

DynaFine™ “Backsplash” Sander

Air Motor and Machine Parts

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

Models:
58000 — 15,000 RPM, “Backsplash” Sander

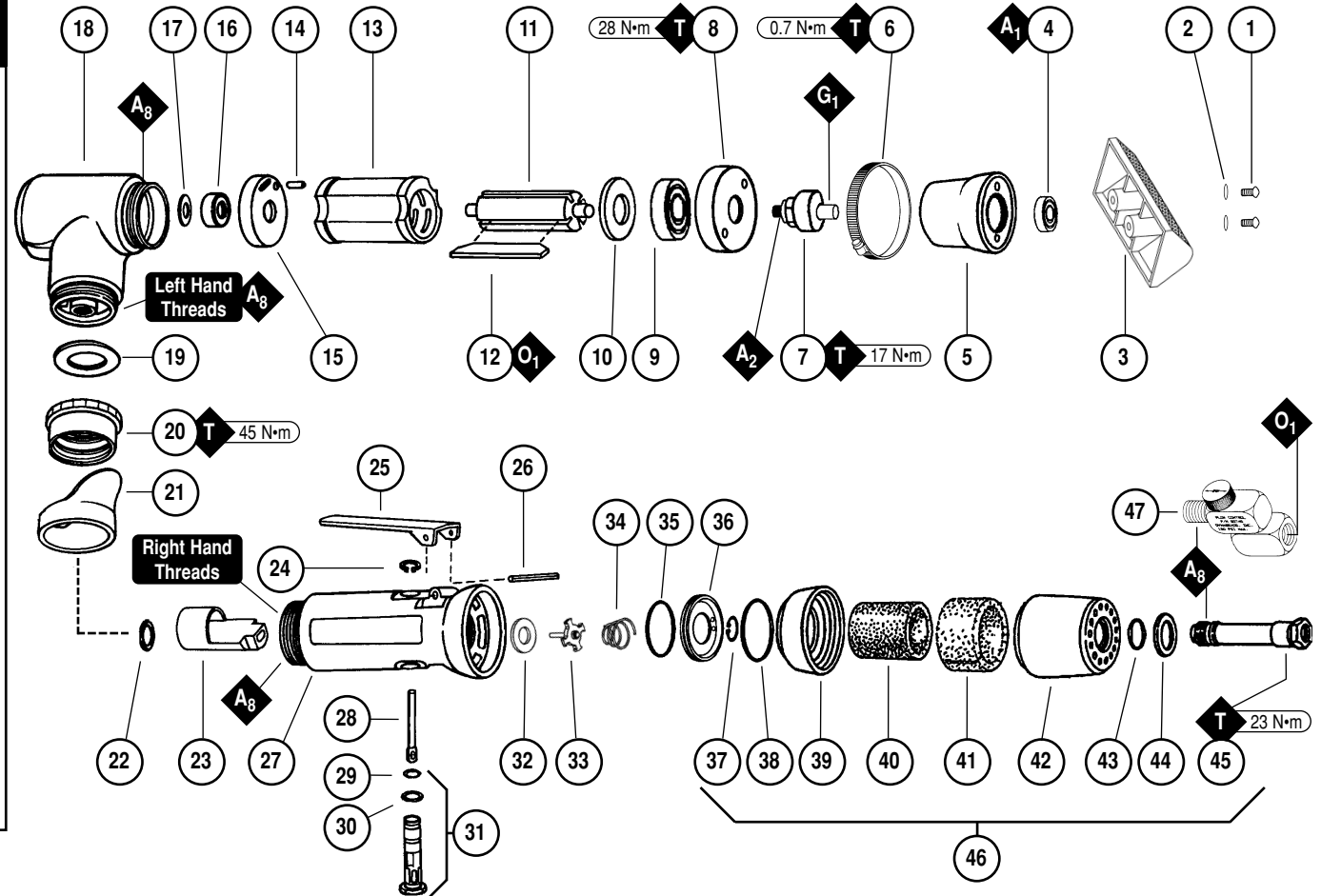
! WARNING

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	95264	Screw (2)	25	01448	Throttle Lever
2	96421	Washer (2)		01462	Safety Lock Lever
3	58013	Pad Mount	26	12132	Pin
4	11016	Bearing	27	01488	Housing
5	57975	Boot Assembly	28	01449	Valve Stem
6	95884	Boot Clamp Assembly	29	95730	O-Ring
7	57961	Cam Assembly	30	01024	O-Ring
8	57962	Exhaust Cover	31	01469	Speed Regulator Assembly
9	56258	Bearing	32	01464	Seal
10	53161	Front Bearing Plate	33	01472	Tip Valve
11	50777	Rotor	34	01468	Spring
12	01480	Blades (4/pkg.)	35	96065	O-Ring
13	01476	Cylinder	36	57970	Air Control Ring
14	50767	Pin	37	95711	Retaining Ring
15	02673	Rear Bearing Plate	38	95438	O-Ring
16	02696	Bearing	39	94521	Muffler Base
17	02679	Shield	40	94524	Sintered Muffler
18	57959	Housing	41	94525	Felt Muffler
19	01548	Gasket	42	94522	Muffler Cap
20	01461	Lock Nut	43	95735	O-Ring
21	01558	Collar	44	94526	Spacer
22	95523	O-Ring	45	94523	Inlet Adapter
23	01470	Insert	46	94520	Muffler Assembly
24	95558	Retaining Ring	47	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 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. 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)	15,000	65 dB(A)	320 (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 activities. Failure to use this collar will highly increase the risk of damage to the valve body of this tool. Please refer to parts breakdown for part identification.

Motor Disassembly:

1. Disconnect tool from power source.
2. Use the **52296** Repair Collar and secure the air tool in a vise.
3. Remove the sanding attachment with a 3 mm hex key.

Continued on next page.

(PD02•15)

Disassembly/Assembly Instructions - DynaFine™ (Continued)

- Loosen the **95884** Boot Clamp and remove the boot assembly.
- Use a 3 mm adjustable pin wrench or **50971** Lock Ring Tool and loosen the **57962** Exhaust Cover by turning it counterclockwise.
- The exhaust cover along with the motor assembly can now be pulled from the **57959** Housing.
- Fasten a 2 in. bearing separator around the end of the **01476** Cylinder that is closest to the **02673** Rear Bearing Plate. Next place the separator on the table of an arbor press so that the **57961** Cam Assembly is pointing toward the floor. Use a 3/16" dia. drive punch as a press tool and push against the rear stem of the rotor pressing it out of the **02696** Bearing.
- The **02696** Bearing can be removed from the rear bearing plate with a **96210** Bearing Removal Tool and arbor press.
- Secure the **50777** Rotor in a soft jaw (aluminum or bronze) vise and remove the **57961** Cam Assembly by turning it counterclockwise.
- Press the front bearing and bearing plate from the **50777** Rotor with a 3/16" dia. drive punch and arbor press.

Motor Disassembly Complete.

Valve Body Disassembly:

- Position the tool in the vise with the air inlet pointing up.
