Parts Page Reorder No. PD09•42
Effective July, 2009
Supersedes PD07•18

1hp Extension Cone or Plug Grinders

Governor Controlled

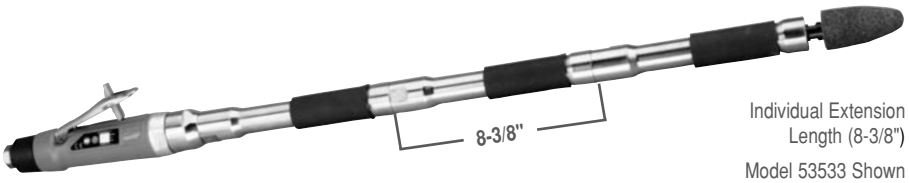
For Serial No. 08E1000A and Higher

Air Tool Manual – Safety, Operation and Maintenance

SAVE THIS DOCUMENT, EDUCATE ALL PERSONNEL

Models:

53531 – 18,000 RPM, 1 Extension
53532 – 18,000 RPM, 2 Extensions
53533 – 18,000 RPM, 3 Extensions



Individual Extension Length (8-3/8")

Model 53533 Shown

FIND THE MOST CURRENT OFFERING OF SUPPORT DOCUMENTS AND ACCESSORIES @ 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 Standard 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 statues, ordinances and/or regulations.





⚠ WARNING

Respiratory protection to be used when exposed to contaminants 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 sanding, sawing, 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 without expressed written consent from Dynabrade, Inc.

Tool Intent: Extension Cone or Plug Grinders are ideal for grinding smoothing weld seams, cleaning castings and preparing surfaces for plating or painting.

Do Not Use Tool For Anything Other Than Its Intended Applications.
This power tool is not intended for use in potentially explosive atmospheres and is not insulated against contact with electrical power.

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

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

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.
- Mount 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.)
- DO NOT use – Cut-off wheels, router bits or other products outside tool intent.

(continued on next page)

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.

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

Operation: 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.
- 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.

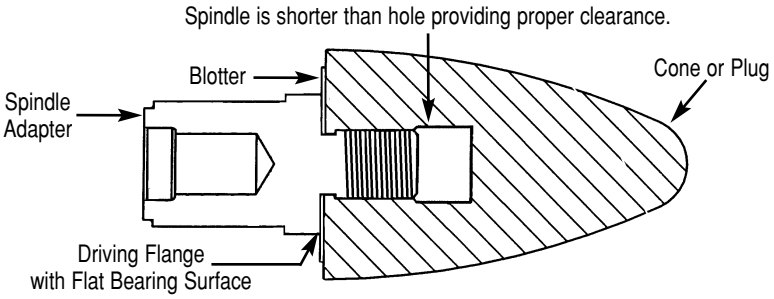
Caution: Tool RPM must never exceed abrasive/accessory RPM rating. Check accessory manufacturer for details on maximum operating speed or special mounting instructions.

- With power source disconnected from air tool, mount types 16, 17, 18, 18R and 19 Cone and plug wheels onto 3/8"-24 UNF-2A Spindle thread.

CONE or PLUG MOUNTING

Typical Mounting for Cone or Plug Wheels

- Inspect abrasive, spindle thread and spindle adapter for wear or damage.
- Blotters must cover at least the adapter surface as shown.
- A blotter (compressible washer) shall always be used between the abrasive cone or plug surface and the adapter to ensure uniform distribution of pressure.
- New blotters shall be used each time a wheel is mounted unless blotters are affixed to the cone or plug by the manufacturer.



