



**0.4 hp. 7°, Mini-Dyanfile II**

**Models:** 15002, 15003, 15006, 15013

**95842** Dynabrade Air Lube 10W/NR

**96541** Motor Tune-Up Kit: Contains parts for air motor maintenance and repair.



**94300** Dynaswivel, 1/4" NPT: • Swivels 360° at two locations • Reduces strain, allowing air hose to drop straight to the floor.





**0.4 hp. Mini-Dynaflex II**

**Model:** 15002, 15003, 15006, 15013

**Repair Tools:**

**50971** Lock Ring Tool (Exhaust Cover)

**96232** Arbor Press (#2)

**96240** Bearing Press Tool (02649 Bearing)

**96242** Bearing Press Tool (02696 Bearing)

**96346** Bearing Separator (2")

**96393** Throttle Body Socket (Rear Exhaust, 7° Throttle Body)

**96399** Service Tool (Air Inlet)

**96460** Wrench (Throttle Body Lock Ring)

**96461** Repair Collar (7° Motor Housing)



## Component Wear Percentages

### 0.4 hp. Mini-Dynaflex II

Model: 15002, 15003, 15006, 15013

Notes: This service chart is published as a guide to expectant life of components.

The replacement levels are based on average tool usage over one year.

Dynabrade, Inc. considers one year usage to be 1,000 hours.

“T” Indicates parts included in 96541 Tune-Up Kit.

Item No.	Part No.	Description	No. Req.	High	Medium	Low	Non-Wear
1	15026	CONTACT ARM - 15002/03/06	1				
	15035	CONTACT ARM - 15013	1			AR	
	15028, 30	CONTACT ARM - 15006	1				
2	15067	VAC HOUSING ASBLY - 15002	1				
	15060	HOUSING ASBLY - 15003/06	1			AR	
	15063	HOUSING ASSEMBLY - 15013	1				
2.1	11040	SPRING	1			X	
2.2	15101	TENSION ARM	1			X	
2.3	15110	WIPER	2			X	
2.4	15112	RETAINER CLIP	2			X	
2.5	96085	SPRING	2			X	
2.6	15105	SHAFT SUPPORT	2			X	
2.7	96086	PIN	3			X	
2.8	15057	BELT GUARD	1			X	
2.9	96014	SCREW	1				X
2.10	15131	SHOULDER WASHER	1			X	
2.11	15132	WAVE SPRING	1			X	
2.12	01788	SCREW	1			X	X
2.13	15068	VACUUM HOUSING - 15002	1				
	15061	HOUSING - 15003, 15006	1			X	
	15062	HOUSING - 15013	1				
2.14	40029	MOTOR LOCK	1				X
2.14.1	95442	SCREW	2			X	
2.14.2	96089	LABEL - 15002	1				
	96186	LABEL - 15003, 15006	1			X	
	96140	LABEL - 15013	1				
3	15108	KNOB	1			X	
4	04118	MOTOR ASSEMBLY	1			AR	
4.1	15118	DRIVE WHEEL	1			X	
4.2	15106	EXHAUST COVER	1				X
4.3	15111	FELT SILENCER	1		X		
4.4	01580	FELT SEAL	1		X		
4.5	02649	BEARING	1		T		
4.6	54529	SHIM PACK (3/PKG)	1		T		
4.7	01478	FRONT BEARING PLATE	1			X	
4.8	50767	PIN	2			X	
4.9	01479	SPACER	1			T	
4.10	01475	ROTOR	1				X
4.11	01480	VANE SET (4/PKG)	1	T			
4.12	01476	CYLINDER	1				X
4.13	02673	REAR BEARING PLATE	1				X
4.14	02696	BEARING	1		T		
4.15	02679	SHIELD	1			X	
4.16	01546	HOUSING	1				X
4.17	01558	COLLAR	1			X	
4.18	95523	O-RING	1		T		
4.19	15129	SCREW	1				X
4.20	45309	THROTTLE BODY ASSEMBLY	1			AR	
4.20.1	01548	GASKET	1		T		



## Component Wear Percentages

4.20.2	01437	PLUG	1				X
4.21	96077	O-RING	1			T	
4.22	09622	SLEEVE	1			X	
4.23	45315	BUSHING	1			T	
4.24	97045	PIN	1			T	
4.25	45263	THROTTLE LEVER ASSY.	1			X	
4.26	97060	PIN	1			T	
4.27	45310	SEAL	1			T	
4.28	58365	TIP VALVE	1			T	
4.29	01468	SPRING	1			T	
4.30	01564	SPACER	1			X	
4.31	94535	MUFFLER ASSEMBLY	1			AR	
4.31.1	95711	RETAINING RING	1			T	
4.32.2	96065	O-RING	1			T	
4.31.3	01488	FELT SILENCER	4		T		
4.31.4	01446	AIR DEFLECTOR	1			X	
4.31.5	95620	RETAINING RING	1			T	
4.31.6	01578	INLET ADAPTER	1				X
---	95266	HEX KEY (3 MM)	1			AR	

