

Pistol Grip Drill Central Vacuum

Parts Page Reorder No. PD09•26
Effective June, 2009

Air Tool Manual – Safety, Operation and Maintenance

SAVE THIS DOCUMENT, EDUCATE ALL PERSONNEL

Models:

53103 – 3,400 RPM, 3/8" Chuck

53104 – 4,500 RPM, 3/8" Chuck

53105 – 950 RPM, 3/8" Chuck

53106 – 950 RPM, 1/2" Chuck



1-1/4" Vacuum Port

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! WARNING

Read and understand this tool manual before operating your air tool. Follow all safety rules for the protection of operating personnel as well as adjacent areas. Always operate, inspect and maintain this tool in accordance with the American National Safety Institute (ANSI) Safety Code for Portable Air Tools – B186.1. For additional safety information, refer to Safety Requirements for the Use, Care and Protection of Abrasive Wheels – ANSI B7.1, Code of Federal Regulation – CFR 29 Part 1910, European Committee for Standards (EN) Hand Held Non-Electric Power Tools – Safety Requirements and applicable State and Local Regulations.

SAFETY LEGEND

	! WARNING Read and understand tool manual before work starts to reduce risk of injury to operator, visitors, and tool.	! WARNING Practice safety requirements. Work alert, have proper attire, and do not operate tools under the influence of alcohol or drugs.	
	! WARNING Eye protection must be worn at all times, eye protection to conform to ANSI Z87.1.	! WARNING Ear protection to be worn when exposure to sound, exceeds the limits of applicable Federal, State or local statutes, ordinances and/or regulations.	
	! WARNING Respiratory protection to be used when exposed to contaminant's that exceed the applicable threshold limit values required by law.	! WARNING Air line hazard, pressurized supply lines and flexible hoses can cause serious injury. Do not use damaged, frayed or deteriorated air hoses and fittings.	

! WARNING

Some dust created by grinding, drilling, and other construction activities contain chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints
- Crystalline silica from bricks and cement and other masonry products
- Arsenic and chromium from chemically treated lumber

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

SAFETY INSTRUCTIONS

Carefully Read all instructions before operating or servicing any Dynabrade® Abrasive Power Tool.

Products offered by Dynabrade are not to be modified, converted or otherwise altered from the original design.

Tool Intent: Pistol Grip Drills can be used to drill wood, ceramics, plastics, fiberglass, laminates, hard and soft materials. An appropriate external vacuum source is required that is suitable for material being processed.

Do Not use tool for anything other than intended applications.

Training: Proper care, maintenance, and storage of your tool will maximize performance.

- Employer's Responsibility – Provide Pistol Grip Drill operators with safety instructions and training for safe use of tools and accessories.

Caution: Remove adjusting keys or wrenches before turning on the tool. A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

- Always use auxiliary handle for maximum control over torque reaction or kick-back.

(continued on next page)

SAFETY INSTRUCTIONS CONTINUED

Accessory Selection:

- Abrasive/accessory RPM (speed) rating MUST be approved for AT LEAST the tool RPM rating.
- Before mounting an accessory, visually inspect for defects. Do not use defective accessories.
- Use only recommended accessories. See back page of manual and Dynabrade catalog.
- Follow tool specifications before choosing size and type of accessory.
- Only use recommended fittings and air line sizes. Air supply hoses and air hose assemblies must have a minimum working pressure rating of 150 PSIG (10 Bars, g) or 150 percent of the maximum pressure produced in the system, whichever is higher. (See tool Machine Specifications table.)

OPERATING INSTRUCTIONS

Warning: Always wear eye protection. Operator of tool is responsible for following: accepted eye, face, respiratory, hearing and body protection.

Caution: Hand, wrist and arm injury may result from repetitive work, motion and overexposure to vibration.

- Tool RPM must never exceed abrasive/accessory RPM rating. Check accessory manufacturer for details on maximum operating speed or special mounting instructions.

Warning: Keep hand and clothing away from working end of the air tool.

Warning: Unexpected tool movement or breakage of inserted tool may cause injury.

Caution: Release throttle in case of an interruption of the energy supply.

