

2 hp Right Angle Disc Grinder

Models:

50348 - 7", 6,000 RPM

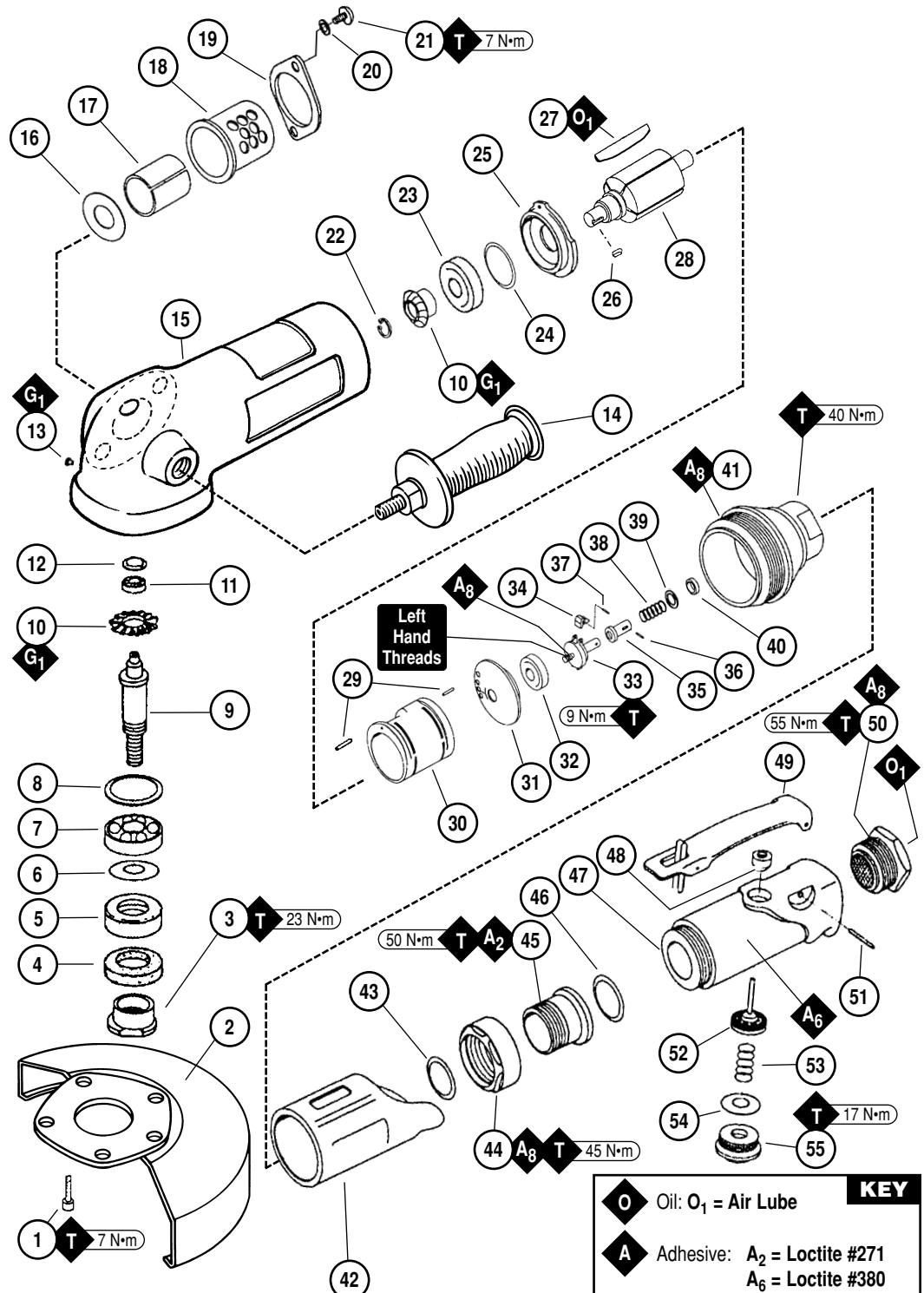
Air motor and machine parts; with 5/8"-11 male spindle

