

### Models:

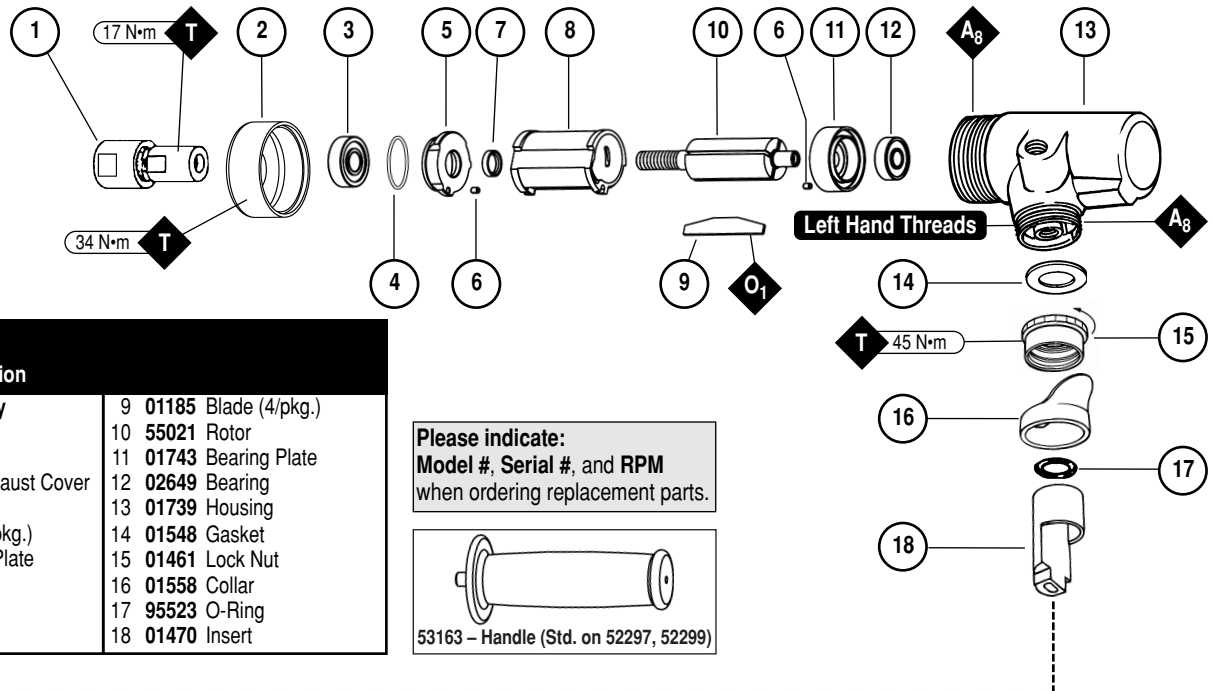
52279 – 15,000 RPM, 6 mm Collet  
52292 – 15,000 RPM, 1/4" Collet  
52293 – 18,000 RPM, 1/4" Collet  
52294 – 20,000 RPM, 1/4" Collet  
52295 – 18,000 RPM, 6 mm Collet  
52297 – 20,000 RPM, 1/4" Collet  
52298 – 20,000 RPM, 6 mm Collet  
52299 – 20,000 RPM, 6 mm Collet

