



Disassembly Instructions - 11" Diameter, Gear-Driven Sander

Motor Disassembly:

1. Shut off the air supply. Carefully discharge air and disconnect the sander from the air supply.
2. Use the **57092** Repair Collar to hold the sander in a vise. Position the sander with the backing pad facing up. NOTICE: Do not over tighten the repair collar and sander in the vise. Over tightening will make it difficult to remove the lock ring and air motor.
3. Use a 3 mm hex key to remove the screws, washers and backing pad from the sander.
4. Use a 4mm hex key to remove the balance arm assembly. Turn counterclockwise.
5. Remove the **56474** Balance Washer and **56452** Mount Plate Assembly. Remove **96150** Shims. Use a 2 mm hex key to remove **96166** Set Screw.
6. Use the **56599** Lock Ring Tool to remove the **57332** Lock Ring. Turn counterclockwise.
7. Pull the air motor assembly out of the housing.
8. Use retaining ring pliers to remove the **95626** Retaining Ring.
9. Remove the **95911** O-Ring from the **56595** Cylinder. Fasten the **96346**, 2" Bearing Separator around the cylinder.
10. Place the bearing separator on the table of the **96232**, #2 Arbor Press, with the air motor suspended and the work spindle pointing down.
11. Use a 5/16" (8 mm) diameter flat-end drive punch and the arbor press to push the shaft out of the **01206** Bearing. Use the **96214** Bearing Removal Tool to push the **01206** Bearing out of the **54629** Rear Bearing Plate.
12. Remove the cylinder, rotor, vanes, and key.
13. Use the arbor press to push the shaft and the **56052** Bearing out of the **56559** Front Bearing Plate.
14. Use the bearing separator and arbor press to remove the **56052** Bearing from the shaft.
15. Fasten the **96181** Pinion Wrench in a vise. Place the **57749** Pinion Gear onto the pinion wrench. Use a HEAT GUN to soften the thread adhesive. Use the **96182** Front Plate Tool to remove the **56559** Front Bearing Plate from the pinion gear. Turn counterclockwise.

Motor Disassembly Complete.

Important: Clean, and inspect all motor parts for wear or defect.

Assembly Instructions - 11" Diameter, Gear-Driven Sander

Motor Assembly:

1. Face the open side of the **56052** Bearing toward the work spindle of the **56589** Shaft.
2. Use the smaller end of the **57091** Bearing Press Tool and the **96232**, #2 Arbor Press to install the **56052** Bearing all the way onto the shaft. (**Drawing 1**)
3. Fasten the **96181** Pinion Wrench in a vise. Place the **57749** Pinion Gear onto the pinion wrench. Place the larger, flat side of the **57332** Lock Ring onto the **57749** Pinion Gear.
4. Apply a small amount of Loctite #271 to the threads of the **56559** Front Bearing Plate. Use the **96182** Front Plate Tool to install the front bearing plate onto the **57749** Pinion Gear. Torque to 34 N•m/300 in. lbs.
5. Apply a small amount of Loctite #271 to the outside race of the **56052** Bearing. Use the large end of the **57091** Bearing Press Tool and the arbor press to install the front bearing plate onto the **56052** Bearing and shaft. (**Drawing 2**)
6. Install the **54673** Key so that the square side of the key fits into the keyway on the shaft. NOTICE: The tapered side of the key fits into the keyway of the rotor. Apply the **95842** Dynabrade Air Lube 10W/NR (or equivalent) to the vanes. Install the **54705** Rotor/Vane Set (5) onto the shaft.
7. Install the **56595** Cylinder over the rotor so that the short line-up pin fits into the front bearing plate.
8. Place the **54629** Rear Bearing Plate over the shaft so that the long line-up pin fits through the hole in the rear bearing plate. (**Drawing 3**)

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Disassembly/Assembly Instructions

9. Use the small end of the **57091** Bearing Press Tool to install the **01206** Bearing onto the shaft and into the **54629** Rear Bearing Plate. NOTICE: Carefully press the **01206** Bearing onto the shaft until it just touches against the bearing seat on the inside of the bearing plate, and the rear bearing plate just touches the cylinder. (**Drawing 4**)
10. Use retaining ring pliers to install the **95626** Retaining Ring with the concave side of the ring facing toward the motor assembly. Press the retaining ring down completely into the groove on the shaft.
11. Use the **57092** Repair Collar to hold the housing in a vise with the opening for the motor facing up. NOTICE: Do not over tighten the repair collar and sander in the vise. Over tightening will make it difficult to install the air motor and lock ring.
12. Apply some lubricant to the **95911** O-Ring and install it into the air inlet hole in the cylinder.
13. Align the cylinder line-up pin with the line-up hole on the inside of the housing. Install the motor into the housing.
14. Use the **56599** Lock Ring Tool to secure the motor in the housing. Torque to 34 N·m/300 in. lbs. NOTICE: Align one of holes in **57332** Lock Ring with the set screw hole in housing.
15. Use a 2 mm hex key to install the **96166** Set Screw into the housing so that the end of the set screw is flush with the top of the lock ring.
16. Install the shroud onto the housing.
17. Apply a small amount of the **95542** Grease to the mount plate gear and install the **56452** Mount Plate Assembly. NOTICE: It is necessary to shim the mount plate assembly to prevent excessive drag between the **57360** Felt Wiper and the **57332** Lock Ring. Use the **96150** Shims (0.076 mm) as required. Once the mount plate assembly is correctly shimmed, install the **56474** Balance Washer onto the work spindle.
18. Install the **59277** Balance Arm Assembly onto the work spindle. Apply a small amount of Loctite #243 (or equivalent) to the threads of the **96477** Screw. Hold the balance arm assembly stationary with an adjustable wrench and use a 4 mm hex key to tighten the **96477** Screw. Turn clockwise. (Torque to 9N·m/80 in. lbs.)
19. Use the **95541** Grease Gun to apply 2 full plunges of the **95542** Grease through the grease fitting located in the **56452** Mount Plate Assembly. NOTICE: Apply two full plunges of grease after every 300-hour interval of use.
20. Use a 3 mm hex key to install the backing pad.

