Parts Page Reorder No. PD03•17
Effective May, 2003
Supersedes PD02•20

Dynafine® Sander

Air Motor and Machine Parts

Models:
57900 — 13,000 RPM, Detail Sander
57910 — Versatility Kit
57930 — 13,000 RPM, Finger Sander

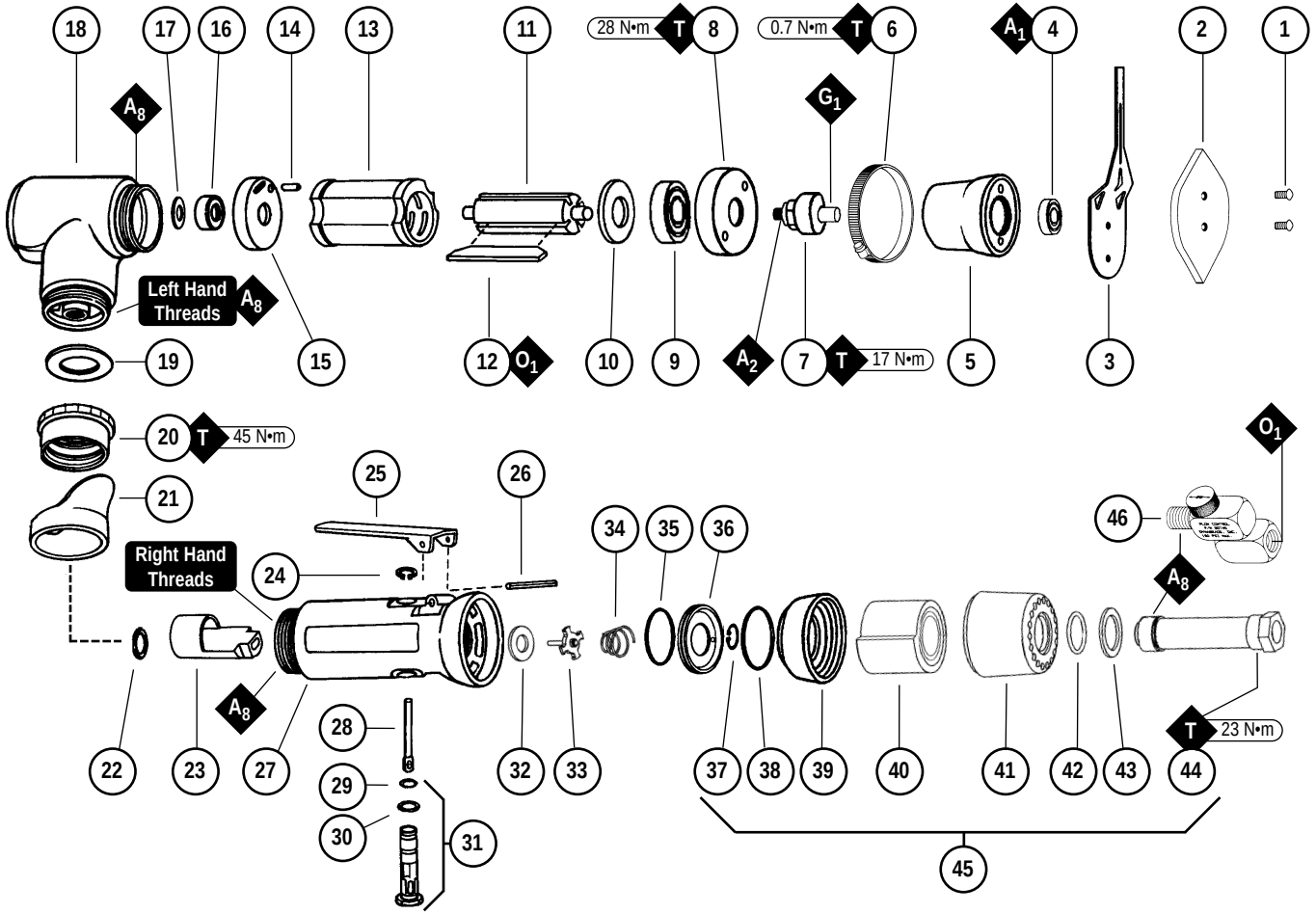
KEY

- O — Oil: O_1 = Air Lube
- A — Loctite: A_1 = Loctite #609, A_2 = Loctite #271, A_8 = Loctite #567
- T — Torque: N•m x 8.85 = In. - lbs.
- G — Grease: G_1 = Lubriplate 630 AA