\*AR - "As Required"

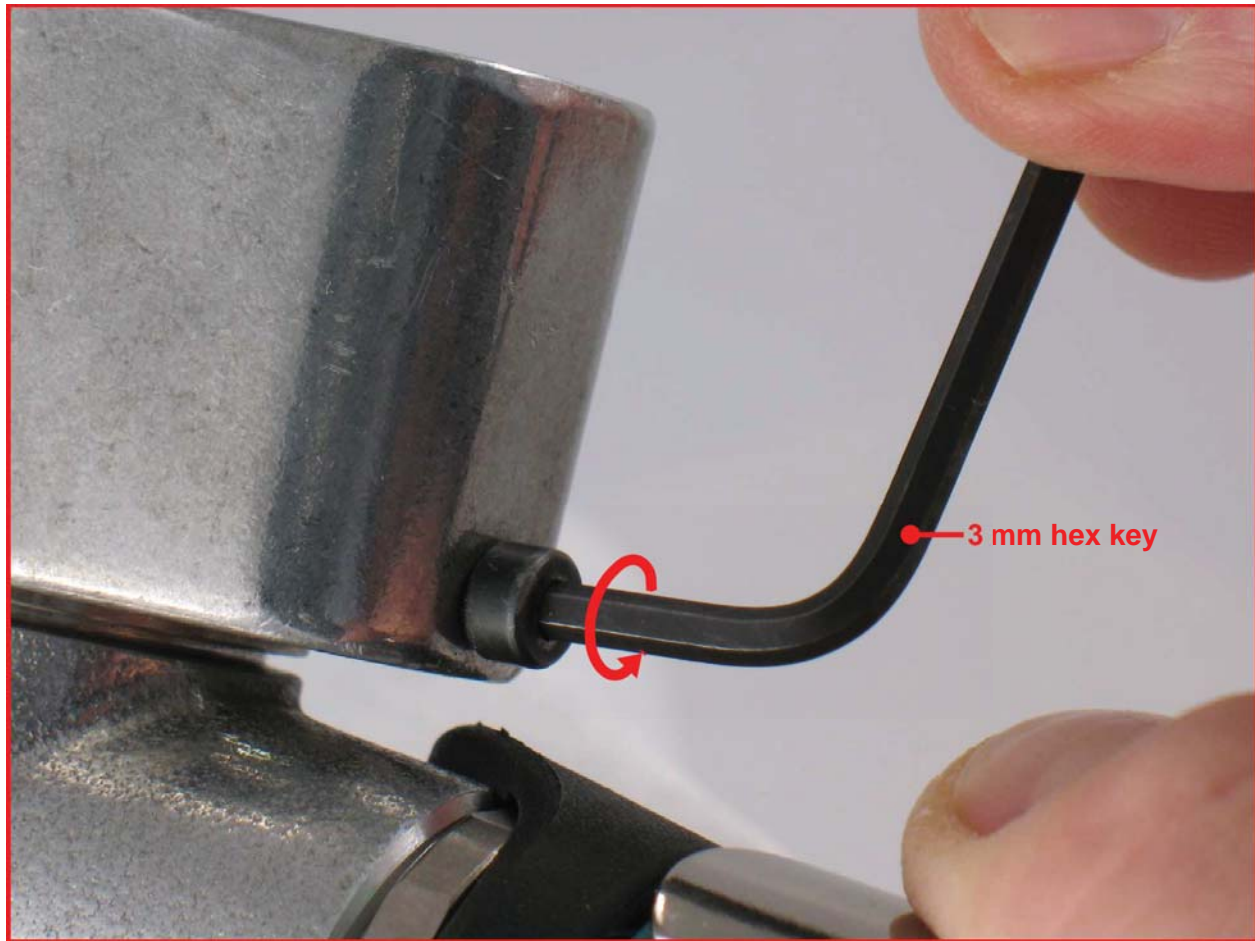
### **Disassembly Instructions - 0.4 hp. Mini-Dynafile II**

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

**Notice:** Shut off the air supply and depress throttle lever to deplete the remaining air.

• Carefully disconnect the tool from the air supply hose. • Remove the abrasive belt and contact arm assembly. • Use the Special Repair Tools designed for the disassembly and assembly of this motor.