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	95897	Screw (5)
2	52149	Guard
3	52118	Spindle Nut
4	52089	Washer
5	50412	Felt Ring
6	52147	Spacer
7	50505	Bearing
8	52148	Shim Pack (3/pkg.)
9	52131	Spindle
10	52184	Bevel Gear/Pinion Set
11	02649	Bearing
12	50497	Spindle Cap Cover
13	01041	Grease Fitting
14	52169	Handle
15	52146	Housing
16	52165	Gasket
17	52167	Felt Silencer
18	52164	Exhaust Cover
19	52180	Clamp
20	01791	Washer (2)
21	50511	Screw (2)
22	95998	Ring
23	52130	Bearing
24	52141	Shim Pack (3/pkg.)
25	52136	Bearing Plate
26	50509	Key
27	07109	Blade (5/pkg.)
28	07108	Rotor/Shaft Assy.
29	01673	Pin (2)
30	52139	Cylinder
31	52140	Bearing Plate
32	01266	Bearing
33	52171	Governor Cage
34	50530	Governor Weight
35	50541	Governor Valve
36	50468	Pin
37	96059	Governor Pin (2)
38	52172	Governor Spring
39	52173	Shim (as req.) 6/Pkg.
40	50548	Spring Holder
41	52123	Adapter
42	07136	Grip
43	02658	Packing
44	02631	Nut
45	02626	Adjustment Bushing
46	01746	O-Ring
47	07141	Valve Body (Incl. 07142 Bushing)
48	07142	Bushing
49	01089	Safety Lever
50	01697	Inlet Bushing
51	01017	Pin
52	07168	Valve Stem Assy.
53	07145	Spring
54	07146	Packing
55	07147	Plug



KEY	
O	Oil: O ₁ = Air Lube
A	Adhesive: A ₂ = Loctite #271 A ₆ = Loctite #380 A ₈ = Loctite #567
T	Torque: N•m x 8.85 = In. - lbs.
G	Grease: G ₁ = Lubriplate 630 AA

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.

Operating Instructions:

Warning: Eye, face, sound, respiratory 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. 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 10 SCFM. (If the tool specification states 40 SCFM, set the drip rate of your lubricator at 4 drops per minute.) Dynabrade Air Lube (P/N **95842**: 1pt. 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 possibility of misuse due to unclean air, wet air or insufficient lubrication. Dynabrade recommends the following: **11411** Air Line Filter-Regulator-Lubricator – Provides accurate air pressure regulation, two-stage filtration of water/contaminants, and micro-mist lubrication of pneumatic components. Operates 55 SCFM (1,558 LPM) @ 100 PSIG (6.9 Bars) has 1/2" NPT female ports.
5. Grease the spiral bevel gears through the **01041** Grease Fitting with 2-3 plunges every 16 hours of use to achieve maximum gear life. (Order **95542** Grease and **95541** Gun.)
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 **96042**) is available which includes assorted parts to help maintain motor in peak operating condition. Please refer to Dynabrade's Preventative Maintenance Schedule for a guide to expectant life of component parts.
8. Mineral spirits are recommended when cleaning the tool and parts. Do not clean tool or parts with any solvents or oils containing acids, esters, ketones, 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.

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	Air Inlet Thread	Sound Level	Air Flow Rate CFM/SCFM (LPM)	Spindle Thread	Air Pressure PSIG (Bars)	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
50348	2 (1491)	6,000	1/2" NPT	86 dB(A)	9/64 (1,812)	5/8" -11 Male	90 (6.2)	8.6 (3.9)	13-3/4 (349)	5-1/4 (132)

Additional Specifications: Hose I.D. Size 1/2" or 15mm

Disassembly/Assembly Instructions – 2 hp/7° Right Angle Depressed Center Wheel Grinder

Important: The manufacturer's warranty is void if the tool is disassembled before the warranty expires.

Notice: All of the special repair tools referred to in these instructions can be ordered from Dynabrade Inc.

Please refer to the parts page for proper part identification.

Right Angle and Motor Disassembly:

