Parts Page Reorder No. PD96•55
Effective September, 1996

Models:
57250 – 3 1/2" Non-Vac/Central Vac
57251 – 5" Non-Vac
57252 – 5" Central Vac
57253 – 6" Non-Vac
57254 – 6" Central Vac

Electric Random Orbital Sander

⚠WARNING **Always operate, inspect and maintain this tool in accordance with the safety standards established by OSHA, Underwriters Laboratories, Inc., The Canadian Standards Association and The American National Standards Institute (ANSI). Dynabrade, Inc. assumes no responsibility for any damage or accidents resulting from the misuse of this tool, its misapplication or nonadherence to precautionary safety measures.**

General Safety Rules

Read and save all instructions before operating this power tool.

Warning:
When using electric tools, basic safety precautions should always be followed to reduce the risk of a fire, electric shock, and personal injury, including the following:

1. **Keep work area clean.** Cluttered areas and benches invite accidents.
2. **Consider work area environment.** Do not expose tools to rain. Keep work area well lit. Do not use power tools in damp or wet locations. Do not use tools in the presence of flammable liquids or gases.
3. **Guard against electric shock.** Prevent body contact with grounded surfaces. For example; pipes, radiators, ranges, refrigerator enclosures.
4. **Keep children away**. Do not let visitors contact tool or extension cord. All visitors should be kept away from work area.
5. **Store idle tools.** When not in use, tools should be stored in a dry, or locked place - out of the reach of children.
6. **Do not force tool.** It will do a better and safer job at its intended rate.
7. **Use the right tool.** Do not force a small tool or attachment to do the job of a heavy duty tool. Do not use tool for purposes not intended.
8. **Dress properly.** Do not wear loose fitting clothing or jewelry. Clothes can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
9. **Use safety glasses.** Also use face-shield or dust mask if operation area is dusty.
10. **Do not abuse cord.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil and sharp edges.
11. **Secure work.** Use clamps or a vice to hold workpiece. It's safer than using your hand and it frees up both hands to operate tool.
12. **Do not overreach.** Keep proper footing and balance at all times.
13. **Maintain tools with care.** Keep tools clean for better use and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean and free from oil and grease.
14. **Do not leave tool running**. Disconnect tools when not in use, before servicing, when changing belts, contact arms, etc.
15. **Remove keys and wrenches.** Form a habit of checking to see that all keys and adjusting wrenches are removed from tool before turning it on.
16. **Avoid accidental starting.** Do not carry around plugged in tool with finger on lever. Be sure lever is off when plugging in.
17. **Out-door use extension cords**. When tool is used outdoors, use only extension cord suitable for outdoor use. They should be marked with the suffix W-A (for UL) or W (for CSA in Canada).
18. **Stay alert**. Watch what you are doing. Use common sense. Do not operate tool when you are tired.
19. **Check damaged parts**. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, breakage of moving parts, binding of moving parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced. Do not use tool if switch does not turn tool on or off.
20. **Avoid gaseous areas.** Do not operate portable electric tools in gaseous or explosive atmospheres. Motors in these tools normally spark, and the sparks can ignite fumes.
21. **Do not alter or misuse tool.** This tool is precision built. Any alteration or modification not specified is misuse and may result in a dangerous condition. Only these accessories and attachments that are found in this instruction manual are acceptable for use with this tool. The use of any other accessory or attachment might present a risk to the operator.
22. **Replacement parts.** When servicing, use only identical replacement parts. When ordering replacement parts, please specify model and serial numbers of your machine.

Voltage Warning
Before connecting the tool to a power source (receptacle, outlet, etc.), be sure the voltage supplied is the same as what is specified on the nameplate of the tool. A power source with greater than that specified for tool can result in **serious injury** to the user as well as damage to the tool. Using a power source with voltage less than the nameplate rating is harmful to the tool's motor. If in doubt, **do not plug in the tool.**

Double Insulation
Your Electric Sander is **double-insulated** to give you added safety. This means that the tool is constructed throughout with two separate "layers" of electrical insulation, or one double thickness of insulation between you and the tool's electrical system.