#### **Motor Disassembly:**



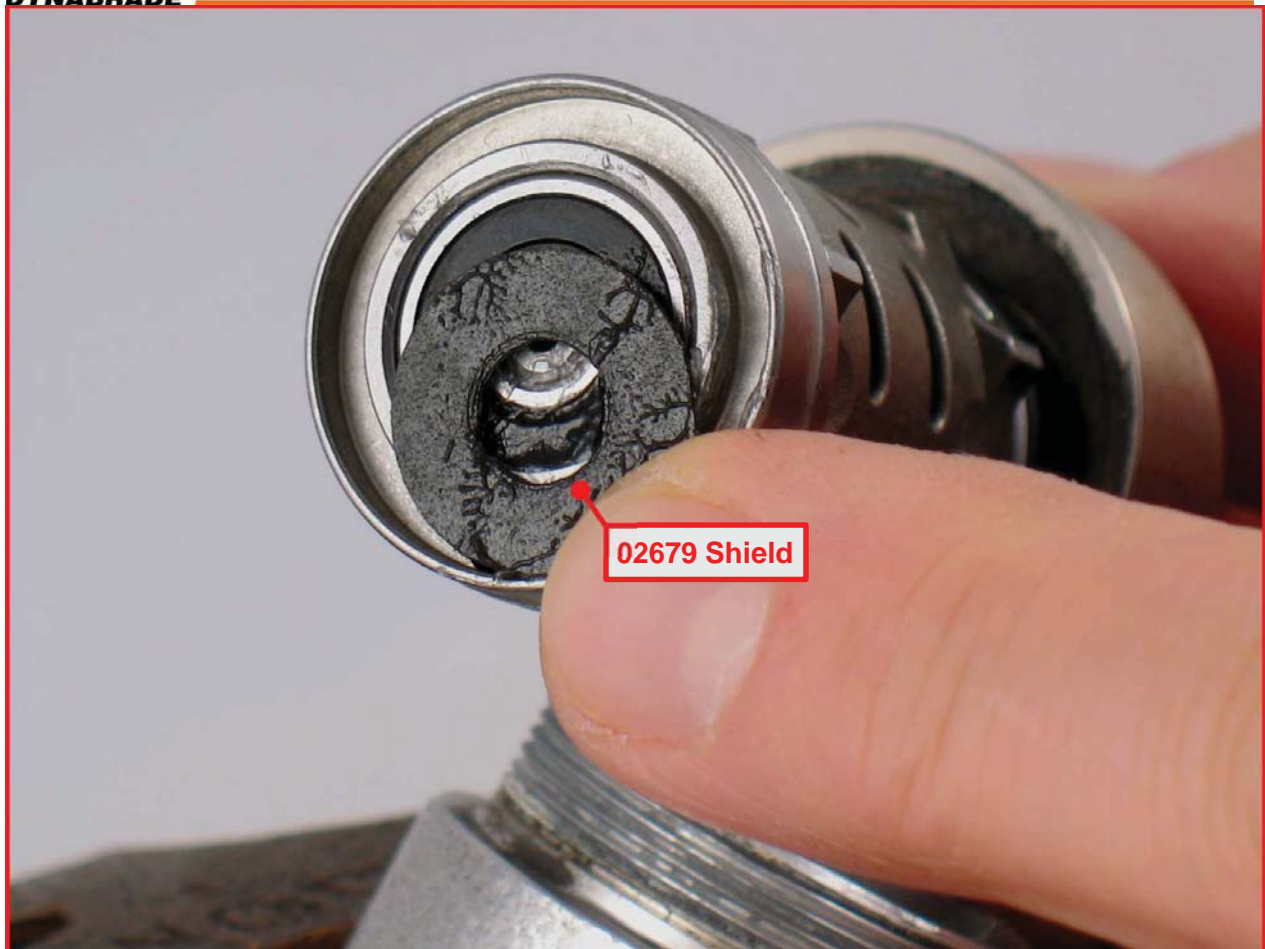
1. Use a 3 mm hex key to loosen the **01788** Motor Lock Screw. Remove the **15060** Housing Assembly from the air motor.



2. Carefully fasten the **01546** Housing in a vise with aluminum or bronze jaws so that the drive wheel is pointing up. **Notice: Over tightening vise will damage housing.** Repair Collar **96461** (designed to protect the **01546** Housing) is available upon order.
  - Use the **95262**, 14 mm Wrench and a 4 mm hex key to remove the **15118** Drive Wheel. **Notice: If the drive wheel cannot be removed, or the optional rubber drive wheel, 40378 has been installed, refer to Step #3.**