Caution: Use only recommended lubricants.

Warning: Be sure that any loose clothing, hair and all jewelry is properly restrained.

- Secure inlet bushing on air tool with a wrench before attempting to install the air fitting to avoid damaging housing assembly.
- BEFORE MOUNTING AN ACCESSORY, after all tool repairs and whenever a drill is issued for use, check tool RPM (speed) with tachometer with air pressure set at 90 PSIG while the tool is running. If tool is operating at a higher speed than the RPM marked on the tool housing, or operating improperly, the tool must be serviced and corrected before use.

DRILL ACCESSORY MOUNTING INSTRUCTIONS

Warning: Disconnect power source before removing inserted tool

- Open chuck jaws wide enough to install bit. Be sure the bit shank and chuck jaws are clean. Dirt particles may prevent the bit from lining up properly.
- Insert the bit into the chuck. Center the bit in the chuck jaws and lift it about 1/16" off the bottom. Tighten the chuck jaws by the hand to align the bit.
- Place the chuck key in each of the three holes in the chuck, turning it clockwise. Tighten securely.

Caution: Remove adjusting keys or wrenches before turning the tool on. A wrench or a key is left attached to a rotating part of the tool may result in personal injury.

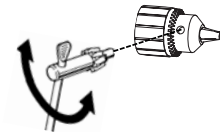
- Connect air tool to power source. Be careful NOT to depress throttle in the process. Do not expose air tool to inlet pressure above 90 PSIG or (6.2 Bars).

Caution: After installing the accessory, before testing or use and/or after assembling tool, the Pistol Grip Drill must be started at a reduced speed to check for good balance. Gradually increase tool speed. DO NOT USE if tool vibration is excessive. Correct cause, and retest to insure safe operation.

- To remove the bit, insert the chuck key into the holes in the chuck and turn counterclockwise.

Bit Selection:

- Use sharp bits. Sharp bits are less likely to bind when drilling. Use the proper bit for the job.
- Check the information on the bit's packaging for proper usage. Do not use bits larger than the rated capacity of the drill.



Caution: If the bit binds, the drill will suddenly react in the opposite direction of the rotation of the bit. The operator should prepare for a sudden reaction by holding the tool securely.

- Use proper speed for the size of bit. Larger bits should be run at the lower speed. Driving larger bits at the high speeds will increase the chance of reaction.
- Avoid drilling warped, wet, knotty, and pitchy materials if possible.
- When removing the bit from the tool avoid contact with the skin and use proper protective glove when grasping the bit or accessory. Accessories may be hot after prolonged use.
- Make sure that work area is uncluttered, and visitors are at a safe range from the tools and debris.
- A moving drill accessory that snags or catches within work piece may cause tool to stop unexpectedly or move erratically, which may cause injury.

Warning: Air tools are not intended for use in explosive atmospheres and are not insulated for contact with electric power sources.

- Use a vise or clamping device to hold work piece firmly in place. Do not apply excessive force on tool or apply "rough" treatment to it.

Warning: Always work with a firm footing, posture and proper lighting.

- Ensure that sparks and debris resulting from work do not create a hazard.

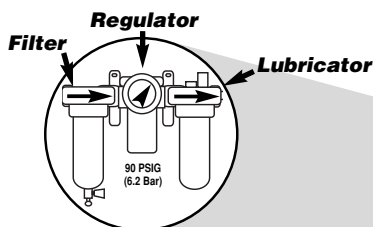
• This tool is rear exhaust. Exhaust may contain lubricants, vane material, bearing grease, and other materials flushed through the tool.

Warning: Drilling certain materials can create explosive dust. It is the employer's responsibility to notify the user of acceptable dust levels.

- Some material contains chemicals which may be toxic. Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data.
- Certain materials can cause sparks which can cause fires or explosions. It is the user's responsibility to make sure the work is done on spark free materials.

Report to your supervisor any condition of the tool, accessories, or operation you consider unsafe.