Tools built with this type of insulation system are not intended to be grounded. As a result, your Electric Sander is equipped with a two prong plug which permits you to use extension cords without concern for maintaining a ground connection.

Note: Double-insulation does not take the place of normal safety precautions when operating this tool. The insulation system is added for protection against injury resulting from a possible electrical insulation failure within the tool.

Caution: When servicing double-insulated tools, **use only identical replacement parts.** Repair or replace damaged cords.

Extension Cords
Double-insulated tools have two-wire cords, and can be used with either two-wire or three-wire extension cords. Only round jacketed extension cords should be used, and we recommend that they be listed by Underwriters Laboratories (UL) - (CSA in Canada). If the extension cords will be used outside, the cord must be suitable for outdoor use. They should be marked with the suffix W-A (for UL) or W (for CSA in Canada). Any cord marked as an outdoor cord can also be used for indoor work.

Polarized Plugs: To reduce the risk of electric shock, this equipment has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

Warning: Keep extension away from the immediate working area.

Important Operating 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.

Operating Instructions:

Warning: Eye, face 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. Connect power source to tool. Be careful **not** to depress paddle switch in the process.
3. Hold tool by the motor housing only. One or two hands may be used. **Do Not** hold tool by head/housing assembly. **Keep hands away from all grinding/sanding edges and moving parts.** A side handle is included for two hand operation of tool. (See "Installing Side Handle" instructions.)
4. Depress paddle switch (trigger) and hold to start tool. Release switch to stop tool.

Shroud Angle Adjustment:

To pivot shroud:

1. Disconnect power source.
2. Loosen **96160** Set Screw on shroud with the supplied 5/64" hex wrench (p/n - **95050**).
3. Pivot shroud to desired angle and retighten **96160** Set Screw.

Sanding Pad Change Instructions:

1. Disconnect power source.
2. Insert 26 mm wrench (p/n - **50679**) through slot in shroud until secure on hex of balancer shaft.
3. Turn pad counter clockwise to remove. Turn pad clockwise to secure a new pad.
4. Remove wrench and connect to power source.

Installing Side Handle:

The side handle may be installed on either side of the rotor housing for right or left hand operation. Position the side handle on the side offering the best comfort and control of the tool. To install, thread side handle into side handle socket on desired side of motor housing and tighten securely.

Safety Instructions:

Warning: Eye, face 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.

Important: User of tool is responsible for following accepted safety codes such as those published by the American National Standards Institute (ANSI).

- Operate machine for 30 seconds before application to workpiece to determine if machine is working properly and safely before work begins.
- Always disconnect power supply before changing abrasive or making machine adjustments.
- Inspect abrasives and 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.

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

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.

Motor Assembly/Disassembly Instructions
Electric Random Orbital Sander

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

Disassembly:

1. Place the shaft balancer in a vise. Using a thin screwdriver, pick out the end of the **95630** Snap Ring and peel out.
2. Screw the threaded portion of **56056** Bearing Puller into **57069** Balancer Shaft and use slider weight to pull assembly out.

Note: Shaft balancer may need to be heated to 200 degrees to separate.

3. Press off **56052** Bearing with bearing separator and remove bearing seal and bearing shield

Disassembly complete.

Reassembly:

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

1. Install **95630** Snap Ring onto **57069** Balancer Shaft. Install **95628** Shield with convex face toward hex of balancer shaft.
2. Install **56053** Seal.

Note: Be certain seal is pressed completely over shaft step.

