the mating faces of the individual components. Be sure to completely disassemble the bearing components, remove all protective plastic, and wipe the oil from all surfaces at installation.

The shaft should be raised and fully supported before installing the bearing. It is good practice to locate shaft position, and install the held (fixed) bearing first. This practice serves to anchor the shaft in position and facilitate proper positioning for the expansion bearing on the shaft.

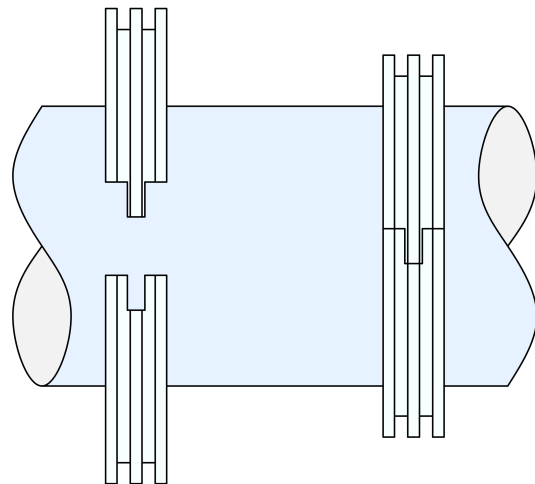
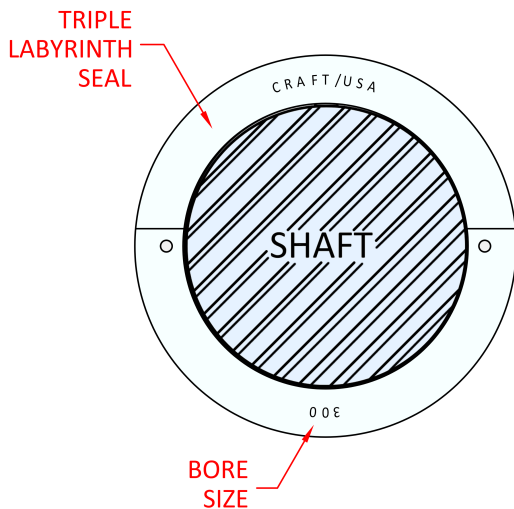
3 Installing the Triple Labyrinth Seals

For best results, install the seals first and slide them out of the way; one seal to the left of, the other seal to the right of, the inner race position on the shaft.

1. Separate the seals by driving out the steel pins with the 1/8" diameter drift pin and pulling the seals apart by hand. Do not mix the two seals up.
2. Lightly lubricate the seal bore between the O-rings with grease.

3. Assemble the seals around the shaft so that "Craft/USA" and the seal bore size are on the same side and facing outward. This will allow for easy identification in the field.
4. A strap wrench may be used to compress the seal together to re-install the steel pins. Use only enough pressure to bring the seal joint faces together. The steel pins can be squeezed back into place with a pair of channel lock pliers.

INSTRUCTION #3: Installing the Triple Labyrinth Seals



4 Installing the Inner Race with Clamp Collars

Check that the inner race and shaft are clean and dry. Do not coat the shaft or bearing bore with oil or grease. The inner race should be dry fit to the shaft.

1. Observing the match mark numbers, place the inner race halves on the shaft in the desired position. Also note the **black reference line** in the clamp collar groove on one side. Assemble so the **black reference line** is continuous around one

groove. Place the splits in a "north-south" (up-down position).

2. Place a 0.015" feeler gauge in the center of the bottom half of the split. This will prevent the gap from closing up when installing the clamp collars.
3. Install clamp collars with match numbers facing outboard, both sides. Place a non-threaded half of a clamp collar into one

of the machined grooves of the inner race on the top, with its split line at the “east-west” position. The actual position should be between 45 and 90 degrees to the split line of the inner race.