- Using two wrenches remove the air fitting or flow control swivel from the **94523** Inlet Adapter.
- Loosen the **94523** Inlet Adapter from the valve housing and remove the muffler assembly. **Note:** Use the exploded view of the muffler assembly on the front of this parts page to identify parts and to insure their correct assembly.
- Remove the **12132** Pin throttle lever with a drive punch.
- Use retaining ring pliers to remove the **95558** Retaining Ring and the **01469** Speed Regulator Assembly. All the other components can be removed.

Valve Body Disassembly Complete.

Motor Assembly:

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

- Use the **01476** Cylinder as an adjustment jig. Place the cylinder on the table of the arbor press.
- Place the **50777** Rotor inside the cylinder so that the front face of the rotor is even with the top edge of the cylinder.
- 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.
- Place the **56258** 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.
- Secure the **50777** Rotor in a soft jaw (aluminum or bronze) vise with bearing plate assembly pointing up.
- Place the **57962** Exhaust Cover over the bearing/plate assembly.
- Apply a small amount of #271 Loctite (or equivalent) to the threads of the **57961** Cam Assembly and install it onto the rotor, torque it to 17 N•m/150 in.-lbs.
- Remove this assembly from the vise and install **01480** Vanes that have been lubricated with Dynabrade Air Lube (10W/NR) or (equivalent oil).
- 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.
- The **02696** Rear Bearing and the **02673** Rear Bearing Plate must be pressed together as an assembly before installing them onto the **50777** Rotor. Use **96216** Bearing Press Tool so that the press tool rest against the outer race of the bearing and press it all the way into the bearing plate.
- Using the same bearing press tool, place the press tool so that it rest against the inner race of the bearing and then carefully press the assembly onto the **50777** Rotor achieving 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.
- Apply a small amount of grease to the seal of the **02696** Bearing and position the **02679** Shield against the bearing.
- Install the motor assembly into the **57959** Housing making sure that it slides all the way in.
- Apply a small amount of Loctite#576 (or equivalent) to the threads of the **57595** Housing and thread the **57962** Exhaust Cover onto the housing. Use the **50971** Lock Ring Tool and torque to 28 N•m/250 in.-lbs.
- Apply a small amount of Loctite #609 (or equivalent) to the outer race and press **11016** Bearing into the boot assembly by using **96243** Bearing Press Tool pushing against m the outer race of the bearing. Press the bearing into the boot assembly so that the bearing ends up flush with the inside surface of the aluminum hub.
- Apply a small amount of grease to the shaft of the cam assembly and install the boot assembly along with the **95884** Boot Clamp onto the tool.
- Tighten **95884** Boot Clamp and torque to .68 N•m/6 in.-lbs.
- Use 3 mm hex key to install sanding attachment.

