

Dynafine® Sanders



Parts Page Reorder No. PD06•06
Effective March, 2006
Supersedes PD05•22

Detail Sander/Backsplash/Finger/Wet/Raised Panel

Air Tool Manual – Safety, Operation and Maintenance

SAVE THIS DOCUMENT, EDUCATE ALL PERSONNEL

Models: (Sander)

- 57900 – 13,000 RPM, Detail Sander
- 57910 – Detail Sander Versatility Kit
- 57930 – 13,000 RPM, Finger Sander

Models: (Backsplash)

- 58000 – 13,000 RPM, Backsplash Sander
- 58010 – Backsplash Sander Versatility Kit

Model: (Wet)

- 57902 – 13,000 RPM, Wet Sander

Model: (Raised Panel)

- 57906 – 13,000 RPM, Raised Panel Pad Sander



Model 57900

⚠ 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 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, 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: Dynafine® Sanders are designed for finishing. Excellent for removing milling and machining marks from wood, solid surface and metal. Defect removal in painted surfaces and clear coats.

Do Not use tool for anything other than its intended applications.

This power tool is not intended for use in potentially explosive atmospheres and is not insulated against contact with electrical power.

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

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

(continued on next page)

SAFETY INSTRUCTIONS - Cont.

Accessory Selection:

- Abrasive/accessory RPM (speed) rating MUST be approved for AT LEAST the tool RPM rating.
- Before mounting an accessory, visually inspect for defects. Do not use defective accessories.
- Mount only recommended accessories. See back page of manual and Dynabrade literature.
- 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 personal protection equipment. Operator of tool is responsible for following: accepted eye, face, respiratory, hearing 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.

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

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

- Secure inlet bushing on air tool with a wrench before attempting to install the air fitting to avoid damaging housing assembly.
- Check tool RPM (speed) with tachometer with air pressure set at 90 PSIG (6.2 Bars, g) while the tool is running. If tool is operating at a higher speed than the RPM marked on the tool housing, or operating improperly, the tool must be serviced and corrected before use.

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

- With power source disconnected from air tool, mount recommended accessory.
- 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, g).

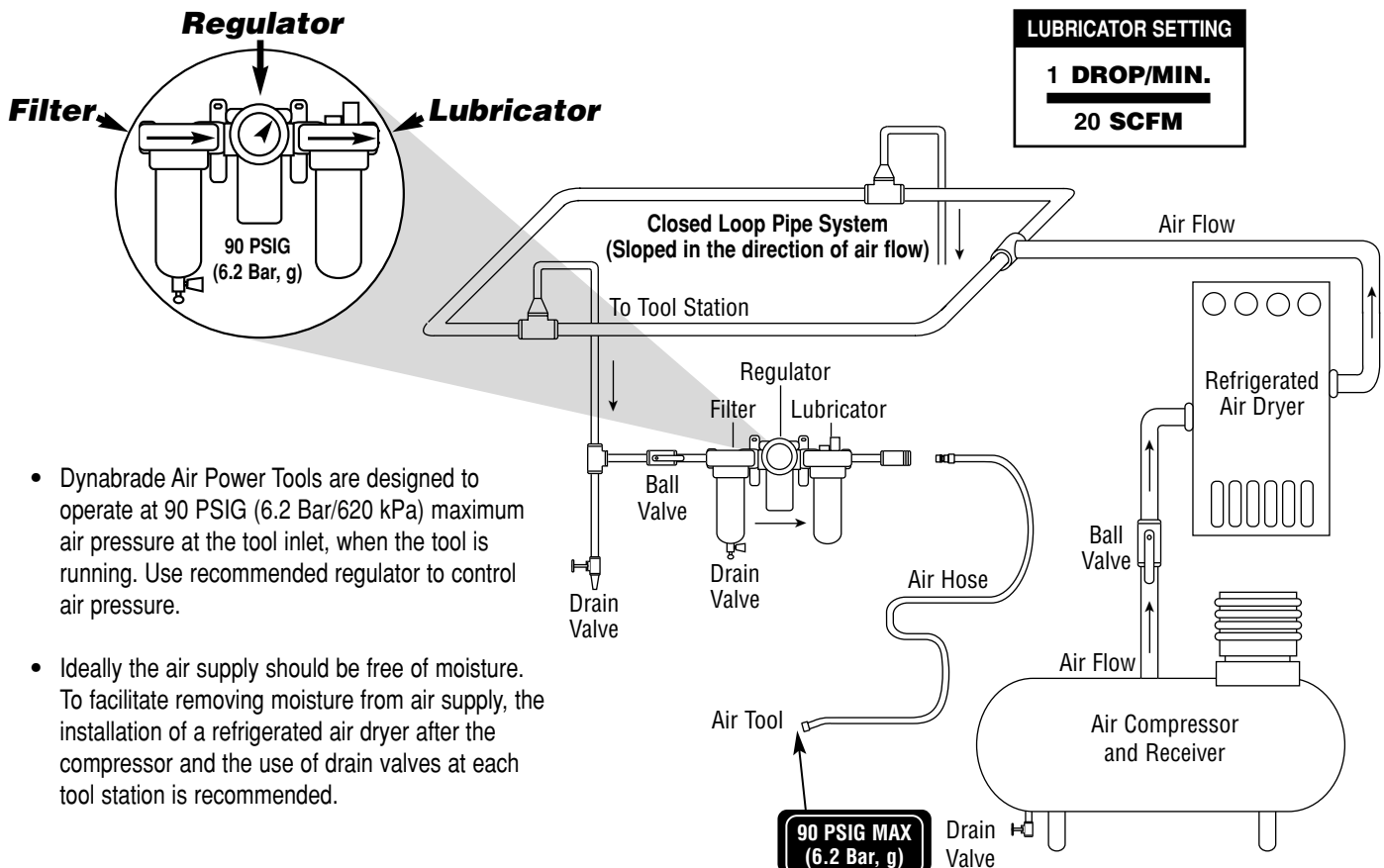
Caution: After installing the accessory, the tool must be started at a reduced speed to check for good balance.

Gradually increase tool speed. DO NOT USE if tool vibration is excessive. Correct cause, and retest to insure safe operation.

- 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.

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.

- Use only genuine Dynabrade replacement parts to insure quality. To order replacement parts, specify **Model#**, **Serial#** and **RPM** of your air tool.
- It is strongly recommended that all Dynabrade rotary vane air tools be used with a Filter-Regulator-Lubricator to minimize the possibility of misuse due to unclean air, wet air or insufficient lubrication. Dynabrade recommends the following: **11411** Air Filter-Regulator-Lubricator (FRL) – Provides accurate air pressure regulation and two stage filtration of water contaminants. Operates 55 SCFM/1,558 LPM @ 90 PSIG (6.2 Bar, g) with 1/2" NPT female ports.
- Dynabrade recommends one drop of air lube per minute for each 20 SCFM/566 LPM (example: if the tool specification states 40 SCFM/1133 LPM, set the drip rate on the filter-lubricator to 2 drops per minute). Dynabrade Air Lube (P/N **95842**: 1 pt 473 ml) is recommended.

Routine Preventative Maintenance: Check free speed of tool using a tachometer. This tool should be speed checked 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 **96236**) is available which includes high wear and medium wear motor parts.
- Air tool labels must be kept legible at all times, if not, reorder label(s) and replace. User is responsible for maintaining specification information i.e.: Model #, S/N, and RPM. (See Assembly Breakdown)
- Blow air supply hose out prior to initial use.
- Visually inspect air hoses and fittings for frays, visible damage and signs of deterioration. Replace damaged or worn components.
- Refer to Dynabrade's Warning/Safety Operating Instructions Tag (Reorder No. **95903**) for safety information.

After maintenance is performed on tool, add a few drops of Dynabrade Air Lube (P/N **95842**) to the air line and start the tool a few times to lubricate air motor. Check for excessive tool vibration.

Handling and Storage:

- Use of tool rests, hangers and/or balancers is recommended.
- Protect tool inlet from debris (see Notice below).
- DO NOT carry tool by air hose or near the tool throttle lever.
- Protect abrasive accessories from exposure to water, solvents, high humidity, freezing temperature and extreme temperature changes.
- Store accessories in protective racks or compartments to prevent damage.

Machine Specifications

Model Number	Motor hp (W)	Motor RPM	Sound Level	Air Flow Rate CFM/SCFM (LPM)	Air Pressure PSIG (Bars)	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
57900	.15 (118)	13,000	65 dB(A)	3/20 (566)	90 (6.2)	1.6 (.7)	9 (229)	3-3/4 (95)
57902	.15 (118)	13,000	65 dB(A)	3/20 (566)	90 (6.2)	1.6 (.7)	9 (229)	3-3/4 (95)
57906	.15 (118)	13,000	65 dB(A)	3/20 (566)	90 (6.2)	1.6 (.7)	9 (229)	4-1/8 (107)
57910	.15 (118)	13,000	65 dB(A)	3/20 (566)	90 (6.2)	1.6 (.7)	9 (229)	3-3/4 (95)
57930	.15 (118)	13,000	65 dB(A)	3/20 (566)	90 (6.2)	1.6 (.7)	11-3/4 (298)	4 (102)
58000	.15 (118)	13,000	65 dB(A)	3/20 (566)	90 (6.2)	1.6 (.7)	9 (229)	3-3/4 (95)
58010	.15 (118)	13,000	65 dB(A)	3/20 (566)	90 (6.2)	1.6 (.7)	9 (229)	3-3/4 (95)

Additional Specifications: Air Inlet Thread 1/4" NPT • Hose Size 1/4" or 8 mm

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

Notice

All Dynabrade motors use the highest quality parts and metals available and are machined to exacting tolerances. The failure of quality pneumatic motors can most often be traced to an unclean air supply or the lack of lubrication. Air pressure easily forces dirt or water contained in the air supply into motor bearings causing early failure. It often scores the cylinder walls and the rotor blades resulting in limited efficiency and power. Our warranty obligation is contingent upon proper use of our tools and cannot apply to equipment which has been subjected to misuse such as unclean air, wet air or a lack of lubrication during the use of this tool.