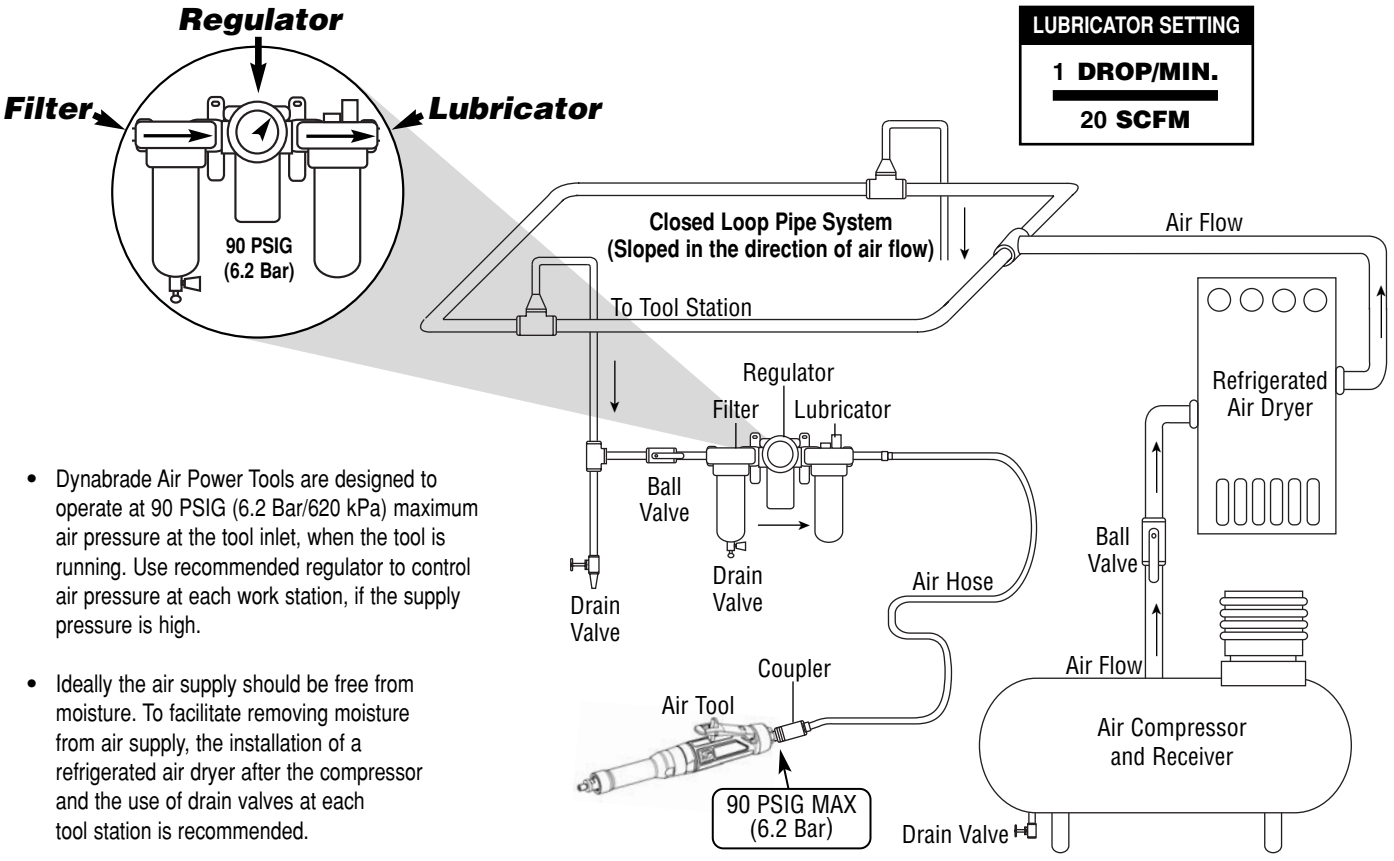
- Connect air tool to power source. Be careful NOT to depress throttle lever in the process. **Do not expose air tool to inlet pressure above 90 PSIG or (6.2 Bars).**

Caution: After installing the accessory, the Extension Grinder 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.

- Release the throttle lever in case of an interruption of the energy supply.
- Make sure that work area is uncluttered, and visitors are at a safe range from the tools and debris. Potentially explosive atmospheres can be caused by dust and fumes resulting from sanding or grinding. Always use dust extraction or suppression systems which are suitable for the material being processed.
- Ensure that sparks and debris resulting from work does not create a hazard.
- Use a vise or clamping device to hold work piece firmly in place.
- To reduce operator fatigue use **53199** Collar to mount to suspension device.
- Do not apply excessive force on tool or apply "rough" treatment to it.
- Always work with a firm footing, posture and proper lighting.

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 at each work station, if the supply pressure is high.
- 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.

Maintenance Instructions

Important: To keep tool safe a preventative maintenance program is recommended whenever portable power tools are used.

- 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: **11411** Air Filter-Regulator-Lubricator (FRL) – Provides accurate air pressure regulation and two stage filtration of water contaminants. Operates 55 SCFM/1,558 LPM @ 90 PSIG with 1/2" NPT female ports.
- 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.
- 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.

