

### Disassembly Instructions - 0.4 hp. Air Motor (7° Of fset)

(Models: 47211, 47212, 48205, 48207, 48335, 48337, 48500, 48503)

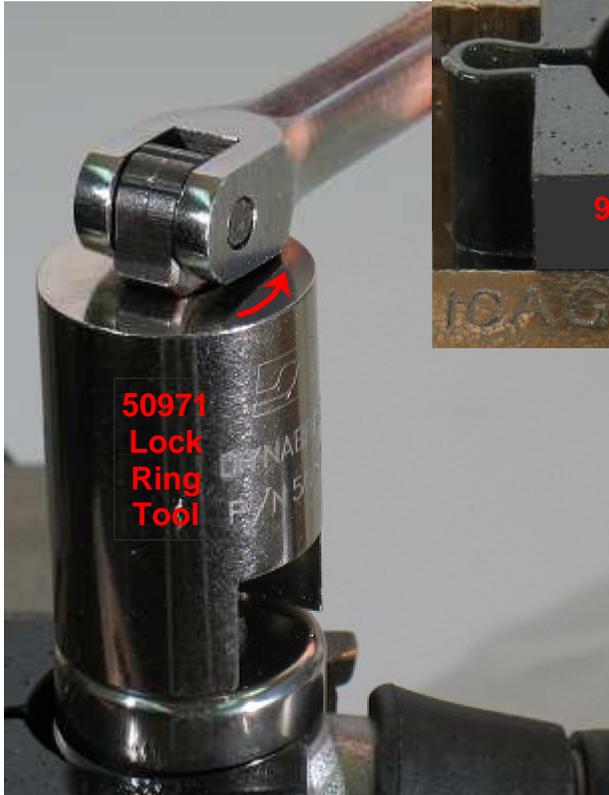
**Important:** Use these instructions along with the tool, parts page or manual.

**Notice:** To avoid damage to the motor housing, use the Special Repair Tools designed for the disassembly and assembly of this motor.

Disconnect the tool from the air supply. Use the appropriate wrenches to hold the work spindle stationary and remove the accessory.

#### Motor Disassembly:

1. Use the **96461** Repair Collar to hold the **01546** or **50776** Housing in a vise, with the tool spindle pointing up.
2. Use the **50971** Lock Ring Tool to remove the cover/lock nut. Turn counterclockwise.



3. **Notice:** Planetary gear models, see: "Disassembly Instructions - 0.4 hp. Planetary Reduction Gears".



4. Remove the motor from the housing.

**Notice:** Some models may contain a **02679** Shield.  
(Remove from housing.)

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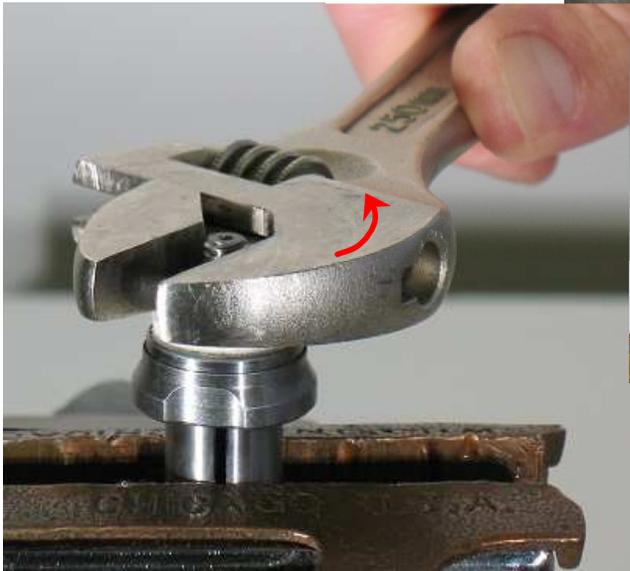
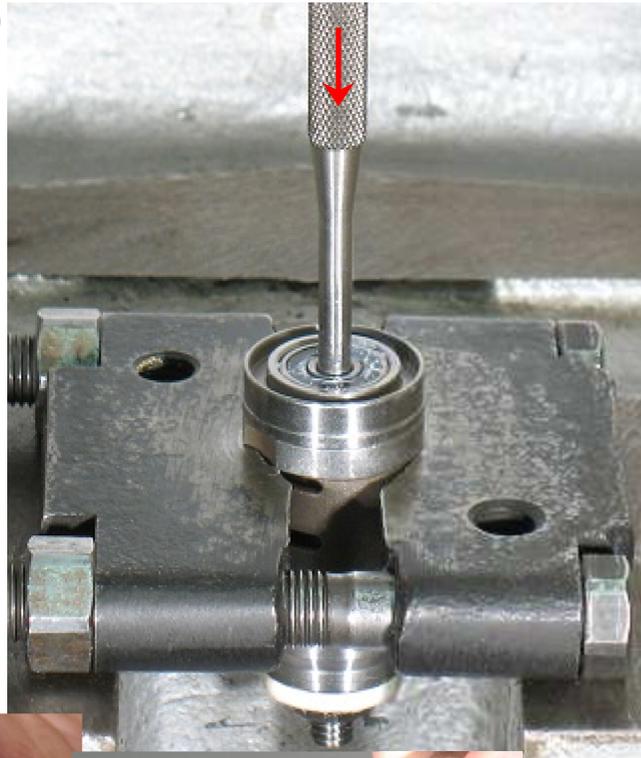
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4. Fasten the **96346** Bearing Separator (2") around the **01476** Cylinder.

