

Rebel Series Grinders

7" & 9" Diameter, Right Angle

For Serial No. KH12111C and Higher

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

Model	Wheel Dia.	RPM	Autobalancer	Power
53281	7" (180 mm)	8,500	Yes	2.8 hp
53283	9" (230 mm)	6,500		2.5 hp

GRINDER



53281

LIMITED
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: Rebel Series Grinders are intended to be used by professional operators and are ideal for material removal using depressed center grinding wheels or abrasives flap disc wheels with 7/8" center hole. Follow Rebel Series Grinder abrasive mounting instructions included with the tool.

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.

Daily (every 8 hours):

- Inspect tool and accessories for damage or broken parts. Replace items as necessary to ensure proper operation and safety.
-  Lubricate motor as recommended. Use **95842** Dynabrade Air Lube (10W/NR). Apply 1 drop/minute of air lube per 20 SCFM. **Lubricate wick system through the angle gear oil fitting with 4-5 plunges for every 8 hours of use, to achieve maximum gear life.**
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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) Always prime pump to ensure good flow before lubricating gears.

- Check air line pressure with a gage. (MAX. 90 PSIG or 6.2 Bar operating pressure at the air inlet of the tool.)
- 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 a 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 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.
- Governors are not serviceable, replace complete **54998** Governor Assemblies; do not try to repair. Do not pull on springs in effort to adjust governor.

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.

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 labels and replace. User is responsible for maintaining specification information.

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.

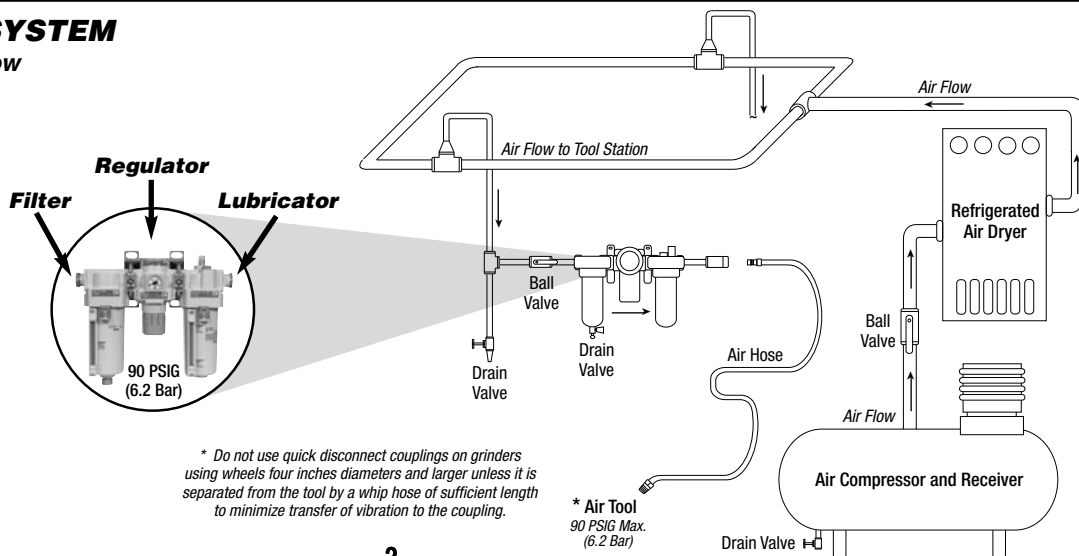
NOTICE

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.



