Parts Page Reorder No. PD10•17
Effective April, 2010
Supersedes PD02•57

Models:

52256 – 15,000 RPM, 1/4" - Collet
52257 – 18,000 RPM, 1/4" - Collet
52258 – 20,000 RPM, 1/4" - Collet
52264 – 15,000 RPM, 6mm - Collet
52265 – 18,000 RPM, 6mm - Collet
52266 – 20,000 RPM, 6mm - Collet

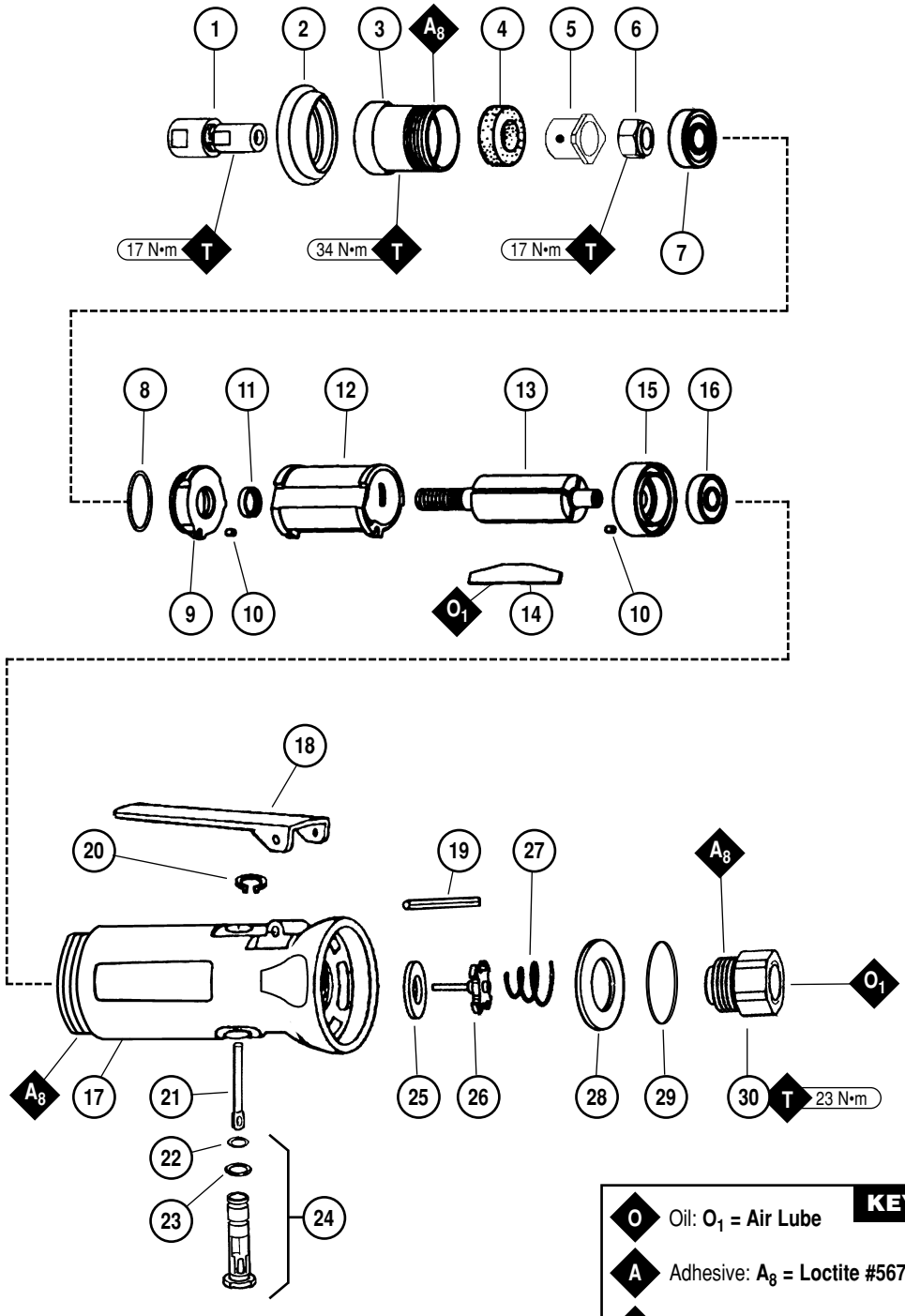
.7 hp/Straight-Line/Front Exhaust
Die Grinder