Place the bearing separator and the motor in the **96232** Arbor Press (#2) with the tool spindle pointing down.

5. Use a 3/16" (4.76 mm) diameter flat-end drive punch as a press tool to push the rotor out of the **02696** Bearing.
6. Remove the cylinder and vanes.
7. By hand, use the 3/16" (4.76 mm) diameter flat-end drive punch to push the **02696** Bearing (slip-fit) out of the **02673** Rear Bearing Plate.
8. Use a wrench to remove the **50133** Adapter or **01435** Collet Body. Turn counterclockwise.



Remove the **01478** Front Bearing Plate, **02649** Bearing, shims, and **01479** Spacer.



**Motor Disassembly Complete.**

**Important:**  
Clean and inspect parts before assembling.

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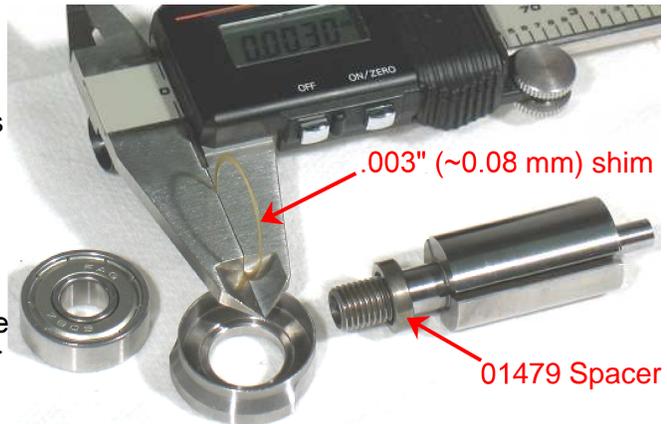
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### Assembly Instructions - 0.4 hp. Air Motor (7° Offset)

(Models: 47211, 47212, 48205, 48207, 48335, 48337, 48500, 48503)

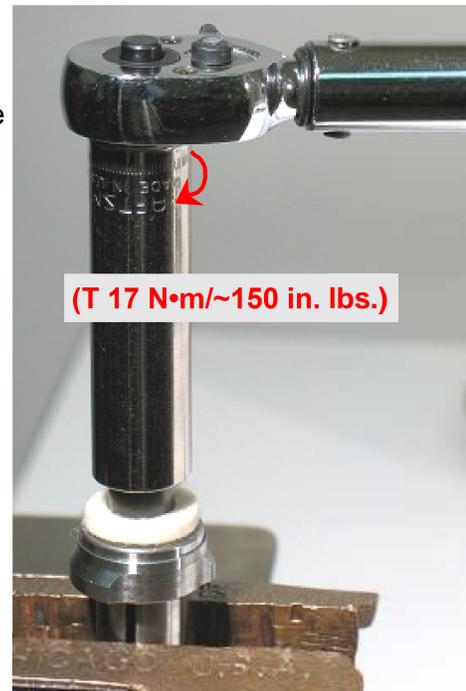
#### Motor Assembly:

