

4-1/2" and 5" Type 41 Cut-Off Grinders 1.3 hp

Safety, Operation and Maintenance – Save This Document and Educate All Personnel

Model	Wheel Size	RPM	Spindle Thread
52584	4-1/2"	13,000	5/8"-11
52585	5"	12,000	5/8"-11

GRINDER



**LIFETIME
WARRANTY**

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! WARNING

Read and understand this tool manual before operating your air tool. Follow all safety rules for the protection of operating personnel as well as adjacent areas. Always operate, inspect and maintain this tool in accordance with the American National Standards Institute (ANSI). Safety Requirements for abrading materials with coated abrasive systems – ANSI B7.1, Compressed Air and Gas Institute (CAGI) Safety Code for Portable Air Tools – B186.1, Code of Federal Regulation – CFR 29 Part 1910, International Organization for Standardization (ISO) Hand Held Non-Electric Power Tools – Safety Requirements and applicable State and Local Regulations.



Read and understand tool manual before work starts to reduce risk of injury to operator, visitors, and tool.



Eye protection must be worn at all times, eye protection to conform to ANSI Z87.1.



Ear protection to be worn when exposure to sound, exceeds the limits of applicable Federal, State or local statutes, ordinances and/or regulations.



Practice safety requirements. Work alert, have proper attire, and do not operate tools under the influence of alcohol or drugs.



Respiratory protection to be used when exposed to contaminants that exceed the applicable threshold limit values required by law.



Air line hazard, pressurized supply lines and flexible hoses can cause serious injury. Do not use damaged, frayed or deteriorated air hoses and fittings.

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 and OPERATING INSTRUCTIONS



Carefully Read and Understand the General and Grinder sections found in Tool Safety and Operating Guidelines (PN00001676) Before Handling or Using Tool.

Carefully Read all instructions before operating or servicing any Dynabrade® Abrasive Power Tool. Products offered by Dynabrade are not to be modified, converted or otherwise altered from the original design.

Tool Intent: Cut-Off Grinders are intended to be used by professional operators and are ideal for cutting, trimming steel, composites, aluminum and other materials using 4-1/2" and 5" Type 41 reinforced straight cut-off wheels with a 7/8" center hole.

DO NOT USE Tool for Anything Other Than Its Intended Applications.

Training: Proper care, maintenance, and storage of your air tool will maximize tools performance and reduce chance for accident.

Employer's Responsibility: Provide operators with safety instructions and training for safe use of tools and accessories.

Report to Your Supervisor any Condition of the Tool, Accessories or Operation you Consider Unsafe.

MAINTENANCE INSTRUCTIONS

Important: To keep tool safe, a Preventative Maintenance Program is recommended. The program should include inspection of the tool and all related accessories and consumables, including air lines, pressure regulators, filters, oilers, etc. (refer to CAGI B186.1 for additional maintenance information). If accessory or tool breakage occurs, investigate failure to determine the cause and correct before issuing tool for work. Use the following schedule as a starting point in developing a Preventative Maintenance Program. If tool does not operate properly (RPM, vibration, start/stop) after these scheduled checks or at any time, the tool must be repaired and corrected before returning tool to use.

INSTALLATION

- To ensure long life and dependable service, use a Closed Loop Air System and Filter-Regulator-Lubricator (FRL) as diagramed below.
- Each tool should have its own dedicated hose connected to an air supply FRL. Quick disconnects should be installed at the FRL in an effort to reduce contamination into the tool. Securely affix all fittings and hose assemblies.
- 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: **10690** Air Line Filter-Regulator-Lubricator — Provides accurate air pressure regulation, two-stage filtration of water contaminants and micro-mist lubrication of pneumatic components.
- Dynabrade recommends 1 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). **95842** Dynabrade Air Lube is recommended.

MAINTENANCE SCHEDULE

Maintenance schedules depend on the type and style of tool. Refer to page 3 to reference symbols associated with specific maintenance items/areas. Match maintenance schedules accordingly. See page 4 for any additional maintenance information.

Note: Turbine style air motors do not require oil.

Daily (every 8 hours):

- Inspect tool and accessories for damage or broken parts. Replace items as necessary to ensure proper operation and safety.
- **O** Lubricate motor as recommended. Use **95842** Dynabrade Air Lube (10W/NR). Apply 1 drop/minute of air lube per 20 SCFM.
- Check air line pressure with a gage. (MAX. 90 PSIG or 6.2 Bar operating pressure at the air inlet of the tool.)
- **W** Lubricate wick system and right angle gears through gear case fitting. Apply 3 plunges of **95848** Gear Oil. Use **95541** Lubricant Gun (Prime lubricant gun before use).
- Check tool for proper operation: If operating improperly or demonstrates unusual vibration, the tool must be serviced and problem corrected before further use.

