Parts Page Reorder No. PD02•44
Effective September, 2002

.7 Hp/Right-Angle/Side Exhaust

Depressed Center Wheel Grinder

Models:

50370 — 4" DCWG, 3/8"- 24 Spindle
50374 — 5" DCWG, 5/8"- 11 Spindle

12,000 RPM, Machine and Motor parts

WARNING **Always operate, inspect and maintain this tool in accordance with the Safety Code for portable air tools (ANSI B186.1 and B7.1) 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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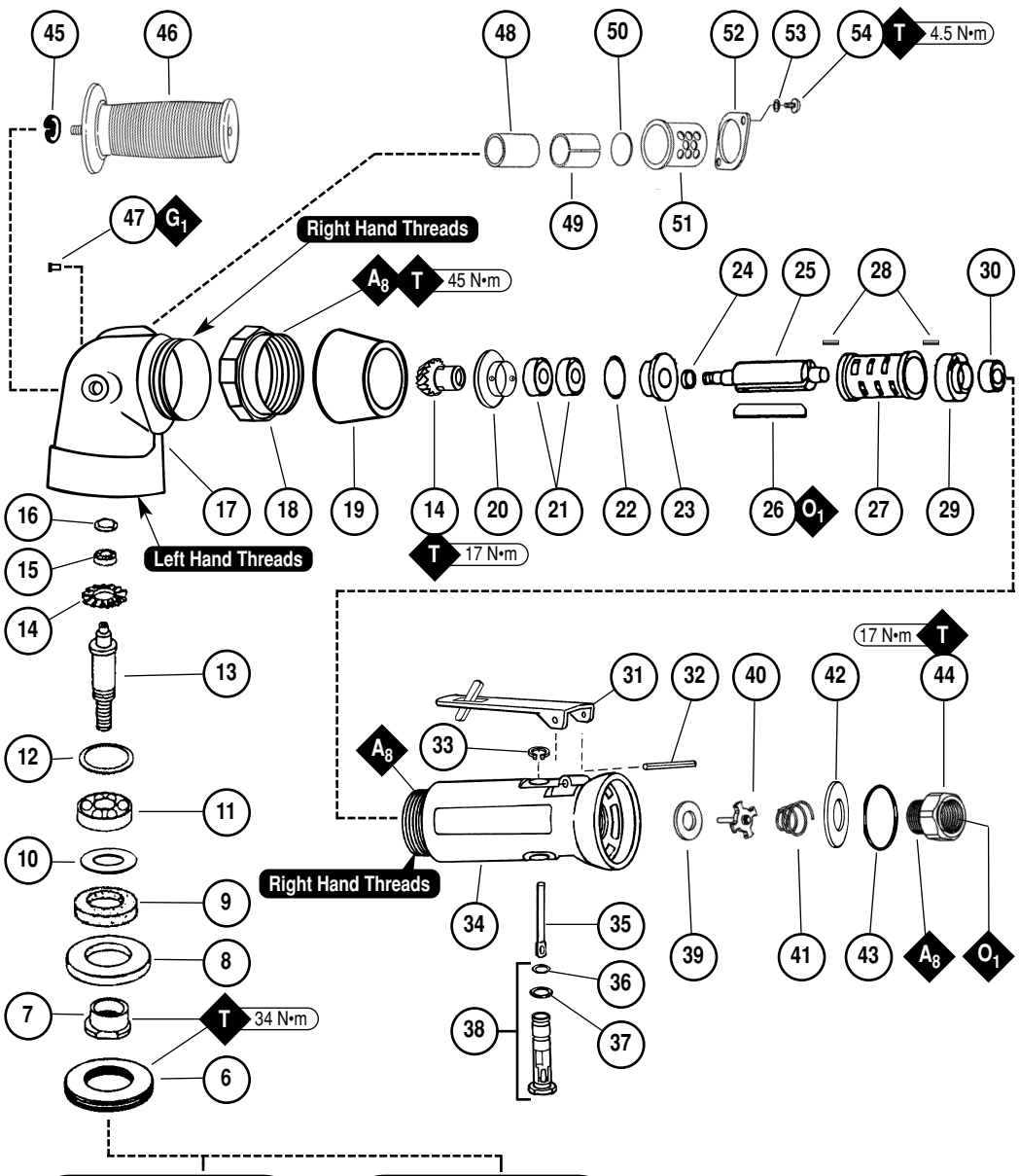
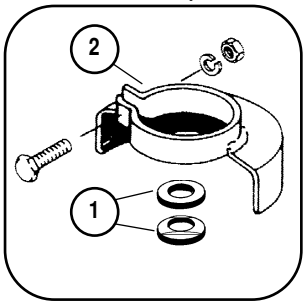
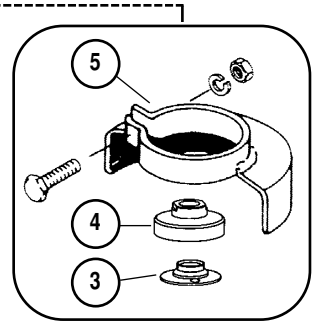




Model 50370



Model 50374

KEY

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

***2 to 3 plunges of grease every 16 hours of use.**

See inside for Important Operating, Maintenance and Safety Instructions.

