

# Models:

52210 – 15,000 RPM, 1/4"  
52211 – 18,000 RPM, 1/4"  
52212 – 20,000 RPM, 1/4"  
52213 – 24,000 RPM, 1/4"  
52260 – 15,000 RPM, 6mm  
52261 – 18,000 RPM, 6mm  
52262 – 20,000 RPM, 6mm  
52263 – 24,000 RPM, 6mm

# .5Hp/7°/Front Exhaust/Short Shank Die Grinder

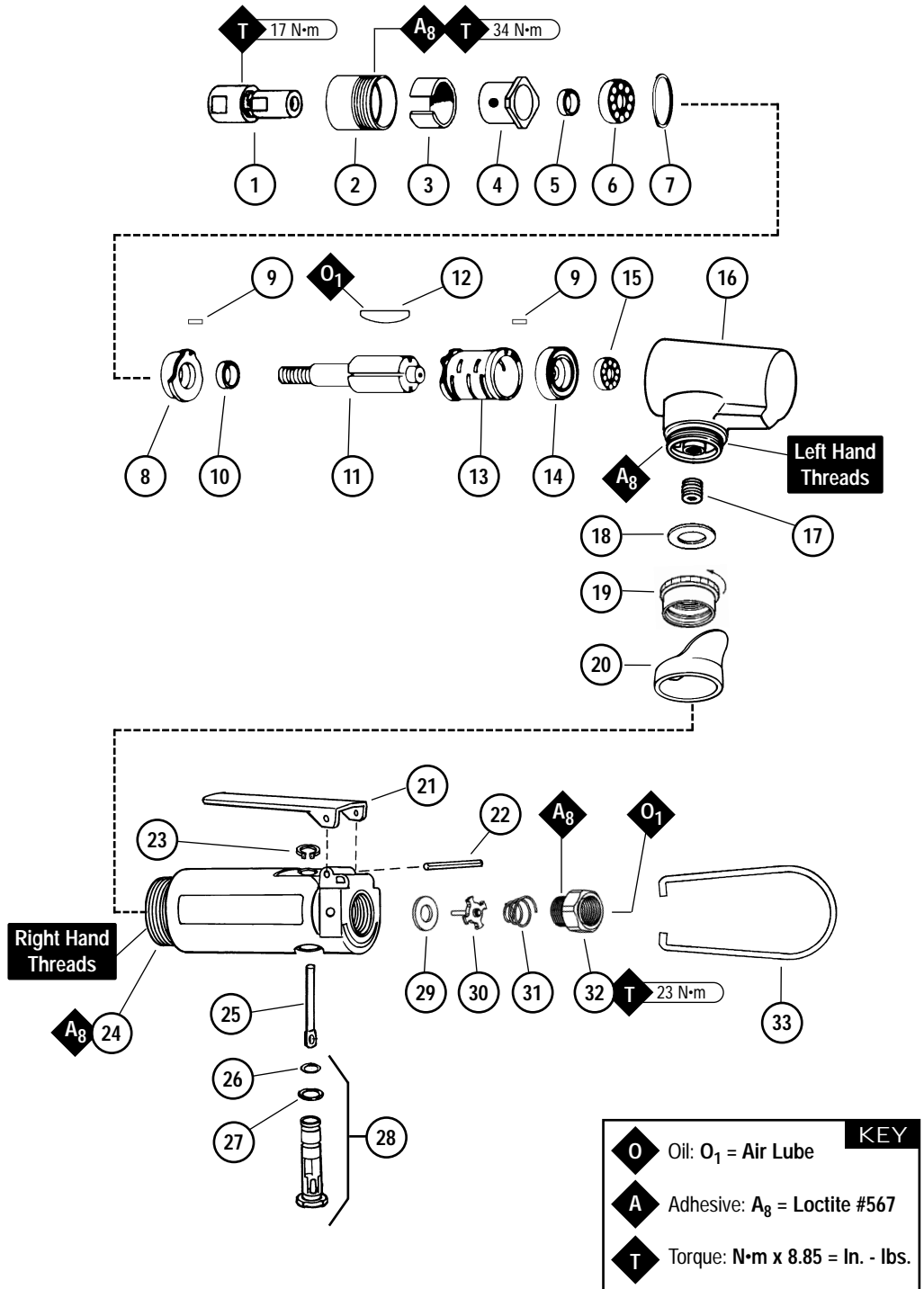
Air Motor and Machine Parts

## 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	50010	1/4" Collet Assembly
	50015	6mm Collet Assembly
2	04087	Lock Ring
3	04078	Fabric Silencer
4	Air Control Silencer	
	01124	15,000 RPM
	01125	18,000 RPM
	04084	20,000 RPM
	01126	24,000 RPM
5	01149	Spacer
6	01007	Bearing
7	01121	Shim Pack (3/Pkg.)
8	01008	Bearing Plate
9	50767	Pin (2)
10	01010	Spacer
11	01148	Rotor
12	01011	Blade (4/Pkg.)
13	01013	Cylinder
14	01014	Bearing Plate
15	01015	Bearing
16	01447	Motor Housing
17	01437	Plug
18	01548	Gasket
19	01461	Lock Nut
20	01558	Collar
21	01448	Throttle lever
	01462	Safety Lock Lever
22	12132	Pin
23	95558	Retaining Ring
24	Housing	
	01581	1/4", 15,000 RPM
	01582	1/4", 18,000 RPM
	01583	1/4", 20,000 RPM
	01584	1/4", 24,000 RPM
	01849	6mm, 15,000 RPM
	01868	6mm, 18,000 RPM
	01870	6mm, 20,000 RPM
	01874	6mm, 24,000 RPM
25	01449	Valve Stem
26	95730	O-Ring
27	01024	O-Ring
28	01469	Speed Regulator Assy.
29	01464	Seal
30	01472	Tip Valve
31	01468	Spring
32	01494	Inlet Bushing
33	50033	Hanger



## 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. Use only genuine Dynabrade replacement parts. To reorder replacement parts, specify the **Model #**, **Serial #**, and **RPM** of your machine.
4. A Motor Tune-Up Kit (P/N **96044**) 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.
5. 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: **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.
6. 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, nitro carbons or 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).
- 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.