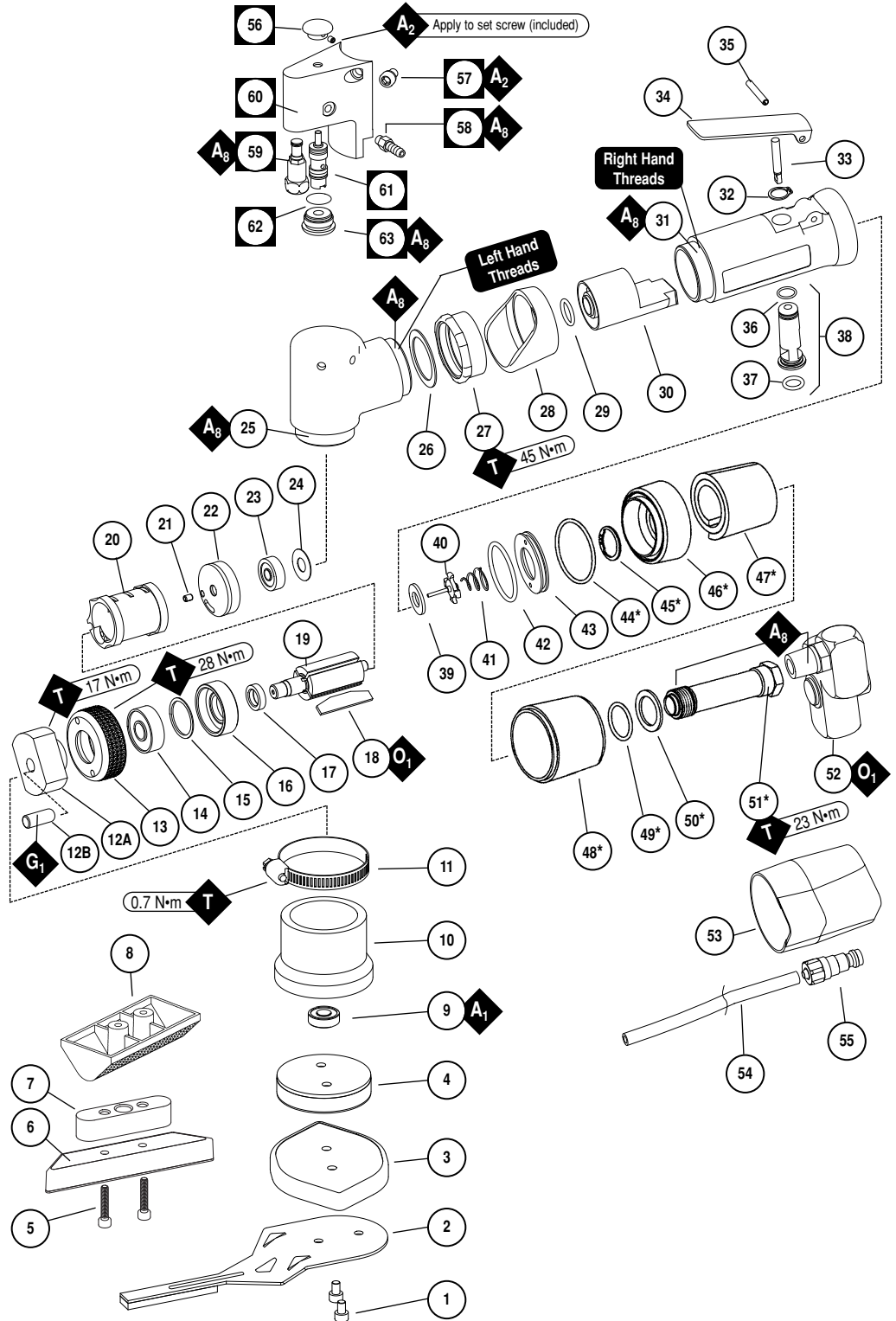
One Year Warranty

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.

Index Key

No.	Part #	Description
1	97328	Screw (2)
	95264	Screw (2) Model: 58000 ONLY (Inc. 96421 Washer (2))
2	57932	3/8" Sanding Arm
3	57953	Hook-Face Pad
4	58030	2" Vinyl Face Pad
	58032	3" Vinyl Face Pad
5	96296	Screw (2)
6	57956	Raised Panel Pad
7	98292	Pad Adapter
8	58013	Pad Mount
9	11016	Bearing
10	57975	Boot Assembly
11	97326	Boot Clamp
12A	58095	Cam Assy. (Includes: 96238 Pin)
12B	96238	Pin
13	57962	Exhaust Cover
14	02649	Bearing
15	54529	Shim Pack (3/pkg.)
16	02038	Front Bearing Plate
17	01479	Spacer
18	01480	Blades (4/pkg.)
19	02037	Rotor
20	01476	Cylinder
21	50767	Pin
22	02673	Rear Bearing Plate
23	02696	Bearing
24	02679	Shield
25	7" Housing	
	01546	Standard
	57779	Wet
26	01548	Gasket
27	01461	Lock Nut
28	01558	Collar
29	95523	O-Ring
30	01470	Insert
31	Housing	
	57934	Model: 57900
	57936	Model: 57902
	57917	Model: 57906
	57934	Model: 57910
	57843	Model: 57930
	30737	Model: 58000
	30738	Model: 58010
32	95558	Retaining Ring
33	01449	Valve Stem
34	01448	Throttle Lever
	01462	Safety Lock Lever
35	12132	Pin
36	95730	O-Ring
37	01024	O-Ring
38	01469	Speed Regulator Assembly (Includes: 95730, 01024 O-Ring)
39	01464	Seal
40	01472	Tip Valve
41	01468	Spring
42	96065	O-Ring
43	57970	Air Control Ring
44*	95438	O-Ring
45*	95711	Retaining Ring
46*	94521	Muffler Cap
47*	94528	Felt Muffler
48*	94522	Muffler Cap
49*	95375	O-Ring
50*	94526	Spacer
51*	94523	Inlet Adapter
52	94407	1/4" Flow Control Valve
53	10293	Shrink Tube
54	95955	10' Tubing
55	95962	Quick Disconnect
56	57751	Button (w/set screw)
57	97327	Screw (2)
58	95074	Hose Fitting
59	57728	Nozzle
60	57778	Bracket
61	57727	Valve Cartridge
62	95523	O-Ring
63	56076	Throttle Valve

.4 hp Dynafine® Sander Complete Assembly



* Note: All parts indicated by an asterisk are included in 94519 Muffler Assembly.

KEY	
O	Oil: O ₁ = Air Lube
A	Adhesive: A ₁ = Loctite #609 A ₂ = Loctite #271 A ₈ = Loctite #567
T	Torque: N·m x 8.85 = In. - lbs.
G	Grease: G ₁ = Lubriplate 630 AA

Disassembly/Assembly Instructions - .4hp Dynafine® Tools

Important: The Manufacturing Warranty is void if the tool is disassembled before the warranty expires, by anyone other than a Dynabrade® Approved Repair Technician. Notice: A 96236 Motor Tune-Up Kit is available. Also, the special repair tooling referred to in these instructions can be ordered through your Dynabrade® Distributor. Please refer to this tool manual for correct part number identification.

Important: Always follow these steps before servicing any part of this air tool.

1. Shut off the air supply, and depress throttle lever to dissipate the remaining air. Carefully disconnect the tool from the air supply hose.

Motor Disassembly:

1. Place the **52296** Repair Collar around the **01546/57779** Housing and hold the sander in a vise with the sanding attachment facing up.
2. Use the **95266** Hex Key (3mm) to remove the sanding attachment.
3. Loosen and remove the **95884** Boot Clamp and boot assembly.
4. Use an adjustable 3mm pin spanner wrench or the **50971** Lock Ring Tool to loosen the **57962** Exhaust Cover by turning it counterclockwise.
5. Pull the air motor out of the **01546/57779** Housing. Fasten the **96346** Bearing Separator (2") around the portion of the **01476** Cylinder that is closest to the rear bearing plate.
6. Place the bearing separator and the air motor on the table of the **96232** Arbor Press (#2) so that the cam assembly is pointing down.
7. Remove the **02679** Shield from the **02696** Bearing.
8. Use a 3/16" or 4mm diameter flat end drive punch as a press tool to push the rotor out of the **02696** Bearing.
9. Remove the cylinder and vanes.
10. Use the **96210** Bearing Removal Tool and the arbor press to remove the **02696** Bearing from the **02673** Rear Bearing Plate.
11. Hold the vane slot portion of the rotor in a vise with aluminum or bronze jaws so that the cam assembly is pointing up.
12. Use an adjustable open-end wrench to remove the cam assembly by turning it counterclockwise.
13. Remove the **02649** Bearing, **01478** Front Bearing Plate, **54529** Shims and **01479** Spacer from the rotor.

Motor Disassembly Complete.

Valve Disassembly:

1. Place the **52296** Repair Collar around the **01546/57779** Housing and hold the tool in a vise so that the inlet adapter is pointing up.
2. Use two wrenches, one to hold the inlet adapter stationary and the other to remove the air fitting.
3. Remove the inlet adapter by turning it counterclockwise. **Note:** Refer to the exploded view of the muffler to identify components and their order of disassembly.
4. Use needle nose pliers to remove the **01468** Spring and the **01472** Tip Valve. Use a small screwdriver to remove the **01464** Seal.
5. Use a 2.5mm diameter drive punch to remove the **12132** Pin, and throttle lever. Remove the **01449** Valve Stem.
6. Use retaining ring pliers to remove the **95558** Retaining Ring and the **01469** Speed Regulator Assembly from the housing.

Valve Disassembly Complete.

Important: Clean and inspect all parts before assembling.

