For Serial No. 4G1255 and Higher

Parts Page Reorder No. PD07•17R
Effective April, 2011
Supersedes PD07•17

Right Angle Mini-Orbital Sander

Air Tool Manual – Safety, Operation and Maintenance

SAVE THIS DOCUMENT, EDUCATE ALL PERSONNEL

Models:

58035 – 15,000 RPM
58037 – 12,000 RPM
58038 – 12,000 RPM



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 – 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: Right Angle Mini-Orbital Sander is ideal for finesse sanding.

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 their performance.

- Employer's Responsibility – Provide Right Angle Mini-Orbital Sander operator 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.
- Use only recommended accessories. See back page of manual and Dynabrade Literature.

(continued on next page)

SAFETY INSTRUCTIONS (Continued)

- Follow tool specifications before choosing size and type of accessory.
- Only use recommended fittings and air line sizes. Air supply hoses and air hose assemblies must have a minimum working pressure rating of 150 PSIG (10 Bars, g) or 150 percent of the maximum pressure produced in the system, whichever is higher. (See tool Machine Specifications table.)

OPERATING INSTRUCTIONS

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

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

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

- Install air fitting into inlet bushing of tool. Important: Secure inlet bushing of tool with a wrench before attempting to install the air fitting to avoid damaging valve body housing.
- Connect air source, depress throttle lever.
- BEFORE MOUNTING AN ACCESSORY, after all tool repairs and whenever a Right Angle Mini-Orbital Sander is issued for use, check tool OPM (speed) with tachometer with air pressure set at 90 PSIG while the tool is running. This tool is an orbital tool, checking the OPM requires either a strobe or magnetic tachometer. 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 / OPM must never exceed abrasive/accessory RPM / OPM rating. Check accessory manufacturer for details on maximum operating speed or special mounting instructions.

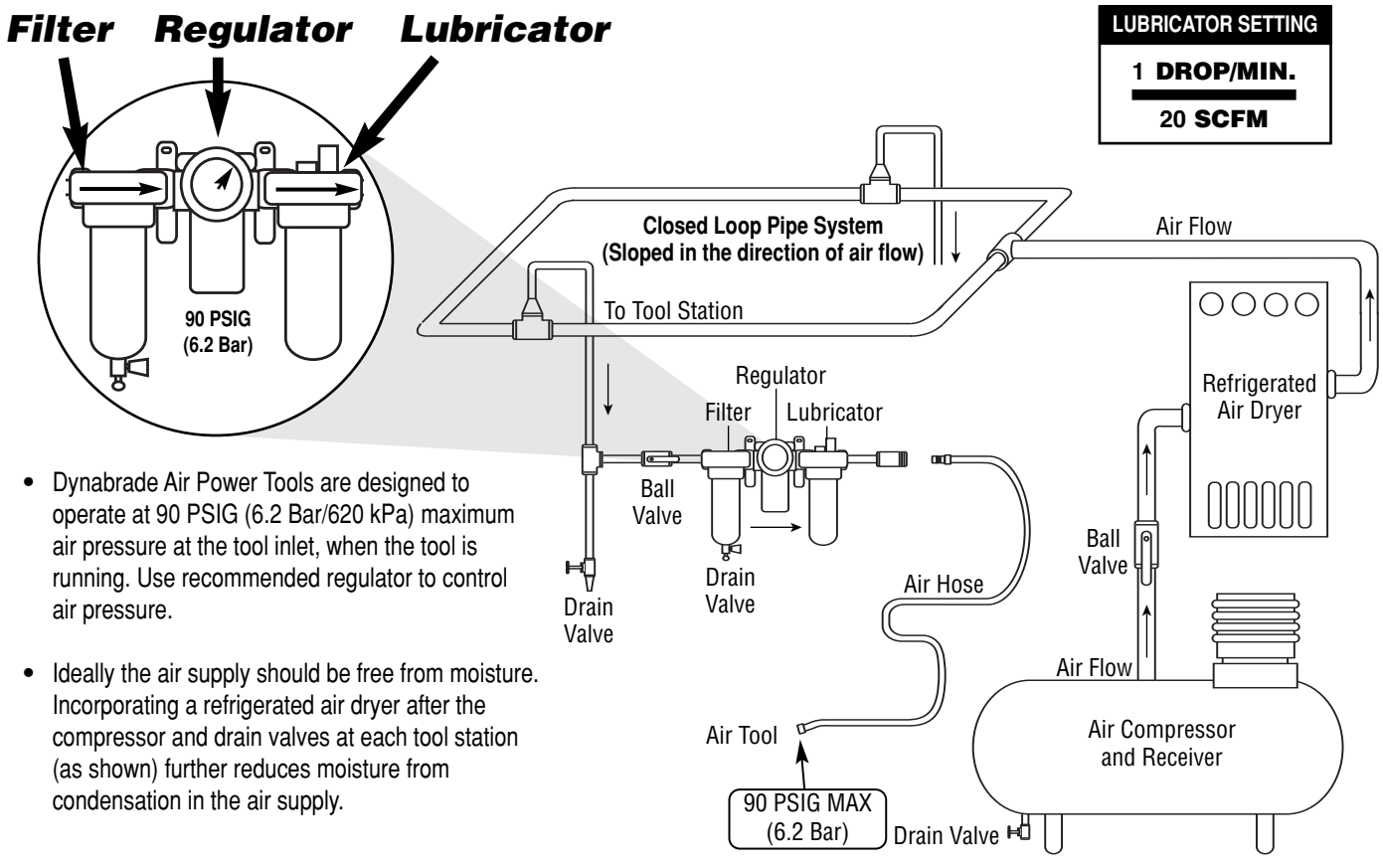
- With power source connected at the air tool relieve hose of air pressure and disconnect tool from air supply when changing recommended accessories.
- Connect air tool to power source. Be careful NOT to depress throttle lever in the process.
  Do not expose air tool to inlet pressure above 90 PSIG or (6.2 Bars).

