

25,000 RPM Pencil Grinder

Air Tool Manual – Safety, Operation and Maintenance

SAVE THIS DOCUMENT, EDUCATE ALL PERSONNEL

Models:

- 52861 (1/8" Collet)
- 52862 (3mm Collet)
- 52863 (1/4" Collet)
- 52864 (6mm Collet)



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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 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.

Tool Intent: Pencil Grinder Tools are ideal for engraving, light deburring, deflashing, surface preparation, cleaning and finishing using the proper abrasive stones, abrasive mounted wheels, points, molded abrasives, and carbide burrs.

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 performance.

- Employer's Responsibility – Provide Pencil 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.

(continued on next page)

SAFETY INSTRUCTIONS (Cont.)

- Before mounting an accessory, visually inspect for defects. Do not use defective accessories.
- Always match collet insert with accessory shaft size. i.e. 1/8" shaft = 1/8" collet insert
- Follow tool specifications before choosing size and type of accessory (see pg. 7 for ANSI Group W plain wheels).
- Only use recommended fittings and air line sizes. Air supply hoses and air hose assemblies must have a minimum working pressure rating of 170 PSIG (10 Bars, g) or working pressure limited to 113 PSIG for all 25,000 RPM Pencil Grinders.
- If a grinding bit is broken, a careful investigation should be made by the user to determine and correct the cause.

OPERATING INSTRUCTIONS

Warning: Always wear personal protection equipment. Operator of tool is responsible for following: accepted eye, face, respiratory, hearing, hand and body protection. Adjacent personnel must be protected from potential injury.

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

Operation: Be sure that any loose clothing, hair and all jewelry is properly restrained. Keep hand and clothing away from working end of the air tool.

- BEFORE MOUNTING AN ACCESSORY, after all tool repairs and whenever a pencil grinder 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.

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 check the collet to assure it is in good condition. If so mount the recommended accessory.
- Make sure tool is off and then connect power source.

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 pencil grinder must be started at a reduced speed to check for good balance. Make sure no one is in the unguarded plane of the accessory. Gradually increase tool speed. DO NOT USE if tool vibration is excessive. Correct cause, and retest to insure safe operation. Run tool for 1 minute of operating speed in a protected area.

- Make sure that work area is uncluttered, and visitors are at a safe range from the tools and debris.
- 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.
- Always work with a firm footing, posture and proper lighting.
- Ensure that sparks and debris resulting from work do not create a hazard.
- Debris from working certain materials may have the tendency to create a spark/ignition hazard, understand the properties and associated risk of the materials being worked.
- Tools exhaust may contain lubricants, bearing grease, and other materials. Direct exhaust away from operator.
- Do not use cut off wheels or router bits in this tool.
- Note the tool rundown time. Control the tool as if it were under power.
- Use long shank burrs (1.9" or longer) with caution. They are subject to bending, whipping, and breaking when run at high speeds.
- The rated RPM of a mounted point is lowered if the overhang (end of collet to abrasive) exceeds .5 inches (12.7mm). Refer to the included tables. Reference ANSI B 7.1 for a more complete listing and additional information.
- Always use/replace collet cover after accessory changes. To avoid risk of injury due to rotating collet always operate tool with collet cover in place.
- Use hearing protection when working with materials that produce high process noise levels. Permanent hearing loss can result from high sound levels.
- 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 set the tool down until the on/off valve is OFF and the tool has stopped turning.
- If power source is interrupted ensure tool is in OFF position before setting tool down.

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

MAINTENANCE INSTRUCTIONS

Important: A Preventative Maintenance Program is recommended for this tool. The program should include inspection of air supply lines, air line pressure 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.
- All Dynabrade Air Tools must be used with a Filter-Regulator-Lubricator to maintain all warranties.

