Parts Page Reorder No. PD07•32
Effective September, 2007

3" Vacuum Disc Sanders

Air Tool Manual – Safety, Operation and Maintenance

SAVE THIS DOCUMENT, EDUCATE ALL PERSONNEL

Trimmed Shroud Models:

50210 – 15,000 RPM, Self-Generated Vacuum, 1" O.D. Port
3" (80 mm) Discs Maximum

50211 – 15,000 RPM, Central Vacuum, 1-1/4" I.D. Threaded Hose Cuff
3" (80 mm) Discs Maximum

Standard Shroud Models:

50561 – 15,000 RPM, Central Vacuum, 1-1/4" I.D. Threaded Hose Cuff
3" (80 mm) Discs Maximum

50570 – 15,000 RPM, Self-Generated Vacuum, 1" O.D. Port
3" (80 mm) Discs Maximum

Model 50211 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 Standards 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, 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: Vacuum Disc Sander is ideal for coatings removal in non-ferrous metal and non-spark applications.

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 air tools will maximize their performance.

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

Accessory Selection:

- Use only 2" Locking-Type Bristle Discs, or 3" Locking-Type Sanding Discs.
- 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. Reference Dynabrade catalog and this tool manual.
- Do not use grinding wheels or cut-off wheels.

SAFETY INSTRUCTIONS CONT.

- Follow tool specifications before choosing size and type of accessory.
- Only use recommended fittings and air line sizes. Air supply hoses and air hose accessories must have a minimum working pressure 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 personal protective equipment. Operator of tool is responsible for the 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.
- Working end of tool has a potential of cutting and severing.

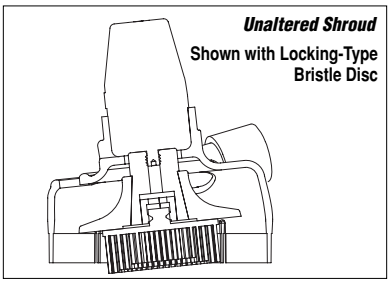
Operation: Be sure that any loose clothing, hair and all jewelry is properly restrained.

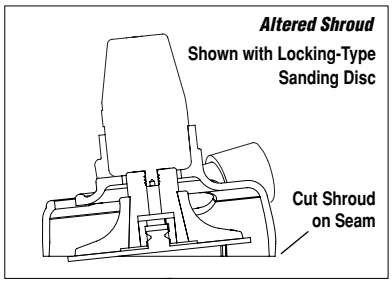
- Secure inlet bushing on air tool with a wrench before attempting to install the air fitting to avoid damaging housing assembly.
- BEFORE MOUNTING A BACK-UP PAD, after all tool repairs and whenever a Vacuum Disc Sander is issued for use, check tool RPM (speed) with tachometer with air pressure set at 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.

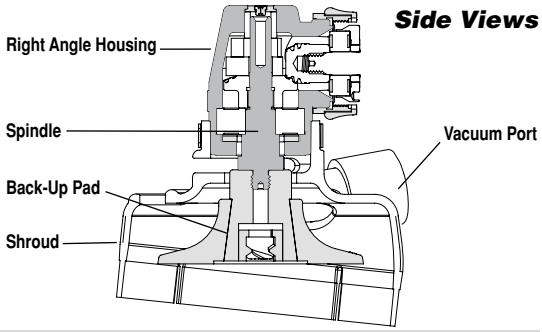
- Disconnect air hose from tool when changing abrasive discs.

Shroud Configurations - Mounting Different Products





Side Views



- 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, before testing or use and/or after assembling tool, the Vacuum Disc Sander 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. Test tool at its free speed (RPM) in a protected area for at least one minute before applying the tool to the work.