Caution: After installing the accessory, before testing or use and/or after reassembling tool, the Right Angle Mini-Orbital 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.

- Use only appropriately sized abrasive sanding discs properly secured to the backing pad provided with the air sander. Ensure that self-fixing sanding discs are mounted concentrically.
- 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.
- Proceed with caution in unfamiliar surroundings. Hidden hazards may exist, such as electricity or other utility lines.
- 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.
- Work may generate hazardous dust.
- 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.
- This tool is front exhaust. Exhaust may contain lubricants, vane material, bearing grease, and other materials flushed thru the tool.

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

Air System



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

- Ideally the air supply should be free from moisture. Incorporating a refrigerated air dryer after the compressor and drain valves at each tool station (as shown) further reduces moisture from condensation in the air supply.

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. See Preventative Maintenance Schedule on pg 7.
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 Filter-Regulator-Lubricator (FRL) – Provides accurate air pressure regulation and two stage filtration of water contaminants. Operates 40 SCFM @ 100 PSIG with 3/8" 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.
- **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 **95848** Gear Oil dispensed with the **95581** Gun. DO NOT contaminate the wick with any other oil or grease product.

Routine Preventative Maintenance:

- Check free speed of Right Angle Mini-Orbital Sander using a tachometer on a regular basis.
- 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 **96179**) is available which includes high wear and medium wear motor parts.
- All tool labels must be kept legible at all times. 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	Maximum Air Flow SCFM (LPM)	Air Pressure PSIG (Bars)	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
58035	.4 (298)	15,000	85	21 (595)	90 (6.2)	1.63 (.74)	5-7/16 (138)	3-11/16 (94)
58037	.4 (298)	12,000	85	20 (566)	90 (6.2)	1.63 (.74)	5-7/16 (138)	3-3/4 (96)
58038	.4 (298)	12,000	85	20 (566)	90 (6.2)	1.63 (.74)	5-7/16 (138)	4 (104)

Additional Specifications: Air Inlet Thread 1/4" NPT • Hose I.D. Size 1/4" (8mm)
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 materials available and are machined to exacting tolerances. The failure of quality pneumatic motors can most often be traced to an unclean air supply or the lack of lubrication. Air pressure easily forces dirt or water contained in the air supply into motor bearings causing early failure. It often scores the cylinder walls and the rotor blades resulting in limited efficiency and power. Our warranty obligation is contingent upon proper use of our tools and cannot apply to equipment which has been subjected to misuse such as unclean air, wet air or a lack of lubrication during the use of this tool.