Routine Preventative Maintenance:

- 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 contaminates. Operates Up to 55 SCFM/1,558 LPM @ 100 PSIG with 1/2" NPT female ports.
- Dynabrade recommends Dynabrade Air Lube (P/N **95842** 1pt. (473ml).
- **DO NOT** clean or lubricate tools with chemicals that have a low flash point (example: WD-40®).
- Air tool markings must be kept legible at all times. User is responsible for maintaining specification information i.e.: Model #, S/N, and RPM.
- 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.
- Check free speed of pencil grinder using a tachometer on a regular basis.
- Refer to Dynabrade's Warning/Safety Operating Instructions Tag (Reorder No. **95903**) for safety information.

Handling and Storage:

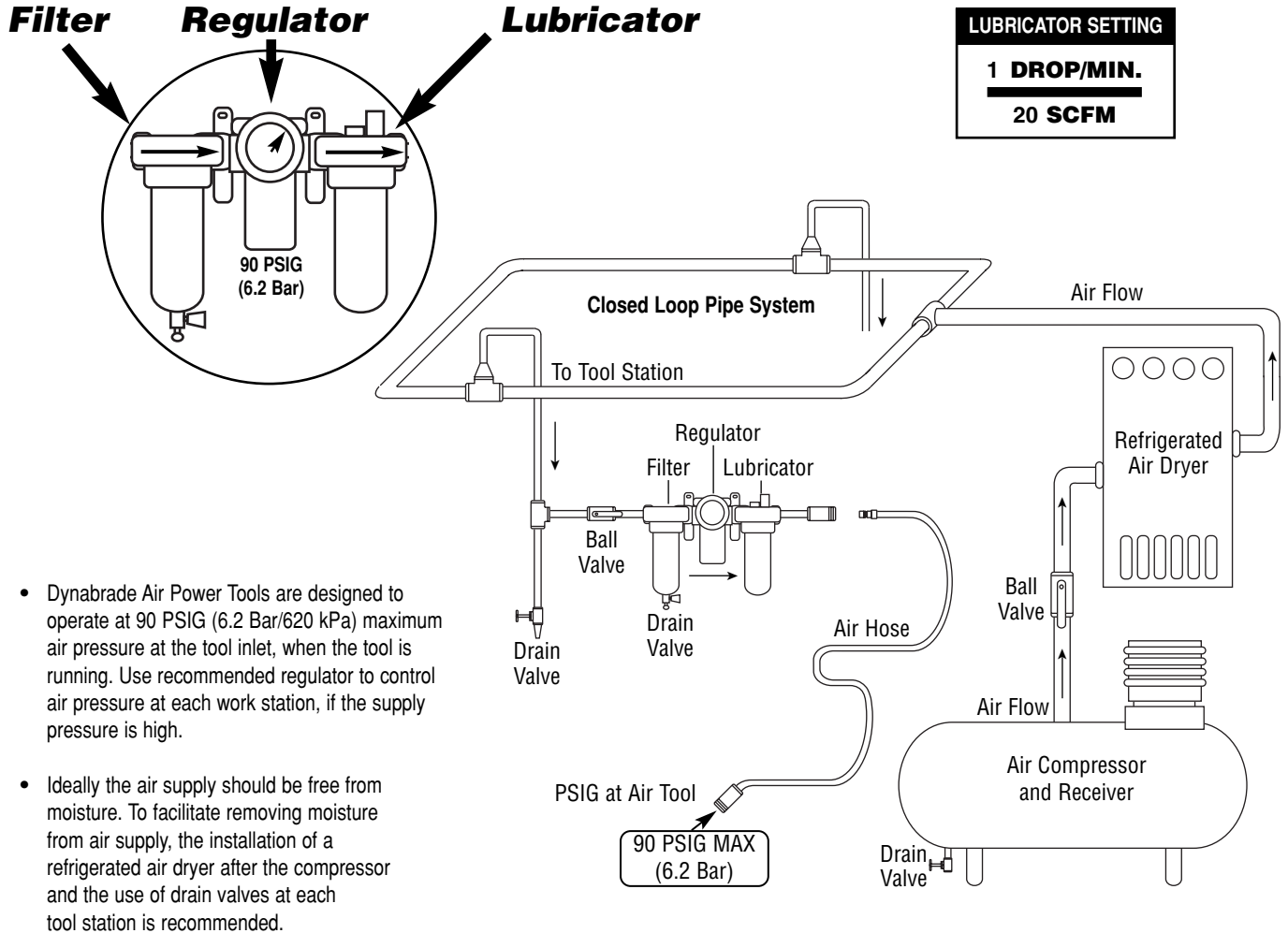
- Use of tool rests, hangers and/or balancers is recommended.
- Protect tool inlet from debris.
- **DO NOT** carry tool by air hose.