Valve Assembly:

1. Install the **01469** Speed Regulator Assembly (with o-rings) into the **01546/57779** Housing and hold it in place with the **95558** Retaining Ring.
2. Position the **52296** Repair Collar around the **01546/57779** Housing and hold the tool in a vise so that the **12132** Pin, throttle lever, and **01449** Valve Stem can be installed.
3. Position the **52296** Repair Collar around the **01546/57779** Housing and hold the tool in a vise so that the air inlet opening is pointing up.
4. Install the **01464** Seal into the air inlet so that it is laying flat.
5. Use needle nose pliers to install the **01472** Tip Valve so that the metal pin passes through the hole in the **01449** Valve Stem.
6. Install the **01468** Spring so that the smaller end of the spring fits against the back of the tip valve.
7. Apply a small amount of the Loctite® #567 (or equivalent) to the external threads of the inlet adapter and install it into the valve housing. **Note:** Refer to the exploded view of the muffler to identify components and their order of assembly.
8. Use two wrenches, one to hold the inlet adapter stationary and the other to install the air fitting.

Valve Assembly Complete.

Motor Assembly:

1. Hold the vane slot portion of the rotor in a vise with aluminum or bronze jaws so that the threaded spindle is pointing up.
2. Install the **01479** Spacer onto the rotor.
3. Select .003" (.08mm) thickness in shims from the **54529** Shim Pack and install shims into the **02038** Front Bearing Plate.
4. Install the **02649** Bearing into the front bearing plate and onto the rotor.
5. Install the **57962** Exhaust Cover and the **58095** Cam Assembly onto the rotor. (Torque to 17 N•m/150 in. lbs.)

(continued on next page)

Disassembly/Assembly Instructions - .4hp Dynafine® Tools (Cont.)

6. Use a .001"(0.3mm) thick feeler gauge to check the clearance between the front bearing plate and the face of the rotor.
7. The clearance should be .001"-.0015" (0.3-0.4mm).
Note: If the clearance needs adjustment, repeat steps 2-5 adding or removing shims as required.
8. Lubricate the **01480** Vanes 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 **02673** Rear Bearing Plate.
10. Use the raised outer diameter of the **96216** Bearing Press Tool and the arbor press to install the **02696** Bearing into the **02673** Rear Bearing Plate.
11. Use the raised inner diameter of the **96216** Bearing Press Tool and the arbor press to install the 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. Apply a small amount of light grease to the seal of the **02696** Bearing and adhere the **02679** Shield against the bearing.
13. Carefully slide the motor assembly into the **01546/57779** Housing.
14. Apply a small amount of the Loctite® #567 (or equivalent) to the threads of the **01546/57779** Housing.
15. Use a 3mm adjustable pin spanner wrench or the **50971** Lock Ring Tool to tighten the exhaust cover onto the **01546/57779** Housing.
(Torque to 28N•m/250 in. lbs.)
16. Install the **57975** Clamp onto the boot assembly.
17. Install the boot assembly with the clamp, aligning them on the **57962** Exhaust Cover. Tighten the clamp. (Torque to 7N•m/6 in. lbs.)
18. Use the **95266** Hex Key (3mm) to install the sanding attachment.

Motor 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 inlet with throttle lever depressed. Operate tool for 30 seconds to allow air lube to properly lubricate internal motor components. Motor should now be tested for proper operation at 90 PSIG (6.2 Bar, g) max. If tool operates at a higher RPM than marked on the tool or if vibration and sound levels seem abnormal, the tool should be serviced to correct the cause before use.

Throttle Positioning Procedure:

Important: Carefully perform this procedure so as not to entirely separate the 01546 Housing from the valve housing. Loosen the 01461 Lock Nut only enough to make the desired throttle lever adjustment.

1. Place the **52296** Repair Collar around the valve housing and hold it in a vise so that the **01546/57779** Housing is pointing up.
2. Slip the **01558** Collar down onto the valve housing to expose the **01461** Lock Nut.
3. With a firm hold on the **01546/57779** Housing use a 34mm or an adjustable wrench to turn the lock nut clockwise to loosen the **01546/57779** Housing from the valve housing.
4. Orient the throttle lever to the operators desired grip and positioning. **Note:** Allow for additional rotation of the **01546/57779** Housing as the **01461** Lock Nut is tightened.
5. Grasp the **01546/57779** Housing firmly to reduce its rotation. Use a 34mm or an adjustable wrench to tighten the **01461** Lock Nut.
Torque to 45 N•m/400 lbs. in.
6. Slip the **01558** Collar back over the **01461** Lock Nut.

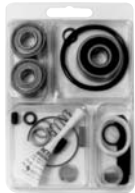
Throttle Positioning Procedure Complete.

Preventative Maintenance Schedule

For All .4hp Dynafine® Sanders

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.



96236 – Motor Tune-Up Kit

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

Index #	Part Number	Description	Number Required	High Wear 100%	Medium Wear 70%	Low Wear 30%	Non-Wear 10%
1	See Note	Screw	2			L	
2	57932	3/8" Sanding Arm	1				X
3	57953	Hook-Face Pad	1		X		
4	See Note	Vinyl Face Pad	1		X		
5	96296	Screw	2			L	
6	57956	Raised Panel Pad	1		X		
7	98292	Pad Adapter	1				X
8	58013	Pad Mount	1			X	
9	11016	Bearing	1	T			
10	57975	Boot Assembly	1			X	
11	97326	Boot Clamp	1			X	
12	58095	Cam Assembly	1				X
13	57962	Exhaust Cover	1				X
14	02649	Bearing	1		X		
15	54529	Shim Pack (3/pkg.)	1		D		
16	02038	Front Bearing Plate	1			X	
17	01479	Spacer	1			L	
18	01480	Blades	4	T			
19	02037	Rotor	1			X	
20	01476	Cylinder	1			X	
21	50767	Pin	1			X	
22	02673	Rear Bearing Plate	1			X	
23	02696	Bearing	1		T		
24	02679	Shield	1		T		
25	See Note	Housing	1			X	
26	01548	Gasket	1			T	
27	01461	Lock Nut	1				X
28	01558	Collar	1			D	
29	95523	O-Ring	1			T	
30	01470	Insert	1				X
31	See Note	Housing	1				X
32	95558	Retaining Ring	1		T		
33	01449	Valve Stem	1			T	
34	See Note	Lever	1			X	
35	12132	Pin	1			T	
36	95730	O-Ring	1			X	
37	01024	O-Ring	1			X	
38	01469	Speed Regulator Assy.	1			T	
39	01464	Seal	1			T	
40	01472	Tip Valve	1			T	
41	01468	Spring	1			T	
42	96065	O-Ring	1			T	
43	57970	Air Control Ring	1				X
44*	95438	O-Ring	1			T	
45*	95711	Retaining Ring	1			T	
46*	94521	Muffler Cap	1			D	
47*	94528	Felt Muffler	1		T		
48*	94522	Muffler Base	1			D	
49*	95375	O-Ring	1			T	
50*	94526	Spacer	1				X
51*	94523	Inlet Adapter	1				X
52	94407	1/4" Flow Control Valve	1			X	
53	10293	Shrink Tube	1		X		
54	95955	10' Tubing	1		X		
55	95962	Quick Disconnect	1			X	
56	57751	Button (w/set screw)	1			X	
57	97327	Screw	2				X
58	95074	Hose Fitting	1			X	
59	57728	Nozzle	1			X	
60	57778	Bracket	1			X	
61	57727	Valve Cartridge	1			X	
62	95523	O-Ring	1			X	
63	56076	Throttle Valve	1			X	

96236 Tune-Up Kit

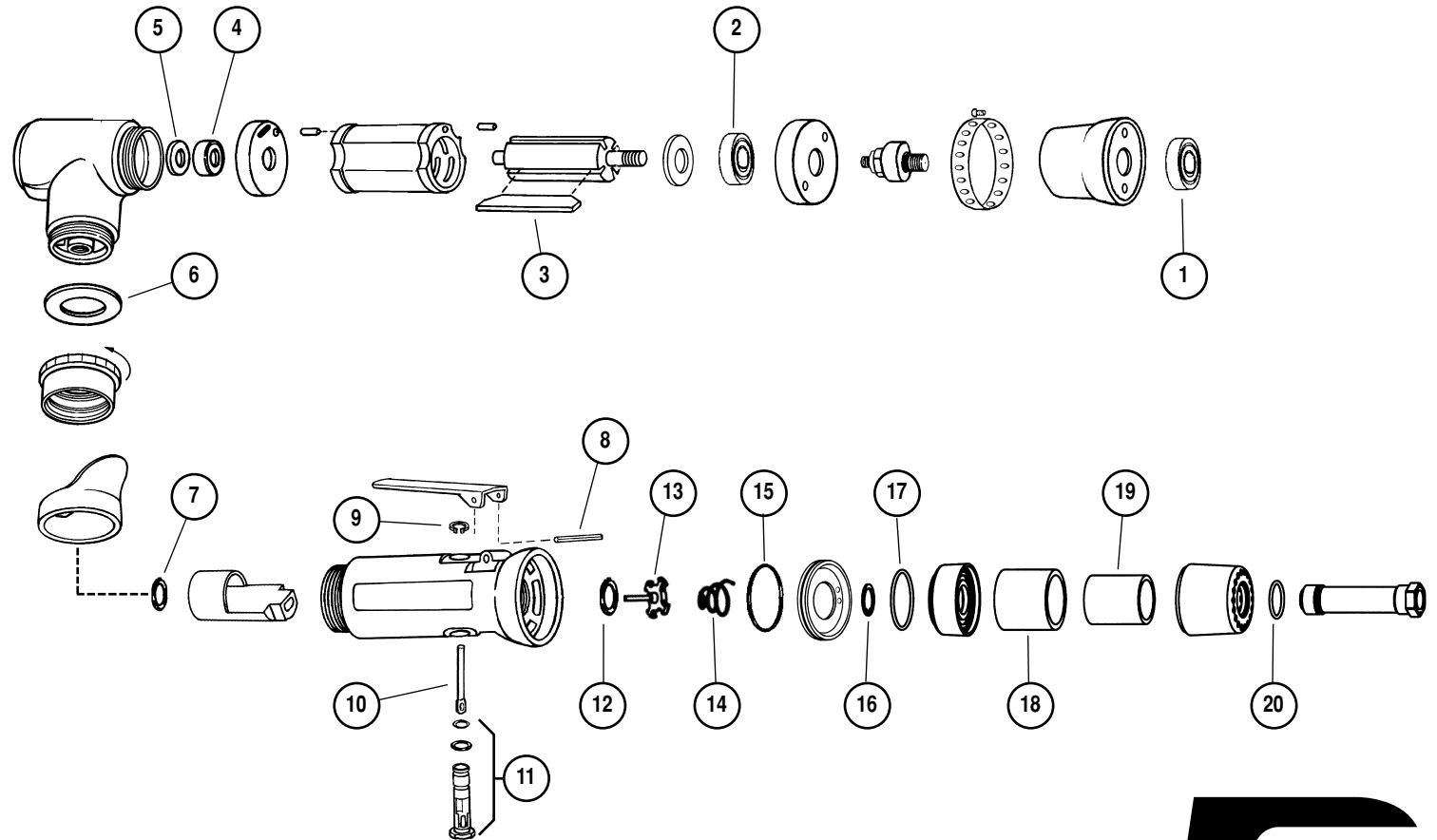
**For Use With All:
 .4Hp/7°/Rear Exhaust/Dynafine Models**