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 over tightening of inlet bushing and 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.
5. Air tools are not intended for use in explosive atmospheres and are not insulated for contact with electrical power sources. Sanding/Grinding certain materials can create explosive dust. It is the employers responsibility to notify the user of acceptable dust levels. Sanding/Grinding can cause sparks which can cause fires or explosions. It is the users responsibility to make sure the work area is free of flammable materials.

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 positive-drip lubrication of pneumatic components. Operates 40 SCFM @ 100 PSIG has 3/8" NPT female ports.
5. Gear case of this Dynabrade air tool should be lubricated 2 to 3 plunges every 16 hours of use by using **95541** Grease Gun and **95542** Grease.
6. Use only genuine Dynabrade replacement parts. To reorder replacement parts, specify the **Model #**, **Serial #**, and **RPM** of your machine.
7. A Motor Tune Up Kit (P/N **96184**) is available which includes assorted parts to help maintain motor in peek operating condition.
8. Mineral spirits are recommended when cleaning the tool and parts. Do not clean tool with any solvents or oils containing acids, esters, keytones, chlorinated hydrocarbons, or nitro carbons.
9. DO NOT clean or maintain air tools with chemicals that have a low flash point (example: WD-40®).

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 30 seconds before application to workpiece to determine if machine is working properly and safely before work begins.
- Always use proper guards. Make sure guards are in proper position, secure and in good repair.
- Always disconnect power supply before changing abrasive or making machine adjustments.
- Inspect abrasives and accessories for damage or defects prior to and during operation of tool. Never mount bonded grinding wheels.
- 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.

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, sanding pads, rotor blades, etc., are not covered under this warranty.

Model Number	Motor hp (W)	Motor RPM	Sound Level	Maximum Air Flow CFM/SCFM (LPM)	Air Pressure PSIG (Bars)	Spindle Thread	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
50370	.6 (447)	12,000	82 dB(A)	5/36 (1,020)	90 (6.2)	5/8"-11 male	3.2 (1.5)	9-1/8 (229)	3-3/4 (95)
50374	.6 (447)	12,000	82 dB(A)	5/36 (1,020)	90 (6.2)	3/8"-24 male	3.4 (1.5)	8-1/2 (216)	4-3/8 (111)

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

Disassembly/Assembly Instructions - .7Hp/Right-Angle/Side Exhaust

Important: Manufacturer's warranty is void if tool is disassembled before warranty expires.

Notice: All of the special repair tools referenced in these instructions can be ordered from Dynabrade. Please refer to this parts page for proper identification of all parts.

Right-Angle Disassembly:

Important: Disconnect the tool from the air supply before proceeding with the disassembly of the tool.

1. Remove the **53163** Handle and the **95042** Lock Washer from the **50362** Right-Angle Housing.
2. Carefully secure the tool in a vise with aluminum or bronze soft jaws. Position the tool so that the **50334**/**52117** Spindle is pointing up. **Note:** Clamp the right-angle housing in the vise between the handle boss and the **50366** Exhaust Cover.
3. Remove any abrasive, flanges, disc pads, shrouds and guards from the tool. **Note:** Use the proper wrenches to remove the flanges and abrasives.
4. Use an adjustable pin spanner wrench with 3/16" dia. pins (4.76 mm) to remove the **50384** Spindle Retainer by turning it clockwise. (**Left hand threads**)
5. Pull the spindle assembly from the housing and remove the **52089** Washer, **52089** Washer, **52088** Spacer and **52120** Shims.
6. Carefully secure the bevel gear in the vise with aluminum or bronze jaws and use an adjustable wrench to remove the **50333**/**52118** Spindle Nut by turning it counterclockwise.
7. Remove the **50412** Felt Ring from the spindle nut.
8. Use the **96346** Bearing Separator (2") and the **96232** Arbor Press (#2) to remove the **50431** Bearing and the bevel gear from the spindle.
9. Insert a 1/4" dia. flat end drive punch through the access hole in the top of the **50362** Right-Angle Housing and press the **50424** Spindle Cap Cover and the **12152** Bearing out of the right-angle housing.
10. Use the **95266** Hex Key Wrench (3 mm) to remove the **50511** Screws (2), **01791** Washers (2) and **07149** Clamp.
11. Disassemble the exhaust silencer.
12. Slide back the **50383** Collar and then use a 42 mm crowfoot or an adjustable wrench to loosen the **50381** Lock Ring by turning it clockwise. (**Left hand threads**)
13. Remove the **50381** Lock Ring from the **01295** Housing by turning the housing counterclockwise. (**Right hand thread**)

Right-Angle Disassembly Complete.