3. Apply 1 drop of #271 Loctite® (or equivalent) and spread over several places around the outside diameter of balancer shaft.
4. Press **56052** Bearing with seal side toward hex of balancer shaft.
5. Apply 1 drop of #271 Loctite® (or equivalent) and spread over several places around the outside of the bearing and slide into shaft balancer until firmly seated.
6. Squeeze **95630** Snap ring into groove in shaft balancer. Allow 30 minutes for the adhesive to cure.

Reassembly complete.

Extension Cords

Grounded tools require a three wire extension cord. Double insulated tools can use either a two or three wire extension cord. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage resulting in loss of power and possible tool damage. Refer to the table below to determine the required minimum wire size.

Nameplate Amperes	Extension Cord Length					
	25'	50'	75'	100'	150'	200'
0–5.0	16	16	16	14	12	12
5.1–8.0	16	16	14	12	10	–
8.1–12.0	14	14	12	10	–	–
12.1–15.0	12	12	10	10	–	–
15.1–20.0	10	10	10	–	–	–

**Based on limiting the line voltage drop to live volts at 150% of the rated amperes*

The smaller the gauge number of the wire the greater the capacity of the cord. For example a 14 gauge cord can carry a higher current than a 16 gauge cord. When using more than one extension cord to make up the total length, be sure each cord contains at least the minimum wire size required. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum wire size.