Air Motor and Machine Parts

Parts included in tune-up kit are identified by part number. Not all parts are required for all models.
 Please refer to appropriate parts page for additional identification and disassembly/assembly instructions.

Index Key		
No.	Part #	Description
1	11016	Bearing
2	56305	Bearing
3	01480	Blades (4/Pkg.)
4	02696	Bearing
5	02679	Seal
6	01548	Gasket
7	95523	O-Ring
8	12132	Pin
9	95558	Retaining Ring
10	01449	Valve Stem
11	01469	Speed Regulator Assy.
12	01464	Seal
13	01472	Tip Valve
14	01468	Spring
15	96065	O-Ring
16	95711	Retaining Ring
17	95438	O-Ring
18	94524	Sintered Muffler
19	94525	Felt Muffler
20	95375	O-Ring

Note: Tune-Up Kit Includes the following part for earlier Vintage Tools.
 02650 – Bearing



Dynafine® Sanders

Detail Sander/Backsplash/Finger/Wet

Air Tool Manual – Safety, Operation and Maintenance

SAVE THIS DOCUMENT, EDUCATE ALL PERSONNEL

Models: (Sander)

- 57900 – 13,000 RPM, Detail Sander
- 57910 – Detail Sander Versatility Kit
- 57930 – 13,000 RPM, Finger Sander

Models: (Backsplash)

- 58000 – 13,000 RPM, Backsplash Sander
- 58010 – Backsplash Sander Versatility Kit

Model: (Wet)

- 57902 – 13,000 RPM, Wet Sander

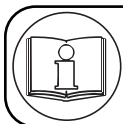


(Model 57900)

⚠ 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 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: Dynafine® Sanders are designed for finishing. Excellent for removing milling and machining marks from wood, solid surface and metal. Defect removal in painted surfaces and clear coats.

Do Not use tool for anything other than its intended applications.

This power tool is not intended for use in potentially explosive atmospheres and is not insulated against contact with electrical power.

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

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

(continued on next page)

SAFETY INSTRUCTIONS - Cont.

Accessory Selection:

- Abrasive/accessory RPM (speed) rating MUST be approved for AT LEAST the tool RPM rating.
- Before mounting an accessory, visually inspect for defects. Do not use defective accessories.
- Mount only recommended accessories. See back page of manual and Dynabrade literature.
- 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.

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

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

- Secure inlet bushing on air tool with a wrench before attempting to install the air fitting to avoid damaging housing assembly.
- Check tool RPM (speed) with tachometer with air pressure set at 90 PSIG (6.2 Bars, g) while the tool is running. If tool is operating at a higher speed than the RPM marked on the tool housing, or operating improperly, the tool must be serviced and corrected before use.

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

- With power source disconnected from air tool, mount recommended accessory into collet assembly.
- The mandrel diameter of the abrasive/accessory must insert freely, but not loosely, all the way to the base of the collet body before tightening the collet cap. Use wrenches provided.
- 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, g).

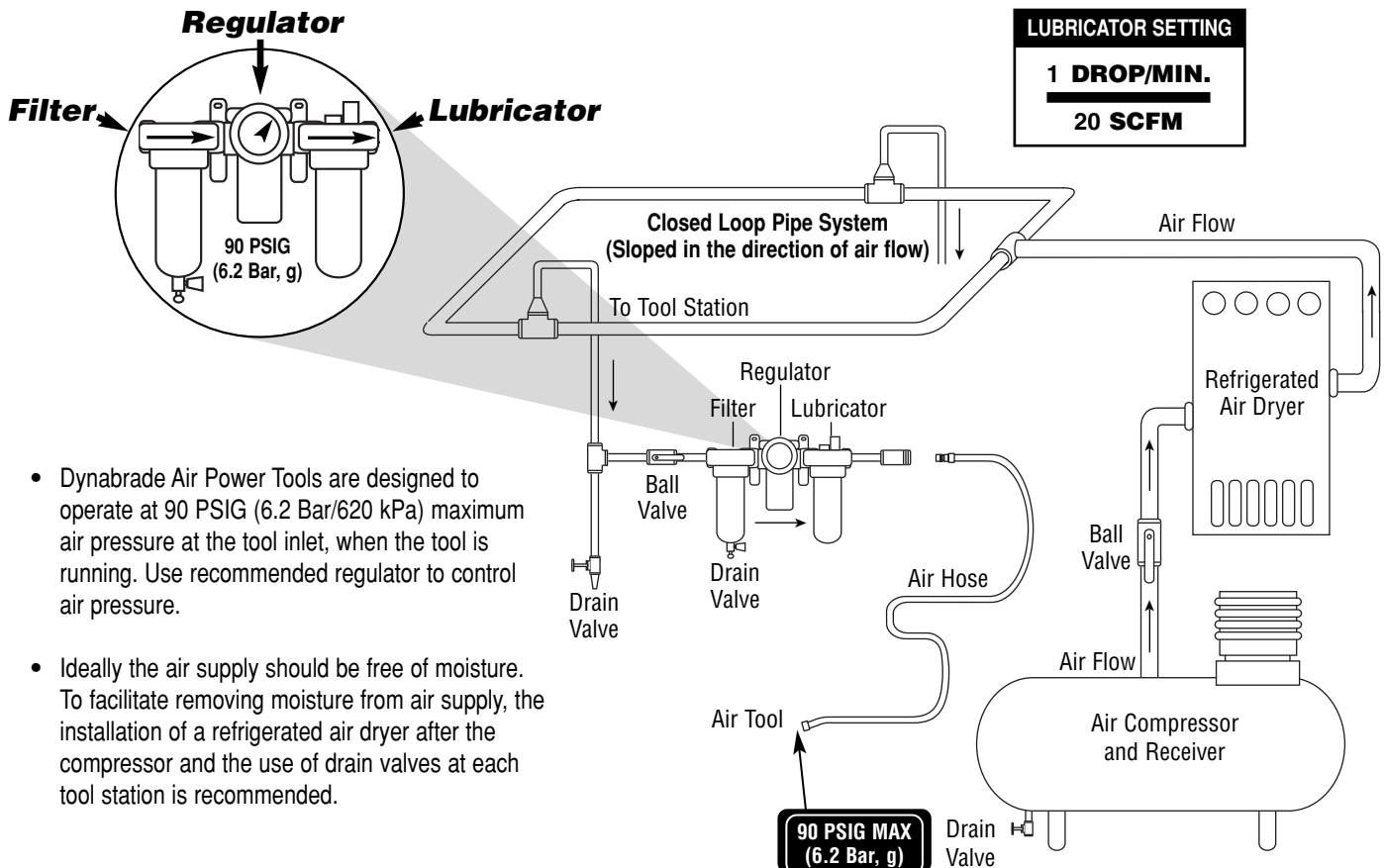
Caution: After installing the accessory, the Extension Die Grinder must be started at a reduced speed to check for good balance.

Gradually increase tool speed. DO NOT USE if tool vibration is excessive. Correct cause, and retest to insure safe operation.

- 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.

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.

- Use only genuine Dynabrade replacement parts to insure quality. To order replacement parts, specify **Model#**, **Serial#** and **RPM** of your air tool.
- It is strongly recommended that all Dynabrade rotary vane air tools be used with a Filter-Regulator-Lubricator to minimize the possibility of misuse due to unclean air, wet air or insufficient lubrication. Dynabrade recommends the following: **11411** Air Filter-Regulator-Lubricator (FRL) – Provides accurate air pressure regulation and two stage filtration of water contaminants. Operates 55 SCFM/1,558 LPM @ 90 PSIG (6.2 Bar, g) with 1/2" NPT female ports.
- Dynabrade recommends one drop of air lube per minute for each 20 SCFM/566 LPM (example: if the tool specification states 40 SCFM/1133 LPM, 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 Extension Die Grinder using a tachometer. This governor controlled grinder should be speed checked every 20 hours of use or weekly, whichever occurs more frequently.

- **DO NOT** disassemble the governor for any reason. Reorder correct speed – governor assembly (See Assembly Breakdown) and recheck free speed of tool with a tachometer.
- Periodically remove collet insert and clean the inside diameter and slots from debris to keep accessories secure and reduce vibration.
- Mineral spirits are recommended when cleaning the tool and parts. Do not clean tool or parts with any solvents or oils containing acids, esters, ketones, chlorinated hydrocarbons or nitro carbons.
- **DO NOT** clean or maintain tools with chemicals that have a low flash point (example: WD-40®).
- A Motor Tune-Up Kit (P/N **96532**) is available which includes high wear and medium wear motor parts.
- Air tool labels must be kept legible at all times, if not, reorder label(s) and replace. User is responsible for maintaining specification information i.e.: Model #, S/N, and RPM. (See Assembly Breakdown)
- Blow air supply hose out prior to initial use.
- Visually inspect air hoses and fittings for frays, visible damage and signs of deterioration. Replace damaged or worn components.
- Refer to Dynabrade's Warning/Safety Operating Instructions Tag (Reorder No. **95903**) for safety information.