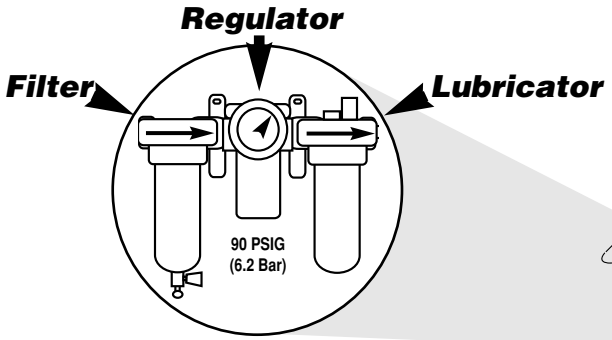
- Release throttle lever when air supply is interrupted.
- Make sure that work area is uncluttered, and visitors are at a safe range from the tools and debris.
- Air tools are not intended for use in explosive atmospheres and are not insulated for contact with electric power sources.
- Use a vise or clamping device to hold work piece firmly in place.
- Do not apply excessive force on tool or apply "rough" treatment to it.
- Always work with a firm footing, posture and proper lighting.
- Ensure that sparks and debris resulting from work does not create a hazard.
- USE ONLY ON NON-FERROUS MATERIALS.
- This tool has rear exhaust. Exhaust may contain lubricants, vane material, bearing grease, and other materials flushed thru the tool.

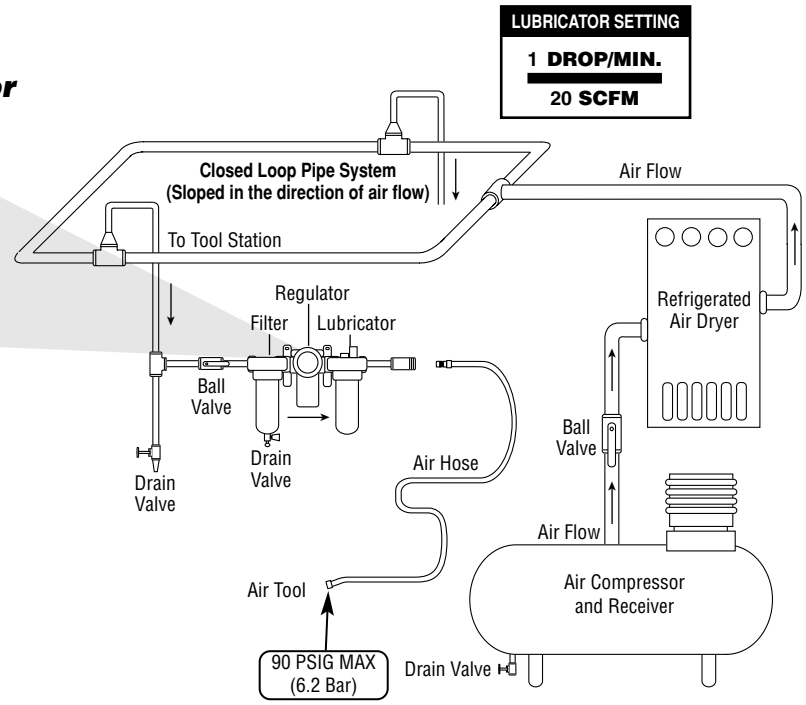
Warning: Sanding certain materials can create explosive dust. It is the employers responsibility to notify the user of acceptable dust levels.

- Sanding certain materials can cause sparks which can cause fires or explosions. It is the users responsibility to make sure the work area is free of flammable materials.
- Always use dust extraction or suppression systems which are suitable for the materials being processed.

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 of 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: 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: **11405** Air Line Filter-Regulator-Lubricator — Provides accurate air pressure regulation, two-stage filtration of water contaminants and micro-mist lubrication of pneumatic components. Operates up to 40 SCFM @ 100 PSIG has 3/8" NPT female ports.
- **Lubricate wick system through the angle gear oil fitting with 2-3 plunges for every 24 hours of use, to achieve maximum gear life. Important:** Use only the recommended angle gear oil for the wick system. Do not contaminate the wick with any other oil or grease product. (Order **95848** Gear Oil and **95541** Gun)
- 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 regularly using a tachometer and after repair and maintenance. Remove abrasive and back-up pad before testing.
- Inspect back-up pad regularly for nicks, cuts, sharp edges, flatness and runout. Replace damaged or worn back-up pad with genuine Dynabrade back-up pad.
- Inspect shroud for wear or damage. Shrouds that are severely worn or subject to a disc breakage must be replaced.
- Inspect accessories before mounting. Do not mount accessories that are damaged or cracked.
- Check accessory - speed rating. Rating on accessory must be greater than the tool speed marked on the housing.
- If accessory breakage occurs, investigate to determine the cause and correct before issuing tool for work.