Every 20 Hours/Once a Week (which ever comes first):

- Measure RPM (speed) by setting air pressure to 90 PSIG (6.2 Bar) at tool inlet, without accessory mounted, while the tool is running. Using tachometer, check spindle speed of the tool. Unless otherwise stated the

no-load speed may not exceed the rated speed. If tool speed exceeds maximum rated RPM, service as required and correct before use.

- If tool is running too fast: look for worn, damaged or missing governor, air control rings and silencer(s). Service as required.
- If tool is running too slow: look for malfunctioning governor, clogged inlet screen, silencer(s) or air stream. Service as required.

Note: Special care must be taken when servicing governors. Refer to specific tool manual for governor instructions and/or speed control devices. Governor assemblies made from molded plastic components are non-serviceable and must be replaced.

Every 50 Hours:

- **G** Lubricate planetary gears through gear case fitting with 3 plunges of **95544** Grease. Use **95541** Lubricant Gun. (Prime lubricant gun before use).

REPAIR

- Use only genuine Dynabrade replacement parts to ensure quality. To order replacement parts, specify Model#, Serial# and RPM of your air tool.
- 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.
- A Motor Tune-Up Kit is available which includes high wear and medium wear motor parts.
- Air tool markings must be kept legible at all times, if not, reorder housing and replace. User is responsible for maintaining specification information.

- **O** After maintenance is performed on tool, add a few drops of **95842** Dynabrade Air Lube to the tool inlet and start the tool a few times to lubricate air motor. Verify RPM (per 20 hr maintenance schedule), vibration and operation.

HANDLING & 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.
- Store accessories in protective racks or compartments to prevent damage.
- Follow the handling instructions outlined in the operating instructions when carrying the tool and when changing accessories.
- Protect accessories from exposure to water, solvents, high humidity, freezing temperature and extreme temperature changes.

END OF USE/DISPOSAL

When tool has reached its end of useful service, disassemble tool into its primary components (i.e. steel, aluminum and plastic) and recycle or discard per local, state and/or federal regulations as to not harm the environment.

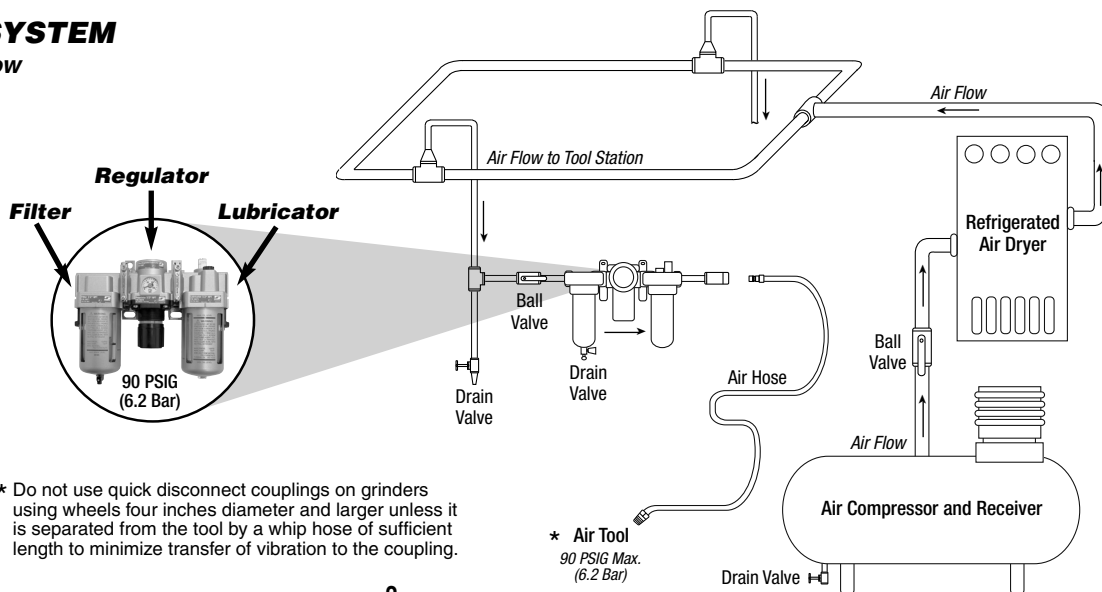
NOTICE

All Dynabrade air motors use the highest quality parts available and are manufactured to exacting tolerances. Air motor failures are often traced to lack of lubrication or unclean air supply. Compressed air can force dirt and other contaminants into motor bearings causing early failure. Contaminants can score cylinder wall and vanes resulting in reduced efficiency and power. Our warranty obligation is contingent upon proper use of our tools. Air motors which have been subjected to misuse, contaminated air or lack of lubrication will void warranty.

CLOSED LOOP AIR SYSTEM

Sloped in Direction of Air Flow

- Dynabrade Air Power Tools are designed to operate at 90 PSIG (6.2 Bar) 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. 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.