Motor Disassembly:

1. Pull the motor assembly out of the **01295** Housing.
2. Fasten the **96346** Bearing Separator (2") around the portion of the **01028** Cylinder that is closest to the **01722** Rear Bearing Plate.
3. Place the bearing separator with the air motor on the table of the **96232** Arbor Press (#2) so that the pinion gear is pointing down.
4. Use a 3/16" dia. flat end drive punch as a press tool against the rear stem of the **50379** Rotor and push the rotor out of the **02649** Bearing.
5. Remove the cylinder and blades.
6. Use the **96213** Bearing Removal Tool and the arbor press to push the **02649** Bearing out of the **01722** Rear Bearing Plate.
7. Secure the vane body of the rotor in a vise with aluminum or bronze jaws so that the pinion gear is pointing up.
8. Use the **95262** 14 mm open-end wrench to remove the pinion gear by turning it counterclockwise. (**Right hand threads**)
9. Remove the **50332** Spacer, **50368** Front Bearing Plate, **01007** Bearings (2), **01121** Shims and **01010** Spacer from the **50379** Rotor.

Motor Disassembly Complete.

Valve Disassembly:

1. Secure the wrench flat area of the **01295** Housing in a vise with aluminum or bronze jaws so that the air inlet is pointing up.
2. Hold the **01494** Inlet Adapter stationary with an adjustable wrench and carefully remove any fitting with another wrench. **Important:** The **01494** Inlet Adapter must be held stationary when the air fitting is being removed so as not to damage the **01295** Housing.
3. Remove the **01494** Inlet Adapter with an adjustable wrench.
4. Remove the **53190** Block Plate and **96065** O-Ring.
5. Remove the **01468** Spring, **01472** Tip Valve and the **01464** Seal can be removed with a small screwdriver.
6. Use a 2.5 mm dia. drive punch to remove the **01017** Pin and the throttle lever.
7. Use retaining ring pliers to remove the **95558** Retaining Ring and then push the **01247** Speed Regulator Assembly (includes o-rings) along with the **01477** Valve Stem out of the **01295** Housing.

Valve Disassembly Complete.

Valve Assembly:

Important: Clean and inspect all of the parts before assembling.

1. Secure the wrench flat area of the **01295** Housing in a vise with aluminum or bronze jaws so that the air inlet opening is pointing up.
2. Install the **01247** Speed Regulator Assembly (includes o-rings) along with the **01477** Valve Stem into the **01295** Housing.
3. Secure the speed regulator assembly in the housing with the **95558** Retaining Ring.
4. Insert the **01464** Seal into the air inlet opening of the housing so that it lays flat.
5. Use needle nose pliers to install the **01472** Tip Valve so that the metal pin of the tip valve fits through the hole in the **01477** Valve Stem.
6. Install the **01468** Spring so that the small end of the spring fits over the back of the tip valve.
7. Install the **96065** O-Ring onto the **53190** Block Plate. Install the **53190** Block Plate with its flat side toward the housing.
8. Apply a small amount of the Loctite #567 (or equivalent) to the male threads of the **01494** Inlet Adapter and install the adapter into the air inlet opening. (Torque to 23 N•m/200 in.- lbs.)
9. Install the throttle lever and secure it to the **01295** Housing with the **01017** Pin.

Valve Assembly Complete.

Motor Assembly:

1. Secure the vane body of the **50379** Rotor in a vise with aluminum or bronze jaws so that the threaded spindle is pointing up.

(continued on next page)

2. Install the **01010** Spacer onto the rotor.
3. Select .003 (.08 mm) thickness in shims from the **01121** Shim Pack and install these into the **50368** Front Bearing Plate.
4. Install the **01007** Bearing (2) into the **50368** Front Bearing Plate.
5. Slip this assembly down onto the rotor.
6. Place the **50332** Spacer against the **01007** Bearing so that its smaller diameter is touching the outer race of the bearing.
7. Secure the bearing/plate in place with the pinion gear. (Torque to 17 N•m/150 in.-lbs.)
8. Check the rotor/plate clearance with a .001 (.0.03 mm) feeler gauge. The clearance should be .001-.0015 (0.03-0.04 mm). If the rotor/plate clearance needs adjustment, repeat steps 3-6 and shim as required.
9. Once the proper rotor/plate clearance is achieved, install the **01185** Blades (4) that have been lubricated with the **95842** Dynabrade Air Lube (10W/NR or equivalent).
10. Install the **01028** Cylinder so that the air inlet openings in the **01722** Rear Bearing Plate align with the air inlet openings in the cylinder.
11. Use the **96240** Bearing Press Tool and the **96232** Arbor Press (#2) to the **02649** Bearing into the **01722** Rear Bearing Plate. **Note:** Position the press tool so that it is resting against the outer race of the bearing when pressing the bearing into the bearing plate.
12. Use the opposite end of the **96240** Bearing Press Tool to install the bearing/plate assembly onto the **50379** Rotor. **Note:** Position the press tool so that it is resting against the inner race of the bearing when pressing the bearing/plate assembly onto the rotor. Press the assembly together only until the **01722** Rear Bearing Plate comes in contact with the **01028** Cylinder. This should create a snug fit between the bearing plates and the cylinder. A loose fit will not apply the proper preload on the motor bearings.
13. Carefully align the air inlet node of the **01722** Rear Bearing Plate with the air inlet notch on the inside of the **01295** Housing and insert the motor assembly all of the way into the housing.