- Mineral spirits are recommended when cleaning the tool and parts. Do not clean tool or parts with any solvents or oils containing acids, ester, ketone, 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 **96179**) 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 tool vibration before mounting abrasive wheel accessory.

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 tool from exposure to water, solvents, high humidity, freezing temperature and extreme temperature changes.
- DO NOT USE accessories that have been dropped or show signs of cracks, nicks or other defects.
- Store accessories in protective racks or compartments to prevent damage.

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.

Machine Specifications

Model Number	Motor hp (W)	Motor RPM	Sound Level	Maximum Air Flow SCFM (LPM)	Spindle Thread	Air Pressure PSIG (Bars)	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
50210	.4 (268)	15,000	89 dB(A)	21 (595)	1/4"-20 male	90 (6.2)	1.7 (.7)	9-11/16 (247)	3-7/8 (97)
50211	.4 (268)	15,000	86 dB(A)	21 (595)	1/4"-20 male	90 (6.2)	1.7 (.7)	10 (254)	3-7/8 (97)
50561	.4 (268)	15,000	86 dB(A)	21 (595)	1/4"-20 male	90 (6.2)	1.7 (.7)	10 (254)	4-3/8 (109)
50570	.4 (268)	15,000	89 dB(A)	21 (595)	1/4"-20 male	90 (6.2)	1.7 (.7)	9-11/16 (247)	4-3/8 (109)

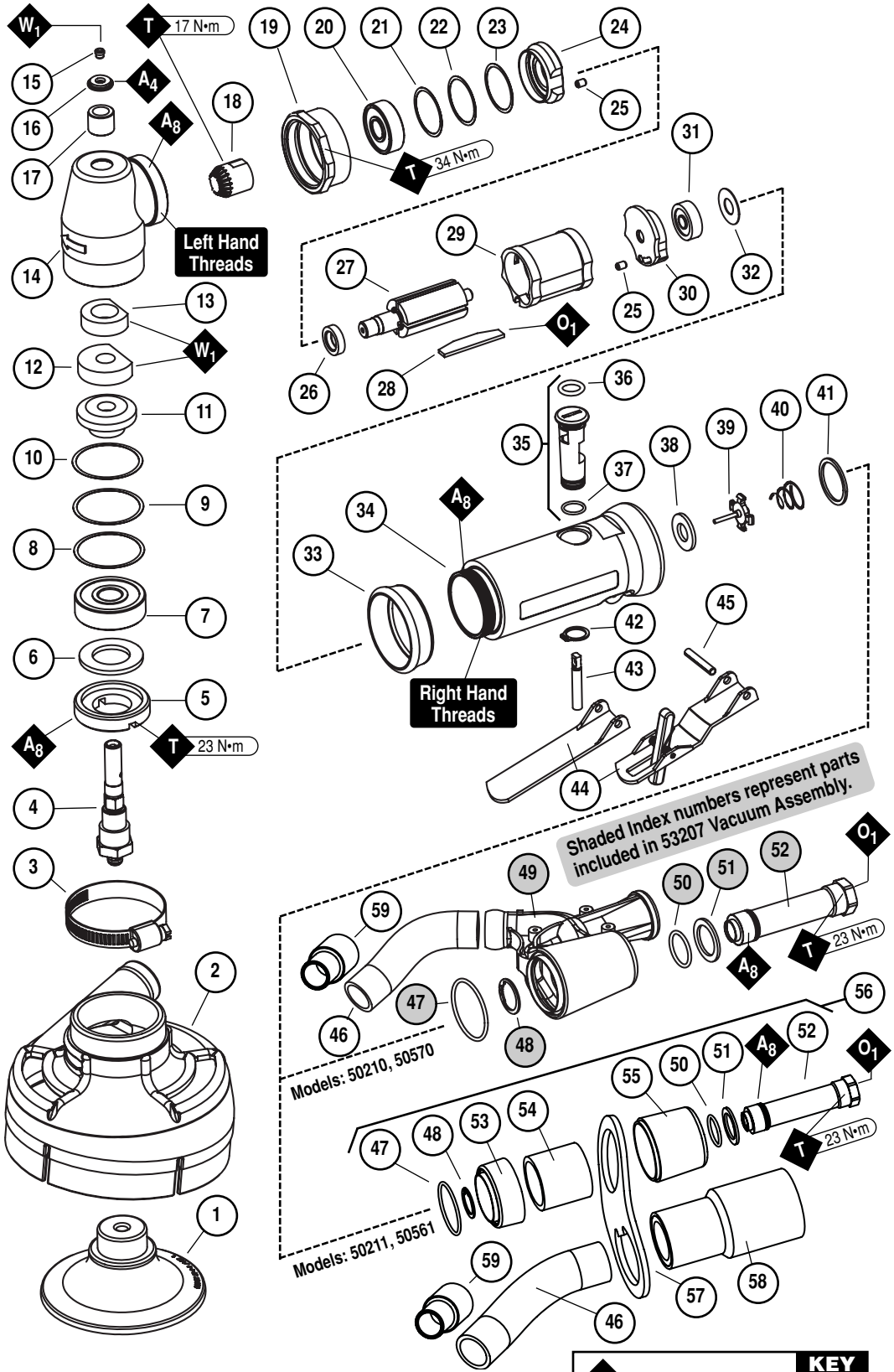
Additional Specifications: Air Inlet Thread 1/4" NPT • Hose I.D. 1/4" (6mm)
Sound Level is the pressure measurement according to the method outlined in ISO regulation ISO-15744.
Warning: Ear protection to be worn when exposure to sound exceeds the limits of applicable Federal, State or local statutes, ordinances and/or regulations.