Lubricator Setting

1 Drop/Minute per 20 SCFM

Models

53281 - 7" Dia., 8,500 RPM

53283 - 9" Dia., 6,500 RPM

Rebel Series Grinders

Complete Assembly

ITEM	P/N	DESCRIPTION	QTY.
1	54989	SCREW	1
2	54982	OUTER FLANGE	1
3	54930	AUTO BALANCER	1
4	96274	SCREW	5
5	54918 54919	7" TYPE 27 GUARD 9" TYPE 27 GUARD	1
6	54952	LOCK RING	1
7	55008	SPINDLE	1
8	50509	KEY	1
9	54917	BEARING	1
10	52133	SHIM	AR
11	52132	SHIM	AR
12	54916 54914	GEAR SET - 53281 GEAR SET - 53283	1
13	02649	BEARING	1
14	97995	WAVE DISC	1
15	54999	WICK	1
16	59724	MAGNET HOLDER	1
17	59725	MAGNET	1
18	54938	PLUNGER INCLUDES 96156 O RING	1
19	98285	SPRING	1
20	96156	O-RING	1
21	55095 55097	HOUSING - 53281 HOUSING - 53283 INCLUDES 54939 BUSHING 25287 WARNING LABEL 01041 GREASE FITTING	1
22	50511	SCREW	1
23	54954	MUFFLER COVER	1
24	54928	SILENCER	1
25	53134	DAMPENING HANDLE	1
26	54915 54913	PINION, 8,500 RPM - 53281 PINION, 6,500 RPM - 53283	1

ITEM	P/N	DESCRIPTION	QTY.
27	54900	BEARING ASSY	1
28	54910	SHIM PACK	AR
29	54909	SHIM	1
30	01787	O-RING	1
31	54901	FRONT END PLATE	1
32	54902	SPACER	1
33	54903	ROTOR	1
34	54904	VANE SET (4/PKG)	1
35	54905	CYLINDER	1
36	96441	PIN	1
37	54880	REAR END PLATE	1
38	96779	O-RING	1
39	96772	WAVE WASHER	1
40	96773	O-RING	1
41	54907	BEARING	1
42	54998	GOVERNOR ASSY	1
43	54953	GOVERNOR CHAMBER	1
44	95526	O-RING	1
45	54958	GASKET	1
46	54960	MOTOR SPRING	1
47	54961	SPACER	1
48	54936	THROTTLE HANDLE INCLUDES: 54941 SAFETY LATCH, 54942 SPRING & 95164 PIN	1
49	95720	SCREW	4
50	54940	BUSHING	1
51	97045	PLUNGER	1
52	54937	THROTTLE LEVER	1
53	96776	PIN	1

ITEM	P/N	DESCRIPTION	QTY.
54	54814	ACTIVATOR PIVOT	1
55	54815	BALL SEAT	1
56	54945	PIN	1
57	97807	O-RING	1
58	54946	BALL	1
59	54947	SPRING	1
60	96512	RETAINER RING	1
61	54988	INLET SCREEN	1
62	96777	O-RING	1
63	54990	INLET BUSHING	1
—	94949	PIN SPANNER WRENCH	1
—	95331	32 MM - OPEN END WRENCH	1

AR - "As Required"