Motor Assembly Complete.

Right-Angle Assembly:

1. Assemble the exhaust silencer components according to the exploded view and position the **50366** Exhaust Cover on the **50362** Right Angle Housing so as to direct the exhaust air away from the operator.
2. Install the **07149** Clamp over the exhaust cover and use the **95266** Hex Key Wrench (3 mm) to install the **50511** Screw (2) and the **01791** Washers (2) to secure the exhaust assembly onto the right angle housing.
3. Install the **56424** Spindle Cap Cover into the right-angle housing so that the recessed side will be facing the **12152** Bearing.
4. Use the **96241** Bearing Press Tool to install the **12152** Bearing. **Note:** Position the press tool so that it is resting against the outer race of the bearing when pressing the bearing into the housing.
5. Carefully secure the **50362** Housing in a vise with aluminum or bronze jaws. Position the housing so that the spindle opening is facing up. **Note:** Clamp the right-angle housing in the vise between the handle boss and the **50366** Exhaust Cover.
6. Apply the Loctite #567 to the external threads of the **50362** Right-Angle Housing and install the **50381** Lock Ring onto the housing.
7. Apply the Loctite #567 to the external threads of the **01295** Housing and thread the housing into the **50381** Lock Ring. Thread the right-angle and motor housings together. Orient the throttle lever to the operators desired location and while holding the **01295** Housing stationary secure the **50381** Lock Ring. (Torque to 45 N•m/400 in.- lbs.)
8. Use the **96232** Arbor Press (#2) to install the bevel gear and the **50431** Bearing onto the **50334**/**52117** Spindle.
9. Carefully secure the bevel gear in the vise with aluminum or bronze jaws so that the threaded spindle is pointing up. Install the **50412** Felt Ring onto the **50333**/**52118** Spindle Nut and use a 24 mm crowfoot or an adjustable wrench to install the spindle nut onto the spindle by turning it clockwise. (Torque to 34 N•m/300 in.- lbs.)
10. Install the spindle with the bevel gear into the **50362** Right-Angle Housing. **Note:** Make sure that the gear and pinion mesh properly. Push down on the spindle while rotating it 360˚ to check for the correct fit between the gear and pinion teeth. Install shims from the **52120** Shim Pack to adjust the backlash. (The slight clearance that must exist between the gear and pinion teeth.)
11. Install the **52088** Spacer so that it fits into the spindle opening of the **50362** Right-Angle Housing and over the **50412** Felt Ring.
12. Install the **52089** Washer so that the deeper recess fits over the **50412** Felt Ring.
13. Use an adjustable pin spanner wrench with 3/16" dia. pins (4.76 mm) to install the **50384** Spindle Retainer by turning it counterclockwise. (**Left hand threads**) (Torque to 34 N•m/300 in.- lbs.)
14. Hold the **01494** Inlet Adapter stationary with an adjustable wrench and carefully install any air fitting with another wrench. **Important:** The **01494** Inlet Adapter must be held stationary when the air fitting is being installed so as not to damage the **01295** Housing.
15. Apply several drops of the **95842** Dynabrade Air Lube (10W/NR or equivalent) directly into the air fitting. Test run the tool at 90 PSIG operating air pressure and check the speed of the tool with a tachometer. **Important:** The tool must run at the correct RPM before any attachment is mounted on the tool.
16. Install any guards, shrouds, disc pads, flanges and abrasives on the tool. **Note:** Use the proper wrenches to install the flanges and abrasives. The proper wrenches are listed on the back of this parts page.
17. Remove the tool from the vise and install the **53163** Handle with the **95042** Lock Washer onto the right-angle housing.

Motor Assembly Complete.

Optional Accessories



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: 1gal. (3.8 L)



Grease and Grease Gun

- 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
95542: 10 oz. (283.5 g) tube



96184 Motor Tune-Up Kit

- Includes assorted parts to help maintain and repair motor.

Visit Our Web Site: www.dynabrade.com

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DYNABRADE®

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