For Serial No. 6C5500 and Higher

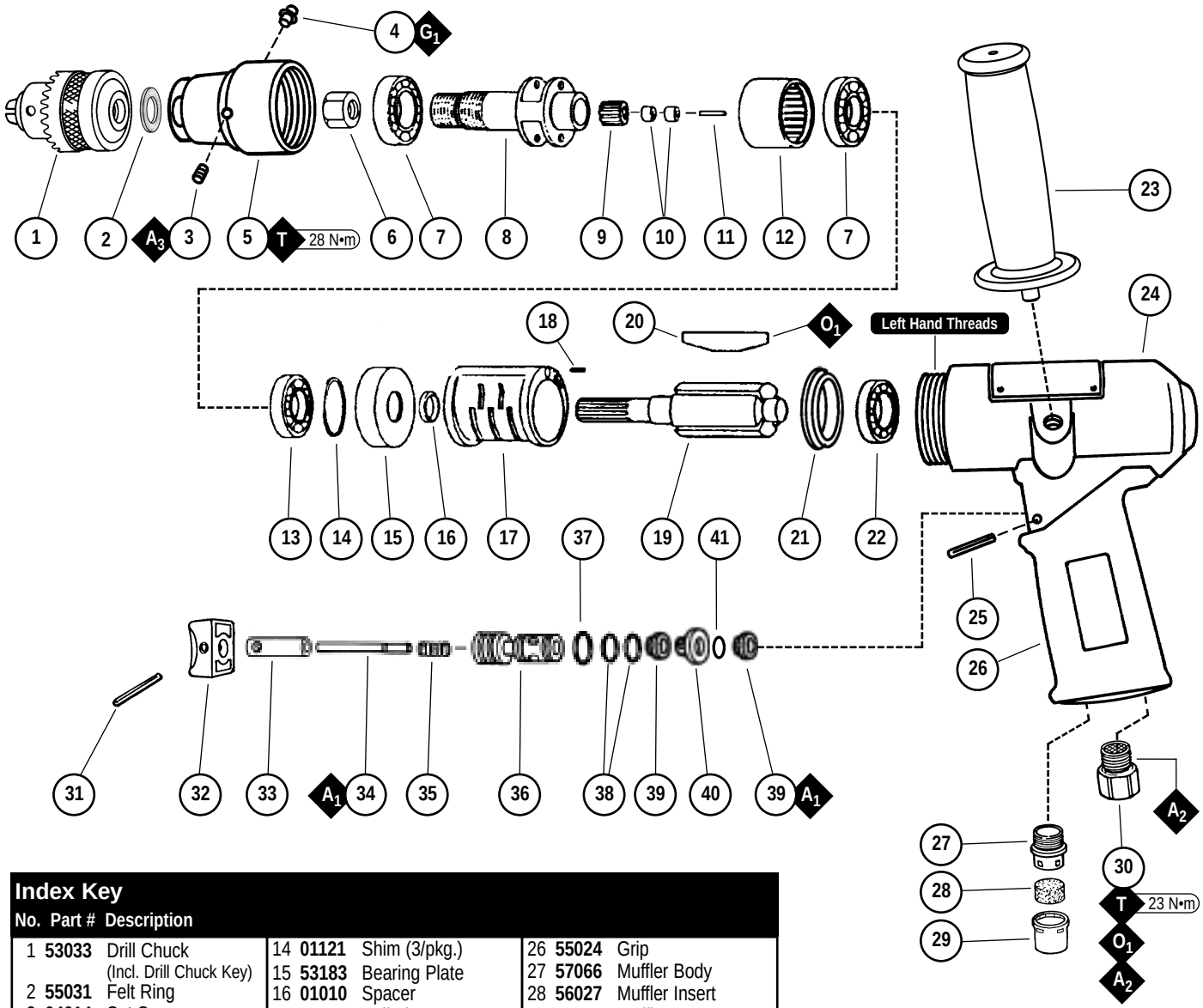
Parts Page Reorder No. PD00•65
Effective August, 2000
Supersedes PD96•80