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 Assy.
	50015	6mm Collet Assy.
2	**53175**	Insulator Collar
3	**01371**	Lock Ring
4	**01727**	Felt Silencer
5	**Air Control Ring**	
	01724	15,000 RPM
	01725	18,000 RPM
	01726	20,000 RPM
6	**01708**	Rotor Nut
7	**01007**	Bearing
8	**01121**	Shim Pack (3/pkg.)
9	**01008**	Bearing Plate
10	**50767**	Pin (2)
11	**01010**	Spacer
12	**01028**	Cylinder
13	**55025**	Rotor
14	**01185**	Blade (4/pkg.)
15	**01722**	Bearing Plate
16	**02649**	Bearing
17	**01295**	Housing
18	**57342**	Throttle Lever
	01089	Safety Lock Lever (optional)
19	**01017**	Pin
20	**95558**	Retaining Ring
21	**01477**	Valve Stem
22	**95730**	O-Ring
23	**01024**	O-Ring
24	**01247**	Speed Regulator Assy.
25	**01464**	Seal
26	**01472**	Tip Valve
27	**01468**	Spring
28	**53190**	Block Plate
29	**96065**	O-Ring
30	**01494**	Inlet Adapter



KEY

- O — Oil: O_1 = **Air Lube**
- A — Adhesive: A_8 = **Loctite #567**
- T — Torque: **N•m x 8.85 = In. - lbs.**

See reverse side for Accessories and 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 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: **10681** Air Line Filter-Regulator-Lubricator — Provides accurate air pressure regulation, two-stage filtration of water contaminants and micro-mist lubrication of pneumatic components.
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 **96529**) 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.
- **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.

Lifetime Warranty

All Dynabrade portable pneumatic power tools are rigorously inspected and performance tested in our factory before shipping to our customers. If a Dynabrade tool develops a performance problem and an inherent defect is found during normal use and service, Dynabrade will warrant this tool against defects in workmanship and materials for the lifetime of the tool. Upon examination and review at our factory, Dynabrade shall confirm that the tool qualifies for warranty status, and will repair or replace the tool at no charge to the customer. Normally wearable parts and products are NOT covered under this warranty. Uncovered items include bearings, contact wheels, rotor blades, regulators, valve stems, levers, shrouds, guards, O-rings, seals, gaskets and other wearable parts. Dynabrade's warranty policy is contingent upon proper use of our tools in accordance with factory recommendations, instructions and safety practices. It shall not apply to equipment that has been subjected to misuse, negligence, accident or tampering in any way so as to affect its normal performance. To activate lifetime warranty, customer must register each tool at www.dynabrade.com. Dynabrade will not honor lifetime warranty on unregistered tools. A one-year warranty will be honored on all unregistered portable pneumatic power tools. Lifetime warranty applies only to portable pneumatic tools manufactured by Dynabrade, Inc. in the USA. Lifetime warranty applies only to the original tool owner; warranty is non-transferable.

Model Number	Motor hp (W)	Motor RPM	Sound Level	Maximum Air Flow SCFM (LPM)	Air Pressure PSIG (Bars)	Spindle Thread	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
52256/52264	.7 (522)	15,000	83 dB(A)	31 (878)	90 (6.2)	3/8"-24 male	1.7 (.8)	6 (152)	1-7/8 (48)
52257/52265	.7 (522)	18,000	87 dB(A)	33 (935)	90 (6.2)	3/8"-24 male	1.7 (.8)	6 (152)	1-7/8 (48)
52258/52266	.7 (522)	20,000	91 dB(A)	34 (963)	90 (6.2)	3/8"-24 male	1.7 (.8)	6 (152)	1-7/8 (48)

Additional Specifications: Air Inlet Thread 1/4" NPT • Hose I.D. 3/8" (10mm)
Sound Level is the pressure measurement according to the method outlined in ISO regulation ISO-15744

Disassembly/Assembly Instructions - .7 hp/Front Exhaust/Die Grinder

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

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

Motor Disassembly:

1. Disconnect tool from air supply.
2. Secure air tool in a vise by holding on the flats of the motor housing.
3. Remove the collet assembly from the rotor shaft by inserting a 3/16" hex key through the collet body and into the rotor shaft. Use the **95262** Wrench (14mm) to loosen the collet assembly turning it counterclockwise.
4. Remove the **01371** Lock Ring with an adjustable wrench turning it counterclockwise.
5. Pull the motor assembly from the housing.
6. Fasten the **96346** Bearing Separator (2") around the portion of the **01028** Cylinder nearest the **01722** Bearing Plate.
7. Place the bearing separator and the air motor on the table of the **96232** Arbor Press (#2) so that the threaded shaft of the rotor is pointing toward the floor.
8. Use a 1/4" dia. flat end drive punch as a press tool and push the rotor shaft out of the **02649** Bearing.
9. The **02649** Bearing can be removed from the **01722** Bearing Plate with the **96213** Bearing Removal Tool and the **96232** Arbor Press (#2).
10. Secure the vane portion of the **55025** Rotor in a vise with aluminum or bronze jaws.
11. Use an adjustable wrench to remove the **01708** Rotor Nut turning it counterclockwise.
12. The **01007** Bearing, **01008** Bearing Plate, **01121** Shims, and **01010** Spacer can now be removed.

Motor Disassembly Complete.

