For Serial No. 9L1437 and Higher

Parts Page Reorder No. PD00•26
Effective March, 2000
Supersedes PD99•07

Models:
57200 – 5" Non-Vacuum
57201 – 5" Vac-Ready
57202 – 5" Basic Vac
57203 – 5" Deluxe Vac
57204 – 5" Central Vac-Ready
57210 – 6" Non-Vacuum
57211 – 6" Vac-Ready
57212 – 6" Basic Vac
57213 – 6" Deluxe Vac
57214 – 6" Central Vac-Ready

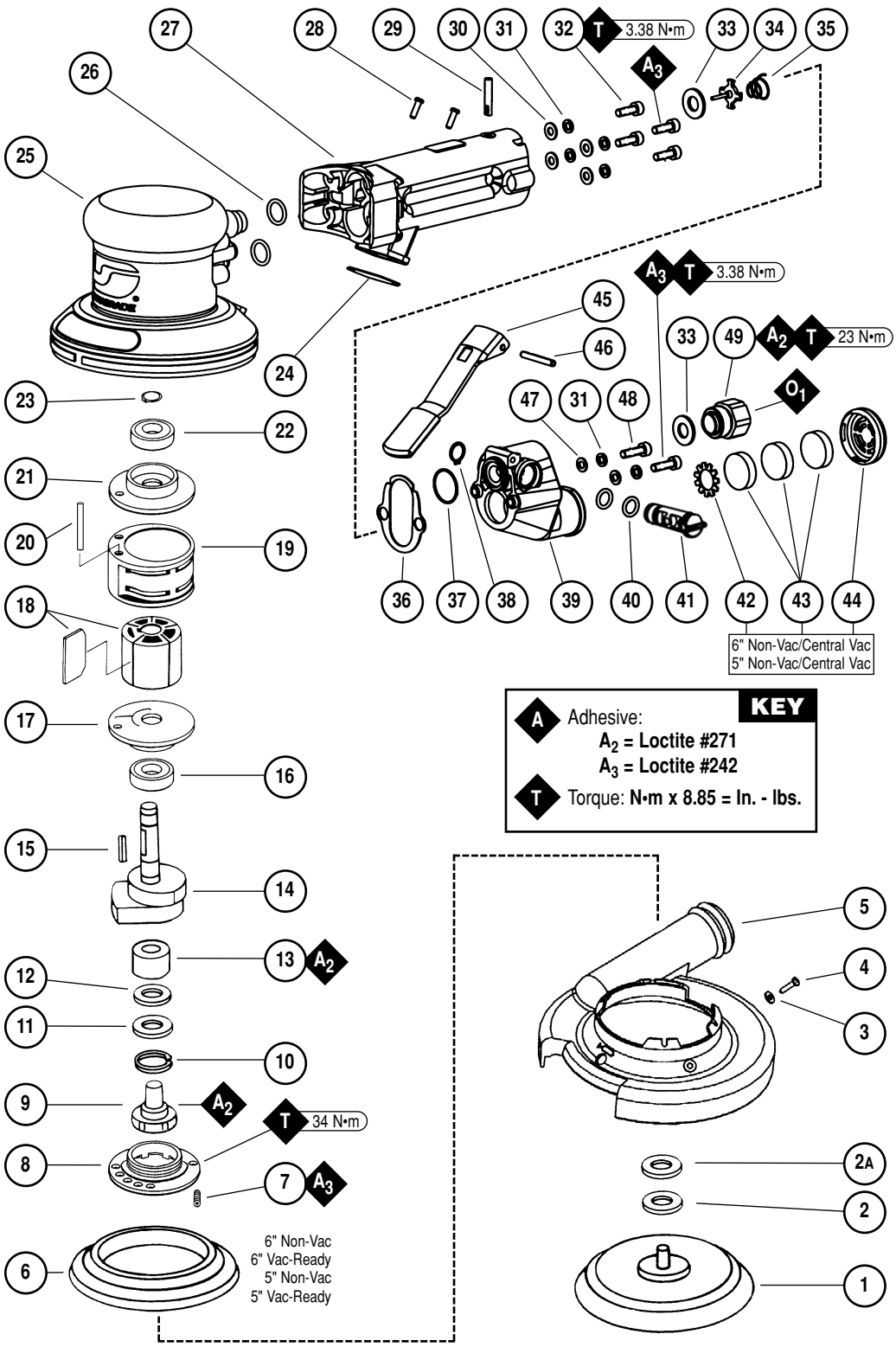
5" & 6" Two Hand Dynorbital® Sander

Air Powered, Random Orbital Sander, 12,000 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.**