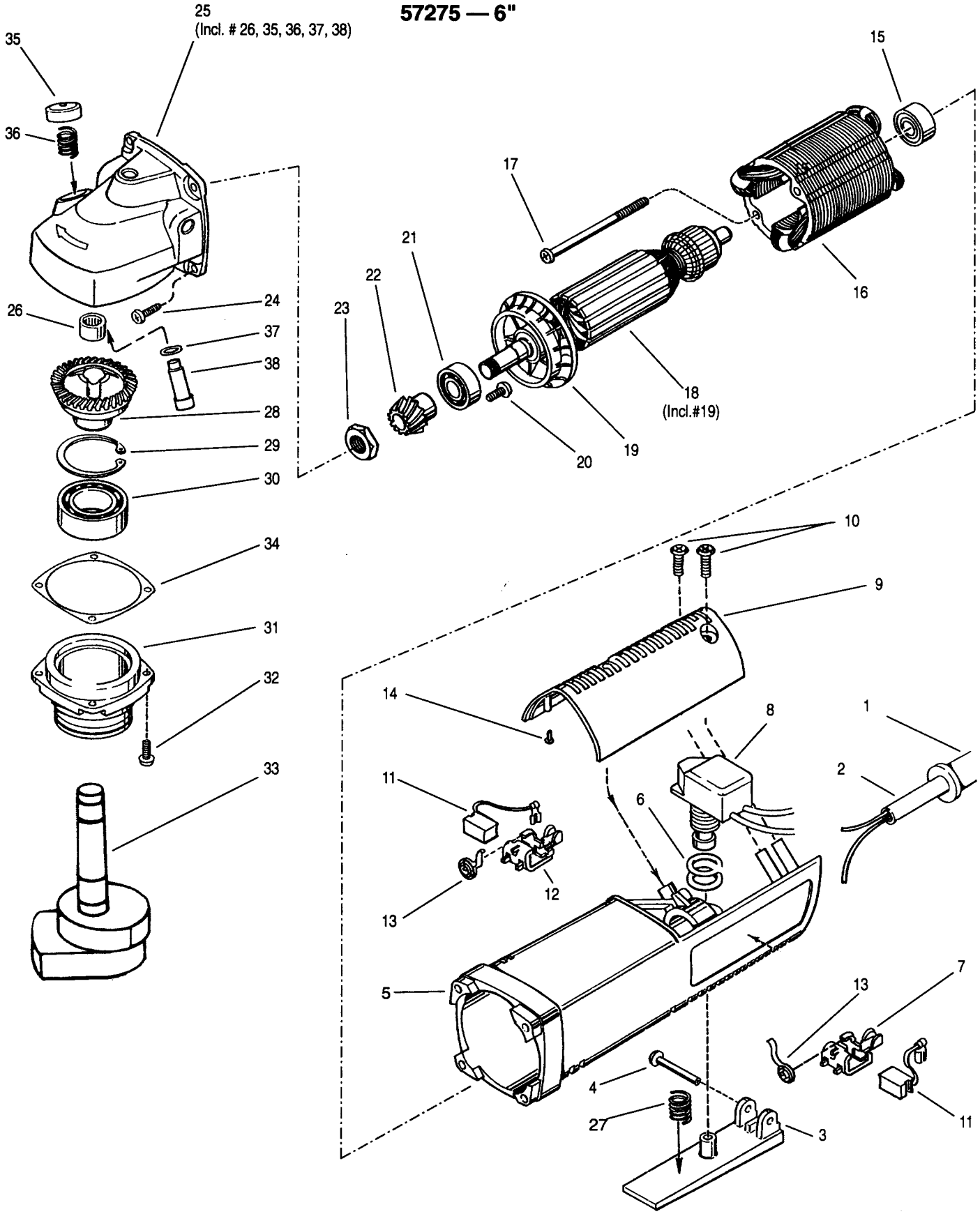
Guidelines For Using Extension Cords

- If you are using an extension cord outdoors, be sure it is marked with the suffix "W-A" ("W" in Canada) to indicate that it is acceptable for outdoor use.
- Be sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it.
- Protect your extension cords sharp objects, excessive heat and damp or wet areas.

Read and save all instructions for future reference

Motor Assembly — Parts Breakdown

57273 — 3-1/2"
57274 — 5"
57275 — 6"