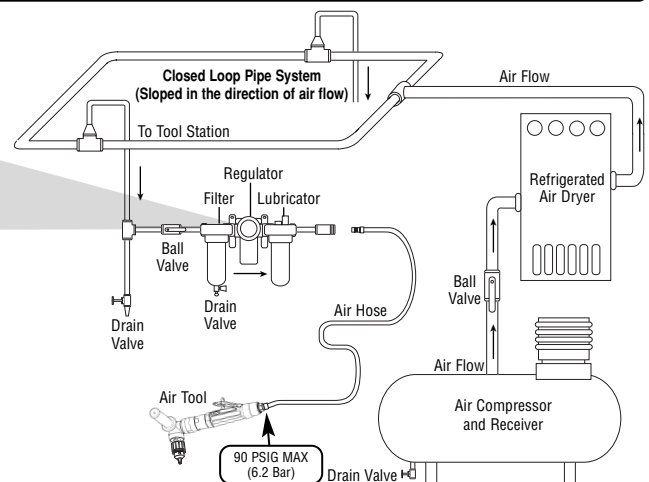
Air System



- Dynabrade Air Power Tools are designed to operate at 90 PSIG (6.2 Bar/620 kPa) maximum air pressure at the tool inlet, when the tool is running. Use recommended regulator to control air pressure.

- Ideally the air supply should be free from moisture. To facilitate removing moisture from air supply, the installation of a refrigerated air dryer after the compressor and the use of drain valves at each tool station is recommended.

LUBRICATOR SETTING
1 DROP/MIN.
20 SCFM



Maintenance Instructions

Important: To keep tool safe a preventative maintenance program is recommended whenever portable power tools are used. The program should include inspection of air supply lines, air line pressure, proper lubrication and repair of tools. Refer to ANSI B186.1 for additional maintenance information.

- Use only genuine Dynabrade replacement parts to insure quality. To order replacement parts, specify **Model#**, **Serial#** and **RPM** of your air tool.
- 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: **10681** Air Filter-Regulator-Lubricator (FRL) – Provides accurate air pressure regulation and two stage filtration of water contaminant's.
- Grease the planetary gear assembly with the **95542** Grease by applying **1 plunge** with the **95541** Grease Gun after **every 50 hours** of use for maximum gear life.
- Dynabrade recommends one drop of air lube per minute for each 20 SCFM (example: if the tool specification states 40 SCFM, set the drip rate on the filter-lubricator to 2 drops per minute). Dynabrade Air Lube (P/N **95842**: 1 pt 473 ml) is recommended.

Routine Preventative Maintenance:

- Check free speed of Pistol Grip Drill using a tachometer after every service or repair.

Caution: 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.

Caution: DO NOT clean or maintain tools with chemicals that have a low flash point (example: WD-40®).

- A Motor Tune-Up Kit (P/N **96047**) is available which includes high wear and medium wear motor parts.
- Air tool labels must be kept legible at all times, if not, reorder label(s) and replace. User is responsible for maintaining specification information i.e.: Model #, S/N, and RPM. (See Assembly Breakdown)
- Blow air supply hose out prior to initial use.
- Visually inspect air hoses and fittings for frays, visible damage and signs of deterioration. Replace damaged or worn components.
- Refer to Dynabrade's Warning/Safety Operating Instructions Tag (Reorder No. **95903**) for safety information.

After maintenance is performed on tool, add a few drops of Dynabrade Air Lube (P/N **95842**) to the air line and start the tool a few times to lubricate air motor. Check for excessive tool vibration.

Handling and Storage:

- Use of tool rests, hangers and/or balancers is recommended.
- Protect tool inlet from debris (see Notice below).
- DO NOT carry tool by air hose, or near the tool throttle.
- Protect abrasive accessories from exposure to water, solvents, high humidity, freezing temperature and extreme temperature changes.
- Store accessories in protective racks or compartments to prevent damage.

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.

