

.7 hp Pistol Grip Drill

Governor Controlled

Parts Page Reorder No. PD12•12
Effective March, 2012
Supersedes PD09•43R

Safety, Operation and Maintenance – Save This Document and Educate All Personnel

Model	Chuck	RPM
53092	1/2"	500
53093	3/8"	1,800
53094	3/8"	2,400

DRILL



Find The Most Current Offering of Support Documents and Accessories at www.Dynabrade.com

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 Standards Institute (ANSI). Safety Requirements for the Use, Care and Protection of Abrasive Wheels – ANSI B7.1, Compressed Air and Gas Institute (CAGI) Safety Code for Portable Air Tools – B186.1, Code of Federal Regulation – CFR 29 Part 1910, International Organization for Standardization (ISO) Hand Held Non-Electric Power Tools – Safety Requirements and applicable State and Local Regulations.



Read and understand tool manual before work starts to reduce risk of injury to operator, visitors, and tool.



Eye protection must be worn at all times, eye protection to conform to ANSI Z87.1.



Ear protection to be worn when exposure to sound, exceeds the limits of applicable Federal, State or local statutes, ordinances and/or regulations.



Practice safety requirements. Work alert, have proper attire, and do not operate tools under the influence of alcohol or drugs.



Respiratory protection to be used when exposed to contaminants that exceed the applicable threshold limit values required by law.



Air line hazard, pressurized supply lines and flexible hoses can cause serious injury. Do not use damaged, frayed or deteriorated air hoses and fittings.

Some dust created by sanding, 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 and OPERATING INSTRUCTIONS



Carefully Read and Understand the General and Drill sections found in Tool Safety and Operating Guidelines (PN00001676) Before Handling or Using Tool.

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.

DO NOT USE Tool for Anything Other Than Its Intended Applications.

Training: Proper care, maintenance, and storage of your air tool will maximize tools performance and reduce chance for accident.

Employer's Responsibility: Provide operators with safety instructions and training for safe use of tools and accessories.

Report to Your Supervisor any Condition of the Tool, Accessories or Operation you Consider Unsafe.

SAFETY INSTRUCTIONS CONTINUED

Accessory Selection:

- Drill Bit/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.

Caution: Check manufacturer of non-flammable fluid for compatibility in drilling operations.

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 drill bit.

- 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.

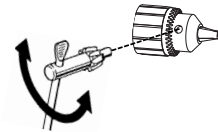
- Connect air tool to power source. Be careful NOT to depress throttle in the process. Do not expose air tool to inlet pressure above 90 PSIG or (6.2 Bars).

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.

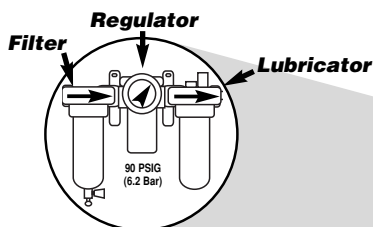
- Ensure that sparks and debris resulting from work do not create a hazard.
- This tool is rear exhaust. Exhaust may contain lubricants, vane material, bearing grease, and other materials flushed through the tool.

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.

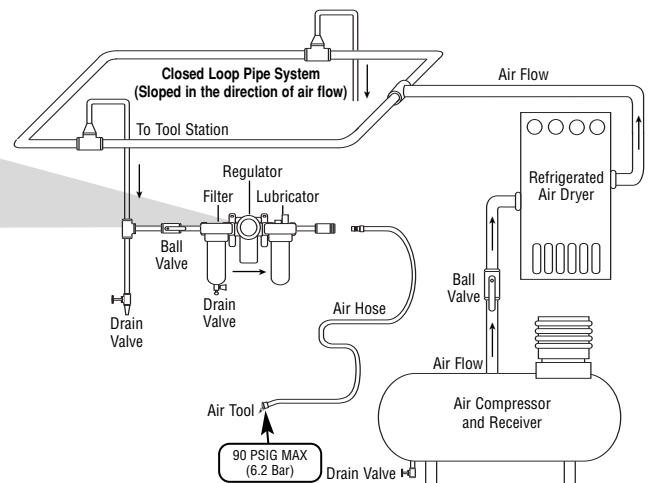
Air System



- 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 **2-3 plunges** 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 tool using a tachometer without abrasive accessory attached with 90 PSIG at inlet while tool is running. This governor controlled tool should be speed checked every 20 hours of use or weekly, whichever occurs more frequently. Always check tool speed after any maintenance or repair.
- Take special care when performing any maintenance to the governor, the governor is preset at the factory to maintain the maximum rated speed for the tool, if any inconsistency is found in the operating speed the tool must not be used. Investigate the cause, repair and recheck the free speed before use.