3 in. Vacuum Disc Sanders
Complete Assembly

Models:
50210, 50211, 50561, 50570

Index Key

No.	Part #	Description
1	**51346**	Pad
2	**50771**	Shroud - Standard
	50789	Shroud - Trimmed
3	**97326**	Clamp
4	**02029**	Spindle
5	**02035**	Lock Nut
6	**01486**	Felt Silencer
7	**54520**	Bearing
8	**97116**	Shim
9	**97117**	Shim
10	**97118**	Shim
11	**02597**	Gear
12	**02044**	Wick
13	**02045**	Wick
14	**02031**	Housing – Includes:
15	**01041**	Gear Oil Fitting
16	**02041**	Gear Oil Plate
17	**02033**	Needle Bearing
18	**02598**	Pinion
19	**01461**	Lock Nut
20	**02649**	Bearing
21	**54543**	Shim
22	**54544**	Shim
23	**54551**	Shim
24	**01478**	Bearing Plate
25	**50767**	Pin (2)
26	**01479**	Spacer
27	**02037**	Rotor
28	**01480**	Blade (4/pkg.)
29	**01476**	Cylinder
30	**02676**	Bearing Plate
31	**02696**	Bearing
32	**02679**	Shield
33	**01547**	Collar
34	**50774**	Housing - Mdl: 50210
	50775	Housing - Mdl: 50211
	50773	Housing - Mdl: 50561
	50772	Housing - Mdl: 50570
35	**01469**	Speed Regulator Assy.
36	**01024**	O-Ring
37	**95730**	O-Ring
38	**01464**	Seal
39	**01472**	Tip Valve
40	**01468**	Spring
41	**01564**	Air Control Ring
42	**95558**	Retaining Ring
43	**01449**	Valve Stem
44	**01448**	Throttle Lever
	01462	Safety-Lock Lever (Optional)
45	**12132**	Pin
46	**96584**	Vac. Hose (Gray - NC)
	31938	Vac. Hose (Black - C)
47	**95438**	O-Ring
48	**95711**	Retaining Ring
49	**94532**	Vacuum Adapter
50	**95375**	O-Ring
51	**94526**	Spacer
52	**94523**	Inlet Adapter
53	**94521**	Muffler Base
54	**94528**	Silencer
55	**94522**	Muffler Cap
56	**94519**	Muffler Assembly
57	**97161**	Vacuum Hose Retainer
58	**31907**	Vac. Hose Cuff (1-1/4")
59	**95601**	Hose Cuff (2) Gray (Non-Conductive)
	31908	Hose Cuff (2) Black (Conductive)