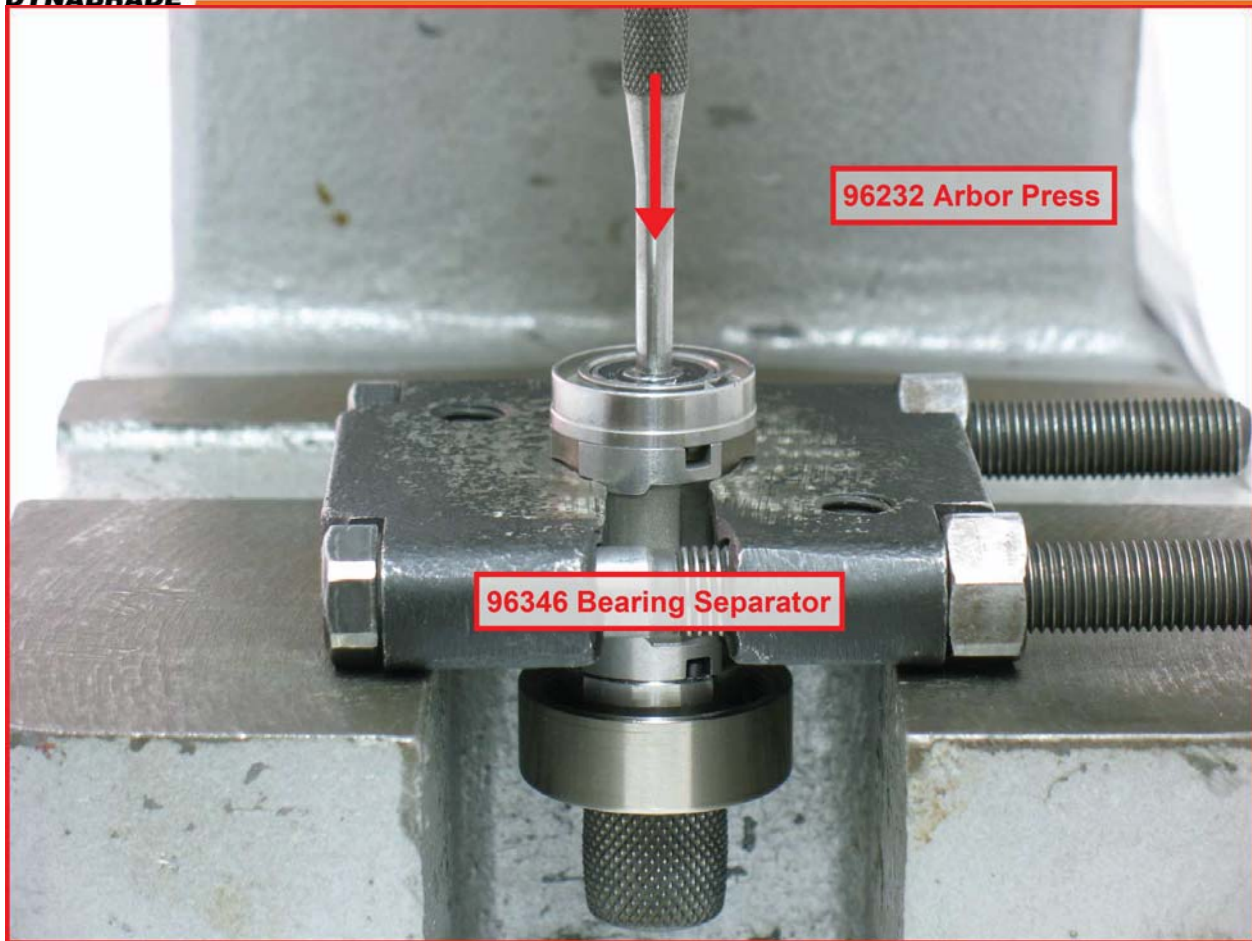
3. Use the **50971** Lock Ring Tool or an adjustable 3 mm pin spanner wrench to remove the **15106** Exhaust Cover. Turn counterclockwise.



