Disassembly Instructions - 0.7 hp. Router

Model: 51863
Notice: Use these instructions along with the tool manual.
Important: Disconnect tool from the air supply.

- To avoid damage, use the Service Tools (**ST**) designed for disassembly and assembly.

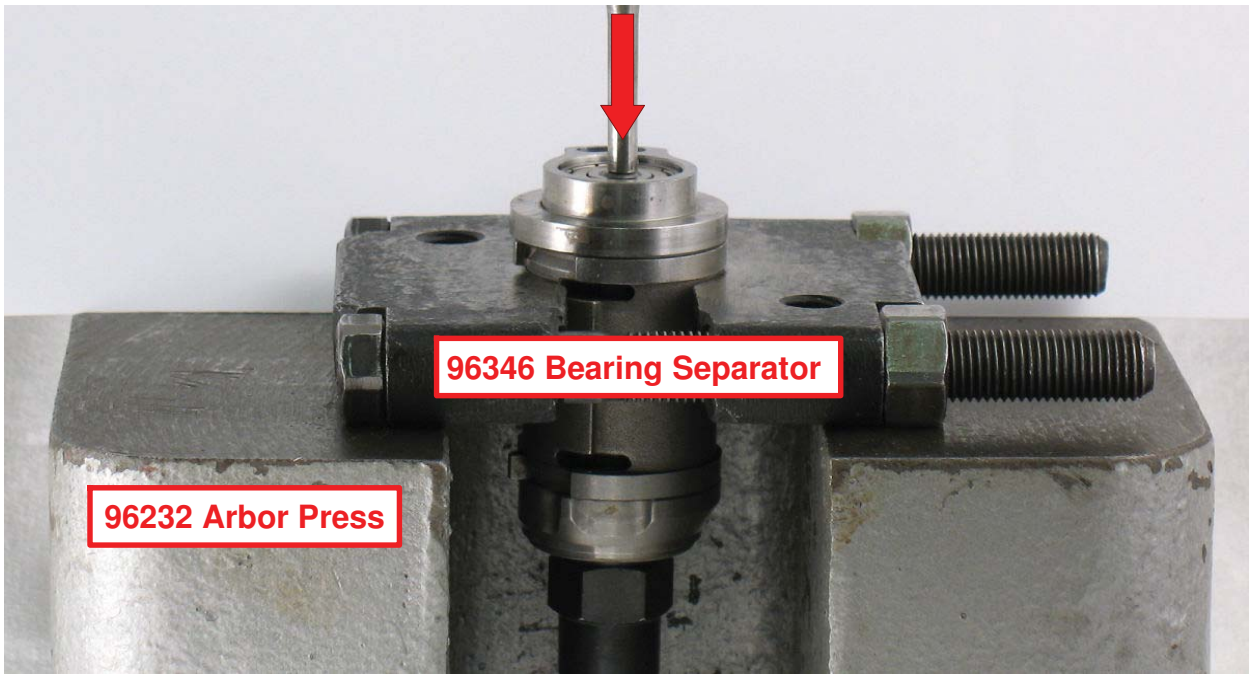
Motor Disassembly:

1. Fasten flats of **30450** Housing in a vise with aluminum or bronze jaws.

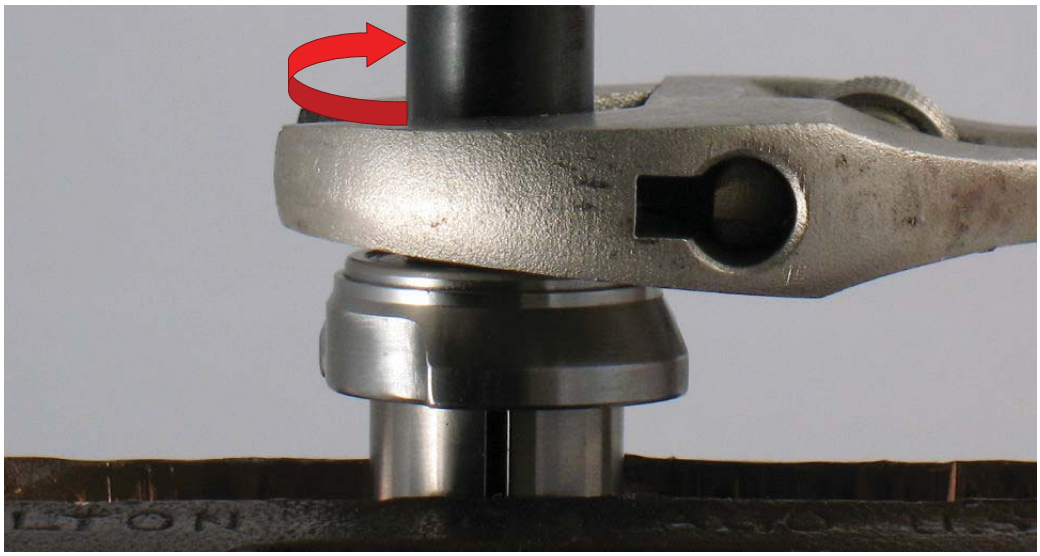
2. Loosen **95920** Thumb Screw.
- Turn **51856** Nose Assembly counterclockwise to remove.