After maintenance is performed on tool, add a few drops of Dynabrade Air Lube (P/N **95842**) to the air line and start the tool a few times to lubricate air motor. Check for excessive tool vibration.

Handling and Storage:

- Use of tool rests, hangers and/or balancers is recommended.
- Protect tool inlet from debris (see Notice below).
- **DO NOT** carry tool by air hose or near the tool throttle lever.
- Protect abrasive accessories from exposure to water, solvents, high humidity, freezing temperature and extreme temperature changes.
- Store accessories in protective racks or compartments to prevent damage.

Machine Specifications

Model Number	Motor hp (W)	Motor RPM	Sound Level	Air Flow Rate CFM/SCFM (LPM)	Air Pressure PSIG (Bars)	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
57900	.15 (118)	13,000	65 dB(A)	3/20 (566)	90 (6.2)	1.6 (.7)	9 (229)	3-3/4 (95)
57902	.15 (118)	13,000	65 dB(A)	3/20 (566)	90 (6.2)	1.6 (.7)	9 (229)	3-3/4 (95)
57910	.15 (118)	13,000	65 dB(A)	3/20 (566)	90 (6.2)	1.6 (.7)	9 (229)	3-3/4 (95)
57930	.15 (118)	13,000	65 dB(A)	3/20 (566)	90 (6.2)	1.6 (.7)	11-3/4 (298)	4 (102)
58000	.15 (118)	13,000	65 dB(A)	3/20 (566)	90 (6.2)	1.6 (.7)	9 (229)	3-3/4 (95)
58010	.15 (118)	13,000	65 dB(A)	3/20 (566)	90 (6.2)	1.6 (.7)	9 (229)	3-3/4 (95)

Additional Specifications: Air Inlet Thread 1/4" NPT • Hose Size 1/4" or 8 mm

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.

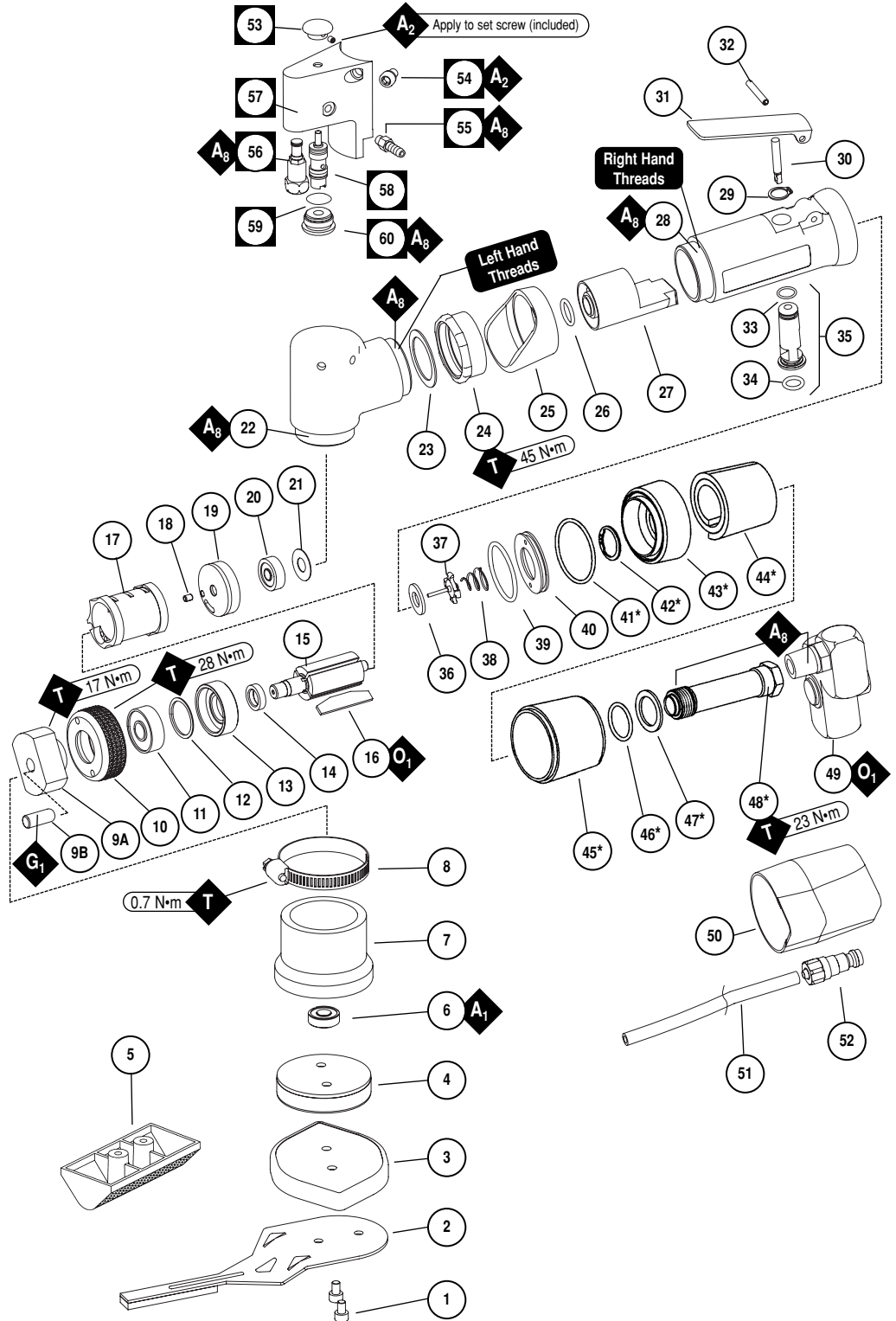
One Year Warranty

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.

Index Key

No.	Part #	Description
1	97328	Screw (2)
	95264	Screw (2) Model: 58000 ONLY
2	57932	3/8" Sanding Arm
3	57955	Hook-Face Pad
4	58030	2" Vinyl Face Pad
	58032	3" Vinyl Face Pad
5	58013	Pad Mount
6	11016	Bearing
7	57975	Boot Assembly
8	97326	Boot Clamp
9A	58095	Cam Assy. (Includes: 96238 Pin)
9B	96238	Pin
10	57962	Exhaust Cover
11	02649	Bearing
12	54529	Shim Pack (3/pkg.)
13	02038	Front Bearing Plate
14	01479	Spacer
15	02037	Rotor
16	01480	Blades (4/pkg.)
17	01476	Cylinder
18	50767	Pin
19	02673	Rear Bearing Plate
20	02696	Bearing
21	02679	Shield
22	7" Housing	
	01546	Standard
	57779	Wet
23	01548	Gasket
24	01461	Lock Nut
25	01558	Collar
26	95523	O-Ring
27	01470	Insert
28	Housing	
	57934	Model: 57900
	57936	Model: 57902
	57934	Model: 57910
	57843	Model: 57930
	30737	Model: 58000
	30737	Model: 58010
29	95558	Retaining Ring
30	01449	Valve Stem
31	01448	Throttle Lever
	01462	Safety Lock Lever
32	12132	Pin
33	95730	O-Ring
34	01024	O-Ring
35	01469	Speed Regulator Assembly (Includes: 95730, 01024 O-Ring)
36	01464	Seal
37	01472	Tip Valve
38	01468	Spring
39	96065	O-Ring
40	57970	Air Control Ring
41*	95438	O-Ring
42*	95711	Retaining Ring
43*	94521	Muffler Cap
44*	94528	Felt Muffler
45*	94522	Muffler Cap
46*	95375	O-Ring
47*	94526	Spacer
48*	94523	Inlet Adapter
49	94407	1/4" Flow Control Valve
50	10293	Shrink Tube
51	95955	10' Tubing
52	95962	Quick Disconnect
53	57751	Button (w/set screw)
54	97327	Screw (2)
55	95074	Hose Fitting
56	57728	Nozzle
57	57778	Bracket
58	57727	Valve Cartridge
59	95523	O-Ring
60	56076	Throttle Valve Pin

.4 hp Dynafine® Sander Complete Assembly



Parts Included in 57777 Wet Assembly

* Note: All parts indicated by an asterisk are included in 94519 Muffler Assembly.

KEY	
O	Oil: O ₁ = Air Lube
A	Adhesive: A ₁ = Loctite #609 A ₂ = Loctite #271 A ₈ = Loctite #567
T	Torque: N·m x 8.85 = In. - lbs.
G	Grease: G ₁ = Lubriplate 630 AA

Disassembly/Assembly Instructions - .4 hp Dynafine® Tools

Important: The Manufacturing Warranty is void if the tool is disassembled before the warranty expires, by anyone other than a Dynabrade® Approved Repair Technician. Notice: A 96236 Motor Tune-Up Kit is available. Also, the special repair tooling referred to in these instructions can be ordered through your Dynabrade® Distributor. Please refer to this tool manual for correct part number identification.

Important: Always follow these steps before servicing any part of this air tool.

1. Shut off the air supply, and depress throttle lever to dissipate the remaining air. Carefully disconnect the tool from the air supply hose.

