

## Disassembly/Assembly Instructions – Dynabug® II Sander

**Important: Manufacturers warranty is void if the tool is disassembled before the warranty expires.**

The Tool Repair Kit 57874 is available. This kit includes: 56058 Lock Ring Tool, 57092 Repair Collar, 57091 Bearing Press Tool, 95266 (3mm) Hex Key, 96034 (12mm) Hex Key and (3/4") 96066 Socket. These will assist in the disassembly and assembly of the Dynabug® II Orbital Sander. Please refer to the parts breakdown list for the proper part number identification.

### Disassembly:

1. Close off the air supply and disconnect the sander from the air supply line.
2. Place the 57092 Repair Collar around the housing and secure the sander in a vise so that the pad and/or pad base are facing up. **Note:** Do not over tighten the sander in the vise, as this will make the removal of the 56046 Lock Ring and the motor difficult.
3. Use a Phillips Screwdriver to remove the (4) screws, (4) 96538 Washers and sanding pad.
4. Insert a 3/16" dia. drive punch through one of the holes in the pad base to prevent the shaft balancer from rotating. Use the 95266, (3mm) Hex Key to remove the 95344 Screw along with the 95935 Washer by turning it counterclockwise.
5. For vacuum models refer to the Vacuum Conversion Instructions on page 6 and diagrams on page 8, then remove the vacuum components.
6. Position two flat blade screwdrivers between the counterweight and the bearing area of the pad base. Pry the pad base away from the housing.
7. Use the small end of the 57091 Bearing Press Tool along with the 96232 (#2) Arbor Press to remove the 54552 Bearing from the pad base.
8. Use the 56058 Lock Ring Tool to loosen the 56046 Lock Ring by turning it counterclockwise.
9. Remove the 57896 Felt Seal from the shaft balancer and pull the motor out of the housing. Remove the 01024 O-Ring from the cylinder.
10. Use retaining ring pliers to remove the 98463 Retaining Ring.
11. Fasten the 96236 (2") Bearing Separator around the part of the 59051 Cylinder that is closest to the 57891 Rear Bearing Plate.
12. Place the bearing separator on the table of the arbor press so that the counterweight is pointing down and use a 1/4" dia. flat end drive punch to push the shaft balancer out of the 58368 Bearing. **Note:** If it's necessary, the 58368 Bearing can be removed from the bearing plate with the 96214 Bearing Removal Tool and the arbor press.
13. Remove the rotor, blades, and key.
14. Use the arbor press to push the shaft balancer, the 59083 Felt Washer, and the 58368 Bearing out of the 57893 Front Bearing Plate.
15. Remove the lock ring and the 59057 Seal.
16. Use the bearing separator and the arbor press to remove the 58368 Bearing and the felt washer from the shaft balancer.

**Motor Disassembly Complete.**

### Valve Disassembly:

1. Use a 2.5mm drive pin punch to remove the 94590 Pin, 57888 Throttle Lever and 57041 Comfort Platform.
2. Remove the 01494 Inlet Bushing by turning it counterclockwise.
3. Remove the spring, tip valve, and seal.
4. Use retaining ring pliers to remove the 95697 Retaining Ring and push the 59075 Speed Regulator out of the housing.
5. Remove the valve stem and the o-rings from the speed regulator.