4. Loosen the vise and carefully pull the motor out of the **01546** Housing.
  - Remove the **02679** Shield.



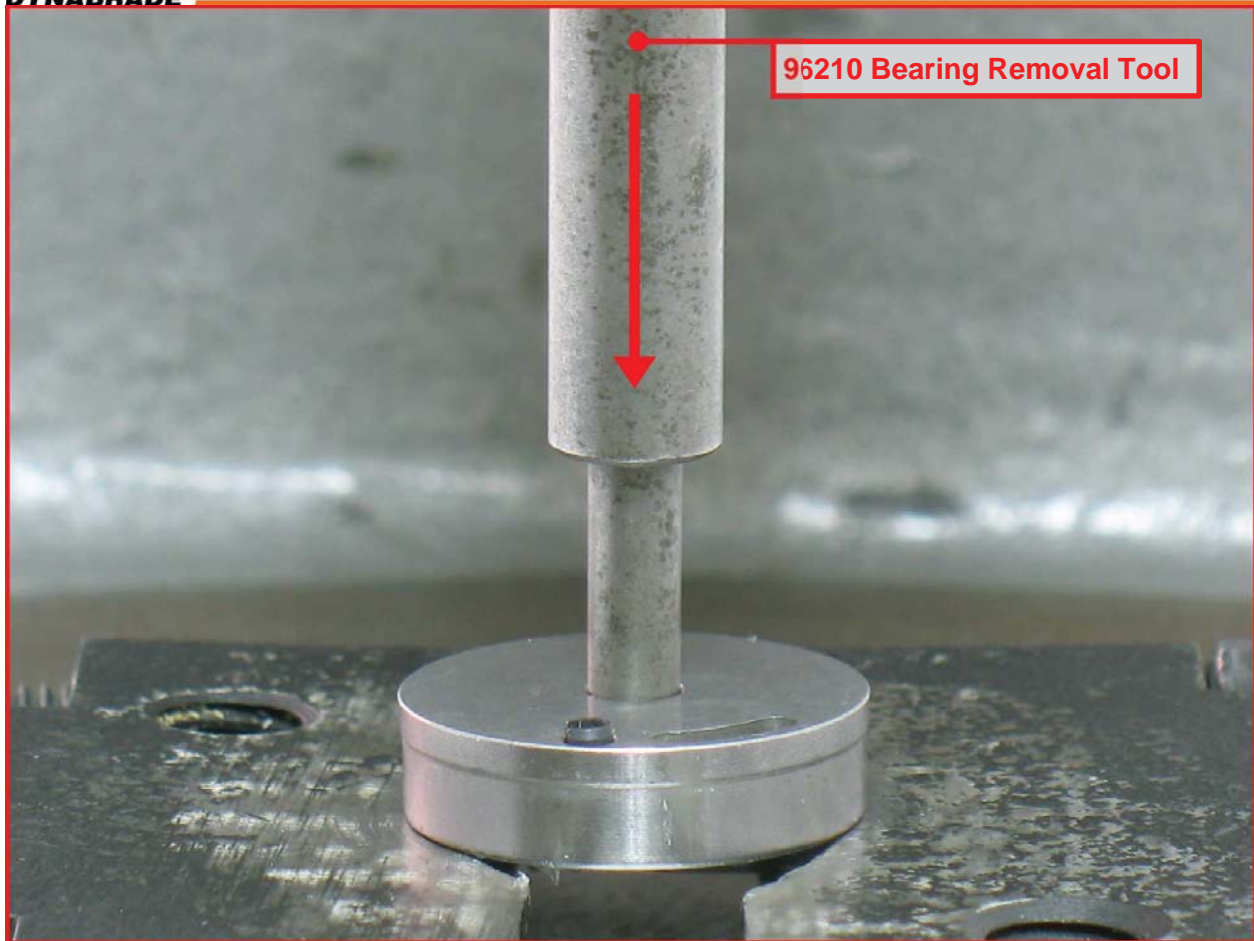
## Disassembly/Assembly Instructions



5. Fasten the **96346** Bearing Separator (2") around the **01476** Cylinder.
  - Place the bearing separator in the **96232** Arbor Press (#2) so that the drive wheel is pointing down.
  - Use a 3/16" or 5 mm diameter flat end drive punch as a press tool and push the rotor out of the **02696** Bearing.



## ***Disassembly/Assembly Instructions***



6. Use the **96210** Bearing Removal Tool and the arbor press to remove the **02696** Bearing from the rear bearing plate.



7. Fasten the rotor in the vise with aluminum or bronze jaws so that the drive wheel is pointing up.
  - Use the **95262**, 14 mm Wrench, or groove pliers to remove the drive wheel. Turn counterclockwise.
  - Remove the exhaust cover, felt silencers, bearing, plate, shims and the **01479** Spacer.