95262 14mm Wrench

KEY

- **O** Oil: O_1 = Air Lube
- **W** Wicking: W_1 = Gear Oil
- **A** Adhesive: A_4 = Loctite #680, A_8 = Loctite #567
- **T** Torque: N•m x 8.85 = In. - lbs.

Disassembly/Assembly Instructions - Right Angle Tools

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

Angle-Head Disassembly:

1. Disconnect the tool from the air supply. **Important:** Hold the air inlet adapter securely with a wrench before removing the air fitting so as to prevent damage to the composite housing.
2. Loosen and remove the **51346** Pad backing.
3. Remove **50771** Shroud by unscrewing **97326** Clamp.
4. Secure the **02031** Housing in a vise by using the **52296** Repair Collar to provide protection for the housing. Position the housing so that the **02035** Lock Ring is facing up.
5. Use the **50971** Lock Ring Tool to remove the **02035** Lock Ring, by turning it counterclockwise.
6. Grasp the spindle to pull the spindle, the **54520** Bearing, the gear and the shims out of the housing.
7. The bearing and gear can be pressed off the spindle with the **96232**, #2 Arbor Press.
8. If necessary the **02033** Needle Bearing can be removed by using a 5/16" dia. flat end drive punch to push the **02041** Gear Oil Plate, and **01041** Gear Oil Fitting out of the **02031** Housing.

Angle-Head Disassembly Complete.

Motor Disassembly:

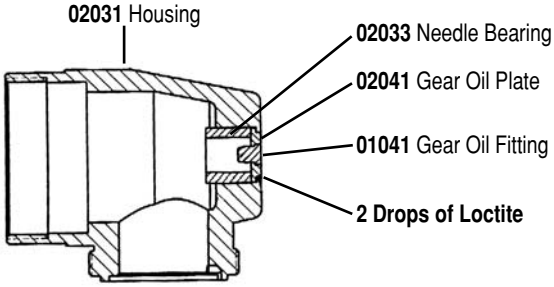
1. Disconnect the tool from the air supply. **Important:** Hold the air inlet adapter securely with a wrench before removing the air fitting so as to prevent damage to the composite housing.
2. Secure the motor housing in a vise by using the **52296** Repair Collar or padded jaws to provide protection for the housing. Position the tool so that the angle-head is pointing up.
3. Use a 34 mm or an adjustable wrench to remove the **01461** Lock Nut by turning it clockwise.
4. Pull the motor assembly out of the motor housing.
5. Fasten the **96346**, 2" Bearing Separator around the portion of the **01476** Cylinder that is closest to the **02676** Rear Bearing Plate.
6. Place the bearing separator on the table of the arbor press so that the pinion gear end of the rotor is pointing toward the floor.
7. Use a 3/16" dia. flat end drive punch as a press tool and position it on the rotor shaft. Press the rotor out of the **02696** Bearing. The **02696** Bearing can be removed from the **02676** Bearing Plate with the **96210** Bearing Removal Tool and the arbor press.
8. Secure the body of the rotor in a vise with bronze or aluminum jaws so that the pinion gear is pointing up.
9. Use a wrench to remove the pinion gear from the rotor by turning it counterclockwise.
10. Push the **02649** Bearing out of the front bearing plate and remove the shims.
11. Slip the **01479** Spacer off the rotor.

Motor Disassembly Complete.

Valve Disassembly:

1. Use the **52296** Repair Collar to securely hold the motor housing in a vise so that the inlet adapter is pointing up.
2. Remove the muffler assembly by loosening the inlet adapter. Remove the **01468** Spring, **01472** Tip Valve, and **01464** Seal. Refer to the parts breakdown for part identification and the sequence of disassembly for the muffler.
3. Reposition the motor housing in the vise so that the throttle lever, and the **12132** Pin are accessible. Remove the pin and lever by using a 2.5 mm dia. drive punch.
4. Use retaining ring pliers to remove the **95558** Retaining Ring and push the **01469** Speed Regulator Assembly out of the motor housing.