One Year Warranty

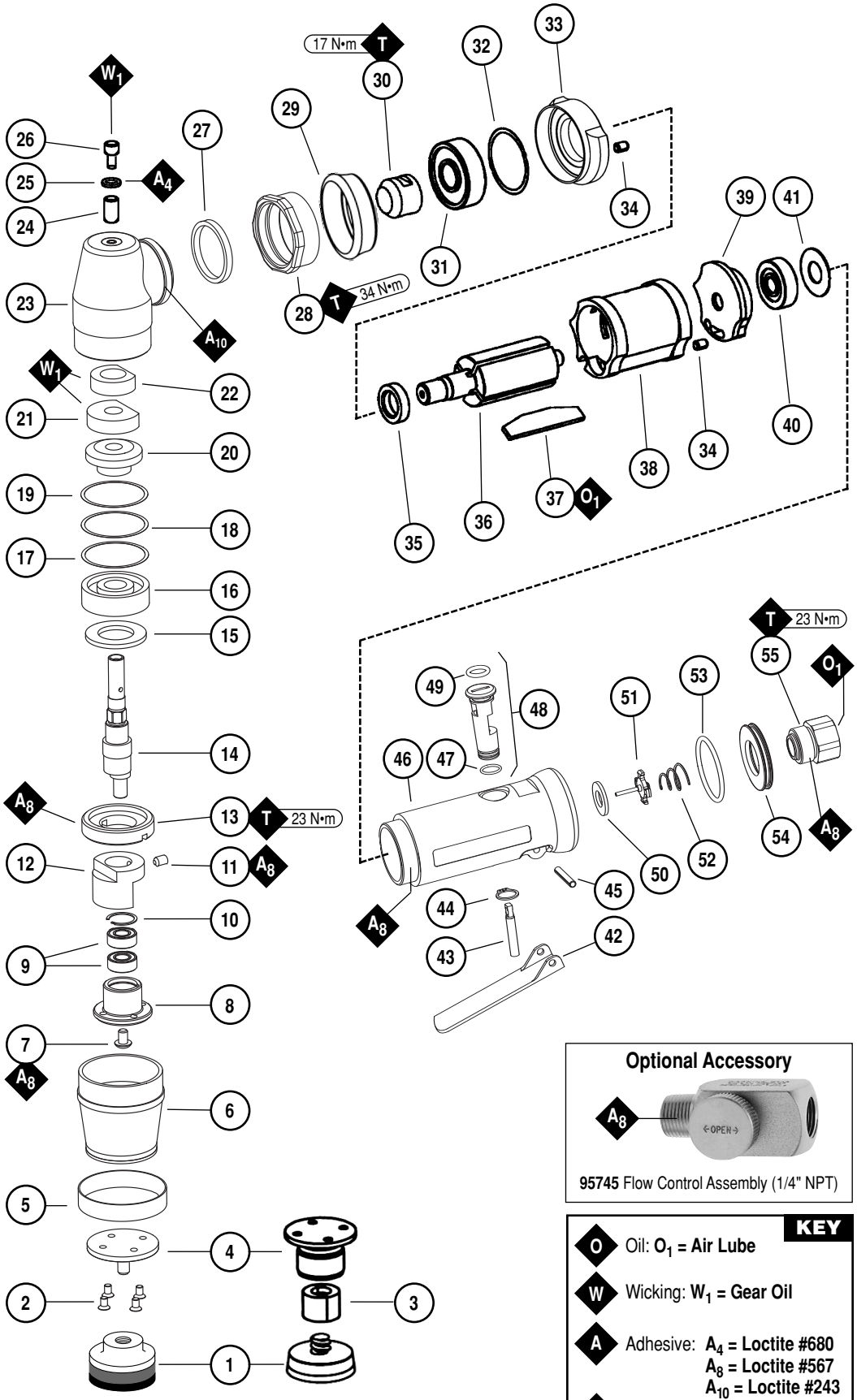
Following the reasonable assumption that any inherent defect which might prevail in a product will become apparent to the user within one year from the date of purchase, all equipment of our manufacture is warranted against defects in workmanship and materials under normal use and service. We shall repair 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.