Routine Preventative Maintenance: Check free speed of Extension Grinder using a tachometer. This governor controlled grinder should be speed checked every 20 hours of use or weekly, whichever occurs more frequently.

- DO NOT disassemble the governor for any reason. Reorder correct speed – governor assembly (See Assembly Breakdown) and recheck free speed of tool with a tachometer.
- Inspect flanges and spindle/spindle adapter threads for wear or damage.
- 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.
- DO NOT clean or maintain tools with chemicals that have a low flash point (example: WD-40®).
- A Motor Tune-Up Kit (P/N **96532**) 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.

Machine Specifications

Model Number	Motor hp (W)	Motor RPM	Sound Level	Air Flow Rate SCFM (LPM)	Air Pressure PSIG (Bars)	Tool Thread	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
53531	1 (745)	18,000	79 dB(A)	40 (1,133)	90 (6.2)	3/8"-24	4.8 (2.2)	18-1/8 (460)	1-7/8 (48)
53532	1 (745)	18,000	79 dB(A)	40 (1,133)	90 (6.2)	3/8"-24	6.9 (3.1)	26-3/4 (679)	1-7/8 (48)
53533	1 (745)	18,000	79 dB(A)	40 (1,133)	90 (6.2)	3/8"-24	8.9 (4.0)	35-1/8 (892)	1-7/8 (48)

Additional Specifications: Air Inlet Thread 3/8" NPT • Hose I.D. Size 3/8" (10 mm) • Air Flow Rate Based At Max HP. • Air Pressure 90 PSIG Max
Sound Level is the pressure measurement according to the method outlined in ISO regulation ISO-15744

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.

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.