1. Install the **01479** Spacer onto the rotor.
2. Select **.003"** (~0.08 mm) shim thickness from the **54529** Shim Pack. Install shims into the **01478** Front Bearing Plate.
3. Install the **02649** Bearing into the front bearing plate and onto the rotor.  
**Notice:** For the planetary geared models use the **RAISED CENTER** of the **96240** Bearing Press Tool and the arbor press to install the **02649** Bearing along with bearing plate.



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 **50133** Adapter or **01435** Collet Body. Turn clockwise. (T 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.

**Notice:** Clearance should be **.001"**-.0015" (~0.03-0.04 mm). Repeat steps 2-5 if the clearance needs further adjustment. Install or remove shims as required.



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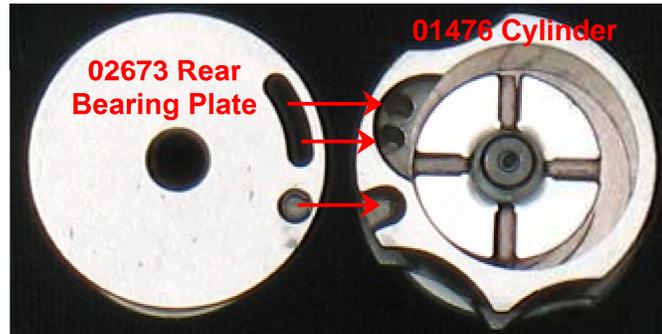
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7. Use Dynabrade Air Lube **95842** 10W/NR (or equivalent) to lubricate the **01480** Vanes. Install the vanes in the rotor.
8. Install the **01476** Cylinder and the **02673** Rear Bearing Plate so that the air inlet openings line-up.



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 **02673** Rear Bearing Plate.

**IMPORTANT:** Carefully press the bearing until the plate just touches the cylinder. Establish a "snug-fit" between the bearing plates and the cylinder.



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

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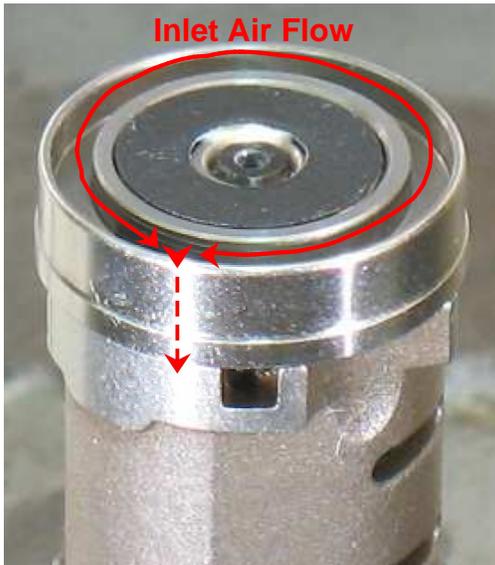
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11. If the model contains a **02679** Shield, place a small amount of clean grease on the seal of the **02696** Bearing and stick the shield against the bearing.
12. Install the motor into the **01546/50776** Housing. **Notice:** The **02673** Rear Bearing Plate has an air channel. It is not necessary to orient the air inlet of the motor with the air inlet on the inside of the housing.



13. Apply a small amount of Loctite Primer # 7649 to the threads of the **01546/50776** Housing. Apply a small amount of Loctite #567 to the housing.

14. Use the **50971** Lock Ring Tool and a torque wrench to install the cover/lock nut. (T to 28 N•m/~250 in. Lbs.)



**Motor Assembly Complete.**

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### Throttle Body, Valve and Muffler Disassembly Instructions - 0.4 hp. (7° Off-Set)

1. Use the **96461** Repair Collar to hold the **01546** or **50776** Housing in a vise, with the tool spindle pointing up.