KEY

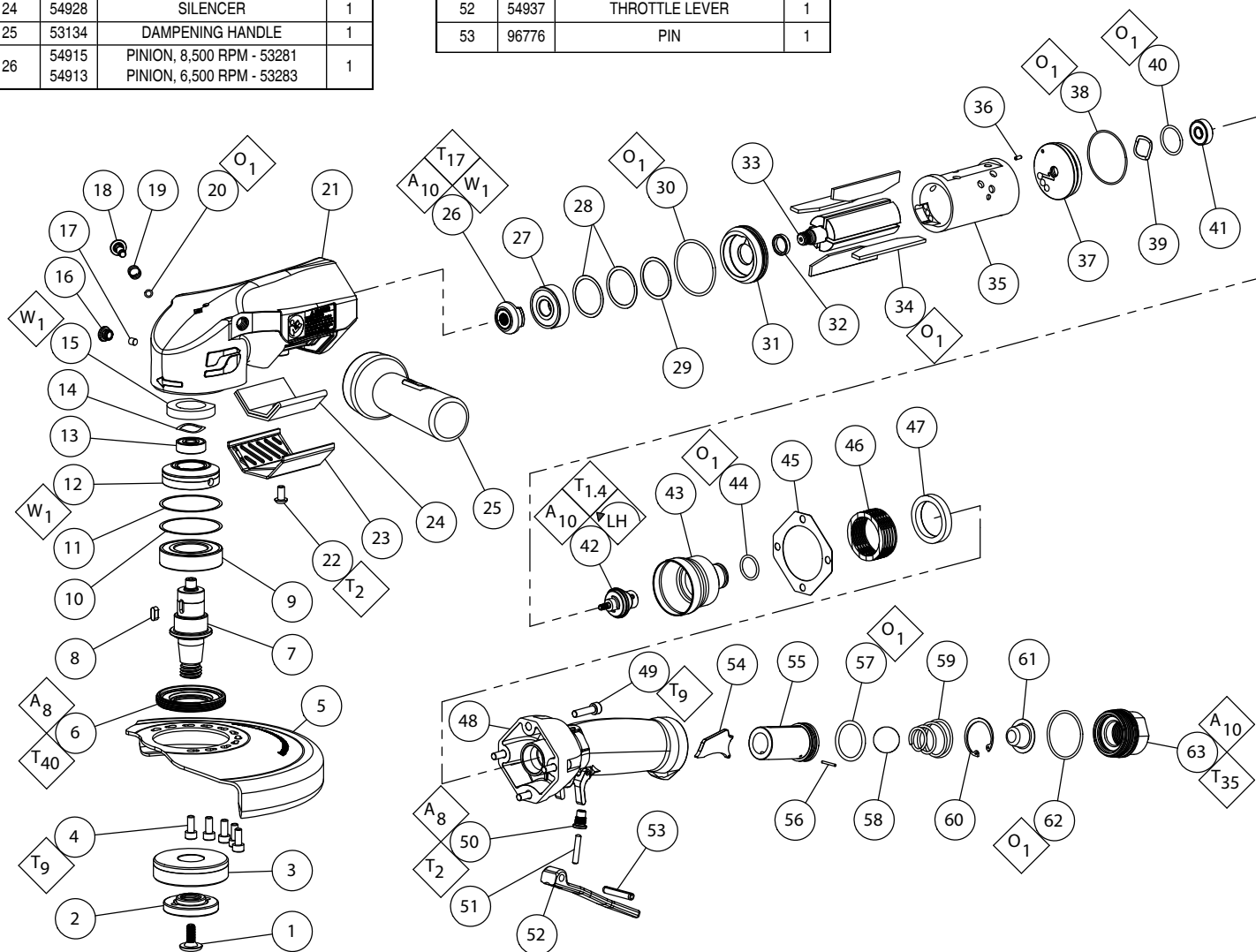
O Oil: O₁ = Air Lube

A Adhesive: A₂ = Loctite #271
A₈ = Loctite #567
A₁₀ = Loctite #243

W W₁ = Wick Oil

T_x X = Torque Value (N•m)
(N•m x 8.85 = lb•in.)

Always follow adhesive manufacturers cleaning and priming recommendations.



LIMITED LIFETIME WARRANTY

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

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MACHINE SPECIFICATIONS

Model	Speed	Power	Air Consumption	Diameter	Weight	Length	Height
53281	8,500 RPM	2.8 hp (2,088 W)	115 SCFM (4,406 LPM)	7" (180 mm)	7.5 lb. (3.4 kg)	13.4" (340 mm)	4.2" (107 mm)
53283	6,500 RPM	2.5 hp (1,860 W)	115 SCFM (4,406 LPM)	9" (230 mm)	7.9 lb. (3.6 kg)	13.4" (340 mm)	4.2" (107 mm)

Additional Specifications: Air Inlet Thread 1/2" NPT • Hose I.D. 1/2" (10 mm) • Spindle Thread 5/8"-11
Visit dynabrade.com for your model's current vibration and sound data.

OPTIONAL ACCESSORIES



High Profile Guard

- Used for type 27 disposable hub flap discs and any other abrasive that doesn't properly fit under the lip of the standard guard.

Part No. 54920: 7" (180 mm) diameter



Low Profile Back-up Flange

- For use with 7/8" diameter center hole flap discs.

Part No. 54981



Whip Hose

- 1/2" diameter air line with 1/2" NPT female fitting, and 1/2" NPT male Mega Flow Plug.

Part No. 94825: 5 feet



Tune-Up Kit

- Contains high and medium wear parts.

Part No. 96644



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)



Dynabrade Gear Oil

- Easy to apply with Dynabrade P/N 95541 Grease/Oil Gun (sold separately).

Part No. 95848: 2.5 oz. (74 ml) Tube

Part No. 95541: Lubricant Gun, Push-Type



Specialty Repair Tool

- Lock-ring torque wrench

Part No. 96822

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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