

.4 Hp/Straight Line/Rear Exhaust Die Grinder

Models:

52341 — 30,000 RPM, 1/8" — Collet

Air Motor and Machine Parts

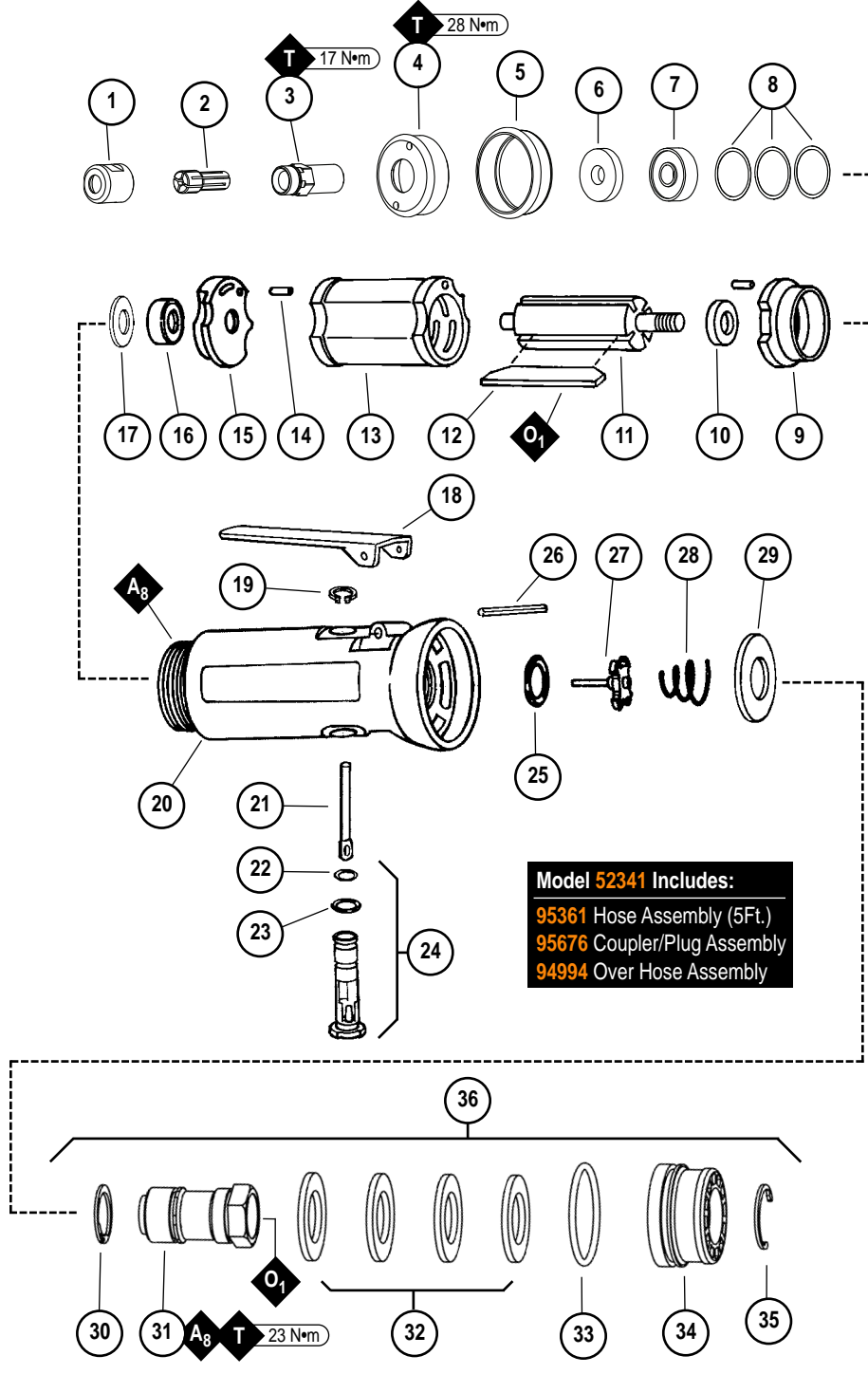
! WARNING Always operate, inspect and maintain this tool in accordance with the Safety Code for portable air tools (ANSI B186.1) and any other applicable safety codes and regulations. Please refer to Dynabrade's Warning/Safety Operating Instructions for more complete safety information.