⚠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	**96258**	Screw (2)
2	**57953**	Hook Face Pad
3	**57932**	3/8" Sanding Arm
4	**11016**	Bearing
5	**57975**	Boot Assembly
6	**95884**	Boot Clamp Assembly
7	**57961**	Cam Assembly
8	**57962**	Exhaust Cover
9	**56305**	Bearing
10	**53161**	Front Bearing Plate
11	**50777**	Rotor
12	**01480**	Blades (4/pkg.)
13	**01476**	Cylinder
14	**50767**	Pin
15	**02673**	Rear Bearing Plate
16	**02696**	Bearing
17	**02679**	Shield
18	**01546**	Housing
19	**01548**	Gasket
20	**01461**	Lock Nut
21	**01558**	Collar
22	**95523**	O-Ring
23	**01470**	Insert
24	**95558**	Retaining Ring
25	**01448**	Throttle Lever
	01462	Safety Lock Lever
26	**12132**	Pin
27	**01488**	Housing
28	**01449**	Valve Stem
29	**95730**	O-Ring
30	**01024**	O-Ring
31	**01469**	Speed Regulator Assembly
32	**01464**	Seal
33	**01472**	Tip Valve
34	**01468**	Spring
35	**96065**	O-Ring
36	**57970**	Air Control Ring
37	**95711**	Retaining Ring
38	**95438**	O-Ring
39	**94521**	Muffler Base
40	**94528**	Felt Muffler
41	**94522**	Muffler Cap
42	**95375**	O-Ring
43	**94526**	Spacer
44	**94523**	Inlet Adapter
45	**94519**	Muffler Assembly
46	**94407**	1/4" Flow Control



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.
4. Check tool speed with tachometer. If tool is operating at a higher speed than the RPM marked on the tool or operating improperly, the tool should be serviced to correct the cause before use.

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 20 SCFM (example: if the tool specifications state 40 SCFM, set the drip rate of your filter-lubricator at 2 drops per minute).
   Dynabrade Air Lube (P/N **95842**: 1 pt. 473 ml) is recommended.
4. An Air Line Filter-Regulator-Lubricator must be used with this air tool to maintain all warranties. 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 **96236**) is available which includes assorted parts to help maintain motor in peak operating condition.
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).
- Operate machine for one minute before application to workpiece to determine if machine is working properly and safely before work begins.
- 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.

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)	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
All Models	.12 (89)	13,000	65 dB(A)	3/20 (566)	90 (6.2)	1.6 (.7)	9 (229)	3-3/4 (95)

Additional Specifications: Air Inlet Thread 1/4" NPT • Hose Size 1/4" (8 mm)

Disassembly/Assembly Instructions - Dynafine®

Important: Manufacturer's warranty is void if tool is disassembled before warranty expires.
Notice: Dynabrade strongly recommends the use of their **52296** Repair Collar (sold separately) during assembly/disassembly of the Dynafine® sander.
All of the special repair tooling referred to in these instructions can be ordered from Dynabrade. Please refer to this parts page for proper part identification.

Motor Disassembly:

1. Disconnect the tool from the air supply.
2. Place the **52296** Repair Collar around the tool and secure it in a vise so that the sanding attachment is facing up.
3. Remove the sanding attachment with the **95266** (3 mm) Hex Key.

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4. Loosen the **95884** Boot clamp and remove the boot assembly.
5. Use a 3 mm adjustable pin spanner wrench or the **50971** Lock Ring Tool to remove the **57962** Exhaust Cover by turning it counterclockwise.
6. Pull the exhaust cover along with the motor assembly from the **01546** Housing.
7. Fasten the **96346** (2 in.) Bearing Separator around the end of the **01476** Cylinder that is closest to the **02673** Rear Bearing plate. Place the bearing separator on the table of the **96232** #2 Arbor Press so that the **57961** Cam Assembly is pointing toward the floor. Use a 3/16" dia. flat end drive punch as a press tool and push the rear stem of the **50777** Rotor out of the **02696** Bearing.
8. The **02696** Bearing can be removed from the rear bearing plate with a **96210** Bearing Removal Tool and the arbor press.
9. Secure the **50777** Rotor in a vise with an aluminum or bronze jaws and remove the **57961** Cam Assembly by turning it counterclockwise.
10. Remove the front bearing/plate from the **50777** Rotor with a 3/16" dia. flat end drive punch and the arbor press.

Motor Disassembly Complete.