Valve Disassembly:

1. Secure the motor housing in a vise by holding on the flats so that the air inlet is pointing up.
2. **Important:** The **01494** Inlet Adapter must be held stationary with a wrench while removing the air fitting from the air inlet.
3. Remove the **01494** Inlet adapter.
4. Remove the **53190** Block Plate, **96065** O-Ring, **01468** Spring, **01472** Tip Valve and **01464** Seal.
5. Use a 2.5mm drive punch to remove the **01017** Pin and throttle lever.
6. Remove the **95558** Retaining Ring and push the **01247** Speed Regulator Assembly along with the **01477** Valve Stem out of the motor housing.

Valve Disassembly Complete.

Motor Assembly:

Important: Clean and inspect all parts before assembling.

1. Secure the vane portion of the **55025** Rotor in a vise with aluminum or bronze jaws.
2. Install the **01010** Spacer onto the rotor.
3. Place a .003" (.08mm) thickness in the shims into the **01008** Bearing Plate and install the **01007** Bearing. Slide this assembly onto the rotor.
4. Install the **01708** Rotor Nut onto the rotor. (Torque to 17 N•m/150 in.- lbs.)
5. Check the clarence between the rotor and the bearing plate with a .001" (.03mm) thick feeler gauge. The clearance should be at .001" (.03mm) to .0015" (.04mm). If it is necessary to adjust the clearance, repeat steps 3-5 adding or removing shims. Once proper rotor/gap clearance is achieved proceed with the motor assembly.
6. Install the **01185** Blades (4/pkg.) that have been lubricated with the **95842** Dynabrade Air Lube (10W/NR or equivalent).
7. Place the **01028** Cylinder onto the assembly so that the air passage will line up with the air passage in the **01722** Bearing Plate.
8. Use the **96240** Bearing Press Tool to install the **02649** Bearing into the **01722** Bearing Plate. **Note:** Use the **96240** Bearing Press Tool so that it is touching the outer race of the bearing.
9. Use the **96240** Bearing Press Tool to install the bearing/plate assembly onto the **55025** Rotor. **Note:** The press tool should push against the inner race of the bearing. **Important:** Carefully press the bearing/plate assembly onto the rotor so as to achieve a snug fit between the bearing plates and the cylinder. A snug fit will trap the cylinder while still allowing it to be shifted from side to side with a slight amount of finger pressure. A loose fit will not achieve the proper preload of the motor bearings.
10. Align the outer diameters of the bearing plates and the cylinder. Carefully slide the motor assembly into the housing so that the air passage node of the **01722** Bearing Plate will fit into the air passage notch on the inside of the motor housing. Make sure that the motor is positioned properly and that it fits all the way into the housing before installing the lock ring.
11. Secure the motor housing in a vise by holding on the flats of the housing so that the rotor shaft is pointing up.
12. Install the **01727** Silencer and the air control ring into **01371** Lock Ring. Apply a small amount of the Loctite #567 (or equivalent) to the threads of the lock ring and install these parts onto the motor housing. (Torque to 35 N•m/300 in.- lbs.)
13. The motor can now be checked for proper adjustment. With the motor housing still mounted in the vise pull up on the end of the rotor shaft while turning it back and forth. (Apply 10-15 lbs. Force) Perform the same procedure while pushing down on the rotor shaft with the same amount of force. The rotor should turn freely without any drag, or rub being felt. If a pull rub is felt, increase preload or remove shims. If a push rub is felt then remove some of the load or add shims.
14. Install the collet assembly.

Motor Assembly Complete.

Valve Assembly:

1. Secure the motor housing in a vise holding on the housing flats so that the air inlet opening is pointing up.
2. Install the **01247** Speed Regulator Assembly (includes o-rings) and **01477** Valve Stem into the motor housing securing it with the **95558** Retaining Ring.

3. Place the **01464** Seal into the air inlet opening. Use needle nose pliers to install the **01472** Tip Valve so that the metal pin fits through the hole of the **01477** Valve Stem and then place the smaller end of the **01468** Spring against the back of the tip valve.
4. Install the **53190** Block plate along with the **96065** O-Ring onto the back of the motor housing.
5. Apply a small amount of the Loctite #567 (or equivalent) to the **01494** Inlet Adapter and install it. (Torque to 23 N•m/200 in.- lbs.)
6. Install the throttle lever securing it with the **01017** Pin.
7. Hold the **01494** Inlet Adapter stationary with an adjustable wrench while installing the air fitting.

Valve Assembly Complete. 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. 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 penetrate motor.

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Optional Accessories



53032 – 1/4" Drill Chuck
Includes: **53052** Mated Chuck Key



Collet Inserts
- **50065** – 1/8"
- **50039** – 8mm
- **50014** – 3/8"



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

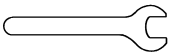


96529 Motor Tune-Up Kit:
- Includes assorted parts to help maintain and repair motor.



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

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



95262 – 14mm open-end.
95281 – 19mm open-end.



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



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



96213 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.



96240 Bearing Press Tool
- This tool is used to safely press a bearing into a bearing plate or onto a shaft.

Visit Our Web Site: www.dynabrade.com **Email:** Customer.Service@Dynabrade.com

DYNABRADE®

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