Machine Specifications

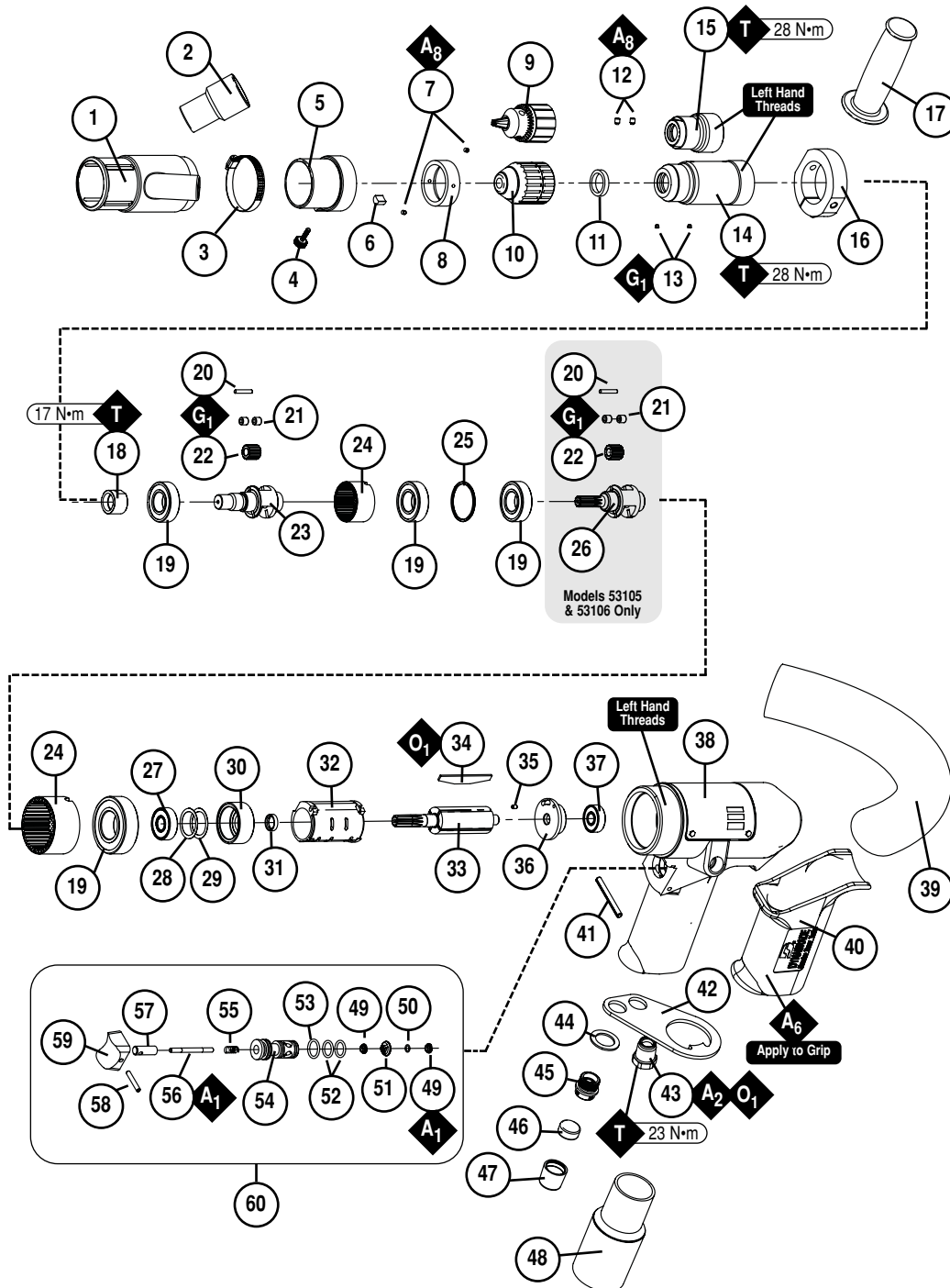
Model Number	Motor hp (W)	Motor RPM	Air Inlet Thread	Sound Level	Air Flow Rate SCFM (LPM)	Air Pressure PSIG (Bars)	Hose I.D. Size	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
53103	.7 (522)	3,400	1/4" NPT	84 dB(A)	40 (1130)	90 (6.2)	3/8" (10 mm)	4 (1.8)	10-3/8 (264)	5-7/8 (149)
53104	.7 (522)	4,500	1/4" NPT	84 dB(A)	40 (1130)	90 (6.2)	3/8" (10 mm)	4 (1.8)	10-3/8 (264)	5-7/8 (149)
53105	.7 (522)	950	1/4" NPT	84 dB(A)	40 (1130)	90 (6.2)	3/8" (10 mm)	4.4 (2.0)	12-1/4 (310)	5-7/8 (149)
53106	.7 (522)	950	1/4" NPT	84 dB(A)	40 (1130)	90 (6.2)	3/8" (10 mm)	4.4 (2.0)	12-1/4 (310)	5-7/8 (149)