Motor Assembly Complete.

Handle and Valve Disassembly:

1. Place the **57092** Repair Collar around the housing so that the handle is pointing up.
2. Use a Phillips screwdriver to remove the four screws that fasten the handle to the housing. Carefully remove the handle from the housing. This gives access to the valve components, o-ring seal, gasket and vacuum plug.
3. Use a 1/8" diameter flat-end drive punch to remove the **95627** Pin and **56582** Safety Throttle Lever.
4. Pull the **56578** Speed Regulator and valve stem out of the housing.

Handle and Valve Disassembly Complete.

Handle and Valve Assembly:

1. Place the **57092** Repair Collar around the housing so that the handle mounting area is facing up.
2. Install the **01025** O-Rings (3) onto the **56578** Speed Regulator. Apply lubricant to the o-rings and install the regulator into the housing. NOTICE: Be careful that the o-rings do not get caught and pulled out of the o-ring grooves.
3. Install the **98459** O-Ring onto the **56579** Valve Stem. Apply lubricant to the o-ring and install the valve stem end that is closest to the o-ring.
4. Install the **56582** Safety Throttle Lever and secure it with the **95627** Pin.
5. Install the **56598** Seal into the air inlet passage of the housing.
6. Install the **56586** Vacuum Plug into the exhaust passage of the housing. (See Exploded View)

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Disassembly/Assembly Instructions

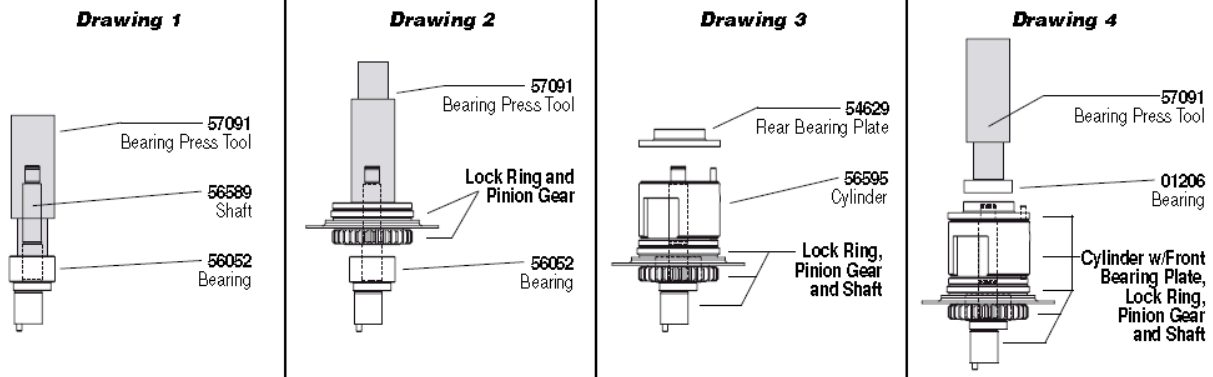
- Use needle-nose pliers to install the **51944** Tip Valve fitting it under the end of the **56579** Valve Stem.
 - Install the large end of the **51943** Spring into the air inlet passage of the handle.
 - Install the **56469** Gasket onto the handle.
 - Apply lubricant to the **96459** O-Ring and install it around the outside diameter of the air inlet passage.
 - Connect the handle to the housing and secure it in place with the four screws. NOTICE: The two longer screws, Part Number **96454** also help to secure the **56581** Grip to the housing.
 - Install the **56597** Muffler and secure it with the **56596** Muffler Clip. (See Exploded View)
- Handle and Valve Assembly Complete.**

Tool Assembly Complete.

Allow 30 minutes for adhesives to cure before operating tool.

Important: Test motor for proper operation. Place 3 drops of Dynabrade Air Lube (P/N **95842**) directly into the air inlet with throttle lever depressed. Supply 90 PSIG (6.2 Bar) operating air pressure at the air inlet of the tool. Operate tool for 30 seconds to determine if tool is operating properly, and to allow lubricant to flow to the motor. Use a tachometer to check work spindle speed. If motor does not operate properly or operates at a higher RPM than marked on the tool, the tool should be serviced to correct the problem before use.

Diagrams



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