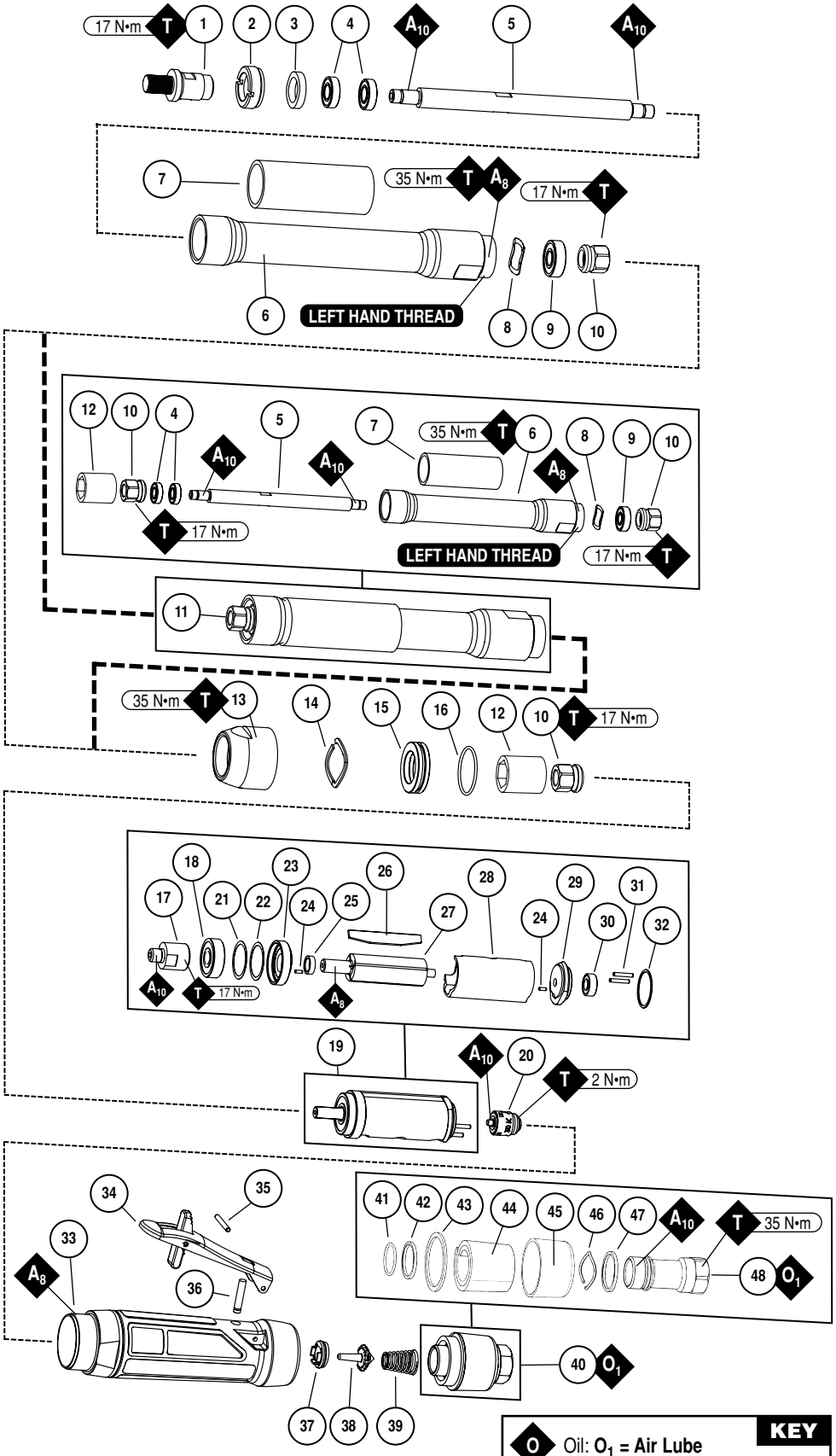
Index Key

No.	Part #	Description
1	**53610**	3/8-24 Adapter
2	**93689**	Extension Cap
3	**51956**	Felt Seal
4	**01139**	Bearing (2,4,6)
5	**93688**	Extension Spindle (1,2,3)
6	**93687**	Extension Housing
7	**53690**	Grip
8	**98325**	Wave Washer
9	**01007**	Bearing (1,2,3)
10	**51969**	Coupler (2,4,6)
11	**53547**	Extension Sub Assembly
12	**50902**	Coupling Insert (1,2,3)
13	**93686**	Adapter
14	**96498**	Wave Spring
15	**53620**	Adapter
16	**95438**	O-Ring
17	**93696**	Adapter
18	**54520**	Bearing
19	**01910**	Motor Assembly
20	**51932**	Governor
21	**97119**	Shim
22	**97120**	Shim
23	**51922**	Front Bearing Plate
24	**96441**	Pin (2)
25	**51927**	Rotor Spacer
26	**51926**	Vane (4/Pkg.)
27	**51921**	Rotor
28	**51925**	Cylinder
29	**51923**	Rear Bearing Plate
30	**02057**	Bearing
31	**96445**	Pin (2)
32	**51924**	Gasket
33	**All Housings Include:**	
	Warning & Specification Labels	
	20061	Housing – Model **53531**
	20062	Housing – Model **53532**
	20063	Housing – Model **53533**
34	**51949**	Safety Lock Lever
35	**96444**	Pin
36	**51946**	Valve Stem Assembly
37	**51945**	Valve Seat
38	**51944**	Tip Valve
39	**51943**	Spring
40	**53655**	Muffler Assembly
41	**96442**	O-Ring
42	**51940**	Spacer
43	**53682**	Gasket
44	**94528**	Felt Silencer
45	**53686**	Muffler Cap
46	**94924**	Wave Spring
47	**53683**	Spacer
48	**53681**	Inlet Bushing (Includes. 2 - 51938)

Label Key

Part #	Description
00001180	Warning Label
00001181	Specification Label

Complete Assembly



Always follow adhesive manufacturers cleaning and priming recommendations.

KEY

- **O** Oil: **O_1 = Air Lube**
- **A** Adhesive: **A_8 = Loctite #567**, **A_{10} = Loctite #243**
- **T** Torque: **N•m x 8.85 = In. - lbs.**
- **G** Grease: **G_1 = Lubriplate 630 AA**

Disassembly Instructions - 1hp Extension Cone or Plug Grinders

Important: Manufacturer's warranty is void if tool is disassembled before warranty expires. Please refer to parts complete tool assembly for part identification.

Disconnect tool from power source before tool repair.

Extension Disassembly:

1. Remove accessory or abrasive product from the tool assembly.
2. Using **51989** Repair Collar *(***order separately***)* or padded vise, secure front end of Housing using machined flats on the silver ring.
3. Secure **93686** Adapter with wrench and remove **93687** Extension Housing (**LEFT HAND THREAD**) from Adapter (turn extension housing clockwise).
4. Remove **93686** Adapter from motor housing (turn counterclockwise).
5. Secure **51969** Coupler (using 13/16 deep hex socket) remove Threaded Adapter.
6. Secure **93687** Extension Housing, using wrench flats and remove **93689** Extension Cap using **96347** Adjustable Pin Wrench **(order separately)**.
7. Pull Extension spindle and bearings from Extension Housing.