Index Key

No. Part # Description

1	52753	Vacuum Shroud
2	31900	1" Dia. Hose Cuff
3	97029	Hose Clamp
4	53219	Locking Knob
5	02276	Shroud Base
6	40029	Motor Lock
7	02275	Screw (2)
8	02272	Sleeve
9	53034	1/2" Chuck - 53106
10	96526	3/8" Keyless Chuck
	53103/53104/53105	
11	55031	Felt Seal
12	04014	Screw (1) - 53103/53104 (2) - 53105/53106
13	01041	Fitting (1) - 53103/53104 (2) - 53105/53106
14	53185	Cover - 53105/53106
15	55030	Cover - 53103/53104
16	53199	Clamp Collar - 53105/53106
17	53163	Handle Assembly
18	04114	Nut
19	02552	Bearing (2) - 53103/53104 (4) - 53105/53106
20	53182	Pin (2) - 53103/53104 (4) - 53105/53106
21	04026	Bearing (4) - 53103/53104 (8) - 53105/53106
22	53195	Gear Planet (2) - 53104 (4) - 53105/53106
	53193	Gear Planet (2) - 53103
23	02270	Carrier - 53103/53104/53105
	53165	Carrier - 53106
24	53191	Ring Gear (1) - 53103/53104 (2) - 53105/53106
25	53188	Spacer - 53105/53106
26	53164	Carrier - 53105/53106
27	01007	Bearing
28	01293	Shim
29	01294	Shim
30	53183	Front Bearing Plate
31	01010	Spacer
32	01028	Cylinder
33	04009	Rotor - 53104/53105/53106
	04017	Rotor - 53103
34	01057	Vane (4)
35	50767	Pin Spring
36	55027	Rear Bearing Plate
37	02649	Bearing
38	53112	Housing - 53103
	53113	Housing - 53104
	53114	Housing - 53105
	53115	Housing - 53106
39	31926	Vacuum Hose
40	55024	Grip
41	96025	Pin
42	02271	Vacuum Hose Holder
43	56023	Inlet Bushing
44	02274	Washer
45	57066	Muffler Body
46	56027	Muffler Insert
47	56028	Muffler Cap
48	31905	1-1/4" Swivel Hose Cuff
49	55051	Valve Stop (2)
50	96147	O-Ring
51	55041	Valve
52	02027	O-Ring (2)
53	50939	O-Ring
54	55039	Bushing
55	96069	Spring
56	55052	Valve Stem
57	55043	Trigger Post
58	50936	Pin
59	55035	Trigger
60	55058	Trigger Assembly

Pistol Grip Drill Complete Assembly - All Models



53054 1/2" Chuck Key



95281 19 mm Open End Wrench

KEY

O	Oil: O ₁ = Air Lube
G	Grease: G ₁ = Lubriplate 630 AA
A	Adhesive: A ₁ = Loctite #609 A ₂ = Loctite #271 A ₆ = Loctite #380 A ₈ = Loctite #567
T	Torque: N•m x 8.85 = In. - lbs.

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 peak operating condition.

Shroud Disassembly:

1. Remove **31926** Vacuum Hose, loose **53219** Locking Knob and slide **02276** Shroud Base from tool.
2. Loosen **97029** Hose Clamp, remove **52753** Vacuum Shroud from Base and remove **31900** Hose Cuff from Shroud.

Tool Disassembly:

1. Remove drill chuck and **53163** Side Handle.
2. Carefully secure the tool in a vise so that the spindle is pointing up. To avoid damaging the housing do not over tighten the vise.
3. Remove the Cover by turning it clockwise. (**Left Hand Thread**)
4. Pull the air motor from the housing.
5. Remove the **56028** Muffler Cap. To remove the **57066** Muffler Body use the **96034** 12mm Hex Key.