3. Use an adjustable wrench to remove **51870** Lock Ring. Turn counterclockwise.

4. Pull motor from housing.

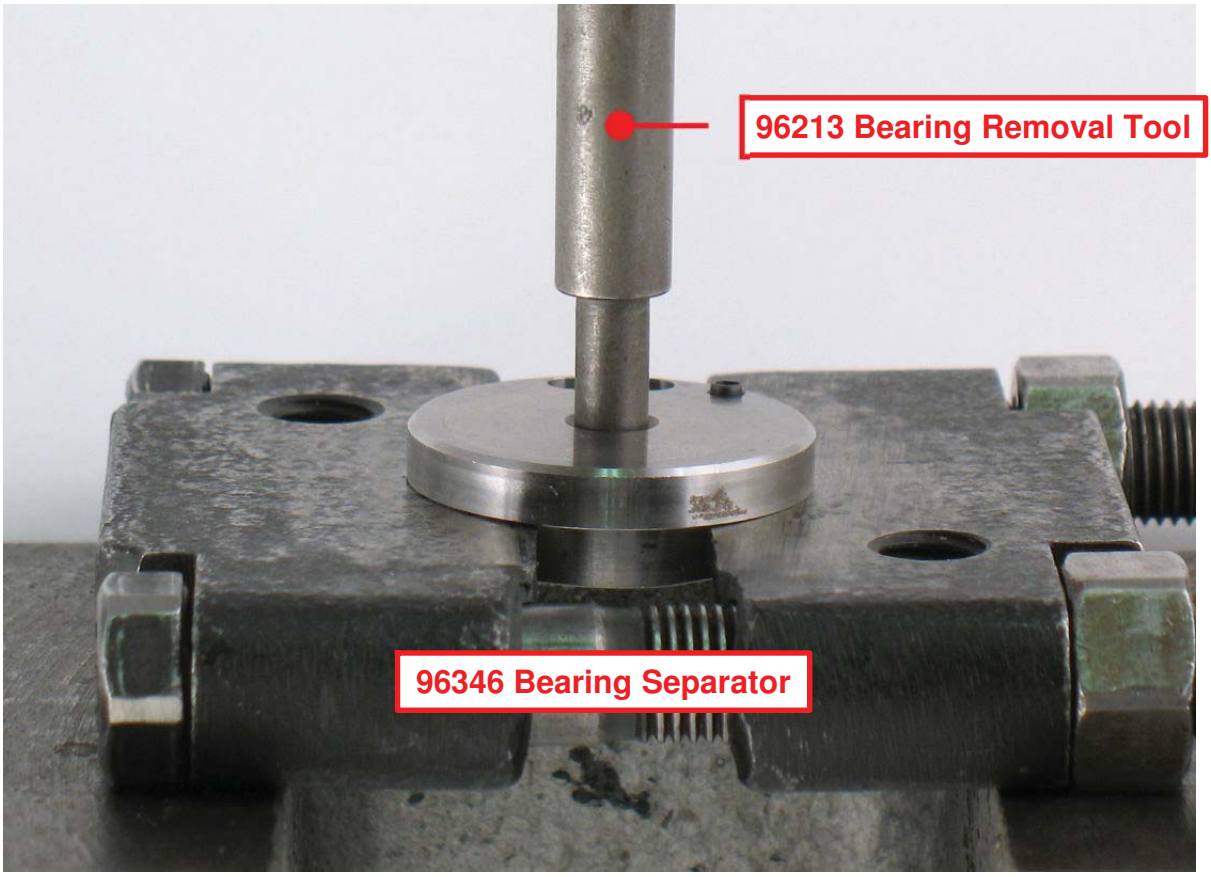


5. Fasten **96346** Bearing Separator (2") around **01028** Cylinder. Place separator and motor in **96232** Arbor Press (#2) with collet assembly pointing down.
Use a Ø 1/4" or 6 mm flat end drive punch to push rotor out of **02649** Bearing.