Index Key

No.	Part #	Description
1	**56104**	5" Vac Sanding Pad
	56105	6" Vac Sanding Pad
	56106	5" Non-Vac Sanding Pad
	56107	6" Non-Vac Sanding Pad
2	**95858**	Spacer
2A	**95859**	Spacer
3	**95886**	Washer (4) (CVR)
4	**96425**	Screw (4) (CVR)
5	**57737**	6" Vacuum Shroud
6	**57369**	Lip Seal Shroud
7	**96166**	Set Screw
8	**57332**	Lock Ring
9	**57069**	Balancer Shaft
10	**95630**	Snap Ring
11	**95628**	Bearing Shield
12	**56053**	Bearing Seal
13	**56052**	Balancer Bearing
14	**57364**	5" Motor Shaft Balancer
	57365	6" Motor Shaft Balancer
15	**54673**	Rotor Key
16	**02695**	Bearing
17	**54630**	Front Bearing Plate
18	**54705**	Rotor/Blade Set
19	**54631**	Cylinder Assy. (incl. #20)
20	**95865**	Line-Up Pin
21	**54629**	Rear Bearing Plate
22	**01206**	Bearing
23	**95626**	Retaining Ring
24	**57382**	Gasket (5", 6" Non-Vac 6" Central Vac)
	57383	Gasket (5", 6" Vac-Ready 5" Central Vac)
25	**57205**	Housing - **57200**
	57206	Housing - **57201, 02, 03**
	57207	Housing - **57204**
	57208	Housing - **57210**
	57209	Housing - **57211, 12, 13**
	57218	Housing - **57214**
26	**95523**	O-Ring (2)
27	**56671**	Handle
28	**96123**	Screw (2)
29	**57396**	Valve Stem
30	**95886**	Flat Washer (4)
31	**01211**	Split Lock Washer (6)
32	**97010**	Screw (4)
33	**01464**	Seal (2)
34	**01472**	Tip Valve
35	**01468**	Conical Spring
36	**56673**	Gasket
37	**96328**	O-Ring
38	**98597**	Retaining Ring
39	**56672**	Adapter Assembly
40	**01024**	O-Ring (2)
41	**57343**	Speed Regulator
42	**54199**	Muffler Seat
43	**54195**	Muffler (3)
44	**54194**	Muffler Cap
45	**57344**	Throttle Lever
46	**01017**	Pin
47	**96421**	Flat Washer (2)
48	**01788**	Screw (2)
49	**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 possibly of misuse due to unclean air, wet air or 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	Pad Dia. Inch (mm)	Sound Level	Air Flow Rate CFM/SCFM (LPM)	Air Pressure PSIG (Bars)	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
57200	.4 (298)	12,000	5 (127)	78 dB(A)	4/27 (765)	90 (6.2)	2.7 (1.2)	10-1/4 (260)	4-1/2 (114)
57201-03	.4 (298)	12,000	5 (127)	82 dB(A)	4/27 (765)	90 (6.2)	2.7 (1.2)	10-1/4 (260)	4-1/2 (114)
57204	.4 (298)	12,000	5 (127)	86 dB(A)	4/27 (765)	90 (6.2)	2.7 (1.2)	10-1/4 (260)	4-1/2 (114)
57210	.4 (298)	12,000	6 (152)	82 dB(A)	4/27 (765)	90 (6.2)	4.5 (2.0)	10-1/2 (267)	4-1/2 (114)
57211-13	.4 (298)	12,000	6 (152)	88 dB(A)	4/27 (765)	90 (6.2)	4.5 (2.0)	10-1/2 (267)	4-1/2 (114)
57214	.4 (298)	12,000	6 (152)	84 dB(A)	4/27 (765)	90 (6.2)	4.5 (2.0)	10-1/2 (267)	4-1/2 (114)