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 **96466**) 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 lever.
- 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.

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.

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)
53092	.7 (522)	500	1/4" NPT	76 dB(A)	30 (850)	90 (6.2)	3/8" (10 mm)	4.9 (2.2)	10-5/8 (270)	6-3/8 (162)
53093	.7 (522)	1,800	1/4" NPT	73 dB(A)	28 (793)	90 (6.2)	3/8" (10 mm)	3.2 (1.5)	8-7/8 (225)	6-3/8 (162)
53094	.7 (522)	2,400	1/4" NPT	74 dB(A)	30 (850)	90 (6.2)	3/8" (10 mm)	3.2 (1.5)	8-7/8 (225)	6-3/8 (162)

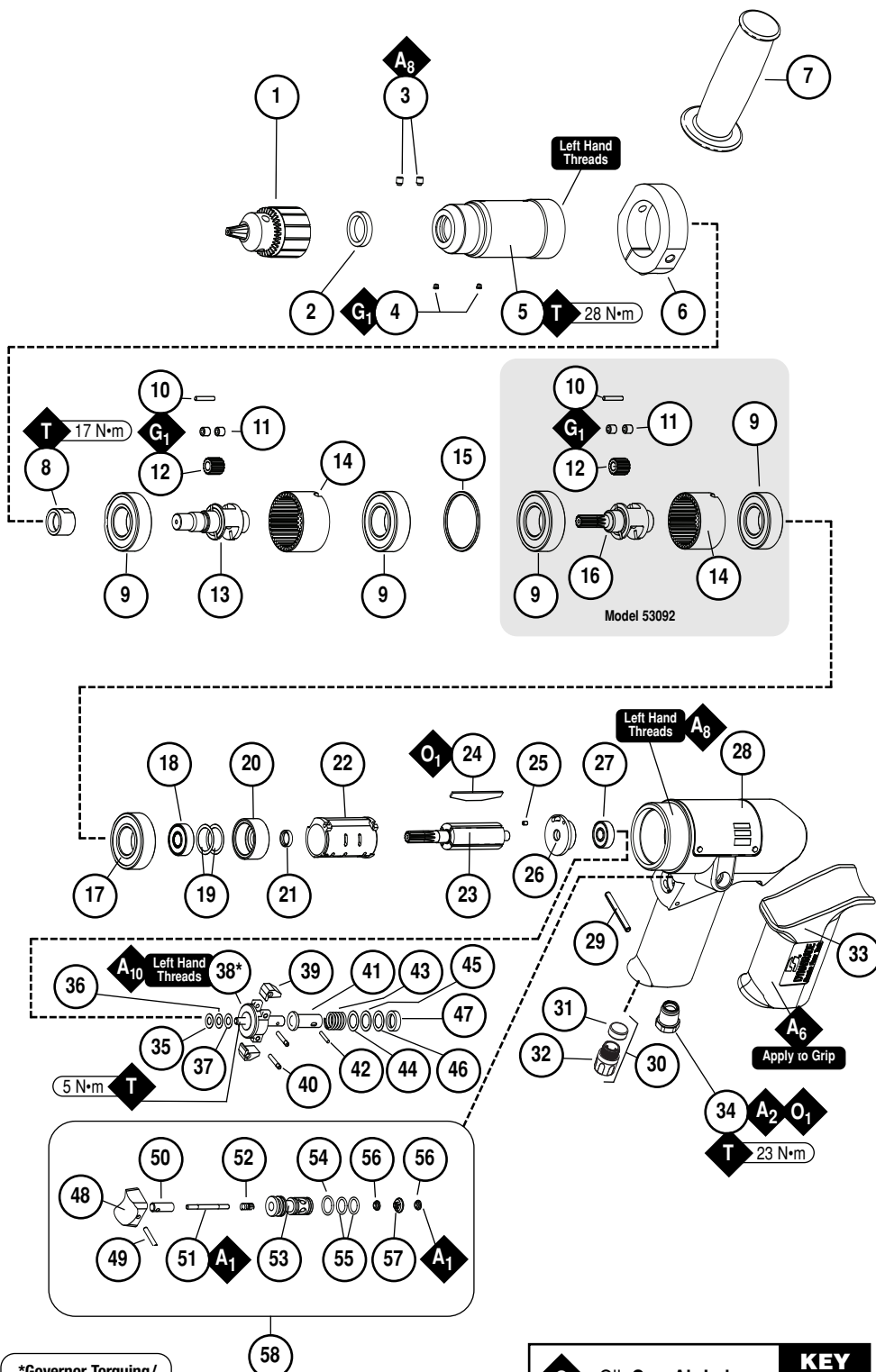
Additional Specifications: Air Inlet Thread 1/4" NPT • Hose I.D. 3/8" (10mm)