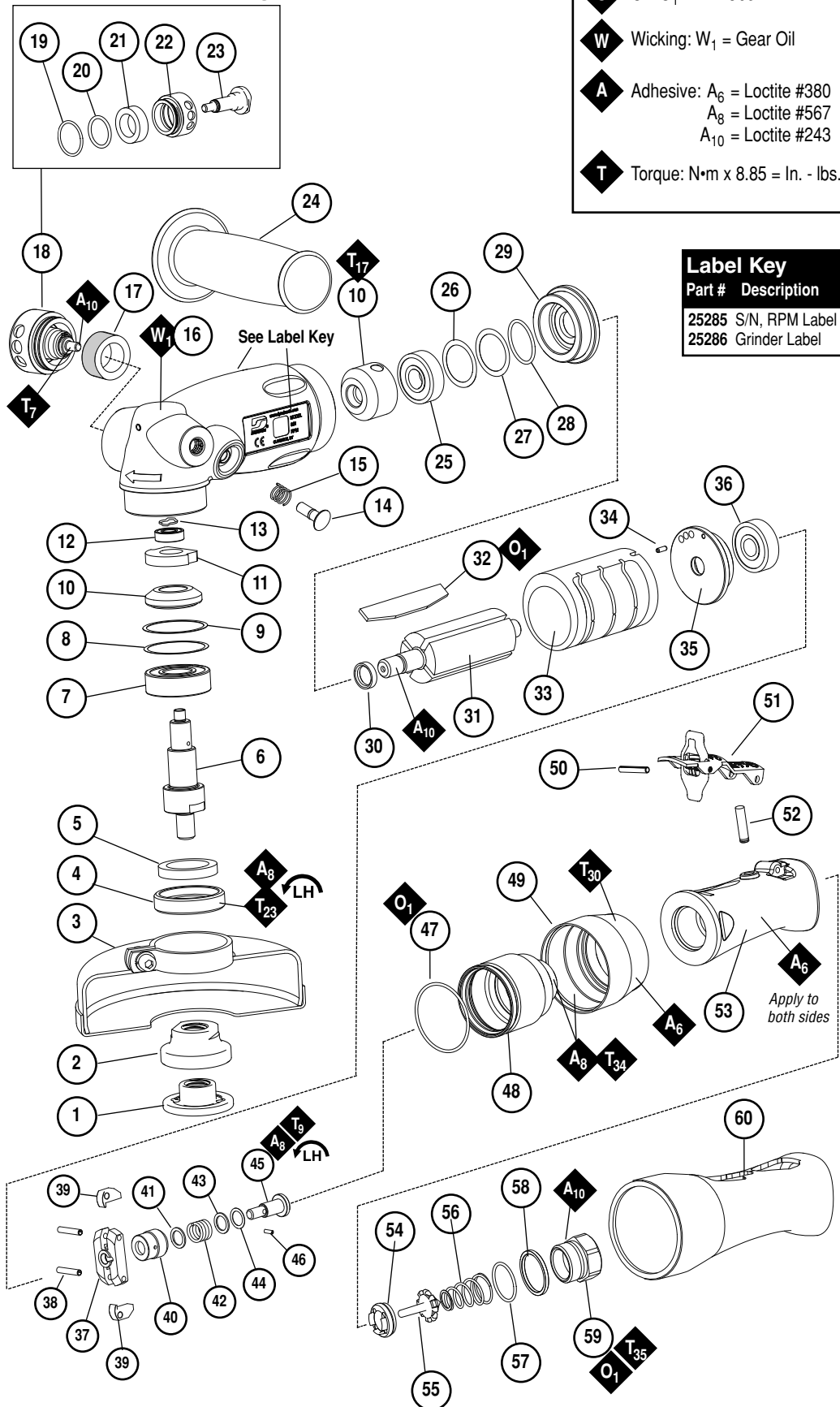
- Do not use quick disconnect couplings on grinders using wheels four inches diameter and larger unless it is separated from the tool by a whip hose of sufficient length to minimize transfer of vibration to the coupling.

Lubricator Setting

1 Drop/Minute per 20 SCFM

Model**52584** 4-1/2" Tool**52585** 5" Tool**4-1/2" and 5" Cut-Off Grinder
Complete Assembly****Index Key**