1. Shut the air supply valve and disconnect the disc grinder from the air supply hose.
2. Remove the **07139** Flange with the **95051** Hex Key (3/8"). Remove the Type 27 Wheel and the **52176** Back-Up Flange.
3. Remove the **52169** Handle.
4. Use the **95331** Hex Key (4mm) to remove the **95897** Screws (5), and the **52149** Guard from the **52146** Housing.
5. Pull the **52131** Spindle along with the associated components out of the **52146** Housing.
6. Hold the **52146** Housing in a vise with aluminum or bronze jaws by holding the housing between the handle mounting boss and the **52164** Exhaust Cover.
7. Roll back the **07136** Grip to expose the wrench flats on the **52123** Adapter. Use the **96079** Wrench (32mm) or an adjustable wrench to remove the **52123** Adapter from the **52146** Housing by turning it counterclockwise.
8. Pull the motor assembly out of the **52146** Housing.
9. Very carefully hold the pinion gear stationary in the aluminum or bronze jaws. Use an adjustable wrench to remove the governor assembly by turning it clockwise. (Left Hand Threads)
10. Fasten the **96346** Bearing Separator (2") around the portion of the **52139** Cylinder that is closest to the **52140** Bearing Plate.
11. Position the motor assembly with the separator in the **96232** Arbor Press (#2) so that the pinion is pointing down.
Note: Use additional blocking under the bearing separator to provide clearance for disassembling the air motor.
12. Use a 3/16" dia. flat end drive punch as a press tool along with the arbor press to push the rotor out of the **01266** Bearing.
13. Use the **96214** Bearing Removal Tool to remove the **01266** Bearing from the **52140** Bearing Plate.
14. Remove the **95998** Retaining Ring from the pinion gear. Position the flat side of the bearing separator toward the gear teeth and fasten it to the pinion gear. Place the bearing separator along with the remaining motor components in the arbor press so that the pinion gear is pointing up. Use a 1/4" dia. flat end drive punch to push the **07108** Rotor out of the pinion gear.
15. Remove the **52136** Bearing Plate, **52184** Bearing and the **52141** Shims from the rotor.
16. Use a 1/4" dia. flat end drive punch to remove the **50497** Washer and the **02649** Bearing from the **52146** Housing.
17. Hold the flats on the **52131** Spindle in the vise with aluminum or bronze jaws and use an adjustable wrench to remove the **52118** Spindle Nut by turning it counterclockwise.
18. Use the bearing separator and the arbor press to remove the **50505** Bearing and the bevel gear.

Right Angle and Motor Disassembly Complete.

Valve Disassembly:

1. Remove the **07147** Plug by turning it counterclockwise.
2. Remove the **07146** Packing, the **07145** Spring, and the **07168** Valve Stem Assembly.
3. Remove the **01017** Pin and the **01089** Safety Throttle Lever.

Valve Disassembly Complete.

Muffler Disassembly:

1. Use the **95266** Hex Key (3mm) to remove the **50511** Screws (2), **01791** Washers (2), **52180** Clamp and the **52164** Exhaust Cover.
2. Remove the **52167** Felt Silencer and the **52165** Gasket.

Muffler Disassembly Complete.

Clean and inspect all parts before assembling.

Muffler Assembly:

1. Install the **52164** Gasket onto the **52146** Housing.
2. Install the **52167** Felt Silencer into the **52164** Exhaust Cover and attach these to the **52146** Housing with the **52180** Clamp, **50511** Screws (2), and the **01791** Washers (2).

Muffler Assembly Complete.

Valve Assembly:

1. Install the **07146** Packing onto the **07147** Plug.
2. Insert the **07145** Spring into the **07168** Valve Stem Assembly and install these into the **07141** Valve Body.
3. Hold the valve components in place with the **07147** Plug. (Torque to 17 N•m/150 in. lbs.)
4. Install the **01089** Safety Throttle Lever holding it in place with the **01017** Pin.

Valve Assembly Complete.

Right Angle and Motor Assembly:

1. Select .003" (.08mm) thickness in shims from the **52141** Shim Pack. Install the shims into the **52136** Bearing Plate and then install the **52130** Bearing.
2. Install the bearing/plate assembly onto the **07108** Rotor and hold this assembly in place with the **50509** Key, pinion gear and the **95998** Retaining Ring.
3. Use a .001" (.03mm) feeler gauge to check the clearance between the bearing plate and the face of the rotor.
4. The clearance should be .001" (.03mm) to .0015" (.04mm). If the clearance needs adjustment, repeat steps 1-4 adding or removing shims as required.
5. Lubricate the **07109** Blades (5) with the **95842** Dynabrade Air Lube (10W/NR or equivalent) and install these into the vane slots in the rotor.
6. Install the **52139** Cylinder over the **07108** Rotor so that the air inlet opening of the cylinder will line up with the air inlet opening in the **52140** Bearing Plate.
7. Use the **96232** Arbor press to install the **01266** Bearing into the **52140** Bearing Plate.
8. Use the raised inner diameter of the **96244** Bearing Press Tool so that it will rest against the inner race of the **01266** Bearing. Carefully press the bearing/plate assembly onto the **07108** Rotor until it touches the **52139** Cylinder. This will establish a snug fit between the bearing plates and the cylinder.
9. Hold the pinion in a vise with aluminum or bronze jaws so that the female threaded end of the rotor is pointing up.
10. Apply a small amount of the Loctite #567 (or equivalent) to the threaded stem of the **52171** Governor Cage and install the governor assembly onto the **07108** Rotor turning it counterclockwise. (Left Hand Thread) (Torque to 9 N•m/80 in. lbs.)
11. Install the motor assembly into the **52146** Housing.
12. Hold the **52146** Housing in a vise with aluminum or bronze jaws by holding the housing between the handle mounting boss and the **52164** Exhaust Cover.
13. Apply a small amount of the Loctite #567 (or equivalent) to the threads of the **52123** Adapter and install the adapter along with the valve body assembly. (Torque to 40 N•m/350 in. lbs.) **Important:** Remove the tool from the vise and connect it to the air supply. Test run the tool to make sure that the air motor is functioning properly.