KEY

- O** Oil: O₁ = Air Lube
- A** Adhesive: A₈ = Loctite #567
- T** Torque: N•m x 8.85 = In. - lbs.

Index Key

No.	Part #	Description
1	01484	Collet Cap
2	01495	1/8" Collet Insert
3	01435	Collet Body
4	01489	Exhaust Cover
5	01547	Rubber Collar
6	01580	Silencer
7	02649	Bearing
8	54529	Shim Pack (3/pkg)
9	01478	Front Bearing Plate
10	01479	Spacer
11	01475	Rotor
12	01480	Vanes (4/pkg)
13	01476	Cylinder
14	50767	Pin (2)
15	02676	Rear Bearing Plate
16	02696	Bearing
17	02679	Shield
18	01448	Throttle Lever
	01462	Safety Lock Lever
19	95558	Retaining Ring
20	51266	Housing
21	01449	Valve Stem
22	95730	O-Ring
23	01024	O-Ring
24	01469	Speed Reg. Assy.
25	12132	Pin
26	01464	Seal
27	01472	Tip Valve
28	01468	Spring
29	01564	Air Control Ring
30	95711	Retaining Ring
31	01578	Inlet Adapter
32	01486	Felt Silencer (4)
33	96065	O-Ring
34	01446	Air Deflector
35	95620	Retaining Ring
36	94535	Muffler Assembly



Model 52341 Includes:
 95361 Hose Assembly (5Ft.)
 95676 Coupler/Plug Assembly
 94994 Over Hose Assembly

See inside for Important Operating, Maintenance and Safety Instructions.
 Please indicate: Model #, Serial #, and RPM when ordering replacement parts.

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**: 1pt. 473ml.) 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: **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, please specify the **Model #**, **Serial #** and **RPM** of your machine.
6. A Motor Tune-Up Kit (P/N **96049**) 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, 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).
- 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.

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)	Spindle Thread	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
52341	.4 (298)	30,000	87 dB(A)	3/23 (651)	90 (6.2)	M8 x 1.0 male	.8 (.36)	5-3/4 (146)	1-5/8 (41)

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

Disassembly/Assembly Instructions - .4 Hp/Straight-Line/Rear Exhaust

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. Secure air tool in vise using 52296 Repair Collar or padded jaws.
2. Remove collet cap and insert.
3. With an adjustable pin wrench, remove 01489 Exhaust Cover by turning counter-clockwise. Remove muffler insert.
4. Pull motor assembly from housing.
5. Press rotor from 02696 Rear Bearing. Press 02696 Bearing from 02676 Rear Bearing Plate.
6. Remove 01435 Collet Body from rotor shaft. Twist collet counter clockwise from shaft.
7. Remove 02649 Front Bearing, bearing plate, cylinder, blades (4) and 01479 Spacer from rotor.
Note: 02649 Bearing is a slip fit into 01478 Front Bearing Plate.

Motor Disassembly Complete.

Motor Assembly:

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

1. Place 01475 Rotor in padded vise with threaded spindle facing upward.
2. Slip 01479 Spacer onto rotor.
3. Place a .002" shim into 01478 Front Bearing Plate as an initial spacing (**Note:** 54529 Shim Pack contains .001", .002", and .003" shims) and slip 02649 Bearing into plate.
4. Install bearing/bearing plate assembly onto rotor.
5. Tighten 01435 Collet Body onto rotor (torque to 17 N•m/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 01480 Blades (4) into rotor slots. Dynabrade Air Lube P/N 95842 is recommended for lubrication.
8. Install cylinder over rotor.
9. Press 02696 Rear Bearing into 02673 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. A loose fit will not achieve the proper pre-load of motor bearings. 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.
10. Secure housing in vise using 52296 Repair Collar.
11. Place 02679 Shield over 02696 Rear Bearing and Install motor assembly into housing. Be sure motor fits all the way into housing.
12. Assemble 01580 Silencer into 01489 Exhaust Cover and install onto motor housing (torque 28 N•m/250 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.