MAINTENANCE INSTRUCTIONS - CONTINUED

Handling and Storage:

- 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.

Air System



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. Air pressure easily forces dirt or water contained in the air supply into motor bearings causing early failure. Dirt and water often score the inner workings of the tool 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 maintenance 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.

Models:

52861, 52862
52863, 52864

Pencil Grinder Complete Assembly

KEY

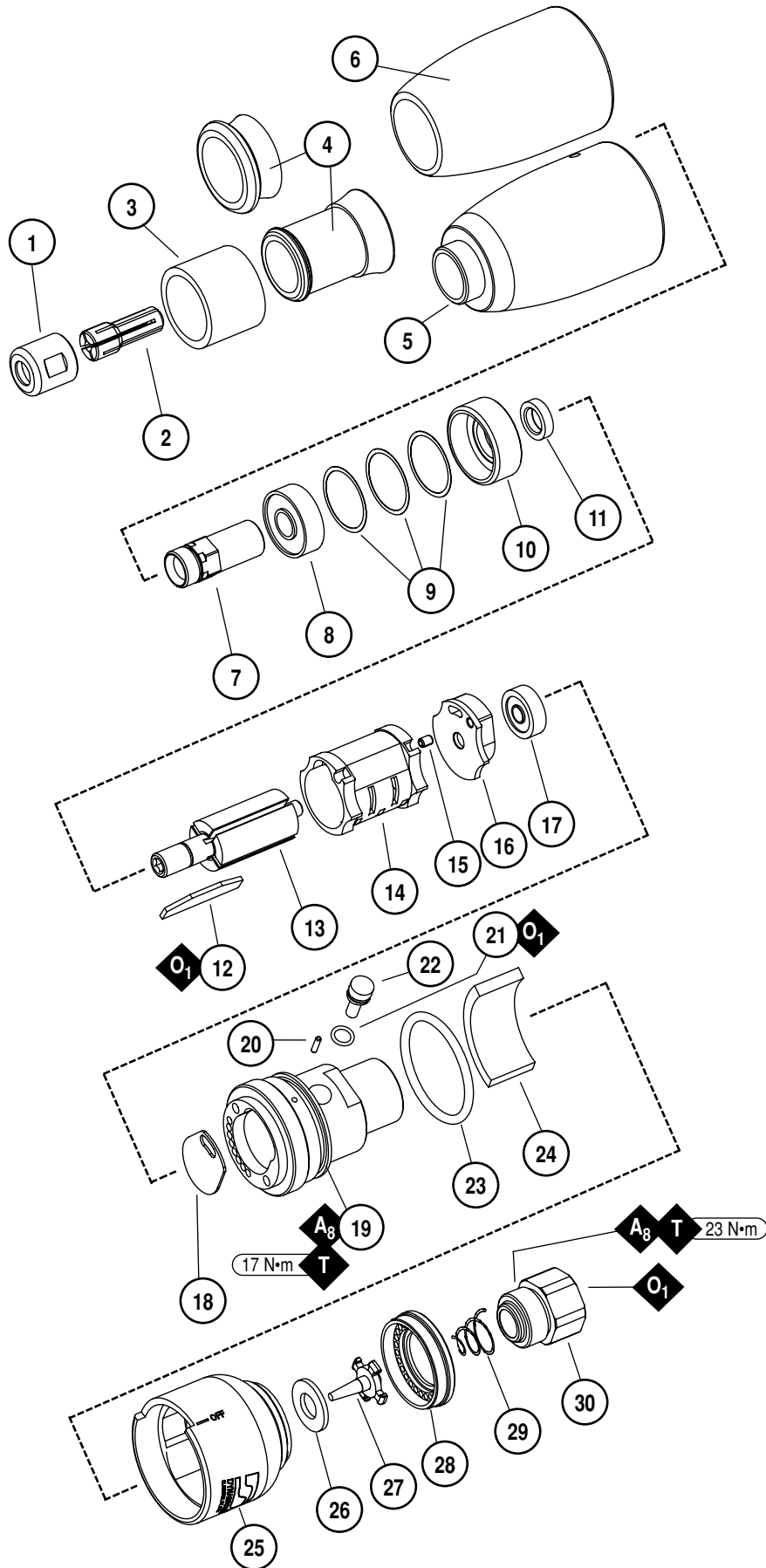
A Adhesive: **A₃** = Loctite #242
A₇ = Loctite #222
A₈ = Loctite #567