6. Fasten **55021** Rotor in vise with aluminum or bronze jaws. Use an adjustable wrench to remove collet assembly. Turn counterclockwise.

- Remove **01007** Bearing, **01008** Bearing Plate, shims, and **01010** Spacer.



7. Use **96213** Bearing Removal Tool and arbor press to remove **02649** Bearing from the rear bearing plate.

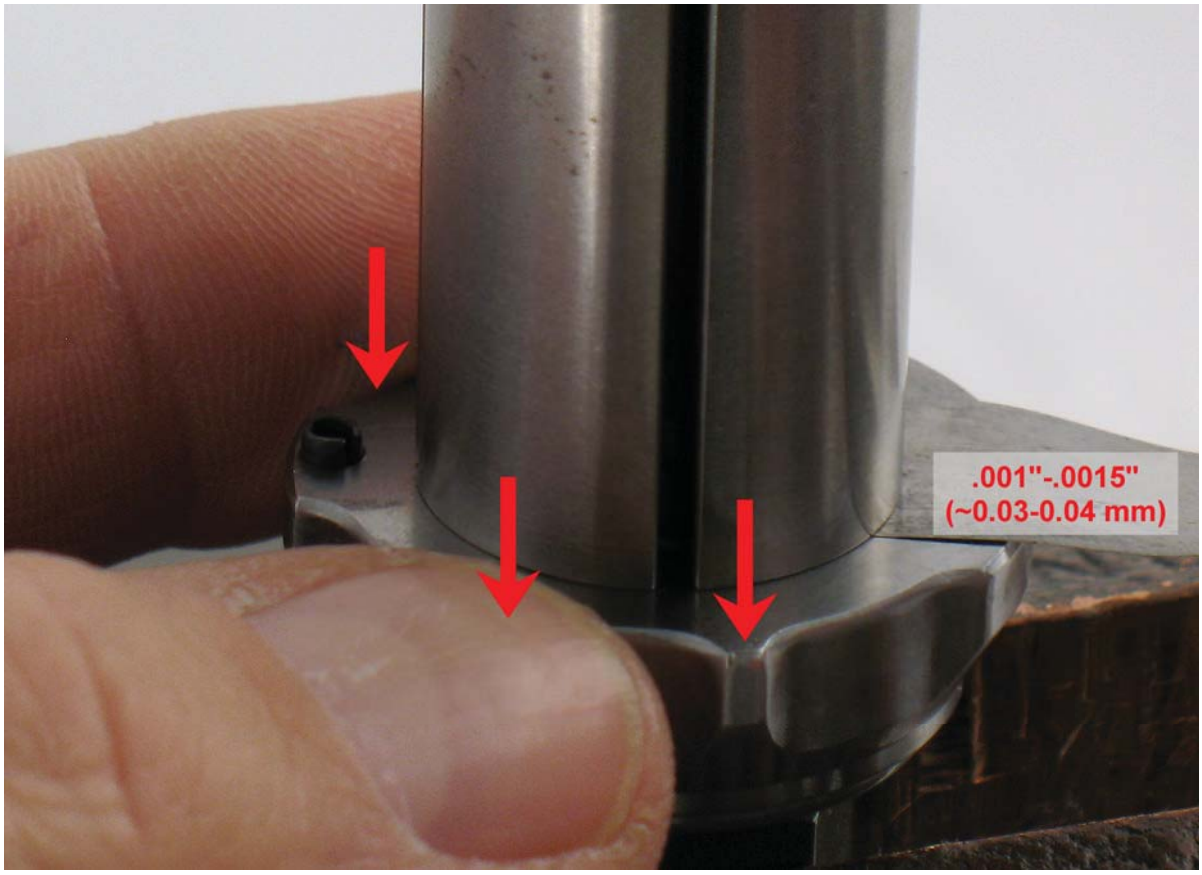
Motor disassembly completed.