Right Angle Mini-Orbital Sander
Complete Assembly

Models:
58035 – 15,000 RPM
58037 – 12,000 RPM
58038 – 12,000 RPM

Index Key

No.	Part #	Description
1	**54088**	Pad - Mdl: 58035
	54018	Pad - Mdl: 58037
	54031	Pad - Mdl: 58038
2	**97175**	Screw (4)
3	**95615**	Roloc® Shell
4	**30701**	Plate - Mdl: 58035, 37
	30721	Plate - Mdl: 58038
5	**30709**	Boot Clamp
6	**30700**	Boot
7	**97174**	Screw
8	**30702**	Balancer Shaft
9	**30705**	Bearing (2)
10	**97172**	Snap Ring
11	**97173**	Set Screw
12	**30703**	Counterweight
13	**02035**	Lock Ring
14	**30704**	Shaft
15	**01486**	Felt Silencer
16	**54520**	Bearing
17	**97118**	Shim
18	**97117**	Shim
19	**97116**	Shim
20	**Gear**	
	02597	Mdl: 58035
	02623	Mdl: 58037, 58038
21	**Bottom Wick**	
	02044	Mdl: 58035
	02042	Mdl: 58037, 58038
22	**Top Wick**	
	02045	Mdl: 58035
	02043	Mdl: 58037, 58038
23	**02052**	Housing
24	**02033**	Needle Bearing
25	**02041**	Gear Oil Plate
26	**01041**	Gear Oil Fitting
27	**01728**	Felt Silencer
28	**01461**	Lock Nut
29	**01547**	Collar
30	**Pinion**	
	02598	Mdl: 58035
	02624	Mdl: 58037, 58038
31	**02649**	Bearing
32	**54529**	Shim (3/pkg.)
33	**01478**	Front Bearing Plate
34	**50767**	Pin (2)
35	**01479**	Spacer
36	**02037**	Rotor
37	**01480**	Blades (4/Pkg.)
38	**01476**	Cylinder
39	**02676**	Rear Bearing Plate
40	**02696**	Bearing
41	**02679**	Shield
42	**01448**	Throttle Lever
	01462	Safety Lock Lever
43	**01449**	Valve Stem
44	**95558**	Retaining Ring
45	**12132**	Pin
46	**30710**	Housing - Mdl: 58035
	30712	Housing - Mdl: 58037
	30713	Housing - Mdl: 58038
47	**95730**	O-Ring
48	**01469**	Speed Regulator Assembly
49	**01024**	O-Ring
50	**01464**	Seal
51	**01472**	Tip Valve
52	**01468**	Spring
53	**96065**	O-Ring
54	**53190**	Block Plate
55	**01494**	Inlet Bushing



Optional Accessory

95745 Flow Control Assembly (1/4" NPT)

KEY

- **O** Oil: **O_1 = Air Lube**
- **W** Wicking: **W_1 = Gear Oil**
- **A** Adhesive: **A_4 = Loctite #680**, **A_8 = Loctite #567**, **A_{10} = Loctite #243**
- **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.

Motor Disassembly:

1. Shut the air supply and disconnect the sander from the air supply hose. **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 to provide protection for the housing. Position the tool so that the angle head is pointing up.
3. Use a 34mm 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 **96232** Arbor Press (#2).
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. Pull the **01478** Front Bearing Plate with bearing off the rotor.
11. Push the **02649** Bearing out of the front bearing plate and remove the shims.
12. Slip the **01479** Spacer off the rotor.

Motor Disassembly Complete.

Orbital Head Disassembly:

1. Shut the air supply and disconnect the sander from the air supply hose.
2. Remove the pad.
3. Use a Phillips® screwdriver to remove the **97175** Screws (4).
4. Use a sharp utility knife to cut through and remove the **30709** Boot Clamp. **Important:** Cut the clamp carefully so as to prevent personal injury and damage to the **30700** Boot.
5. Pull the **30700** Boot from the **02052** Housing.
6. Hold the **30703** Counterweight stationary with a 19mm open-end wrench. Use a Phillips® screwdriver to loosen the **97174** Screw and remove the **30702** Balancer Shaft.
7. Use a 5/64" (2mm) slotted screw, screwdriver to remove the **97172** Snap Ring.
8. Use the **96210** Bearing Removal Tool and the **96232** Arbor Press (#2) to push the **30705** Bearings (2) out of the balancer shaft.
9. Use a 2mm Hex Key to remove the **97173** Set Screw and the **30703** Counterweight.