T Torque: **N·m x 8.85 = In. - lbs.**

Always follow adhesive manufacturers cleaning and priming recommendations.

Index Key

No.	Part #	Description
1	01484	Collet Cap
2	Collet Insert	
	01495	1/8 in.
	01496	3mm
	01485	1/4 in.
	01497	6mm
3	52881	Tactile Grip
4	52879	Collet Cover
	52898	Thread Guard (Optional)
5	52885	Housing
6	52897	Grip
7	01435	Collet Body
8	02649	Bearing
9	54529	Shim Pack (3/Pkg.)
10	02038	Front Bearing Plate
11	01479	Spacer
12	01480	Vane (4/Pkg.)
13	01475	Rotor
14	01476	Cylinder
15	50767	Pin
16	52871	Rear Bearing Plate
17	02696	Bearing
18	52872	Air Inlet Gasket
19	52875	Manifold
20	97416	Pin
21	98459	O-Ring
22	52876	Plunger
23	96016	O-Ring
24	52882	Felt Muffler
25	Cover	
	52883	Model - 52861
	52884	Model - 52862
	52888	Model - 52863
	52889	Model - 52864
26	01464	Seal
27	58365	Tip Valve
28	52880	Retainer Cover
29	01468	Spring
30	01494	Inlet Bushing



Special Repair Tools

Part #	Description
97787	Adjustable Spanner Wrench



96076 12mm Wrench
95262 14mm Wrench

Disassembly/Assembly Instructions – 25,000 RPM Pencil Grinder

Important: Manufacture warranty is void if tool is disassembled before warranty expires by anyone other than a Dynabrade authorized repair technician.
Notice: All of the special tooling referred to in these instructions can be ordered from your Dynabrade Distributor. Please refer to this parts page for correct part identification. Before servicing this air tool always shut off the air supply valve and dissipate the remaining air pressure before disconnecting the tool from the air supply.

Valve Disassembly:

1. Remove the collet cover with grip from the **52885** Housing by turning it counterclockwise.
2. Use the **96076** Wrench (12mm) to hold the **01435** Collet Body stationary while using the **95262** Wrench (14mm) to remove the **01484** Collet Cap by turning it counterclockwise.
3. Place the **52296** Repair Collar around the thickest portion of the **52885** Housing.
4. Fasten the tool with the repair collar into a vise so that the collet body is pointing down.
5. Use two wrenches, one to hold the **01494** Inlet Bushing stationary, and one to remove the **96229** Male Fitting from the inlet bushing. Turn the fitting counterclockwise.
6. Use a wrench to remove the **01494** Inlet Bushing by turning it counterclockwise.
7. Remove the **52880** Cover Retainer, cover, and **52882** Felt Muffler.
8. Remove the **01468** Spring, **58365** Tip Valve, **01464** Seal, and **52876** Valve Stem.

Valve Disassembly Complete.

Access Air Motor:

1. Remove the **96016** O-Ring.
2. Use a HOT AIR GUN to apply heat to the **52875** Twist Valve Manifold.
3. Use an adjustable wrench to remove the twist valve manifold from the **52885** Housing by turning it counterclockwise.
4. Remove the **52872** Air Inlet Gasket from the twist valve manifold.
5. Push the air motor assembly out of the **52885** Housing.