Motor Disassembly:

1. Secure **96346** Bearing Separator (2in.) around the end of the cylinder closest to the rear bearing plate. Place the separator on the table of the **96232** Arbor Press so that the front of the motor is pointing down.
2. Use a 5/32" dia. flat end drive punch as a press tool and push the rotor out of the **02649** Bearing.
3. Remove the **02649** Bearing from the rear bearing plate with the **96213** Bearing Removal Tool and the arbor press.
4. Front Bearing/Plate Removal:
 - A. To remove the front bearing/plate from the **04009** Rotor, use the 2 in. bearing separator and the arbor press by pushing the pinion end of the rotor out of the **01007** Bearing.
 - B. To remove the front bearing/plate from the **55025** Rotor, the **01007** Bearing and the **01010** Spacer are both a slip fit to the plate and the rotor.

Planetary Gear Disassembly:

1. To remove the planetary gear assemblies from the cover remove the **04014** Set Screw(s).
2. Push the planetary assembly(ies) out of the cover. (Use the arbor press if needed.)
3. Fasten **96346** Bearing Separator (2in.) between the rear **02552** Bearing(s) and place the separator on the arbor press so that the planetary carrier spindle/pinion points down. Use the larger end of the **96214** Bearing Removal Tool to press the planetary carrier(s) out of the rear **02552** Bearing.
4. Remove the shafts and gears from the planetary carrier(s).
5. Use the bearing separator to also remove the front **02552** Bearing from the **53164** Planetary Carrier.
6. Carefully secure the planetary carrier in a soft aluminum or bronze jaw so that its' spindle is pointing up. Remove the **04114** Spindle Nut turning it counterclockwise.
7. Fasten a 2 in. bearing separator between the front **02552** Bearing and the **53165** planetary Carrier. Place these on the arbor press with the spindle pointing up and press the planetary carrier from the bearing.
8. Remove the **55031** Felt Seal from the cover.

Valve Disassembly:

1. Drive **96025** Pin from housing and pull the valve stem assembly from the housing.
2. To remove the **55051** Valve Stop use a 3/32" dia. flat end drive punch as a press tool, and with the aid of a small separator and an arbor press, push the **55052**.
3. 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 the first **55051** Valve Stop with its' large end facing away from the **55039** Bushing.
3. Install **96147** O-Ring onto the second **55051** Valve Stop.
4. Apply a small amount of #609 Loctite (or equivalent) onto **55052** Valve Stem and, press **55051** Valve Stop onto the valve stems that the o-ringed side is facing the **55041** Valve. **Important:** Press the second valve stop onto the valve stem only until the large end of the valve stop is flush with the end of the valve stem.
5. Install the valve assembly into the housing and secure it with the **96055** Pin.

Motor Assembly:

Important: Clean and inspect all parts before assembling.

1. Install **01010** Spacer on the rotor.
2. Install .003" thickness of shims into front bearing plate. Install **01007** Bearing into the front bearing plate.
3. Front Bearing/Plate Installation:
 - A. Use the **96244** Bearing Press Tool and arbor press to install the **53183** Front Bearing Plate along with **01007** Bearing onto the **04009** Rotor. (Place the tool against the inner race of the bearing.)

(continued on next page)

Disassembly/Assembly Instructions Continued

Motor Assembly Continued:

- B. Slip the **55026** Front Bearing Plate along with the **01007** Bearing onto the **55025** Rotor.
4. Use a .001" feeler gage to check clearance between the front of the rotor body and the face of the front bearing plate. That clearance must be .001"-.0015". If it is necessary to adjust the clearance, do this by adding or removing the appropriate thickness in shims.
 5. Apply Dynabrade Air Lube **95842** to the **01185** Blades and install these into the rotor slot.
 6. Install the **01028** Cylinder so that the air inlet area lines up with the air inlet holes in the rear bearing plate.
 7. Use the **96240** Bearing Press Tool and arbor press to install the **02649** Bearing into the **55027** Rear Bearing Plate (press tool against the outer race of the bearing).
 8. Use the **96240** Bearing Press Tool and arbor press to install the rear bearing/plate onto the rotor (press tool against the inner race of the bearing).
Important: The fit must be snug between the bearing plates and the cylinder. However, if its' too tight the rotor will turn freely. In that case the fit must be loosened so that the rotor will turn freely while still maintaining a snug fit.