Motor Disassembly:

1. Place the **52296** Repair Collar around the **01546/57779** Housing and hold the sander in a vise with the sanding attachment facing up.
2. Use the **95266** Hex Key (3mm) to remove the sanding attachment.
3. Loosen and remove the **95884** Boot Clamp and boot assembly.
4. Use an adjustable 3mm pin spanner wrench or the **50971** Lock Ring Tool to loosen the **57962** Exhaust Cover by turning it counterclockwise.
5. Pull the air motor out of the **01546/57779** Housing. Fasten the **96346** Bearing Separator (2") around the portion of the **01476** Cylinder that is closest to the rear bearing plate.
6. Place the bearing separator and the air motor on the table of the **96232** Arbor Press (#2) so that the cam assembly is pointing down.
7. Remove the **02679** Shield from the **02696** Bearing.
8. Use a 3/16" or 4mm diameter flat end drive punch as a press tool to push the rotor out of the **02696** Bearing.
9. Remove the cylinder and vanes.
10. Use the **96210** Bearing Removal Tool and the arbor press to remove the **02696** Bearing from the **02673** Rear Bearing Plate.
11. Hold the vane slot portion of the rotor in a vise with aluminum or bronze jaws so that the cam assembly is pointing up.
12. Use an adjustable open-end wrench to remove the cam assembly by turning it counterclockwise.
13. Remove the **02649** Bearing, **01478** Front Bearing Plate, **54529** Shims and **01479** Spacer from the rotor.

Motor Disassembly Complete.

Valve Disassembly:

1. Place the **52296** Repair Collar around the **01546/57779** Housing and hold the tool in a vise so that the inlet adapter is pointing up.
2. Use two wrenches, one to hold the inlet adapter stationary and the other to remove the air fitting.
3. Remove the inlet adapter by turning it counterclockwise. **Note:** Refer to the exploded view of the muffler to identify components and their order of disassembly.
4. Use needle nose pliers to remove the **01468** Spring and the **01472** Tip Valve. Use a small screwdriver to remove the **01464** Seal.
5. Use a 2.5mm diameter drive punch to remove the **12132** Pin, and throttle lever. Remove the **01449** Valve Stem.
6. Use retaining ring pliers to remove the **95558** Retaining Ring and the **01469** Speed Regulator Assembly from the housing.

Valve Disassembly Complete.

Important: Clean and inspect all parts before assembling.

Valve Assembly:

1. Install the **01469** Speed Regulator Assembly (with o-rings) into the **01546/57779** Housing and hold it in place with the **95558** Retaining Ring.
2. Position the **52296** Repair Collar around the **01546/57779** Housing and hold the tool in a vise so that the **12132** Pin, throttle lever, and **01449** Valve Stem can be installed.
3. Position the **52296** Repair Collar around the **01546/57779** Housing and hold the tool in a vise so that the air inlet opening is pointing up.
4. Install the **01464** Seal into the air inlet so that it is laying flat.
5. Use needle nose pliers to install the **01472** Tip Valve so that the metal pin passes through the hole in the **01449** Valve Stem.
6. Install the **01468** Spring so that the smaller end of the spring fits against the back of the tip valve.
7. Apply a small amount of the Loctite® #567 (or equivalent) to the external threads of the inlet adapter and install it into the valve housing. **Note:** Refer to the exploded view of the muffler to identify components and their order of assembly.
8. Use two wrenches, one to hold the inlet adapter stationary and the other to install the air fitting.

Valve Assembly Complete.

Motor Assembly:

1. Hold the vane slot portion of the rotor in a vise with aluminum or bronze jaws so that the threaded spindle is pointing up.
2. Install the **01479** Spacer onto the rotor.
3. Select .003" (.08mm) thickness in shims from the **54529** Shim Pack and install shims into the **02038** Front Bearing Plate.
4. Install the **02649** Bearing into the front bearing plate and onto the rotor.
5. Install the **57962** Exhaust Cover and the **58095** Cam Assembly onto the rotor. (Torque to 17 N•m/150 in. lbs.)

(continued on next page)

Disassembly/Assembly Instructions - .4hp Dynafine® Tools (Cont.)

6. Use a .001"(0.3mm) thick feeler gauge to check the clearance between the front bearing plate and the face of the rotor.
7. The clearance should be .001"-.0015" (0.3-0.4mm).
Note: If the clearance needs adjustment, repeat steps 2-5 adding or removing shims as required.
8. Lubricate the **01480** Vanes 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 **02673** Rear Bearing Plate.
10. Use the raised outer diameter of the **96216** Bearing Press Tool and the arbor press to install the **02696** Bearing into the **02673** Rear Bearing Plate.
11. Use the raised inner diameter of the **96216** Bearing Press Tool and the arbor press to install the 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. Apply a small amount of light grease to the seal of the **02696** Bearing and adhere the **02679** Shield against the bearing.
13. Carefully slide the motor assembly into the **01546/57779** Housing.
14. Apply a small amount of the Loctite® #567 (or equivalent) to the threads of the **01546/57779** Housing.
15. Use a 3mm adjustable pin spanner wrench or the **50971** Lock Ring Tool to tighten the exhaust cover onto the **01546/57779** Housing.
(Torque to 28N•m/250 in. lbs.)
16. Install the **57975** Clamp onto the boot assembly.
17. Install the boot assembly with the clamp, aligning them on the **57962** Exhaust Cover. Tighten the clamp. (Torque to 7N•m/6 in. lbs.)
18. Use the **95266** Hex Key (3mm) to install the sanding attachment.

Motor 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 inlet with throttle lever depressed. Operate tool for 30 seconds to allow air lube to properly lubricate internal motor components. Motor should now be tested for proper operation at 90 PSIG (6.2 Bar, g) max. If tool operates at a higher RPM than marked on the tool or if vibration and sound levels seem abnormal, the tool should be serviced to correct the cause before use.

Throttle Positioning Procedure:

Important: Carefully perform this procedure so as not to entirely separate the **01546** Housing from the valve housing. Loosen the **01461** Lock Nut only enough to make the desired throttle lever adjustment.

1. Place the **52296** Repair Collar around the valve housing and hold it in a vise so that the **01546/57779** Housing is pointing up.
2. Slip the **01558** Collar down onto the valve housing to expose the **01461** Lock Nut.
3. With a firm hold on the **01546/57779** Housing use a 34mm or an adjustable wrench to turn the lock nut clockwise to loosen the **01546/57779** Housing from the valve housing.
4. Orient the throttle lever to the operators desired grip and positioning. **Note:** Allow for additional rotation of the **01546/57779** Housing as the **01461** Lock Nut is tightened.
5. Grasp the **01546/57779** Housing firmly to reduce its rotation. Use a 34mm or an adjustable wrench to tighten the **01461** Lock Nut.
Torque to 45 N•m/400 lbs. in.
6. Slip the **01558** Collar back over the **01461** Lock Nut.

Throttle Positioning Procedure Complete.

Preventative Maintenance Schedule

For All .4hp Dynafine® Sanders

This service chart is published as a guide to expectant life of component parts. The replacement levels are based on average tool usage over one year. Dynabrade Inc. considers one year usage to be 1,000 hours.

Parts Common to all Models:

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.

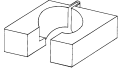


96236 – Motor Tune-Up Kit

Index #	Part Number	Description	Number Required	High Wear 100%	Medium Wear 70%	Low Wear 30%	Non-Wear 10%
1	See Note	Screw	2			L	
2	57932	3/8" Sanding Arm	1				X
3	57955	Hook-Face Pad	1		X		
4	See Note	Vinyl Face Pad	1		X		
5	58013	Pad Mount	1			X	
6	11016	Bearing	1	T			
7	57975	Boot Assembly	1			X	
8	97326	Boot Clamp	1			X	
9	58095	Cam Assembly	1				X
10	57962	Exhaust Cover	1				X
11	02649	Bearing	1		X		
12	54529	Shim Pack (3/pkg.)	1		D		
13	02038	Front Bearing Plate	1			X	
14	01479	Spacer	1			L	
15	02037	Rotor	1			X	
16	01480	Blades	5	T			
17	01476	Cylinder	1			X	
18	50767	Pin	1			X	
19	02673	Rear Bearing Plate	1			X	
20	02696	Bearing	1		T		
21	02679	Shield	1		T		
22	See Note	Housing	1			X	
23	01548	Gasket	1			T	
24	01461	Lock Nut	1				X
25	01558	Collar	1			D	
26	95523	O-Ring	1			T	
27	01470	Insert	1				X
28	See Note	Housing	1				X
29	95558	Retaining Ring	1		T		
30	01449	Valve Stem	1			T	
31	See Note	Lever	1			X	
32	12132	Pin	1			T	
33	95730	O-Ring	1			X	
34	01024	O-Ring	1			X	
35	01469	Speed Regulator Assy.	1			T	
36	01464	Seal	1			T	
37	01472	Tip Valve	1			T	
38	01468	Spring	1			T	
39	96065	O-Ring	1			T	
40	57970	Air Control Ring	1				X
41*	95438	O-Ring	1			T	
42*	95711	Retaining Ring	1			T	
43*	94521	Muffler Cap	1			D	
44*	94528	Felt Muffler	1		T		
45*	94522	Muffler Base	1			D	
46*	95375	O-Ring	1			T	
47*	94526	Spacer	1				X
48*	94523	Inlet Adapter	1				X
49	94407	1/4" Flow Control Valve	1			X	
50	10293	Shrink Tube	1		X		
51	95955	10' Tubing	1		X		
52	95962	Quick Disconnect	1			X	
53	57751	Button (w/set screw)	1			X	
54	97327	Screw	2				X
55	95074	Hose Fitting	1			X	
56	57728	Nozzle	1			X	
57	57778	Bracket	1			X	
58	57727	Valve Cartridge	1			X	
59	95523	O-Ring	1			X	
60	56076	Throttle Valve Pin	1			X	

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

Optional Accessories



52296 Repair Collar

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



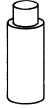
50971 Lock Ring Tool

- Lock Ring Tool has a 3/8 in. square socket for use with 3/8 in. drive; breaker bar, ratchet head, or torque wrenches.



96236 Motor Tune-Up Kit

- Includes assorted parts to help maintain and repair motor.



96210 Bearing Removal Tool

- This tool is used to pass through the I.D. of the bearing plate and to push against the I.D. of the bearing.



96216, 96243, 96244

Bearing Press Tools

- These tools are used to safely press a bearing plate or onto a shaft.