# .7 Hp/Short Shank/Rear 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.

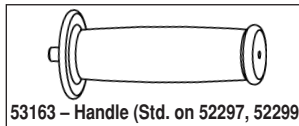


### Index Key

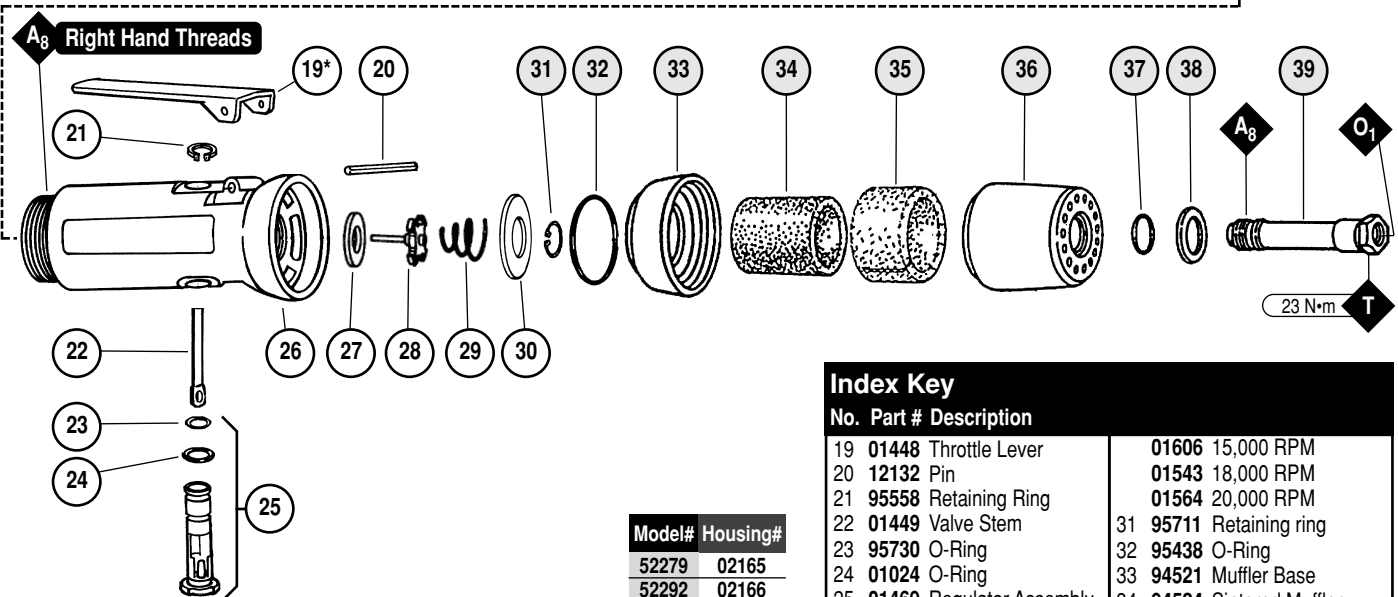
#### No. Part # Description

1 Collet Assembly	9 01185 Blade (4/pkg.)
50010 1/4"	10 55021 Rotor
50015 6 mm	11 01743 Bearing Plate
2 04034 Rear Exhaust Cover	12 02649 Bearing
3 01007 Bearing	13 01739 Housing
4 01121 Shim (3/pkg.)	14 01548 Gasket
5 01008 Bearing Plate	15 01461 Lock Nut
6 50767 Pin (2)	16 01558 Collar
7 01010 Spacer	17 95523 O-Ring
8 01028 Cylinder	18 01470 Insert

Please indicate:  
Model #, Serial #, and RPM  
when ordering replacement parts.



53163 – Handle (Std. on 52297, 52299)



### Index Key

#### No. Part # Description

19 01448 Throttle Lever	01606 15,000 RPM
20 12132 Pin	01543 18,000 RPM
21 95558 Retaining Ring	01564 20,000 RPM
22 01449 Valve Stem	31 95711 Retaining ring
23 95730 O-Ring	32 95438 O-Ring
24 01024 O-Ring	33 94521 Muffler Base
25 01469 Regulator Assembly	34 94524 Sintered Muffler
26 Housing (See Chart)	35 94525 Felt Muffler
27 01464 Seal	36 94522 Muffler Cap
28 01472 Tip Valve	37 95375 O-Ring
29 01468 Spring	38 94526 Spacer
30 Air Control Ring	39 94523 Inlet Adapter

#### Model# Housing#

52279	02165
52292	02166
52293	02167
52294	02168
52295	02169
52297	02168
52298	02170
52299	02170

Shade Parts represent 94520 Muffler Assembly

\*Optional 01462 Safety lock lever assembly available.

See reverse side for Accessories and Important Operating, Maintenance and Safety Instructions.

**O** Oil: O<sub>1</sub> = Air Lube

**A** Adhesive: A<sub>8</sub> = Loctite #567

**T** Torque: N·m x 8.85 = In. - lbs.

KEY

# 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: 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 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 96045) 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.

## 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)
15,000 RPM Models	.7 (522)	15,000	78 dB(A)	5/34 (963)	90 (6.2)	3/8"-24 male	2.3 (1.0)	8-1/8 (206)	5-1/2 (140)
18,000 RPM Models	.7 (522)	18,000	80 dB(A)	5/34 (963)	90 (6.2)	3/8"-24 male	2.3 (1.0)	8-1/8 (206)	5-1/2 (140)
20,000 RPM Models	.7 (522)	20,000	77 dB(A)	5/37 (1,048)	90 (6.2)	3/8"-24 male	2.3 (1.0)	8-1/8 (206)	5-1/2 (140)

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

# **Disassembly/Assembly Instructions-.7 Hp 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. Disconnect tool from power source.
2. Secure air tool in vise using **52296** Repair Collar. Remove Collet Cap and Collet Insert.
3. With an open-end wrench remove **04034** Rear Exhaust Cover by turning counter-clockwise.
4. Pull motor assembly out of housing.
5. Press rotor from **01743** Rear Bearing. Press **02649** Bearing from bearing plate.
6. Remove **01028** Cylinder, blades (4) and **01010** Spacer from rotor. **Note:** **01007** Bearing, **01008** Front Bearing Plate and spacer are a slip fit onto rotor.