No.	Part #	Description
1	25443	Outer Flange
2	25442	Backup Flange
3	25464	4-1/2" Type 41 Guard
	25465	5" Type 41 Guard
4	25265	Retainer
5	53609	Felt Seal
6	25271	Spindle
7	01036	Bearing
8	98288	Shim (.089 mm Thk.) (asReq)
9	98287	Shim (.25 mm Thk.) (asReq)
10	25230	Bevel Gear Set
11	25264	Wick
12	02057	Bearing
13	98243	Wave Spring
14	25273	Plunger Assembly (Incl 97156 Ring)
15	98285	Spring
16	25434	Housing (52584 4-1/2" Tool)
	25435	Housing (52585 5" Tool) (Includes: 01041 Gear Oil Fitting, 25275 Bushing)
17	25283	Silencer
18	25217	Muffler Assembly
19	98282	O-Ring (2 mm)
20	98281	O-Ring (1.5 mm)
21	25282	Silencer
22	25278	Muffler Cover
23	25281	Muffler Stem Assembly
24	53134	Vibration Dampening Handle
25	01007	Bearing
26	01294	Shim (as required)
27	01293	Shim (as required)
28	98242	O-Ring
29	25236	Front Bearing Plate
30	01010	Spacer
31	25233	Rotor
32	25234	Vane (4/Pkg.)
33	25235	Cylinder
34	96441	Pin
35	25237	Rear Bearing Plate
36	01206	Bearing
37	25290	Governor Cage
38	98279	Pin (2)
39	25291	Governor Weight (2)
40	25293	Governor Valve
41	25297	Shim (.8 mm Thk. - For Model 52584 Only)
42	25294	Governor Spring
43	25298	Shim (.25 mm Thk.) (asReq)
44	25299	Shim (.13 mm Thk.) (asReq)
45	25292	Governor Spindle
46	25295	Pin
47	66435	O-Ring
48	25256	Governor Housing
49	25257	Cup Nut
50	12132	Pin
51	01950	HD Safety-Lock Lever
52	25247	Valve Stem Assembly (Incl 96443 O-Ring)
53	25245	Throttle Handle (Incl 25246 Bushing)
54	51945	Valve Seat
55	25249	Tip Valve
56	25250	Spring
57	96442	O-Ring
58	51940	Spacer
59	25213	Inlet Bushing (Incl 51938 Screen (2))
60	25253	Insulating Cover
-	94949	Pin Spanner Wrench
-	95304	24 mm Open End Wrench

25217 Muffler Assembly

LIFETIME WARRANTY

To validate Dynabrade Lifetime Warranty, you must register each tool at: www.dynabrade.com. Registration of each tool at website is required. Dynabrade will not honor Lifetime Warranty on unregistered tools. Please view the entire Lifetime Warranty Policy at : www.dynabrade.com.

MACHINE SPECIFICATIONS

Model	Speed	Power	Air Consumption	Spindle Thread	Weight	Length	Height
52584	13,000 RPM	1.3 hp (969 W)	43 SCFM (1218 LPM)	5/8"-11	5.4 lbs. (2.4 kg)	10" (254 mm)	4" (100 mm)
52585	12,000 RPM	1.3 hp (969 W)	43 SCFM (1218 LPM)	5/8"-11	5.7 lbs. (2.6 kg)	10" (254 mm)	4" (100 mm)

Additional Specifications: Air Inlet Thread 3/8" NPT • Hose I.D. 3/8" (10 mm)
Visit dynabrade.com for your model's current vibration and sound data.

OPTIONAL ACCESSORIES



Motor Tune-Up Kit

- Includes assorted parts to help maintain and repair motor.

Part No. 96100



Whip Hose

- 3/8" diameter airline with 3/8" NPT male and female fittings
- Quick disconnect couplings should not be connected directly to tool inlet for use on grinders utilizing abrasive wheels 4" diameter and greater.

Part No. 94820: 5 feet



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.

Part No. 95842: 1 pt. (473 ml)

Part No. 95843: 1 gal. (3.8 L)



Gear Oil

- Formulated for Dynabrade geared tools utilizing a wick-type lubrication system.

Part No. 95848: 2.5 oz.



Push-type Grease/Oil Gun

- One-hand operation.

Part No. 95541

SPECIAL GREASE INSTRUCTIONS

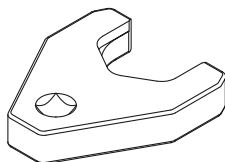


Lubricate wick system through the angle gear oil fitting with 2-3 plunges for every 24 hours of use, to achieve maximum gear life. Prime pump to insure good oil flow.

Important: Use only the recommended angle gear oil for the wick system. Do not contaminate the wick with any other oil or grease product. Insure that all 3 plunges of oil are injected through the fitting. (Order 95848 Gear Oil and 95541 Gun)

SPECIAL REPAIR TOOLS

Special repair tools are required for disassembly and assembly of this tool. Visit dynabrade.com for your model specific complete information.



REFERENCE CONTACT INFORMATION

American National Standards Institute (ANSI)
www.ansi.org

Compressed Air & Gas Institute (CAGI)
www.cagi.org

European Committee for Standardization (PNEUROP)
www.pneurop.org

International Organization of Standards (ISO)
www.iso.org

U.S. Government Publishing Office (GPO)
www.gpo.gov

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