14. Position the bevel gear on the **52131** Spindle and press it into place with the **96232** Arbor Press.
15. Press the **50505** Bearing onto the **52131** Spindle.
16. Install the **52147** Spacer, **50412** Felt Ring, and **52089** Washer onto the spindle.
17. Hold the mounting flats of the **52131** Spindle in the vise and install the **52118** Spindle Nut. (Torque to 34 N•m/300 in. lbs.)
18. Position the **52146** Housing in the vise so that the right angle spindle opening is facing up.
19. Place the **50497** Bearing Washer into the **52146** Housing so that the recessed side faces the **02649** Bearing.
20. Install the **02649** Bearing making sure that it fits all the way into the bearing pocket in the housing. **Note:** The **96240** Bearing Press Tool is available and can be used to make sure that the bearing is seated properly. **Important:** Follow these steps to adjust the fit of the **52184** Spiral Bevel Gear/Pinion Set.
21. Install the spindle assembly into the **52146** Housing so that the bevel and pinion gears mesh.
22. Install the **52149** Guard holding it with 3 of the **95897** Screws. Check the amount of backlash or clearance between the gear teeth by slowly rotating the spindle back and forth. If there is no backlash remove the spindle assembly and add the **52148** Shims as required until minimum backlash is felt without the bevel/pinion gear set binding or feeling tight.
23. Initially apply some of the **95542** Grease directly onto the gear teeth. **Note:** Do not overload the gear area of the **52146** Housing with grease. After every 16 hours of use apply 2-3 plunges of the **95542** Grease with the **95541** Grease Gun through the **01041** Grease Fitting. Position and hold the **52149** Guard onto the **52146** Housing using all 5 of the **95897** Screws. (Torque to 7 N•m/60 in. lbs.) **Important:** Apply several drops of the **95842** Dynabrade Air Lube (10W/NR or equivalent) into the air inlet and test run the tool. Check the RPM with a tachometer to insure the correct operating speed before mounting a grinding wheel on the disc grinder. Once the correct RPM is verified mount only a Type 27 Wheel that has been inspected for defects and that is free of any defect. (i.e. cracks, chips, or breaks, etc.) Only use the correct mounting flanges for a Type 27 Wheel making sure that they are properly fastened on the tool.

Right Angle and Motor Assembly Complete. Tool Assembly Complete.

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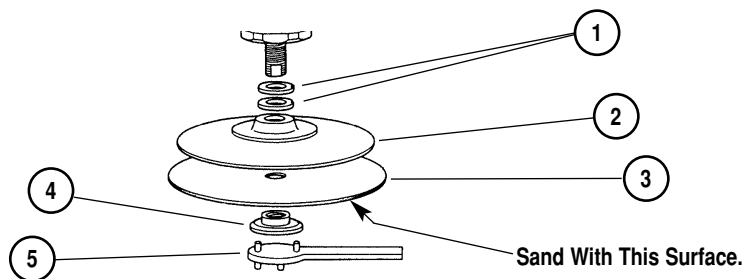
Mounting Arrangement

Index Key

No. Description

- 1 Spacers (2)
- 2 Sanding Pad
- 3 Sanding Disc
- 4 Flange Nut
- 5 Spanner Wrench

All Of The Above Are Not Included With Tool.



Optional Accessories



50275 – 5" Back-up Pad Assembly, 12,500 RPM max.

50277 – 7" Back-up Pad Assembly, 7,000 RPM max.

- Hard density.
- Includes **50273** Flange Nut.
- Accepts abrasive discs with 7/8" center hole.



Dynaswivel®

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

- **95462** 1/2" NPT



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.



96346 – Bearing Separator



96214 – Bearing Removal Tool



96240 – Bearing Press Tool



96043 Motor Tune-Up Kit:

Includes assorted parts to help maintain and repair motor.



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)



95266 – 3mm Hex Key

95051 – 3/8" Hex Key

95304 – 24mm Open-End

96079 – 32mm Open-End

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