### 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 1/4" / 6mm	Motor HP (W)	Motor RPM	Sound Level	Maximum Air Flow CFM/SCFM (LPM)	Hose I.D. Size	Air Inlet Thread	Tool Thread	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
52210 / 52260	.5 (373)	15,000	78 dB(A)	4/26 (736)	3/8" or 10mm	1/4" NPT	3/8"-24 Male	1.7 (0.8)	6 (152)	4-1/2 (114)
52211 / 52261	.5 (373)	18,000	77 dB(A)	4/28 (793)	3/8" or 10mm	1/4" NPT	3/8"-24 Male	1.7 (0.8)	6 (152)	4-1/2 (114)
52212 / 52262	.5 (373)	20,000	77 dB(A)	4/28 (793)	3/8" or 10mm	1/4" NPT	3/8"-24 Male	1.7 (0.8)	6 (152)	4-1/2 (114)
52213 / 52263	.5 (373)	24,000	82 dB(A)	4/28 (793)	3/8" or 10mm	1/4" NPT	3/8"-24 Male	1.7 (0.8)	6 (152)	4-1/2 (114)

Additional Specifications: Air Pressure 90 PSIG (6.2 Bar)

## Disassembly/Assembly Instructions - .5 Hp/7°/Front Exhaust

**Important:** Manufactures warranty is void if tool is disassembled before warranty expires.  
Please refer to parts breakdown for part identification.

### To Disassemble:

1. Secure air tool in a vise equipped with aluminum or bronze jaws.
2. Remove collet cap and insert.
3. With an adjustable pin wrench or **50791** Lock Ring Wrench, remove **04087** Lock Ring by turning counter-clockwise. Remove air control silencer and fabric silencer.
4. Pull motor assembly from housing.
5. Reposition motor housing in vise so inlet bushing is pointing up.
6. Unscrew **01494** Inlet Bushing turning counter-clockwise.
7. Using needle nose pliers, remove **01468** Spring, **01472** Tip Valve and **01464** Seal.
8. Resecure housing in vise so throttle lever and **12132** Pin are accessible.
9. Using a 2.5mm diameter drift pin and a hammer, remove **12132** Pin from housing and remove throttle lever.
10. Remove **95558** Retaining Ring and push **01469** Speed Regulator from Housing.

**Optional:** To disassemble valve body from motor housing, peel back **01558** Collar to expose **01462** Lock Nut. Unscrew lock nut/valve body from housing (left hand threads).