Air Motor Disassembly:

1. Fasten the **96346** 2" Bearing Separator around the portion of the **01476** Cylinder that is closest to the **52871** Rear Bearing Plate. Place the bearing separator on the table of the **96232** #2 Arbor Press so that the collet body is pointing down. Use a 3/16" or 5mm diameter flat end drive punch as a press tool and push the rotor out of the **02696** Bearing. Use the **96210** Bearing Removal Tool and the arbor press to remove the **02696** Bearing from the rear bearing plate.
2. Fasten the vane slot portion of the rotor in a vise with aluminum or bronze jaws so that the collet body is pointing up.
3. Use an adjustable wrench to remove the collet body by turning it counterclockwise.
4. Remove the front bearing/plate/shims and the **01479** Spacer.

Air Motor Disassembly Complete.

Air Motor Assembly:

1. Install the **01479** Spacer onto the rotor.
2. Select .003" (.08mm) thickness shims from the **54529** Shim Pack and install these into the **02038** Front Bearing Plate.
3. Install the **02649** Bearing into the front bearing plate.
4. Position the rotor in a vise with aluminum or bronze jaws so that the rotor spindle is pointing up. Install the front bearing/plate/shims onto the rotor.
5. Install the **01435** Collet Body onto the rotor. (Torque to 17N·m/150 in. lbs.)
6. Remove the assembly from the vise.
7. Use a .001" (0.3mm) thick feeler gauge to check the clearance between the front bearing plate and the face of the rotor. The clearance should be .001"-.0015" (0.3-0.4mm). **Note:** If the clearance needs adjustment repeat steps 2-6, adding or removing shims as required.
8. Lubricate the **01480** Vanes (4) with the **95842** Dynabrade Air Lube 10W/NR (or equivalent) and install these into the rotor.
9. Install the **01476** Cylinder over the rotor so that the air inlet opening of the cylinder will line up with the air inlet opening in the **52871** Rear Bearing Plate.
10. Use the raised outer diameter of the **96216** Bearing Press Tool and the **94232** #2 Arbor Press to install the **02696** Bearing into the **52871** Rear Bearing Plate.
11. Use the raised inner diameter of the **96216** Bearing Press Tool and the arbor press to install the rear bearing/plate onto the rotor.
Note: Carefully press the bearing/plate down until it just touches the cylinder. This will establish a snug fit between the bearing plates and the cylinder.
12. Install the **52872** Air Inlet Gasket into the twist valve manifold carefully so that the air inlet is completely open.
13. After threaded surfaces have been properly cleaned and primed, apply a small amount of the Loctite® #567 to the external threads of the **52875** Twist Valve Manifold.
14. Position the air motor so that the **52871** Rear Bearing Plate fits into the **52875** Twist Valve Manifold.
15. Carefully slide the motor assembly into the **52885** Housing and thread the twist valve manifold into the housing. (Torque to 17N·m/150 in. lbs.)
16. Install the **96016** O-Ring onto the **52875** Twist Valve Manifold.

Air Motor Assembly Complete.

Valve Assembly:

1. Position the tool with the **52296** Repair Collar in a vise so that the opening for the **52876** Valve Stem is facing up.
2. Install the **52876** Valve Stem along with the **98459** O-Ring into the **52875** Twist Valve Manifold.
3. Install the **52882** Felt Muffler into the deep curved recess in the cover and carefully slide the cover onto the twist valve manifold.
4. Position the tool with the **52296** Repair Collar in a vise so that the air inlet opening is facing up.

(continued on next page)

Disassembly/Assembly Instructions – (Continued)

5. Install the **52880** Cover Retainer onto the cover.
6. Install the **01464** Seal into the air inlet opening so that it lays flat.
7. Use a small flat blade screwdriver to push the valve stem over so that the tip valve will fit into the air inlet opening properly.
8. Use needle nose pliers to grasp the back of the **58365** Tip Valve and insert it into the air inlet opening.
9. Use needle nose pliers to install the **01468** Spring into the air inlet opening so that the small end of the spring fits against the Tip valve.
10. After threaded surfaces have been properly cleaned and primed, apply a small amount of the Loctite® #567 onto the external threads of the **01494** Inlet Bushing and install the inlet bushing into twist valve manifold. (Torque to 23N-m/200 in. lbs.)
11. Using two wrenches, one to hold the **01494** Inlet Bushing stationary, and one to install the **96229** Male Fitting into the inlet bushing by turning it clockwise.
12. Remove the tool from the vise.
13. Install the collet insert and cap onto collet body.
14. Install the collet cover and grip assembly onto the **52885** Housing by turning it clockwise.