**Optional:** To disassemble the valve body from the motor housing, peel back **01558** Collar to expose **01461** Lock Nut. Unscrew lock nut/valve body from housing (left hand threads).

**Motor Disassembly Complete.**

## **Valve Body Disassembly:**

1. Position valve body in vise using **52296** Repair Collar with air inlet facing up.
2. Remove air fitting by securing **94523** Inlet Adapter with a wrench and twist air fitting from inlet adapter. **Important:** **94523** Inlet Adapter must be secured before attempting to remove air fitting to avoid damaging valve body housing.
3. Remove **94523** Inlet Adapter.
4. Remove **95711** Retaining Ring from inlet adapter and separate **94521** Muffler Base from **94522** Muffler Cap. Remove sintered muffler and felt muffler.
5. Remove air control ring from valve body. Using needle nose pliers, remove **01468** Spring, **01472** Tip Valve and **01464** Seal.
6. Using a 2.5 mm drift pin, tap **12132** Pin from housing and remove throttle lever.
7. Remove **95558** Retaining Ring. Push **01469** Regulator from valve body.

**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 front bearing plate as an initial spacing and slip **01007** Bearing into plate. **Note:** **01121** Shim Pack contains .001" and .002" shims.
4. Install bearing/bearing plate assembly onto rotor.
5. Tighten 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 **01185** Blades (4/pkg) into rotor slots. Dynabrade Air Lube P/N **95842** is recommended.
8. Install cylinder over rotor. Be sure air inlet holes of cylinder face away from bearing plate.
9. Press **02649** Rear Bearing into **01743** 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. Apply a small amount of Loctite® #567 sealant to threads and install **04034** Rear Exhaust Cover onto motor housing (torque 34 N•m/300 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 Body Assembly:**

1. Insert **01469** Regulator with o-rings and valve stem in place into valve body. Secure with **95558** Retaining Ring.
2. Secure valve body in vise using **52296** Repair Collar with air inlet facing upwards. Insert **01464** Seal.
3. Line up hole in valve stem with hole in housing (looking past brass bushing). Insert **01472** Tip Valve so that the metal pin passes through the hole in the valve stem. Install **01468** Spring (small end towards tip valve).
4. Assemble sintered muffler and felt muffler together and place in **94522** Muffler Cap. Install **94521** Muffler Base onto muffler cap.
5. Install **95438** O-Ring into groove on muffler base. Place **95375** O-Ring and **94526** Spacer into recessed area of muffler cap.
6. Slip **94523** Inlet Adapter through muffler assembly and install **95711** Retainer Ring into groove on inlet adapter.
7. Install air control ring into valve body housing.
8. Apply Loctite® #567 Sealant to threads of **94523** Inlet Adapter and install entire muffler assembly onto valve body (torque 23.0 N•m/200 in. - lbs.).
9. Replace air fitting. Secure inlet adapter with a wrench before tightening air fitting. Install throttle lever and **12132** Pin.

**Notice:** To adjust throttle body orientation for a rear exhaust tool.

1. Use **52296** Repair Collar to secure valve body in vise with **01739** Housing facing up.
2. Peel down **01558** Collar to expose the hex portion of **01461** Lock Nut.

(continued on next page.)

## Disassembly/Assembly Instructions-.7 Hp Rear Exhaust (continued)

3. Using a 34 mm crows foot and firmly holding motor housing, turn **01461** Lock Nut counter clockwise to loosen assembly.
4. Adjust orientation of the throttle lever to agree with your grip and comfort level allowing for additional rotation due to torquing.
5. Using the 34 mm crows foot and (torque 45 N•m/400 In. lb. while firmly holding motor housing in place to reduce housing rotation) to tighten **01461** Lock Nut.

**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

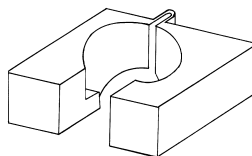
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### Optional Accessories



#### Collet Inserts

- **50065** – 1/8"
- **50013** – 1/4"
- **50016** – 6 mm
- **50039** – 8 mm



#### 52296 Repair Collar

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



#### 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** Composite 1/4" NPT



#### 96045 Motor Tune-Up Kit:

- Includes assorted parts to help maintain and repair motor.

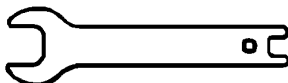


#### 53032 1/4" Drill Chuck

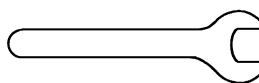
- Includes: **53052** Mated Chuck Key

### Wrenches

**95281** – 19 mm open-end.



**95262** – 14 mm open-end.



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