Sound Level is the pressure measurement according to the method outlined in ISO regulation ISO-15744

1	Drill Chuck (Includes Key)
	53034 1/2" - 53092
	53033 3/8" - 53093/94
2	55031 Felt Seal
3	04014 Screw (1) - 53093/94 (2) - 53092
4	01041 Fitting (1) - 53093/94 (2) - 53092
5	Cover
	52923 Model - 53092
	52922 Model - 53093/94
6	53199 Clamp Collar - 53092
7	53163 Handle Assembly
8	04114 Nut
9	02552 Bearing (2) - 53093/94 (4) - 53092
10	53182 Pin (2) - 53093/94 (4) - 53092
11	04026 Bearing (8) - 53092 Bearing (4) - 53093/94
12	53195 Gear (4), (2) - 53092/94 53193 Gear (2) - 53093
13	53165 Carrier
14	53191 Ring Gear (1) - 53093/94 (2) - 53092
15	53188 Spacer - 53092
16	53164 Carrier - 53092
17	52925 Spacer
18	01007 Bearing
19	01121 Shim Pack (3/pkg.)
20	52924 Front Bearing Plate
21	01010 Spacer
22	01028 Cylinder
23	52917 Rotor- 53093 52918 Rotor- 53092/94
24	01185 Vane (4/pkg.)
25	50767 Pin
26	01743 Rear Bearing Plate
27	02649 Bearing
28	Housing (Includes ID Plate)
	53063 Model - 53092
	53064 Model - 53093
	53065 Model - 53094
29	96025 Pin
30	69272 Muffler Assembly
31	56027 Muffler Insert (2)
32	69359 Muffler Body
33	55024 Grip
34	56023 Inlet Bushing
35	96255* Shim - .38 in. THK
36	96256* Shim - .127 in. THK
37	96257* Shim - .076 in. THK
38	55032 Governor Cage
39	50399 Governor Weight (2)
40	50938 Pin (2)
41	55054 Governor Valve
42	50470 Pin
43	07169 Spring
44	95704* Shim - .010 in. THK
45	95703* Shim - .015 in. THK
46	95702* Shim - .010 in. THK
47	50471 Spring Holder
48	55035 Trigger
49	50936 Pin
50	55043 Trigger Post
51	55052 Valve Stem
52	96069 Spring
53	55039 Bushing
54	50939 O-Ring
55	02027 O-Ring (2)
56	55051 Valve Stop (2)
57	55041 Valve
58	55058 Trigger Assembly

.7 hp Pistol Grip Drill

Complete Assembly – All Models



***Governor Torquing/
Adhesive Instructions**
*Do not exceed rated
torque specification.*
*Over torquing may
cause a safety hazard.*



53053 3/8" Chuck Key
53054 1/2" Chuck Key



95281 19 mm Open End Wrench

KEY

- O** Oil: **O₁** = Air Lube

G Grease: **G₁** = Lubriplate 630 AA

A Adhesive: **A₁** = Loctite #609
A₂ = Loctite #271
A₆ = Loctite #380
A₈ = Loctite #567
A₁₀ = Loctite #243

T Torque: **N·m x 8.85** = **In. · lbs.**

Disassembly/Assembly Instructions

Warning: This pistol grip drill is equipped with a governor that requires FACTORY PRECISION ADJUSTMENT. If the air motor governor needs servicing, the complete tool must be returned to the factory for proper governor adjustment.