Valve Disassembly:

1. Place the **52296** Repair Collar around the valve housing and secure it in a vise so that the air inlet is pointing up.
2. Use two wrenches to remove the air fitting or the **94407** Flow Control from the **94523** Inlet Adapter.
3. Loosen the **94523** Inlet Adapter from the valve housing and remove the **94520** Muffler Assembly. **Note:** Use the exploded view of the muffler assembly on the front of this parts page to identify the specific components and their proper order of assembly.
4. Remove the **12132** Pin and the throttle lever with a drive punch.
5. Use retaining ring pliers to remove the **95558** Retaining Ring and the **01469** Speed Regulator Assembly along with the **01449** Valve Stem.

Valve Disassembly Complete.

Motor Assembly:

Important: Clean and inspect all parts for defects before assembling.

1. Use the **01476** Cylinder as an adjustment jig. Place the cylinder on the table of the arbor press.
2. Position the **50777** Rotor inside the cylinder so that the front face of the rotor is even with the top edge of the cylinder.
3. Install the **53161** Front Bearing Plate onto the rotor and cylinder so that the flat side of plate faces the vane slots of the motor.
4. Place the **56305** Bearing onto the front shaft of the rotor. Using a **96244** Bearing Press Tool, press against the inner race of the bearing pushing it down to the bearing plate and cylinder.
5. Secure the **50777** Rotor in a vise with aluminum or bronze jaws so that the bearing plate assembly is pointing up.
6. Place the **57962** Exhaust Cover over the bearing/plate assembly.
7. Apply a small amount of #271 Loctite (or equivalent) to the threads of the **57961** Cam Assembly and install it onto the rotor. (Torque to 17 N•m/150 in.-lbs.)
8. Remove this assembly from the vise and install **01480** Vanes that have been lubricated with **95842** Dynabrade Air Lube (10W/NR or equivalent).
9. Place **01476** Cylinder onto the assembly so that the air inlet of the cylinder will line up with the air inlet holes in the **02673** Rear Bearing Plate.
10. Use the **96216** Bearing Press Tool so that the press tool rest against the outer race of the **02696** Bearing and press the bearing all the way into the **02673** Rear Bearing Plate.
11. Position the motor assembly in the arbor press with the **57961** Cam Assembly resting on the table of the arbor press. Use the opposite end of the **96216** Bearing Press Tool so that the press tool rest against the inner race of the **02696** Bearing. Carefully press the rear bearing/plate assembly onto the **50777** Rotor until the **02673** Rear Bearing Plate comes in contact with the cylinder. Achieve a snug fit between the bearing plates and the cylinder while still being able to push the cylinder from side to side with a slight force.
12. Apply a small amount of grease to the seal of the **02696** Bearing and position the **02679** Shield against the bearing.
13. Install the motor assembly into the **01546** Housing making sure that it slides all the way in.
14. Apply a small amount of Loctite #567 (or equivalent) to the threads of the **57595** Housing and thread the **57962** Exhaust Cover onto the housing.
15. Apply a small amount of Loctite #609 (or equivalent) to the outer race of the **11016** Bearing. Use the **96243** Bearing Press tool to push against the outer race of the bearing and press the bearing into the boot assembly.
16. Apply a small amount of the **95542** Grease (or equivalent) to the shaft of the cam assembly and install the boot assembly along with the **95884** Boot Clamp.
17. Tighten **95884** Boot Clamp and torque to .68 N•m/6 in.-lbs.
18. Use the **95266** (3 mm) Hex Key to install the sanding attachment.

Motor Assembly Complete.

Valve Body Assembly:

1. Place the **52296** Repair Collar around the valve housing and secure it in a vise so that the air inlet is pointing up.
2. Install the **01469** Speed Regulator Assembly (includes o-rings) along with the **01449** Valve Stem into the valve housing. Secure the speed regulator assembly in the valve housing with the **95558** Retaining Ring.
3. Install the **01464** Seal into the air inlet opening of the valve housing.
4. Line up the hole in the **01449** Valve Stem with the air inlet hole in the valve housing. Use needle nose pliers to insert the **01472** Tip Valve into the air inlet hole of the valve housing so that the metal stem of the tip valve passes through the hole in the valve stem.
5. Install the **01468** Spring so that the small end of the spring fits onto the back end of the **01472** Tip Valve.
6. Install the **96065** O-Ring onto the **57970** Air Control Ring. When installing these into the valve housing make sure to line up the holes in the air control ring with the exhaust area of the valve housing.
7. Assemble the **94520** Muffler. **Note:** Use the exploded view of the muffler assembly on the front of this parts page to identify the specific components and their proper order of assembly.
8. Apply a small amount of the Loctite #567 (or equivalent) to the threads of the **94523** Inlet adapter and install the muffler assembly onto the valve housing. (Torque to 23 N•m/200 in.- lbs.)
9. Install the throttle lever and secure it in place with the **12132** Pin.