Valve Disassembly Complete.



Important: Clean and inspect parts for wear or damage before assembling.

Valve Assembly:

1. Install the **01469** Speed Regulator Assembly into the motor housing, and secure it in place with the **95558** Retaining Ring.
2. Use the **52296** Repair Collar to securely hold the motor housing in a vise so that the air inlet is pointing up.
3. Insert the **01449** Valve Stem into the speed regulator assembly so that the hole in the valve stem aligns with the air inlet hole in the motor housing.
4. Install the **01464** Seal so that it lays flat. Use a needle nose pliers to grasp the nylon portion of the **01472** Tip Valve and install it so that the metal pin fits into the hole of the **01449** Valve Stem.
5. Install the **01468** Spring so that the smaller end fits against the back of the tip valve.
6. Refer to the parts breakdown for part identification and the sequence of assembly for the muffler. Apply a small amount of Loctite #567 (or equivalent) to the male threads of the inlet adapter and install the muffler assembly. Tighten the inlet adapter. (Torque to 23 N•m/200 in. lbs.)

Valve Body Assembly Complete.

Motor Assembly:

1. Secure the body of the rotor in a vise with bronze or aluminum jaws so that the threaded end is pointing up.
2. Slip the **01479** Spacer onto the **02037** Rotor.
3. Select .003 (.08mm) thick shims from the **54529** Shim Pack and place these into the **01478** Front Bearing Plate.
4. Install the **02649** Bearing into the front bearing plate and slip the bearing/plate assembly onto the rotor.
5. Install the pinion onto the rotor, making it hand tight.
6. Check the clearance between the rotor and the bearing plate with a .001 thick feeler gauge. Clearance should be .001" to .0015" (0.03-0.04mm). If it's necessary, readjust clearance by repeating steps 3-5 with different thickness shims.
7. Once the proper rotor/plate clearance is achieved wrench tighten the pinion. (Torque to 17N•m/150 in. lbs.)
8. Apply the **95842** Dynabrade Air Lube (10W/NR or equivalent) to the **01480** Blades and install them onto the rotor.
9. Use the **96242** Bearing Press Tool so that it pushes against the outer race of the **02696** Bearing and install it into the **02676** Rear Bearing Plate with the arbor press.

(continued on next page)

Disassembly/Assembly Instructions - (continued)

10. Place the pinion on the tool plate of the arbor press so that the rear portion of the rotor is pointing up.
11. Install the **01476** Cylinder so that it rests against the **01478** Bearing Plate.
    Note: Make sure that the air inlet passage of the cylinder will properly aligned with the air inlet passage in the **02676** Bearing Plate.
12. Use the **96242** Bearing Press Tool so that it pushes against the inner race of the **02696** Bearing and install the rear bearing/plate assembly onto the rotor with the arbor press. **Important:** Carefully press the rear bearing/plate assembly onto the rotor until it touches the **01476** Cylinder. A "snug" fit should exist between the bearing plates and cylinder. If it is too tight the rotor will not turn freely and will cause damage to the bearings. If it is too loose the proper bearing preload will not be achieved.
13. Apply a small amount of grease to the seal of the **02696** Rear Bearing and place the **02679** Shield against the seal of the bearing.
14. Install the motor assembly into the housing so that the air passage node of the rear bearing plate aligns with the air passage notch inside the housing.
15. Apply a small amount of Loctite #567 (or equivalent) to the threads of the motor housing and use a 34mm (or an adjustable wrench) to connect the angle-head assembly to the motor housing. (Torque to 34 N•m/300 in. lbs.)

Motor Assembly Complete.