Tool Disassembly:

1. Remove the drill chuck and the **53163** Side Handle.
2. Carefully secure the tool in a vise with the spindle pointing up. (To avoid damaging the housing do not over tighten the tool in the vise.)
3. Remove the **52922/52923** Cover. Turn clockwise. (Left Hand Thread)
4. Remove the **52925** Spacer from the front bearing plate.
5. Pull the air motor out of the housing.
6. Remove the **96025** Pin from the housing. Pull the valve assembly out of the housing.
7. Use the **96066** 19 mm Socket (Sold Separately) to remove the **69359** Muffler Body.

Tool Disassembly Complete.

Motor Disassembly:

1. Remove the governor assembly. Turn clockwise. (Left Hand Thread)
2. Important: SAVE ALL SHIMS that are found between the governor assembly and the rotor. (The exact total thickness of these shims is necessary to maintain the correct adjustment and proper function of the governor. These shims must be installed between the governor assembly and the rotor once the air motor is assembled.)
3. Secure the **96346**, 2" Bearing Separator around the cylinder close to the rear bearing plate. Place the separator on the table of the **96232** Arbor Press with the front of the motor pointing down.
4. Use a 5/32" dia. flat end drive punch to push the rotor out of the **02649** Bearing.
5. Use the **96213** Bearing Removal Tool and the arbor press to remove the **02649** Bearing from the rear bearing plate.
6. To remove the front bearing/plate from the **52917/52918** Rotor use the 2" bearing separator and the arbor press. (Push the gear end of the rotor out of the **01007** Bearing.)
7. Remove the **01010** Spacer from the rotor.

Motor Disassembly Complete.

Planetary Gear Disassembly:

1. Remove the **04014** Set Screw(s) from the **52922/52923** Cover.
2. Push the planetary assembly(ies) out of the **52922/52923** Cover. (Use the arbor press if necessary.)
3. Fasten the 2" bearing separator between the rear **02552** Bearing(s) and the **53191** Ring Gear. Place the separator on the arbor press with the planetary carrier spindle/gear pointing down. Use the larger diameter of the **96214** Bearing Removal Tool to push the planetary carrier(s) out of the **02552** Bearing(s).
4. Remove the shafts and gears from the planetary carrier(s).
5. Use the 2" bearing separator to remove the **02552** Bearing from the **53164** Planetary Carrier.
6. Carefully secure the **53165** Planetary Carrier in an aluminum or bronze jaw vise with the spindle pointing up. Remove the **04114** Spindle Nut. Turn counterclockwise.
7. Fasten the 2" bearing separator between the **02552** Bearing and the **53165** Planetary Carrier. Place these on the arbor press with the spindle pointing up. Press the planetary carrier out of the bearing.
8. Remove the **55031** Felt Seal from the cover.

Planetary Gear Disassembly Complete.

Valve Disassembly:

1. Use a 3/32" dia. flat end drive punch, a small separator and the arbor press to remove the **55051** Valve Stop. (Push the **55052** Valve Stem out of the valve stop.)
2. Remove the **55041** Valve.
3. Push the **55052** Valve Stem out of the second **55051** Valve Stop.

Valve Disassembly Complete.

Important: Clean and inspect all parts before assembling.

Valve Assembly:

1. Install the **96069** Spring and the **55039** Bushing (with o-rings) onto the valve stem/trigger assembly.
2. Apply a small amount of Loctite® #609 (or equivalent) to the **55052** Valve Stem. Press the first **55051** Valve Stop (large end facing away from the **55039** Bushing) onto the **55052** Valve Stem until it comes to a stop.
3. Install the **55041** Valve onto the valve stem with the tapered side toward the valve bushing.
4. Apply a small amount of Loctite® #609 (or equivalent) to the end of the **55052** Valve Stem and press the second valve stop onto the valve stem with the tapered side toward the **55041** Valve. (Press the second valve stop onto the valve stem until the flat side of the valve stop is flush with the end of the valve stem.)

Valve Assembly Complete.