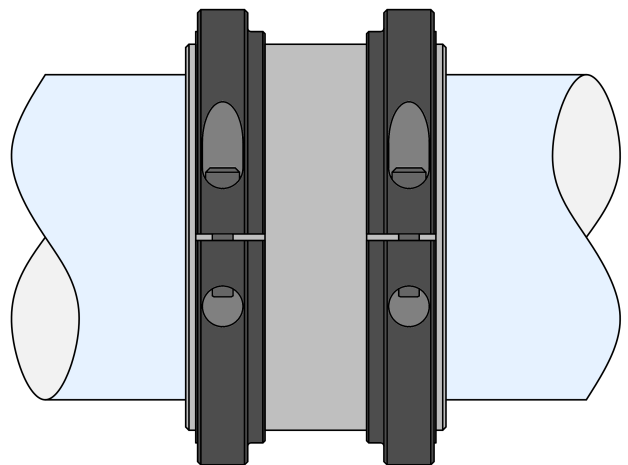
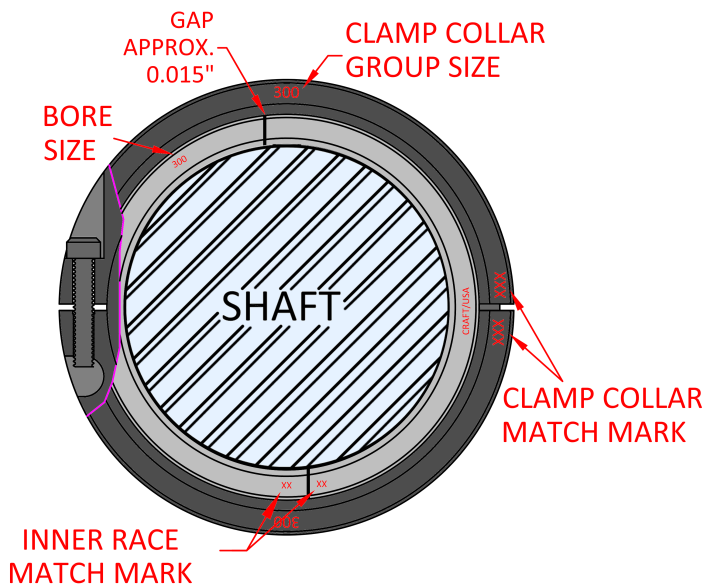
4. Place the bottom half (threaded) of the same clamp collar into position and loosely install the collar locking bolts (fine thread).
5. Repeat the same procedure for the other clamp collar.
6. Re-check inner race position on the shaft before performing the tightening sequence. The race can be moved by tapping it along the shaft with a rubber mallet. **Do not strike the hardened surfaces of the bearing with a hard faced hammer. Permanent bearing damage can occur.**
7. Maintain an equal gap at the joint face of the clamp collars when tightening. Judging

the gaps of the clamp collars “by eye” will suffice.

8. Sequentially tighten all clamp collar bolts. Be sure to remove the feeler gauge as necessary.

There will be gaps at the joint faces of the inner race and clamp collars after final tightening. The gaps are designed to be there, and will vary with shaft size and series of bearings. Provided the shaft is within tolerance, and the race is fully seated on the shaft, the final gap is irrelevant, as long as the gap is evenly split on the inner race halves. However, if there are no gaps at the joints, the shaft is undersized or the bearing bore is incorrect for the shaft. The bearing should not be run. Discontinue installation and re-check the shaft and bearing for matching size before proceeding.