Valve Assembly Complete. Assembly Complete. Allow adhesive to cure (follow adhesive manufacturers recommendations) before operating tool.

Important: Tool should now be tested for proper operation at 90 PSIG. If tool 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 cover turn to the on position. Operate tool for 30 seconds to determine if tool is operating properly and to allow lubricating oils to properly permeate motor.

Preventative Maintenance Schedule

For All 25,000 RPM Pencil 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	
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.

Parts Common to all Models:

Index #	Part Number	Description	Number Required	High Wear	Medium Wear	Low Wear	Non-Wear
				100%	70%	30%	10%
1	01484	Collet Cap	1			X	
2	See Note	Collet Insert	1			X	
3	52881	Tactile Grip	1	X			
4	52879	Collet Cover	1		L		
5	52885	Housing	1			X	
6	52897	Housing	1			X	
7	01435	Collet Body	1			X	
8	02649	Bearing	1		T		
9	54529	Shim Pack (3/Pkg.)	1	T			
10	02038	Front Bearing Plate	1			X	
11	01479	Spacer	1			X	
12	01480	Vane (4/Pkg.)	1	T			
13	01475	Rotor	1				X
14	01476	Cylinder	1			X	
15	50767	Pin	1			X	
16	52871	Rear Bearing Plate	1			X	
17	02696	Bearing	1		T		
18	52872	Air Inlet Gasket	1	T			
19	52875	Manifold	1				X
20	97416	Pin	1			D	
21	98459	O-Ring	1		T		
22	52876	Plunger	1		T		
23	96016	O-Ring	1			T	
24	52882	Felt Muffler	1	T			
25	See Note	Cover	1			X	
26	01464	Seal	1			T	
27	58365	Tip Valve	1			T	
28	52880	Retainer Cover	1			X	
29	01468	Spring	1		T		
30	01494	Inlet Bushing	1				X

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

Pencil Grinder Reference Tables

Note: Reprinted with permission of United Abrasives Manufacturers Association From (ANSI B7.1). For more information on other type mounted wheels refer to (ANSI B7.1) Safety requirements for use, care and protection of Abrasive wheels.