**Valve Disassembly Complete.**

**Important: Clean and inspect all parts for wear or defect before assembling sander.**

### Assembly:

1. Install the 56046 Lock Ring onto the shaft balancer so that the side marked 'OFF' is toward the counterweight.
2. Install the 59083 Felt Washer into the 59057 Seal and place these onto the shaft balancer. (See Drawing 1)
3. Use the small end of the 57091 Bearing Press Tool along with the arbor press to install the 58368 Bearing onto the shaft balancer. (See Drawing 2)  
**Note:** Be certain that the felt washer does not get pinched between the bearing and the shaft balancer.
4. Use the large end of the 57091 Bearing Press Tool to install the 57893 Front Bearing Plate onto the 58368 Bearing. (See Drawing 3)  
**Note:** Pull the 59057 Seal up tight against the 57893 Front Bearing Plate.
5. Install the 56047 Key and the 57113 Rotor/blades (5) onto the shaft balancer. **Note:** These should be lubricated with the 95842 Dynabrade Air Lube (10W/NR or equivalent).
6. Install the 59051 Cylinder so that the short line-up pin fits to the front bearing plate.
7. Install the 58368 Bearing into the 57891 Rear Bearing Plate.
8. Align the cylinder line-up pin with the hole in the rear bearing plate. Use the small end of the 57091 Bearing Press Tool along with the arbor press to install the bearing/plate onto the shaft balancer as is shown in Drawing 4. Press the bearing/plate down until it touches the cylinder. This should create a snug fit between the bearing plates and the cylinder.
9. Install the 98463 Retaining Ring convex side up onto the shaft balancer and compress the ring into the groove on the shaft.
10. Install the 01024 O-Ring into the cylinder and apply a small amount of the Dynabrade Air Lube onto the o-ring.
11. **MARK** the edge of the housing motor opening to identify the location of the line-up notch on the inside of the housing.
12. Align the cylinder line-up pin with the '**NOTCH LOCATION MARK**' and install the motor into the housing. **Note:** Be certain that the line-up pin enters the notch in the housing.
13. Use the 57092 Repair Collar to carefully hold the tool in a vise so that the counterweight is pointing up.
14. Use the 56058 Lock Ring Tool to tighten the 56046 Lock Ring by turning it clockwise. Torque to 17 N-m/150 lbs. in. **Note:** Apply a slight amount of pressure down onto the lock ring while turning the lock ring tool counterclockwise. The lock ring should find the thread. Secure the lock ring by turning it clockwise.
15. Install the 57896 Felt Seal onto the shaft balancer.
16. For vacuum models refer to the Vacuum Conversion Instructions on page 6 and diagrams on page 8, install the vacuum components.
17. Apply a small amount of the Loctite® #271 (or equivalent) in two places on the inside of the pad base bearing pocket. Place the pad base on the tool plate of the arbor press so that the bearing pocket is facing up. Use the flat face of the arbor ram to push the 54552 Bearing into the pad base until the bearing is flush with the surface of the pad base.
18. Use the arbor press and the small end of the 57091 Bearing Press Tool to carefully install the pad base with the bearing onto the shaft balancer. Align the (4) 57890 Isolator Post with the 4 mounting holes in the pad base.
19. Insert a 3/16" dia. drive punch through one of the holes in the pad base to prevent the shaft balancer from rotating. Apply a small amount of the Loctite® #243 (or equivalent) to the internal threads of the shaft balancer and install the 95344 Screw along with the 95935 Washer. Torque to 5 N-m/45 lbs. in.
20. Use a Phillips Screwdriver to install the (4) 96539 Screws, (4) 96538 Washers and sanding pad. **Note:** When installing a vacuum pad orient the open oval pocket in the pad toward the back of the sander so that it will align with the vacuum tube.

**Motor Assembly Complete.**

## **Disassembly/Assembly Instructions – Dynabug® II Sander (cont.)**

### **Valve Assembly:**

1. Apply a small amount of the **95842** Dynabrade Air Lube (10W/NR or equivalent) to the **01025** O-Rings (2) and install these onto the **59075** Speed Regulator.
2. Install the speed regulator with o-rings into the housing and secure it with the **95697** Retaining Ring. Install the **98459** O-Ring onto the **58363** Valve Stem, apply a small amount of the Dynabrade Air Lube to the o-ring and install shorter end of the valve stem into the speed regulator.
3. Install the **01464** Seal, and the **58365** Tip Valve so that it fits under the end of the valve stem. Install the **01468** Spring so that the small end of the spring fits against the tip valve.
4. Apply a small amount of the Loctite® #567 (or equivalent) to the threads of the **01494** Inlet Bushing and install the bushing into the housing. Torque to 23 N-m/200 lbs. in.
5. First place **57041** Comfort Platform onto the housing (line-up over notches), next install **57888** Throttle Lever and secure it to the housing with the **94590** Pin.

**Valve Assembly Complete.**

## **Vacuum Conversion Instructions**

### **Disassemble:**

1. Close off the air supply and disconnect the sander from the air supply line.
2. Use the **96034** (12mm) Hex Key or the **96066** (3/4") Hex Socket to remove different muffler components.
3. Remove the sanding pad.

### **Assembly:**

1. Follow the Sander Assembly Instructions (Steps 15 - 20) to install the pad base and sanding pad when performing vacuum conversions. **Note:** Use Loctite® #380 (or equivalent) to secure the **57896** Felt Seal to the **57897** Vacuum Tube. The vacuum tube may have to be adjusted so that the felt seal sits flush and parallel to the pad base.