96346 Bearing Separator

- Use the separator to remove bearings and gears.



Dynabrade Air Lube

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

95842: 1pt. (473 ml)

95843: 1 gal. (3.8 L)



96232 #2 Arbor Press

- This arbor press is ideal for the disassembly and assembly of air motors.



For Serial No. 2L2948 and Higher

Parts Page Reorder No. PD03•31
Effective September, 2003
Supersedes PD02•20T

Wet Dynafine® Sander

Air Motor and Machine Parts

Models:
57902 — 13,000 RPM, Wet Dynafine®

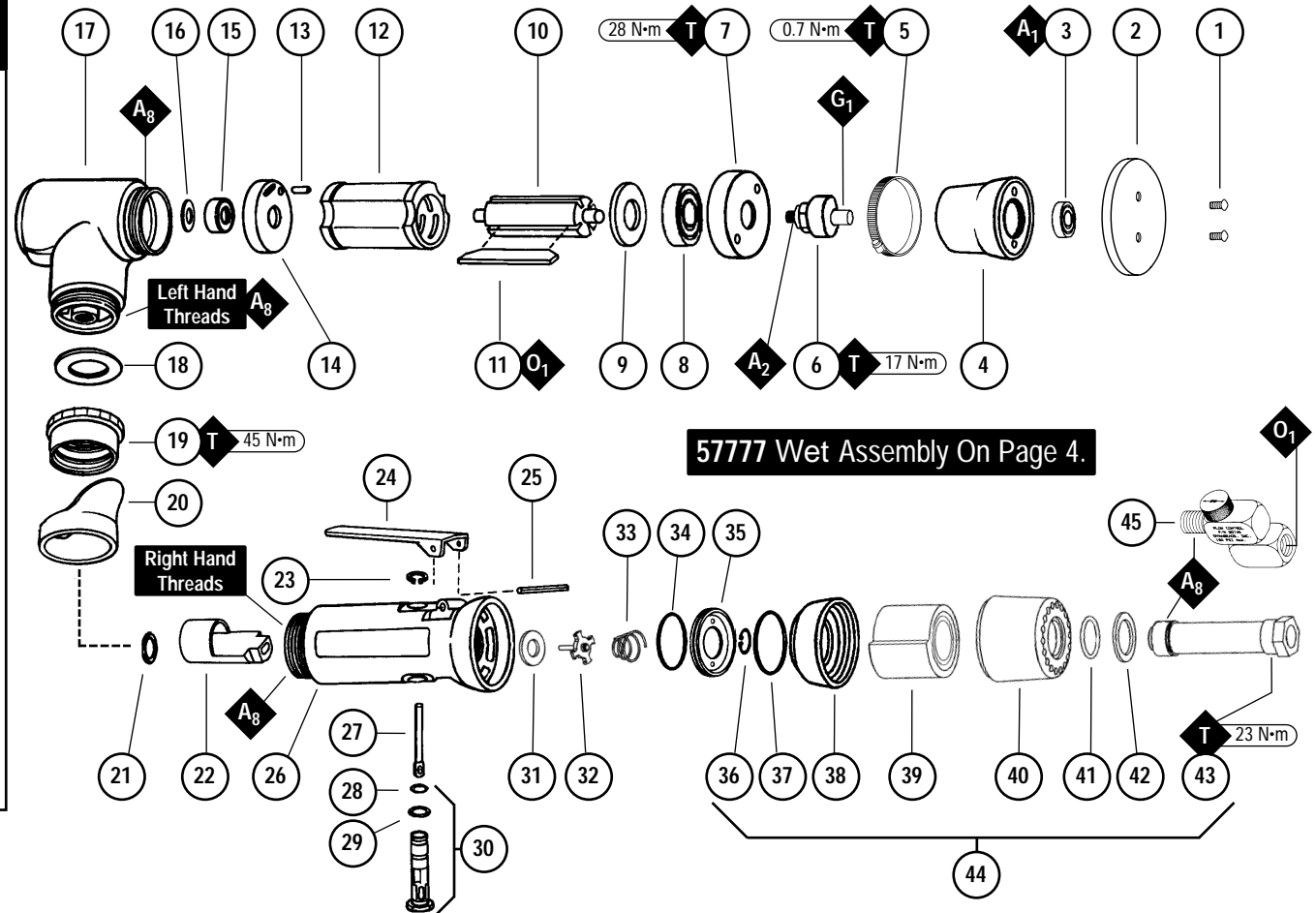
KEY	
O	Oil: O ₁ = Air Lube
A	Loctite: A ₁ = Loctite #609 A ₂ = Loctite #271 A ₈ = Loctite #567
T	Torque: N•m x 8.85 = In. - lbs.
G	Grease: G ₁ = Lubriplate 630 AA

! WARNING

Always operate, inspect and maintain this tool in accordance with the Safety Code for portable air tools (ANSI B186.1) and any other applicable safety codes and regulations. Please refer to Dynabrade's Warning/Safety Operating Instructions for more complete safety information.

Index Key

No.	Part #	Description
1	97328	Screw (2)
2	58030	2" Vinyl Face Pad
3	11016	Bearing
4	57975	Boot Assembly
5	97326	Boot Clamp Assembly
6	57961	Cam Assembly
7	57962	Exhaust Cover
8	56305	Bearing
9	53161	Front Bearing Plate
10	50777	Rotor
11	01480	Blades (4/pkg.)
12	01476	Cylinder
13	50767	Pin
14	02673	Rear Bearing Plate
15	02696	Bearing
16	02679	Shield
17	57779	Housing
18	01548	Gasket
19	01461	Lock Nut
20	01558	Collar
21	95523	O-Ring
22	01470	Insert
23	95558	Retaining Ring
24	01448	Throttle Lever
25	01462	Safety Lock Lever
26	57936	Housing
27	01449	Valve Stem
28	95730	O-Ring
29	01024	O-Ring
30	01469	Speed Regulator Assembly
31	01464	Seal
32	01472	Tip Valve
33	01468	Spring
34	96065	O-Ring
35	57970	Air Control Ring
36	95711	Retaining Ring
37	95438	O-Ring
38	94521	Muffler Base
39	94528	Felt Muffler
40	94522	Muffler Cap
41	95375	O-Ring
42	94526	Spacer
43	94523	Inlet Adapter
44	94519	Muffler Assembly
45	94407	1/4" Flow Control



Important Operating, Maintenance and Safety Instructions

Carefully read all instructions before operating or servicing any Dynabrade® Abrasive Power Tool.

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

Important: All Dynabrade Rotary Vane air tools must be used with a Filter-Regulator-Lubricator to maintain all warranties.

Operating Instructions:

Warning: Eye, face, respiratory, sound, and body protection must be worn while operating power tools. Failure to do so may result in serious injury or death. Follow safety procedures posted in workplace.

1. With power source disconnected from tool, securely fasten abrasive/accessory on tool.
2. 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.
3. Connect power source to tool. Be careful not to depress throttle lever in the process.
4. Check tool speed with tachometer. If tool is operating at a higher speed than the RPM marked on the tool or operating improperly, the tool should be serviced to correct the cause before use.

Maintenance Instructions:

1. Check tool speed regularly with a tachometer. If tool is operating at a higher speed than the RPM marked on the tool, the tool should be serviced to correct the cause before use.
2. Some silencers on air tools may clog with use. Clean and replace as required.
3. All Dynabrade Rotary Vane air motors should be lubricated. Dynabrade recommends one drop of air lube per minute for each 20 SCFM (example: if the tool specifications state 40 SCFM, set the drip rate of your filter-lubricator at 2 drops per minute). Dynabrade Air Lube (P/N **95842**: 1 pt. 473 ml.) is recommended.
4. An Air Line Filter-Regulator-Lubricator must be used with this air tool to maintain all warranties. 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 40 SCFM @ 100 PSIG has 3/8" NPT female ports.
5. Use only genuine Dynabrade replacement parts. To reorder replacement parts, specify the **Model #**, **Serial #**, and **RPM** of your machine.
6. A Motor Tune-Up Kit (P/N **96236**) is available which includes assorted parts to help maintain motor in peak operating condition.
7. Mineral spirits are recommended when cleaning the tool and parts. Do not clean tool or parts with any solvents or oils containing acids, esters, keytones, chlorinated hydrocarbons or nitro carbons.

Safety Instructions:

Products offered by Dynabrade should not be converted or otherwise altered from original design without expressed written consent from Dynabrade, Inc.



- **Important:** User of tool is responsible for following accepted safety codes such as those published by the American National Standards Institute (ANSI).
- Operate machine for one minute before application to workpiece to determine if machine is working properly and safely before work begins.
- Always disconnect power supply before changing abrasive/accessory or making machine adjustments.
- Inspect abrasives/accessories for damage or defects prior to installation on tools.
- Please refer to Dynabrade's Warning/Safety Operating Instructions Tag (Reorder No. **95903**) for more complete safety information.

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.

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.

Model Number	Motor HP (W)	Motor RPM	Sound Level	Air Flow Rate CFM/SCFM (LPM)	Air Pressure PSIG (Bars)	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
57902	.12 (89)	13,000	65 dB(A)	320 (566)	90 (6.2)	1.6 (.7)	9 (229)	3-3/4 (95)

Additional Specifications: Air Inlet Thread 1/4" NPT • Hose Size 1/4" (8 mm)

Disassembly/Assembly Instructions - Dynafine®

Important: Manufacturer's warranty is void if tool is disassembled before warranty expires

Notice: Dynabrade strongly recommends the use of their **52296** Repair Collar (sold separately) during assembly/disassembly of the Dynafine® sander.

All of the special repair tooling referred to in these instructions can be ordered from Dynabrade. Please refer to this parts page for proper part identification.

Motor Disassembly:

1. Disconnect the tool from the air supply.
2. Place the **52296** Repair Collar around the tool and secure it in a vise so that the sanding attachment is facing up.
3. Remove the sanding attachment with the **95266** (3 mm) Hex Key.

Continued on next page.

