For Serial No. 9D1000 and Higher

Parts Page Reorder No. PD00•80R
Effective November, 2000
Supersedes PD96•54

Models:

57600 – Non-Vacuum
57601 – Self-Generated Vac-Ready
57602 – Self-Generated Basic Vac
57603 – Self-Generated Deluxe Vac
57604 – Central Vac-Ready

8" Dynorbital® Random Orbital Sander

Air Powered, Random Orbital Sander, 10,000 RPM

⚠WARNING **Always operate, inspect and maintain this tool in accordance with the Safety Code for portable air tools (ANSI B186.1) and any other applicable safety codes and regulations. Please refer to Dynabrade's Warning/Safety Operating Instructions for more complete safety information.**

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No.	Part#	Description
1	**11579**	Spacer (4) (Ctl.-Vac Only)
2	**96427**	Washer (4) (Ctl.-Vac Only)
3	**96424**	Screw (4) (Ctl.-Vac Only)
4	**57735**	Shroud (Ctl.-Vac Only)
5	**57371**	Shroud
6	**97010**	Screw (9)
7	**95886**	Washer (13)
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	56234	Pad (Non-Vac)
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12	**54628**	Counter Balance
13	**01678**	Screw (3)
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15	**56133**	Bearing
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17	**01788**	Screw (6)
18	**01211**	Lock Washer (10)
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21	**56046**	Lock Ring
22	**54672**	Shaft
23	**54673**	Key
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34	**56671**	Handle
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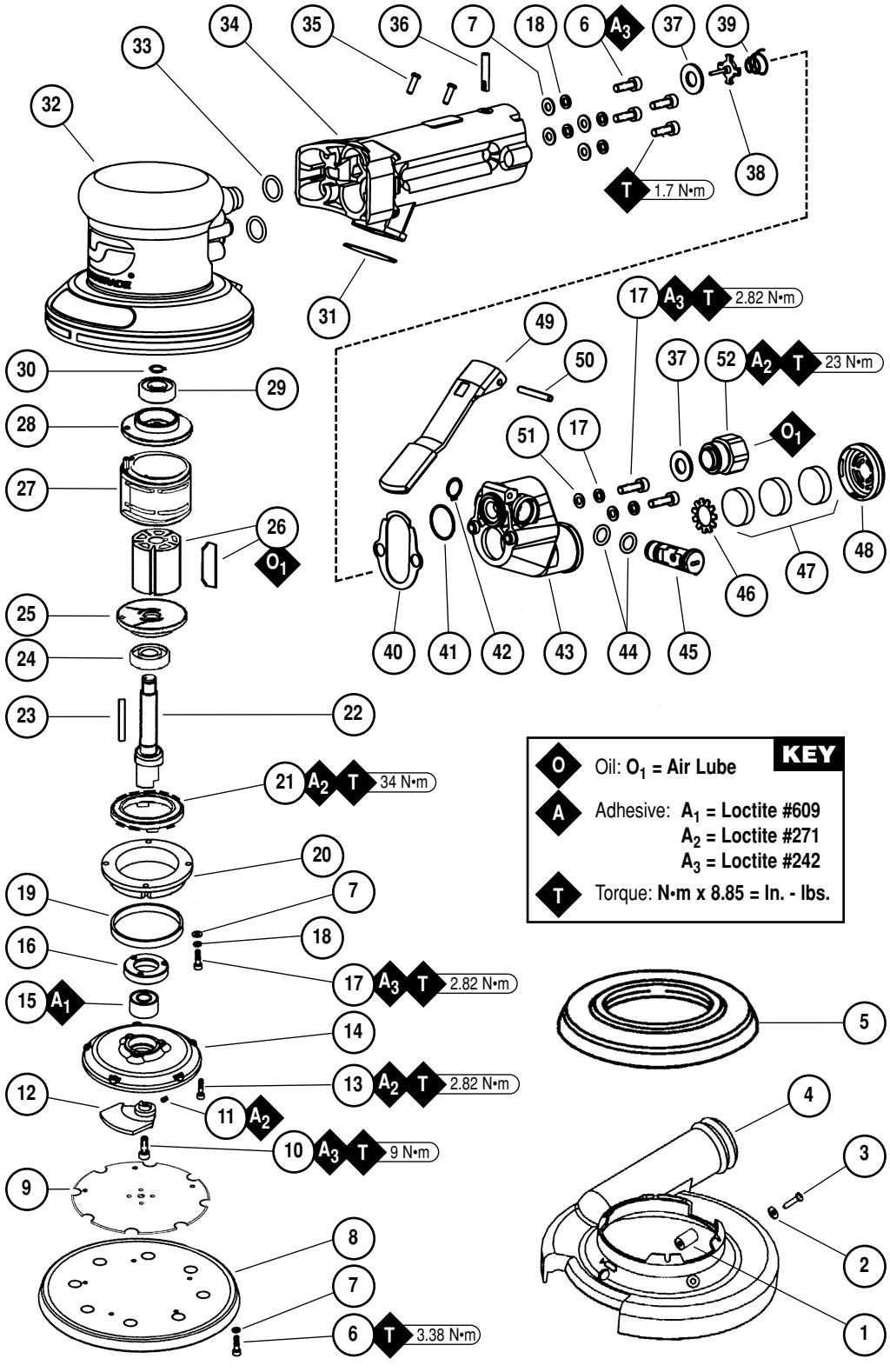
47	**54195**	Muffler (Non-V, Ctl.-V)
48	**54194**	Muffler Cap (Non-V, Ctl.-V)
49	**57344**	Throttle Lever
50	**01017**	Pin
51	**96421**	Flat Washer (2)
52	**01494**	Inlet Bushing