### Motor Disassembly:

1. Remove **50011** Collet Body from rotor shaft by inserting 3/16" hex wrench through collet body and into rotor shaft. Twist collet body from shaft.
2. Remove **01008** Front Bearing Plate, cylinder, blades (4) and **01149** Spacer from rotor.  
**Note:** **01007** Bearing, **01008** Front Bearing Plate and **01149** Spacer are a slip fit onto rotor.
3. Press rotor from **01015** Rear Bearing. Press **01015** Bearing from **01014** Rear Bearing plate.

**Motor Disassembly Complete.**

### Motor Assembly

**Important:** Be sure parts are clean and in good repair before assembling.

1. Place rotor in padded vise with a threaded spindle facing upwards.
2. Slip **01010** Spacer onto rotor.
3. Place a .002" shim into **01008** Front Bearing Plate as an initial spacing (**Note:** **01121** Shim Pack contains .001" and .002" shims) and slip **01007** Bearing into plate.
4. Install Bearing/Bearing Plate assembly onto rotor.
5. Tighten **50011** Collet Body onto rotor (torque to 150 in. - lbs.).
6. Check clearance between rotor and bearing plate by using a .001" feeler gauge. Clearance should be at .001" to .0015". Adjust clearance by repeating steps 1-5 with different shim if necessary.
7. Once proper rotor/gap clearance is achieved, install well lubricated **01011** Blades (4) into rotor slots. Dynabrade Air Lube P/N **95842** is recommended for lubrication.
8. Install cylinder over rotor. Be sure air inlet holes of cylinder face away from bearing plate.
9. Press **01015** Rear Bearing into **01014** Rear Bearing Plate. Press bearing/bearing plate assembly onto rotor. Be sure that pin and air inlet holes line-up with pin slot and air inlet holes in cylinder.

**Important:** Fit must be snug between bearing plates and cylinder. If too tight, rotor will not turn freely. Rotor must then be lightly tapped at press fit end so it will turn freely while still maintaining a snug fit. A loose fit will not achieve the proper preload of motor bearings.

10. Secure motor housing in padded vise so motor cavity faces upwards.
11. Install motor assembly into housing. Be sure motor drops all the way into housing.
12. Insert air control silencer and fabric silencer into **04087** Lock Ring and install onto motor housing (torque 150 in. - lbs.).
13. Motor adjustment must now be checked. With motor housing still mounted in vise, pull end of rotor and twist (10-15 lbs. force), rotor should turn freely without drag. If drag or rub is felt, then increase preload or remove shim. Also, push end of rotor and twist (10-15 lbs. force), rotor should turn freely without drag. If drag or rub is felt, then deload or add shim.

### Valve Stem/Body Assembly:

1. Insert **01469** Speed Regulator Assembly into valve body. Secure with **95558** Retaining Ring.
2. Secure valve body in vise with air inlet facing up and throttle lever accessible.
3. Insert **01464** Seal into housing.
4. Line-up the hole in the **01449** Valve Stem with the hole in the housing (looking past brass bushing). Using needle nose pliers, insert **01472** Tip Valve so that the metal pin passes through the hole in the valve stem.
5. Install **01468** Spring (small end towards the tip valve).
6. Apply a small amount of #567 Loctite (or equivalent) to threads of **01494** Inlet Bushing and install into valve body (torque 23 N·m 200 lbs. in.).
7. Install throttle lever and **12132** Pin. Remove valve body from vise.

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

**Important:** 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.

**Note:** Throttle lever is preset at the factory at an 11:00 o'clock position.

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## Optional Accessories



### Composite Dynaswivel®

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

- 94300 1/4" NPT

### Dynaswivel®

- 95460 1/4" NPT (Aluminum)



### 96044 Motor Tune-Up Kit:

- Includes assorted parts to help maintain and repair motor.



### 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.



### 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. (3.8L)

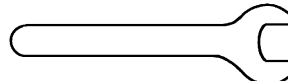
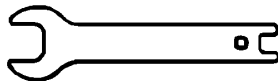


### Collet Inserts

- 50013 — 1/4"
- 50014 — 3/8"
- 50016 — 6mm
- 50039 — 8mm
- 50065 — 1/8"

## Wrenches

95281 – 19mm open-end.



95262 – 14mm open-end.

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