(PD03-31)

Disassembly/Assembly Instructions - Dynafine® (Continued)

- Loosen the **95884** Boot clamp and remove the boot assembly.
- Use a 3 mm adjustable pin spanner wrench or the **50971** Lock Ring Tool to remove the **57962** exhaust Cover by turning it counterclockwise.
- Pull the exhaust cover along with the motor assembly from the **01546** Housing.
- Fasten the **96346** (2 in.) Bearing Separator around the end of the **01476** Cylinder that is closest to the **02673** Rear Bearing plate. Place the bearing separator on the table of the **96232 #2** Arbor Press so that the **57961** Cam Assembly is pointing toward the floor. Use a 3/16" dia. flat end drive punch as a press tool and push the rear stem of the **50777** Rotor out of the **02696** Bearing.
- The **02696** Bearing can be removed from the rear bearing plate with a **96210** Bearing Removal Tool and the arbor press.
- Secure the **50777** Rotor in a vise with an aluminum or bronze jaw and remove the **57961** Cam Assembly by turning it counterclockwise.
- Remove the front bearing/plate from the **50777** Rotor with a 3/16" dia. flat end drive punch and the arbor press.

Motor Disassembly Complete.

Valve Disassembly:

- Place the **52296** Repair Collar around the valve housing and secure it in a vise so that the air inlet is pointing up.
- Use two wrenches to remove the air fitting or the **94407** Flow Control from the **94523** Inlet Adapter.
- Loosen the **94523** Inlet Adapter from the valve housing and remove the **94520** Muffler Assembly. **Note:** Use the exploded view of the muffler assembly on the front of this parts page to identify the specific components and their proper order of assembly.
- Remove the **12132** Pin and the throttle lever with a drive punch.
- Use retaining ring pliers to remove the **95558** Retaining Ring and the **01469** Speed Regulator Assembly along with the **01449** Valve Stem.

Valve Disassembly Complete.

Motor Assembly:

Important: Clean and inspect all parts for defects before assembling.

- Use the **01476** Cylinder as an adjustment jig. Place the cylinder on the table of the arbor press.
- Position the **50777** Rotor inside the cylinder so that the front face of the rotor is even with the top edge of the cylinder.
- Install the **53161** Front Bearing Plate onto the rotor and cylinder so that the flat side of plate faces the vane slots of the motor.
- Place the **56305** Bearing onto the front shaft of the rotor. Using a **96244** Bearing Press Tool, press against the inner race of the bearing pushing it down to the bearing plate and cylinder.
- Secure the **50777** Rotor in a soft jaw (aluminum or bronze) vise with bearing plate assembly pointing up.
- Place the **57962** Exhaust Cover over the bearing/plate assembly.
- Apply a small amount of #271 Loctite (or equivalent) to the threads of the **57961** Cam Assembly and install it onto the rotor, torque to 17 N·m/150 in.-lbs.
- Remove this assembly from the vise and install **01480** Vanes that have been lubricated with Dynabrade Air Lube (10W/NR) or (equivalent oil).
- Place **01476** Cylinder onto the assembly so that the air inlet of the cylinder will line up with the air inlet holes in the **02673** Rear Bearing Plate.
- Use the **96216** Bearing Press Tool so that the press tool rest against the outer race of the **02696** Bearing and press the bearing all the way into the **02673** Rear Bearing Plate.
- Position the motor assembly in the arbor press with the **57961** Cam Assembly resting on the table of the arbor press. Use the opposite end of the **96216** Bearing Press Tool so that the press tool rest against the inner race of the **02696** Bearing. Carefully press the rear bearing/plate assembly onto the **50777** Rotor until the **02673** Rear Bearing Plate comes in contact with the cylinder. Achieve a snug fit between the bearing plates and the cylinder while still being able to push the cylinder from side to side with a slight force.
- Apply a small amount of grease to the seal of the **02696** Bearing and position the **02679** Shield against the bearing.
- Install the motor assembly into the **01546** Housing making sure that it slides all the way in.
- Apply a small amount of Loctite #567 (or equivalent) to the threads of the **57595** Housing and thread the **57962** Exhaust Cover onto the housing.
- Apply a small amount of Loctite #609 (or equivalent) to the outer race of the **11016** Bearing. Use the **96243** Bearing Press tool to push against the outer race of the bearing and press the bearing into the boot assembly.
- Apply a small amount of the **95542** Grease (or equivalent) to the shaft of the cam assembly and install the boot assembly along with the **95884** Boot Clamp.
- Tighten **95884** Boot Clamp and torque to .68 N·m/6 in.-lbs.
- Use the **95266** (3 mm) Hex Key to install the sanding attachment.

Motor Assembly Complete.

Valve Body Assembly:

- Place the **52296** repair Collar around the valve housing and secure it in a vise so that the air inlet is pointing up.
- Install the **01469** Speed Regulator Assembly (includes o-rings) along with the **01449** Valve Stem into the valve housing. Secure the speed regulator assembly in the valve housing with the **95558** retaining Ring.
- Install the **01464** Seal into the air inlet opening of the valve housing.
- Line up the hole in the **01449** Valve Stem with the air inlet hole in the valve housing. Use needle nose pliers to insert the **01472** Tip Valve into the air inlet hole of the valve housing so that the metal stem of the tip valve passes through the hole in the valve stem.
- Install the **01468** Spring so that the small end of the spring fits onto the back end of the **01472** Tip Valve.
- Install the **96065** O-Ring onto the **57970** Air Control Ring. When installing these into the valve housing make sure to line up the holes in the air control ring with the exhaust area of the valve housing.
- Assemble the **94520** Muffler. **Note:** Use the exploded view of the muffler assembly on the front of this parts page to identify the specific components and their proper order of assembly.
- Apply a small amount of the Loctite #567 (or equivalent) to the threads of the **94523** Inlet adapter and install the muffler assembly onto the valve housing. (Torque to 23 N·m/200 in.- lbs.)
- Install the throttle lever and secure it in place with the **12132** Pin.

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

Throttle Lever Positioning Procedure:

- Place the **52296** repair Collar around the valve housing and secure it in a vise so that the **01546** Housing is pointing up.
- Slip the **01558** Collar down onto the valve housing to expose the **01461** Lock Nut.
- With a firm hold on the **01546** Housing, use a 34 mm or an adjustable wrench to turn the **01461** Lock Nut counterclockwise to loosen the **01546** Housing from the valve housing.

(continued on next page)

Disassembly/Assembly Instructions - Dynafine® (Continued)

- Orient the throttle lever to the operators desired grip and positioning. **Note:** Allow for additional rotation of the **01546** Housing as the **01461** Lock Nut is tightened.
- With a firm hold on the **01546** Housing to reduce its rotation, use a 34 mm or an adjustable wrench to tighten the **01461** Lock Nut. (Torque to 45 N-m/400 in.- lbs.)

Important: When performing this procedure be careful not to entirely separate the **01546** Housing from the valve body assembly. Loosen the **01461** Lock Nut only enough to make the adjustment.

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. 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 permeate motor.

Loctite® is a registered trademark of loctite Corp.

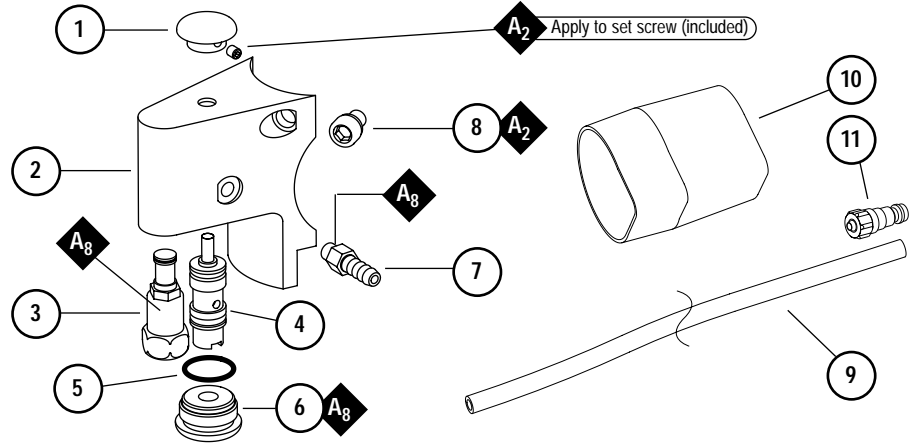
57777 Wet Assembly

Index Key

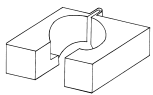
No.	Part #	Description
1	57751	Button (w/set screw)
2	57778	Bracket
3	57728	Nozzle
4	57727	Valve Cartridge
5	95523	O-Ring
6	56076	Throttle Valve Plug
7	95074	Hose Fitting
8	97327	Screw (2)
9	95955	10' Tubing
10	10293	Shrink Tube
11	95952	Quick Disconnect

A Loctite: **A₂** = Loctite #271
A₈ = Loctite #567

KEY



Optional Accessories



52296 Repair Collar

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



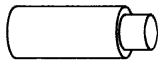
50971 Lock Ring Tool

- Lock Ring Tool has a 3/8 in. square socket for use with 3/8 in. drive; breaker bar, ratchet head, or torque wrenches.



96236 Motor Tune-Up Kit

- Includes assorted parts to help maintain and repair motor.



96210 Bearing Removal Tool

- This tool is used to pass through the I.D. of the bearing plate and to push against the I.D. of the bearing.



96216, 96243, 96244 Bearing Press Tool

- This tool is used to safely press a bearing plate or onto a shaft.



96346 Bearing Separator

- Use the separator to remove bearings and gears.



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: 1 gal. (3.8 L)



95542 Grease 10 oz.

- Multi-purpose grease for all types of bearings, cams, gears.
- High film strength; excellent resistance to water, steam, etc.
- Workable range 0° F to 300° F.

95541 Push-type Grease Gun

- One-hand operation.



96232 #2 Arbor Press

- This arbor press is ideal for the disassembly and assembly of air motors.