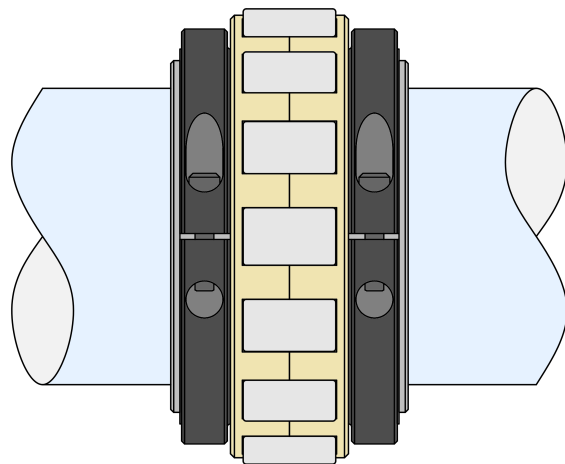
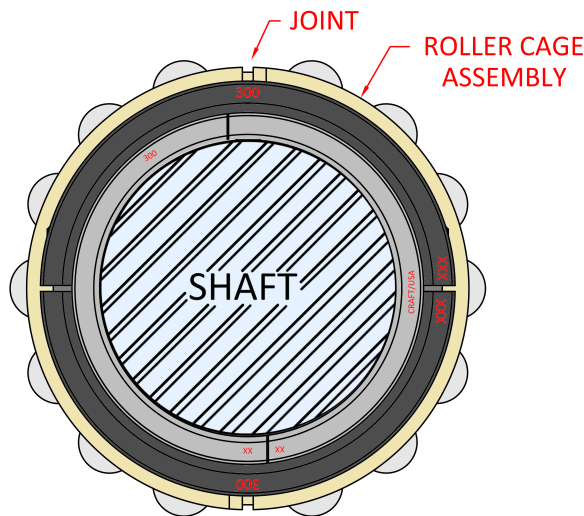
INSTRUCTION #4: Installing the Inner Race with Clamp Collars



5 Installing the Roller Cage Assembly

1. Wipe the inner race clean of dirt, fingerprints, etc. Apply a light coating of grease to the raceway area.
2. Apply grease to the inner surface area of the roller cage unit. Rotate the rollers while applying grease to allow lubricant to enter the cage pockets.
3. Place cage halves around the inner race. Install the cage clips or Nylok bolts, depending on cage design. Tighten Nylok bolts securely.
4. Lightly coat outer surface of roller and cage with grease. Protect from contamination.

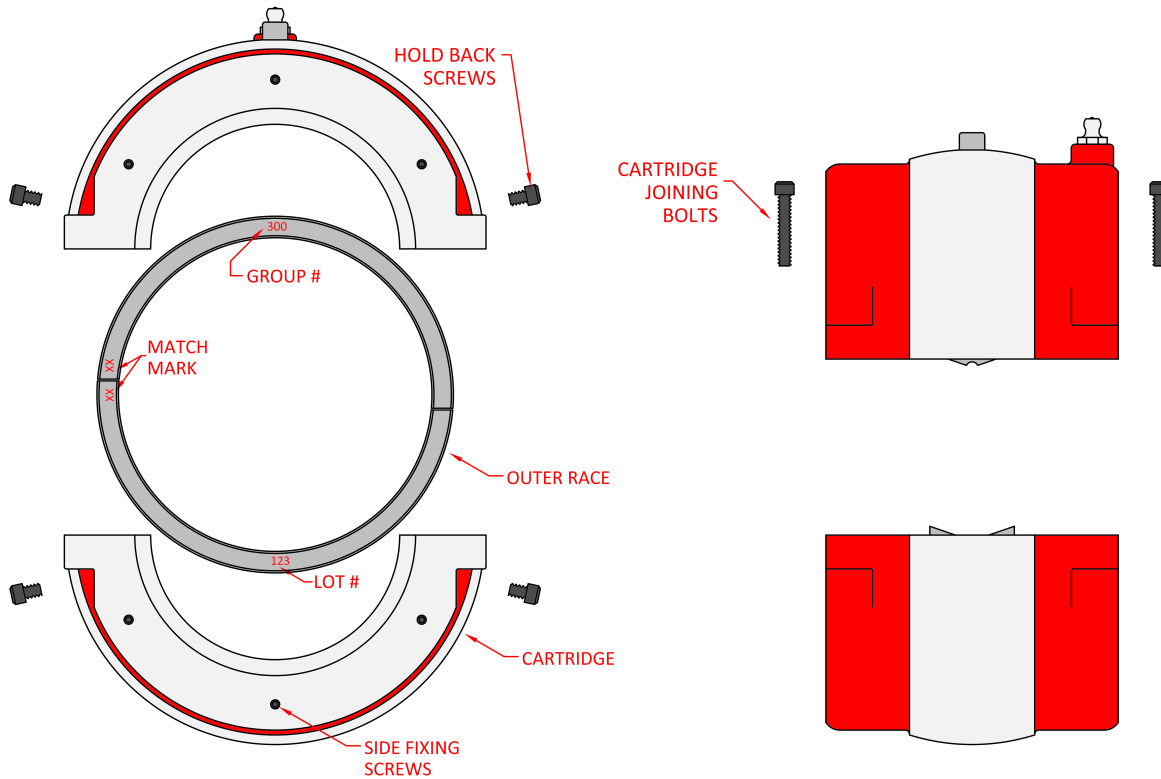
INSTRUCTION #5: Installing the Roller Cage Assembly