Planetary Gear Assembly:

1. Press the front **02552** Bearing onto the front of the planetary carrier.
2. Install the **04114** Spindle Nut onto the planetary carrier. (Torque to 17 N•m/150 in.-lbs.)
3. Lubricate the planetary gears, needle bearings, and shafts with P/N **95542** Grease, and install these into the planetary carrier.
4. Install the **53191** Ring Gear over the planetary carrier so that the set screw and grease fitting notches will orient correctly once placed into the cover.
5. Press the rear **02552** Bearing onto the rear of the planetary carrier until it touches the ring gear. **Important:** The fit must be snug between the bearings and the ring gear. However, if its' too tight the planetary carrier will not turn freely. In that case the fit must be loosened so that the planetary carrier will turn freely while still maintaining a snug fit.
6. Install the **55031** Felt Seal into the cover.
7. Install the planetary carrier assembly(ies) into the cover so that the notches in the ring gear(s) align with the set screw and grease fitting openings in the cover.
8. Apply a small amount of Loctite #567 (or equivalent) to the threads of the **04114** Set Screw(s) and install into the cover.
9. Lubricate the planetary gears through the grease fitting(s) applying 1 plunge at intervals of every 50 hours of use. Order and use the recommended Dynabrade **95542** Grease Gun to insure the maximum gear life.

Tool Assembly:

1. Carefully secure the housing in a vise so that the motor opening is facing up. To avoid damaging the housing do not over tighten the vise.
2. Install the air motor assembly into the housing.
3. Carefully align the cover and the planetary gear assembly(ies) to the housing and the air motor assembly. (**Left Hand Thread**), (Torque to 28 N•m/250 in.-lbs.).
4. Use the **96034** 12mm Hex Key to install the **57066** Muffler Body into the housing. Place the **56027** Muffler Insert into the **56028** Muffler Cap and install these onto the muffler body.
5. Install the drill chuck and the **53153** Side handle.

Shroud Assembly:

1. Slide **31900** Hose Cuff onto port extending from **52753** Shroud.
2. Slide **97029** Hose Clamp onto base of Shroud; ensure that hose clamp is loose. Install Shroud onto **02276** Shroud base.
4. Install Shroud sub-assembly onto tool, ensuring that **02276** engages **02272** Sleeve and Attach **31926** Vacuum hose to Hose Cuff.
6. Tighten **53219** Locking Knob and tighten **97029** Hose Clamp.

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 depressed. Operate tool for 30 seconds to determine if tool is operating properly and to allow lubricating oils to properly permeate motor.

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Notice

All Dynabrade motors use the highest quality parts and materials 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.

Preventative Maintenance Schedule

Pistol Grip Drills

This service chart is published as a guide to expectant life of component parts. The replacement levels are based on average tool usage over one year. Dynabrade Inc. considers one year usage to be 1,000 hours.

Parts Common to all Models:

Index #	Part Number	Description	Number Required	High Wear 100%	Medium Wear 70%	Low Wear 30%	Non-Wear 10%
1	52753	Vacuum Shroud	1		X		
2	31900	1" Dia. Hose Cuff	1			X	
3	97029	Hose Clamp	1				X
4	53219	Locking Knob	1				X
5	02276	Shroud Base	1				X
6	40029	Motor Lock	1			X	
7	02275	Screw	2			L	
8	02272	Sleeve	1				X
9	53034	1/2" Chuck	1				X
10	96526	3/8" Keyless Chuck	1				X
11	55031	Felt Seal	1		T		
12	04014	Screw	2		T		
13	01041	Fitting	2			T	
14	See pg 4	Cover	—				X
15	See pg 4	Cover	—				X
16	See pg 4	Clamp Collar	—			X	
17	53163	Handle Assembly	1		X		
18	04114	Nut	1			T	
19	02552	Bearing	4		X		
20	See pg 4	Pin	—			X	
21	See pg 4	Bearing	—		X		
22	See pg 4	Gear Planet	—			X	
23	See pg 4	Carrier	1			X	
24	53191	Ring Gear	2			X	
25	53188	Spacer	1		T		
26	See pg 4	Carrier	—			X	
27	01007	Bearing	1		T		
28	01293	Shim	1				T
29	01294	Shim	1				T
30	53183	Front Bearing Plate	1			X	
31	01010	Spacer	1		T		
32	01028	Cylinder	1			X	
33	04009	Rotor	1			X	
34	01057	Vane	4		T		
35	50767	Pin Spring	1			X	
36	55027	Rear Bearing Plate	1			X	
37	02649	Bearing	1		T		
38	See pg 4	Housing	1				X
39	31926	Vacuum Hose	1			X	
40	55024	Grip	1			X	
41	96025	Pin	1			T	
42	02271	Vacuum Hose Holder	1				X
43	56023	Inlet Bushing	1				X
44	02274	Washer	1				L
45	57066	Muffler Body	1				X
46	56027	Muffler Insert	1	X			
47	56028	Muffler Cap	1				T
48	31905	Swivel Hose Cuff	1				X
49	55051	Valve Stop	2			L	
50	96147	O-Ring	1			T	
51	55041	Valve	1			T	
52	02027	O-Ring	2			T	
53	50939	O-Ring	1			T	
54	55039	Bushing	1			X	
55	96069	Spring	1		T		
56	55052	Valve Stem	1			L	
57	55043	Trigger Post	1			L	
58	50936	Pin	1			T	
59	55035	Trigger	1			X	
60	55058	Trigger Assembly	1			X	

LEGEND

- T Included in Tune-Up Kit
- X Type of wear, no other comments apply.
- L Easily lost. Care during assembly/disassembly.
- D Easily damaged during assembly/disassembly.
- R Replace each time tool is disassembled.



Tune-Up Kit
Part No. 96047

Note: Please refer to page 4 of tool manual for specific part number.

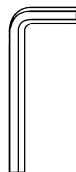
Optional Accessories

Find the Most Current Offering of Support Documents and Accessories at www.dynabrade.com



Dynaswivel®

- Swivels 360° AT TWO PIVOT POINTS allowing the air hose to drop directly to the floor while providing superb tool handling.
- Part No. 94300** – 1/4" NPT



Hex Key

- This is used for the removal and installation of the **57066** Muffler Body.
- Part No. 96034** – 12 mm Hex Key



Motor Tune-Up Kit

- Includes assorted parts to help maintain and repair motor.
- Part No. 96047**



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.
- Part No. 95542:** 10oz. Grease Tube
Part No. 95541: Push-Type Lubricant Gun
- One-hand operation.



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.

Part No. 95842: 1 pt. (473 ml)

Part No. 95843: 1 gal. (3.8 L)



Bearing Press Tool

- Use with (#2) arbor press to achieve accurate press of bearings and motor parts.

Part No. 96240

Part No. 96244



2" Bearing Separator

- Used to remove bearings, gears, and other components.

Part No. 96346



Bearing Removal Tool

- This tool is designed to pass through the I.D. of the bearing plate and push against the I.D. of the bearing.

Part No. 96213

Part No. 96214



Portable Vacuum Systems

- Dynabrade offers a wide assortment of vacuuming options to choose from. To help make your selection please request the most current portable vacuum systems literature from your local representative or by searching our web site.

Reference Contact Information

1. American National Standards Institute – ANSI

25 West 43rd Street
 Forth Floor
 New York, NY 10036
 Tel: 1 (212) 642-4900
 Fax: 1 (212) 398-0023

2. Government Printing Office – GPO

Superintendent of Documents
 Attn. New Orders
 P.O. Box 371954
 Pittsburgh, PA 15250-7954
 Tel: 1 (202) 512-1803

3. European Committee for Standardization

Rue de Stassart 36
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