Angle-Head Assembly:

1. Press the **01041** Gear Oil Fitting into the **02041** Gear Oil Plate.
2. Carefully apply two drops of Loctite #680 (or equivalent) to the recessed area of the **02031** Housing and press the gear oil plate along with gear oil fitting into the housing. (Allow 30 minutes for the adhesive to cure.)
3. Press the **02033** Needle Bearing into the housing.
4. Position the **96239** Bearing Press Tool so that it rests against the inner race of the **54520** Bearing and press the bearing onto the spindle.
5. Align the hex shaped I.D. area of the gear with that of the spindle and press the gear into place.
6. Apply a small amount of Loctite #567 (or equivalent) to the mating threads of the **02031** Housing. Connect these parts while being aware of the right and left hand threads.
7. Place the **52296** Repair Collar around the motor housing and position the tool in a vise so that the angle-housing end of the tool is pointing up.
8. Use a 34 mm or adjustable wrench on the **01461** Lock Nut while holding the angle housing stationary with one hand. **Note:** The throttle lever can be positioned in 360˚ to the desired location. Allow for additional rotation when tightening the lock nut. (Torque to 23 N•m/200 in. lbs.)
9. Reposition the tool assembly in the vise so that the opening in the angle housing, for the **02035** Lock Ring is facing up.
10. Soak the wicks in the **95848** Gear Oil before installing them into the **02031** Housing. Install the top wick first followed by the bottom wick. Position truncated side of each wick toward the end of the pinion gear.
11. Install the **02029** Spindle into the angle housing. Apply a slight amount of pressure down on the spindle while rotating it back and forth checking for the proper backlash or fit between the gears. A slight amount of backlash or clearance should exist between the bevel and pinion gears. When a tight fit exist, then add shims as needed placing the required thickness of shims between the outer race of the **54520** Bearing and the bearing seat in the housing.
12. Place (1) **01486** Felt Silencer into the **02035** Lock Ring, and apply a small amount of Loctite #567 (or equivalent) to the threads of the **02035** Lock Ring. Use the **50971** Lock Ring Wrench to install the lock ring onto the **02031** Housing. (Torque to 23 N•m/200 in. lbs.)
13. Place **50771** Shroud onto housing and fasten **97326** Clamp.
14. Install **51346** Pad and abrasive.

Angle-Head Assembly Complete.
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 air inlet with throttle lever depressed. Operate tool for 30 seconds to determine if tool is operating properly and to allow lubricating oils to properly penetrate motor. Motor should now be tested for proper operation at 90 PSIG. If motor does not operate properly or operates at a higher RPM than marked on the tool, the tool should be serviced to correct the cause before use.

Loctite® is a registered trademark of Loctite Corp.

Special Greasing Instructions

- **Lubricate wick system through the angle gear oil fitting with 2-3 plunges for every 24 hours of use, to achieve maximum gear life.**

  Important: Use only the recommended angle gear oil for the wick system. Do not contaminate the wick with any other oil or grease product.

  (Order **95848** Gear Oil and **95541** Gun)

One Year Warranty

Following the reasonable assumption that any inherent defect which might prevail in a product will become apparent to the user within one year from the date of purchase, all equipment of our manufacture is warranted against defects in workmanship and materials under normal use and service. We shall repair or replace at our factory, any equipment or part thereof which shall, within one year after delivery to the original purchaser, indicate upon our examination to have been defective. Our obligation is contingent upon proper use of Dynabrade tools in accordance with factory recommendations, instructions and safety practices. It shall not apply to equipment which has been subject to misuse, negligence, accident or tampering in any way so as to affect its normal performance. Normally wearable parts such as bearings, contact wheels, rotor blades, etc., are not covered under this warranty.

Preventative Maintenance Schedule

For Models 50210, 50211, 50561 & 50570

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	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.