Important Operating, Maintenance and Safety Instructions

Carefully read all instructions before operating or servicing any Dynabrade® Abrasive Power Tool.

Warning: Hand, wrist and arm injury may result from repetitive work motion and overexposure to vibration.

Important: All Dynabrade Rotary Vane air tools must be used with a Filter-Regulator-Lubricator to maintain all warranties.

Operating Instructions:

Warning: Eye, face, respiratory, sound and body protection must be worn while operating power tools. Failure to do so may result in serious injury or death. Follow safety procedures posted in workplace.

1. With power source disconnected from tool, securely fasten abrasive/accessory on tool.
2. Install air fitting into inlet bushing of tool. **Important:** Secure inlet bushing of tool with a wrench before attempting to install the air fitting to avoid damaging valve body housing.
3. Connect power source to tool. Be careful not to depress throttle lever in the process.

Maintenance Instructions:

1. Check tool speed regularly with a tachometer. If tool is operating at a higher speed than the RPM marked on the tool, the tool should be serviced to correct the cause before use.
2. Some silencers on air tools may clog with use. Clean and replace as required.
3. All Dynabrade Rotary Vane air motors should be lubricated. Dynabrade recommends one drop of air lube per minute for each 10 SCFM (example: if the tool specifications state 40 SCFM, set the drip rate of your filter-lubricator at 4 drops per minute). Dynabrade Air Lube (P/N **95842**: 1 pt. 473 ml.) is recommended.
4. It is strongly recommended that all Dynabrade rotary vane air tools be used with a Filter-Regulator-Lubricator to minimize the possibility of misuse due to unclean air, wet air of insufficient lubrication. Dynabrade recommends the following: **11405** Air Line Filter-Regulator-Lubricator — Provides accurate air pressure regulation, two-stage filtration of water contaminants and micro-mist lubrication of pneumatic components. Operates 40 SCFM @ 100 PSIG has 3/8" NPT female ports.
5. Use only genuine Dynabrade replacement parts. To reorder replacement parts, specify the **Model #**, **Serial #**, and **RPM** of your machine.
6. A Motor Tune-Up Kit (P/N **96122**) is available which includes assorted parts to help maintain motor in peek operating condition. Please refer to Dynabrade's Preventative Maintenance Schedule for a guide to expectant life of component parts.
7. Mineral spirits are recommended when cleaning the tool and parts. Do not clean tool or parts with any solvents or oils containing acids, esters, keytones, chlorinated hydrocarbons or nitro carbons.

Safety Instructions:

Products offered by Dynabrade should not be converted or otherwise altered from original design without expressed written consent from Dynabrade, Inc.



- **Important:** User of tool is responsible for following accepted safety codes such as those published by the American National Standards Institute (ANSI).
- Always disconnect power supply before changing abrasive/accessory or making machine adjustments.
- Inspect abrasives/accessories for damage or defects prior to installation on tools.
- Please refer to Dynabrade's Warning/Safety Operating Instructions Tag (Reorder No. **95903**) for more complete safety information.

Notice

All Dynabrade motors use the highest quality parts and metals available and are machined to exacting tolerances. The failure of quality pneumatic motors can most often be traced to an unclean air supply or the lack of lubrication. Air pressure easily forces dirt or water contained in the air supply into motor bearings causing early failure. It often scores the cylinder walls and the rotor blades resulting in limited efficiency and power. Our warranty obligation is contingent upon proper use of our tools and cannot apply to equipment which has been subjected to misuse such as unclean air, wet air or a lack of lubrication during the use of this tool.