Additional Specifications: Orbit Diameter 3/16" (5mm) • Spindle Thread 5/16"-24 Female • Air Inlet Thread 1/4" NPT • Hose Size 1/4" (6mm)

Motor Assembly/Disassembly Instructions

Important: Manufacturer's warranty is void if tool is disassembled before warranty expires.
These instructions are for use in conjunction with Part Number 57260 Repair Kit, which includes special tools for proper disassembly/assembly of tool. A complete Tune-Up Kit, Part Number 96122 is available which includes assorted parts to help maintain and repair motor.

To Disassemble:

1. Invert machine and secure in vise, using **57092** Collar (supplied in **57260** Repair Kit) or padded jaws.
2. Remove sanding pad with **50679** Open-End Wrench (supplied with sander).
3. Using a 2mm hex key remove the **96166** Set Screw.
4. Insert **56058** Lock Ring Wrench (supplied in **57260** Repair Kit) into corresponding tabs of lock ring and unscrew. Motor may now be lifted out for service. **Important: Do not remove the rubber seals from the motor housing.**
5. Remove **95626** Retainer Ring. Motor may now be disassembled.
6. 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/exhaust area. Push the motor shaft balancer through the bearing. Remove cylinder, rotor, vanes and key.
7. Remove **54630** Front Plate and press off **02695** Front Motor Bearing, using a 2 inch bearing separator and a #2 arbor press.
8. Remove **01206** Bearing from the **54629** Rear Bearing Plate.
9. Disassemble the balancer assembly as follows:

   a.) Remove **95630** Snap Ring. Screw the threaded portion of the **56056** Bearing Puller (supplied in **57260** Repair Kit) into the **57069** Balancer Shaft. **Note:** Heat the outside of the motor shaft balancer to approximately 200° F. Now, using the slider weight, pull the assembly out.

   b.) Press off **56052** Bearing and remove loose parts.
10. If during step 8, the **56052** Bearing remains in the motor shaft balancer, it can be removed by heating the shaft balancer again and using the **56081** Bearing Chuck, **56080** Bearing Puller Stud, **95334** Hex Nut connected to the **56056** Balancer Bearing Puller Assembly. Remove the bearing.

To Assemble:

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

1. Assemble the balancer assembly as follows:

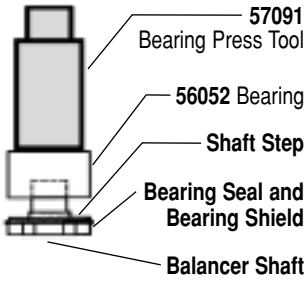
   a.) Install **95630** Snap Ring onto **57069** Balancer Shaft. Install **95628** Shield with convex face toward hex of balancer shaft.

   b.) Install **56053** Bearing Seal. **Note:** Be certain seal is pressed completely over shaft step.

   c.) Apply a slight amount of #271 Loctite® (or equivalent) to inside diameter of the **56052** Bearing and the outside diameter of the **57069** Balancer Shaft.

   d.) Press **56052** Bearing, with seal side toward hex of balancer shaft, up to shaft step using **57091** Bearing Press Tool (supplied in **57260** Repair Kit) (Drawing 1).
2. Place the motor shaft balancer in a soft jaw vise with large end up.
3. Apply a slight amount of #271 Loctite® (or equivalent) on the outside diameter of the **56052** Bearing and slide the balancer shaft assembly into the motor shaft balancer until **56052** Bearing is firmly seated at bottom. Squeeze **95630** Snap Ring into groove in motor shaft balancer to complete the assembly. Remove from vise.
4. Press **02695** Bearing onto the motor shaft balancer down to the shoulder using **57091** Bearing Press Tool (Drawing 2).
5. Install **54630** Front Bearing Plate onto **02695** Bearing and check for smooth rotation (Drawing 3).
6. Place **54673** Rotor Key, **54671** Rotor, and **54674** 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 the end plates.
7. Place **54631** Cylinder over rotor. The "short" line-up pin goes toward the **54630** Front Bearing Plate.
8. Install **01206** Bearing into **54629** Rear Bearing Plate. Place bearing and bearing plate over shaft and "long" end of line-up pin and press fit in place (Drawing 4).
9. Install **95626** Retaining Ring concave side toward motor. **Note:** Be certain that retaining ring is completely pressed down onto its groove on the shaft.
10. Grease the rubber seals inside the housing using a small amount of 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 seals by pushing them until they are flush with inside diameter.