Motor Disassembly:

1. Pull motor assembly from housing assembly.
2. Remove governor assembly by using a slotted screw driver (**LEFT HAND THREAD**, turn clockwise).
3. Secure **51925** Cylinder using **96209** Repair Collar **(order separately)** and place a 1/8" (3 mm) drift pin to the base of the internal thread and press the rotor from the **02057** Rear Bearing.
4. Slide **02057** Rear Bearing from **51923** Rear Bearing Plate.
5. Remove **51925** Cylinder and **51926** Blades.
6. Press rotor through **54520** Bearing, **51922** Front Bearing Plate and **51927** Rotor Spacer.
7. Slide **54520** Bearing and shims from **51922** Front Bearing Plate.

Motor Disassembly Complete.

Housing Disassembly:

1. Secure housing using **51989** Repair Collar (***see back cover for Optional Accessories***).
2. Remove inlet bushing with muffler assembly (turn counterclockwise).
3. Remove **53682** Gasket, **51943** Spring, **96442** O-Ring, **51940** Spacer, **94528** Felt Silencer, **53686** Muffler Cap, **94924** Wave Spring and **53683** Spacer from **53681** Inlet Bushing.
4. Remove **51944** Tip Valve and **51945** Valve Seat.
5. Remove housing and **51989** Repair Collar and lay collar on bench with flange facing down so it is supporting throttle lever. Place a 3/32" (2.4 mm) drift pin on **96444** Pin and tap pin thru housing.
6. Remove **51946** Valve Stem Assembly.
7. Remove **96443** O-Ring from **51946** Valve Stem Assembly.

Housing Disassembly Complete.

Assembly Instructions - 1hp Extension Cone or Plug Grinders

Motor Assembly:

Important: Be sure parts are clean and in good repair before assembling. Follow grease, oil and torque specifications.

1. Place rotor into padded vise with spline facing upwards.
2. Slip **51927** Rotor Spacer over rotor shaft and down against rotor body face.
3. Press **96441** Coiled Pin into **51922** Front Bearing Plate. Make certain, coiled pin does not protrude beyond internal bearing surface.
4. Place a .002" shim into the base of **51922** Front Bearing Plate as an initial spacing and slide **54520** Bearing to the front plate base. **Note: 51951** Shim Pack contains .001" and .002" shims.
5. Press bearing/bearing plate assembly onto rotor, torque **51969** Coupler onto rotor shaft to 17 N•m (150 lb.-in.).
6. Check clearance between rotor and front bearing plate by using a .001" feeler gauge. Clearance should be between .001" – .0015". Adjust clearance by repeating steps 4 and 5 with different shims if necessary.
7. Once proper rotor gap clearance is achieved, install well lubricated **51926** Blades (4) into rotor slots. Dynabrade recommends lubricating blades with **95842** Air Lube.
8. Install **51925** Cylinder over rotor and front plate raised boss. Align coiled pin on front to cylinder slot.
9. Press **96441** Coiled Pin into blind hole on **51923** Rear Bearing Plate. Press (2) **96445** Coiled Pins into the back side of rear bearing plate.
10. Peel backing off **51924** Gasket and apply it firmly in place onto **51923** Rear Bearing Plate.
11. Place **51923** Rear Bearing Plate over rotor mandrel and insert raised boss on rear bearing plate into cylinder diameter, while inserting short coiled pin into cylinder slot. Be sure inlet slot on rear bearing plate line up with inlet slot on cylinder. Flip cylinder end to end and repeat step 8 for correct assembly.

(continued on next page)

Assembly Instructions - *(Continued)*

Important: Manufacturer's warranty is void if tool is disassembled before warranty expires.
Please refer to parts breakdown for part identification.

12. Press **02057** Bearing onto rotor and onto **51923** Rear Bearing Plate until it is seated. **Important:** Cylinder must fit snug between bearing plates. If too tight, rotor will not turn freely. Rotor must be lightly tapped at press fit end until rotor spins freely while still maintaining a snug fit. A loose fit will not achieve the proper preload on motor bearing.
    (While pressing 02057 Bearing, make certain to contact inner race of bearing only.)
13. Add one drop of Loctite® 243 (or equiv.) to governor assembly male thread and screw governor assembly onto place (**LEFT HAND** thread) with a slotted screw head. Torque to 2 N•m (18 lb.-in.).
14. Install motor assembly into housing, making sure motor drops all the way into housing. **Note:** Align both **96445** Coiled Pins to slots in insert and against **51924** Gasket.