Models:
53060 — 3,400 RPM
53095 — 4,500 RPM

3/8" Pistol Grip Drill

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	**53033**	Drill Chuck (Incl. Drill Chuck Key)
2	**55031**	Felt Ring
3	**04014**	Set Screw
4	**01041**	Grease Fitting
5	**55030**	Cover
6	**04114**	Spindle Nut
7	**02552**	Bearing (2)
8	**53165**	Spindle
9	**Gear**	
	53193	3,400 RPM (2)
	53195	4,500 RPM (2)
10	**04026**	Needle Bearing (4)
11	**53182**	Gear Shaft (2)
12	**53191**	Ring Gear
13	**01007**	Bearing
14	**01121**	Shim (3/pkg.)
15	**53183**	Bearing Plate
16	**01010**	Spacer
17	**01028**	Cylinder
18	**50767**	Pin
19	**Rotor**	
	04017	3,400 RPM
	04009	4,500 RPM
20	**01185**	Blade (4/pkg.)
21	**55027**	Bearing Plate
22	**02649**	Bearing
23	**53163**	Handle Assy.
24	**Housing**	
	55048	3,200 RPM
	53067	4,500 RPM
25	**96025**	Pin
26	**55024**	Grip
27	**57066**	Muffler Body
28	**56027**	Muffler Insert
29	**56028**	Muffler Cap
30	**56023**	Inlet Bushing
31	**50936**	Pin
32	**55035**	Trigger
33	**55043**	Trigger post
34	**55052**	Valve Stem
35	**96069**	Spring
36	**55039**	Bushing
37	**50939**	O-Ring
38	**02027**	O-Ring (2)
39	**55051**	Valve Stop (2)
40	**55041**	Valve
41	**96147**	O-Ring

KEY

- **O** Oil: **O_1 = Air Lube**
- **A** Adhesive: **A_1 = Loctite #609**, **A_2 = Loctite #271**, **A_3 = Loctite #242**
- **T** Torque: **N•m x 8.85 = In. - lbs.**
- **G** Grease: **G_1 = Lubriplate 630 AA**

See inside for 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 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, specify the **Model #**, **Serial #**, and **RPM** of your machine.
6. A Motor Tune-Up Kit (P/N **96047**) is available which includes assorted parts to help maintain motor in peek operating condition.
7. Gear case of this Dynabrade air tool should be lubricated with one plunge for every 50 hours of use by Dynabrade's **95541** Grease Gun and **95542** Grease.

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	Maximum Air Flow CFM/SCFM (LPM)	Spindle Thread	Air Pressure PSIG (Bars)	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
53060	.7 (522)	3,400	84 dB(A)	5/33 (935)	1/2"-20 male	90 (6.2)	3.2 (1.4)	8-7/8 (224)	6-3/8 (163)
53095	.7 (522)	4,500	84 dB(A)	5/33 (935)	1/2"-20 male	90 (6.2)	3.2 (1.4)	8-7/8 (224)	6-3/8 (163)

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

Disassembly/Assembly Instructions

Important: Manufacturer's warranty is void if tool is disassembled before warranty expires.
A Motor Tune-Up Kit is available (P/N 96047) is available to help maintain motor in peek operating condition.

Tool Disassembly:

1. Remove drill chuck and **53163** Side Handle.
2. Place machine housing in soft jaw vise. **Important:** Be careful not to over tighten vise to prevent damage.
3. Turn **55030** Cover clockwise and remove, (Left Hand Thread).
4. Pull motor assembly from housing.
5. Remove **56028** Muffler Cap. Use a 12 mm hex key to unscrew **57066** Muffler Body from housing.
6. Unscrew **01494** Inlet Bushing and remove.