TABLE 27
GROUP W—(PLAIN WHEELS)
MAXIMUM OPERATING SPEEDS (RPM) FOR 1/8" MANDRELS

Shape No.	Wheel Diam. Inches	Wheel Thickness Inches	1/8" Overhang & Thd. Mils.	Overhang — Dimension O*			
				1"	1 1/4"	2"	2 1/2"
W 143	1/8	1/8	105,000	64,500	46,650	32,400	21,370
W 144	1/8	1/4	105,000	64,500	46,650	32,400	21,370
W 145	1/8	3/8	105,000	64,500	46,650	32,400	21,370
W 146	1/8	1/2	105,000	64,500	46,650	32,400	21,370
W 151	1/4	1/8	105,000	64,500	46,650	32,400	21,370
W 152	1/4	1/4	105,000	64,500	46,650	32,400	21,370
W 153	1/4	3/8	80,850	52,500	37,500	26,250	17,620
W 154	1/4	1/2	70,500	45,600	31,500	21,970	15,220
W 157	1/2	1/8	123,000	65,625	47,770	33,150	21,750
W 158	1/2	1/4	105,000	64,500	46,650	32,400	21,370
W 159	1/2	3/8	92,400	57,370	39,370	27,900	18,900
W 160	1/2	1/2	81,370	51,000	34,120	24,000	16,870
W 161	1/4	1/8	77,250	45,970	30,900	22,500	16,120
W 162	1/4	3/8	68,400	42,370	28,870	20,850	15,000
W 163	1/4	1/2	60,000	38,020	26,250	18,750	13,870
W 164	1/4	3/4	45,900	30,000	21,750	15,900	11,850
W 165	3/8	1/8	107,400	62,470	41,250	29,250	20,250
W 166	3/8	1/4	96,970	57,000	35,620	25,120	18,000
W 167	3/8	3/8	75,000	45,750	31,120	22,500	15,750
W 168	3/8	1/2	68,400	41,770	28,650	21,000	15,000
W 169	3/8	3/4	61,650	37,720	27,000	19,870	14,250
W 170	3/8	1	52,500	33,000	23,020	16,650	12,600
W 171	3/8	1 1/4	37,120	25,500	18,750	14,620	10,020
W 172	3/4	1/8	99,370	59,250	41,020	29,250	20,250
W 173	3/4	1/4	87,600	53,250	35,250	24,750	17,250
W 174	3/4	3/8	69,000	41,250	27,750	20,400	15,000
W 175	3/4	1/2	54,000	33,000	24,150	18,000	13,500
W 176	3/4	3/4	45,370	28,500	21,000	15,900	12,150
W 177	3/4	1	33,750	23,250	17,620	13,650	10,350
W 178	3/4	1 1/4	25,250	18,750	14,250	10,870	8,250
W 181	1/2	1/8	76,390	55,500	36,750	25,500	17,850
W 182	1/2	1/4	73,500	43,650	29,100	20,770	15,450
W 183	1/2	3/8	51,750	31,870	22,500	17,250	12,900
W 184	1/2	1/2	41,020	26,400	19,500	15,000	11,400
W 185	1/2	3/4	34,500	22,500	16,870	13,120	9,900
W 186	1/2	1	26,250	17,400	12,750	9,750	8,020
W 187	1/2	1 1/4	20,620	13,870	10,120	7,870	6,370
W 190	3/8	1/8	61,120	48,000	31,500	22,650	16,870
W 191	3/8	1/4	58,870	34,500	25,120	18,900	14,250
W 192	3/8	3/8	43,120	27,370	19,870	15,220	11,620
W 193	3/8	1/2	32,250	23,020	16,500	12,520	9,750
W 194	3/8	3/4	29,400	19,120	13,500	10,500	8,250
W 195	3/8	1	22,120	14,250	10,120	7,650	6,150
W 196	3/8	1 1/4	17,620	11,620	8,100	6,150	5,100
W 199	3/4	1/8	50,930	44,770	30,000	21,750	15,750
W 200	3/4	1/4	50,930	33,520	23,850	17,850	13,350
W 201	3/4	3/8	38,250	24,370	17,400	13,270	9,970
W 202	3/4	1/2	30,600	19,500	13,500	10,120	7,800
W 203	3/4	3/4	25,500	15,900	10,870	8,250	6,600
W 204	3/4	1	18,900	12,000	8,400	6,220	5,250
W 210	7/8	1/8	43,650	35,250	25,720	18,900	14,320
W 211	7/8	1/4	43,650	27,900	20,400	15,820	12,220
W 212	7/8	3/8	33,750	20,400	14,400	11,020	9,000
W 213	7/8	1/2	27,000	16,870	11,250	8,250	6,600
W 215	1	1/8	38,200	24,900	18,000	13,870	10,500
W 216	1	1/4	30,620	18,600	12,750	9,620	7,500

*See Figure 47

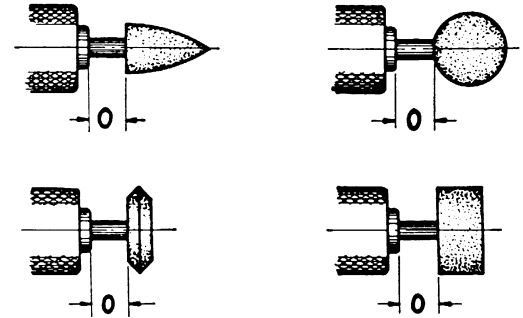


FIGURE NO. 47
Dimension "O" indicates overhang of mandrel.