Motor Assembly Complete.

Valve Body Assembly:

- Secure the **01488** Valve Housing in a vise by using the **52296** Repair Collar. Position the valve housing so that the air inlet is pointing up.
- Install the **01469** Speed Regulator Assembly (include o-rings) along with **01449** Valve Stem and secure in place with **95558** Retaining Ring.
- Install **01464** Seal into the air opening of the housing.
- Line up the hole in the **01449** Valve Stem with the air inlet hole in the housing (look past the brass bushing). Insert the metal pin of the **01472** Tip Valve through the hole in the **01449** Valve Stem (use needle nose pliers to position the tip valve). Install the **01468** Spring (small end first).
- Install **96065** O-Ring onto **57970** Air Control Ring and install into the valve housing making sure to line up holes in the air control ring with the exhaust area of the valve housing.
- Assemble muffler. **Note:** Use the exploded view of the parts page to identify parts and to insure their correct assembly.
- Apply a small amount of Loctite #567 PST Pipe Sealant (or equivalent) to the male threads of **94523** Inlet Adapter and install muffler assembly onto the valve housing. Torque to 23 N•m/200 in.-lbs.
- Install the throttle lever securing 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:

- Use the **52296** Repair Collar to secure the valve body in a vise with the **57959** Housing pointing up.
- Slip the **01558** Collar down onto the valve body assembly exposing the **01461** Lock Nut.
- With a firm hold on the **57959** Housing, use a 34 mm crowfoot wrench (or a thin jaw adjustable wrench or adjustable groove pliers) to turn the **01461** Lock Nut counterclockwise and loosen the **57959** Housing from the valve body assembly.

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Disassembly/Assembly Instructions - DynaFine™ (Continued)

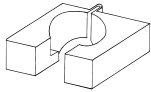
- Adjust the orientation of the throttle lever to the operators desired grip and positioning. **Note:** Allow for additional rotation of the 57959 Housing as the 01461 Lock Nut is tightened.
- Use the 34 mm crowfoot with a torque wrench set at 400 in.-lbs (or a thin jaw adjustable wrench or adjustable groove pliers) while firmly holding the 57959 Housing in place to reduce its rotation and tighten the 01461 Lock Nut.

Important: When performing this procedure be careful not to entirely separate the 57959 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.



Dynaswivel® Air-Line Connector

Swivels 360° at two locations which allows an air hose to drop straight to the floor, no matter how the tool is held.

- 94300 Composite Dynaswivel 1/4" NPT.
- 94407 Flow Control Swivel 1/4" NPT.



94407



94300



96236 Motor Tune-Up Kit

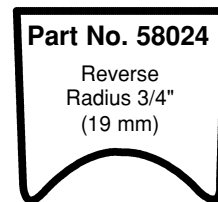
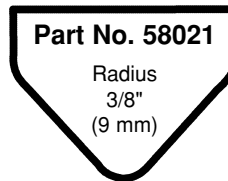
- Includes assorted parts to help maintain and repair motor.

Pads/Abrasives

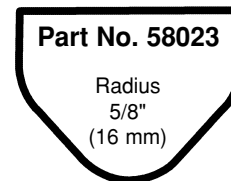
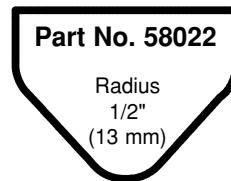
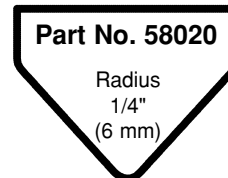
Silicon Carbide Sheets (C Weight)
3-1/2" Wide x 2-3/4" Long / PSA with liner
(89 mm Wide x 70 mm Long)

Abrasive Grit		
120	150	180
93130	93131	93132

Standard Sanding Pads (Included with tool.)



Optional Sanding Pads (Please order separately.)



Visit Our Web Site: www.dynabrade.com

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