2. Pull the **01558** Collar back onto the throttle body housing. Use the **96460** Wrench to loosen the throttle body from the 7° housing. **Left Hand Thread** Turn clockwise.

3. Fasten the **01578** or **94523** Inlet Adapter in a vise with aluminum or bronze jaws so that the throttle body is pointing up.

Use the **96393** Throttle Body Socket to separate the throttle body from the muffler assembly. Turn counterclockwise.



4. To disassemble the muffler and valve components, refer to, and follow the exploded view instructions found in the parts page or tool manual.

**Throttle Body, Valve and Muffler Disassembly Complete.**

### Throttle Body, Valve and Muffler Assembly Instructions - 0.4 hp. (7° Off-Set)

1. Refer to the parts page or tool manual and follow the exploded view instructions to assemble the muffler and valve components.

2. Install the **01564** Air Control Ring onto the **01578** or **94523** Inlet Adapter. Apply a small amount of Loctite #567 to the male thread of the inlet adapter.

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3. By hand, install the the **01578** or **94523** Inlet Adapter into the **45309** Throttle Body.



**01564 Air Control Ring**

**Loctite #567**

4. Fasten the **01578** or **94523** Inlet Adapter in a vise with aluminum or bronze jaws so that the **45309** Throttle Body is pointing up.

5. Use the **96393** Throttle Body Socket and torque wrench to tighten the inlet adapter into the **45309** Throttle Body.  
Turn clockwise. (T to 28 N•m/~250 in. lbs.)



(T to 28 N•m/~250 in. lbs.)

6. Apply a small amount of clean grease to the **95523** O-Ring and install it onto the throttle body.



7. Apply a small amount of Loctite Primer #7649 to the threads of the **01546/50776** Housing.



8. Apply a small amount of Loctite #567 to the housing.



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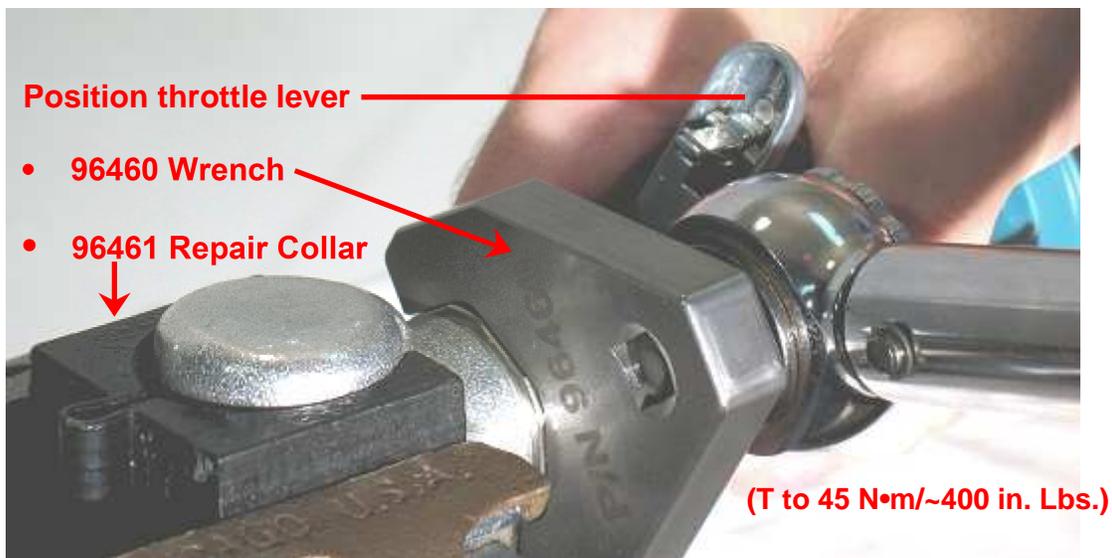
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9. Install the throttle body onto the 7° housing.

**Notice:** Hold the throttle lever in the desired position. Use the **96460** Wrench and a torque wrench to fasten the throttle body onto the 7° housing. **Left Hand Thread** Turn counterclockwise. (T to 45 N•m/~400 in. Lbs.)



**Throttle Body, Valve and Muffler Assembly Complete.**

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