Clean and inspect parts before assembling.

Assembly Instructions - 0.7 hp. Router

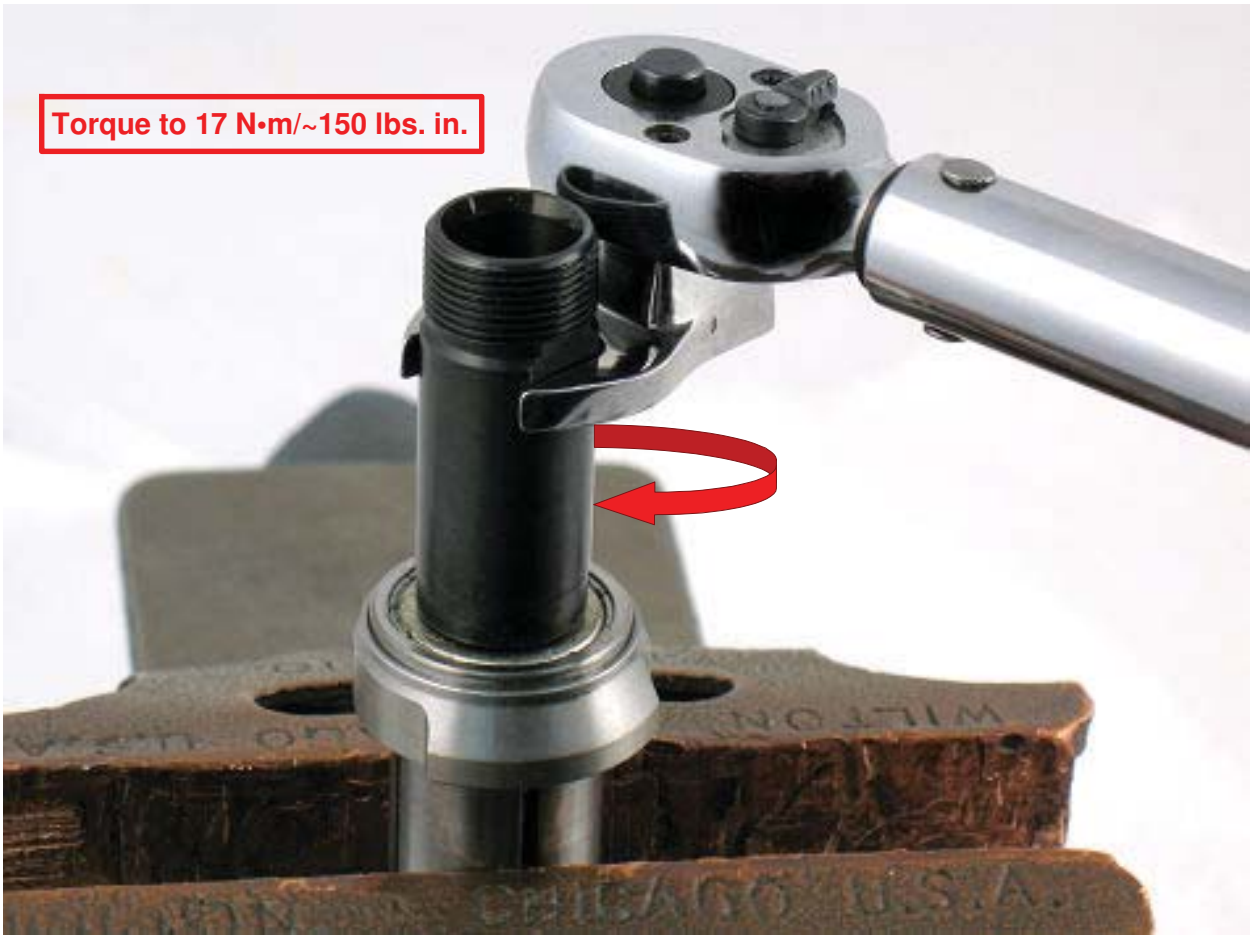
Motor Assembly:

1. Install the **01010** Spacer onto the rotor.
- Install .003" (~0.80 mm) shim thickness into the **01008** Front Bearing Plate.
- Install the **01007** Bearing into the front bearing plate.
- Install the bearing and plate onto the rotor.