Motor Assembly Complete.

Valve Body Disassembly:

1. Position valve body in a vise by using 52296 Repair Collar so that air inlet points up.
2. Secure 01578 Inlet Adapter with a wrench to prevent it from turning. While holding the inlet adapter stationary remove the air fitting by turning it counterclockwise. **Important:** 01578 Inlet Adapter must be secured before attempting to remove the air fitting so as to avoid damaging the valve body housing.
3. Remove 01578 Inlet Adapter.
4. Remove 95711 Retaining Ring from inlet adapter. Then remove 01486 Felt Silencer (4), and 01379 Bronze Muffler.
5. Remove 01564 Air Control Ring from the valve body housing. Use needle nose pliers and remove 01468 Spring, 01472 Tip Valve and 01464 Seal.
6. Use a 2.5 drive punch to remove 12132 Pin and 01448 or 01462 Throttle Lever.
7. Remove 95558 Retaining Ring and push 01469 Regulator from the valve body housing.

Valve Body Disassembly Complete.

Valve Body Assembly:

1. Install 01469 Regulator complete with o-rings and valve stem into valve body housing. Secure it in place with 95558 Retaining Ring.
2. Place valve body housing in a vise, holding it with the aid of 52296 Repair Collar so that the air inlet openings points up.
3. Insert 01464 Seal into the air inlet opening so that it lays flat.
4. Line up hole in valve stem with inlet opening in housing (looking past brass bushing). Install 01472 Tip Valve so that the metal pin passes through the hole in the valve stem. Install 01478 Spring (small end against tip valve).
5. Position 01564 Air Control Ring around inlet opening. Place 01379 Bronze Muffler inside 01446 Air Deflector.
6. With 95620 Retaining Ring installed on female threaded end of 01578 Inlet Adapter insert the inlet adapter through 01446 Air Deflector.
7. Place 01486 Felt Silencer (4) inside 01446 Air Deflector.

(continued on next page)

Disassembly/Assembly Instructions (continued)

8. Install **95711** Retaining Ring into groove at the male threaded end of the inlet adapter. Install **96065** O-Ring into groove on the air deflector.
9. Apply Loctite® #567 (or equivalent) to the male threads of the **01578** Inlet Adapter and install muffler assembly onto valve body housing (torque to 23 N•m/200 in.-lbs.).
10. Install **01448** or **01462** Throttle Lever onto valve body housing with **12132** pin.
11. Secure **01578** Inlet Adapter with a wrench to prevent it from turning. While holding the inlet adapter stationary install the air fitting by turning it clockwise.
Important: **01578** Inlet Adapter must be secured before attempting to install the air fitting so as to avoid damaging the valve body housing.

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.

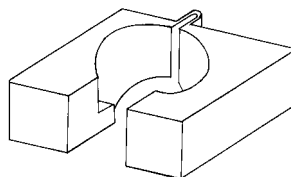
Loctite® is a registered trademark of Loctite Corp.

Optional Accessories



Collet Inserts

- **01485** 1/4"
- **01497** 6mm
- **01495** 1/8"
- **01496** 3mm



52296 Repair Collar

- Specially designed collar for use in vise to prevent damage to valve body housing during disassembly/assembly.



96049 Motor Tune-Up Kit

- Includes assorted parts to help maintain and repair motor.



Dynaswivel®

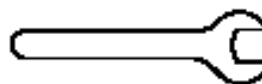
Swivels 360° at two locations which allows an air hose to drop straight to the floor, no matter how the tool is held.

- **94300** 1/4" NPT.



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.



Open-End Wrenches

- 96076** – 12mm open-end.
- 95262** – 14mm open-end.