6 Installing the Outer Race

1. Inspect and clean the bore of the cartridge for the outer race, and filling the grease groove in the center of the outer race bore.
2. Inspect and clean the outer race. Take note of the match marks at the joint, and the top half with the lubrication hole.
3. Install the top half of the outer race into the top half of the cartridge. Press firmly into the cartridge bore. Then repeat for the bottom half. Make sure the outer race match marks line up, and that the outer race with the lubrication hole is in the cartridge half with the lubrication zerk. If the bearing is a 6½" group size or greater, install the radial hold back screws, only finger tight.
4. Place the two cartridge halves together. Install and tighten all four, coarse thread, joining bolts.
5. Tighten each of the side fixing screws, in a star pattern, until they are snug. Inspect the outer race joints, ensuring that they are flush. Remove the four joining bolts.

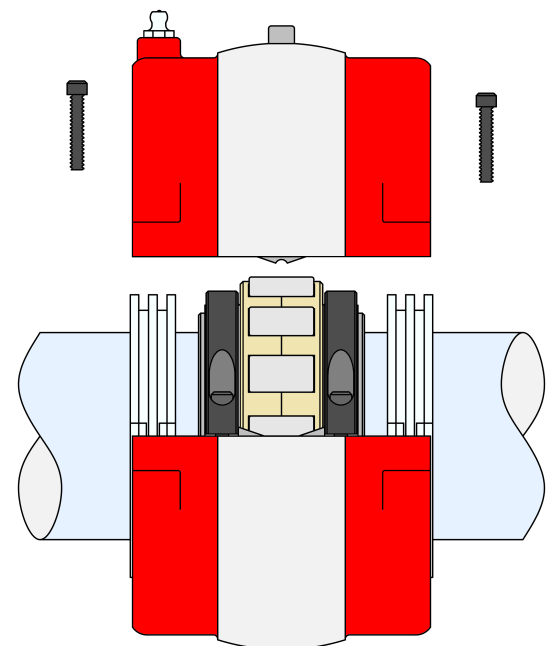
INSTRUCTION #6: Installing the Outer Race



7 Installing the Cartridge

1. Apply grease (about 1/8" deep) to the interior of the cartridge bottom half. Grease the labyrinths of the cartridge. Slide the seals into position. Greasing the labyrinths serves to lubricate the seals and adds an additional grease barrier against contaminants.
2. Repeat the same procedure with the top half of the cartridge.
3. Place the cartridge halves together; install and tighten the cartridge joining bolts (course thread). Rotate cartridge in place to be sure it turns freely without binding. The anti-rotation pin in the top half of the cartridge mates into the housing cap.
4. Coat the spherical ball of the cartridge with a liberal amount of a quality moly or anti-seize compound. Be sure that the spherical ball is clean prior to lubricating. Do not use oil or grease for this purpose.

INSTRUCTION #7: Installing the Cartridge



8 Installing the Pedestal Housing

1. Be sure the pedestal base mounting area is flat, clean, and free from burrs, nicks, etc.
2. If shimming of the pedestal housing base is necessary for adjusting base to center height, Craft recommends a full shim along the length and width of the housing base. **Pedestal base must be supported with 100% shim when required.**
3. Coat the pedestal housing base spherical area with an anti-seize compound. If not already in position, slide the base under the cartridge to its intended mounting position and loosely install the mounting bolts. With the anti-rotation pin on the cartridge properly located, slowly lower the shaft and allow the cartridge unit to settle in the base. When the bearing unit is properly positioned, tighten the mounting bolts.
4. Place the pedestal housing cap in position. Install the bolts, but do not fully tighten. After installation of all bearings, rotate the