### **Non-Vac to Self-Generated Vac (Note: Remove 96540 Vacuum Port Cover Prior to Conversion)**

#### **For connection to Dynabrade Self-Contained Dust Collection Systems**

1. Apply 4 drops of the Loctite® #380 (or equivalent) to the **57897** Vacuum Tube and secure the vacuum tube to the **57083** Vacuum Adapter. Use Loctite® #380 (or equivalent) to attach the **57896** Felt Seal to the **57897** Vacuum Tube.
2. Install the **95526** O-ring onto the **57066** Muffler Body, positioning the o-ring between the shoulder and the 4 protrusions. Insert the **57066** Muffler Body with cone muffler and o-ring through the **57083** Vacuum Adapter.
3. Use the **96034** (12mm) Hex Key to secure all of these components to the housing.
4. Install the **57068** Vacuum Nozzle into the vacuum adapter so that the slots face out. Make sure that the raised portion of the nozzle aligns with the groove in the vacuum adapter.
5. Install the **57067** Vacuum Tube into the vacuum adapter so that the 2 holes in the vacuum tube align with the 2 holes in the vacuum adapter.
6. Insert the **96197** Pin through the vacuum adapter and the **57067** Vacuum Tube.
7. Attach the sander to the dust collection receptacle.

### **Non-Vac to Central Vac (Note: Remove 96540 Vacuum Port Cover Prior to Conversion)**

1. Apply 4 drops of the Loctite® #380 (or equivalent) to the **57897** Vacuum Tube and secure the vacuum tube to the **57093** Vacuum Adapter. Use Loctite® #380 (or equivalent) to attach the **57896** Felt Seal to the **57897** Vacuum Tube.
2. Insert the **69274** Muffler Assembly through the **57093** Vacuum Adapter.
3. Use the **96066** (3/4") Hex Socket to secure all of these components to the housing.
4. Attach the sander to the central vacuum system.

### **Self-Generated Vac to Central Vac**

1. Use a 1/8" dia. drive punch to remove the **96197** Pin.
2. Remove the **57067** Vacuum Tube by turning the tube clockwise and pulling it out of the vacuum adapter.
3. Pull the **57068** Vacuum Nozzle out of the vacuum adapter.
4. Use the **96034** (12mm) Hex Key to remove the **57066** Muffler Body, **57065** Cone Muffler, **95526** O-Ring and **57083** Vacuum Adapter.
5. Apply 4 drops of the Loctite® #380 (or equivalent) to the **57897** Vacuum Tube and install it onto the **57093** Vacuum Adapter. Use Loctite® #380 (or equivalent) to attach the **57896** Felt Seal to the **57897** Vacuum Tube.
6. Install the **57896** Felt Seal onto the **57897** Vacuum Tube. Insert the muffler body and cone muffler through the **57093** Vacuum Adapter.
7. Use the **96066** (3/4") Hex Socket to secure **69274** Muffler Assembly and vacuum components to the housing.
8. Attach the sander to the central vacuum system.

### **Central Vac to Self-Generated Vac**

1. Use the **96066** (3/4") Hex Socket to remove **69274** Muffler Assembly and vacuum components.
2. Install the **95526** O-Ring onto the **57066** Muffler Body, positioning the o-ring between the shoulder and 4 protrusions.
3. Remove the **57897** Vacuum Tube from the **57093** Vacuum Adapter.
4. Apply 4 drops of the Loctite® #380 (or equivalent) to the **57897** Vacuum Tube and install it onto the **57083** Vacuum Adapter. Use Loctite® #380 (or equivalent) to attach the **57896** Felt Seal to the **57897** Vacuum Tube.
5. Insert the **57066** Muffler Body with cone muffler and o-ring through the **57083** Vacuum Adapter and use the **96034** (12mm) Hex Key to secure all of these components to the housing.
6. Install the **57068** Vacuum Nozzle into the vacuum adapter so that the slots face out. Make sure that the raised portion of the nozzle aligns with the groove in the vacuum adapter.
7. Install the **57067** Vacuum Tube into the vacuum adapter so that the 2 holes in the vacuum tube align with the 2 holes in the vacuum adapter.
8. Insert the **96197** Pin through the vacuum adapter and the **57067** Vacuum Tube.
9. Attach the sander to the dust collection receptacle.

**Tool Assembly Complete. Please allow 30 minutes for adhesives to cure before operating tool.**

**Important:** Motor should now be tested for proper operation at 90 PSIG. 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 cause before use. Before operating, place 2-3 drops of Dynabrade Air Lube (P/N **95842**) directly into air inlet with throttle lever depressed. Operate tool for 30 seconds to determine if tool is operating properly and to allow lubricating oils to properly permeate motor.

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