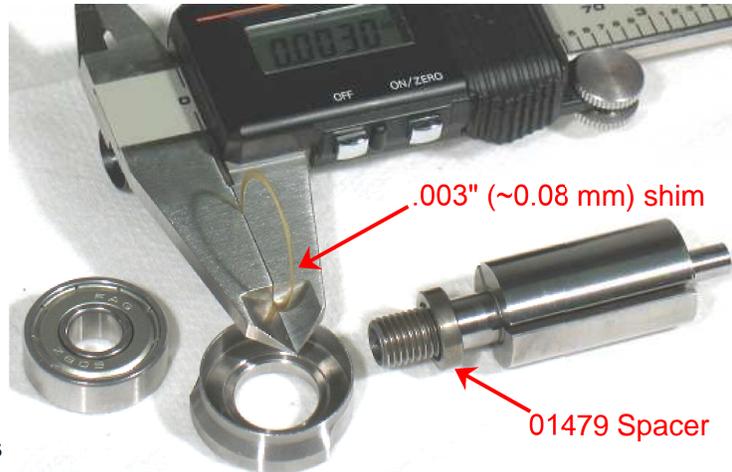


## Assembly Instructions - 0.4 hp. Air Motor (Straight)

### Motor Assembly:

1. Install the **01479** Spacer onto the rotor.
2. Select **.003"** (~0.08 mm) shim thickness from the **54529** Shim Pack. Install shims in the **01478** Front Bearing Plate.
3. Install the **02649** Bearing into the front bearing plate and onto the rotor.



**Notice:** Planetary geared models use the **RAISED CENTER** of the **96240** Bearing Press Tool and the arbor press to install the **02649** Bearing with the bearing plate onto the rotor.

4. Fasten the rotor in the vise with aluminum or bronze jaws so that the spindle is pointing up. Use a 12 mm socket and torque wrench to install the **01435** Collet Body. (T to 17 N•m/~150 in. lbs.)
5. Pull the front bearing plate forward to take play out of the bearing. Use a **.001"** (~0.03 mm) thick feeler gauge to check the clearance between the bearing plate and rotor.
6. Clearance should be **.001"**-.**.0015"** (~0.03-0.04 mm). **Notice:** Repeat steps 2-5 if clearance needs further adjustment. Install or remove shims as required.



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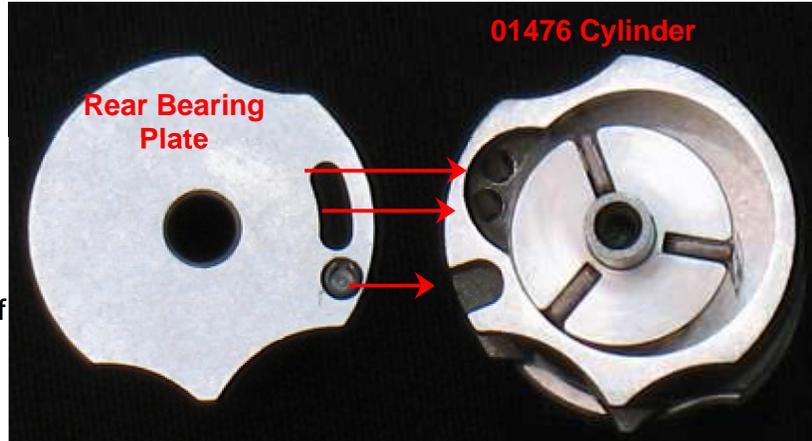
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7. Use Dynabrade Air Lube **95842** 10W/NR (or equivalent) to lubricate the **01480** Vanes. Install the vanes in the rotor.
8. Install the **01476** Cylinder and the **02676** Rear Bearing Plate so that the air inlet openings line-up.
9. Position the **02696** Bearing onto the bearing journal of the rotor.
10. Use the **RAISED CENTER** of the **96242** Bearing Press Tool and the arbor press to install the **02696** Bearing onto the rotor, and into the **02676** Rear Bearing Plate. **IMPORTANT:** Carefully press the bearing until the plate just touches the cylinder. This will establish a "snug-fit" between the bearing plates and the cylinder.



### Complete Motor Assembly

**Notice:** The rear bearing should sit below the outside surface of the rear bearing plate.

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11. Apply a small amount of Loctite #243 (or equivalent) to the threads of the governor assembly and carefully install the governor onto the rotor. **LEFT HAND THREAD**  
Turn counterclockwise. (T to 0.7 N•m/~6 in. lbs.)



**LEFT HAND THREAD:  
Turn counterclockwise.  
(T to 0.7 N•m/~6 in. lbs.)**



12. Fasten the **96399** Hex Key (12 mm) in a vise with aluminum or bronze jaws so that it is pointing up. Place the **45305** or **45307** Housing Core onto the 12 mm hex key so that the air inlet is pointing up.
13. Refer to the parts page or tool manual and follow the exploded view instructions to assemble the muffler and valve components.
14. Install the **01564** Air Control Ring onto the **01578** or **94523** Inlet Adapter and apply a small amount of Loctite #567 to the male threads of the inlet adapter.
15. Use a torque wrench to install the inlet adapter.  
(T to 28 N•m/~250 in. lbs.)



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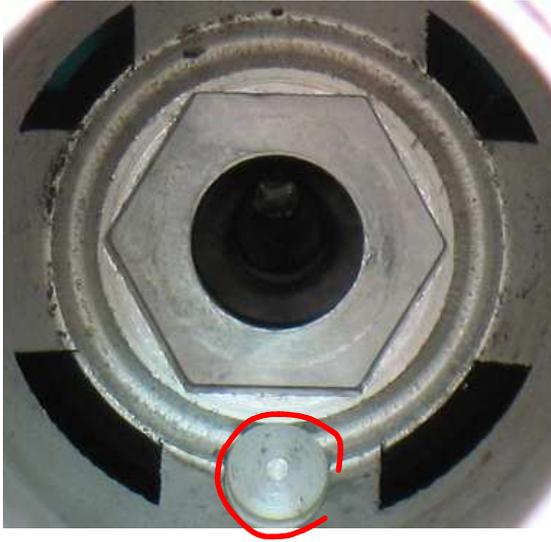
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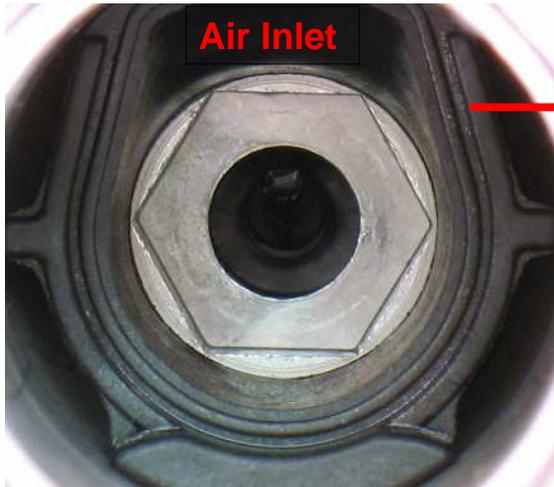
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17. Install the **45320** Governor Chamber.



16. Line-up the **45320** Governor Chamber pin with the hole on the inside of the **45305** or **45307** Housing Core.



The **45320** Governor Chamber installed in **45305** or **45307** Housing.

18. Carefully line-up and install the motor assembly.



**Motor Assembly Complete.**

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