Motor Disassembly:

1. Press rotor from **02649** Bearing and **53183** Bearing Plate.
2. Press **02649** Bearing from **53185** Bearing Plate.
3. Remove **01028** Cylinder and **01185** Blades (4) from rotor.
4. Press **04017/04009** Rotor from **53183** Bearing Plate and **01007** Bearing.
5. Remove **01007** Bearing from **53183** Bearing Plate.
6. Remove **01010** Spacer from **04017/04009** Rotor.

Valve Disassembly:

1. Drive **96025** Pin from housing and remove valve assembly from housing.
2. Remove **55051** Valve Stop (Press valve stem from valve stop, be careful not to damage **55041** Valve. A small bearing puller is recommended).
3. Remove **55041** Valve.
4. Press **55052** Valve Stem through the second **55051** Valve Stop.

Valve Assembly:

1. Install **96069** Spring and slide **55039** Bushing (with o-rings) onto valve stem/trigger assembly.
2. Apply a small amount of #609 Loctite (or equivalent) onto **55052** Valve Stem and, press **55051** Valve Stop onto **55052** Valve Stem large end out.
3. Install **55041** Valve onto valve stem.
4. Install **96147** O-Ring onto the **55051** Valve Stop.
5. Apply a small amount of #609 Loctite (or equivalent) onto **55052** Valve Stem and, press **55051** Valve Stop onto valve stem with o-ringed end facing valve. Press valve stop until flush with valve stem end.
6. Reinsert into housing and replace **96025** Pin.

Motor Assembly:

Important: Be certain all parts are cleaned, properly greased and in good repair before assembling.

1. Install **01007** Front Bearing into **53183** Bearing Plate. (**Note:** Shimming may be required in upcoming steps).
2. Install **01010** Spacer on rotor.
3. Press bearing assembly onto rotor and spacer.
4. Secure **04017/04009** Rotor in padded vise.
5. Use a .001" thick feeler gauge to set clearance between the **53183** Bearing Plate and **04017/04009** Rotor.
6. If shimming is required, use the **01121** Shim Pack accordingly to shim between the **01007** Bearing and **53083** Bearing Plate to obtain a .001" clearance between the bearing plate and rotor.
7. Install **01185** Blades (4) onto **04017/04009** Rotor. (**Note:** Blades should be lubricated with Dynabrade Air Lube P/N **95842** or equivalent before installation).
8. Install **01028** Cylinder over rotor and onto **53183** Bearing Plate.
   Note: Air inlet holes in cylinder should face away from bearing plate.
9. Press **02649** Bearing into **55027** Bearing Plate.
10. Press bearing and bearing plate onto rotor. Be sure **50767** Pin in **55027** Bearing Plate lines up with hole in **01028** Cylinder.
    Important: The fit must be snug between bearing plates and cylinder. If to tight, rotor will not turn freely. Rotor must then be lightly tapped at short end so it will turn freely while still maintaining a snug fit. A loose fit will not achieve the proper pre-load of the motor bearings.

Tool Assembly:

1. Place machine housing in soft jaw vise. Be sure not to over tighten to prevent damage.
2. Install motor assembly into housing.
3. Screw **55030** Cover onto housing turning counterclockwise, torque to 28.0 N•m/250 in. - lbs.
4. Replace **57066** Muffler Body into housing.
5. Replace **56028** Muffler Cap onto muffler body.
6. Apply a small amount of #271 Loctite® (or equivalent) to the threads of the inlet bushing. Install inlet bushing into housing, torque 23.0 N•m/200 in. - lbs.
7. Lubricate motor by applying 2 or 3 drops of Dynabrade Air Lube P/N **95842** (or equivalent) into air inlet.
8. Grease needle bearings and gears in **55030** Cover through **01041** Grease Fitting located on **55030** Cover.

(continued on next page)

9. Replace **53163** Side Handle. Install drill chuck.

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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Note: To order replacement parts specify the model and serial number of your machine.

Optional Accessories

96047 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.

Grease

- 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-handed operation).

95542: 10 oz. (283.5g) tube.

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

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