## ***Disassembly/Assembly Instructions***



**Motor Disassembly Complete.**

**Clean and inspect parts before assembling.**

### Assembly Instructions - 0.4 hp. Mini-Dynafile II

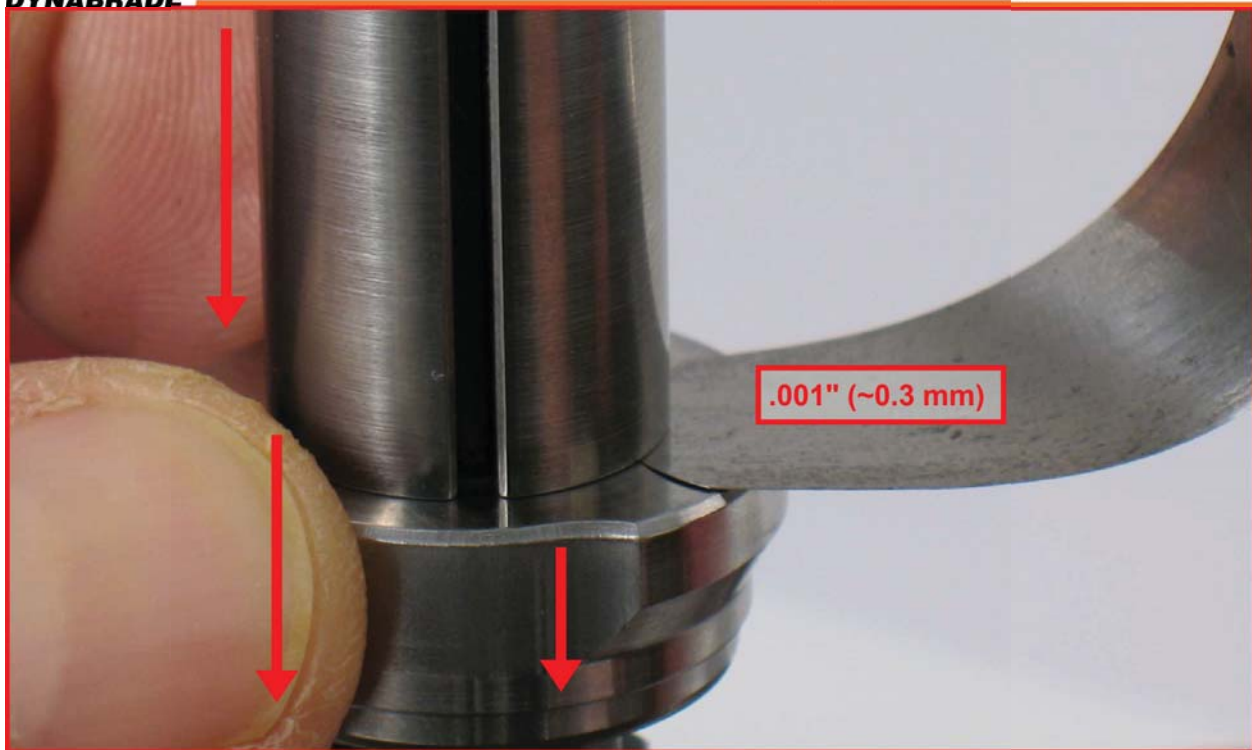
#### Motor Assembly:



1. Fasten the rotor in a vise with aluminum or bronze jaws so that the rotor spindle is pointing up.
  - Install the **01479** Spacer onto the rotor.
  - Install .003" (~0.08 mm) shim thickness into the **01478** Front Bearing Plate.



2. Install the **02649** Bearing into the front bearing plate.
  - Install the bearing and plate onto the rotor.
  - Install the drive wheel hand tight.



3. Use a .001" (~0.3 mm) thick feeler gauge to check clearance between the front bearing plate and the front of the rotor.
  - Push down on the bearing plate to take movement out of the bearing.
  - The clearance should be .001"-.0015" (~0.3 - ~0.4 mm). **Notice:** If the clearance needs further adjustment repeat steps 2-3. Add or remove shims as required.

## ***Disassembly/Assembly Instructions***



4. Once the correct clearance is achieved, remove the drive wheel and install the **01580** Felt Silencer around the rotor spindle.
  - Install the **15111** Felt Silencer into the **15106** Exhaust Cover and place these onto the rotor.
  - Install the drive wheel. (T to 17 N•m/~150 in. lbs.)