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

Throttle Lever Positioning Procedure:

1. Place the **52296** Repair Collar around the valve housing and secure it in a vise so that the **01546** Housing is pointing up.
2. Slip the **01558** Collar down onto the valve housing to expose the **01461** Lock Nut.
3. With a firm hold on the **01546** Housing, use a 34 mm or an adjustable wrench to turn the **01461** Lock Nut counterclockwise to loosen the **01546** Housing from the valve housing.

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Disassembly/Assembly Instructions - Dynafine® (Continued)

4. Orient the throttle lever to the operators desired grip and positioning. **Note:** Allow for additional rotation of the **01546** Housing as the **01461** Lock Nut is tightened.
5. With a firm hold on the **01546** Housing to reduce its rotation, use a 34 mm or an adjustable wrench to tighten the **01461** Lock Nut. (Torque to 45 N•m/400 in.- lbs.)

Important: When performing this procedure be careful not to entirely separate the **01546** Housing from the valve body assembly. Loosen the **01461** Lock Nut only enough to make the adjustment.

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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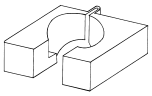
Optional Accessories



52296 Repair Collar
- Specially designed collar for use in vise to prevent damage to valve body housing during disassembly/assembly.

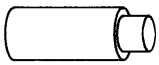
50971 Lock Ring Tool
- Lock Ring Tool has a 3/8 in. square socket for use with 3/8 in. drive; breaker bar, ratchet head, or torque wrenches.

96236 Motor Tune-Up Kit
- Includes assorted parts to help maintain and repair motor.

57931 Wide Sanding Arm
- Available with 1/8" (3 mm) thick x 2" (51 mm) long sponge/vinyl face platen, for use with 3/4" (19 mm) wide x 2" (52) long PSA-backed abrasive strips.

96216, 96243, 96244 Bearing Press Tool
- This tool is used to safely press a bearing plate or onto a shaft.

96346 Bearing Separator
- Use the separator to remove bearings and gears.



96210 Bearing Removal Tool
- This tool is used to pass through the I.D. of the bearing plate and to push against the I.D. of the bearing.

95542 Grease 10 oz.
- Multi-purpose grease for all types of bearings, cams, gears.
- High film strength; excellent resistance to water, steam, etc.
- Workable range 0˚ F to 300˚ F.

95541 Push-type Grease Gun
- One-hand operation.

96232 #2 Arbor Press
- This arbor press is ideal for the disassembly and assembly of air motors.

Dynabrade Air Lube
- Formulated for pneumatic equipment.
- Absorbs up to 10% of its weight in water.
- prevents rust and formation of sludge.
- Keeps pneumatic tools operating longer with greater power and less down time.

95842: 1pt. (473 ml)
95843: 1 gal. (3.8 L)

Pads/Abrasives

Triangular Shaped Pads

Part Number	Description	Density
57950	Vinyl Face for PSA Abrasives	Medium
57951	Hook-Face for Reattachable Abrasives	Medium

Tear Drop Shaped Pads

Part Number	Description	Density
57952	Vinyl Face for PSA Abrasives	Medium
57953	Hook-Face for Reattachable Abrasives	Medium

Triangular Reattachable Coated Abrasive Discs

Part Number	Grit
93913	80
93914	120
93915	150
93916	180

Uses **57951** Hook-Face Pad.

Triangular Sponge Abrasive Discs

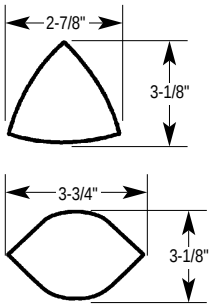
Part Number	Grit
93923	Coarse
93924	Medium
93926	Fine
93927	Super Fine

Uses **57950** Vinyl Face Pad.
Aluminum Oxide PSA Sponge

Triangular Non-Woven Nylon Discs

Part Number	Grit
93931	Medium
93932	Fine

Uses **57951** Hook-Face Pad.



Tear Drop Reattachable Coated Abrasive Discs

Part Number	Grit
93953	80
93954	120
93955	150
93956	180

Uses **57953** Hook-Face Pad.

Tear Drop Non-Woven Nylon Discs

Part Number	Grit
93970	Coarse
93971	Medium
93972	Fine
93973	Super Fine

Uses **57953** Hook-Face Pad.

Tear Drop Sponge Abrasive Discs

Part Number	Grit
93963	Coarse
93964	Medium
93966	Fine
93967	Super Fine

Uses **57952** Vinyl Face Pad.
Aluminum Oxide PSA Sponge

Visit Our Web Site: www.dynabrade.com

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