Extension Assembly:

1. Press **01007** onto short end of **93688** Extension Spindle
2. Add one drop of #243 Loctite® to spindle thread and torque **51969** Coupler to 17 N•m (150 lb.-in.).
3. Place **98325** Wave Washer into extension housing and slide spindle assembly into extension housing.
4. Slide **01139** Bearings and **51956** Felt Seal onto long end of **93688** Extension Spindle.
5. Tighten **93689** Extension Cap onto housing using **96347** Adjustable Pin Wrench **(order separately)**.
6. Secure **51969** Coupler using 13/16" deep hex socket and Torque Threaded Adapter to Spindle Assembly 17 N•m (150 lb.-in.).
7. Add a small amount of #567 Loctite® to male thread of **93687** Extension Housing.
8. Align **50902** Coupling Insert onto **51969** Coupler.
9. Secure **93686** Housing Adapter and thread extension to adapter (**Left Hand Thread**) (turn extension housing counter clockwise).
10. Torque Extension to Adapter to 35 N•m (310 lb.-in.).

Housing Assembly:

1. Secure housing using **51989** Repair Collar, ***(see back cover for Optional Accessories)*** with collet facing downward.
2. Install **51945** Valve Seat by aligning 3 male prongs with three deep slots on insert. Make certain valve seat is pressed flat against base of pocket. **Note:** Add a few drops of Dynabrade Air Lube (P/N **95842**) to pocket walls before inserting **51945** Vale Seat.
3. Install **51944** Tip Valve.
4. Pre-assemble muffler, slide **53683** Spacer over **53681** Inlet Bushing and up against the hex head base. Slide **94924** Wave Spring over **53681** Inlet Bushing and up against spacer. Pre roll **94528** Felt and install it in **53686** Muffler Cap. Support felt in felt/muffler cap assembly and slide **53681** Inlet Bushing thru the inside until the muffler cap assembly seats against the **94924** Wave Spring. Flare the felt and place **51940** Spacer over male thread and set **96442** O-Ring into groove at the base of thread. Return felt to unflared form. Slide **51943** Spring into bushing and up to the two **51938** screens.
5. Place **53682** Gasket over felt silencer and against **53686** Muffler Cap.
6. Apply one drop of Loctite® #243 (or equiv.) to **53681** Inlet Bushing thread.
7. Align small inside diameter of **51943** Spring to cone point on **51944** Tip Valve and thread **53655** Muffler Assembly into place. Torque bushing to 35 N•m (310 lb.-in.).
8. Slide **96443** O-Ring onto **51946** Valve Stem and slide sub-assembly until o-ring passes through housing hole. Make certain valve stem assembly slides freely after the o-ring passes through the hole.
9. Remove housing from **51989** Repair Collar and place repair collar onto the bench top with the part number identifier against the bench. Align the throttle lever holes to housing pin hole and rest the housing and throttle lever onto the legs of the repair collar. Press **96444** Coiled Pin into lever hole and center into housing.

Tool Assembly Complete. Please allow 30 minutes for adhesives to cure before operating tool.

Important: Before operating, place 2-3 drops of Dynabrade Air Lube (P/N **95842**) directly into inlet with throttle lever depressed. Operate tool for 30 seconds to allow air lube to properly lubricate internal motor components. Motor should now be tested for proper operation at 90 PSIG max. If tool operates at a higher RPM than marked on the tool or if vibration and sound levels seem abnormal, the tool should be serviced to correct the cause before use.

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Preventative Maintenance Schedule

For All 1hp Extension Cone or Plug Grinders

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.

LEGEND	
T	Part included in **96532** Motor Tune-Up Kit
X	Type of wear, no other comments apply.
L	Easily lost. Care during assembly/disassembly.
D	Easily damaged during assembly/disassembly.