5. Lubricate the **01480** Vanes with the **95842** Dynabrade Air Lube 10W/NR or equivalent.
  - Install oiled vanes.

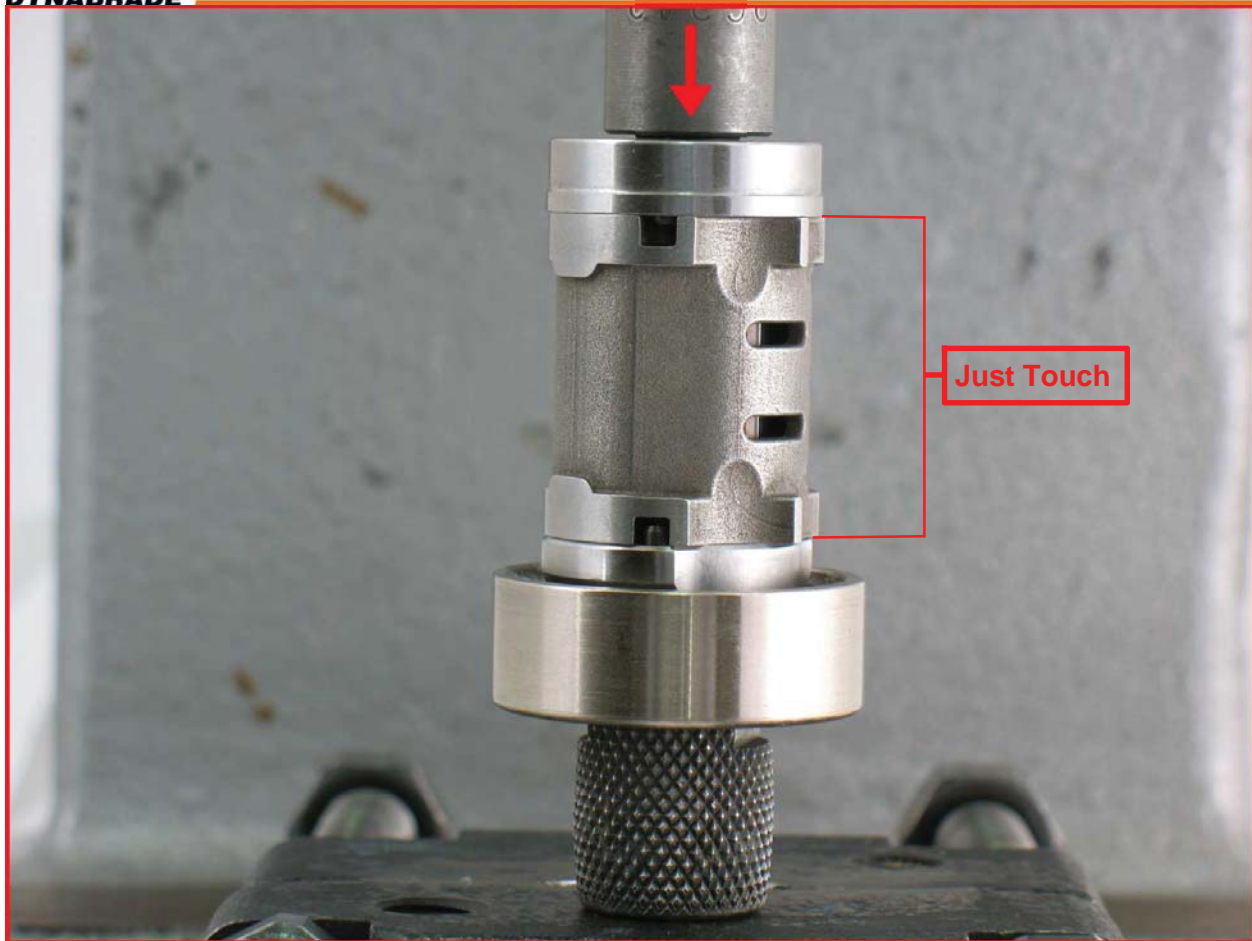


6. Use the **RAISED OUTSIDE DIAMETER** of the **96242** Bearing Press Tool and the **94232** Arbor Press (#2) to install the **02696** Bearing into the **02673** Rear Bearing Plate.



7. Install the **01476** Cylinder so that the air inlet opening in the **02673** Rear Bearing Plate will line up with the air inlet opening of the cylinder.

## Disassembly/Assembly Instructions



8. Use the **RAISED INSIDE DIAMETER** of the 96242 Bearing Press Tool and the arbor press to install the rear bearing and plate onto the rotor. **Notice:** Carefully press the bearing and plate down until it just touches the cylinder. This will establish a close fit between the bearing plates and the cylinder.



Apply clean grease to 02696 Bearing and install 02679 Shield.

9. Apply a small amount of clean grease to the seal of the **02696** Bearing. **Notice:** The grease is used to hold the shield against the seal of the bearing.
  - Install the **02679** Shield.