Orbital Head Disassembly Complete.

Right Angle Housing Disassembly:

1. Shut the air supply and disconnect the sander from the air supply hose.
2. Secure the **30710** / **30712** / **30713** 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.
3. Use the **50971** Lock Ring Tool to remove the **02035** Lock Ring, by turning it counterclockwise.
4. Grasp the shaft to pull the shaft, the **54520** Bearing, the gear and the shims out of the housing.
5. The bearing and gear can be pressed off the spindle with the **96232**, Arbor Press (#2).
6. 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 **02052** Housing.

Right Angle Housing 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 valve components by loosening the inlet adapter. Remove the **01468** Spring, **01472** Tip Valve, and **01464** Seal.
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 2.5mm 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. Apply a small amount of Loctite® #567 (or equivalent) to the male threads of the inlet adapter and 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.

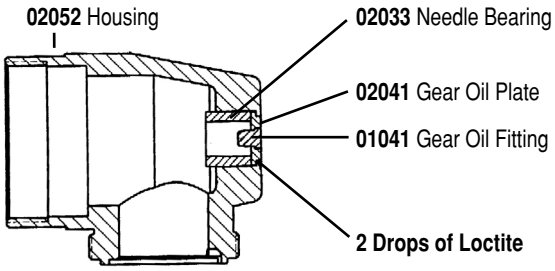
(continued on next page)

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 **96216** 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.
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 **96216** 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.

Right Angle Housing 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 **02052** 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 **02052** 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 34mm 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 34 N-m/300 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 **02052** 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 **30704** Shaft 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 **02052** Housing. (Torque to 23 N-m/200 in. lbs.)

Right Angle Housing Assembly Complete.

Orbital Head Assembly:

1. Install the **30703** Counterweight onto the **30704** Shaft, aligning the screw hole with the pilot hole in the shaft.
2. Apply a small amount of the Loctite® #567 (or equivalent) to the threads of the **97173** Set Screw.
3. Use a 2mm hex key to install the **97173** Set Screw into the **30703** Counterweight and secure the counterweight to the **30704** Shaft.
4. Use the raised outer diameter of the **96216** Bearing Press Tool and the **96232** Arbor Press (#2) to press the **30705** Bearings (2) into the **30702** Balancer Shaft.
5. Install the **97172** Snap Ring into the **30702** Balancer Shaft.
6. Install the balancer shaft assembly onto the **30704** Shaft.
7. Apply a small amount of the Loctite® #567 (or equivalent) onto the threads of the **97174** Screw. Hold the **30703** Counterweight stationary with a 19mm open-end wrench. Use a Phillips® screwdriver to tighten the **97174** Screw into the **30704** Shaft.
8. Install the **30700** Boot and the **30701** Plate, aligning the screw holes.
9. Install the **97175** Screws (4) securely.
10. Install the **30709** Boot Clamp around the **30700** Boot and use a HEAT GUN to shrink-fit the clamp, securing the boot to the **02052** Housing.
11. Install the pad.

Orbital 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.