Drawing 1



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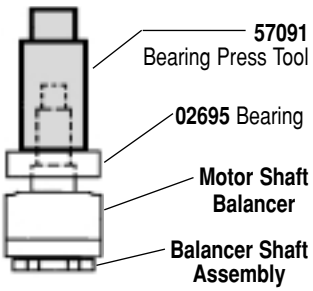
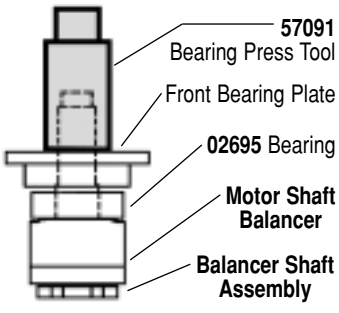
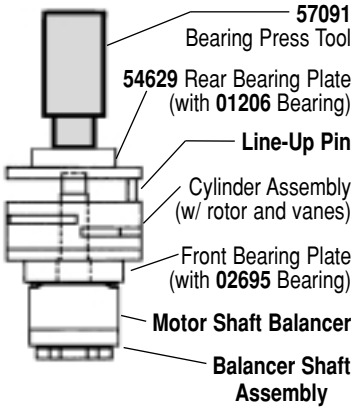
Drawing 2



Drawing 3



Drawing 4



Motor Disassembly/Assembly Instructions (continued)

11. Secure motor housing in vise, using **57092** Collar or padded jaws. Slide motor assembly into secured housing.
Note: With handle pointing toward you while looking into motor bore, be certain line-up pin enters slot to right side of center.
12. Tighten **57332** Lock Ring with **56058** Lock Ring Tool to 34 N•m/300 on. - lbs. Attach shroud and weight-mated sanding pad.
13. Apply one drop of #242 Loctite® (or equivalent) to threads of **96166** Set Screw and reinstall into **57332** Lock Ring. Do not over tighten.

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 **01788** Screws (2), **01211** Lock Washers (2) and **96421** Flat Washers from **56672** Adapter.
3. Carefully remove **56672** Adapter making sure no parts fall to the ground. On non-vacuum and central 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.

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 **56672** Adapter. Place **98597** Retaining Ring on groove of speed regulator using a pair of retaining ring pliers.
2. Line up hole in valve stem with inlet hole in handle. Place **01464** Seal in handle. Insert **01472** Tip Valve so that metal pin goes through the valve stem. Place **01468** Spring into the housing, small end first. Install **56673** Gasket and **96328** O-Ring.
3. Gently line up **56672** Adapter onto handle so no parts shift when tightening. Replace and tighten **01788** Screws (2), **01211** Lock Washers (2), and **96421** Flat Washers (2).

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

Important: Motor should operate at 12,000 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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Accessories

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").

Service Kits

96122 Motor Tune-Up Kit:

- Includes assorted parts to help maintain and repair motor.

01089 Safety Lock Lever

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

57260 Motor Repair Kit:

- Contains special tools for disassembly/assembly of machine.

Visit Our Web Sit: www.dynabrade.com

Email: Customer.Service@Dynabrade.com

DYNABRADE®

DYNABRADE, INC., 8989 Sheridan Drive • Clarence, NY 14031-1490 • Phone: (716) 631-0100 • Fax: 716-631-2073 • International Fax: 716-631-2524
DYNABRADE EUROPE S.àr.l., Zone Artisanale • L-5485 Wormeldange—Haut, Luxembourg • Telephone: 352 76 84 94 1 • Fax: 352 76 84 95 1

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