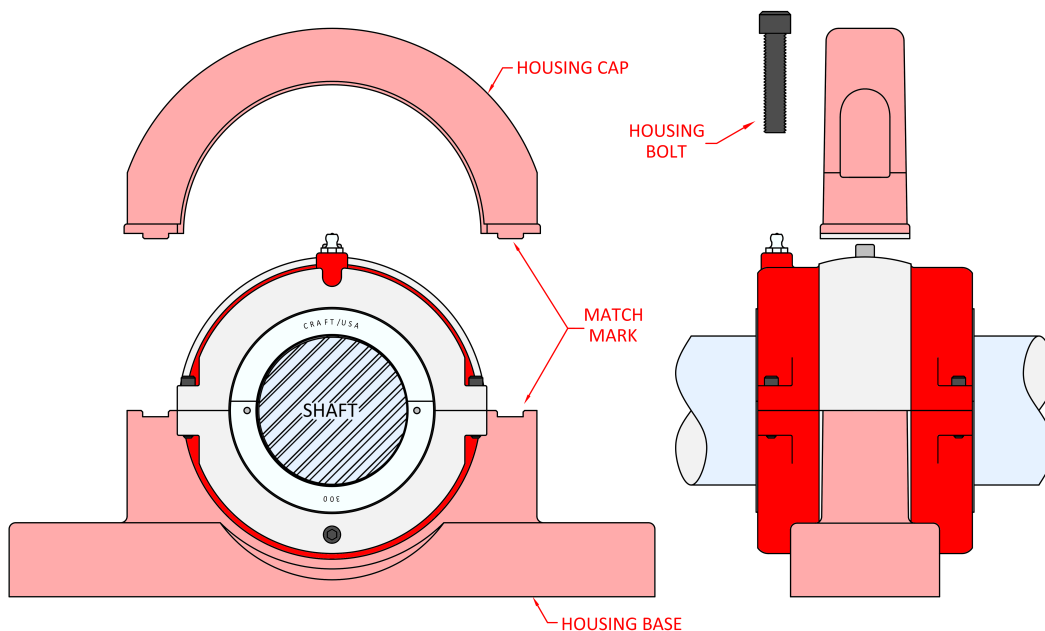
shaft to allow the pillow blocks to align themselves with the shaft position. Tighten all cap bolts.

5. Perform a visual inspection. Be sure the bearings are properly lubricated, and all bolts are fully tightened before placing machinery in service.

With floating (FL) type bearings, be sure the cartridge and pedestal housing have not been moved in relationship to center with the inner race position on the shaft. A re-positioning of the inner race may be necessary if this has occurred. Simply take the down weight off the bearing, slightly loosen the clamp collar bolts without removing them, and tap the inner race up or down the shaft to re-center. When the race is back in center position, re-tighten the clamp collar bolts, and lower the shaft.

If heat related axial growth of the shaft is anticipated, the float (FL) inner race can be offset toward the anticipated heat source to accommodate this growth.

INSTRUCTION #8: Installing the Pedestal Housing



- 1** Check shaft for size and condition. Clean up if necessary.
- 2** Separate and pair up bearing components, remove all protective plastic, and wipe dry of protective oil coating before installation
- 3** Lubricate and install seals and move either side of bearing center position.
- 4** Install the inner race per instructions. Lubricate the raceway.
- 5** Lubricate and install roller cage assembly.
- 6** Lubricate grease path and install outer race in the cartridge.
- 7** Apply grease to seal labyrinths in the cartridge and outer race track, then install the cartridge.
- 8** Lubricate cartridge spherical outside diameter with anti-seize compound.
- 9** Install pedestal housing base. Lubricate housing spherical socket seat with anti-seize.
- 10** Make sure housing base is fully supported along its width and length.
- 11** Rotate the shaft and allow bearing(s) to align before final tightening of pedestal housing cap.
- 12** Perform a visual inspection of the installation, being sure all bolts are fully tightened before placing machinery in service.
- 13** Never install any rolling element bearing dry and lubricate after assembly. Always lubricate during assembly, before rotating the equipment under load.