Motor Assembly:

1. Install the **01010** Spacer onto the rotor.

(continued on next page)

Disassembly/Assembly Instructions Continued

2. Install .003" (0.08 mm) thickness shim(s) into **52924** Front Bearing Plate. Install the **01007** Bearing into the front bearing plate.
3. Front Bearing/Plate Installation: Use the **96244** Bearing Press Tool and arbor press to install the **52924** Front Bearing Plate along with **01007** Bearing onto the Rotor. (Place the raised center of the bearing press tool against the inside race of the bearing.)
4. Use a .001" (0.03 mm) thick feeler gage to check clearance between the front of the rotor body and the face of the front bearing plate. (The clearance must be .001" (0.03 mm) - .0015" (0.04 mm). If necessary adjust the clearance by adding or removing the appropriate shim thickness.)
5. Apply Dynabrade Air Lube **95842** to the **01185** Vanes. Install the vanes into the rotor.
6. Install the **01028** Cylinder with the air inlet aligned with the air inlet in the rear bearing plate.
7. Use the **96240** Bearing Press Tool and the arbor press to install the **02649** Bearing all the way into the **01743** Rear Bearing Plate. (Place the raised outside edge of the bearing press tool against the outside race of the bearing.)
8. Use the **96240** Bearing Press Tool and the arbor press to install the rear bearing/plate onto the Rotor. (Place the raised center of the bearing press tool against the inside race of the bearing.) Important: The fit between the bearing plates and the cylinder must be snug. A snug fit traps the cylinder between the bearing plates. If the fit is too tight the rotor will not turn freely. In that case, loosen the fit so that the rotor will turn freely while still maintaining a snug fit between the bearing plates and the cylinder.
9. Important: INSTALL ALL SHIMS that were saved from between the governor assembly and the rotor during disassembly. The exact total thickness of these shims is necessary to maintain the correct adjustment and proper function of the governor. DO NOT CONTINUE THE ASSEMBLY OF THE AIR MOTOR IF the correct thickness of shims has been compromised in any way. If the shims have been lost, or if damage has occurred to the governor, or to the mating area on the inside of the housing, the tool must be returned to the factory for proper adjustment and/or replacement of any lost or damaged component(s).
10. Apply a small amount of the Loctite® #243 (or equivalent) to the threads of the governor cage. Install the governor assembly onto the rotor. Turn counterclockwise. (Left Hand Threads) (Torque to 5N·m/44 in. lbs.)

Motor Assembly Complete.

Planetary Gear Assembly:

1. Press the **02552** Bearing onto the front of the **53164/53165** Planetary Carrier(s).
2. Install the **04114** Spindle Nut onto the **53165** Planetary Carrier. (Torque to 17 N·m/150 in. lbs.)
3. Lubricate the planetary gears, needle bearings, and shafts with the **95542** Grease. Install these into the planetary carrier.
4. Install the **53191** Ring Gear onto the planetary carrier(s) so that the set screw and lubricant fitting openings will align once this assembly is installed into the **52922/52923** Cover.
5. Press the **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. If the fit is too tight the planetary carrier will not turn freely. In that case, loosen the fit so that the planetary carrier will turn freely while still maintaining a snug fit between the ring gear and the bearings.
6. Install the **55031** Felt Seal into the cover.
7. Install the planetary carrier assembly(ies) into the **52922/52923** Cover with the set screw and lubricant fitting openings in alignment with the openings in the cover.
8. For Model **53092** Only: Install the **53188** Spacer between the two planetary carrier assemblies.
9. Apply a small amount of Loctite® #567 (or equivalent) to the threads of the **04114** Set Screw(s) and install into the **52922/52923** Cover.
10. Install **52925** Spacer with shallow counterbore toward **02559** Bearing.
11. Use Dynabrade **95542** Grease and the **95541** Lubricant Gun to apply gear grease.

To ensure maximum gear life, lubricate the planetary gears through the lubricant fitting(s). Apply 1 plunge of gear grease initially and after every 50-hours of operation.

Planetary Gear Assembly Complete.

Tool Assembly:

1. Carefully secure the housing in a vise with the motor opening facing up. (To avoid damaging the housing do not over tighten the vise.)
2. Carefully install the air motor assembly into the housing.
3. Carefully align and install the cover (with the planetary gear assembly[ies]) onto the housing (with the air motor assembly). (Left Hand Thread) (Torque to 28 N·m/250 in. lbs.)
4. Carefully install the valve assembly into the housing and secure it with the **96025** Pin.
5. Use a 19 mm socket to install the **69359** Muffler Body into the housing.
6. Install the drill chuck and the **53163** Side Handle.

Tool Assembly Complete.

Important: Check the tool for the proper speed (RPM) without an accessory mounted in the chuck.