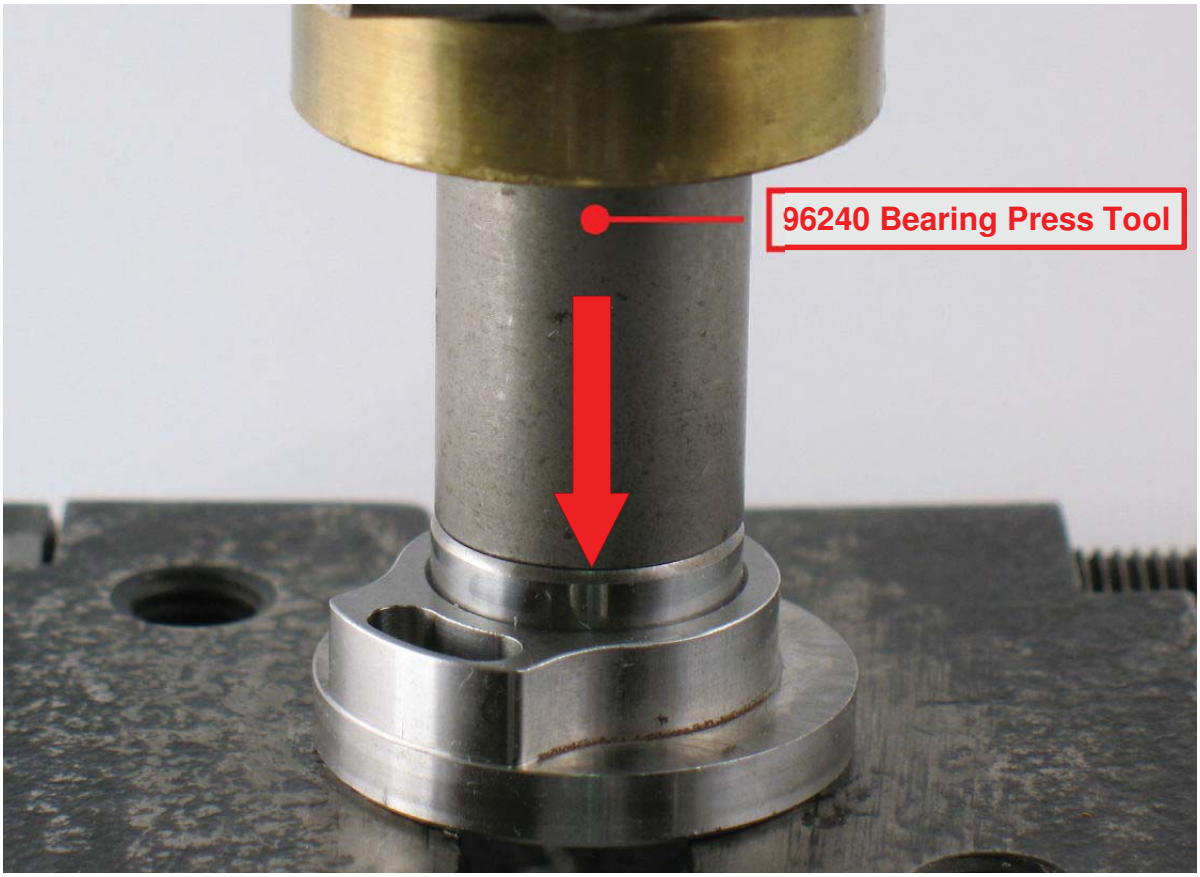
2. By hand, install the **50008** Collet Body. Push the front bearing plate away from the rotor. Check the clearance between the rotor and plate.

- Use a .001" (~0.03 mm) thick feeler gauge.
- **Notice:** The clearance should be .001"-.0015" (~0.03-0.04 mm).
- If rotor/plate clearance requires further adjustment, repeat steps 1 and 2. As required remove or add shims.