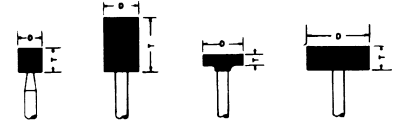


ILLUSTRATION No. 80

MOUNTED WHEELS
STANDARD SHAPES
GROUP "W"

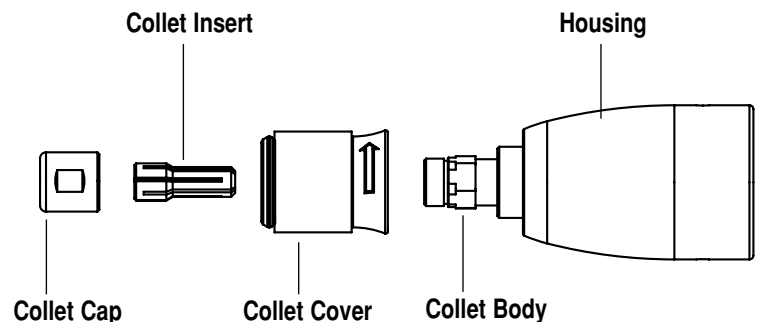
Collet Insert/Accessory Mounting Instructions

Changing A Collet Insert/Accessory:

1. Disconnect tool from power source.
2. Remove the collet cover with grip from the **52885** Housing by turning it counterclockwise.
3. Use the **96076** Wrench (12mm) to hold the **01435** Collet Body stationary while using the **95262** Wrench (14mm) to loosen the **01484** Collet Cap by turning it counterclockwise.
4. Insert desired bit into collet insert a minimum of one inch or at least half the overall length of the accessory and tighten **01484** Collet Cap using **95262** Wrench (14mm) while holding **01435** Collet Body stationary using **96076** Wrench (12mm).

Note: See table 27 above for overhang limits for plain wheels (Group W).

5. Attach collet cover with grip onto **52885** Housing by turning it clockwise.



Optional Accessories

FIND THE MOST CURRENT OFFERING OF SUPPORT DOCUMENTS AND ACCESSORIES @ WWW.DYNABRADE.COM



10681 Filter-Regulator-Lubricator

- Minimize the possibility of misuse due to unclean air, wet air or insufficient lubrication.
- Provides accurate air pressure regulation and two stage filtration of water contaminates.



Model 93351

- 1/8" Carbide Burr Kit, Includes 12 burrs for grinding, deburring, and finishing metal.



94994 Over Hose Assembly

- Over Hose Assembly directs exhaust away from operator.



97787 Spanner Wrench

- Assembly/Disassembly tool, used to properly hold housing.



52898 Optional Thread Guard

- Gives a tactile warning near the working end of the tool.



52877 Tool Hanger

- Allows for tool to be suspended by a tool hanger for ease of use.



52296 Repair Collar

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



Dynabrade Air Lube

- For pneumatic equipment.
- Absorbs up to 10% of its weight in water.
- Prevents rust and formation of sludge.

95821: 4 oz. (118 ml)

95842: 1 pt. (473 ml)

95843: 1 gal. (3.8 L)

Machine Specifications

Model Number	Motor RPM	Sound Level	Maximum Air Flow SCFM (LPM)	Air Pressure PSIG (Bars)	Collet Size	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
52861	25,000	79 dB(A)	16 (445)	90 (6.2)	1/8"	1.1 (.48)	5-5/8 (144)	1-1/2 (39)
52862	25,000	79 dB(A)	16 (445)	90 (6.2)	3mm	1.1 (.48)	5-5/8 (144)	1-1/2 (39)
52863	25,000	79 dB(A)	16 (445)	90 (6.2)	1/4"	1.1 (.48)	5-5/8 (144)	1-1/2 (39)
52864	25,000	79 dB(A)	16 (445)	90 (6.2)	6mm	1.1 (.48)	5-5/8 (144)	1-1/2 (39)

Additional Specifications: Air Inlet Thread 1/4" NPT • Hose Size 1/4" (6mm)

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

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