Full One Year Warranty

Following the reasonable assumption that any inherent defect which might prevail in a product will become apparent to the user within one year from the date of purchase, all equipment of our manufacture is warranted against defects in workmanship and materials under normal use and service. We shall repair or replace at our factory, any equipment or part thereof which shall, within one year after delivery to the original purchaser, indicate upon our examination to have been defective. Our obligation is contingent upon proper use of Dynabrade tools in accordance with factory recommendations, instructions and safety practices. It shall not apply to equipment which has been subject to misuse, negligence, accident or tampering in any way so as to affect its normal performance. Normally wearable parts such as bearings, contact wheels, rotor blades, etc., are not covered under this warranty.

Model Number	Motor HP (W)	Motor RPM	Sound Level	Air Flow Rate CFM/SCFM (LPM)	Air Pressure PSIG (Bars)	Pad Dia. Inch (mm)	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
57600	.31 (231)	10,000	82 dB(A)	3/19 (538)	90 (6.2)	8 (203)	3.4 (1.5)	12 (305)	4-1/2 (114)
57601-03	.31 (231)	10,000	82 dB(A)	3/19 (538)	90 (6.2)	8 (203)	3.4 (1.5)	12 (305)	4-1/2 (114)
57604	.31 (231)	10,000	82 dB(A)	3/19 (538)	90 (6.2)	8 (203)	3.4 (1.5)	12 (305)	4-1/2 (114)

Additional Specifications: Air Inlet Thread 1/4" NPT • Hose I.D. Size 3/8" (10mm)

Motor Disassembly/Assembly Instructions

Important: Manufacturers warranty is void if tool is disassembled before warranty expires.
A complete Tune-Up Kit, part number **96122,** is available which includes assorted parts to help maintain and repair motor. These instructions are for use in conjunction with Part Number **57325** Repair Kit, which includes special tools for proper disassembly/assembly of tool.

To Disassemble:

1. Disconnect tool from power source. Invert machine and secure in soft jaw vise, or use **57092** Collar (supplied in **57325** Repair Kit).
2. Remove sanding pad with 3mm hex wrench. (Supplied in **57325** Repair Kit)
3. Remove **54628** Counterbalance:
   a.) Loosen **95887** Screw with 2mm hex wrench.
   b.) Remove **95898** Screw with 5mm hex wrench.
   Note: 54628 Counter Balance must be held stationary while removing **95898** Screw.
   c.) Remove counterbalance.
4. Pull out mounting plate sub-assembly.
5. Disassemble mounting plate sub-assembly:
   a.) Remove **01678** (3) Screws from underside of mounting plate with a 3mm hex wrench.
   b.) Press out **56133** Bearing from mounting plate by using **57091** Bearing Press Tool (supplied in **57325** Repair Kit).
6. Insert **56058** Lock Ring Wrench (supplied in **57325** Repair Kit) into corresponding tabs of lock ring and unscrew. Motor may now be lifted out for service.
7. Remove **95626** Retaining Ring. Upper motor may now be disassembled.
8. The **54629** Rear Bearing Plate contains a "press fit" bearing. Remove the rear plate assembly by securing the **54631** Cylinder in a standard 2 inch bearing separator or use a standard bearing puller gripped on the cylinder inlet and exhaust area. Push the **54672** Motor Shaft through the bearing.
9. Remove cylinder, rotor, blades and key.
10. Remove **54630** Front Plate and **02695** Front Motor Bearing, using (#2) arbor press. Support inside edge of the bearing cavity wall on the front plate while pressing on the small end of the **54672** Motor Shaft.
11. Remove **01206** Bearing from rear bearing plate with utility press pin.
12. Press **02695** Bearing from **54672** Motor Shaft.

To Assemble:

Important: Be certain parts are clean and in good repair before assembling.