Preventative Maintenance Schedule

For All Right Angle Mini-Orbital Sander

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	**Note 1**	Pads	1				
2	**97175**	Screw	4			**X**	
3	**95615**	Roloc® Shell	1			**X**	
4	**Note 2**	Plate	1			**X**	
5	**30709**	Boot Clamp	1			**X**	
6	**30700**	Boot	1			**X**	
7	**97174**	Screw	1				**X**
8	**30702**	Balancer Shaft	1				**X**
9	**30705**	Bearing	2			**X**	
10	**97172**	Snap Ring	1			**L**	
11	**97173**	Set Screw	1			**X**	
12	**30703**	Counterweight	1				**X**
13	**02035**	Lock Ring	1				**X**
14	**30704**	Shaft	1				**X**
15	**01486**	Felt Silencer	1	**T**			
16	**54520**	Bearing	1		**T**		
17	**97118**	Shim	1		**T**		
18	**97117**	Shim	1		**T**		
19	**97116**	Shim	1		**T**		
20	**Note 2**	Gear	1			**X**	
21	**Note 2**	Bottom Wick	1		**T**		
22	**Note 2**	Top Wick	1		**T**		
23	**Note 2**	Housing	1				**X**
24	**02033**	Needle Bearing	1			**X**	
25	**02041**	Gear Oil Plate	1			**X**	
26	**01041**	Gear Oil Fitting	1			**X**	
27	**01728**	Felt Silencer	2	**T**			
28	**01461**	Lock Nut	1			**X**	
29	**01547**	Collar	1			**X**	
30	**Note 2**	Pinion	1			**X**	
31	**02649**	Bearing	1		**T**		
32	**54529**	Shim (3/pkg.)	1		**T**		
33	**01478**	Front Bearing Plate	1			**X**	
34	**50767**	Pin	2			**X**	
35	**01479**	Spacer	1			**X**	
36	**02037**	Rotor	1				**X**
37	**01480**	Blades (4/Pkg.)	1	**T**			
38	**01476**	Cylinder	1			**X**	
39	**02676**	Rear Bearing Plate	1			**X**	
40	**02696**	Bearing	1		**T**		
41	**02679**	Shield	1		**T**		
42	**01448**	Throttle Lever	1			**X**	
	01462	Safety Lock Lever	1			**X**	
43	**01449**	Valve Stem	1		**T**		
44	**95558**	Retaining Ring	1		**T**		
45	**12132**	Pin	1		**T**		
46	**Note 2**	Housing	1				**X**
47	**95730**	O-Ring	1		**T**		
48	**01469**	Speed Regulator Assy.	1		**T**		
49	**01024**	O-Ring	1		**T**		
50	**01464**	Seal	1		**T**		
51	**01472**	Tip Valve	1		**T**		
52	**01468**	Spring	1		**T**		
53	**96065**	O-Ring	1		**T**		
54	**53190**	Block Plate	1				**X**
55	**01494**	Inlet Bushing	1				**X**

Note 1: Pads are a consumable item. They are application sensitive. Their expectant life will vary depending on the specific work application and work habit of the operator.

Note 2: Please see page 4 for specific part number.

Optional Accessories



96179 Motor Tune-Up Kit

- Includes assorted parts to help maintain and repair motor.



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.

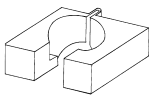


Dynabrade Air Lube

- 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. (3.8L)



52296 Repair Collar

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



Dynabrade Angle Gear Oil

- Specifically formulated to saturate wick system in right angle gear head.
- Easy to apply using Dynabrade P/N **95541** Oil Gun. Apply 3 plunges every 8 hours of operation into tools lubrication fitting.

  95848: 2 oz. tube

  95849: 10 oz. tube

Special Repair Tools

Note: Mentioned In Assembly/Disassembly

96216 Bearing Press Tool
96232 (#2) Arbor Press
96346 (2") Bearing Separator
96210 Bearing Removal Tool
96239 Bearing Press Tool
52296 Repair Collar
50971 Lock Ring Tool

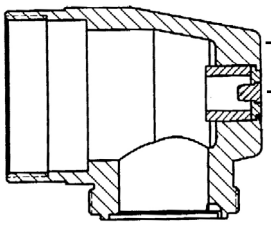
Special Greasing Instructions



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)



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

Visit Our Web Site: www.dynabrade.com

Email: Customer.Service@Dynabrade.com

DYNABRADE®

DYNABRADE, INC., 8989 Sheridan Drive • Clarence, NY 14031-1490 • Phone: (716) 631-0100 • Fax: 716-631-2073 • International Fax: 716-631-2524
DYNABRADE EUROPE S.àr.l., Zone Artisanale • L-5485 Wormeldange—Haut, Luxembourg • Telephone: 352 76 84 94 1 • Fax: 352 76 84 95 1

©DYNABRADE, INC., 2011
PRINTED IN USA
PD07.17R_04/11