96532 – 1 Hp. Motor Tune-Up Kit

Parts Common to all Models:

Index #	Part Number	Description	Number Required	High Wear 100%	Medium Wear 70%	Low Wear 30%	Non-Wear 10%
1	**53610**	Spindle Adapter	**1**				**X**
2	**93689**	Extension Cap	**1**				**X**
3	**51956**	Felt Seal	**1**		**X**		
4	**01139**	Bearing	**See Note**			**X**	
5	**93688**	Extension Spindle	**See Note**				**X**
6	**93687**	Extension Housing	**1**				**X**
7	**53690**	Grip	**1**				**X**
8	**98325**	Wave Washer	**1**				**X**
9	**01007**	Bearing	**See Note**		**X**		
10	**51969**	Coupler	**See Note**				**X**
11	**53656**	Coupling Insert	**See Note**				**X**
12	**93686**	Adapter	**1**				**X**
13	**96498**	Wave Spring	**1**		**T**		
14	**53620**	Adapter	**1**				**X**
15	**95438**	O-Ring	**1**		**T, L**		
16	**93696**	Adapter	**1**				**X**
17	**54520**	Bearing	**See Note**		**T**		
18	**51932**	Governor	**1**				**X**
19	**97119**	Shim	**1**		**T, L**		
20	**97120**	Shim	**1**		**T, L**		
21	**51922**	Front Bearing Plate	**1**			**X**	
22	**96441**	Pin	**2**		**L**		
23	**51927**	Rotor Spacer	**1**		**T**		
24	**51926**	Vane (4/Pkg.)	**1**		**T**		
25	**51921**	Rotor	**1**	**X**			
26	**51925**	Cylinder	**1**			**X**	
27	**51923**	Rear Bearing Plate	**1**			**X**	
28	**02057**	Bearing	**1**		**T**		
29	**96445**	Pin	**2**			**X**	
30	**51924**	Gasket	**1**		**T**		
31	**See Note**	Housing	**1**				**X**
32	**51949**	Safety Lock Lever	**1**			**X**	
33	**96444**	Pin	**1**		**T**		
34	**51946**	Valve Stem Assembly	**1**		**T**		
35	**51945**	Valve Seat	**1**				**X**
36	**51944**	Tip Valve	**1**		**T**		
37	**51943**	Spring	**1**				**X**
38	**96442**	O-Ring	**1**		**T, L**		
39	**51940**	Spacer	**1**				**X**
40	**53682**	Gasket	**1**				**X**
41	**94528**	Felt Silencer	**1**		**T**		
42	**53686**	Muffler Cap	**1**				**X**
43	**94924**	Wave Spring	**1**				**X**
44	**53683**	Spacer	**1**				**X**
45	**53681**	Inlet Bushing	**1**				**X**

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

Optional Accessories

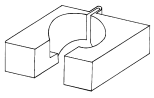
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Dynaswivel®

- Swivels 360° AT TWO PIVOT POINTS allowing the air hose to drop directly to the floor while providing superb tool handling.

95461 – 3/8" NPT.



51989 Repair Collar

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



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.

95841: 4 oz. (118 ml)
95842: 1 pt. (473 ml)
95843: 1 gal. (3.8 L)



96209 Motor Repair Clamp

- Specially designed clamp to secure motor cylinder before disassembly.



96005 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.



Bearing Press Tools

- Used to install bearings.

96243: For installing **02057** Bearing.
96244: For installing **01007** & **54520** Bearings.



96532 Motor Tune-Up Kit

- Includes assorted parts to help maintain and repair motor.

01910 Drop-In Motor

- Allows quick and easy replacement. No motor adjustments needed.



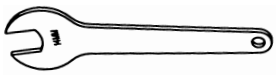
53621 Over Hose Assembly

- Over Hose Assembly directs exhaust away from operator.



30335 Air Supply Hose

- 3/8 in. I.D. x 60 in. Wide air supply hose, includes: 3/8 in. NPT male and female threaded fittings.



Wrenches

95262 – 14 mm open-end.
96347 – Pin Wrench



53199 Collar

- Specially designed to attach to adapter. Allows tool to attach to tool hanger. (With the use of an eye hook. 5/16-18 THD)

Designed to attach to **93686** Adapter.



53652 Threaded Adapter

- Converts from 3/8"-24 THD to 5/8"-11 THD.

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. **Power Tool Institute, Inc.**
   P.O. Box 818
   Yachata, Oregon 97498-0818
   Tel: 1 (503) 547-3185
   Fax: 1 (503) 547-3539

4. **European Committee for Standardization**
   Rue de Stassart 36
   B - 1050 Brussels, Belgium

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