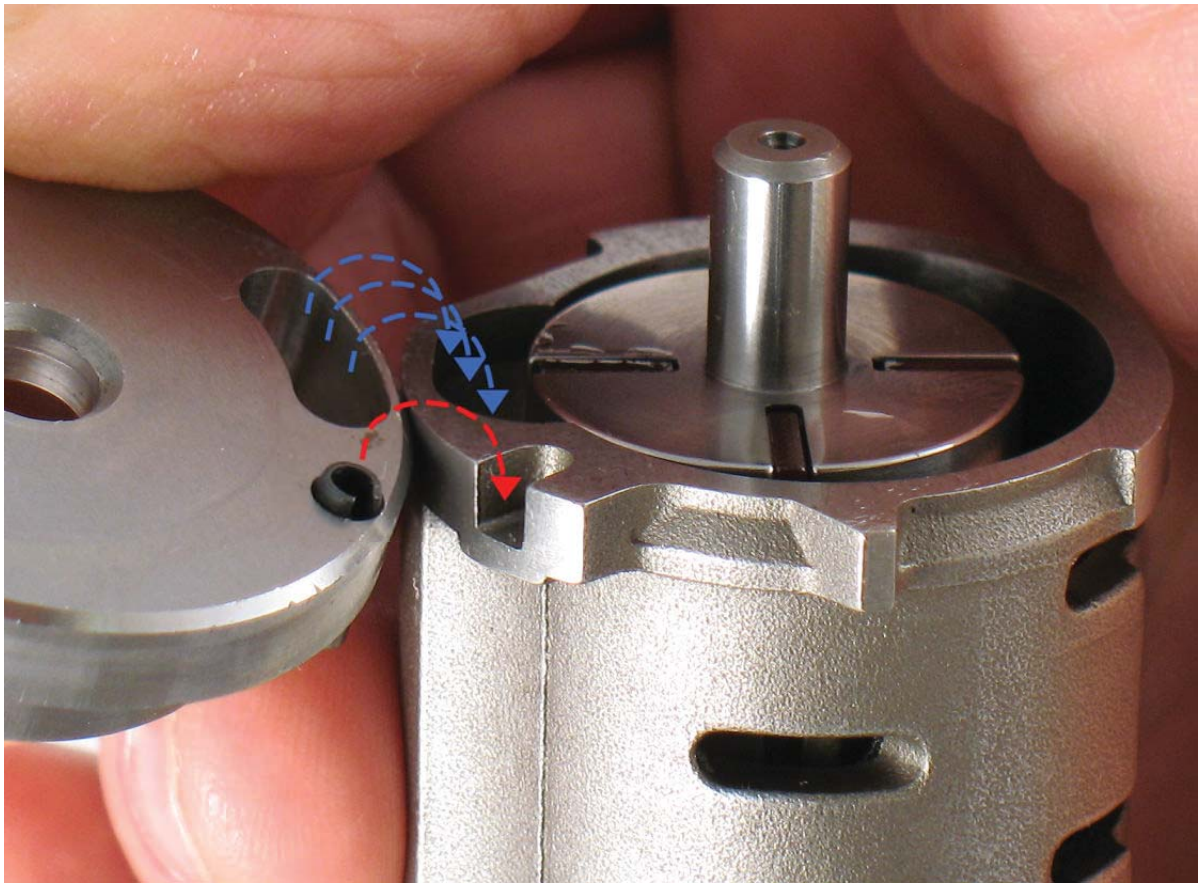


3. Use a 14 mm crowfoot and torque wrench to tighten the **50008** Collet Body. (Torque to 17 N•m/~150 lbs. in.)

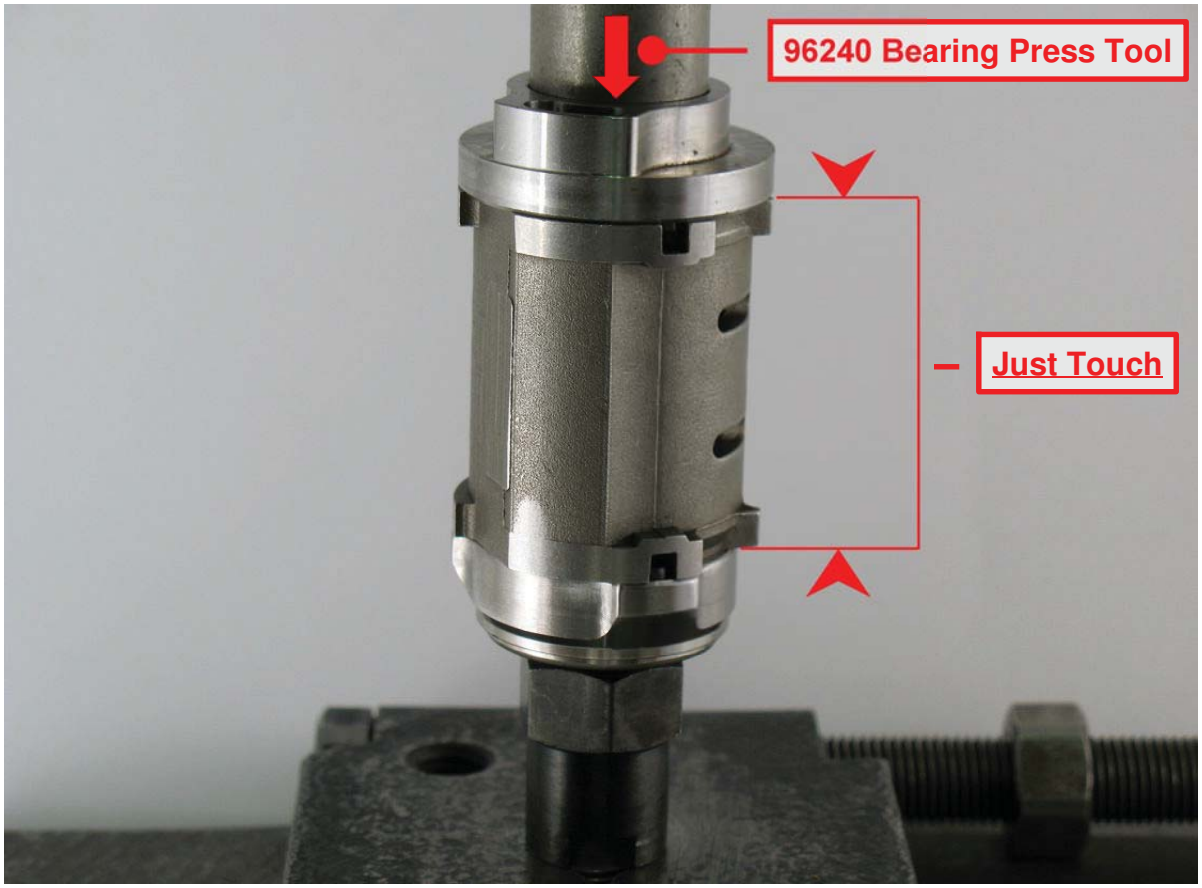
4. Apply **95842** Dynabrade Air Lube 10W/NR or equivalent to **01185** Vanes and install in rotor.



5. Use the ***RAISED OUTSIDE DIAMETER*** of the **96240** Bearing Press Tool and arbor press to install **02649** Bearing. **Notice:** Press bearing into plate all the way.