96179 – 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	**51346**	Pad	1			**X**	
2	**50771**	Shroud	1		**X**		
3	**97326**	Clamp	1				**X**
4	**02029**	Spindle	1				**X**
5	**02035**	Lock Nut	1				**X**
6	**01486**	Felt Silencer	1	**T**			
7	**54520**	Bearing	1		**T**		
8	**97116**	Shim	1		**T**		
9	**97117**	Shim	1		**T**		
10	**97118**	Shim	1		**T**		
11	**02597**	Gear	1			**X**	
12	**02044**	Wick	1		**T**		
13	**02045**	Wick	1		**T**		
14	**02031**	Housing	1				**X**
15	**01041**	Gear Oil Fitting	1			**D**	
16	**02041**	Gear Oil Plate	1			**X**	
17	**02033**	Needle Bearing	1			**X**	
18	**02598**	Pinion	1			**X**	
19	**01461**	Lock Nut	1			**X**	
20	**02649**	Bearing	1	**T**			
21	**54543**	Shim	1		**T**		
22	**54544**	Shim	1		**T**		
23	**54551**	Shim	1		**T**		
24	**01478**	Bearing Plate	1			**X**	
25	**50767**	Pin	2			**X**	
26	**01479**	Spacer	1			**X**	
27	**02037**	Rotor	1				**X**
28	**01480**	Blade (4/pkg.)	1	**T**			
29	**01476**	Cylinder	1			**X**	
30	**02676**	Bearing Plate	1			**X**	
31	**02696**	Bearing	1	**T**			
32	**02679**	Shield	1		**T**		
33	**01547**	Collar	1			**X**	
34	**See Note**	Housing	1				**X**
35	**01469**	Speed Regulator Assy.	1		**T**		
36	**01024**	O-Ring	1				**D**
37	**95730**	O-Ring	1				**D**
38	**01464**	Seal	1		**T**		
39	**01472**	Tip Valve	1		**T**		
40	**01468**	Spring	1		**T**		
41	**01564**	Air Control Ring	1				**L**
42	**95558**	Retaining Ring	1		**T**		
43	**01449**	Valve Stem	1		**T**		
44	**See Note**	Throttle Lever	1			**X**	
45	**12132**	Pin	1		**T**		
46	**See Note**	Hose	1			**X**	
47	**95438**	O-Ring	1			**D**	
48	**95711**	Retaining Ring	1	**T**			
49	**94532**	Vacuum Adapter	1			**X**	
50	**95375**	O-Ring	1			**L**	
51	**94526**	Spacer	1			**L**	
52	**94523**	Inlet Adapter	1				**X**
53	**94521**	Muffler Base	1				**X**
54	**94528**	Silencer	1		**T**		
55	**94522**	Muffler Cap	1				**X**
56	**97161**	Vacuum Hose Retainer	1			**X**	
57	**See Note**	Vacuum Hose Cuff	1			**X**	

Note: Please see page 4 for specific part number.

Optional Accessories

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

Dynaswivel®

- Swivels 360° at two locations which allows an air hose to drop straight to the floor, no matter how the tool is held.

94300 1/4" NPT.

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.

95842: 1pt. (473 ml)

95843: 1gal. (3.8 L)

95675 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.

Dynabrade Angle Gear Oil

- Specifically formulated to saturate wick system in right angle gear head.

95848: 2 oz. tube

95541: Gear Oil Gun

96179 Motor Tune-Up Kit

- Includes assorted parts to help maintain and repair motor.

02050 Drop-In Motor

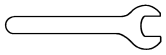
- Allows quick and easy replacement. No motor adjustments needed.

Composite-Style Coupler

- Lightweight 1.4 oz. (.05 Kg), non-marring composite material.
- Easy connect/disconnect by single push-button action.
- Shock-proof, low-vibration, crush-resistant.

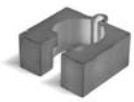
94960: 1/4" Female NPT

94980: 1/4" Male NPT



Open-End Wrench

95262 – 14mm



52296 Repair Collar

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

Portable Vacuum Systems

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

Reference Contact Information

1. **American National Standards Institute – ANSI**
   25 West 43rd Street
   Forth Floor
   New York, NY 10036
   Tel: 1 (212) 642-4900
   Fax: 1 (212) 398-0023
2. **Government Printing Office – GPO**
   Superintendent of Documents
   Attn. New Orders
   P.O. Box 371954
   Pittsburgh, PA 15250-7954
   Tel: 1 (202) 512-1803
3. **European Committee for Standardization**
   Rue de Stassart 36
   B - 1050 Brussels, Belgium

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