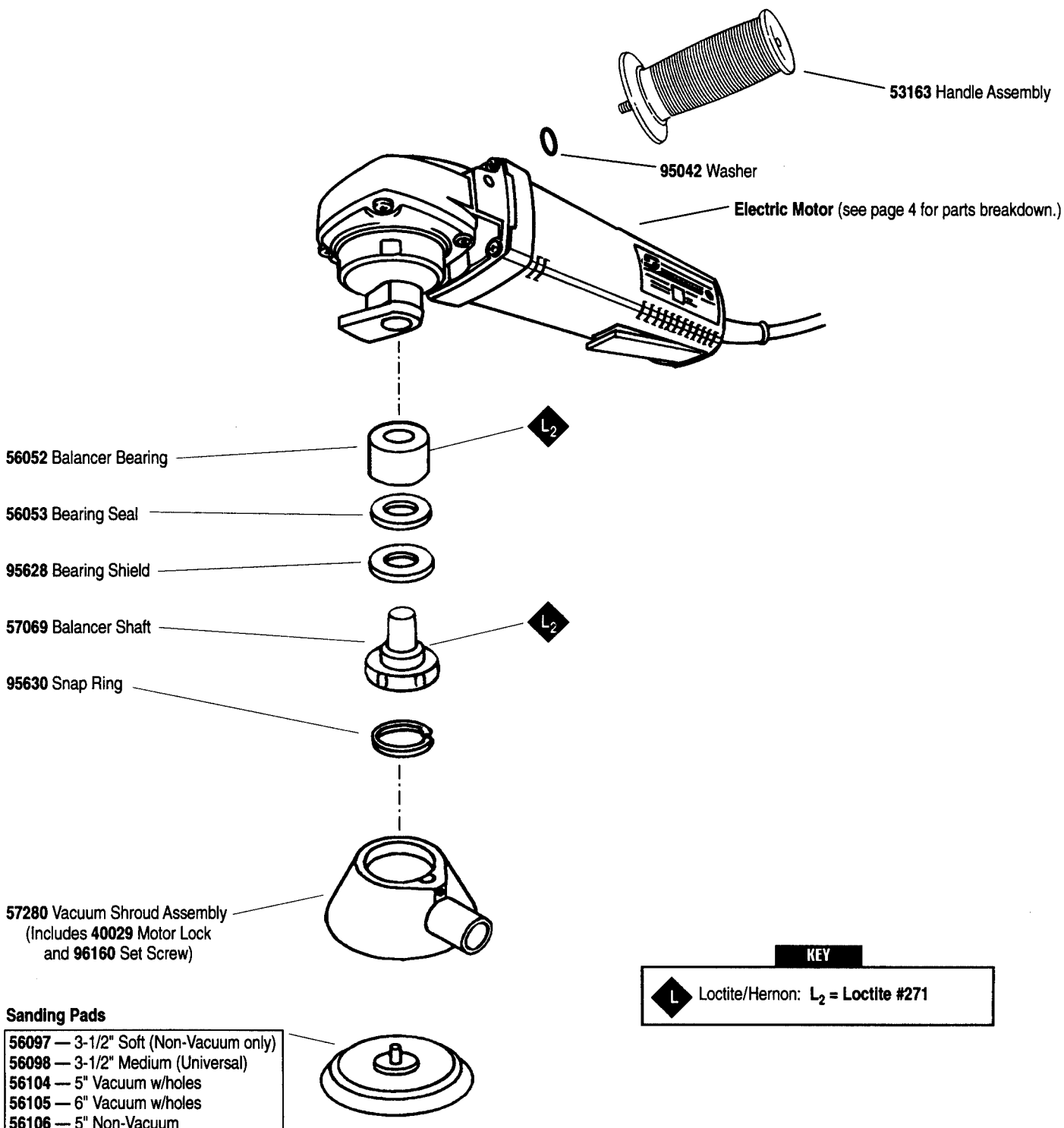


Motor Assembly — Parts Breakdown

To order replacement parts, specify model number and serial number of your machine.

Fig.	Part No.	Description	No. Req.
1	**40567**	Cord Protector	(1)
2	**40522**	Cord Set	(1)
3	**40524**	Trigger	(1)
4	**40525**	.146 Dia. x 1-3/8" Rivet	(1)
5	**40526**	Motor Housing	(1)
6	**40527**	O-Ring	(2)
7	**40528**	Left Brush Holder	(1)
8	**40529**	Switch	(1)
9	**40532**	Cover	(1)
10	**40548**	8-16 x 5/8" Pan Hd. Slt. Plast. T-20	(3)
11	**40534**	Carbon Brush	(2)
12	**40535**	Right Brush Holder	(1)
13	**40536**	Brush Spring	(2)
14	**40537**	Rubber Bumper	(2)
15	**40538**	Rear Ball Bearing	(1)
16	**40539**	120 Volt Field	(1)
17	**40540**	8-16 x 2-1/2" Pan Hd. Slt. Plast. T-20	(2)
18	**40541**	120 Volt Armature	(1)
19	**40542**	Fan	(1)
20	**40543**	8-32 x 3/8" Pan Hd. Slt. Plast. T-20	(2)
21	**40544**	Front Ball Bearing	(1)
22	**40545**	Pinion	(1)
23	**40546**	1/4-28 Hex Lock Nut	(1)
24	**40548**	8-16 x 5/8" Pan Hd. Slt. Plast. T-20	(4)
25	**40549**	Gear Case Assembly	(1)
26	**40550**	Needle Bearing	(1)
27	**40551**	Coil Spring	(1)
28	**40553**	Spiral Bevel Gear	(1)
29	**40554**	Retaining Ring-Internal	(1)
30	**40555**	Ball Bearing	(1)
31	**40557**	Spindle Hub	(1)
32	**40558**	8-32 x 1/2" Pan Hd. Slt. Taptitet T-20	(4)
33	**57270**	3 1/2" Shaft Balancer	(1)
	57271	5" Shaft Balancer	(1)
	57272	6" Shaft Balancer	(1)
34	**40561**	Shim	(0-3)
35	**40562**	Cap	(1)
36	**40564**	Coil Spring	(1)
37	**40565**	O-Ring	(1)
38	**40566**	Lock Pin	(1)