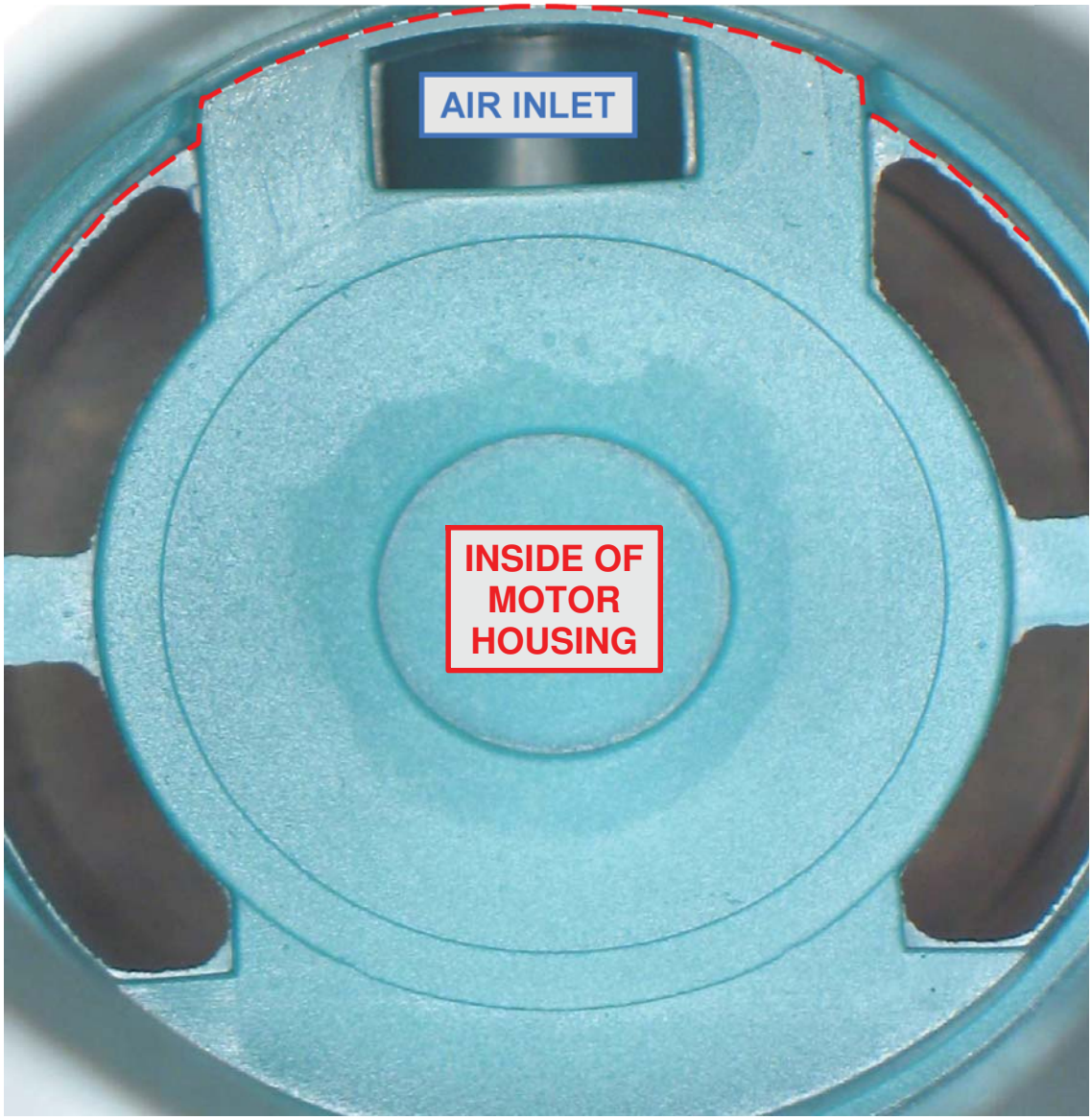


6. Install **01028** Cylinder and **01721** Rear Plate so that air inlet openings line up.



7. Use ***RAISED INSIDE DIAMETER*** of **96240** Bearing Press Tool and the arbor press to install rear bearing and plate.

- **Important:** Press bearing and plate down until the plate just touches the **01028** Cylinder. This will produce a close fit between both bearing plates and the cylinder.



8. **Important:** Line-up air inlet of rear bearing plate with the air inlet on inside of motor housing.
   - Install the motor assembly.

9. Fasten flats of housing in the vise with the collet body pointing up.

- Install **01727** Felt Silencer around the **01726** Air Control Ring and install these in the **51870** Lock Ring.
- Apply Loctite #7649 Primer to threads of the **51870** Lock Ring.
- Apply a small amount of Loctite #243 or equivalent the **51870** Lock Ring.
- Use 36 mm or 1-7/16" crowfoot wrench and a torque wrench to install the **04087** Lock Ring.
- Torque to 34 N·m/~300 lbs. in.

10. Install collet insert and cap to collet body.

11. Install **51856** Nose Assembly.
    - Tighten **95920** Thumb Screw.

Motor assembly completed.

Final Assembly:

Notice: Use exploded view in tool manual for the order of disassembly and assembly of valve components.

1. **Important:** Without an accessory installed, check spindle speed of tool with **max. 90 PSIG or 6.2 Bar operating air pressure at air inlet of tool**.
    - Use a tachometer to check RPM. **Notice:** Unless otherwise stated, the no-load speed should not exceed the maximum rated speed.

Final assembly completed.