1. Press **02695** Bearing onto **54672** Motor Shaft down to shoulder.
2. Assemble **54630** Front Bearing Plate onto shaft and press plate on outer race of **02695** Bearing.
3. Place rotor key, rotor, and blades onto shaft. **Note:** Be certain rotor "floats" easily on the shaft. Because the design of this motor uses a "floating rotor", there is no need to set or adjust gap between the rotor and end plates.
4. Place **54631** Cylinder over rotor. The "short" line-up pin goes toward the front plate.
5. Place rear bearing plate (with **01206** Rear Bearing pressed into place) over shaft and "long" end of line-up pin and press fit in place.
6. Install **95626** Retaining Ring, concave side toward motor. **Note:** Be certain retaining ring is completely pressed down into its groove on the shaft.
7. Grease the rubber seals inside the housing using a small amount if multi-purpose grease or petroleum jelly.
   Note: Be certain that rubber seals in housing have not pulled out of their seat during disassembly. If this has happened re-seat the seals by pushing them until they are flush with inside diameter.
8. Secure motor housing in vise using soft jaws or **57092** Collar (Supplied in **57325** Repair Kit). Slide motor assembly into secured housing.
   Note: With handle pointing toward you be certain that the line-up pin enters slot to the right of center.
9. Apply a bead of #271 Loctite® (or equivalent) onto outer edge of **56046** Lock Ring and tighten with **56058** Lock Ring Wrench to (34 N•m /300 in. – lbs.).
10. Mounting plate sub-assembly:
    a.) Apply #609 Loctite to the inner bore of **54627** Mount plate.
    b.) Press **56133** Bearing into, **54685** Bearing Retainer.
    c.) Apply one drop of #271 Loctite to (3) **01678** Screws. Drop Screws thru holes in **54627** Mount Plate. Using them to line-up with threaded holes in **54658** Bearing Retainer.
    d.) Press **54627** Mount Plate down onto **56133** Bearing and **54685** Bearing Retainer.
    e.) Screw (3) **01678** Screws into **54685** Bearing Retainer. (Torque screws to 2.82 N•m/25 in. – lbs.)
11. Install mount plate sub-assembly onto **54672** Shaft.
12. Install **54628** Counter Balance onto **54672** Shaft, (matching profile of **54672** Shaft with profile on **54628** Counter Balance).
13. Apply one drop of #242 Loctite (or equivalent) to threads of **95898** Screw, and install screw by using a 5mm hex key. (Torque screw to 9 N•m/80 in. – lbs.) **Note: 54898** Counter Balance must be held stationary while installing **95898** Screw.
14. Apply a small amount of #271 Loctite (or equivalent) to threads of **95887** Set Screw and place with a 2mm hex key.
15. Attach sanding back-up pad to the mount plate with (5) **95886** Washers and (5) **97010** Screws. (Torque screws to 3.38 N•m/30 in. – lbs.)

Installation Complete.

To Disassemble Valve And Speed Regulator Assemblies:

1. Invert tool and place in soft jaw vise or use **57092** Repair Collar.
2. Loosen and remove **97010** Screws (2) and **01211** Lock Washers (2) from **56672** Adapter.
3. Carefully remove **56672** Adapter making sure no parts fall to the ground. On non-vacuum models, pry off **54194** Muffler Cap and remove **54195** Muffler (3).
4. Remove **57343** Speed Regulator by detaching **98597** Retaining Ring with a pair of snap ring pliers. Remove **01024** O-Rings with a small screwdriver.
5. Remove tip valve assembly from housing.

(continued on next page)

Motor Disassembly/Assembly Instructions (continued)

To Assemble Valve And Speed Regulator Assemblies:

1. Lightly lubricate **01024** O-Rings and slide them on **57343** Speed Regulator. Install through regulator hole on **57373** Adapter. Place **95558** Retaining Ring on groove of speed regulator using a pair of retaining ring pliers.
2. Line-up hole valve stem with inlet hole in handle. Place **01464** Seal into handle. Insert **01472** Tip Valve so that the metal pin goes through the hole in the valve stem. Place **01468** Spring into the housing, small end first.
3. Install **98597** O-Ring onto **56672** Adapter and place **56673** Gasket onto handle.
4. Gently line-up **57373** Adapter onto handle so no parts shift when tightening. Apply #242 Loctite to **01788** Screws (2), install along with **01211** Lock Washers (2) and **96421** Flat Washer (2).

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

Important: Motor should operate at 10,000 RPM at 6.2 bar (90 PSIG). RPM should be checked with a tachometer. Before operating, we recommend that 3-4 drops of pneumatic tool oil be placed directly into the air inlet with throttle lever depressed. Operate tool for 30 seconds to determine if machine is operating properly and to allow lubricating oils to properly dispense through machine.

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Self-Contained Dust Collection Systems



54290 "Bag-in-Box" System

- **95361** Air Line 5' long.
- **50682** Flex-Hose 1" dia. x 6' long.
- **95362** Rubber Connectors (5).
- **95575** Durable Box Receptacle.
- Sample paper bag included. Paper bag reorder:
  50692 (400/case) or
  50693 (24 per package.)



50617, 56303 – 6' Long Flex-Hose Systems

50617: Has **50683** Standard Reusable Felt Bag with hook 'n loop end for easy emptying.

56303: Has **56304** Zipper-Lock Bag.

- Both systems include 6' long **50682** Flex-Hose.
- Shown with optional **95361** Air Line (1/4").

Optional Accessories Service Kits



96122 Motor Tune-Up Kit:

- Includes assorted parts to help maintain and repair motor.



57325 Motor Repair Kit:

- Contains special tools for disassembly/assembly of machine.

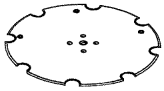


95266 – 3mm Hex Key



01089 Safety Lock Lever

- A **57375** Valve Stem or **57396** Universal Valve Stem must be used in conjunction with this lever to function properly.



56238 8 in. R.O.S. Pad Adapter

- This adapter is used to provide space between the back-up pad and the **57371** Shroud.

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DYNABRADE®

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