Tool Assembly



KEY

L Loctite/Hernon: L_2 = **Loctite #271**

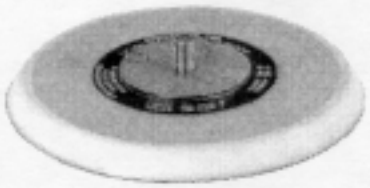
Sanding Pads

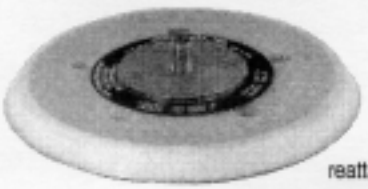
56097 — 3-1/2" Soft (Non-Vacuum only)
56098 — 3-1/2" Medium (Universal)
56104 — 5" Vacuum w/holes
56105 — 6" Vacuum w/holes
56106 — 5" Non-Vacuum
56107 — 6" Non-Vacuum

Random Orbital Sanding Pads

Perfectly balanced and weight-mated to Random Orbital Sanders...
Our pad fits most other popular sanders, too!

Premium Urethane Resists Heat Build-Up — Available in Soft or Medium Density





Vinyl Face for PSA discs and Hook Face for reattachable scrim-backed discs.

Rubber with Vinyl Face for PSA Discs

Rubber with Vinyl Face for PSA Discs
"Post Pattern" for Enhanced Vacuum Pick-Up

No need to align vacuum holes! Saves time on disc changes.

Rubber with Hook Face "Long Nap" for Abrasive Impregnated Non-Woven Nylon Discs

3-1/2", 5" and 6" diameter disc pads have 5/16"-24 male threaded stud. The 3-1/2" diameter discs, without holes, can be used on vacuum and non-vacuum 3-1/2" Dynorbital® Supreme sanders.

Premium Urethane Disc Pad Part Numbers by Pad Diameter

Disc Pad Description	3-1/2"	5"		6"	
	NO HOLES	NO HOLES	HOLES	NO HOLES	HOLES
Soft Density/Vinyl Face for PSA Discs	56097	–	–	–	–
Soft Density/Low Profile/Vinyl Face for PSA Discs	–	56102	56100	56103	56101
Soft Density/Hook Face "Short Nap" for Scrim-Backed Discs	54311	56157	56155	56158	56156
Medium Density/Vinyl Face for PSA Discs	56098	–	–	–	–
Medium Density/Low Profile/Vinyl Face for PSA Discs	–	56106	56104	56107	56105
Medium Density/Hook Face "Short Nap" for Scrim-Backed Discs	54313	54325	54326	54327	54328

Rubber Disc Pad Part Numbers by Pad Diameter

Disc Pad Description	3-1/2"	5"		6"	
	NO HOLES	NO HOLES	HOLES	NO HOLES	HOLES
Medium Density/Vinyl Face for PSA Discs	–	50630	50631	50632	50633
Medium Density/Post Pattern/Vinyl Face for PSA Discs	–	–	50695	–	50696
Medium Density/Hook Face "Short Nap" for Scrim-Backed Discs	–	–	–	–	–
Medium Density/Hook Face "Long Nap" for Non-Woven Nylon Discs	–	50605	50607	50606	50610

Unit = 10 Pads Each. On 5" and 6" pads, no holes, refers to non- vacuum style sanding pads.

Required Weight of Pads

3-1/2" Models — Use pad weighing 80g.
5" Models — Use pad weighing 100g.
6" Models — Use pad weighing 130g.

Toll Free (U.S.A.) 1-800-828-7333
Toll Free (Can.) 1-800-344-1488

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.àrl., Zone Artisanale • L-5485 Wormeldange—Haut, Luxembourg • Telephone: 352 76 84 94 • Fax: 352 76 84 95

PRINTED IN USA