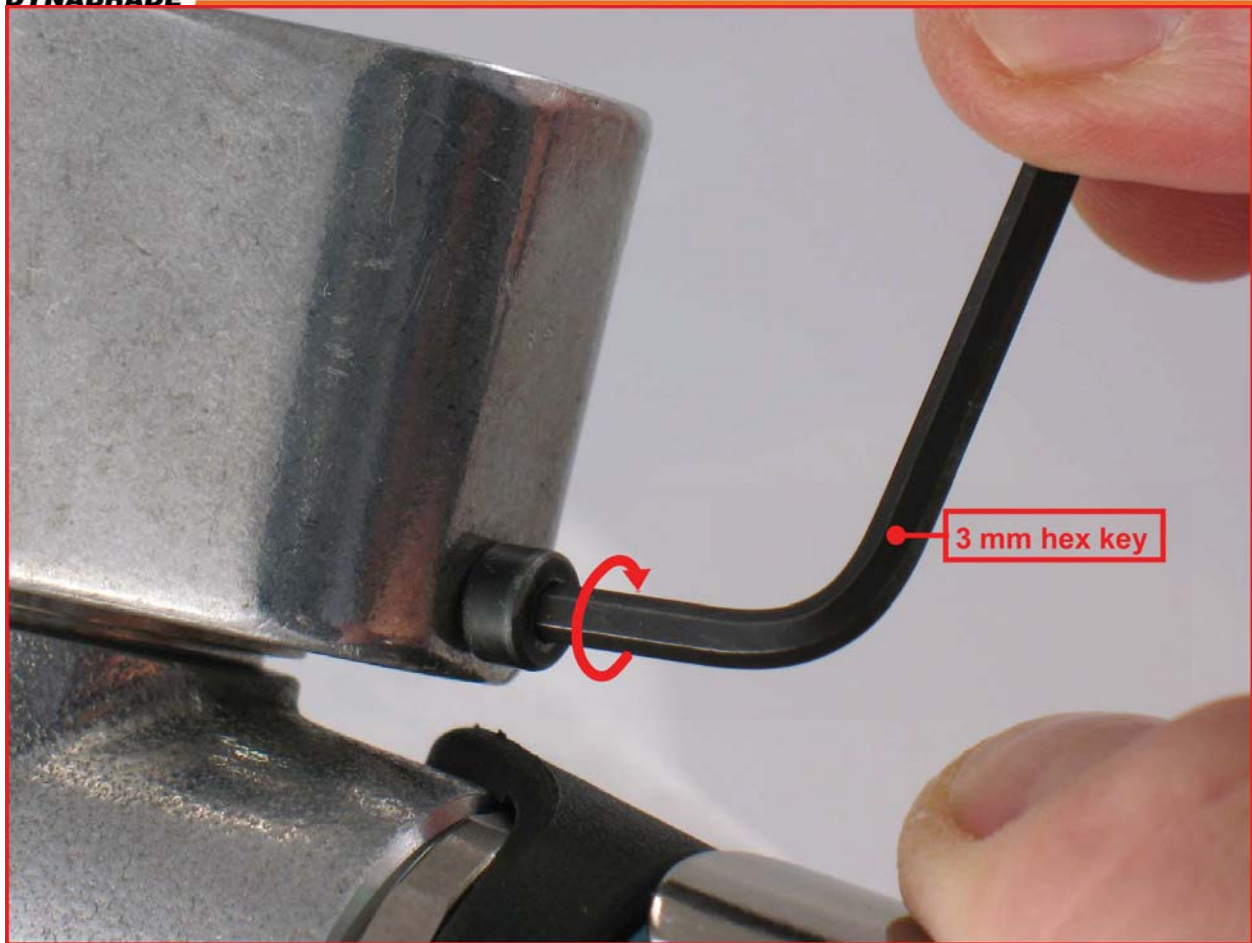
10. Carefully install the motor assembly into the **01546** Housing.
  - Apply Loctite #7649 Primer or equivalent to the thread of the **01546** Housing.
  - Apply a small amount of Loctite #567 or equivalent to the **01546** Housing.



## Disassembly/Assembly Instructions



11. Carefully fasten the **01546** Housing in the vise with aluminum or bronze jaws so that the drive wheel is pointing up. **Notice: Over tightening vise will damage housing.** Repair Collar **96461** (designed to protect the **01546** Housing) is available upon order.
  - Use the **50971** Lock Ring Tool and a torque wrench, or an adjustable 3 mm pin spanner wrench to fasten the **15106** Exhaust Cover onto the **01546** Housing.
  - T to 28 N•m/~250 in. lbs.



12. Install air motor into the **15060** Housing Assembly.
- Use a 3 mm hex key to tighten the **01788** Motor Lock Screw.
- Motor Assembly Completed.**

**Notice:** For belt housing, contact arm and valve assemblies, refer to the exploded view and the additional instructions contained in the tool parts page or manual.



### Disassembly Instructions - Throttle Body, Valve and Muffler - 7° Off-Set

1. Carefully fasten the **01546** Housing in a vise with aluminum or bronze jaws so that the tool spindle is pointing down.



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** Inlet Adapter in the vise with aluminum or bronze jaws so that the throttle body is pointing up.
    - Use the **96393** Throttle Body Socket to remove 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 Completed.**

### **Assembly Instructions - Throttle Body, Valve and Muffler - 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** Inlet Adapter.
  - Apply a small amount of Loctite #567 to the male thread of the inlet adapter.
  - By hand, install the the **01578** Inlet Adapter onto the throttle body.



3. Fasten the **01578** Inlet Adapter in the vise with aluminum or bronze jaws so that the throttle body is pointing up.  
Use the **96393** Throttle Body Socket and torque wrench to tighten the inlet adapter onto the throttle body. Turn clockwise. (T to 28 N•m/~250 in. lbs.)



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



5. Apply Loctite Primer #7649 to the threads of the **01546** Housing.
  - Apply a small amount of Loctite #567 to the housing.



6. Install the throttle body onto the 7° housing.
  - **Notice:** Hold the throttle lever in the desired position. Use the **96460** 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.)
  - Pull the **01558** Collar back over the throttle body lock nut.

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