- 1) Place 3 drops of Dynabrade Air Lube (P/N 95842) directly into the air inlet of the tool with the throttle trigger depressed.
- 2) Operate tool for 30 seconds to allow the lubricant to permeate the air motor.
- 3) Regulate the compressed air supply to provide 90 PSIG (6.2 Bar) Max. at the tool's air inlet while it is running.
- 4) Use a tachometer to verify the actual tool speed. The actual speed (RPM) must match the maximum operating RPM that is marked on the tool.
- 5) If the tool does not operate properly, or the tool operates at a higher RPM than marked, the cause of the difficulty must be corrected before the tool is passed on for normal work operations.

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	See Note	Drill Chuck	1				X
2	55031	Felt Seal	1		T		
3	04014	Screw	See Note		T		
4	01041	Fitting	See Note		T		
5	See Note	Cover	1				X
6	53199	Clamp Collar	1				X
7	53163	Handle Assembly	1				X
8	04114	Nut	1				X
9	02552	Bearing	See Note			X	
10	53182	Pin	See Note			X	
11	04026	Bearing	4			X	
12	53195	Gear	See Note				X
13	See Note	Carrier	See Note				X
14	53191	Ring Gear	See Note				X
15	53188	Spacer	1				X
16	53164	Carrier	See Note				X
17	52925	Spacer	1				X
18	01007	Bearing	1		T		
19	01121	Shim Pack (3/pkg.)	1		T		
20	52924	Front Bearing Plate	1				X
21	01010	Spacer	1		T		
22	01028	Cylinder	1			X	
23	See Note	Rotor	1				X
24	01185	Vane (4/pkg.)	1		T		
25	50767	Pin	1				X
26	01743	Rear Bearing Plate	1				X
27	02649	Bearing	1		T		
28	See Note	Housing	1				X
29	96025	Pin	1		T		
30	69272	Muffler Assembly	1			X	
31	56027	Muffler Insert	2		T		
32	69359	Muffler Body	1		T		
33	55024	Grip	1			X	
34	56023	Inlet Bushing	1				X
35	96255	Shim - .38 in. THK	1				X
36	96256	Shim - .127 in. THK	1				X
37	96257	Shim - .076 in. THK	1				X
38	55032	Governor Cage	1				X
39	50399	Governor Weight	2				X
40	50938	Pin	2				X
41	55054	Governor Valve	1				X
42	50470	Pin	1				X
43	07169	Spring	1				X
44	95704	Shim - .010 in. THK	1				X
45	95703	Shim - .015 in. THK	1				X
46	95702	Shim - .010 in. THK	1				X
47	50471	Spring Holder	1				X
48	55035	Trigger	1				X
49	50936	Pin	1		T		
50	55043	Trigger Post	1				X
51	55052	Valve Stem	1				X
52	96069	Spring	1		T		
53	55039	Bushing	1				X
54	50939	O-Ring	1		T		
55	02027	O-Ring	2				X
56	55051	Valve Stop	2			X	
57	55041	Valve	1		T		
58	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. 96466

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

LIFETIME WARRANTY

To validate Dynabrade Lifetime Warranty, you must register each tool at: www.dynabrade.com. Registration of each tool at website is required. Dynabrade will not honor Lifetime Warranty on unregistered tools. Please view the entire Lifetime Warranty Policy at : www.dynabrade.com.



OPTIONAL ACCESSORIES



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



3/4" Socket

- Used to remove and replace 69359 Muffler Body.

Part No. 96066



Motor Tune-Up Kit

- Includes assorted parts to help maintain and repair motor.

Part No. 96466



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. 95540: 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. 95821: 4oz. (118 ml)

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

Part No. 95843: 1gal. (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



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



Male Plug

- Provides up to twice the air flow compared to standard plug design.
- Plug has "ported" design to prevent "starving" of the air tool.

Part No. 95675



2" Bearing Separator

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

Part No. 96346

REFERENCE CONTACT INFORMATION

- | | | | |
|--|--|---|--|
| 1. American National Standards Institute – ANSI
1899 L Street, NW
11th Floor
Washington, DC 20036
Tel: 1 (212) 642-4900 | 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. Power Tool Institute, Inc.
P.O. Box 818
Yachata, Oregon 97498-0818
Tel: 1 (503) 547-3185 | 4. European Committee for Standardization
Rue de Stassart 36
B - 1050 Brussels, Belgium |
|--|--|---|--|

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