

Compact Rebel Series Grinders

4.5" & 5" Diameter, Autobalancer

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

Model	Spindle Thread	Wheel	RPM	Autobalancer	Exhaust	Power
58901	5/8"-11	4.5" Dia. (115 mm)	13,000	Yes	Rear	2.3 hp
58903		5" Dia. (125 mm)	12,000			2.2 hp



**Model
58903**

GRINDER

LIMITED
LIFETIME
WARRANTY

Find The Most Current Offering of Support Documents and Accessories at www.Dynabrade.com

WARNING

Read and understand this tool manual before operating your air tool. Follow all safety rules for the protection of operating personnel as well as adjacent areas. Always operate, inspect and maintain this tool in accordance with the American National Standards Institute (ANSI). Safety Requirements for the Use, Care and Protection of Abrasive Wheels – 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 – ISO 11148, 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: Compact Rebel Series Grinders are intended to be used by professional operators and are ideal for material removal using depressed center grinding wheels or abrasive flap disc wheels with 7/8" center hole. Follow Compact 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 max. **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.

O Lubricate motor as recommended. Use **95842** Dynabrade Air Lube (10W/NR). Apply 1 drop/minute of air lube. **W** Lubricate wick system through the angle gear oil fitting with 4-5 plunges for every 8 hours of use, to achieve maximum gear life.

Important: Use only the recommended angle gear oil for the wick system. Do not contaminate the wick with any other oil or grease product. (Order **95848** Gear Oil and **95541** Gun) Always prime pump to insure 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. Service as required.
- If tool is running too slow: look for malfunctioning governor, clogged inlet screen, or air stream. Service as required.
- Governors are not serviceable, replace complete **59699** (4.5") 13K or **59700** (5") 12K 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 grip 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.

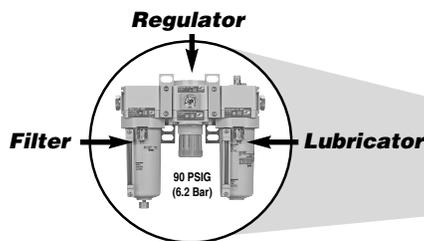
NOTICE

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.

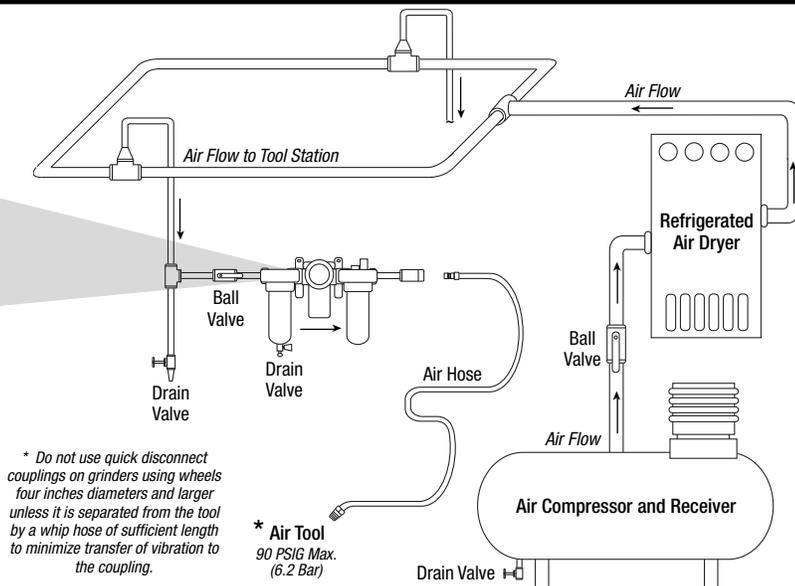
CLOSED LOOP AIR SYSTEM

Sloped in Direction of Air Flow

LUBRICATOR SETTING
1 DROP/MINUTE
MAX



- 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.



Models:

58901 – 13,000 RPM, 4.5" Dia.

58903 – 12,000 RPM, 5" Dia

Compact Rebel Series Grinder Complete Assembly

ITEM	P/N	DESCRIPTION	QTY.
1	54989	RETAINER SCREW	1
2	53696	FLANGE - LOCKING	1
3	59694	AUTO BALANCER	1
4	95885	M4 X 10 SHCS	5
5	59608 59607	GUARD - 4-1/2" GUARD - 5"	1
6	59622	LOCKING RING	1
7	59635	WAVE WASHER	1
8	59623	ADJUSTABLE DISC	1
9	59612	SPINDLE TYPE 27	1
10	59665	ROUNDED MACHINE KEY	1
11	59647	BEARING	1
12	59637	OIL SEAL SUPPORT	1
13	59627	SEAL SUPPORT	1
14	59646	RADIAL SHAFT SEAL	1
15	59679	O-RING	1
16	59697	SHIM PACK	A/R
17	59603	GEAR SET	1
18	59723	NUT	1
19	59652	BEARING	1
20	96772	WAVE SPRING WASHER	1
21	59722	WICK	1
22	25275	BUSHING, SPINDLE LOCK	1
23	98285	SPRING, SPINDLE LOCK	1

ITEM	P/N	DESCRIPTION	QTY.
24	96156	O-RING	1
25	54938	PLUNGER INCLUDES: 96156 O-RING	1
26	59620	HOUSING ASSEMBLY	1
27	59629	VALVE SYSTEM	1
28	59671	O-RING	1
29	59677	O-RING	1
30	59634	BUSHING, THROTTLE	1
31	59690	VALVE STEM PLUG	1
32	59724	MAGNET HOLDER	1
33	59725	MAGNET	1
34	53134	5/16" HANDLE ASSEMBLY	1
35	59621	LATCH	1
36	97174	SCREW	1
37	59676	LATCH SPRING	1
38	59729 59731	GRIP: 58901 GRIP: 58903	1
39	59678	O-RING	1
40	59651	BEARING	1
41	01121	SHIM PACK	A/R
42	59675	O-RING	1
43	59624	FRONT END PLATE	1
44	59631	ROTOR SPACER	1

ITEM	P/N	DESCRIPTION	QTY.
45	59611	ROTOR	1
46	59714	VANE SET (4/PKG)	1
47	59628	CYLINDER	1
48	59670	ROLL PIN	1
49	59626	REAR END PLATE	1
50	96773	O-RING	1
51	59653	BEARING	1
52	59699 59700	GOVERNOR 13K GOVERNOR 12K	1
53	59618	THROTTLE HOUSING	1
54	59680	O-RING	1
55	59664	BALL SEAL	1
56	59668	THROTTLE BALL	1
57	59659	CONICAL SPRING	1
58	59689	SPACER	1
59	59643	NESTED WAVE WASHER	1
60	59663	BAFFLE	1
61	59633	MUFFLER SPRING	1
62	59615	LEVER SUPPORT	1
63	59672	PIN	1
64	59717	LEVER ASSY	1
65	59674	O-RING	1
66	59654	EXHAUST SCREEN	1
67	59721	ADAPTOR INLET ASSY	1
-	94925	WRENCH - PIN KEY	1
-	95331	4 MM HEX KEY WRENCH	1

KEY

W Wick Oil

O Oil: O₁ = Air Lube

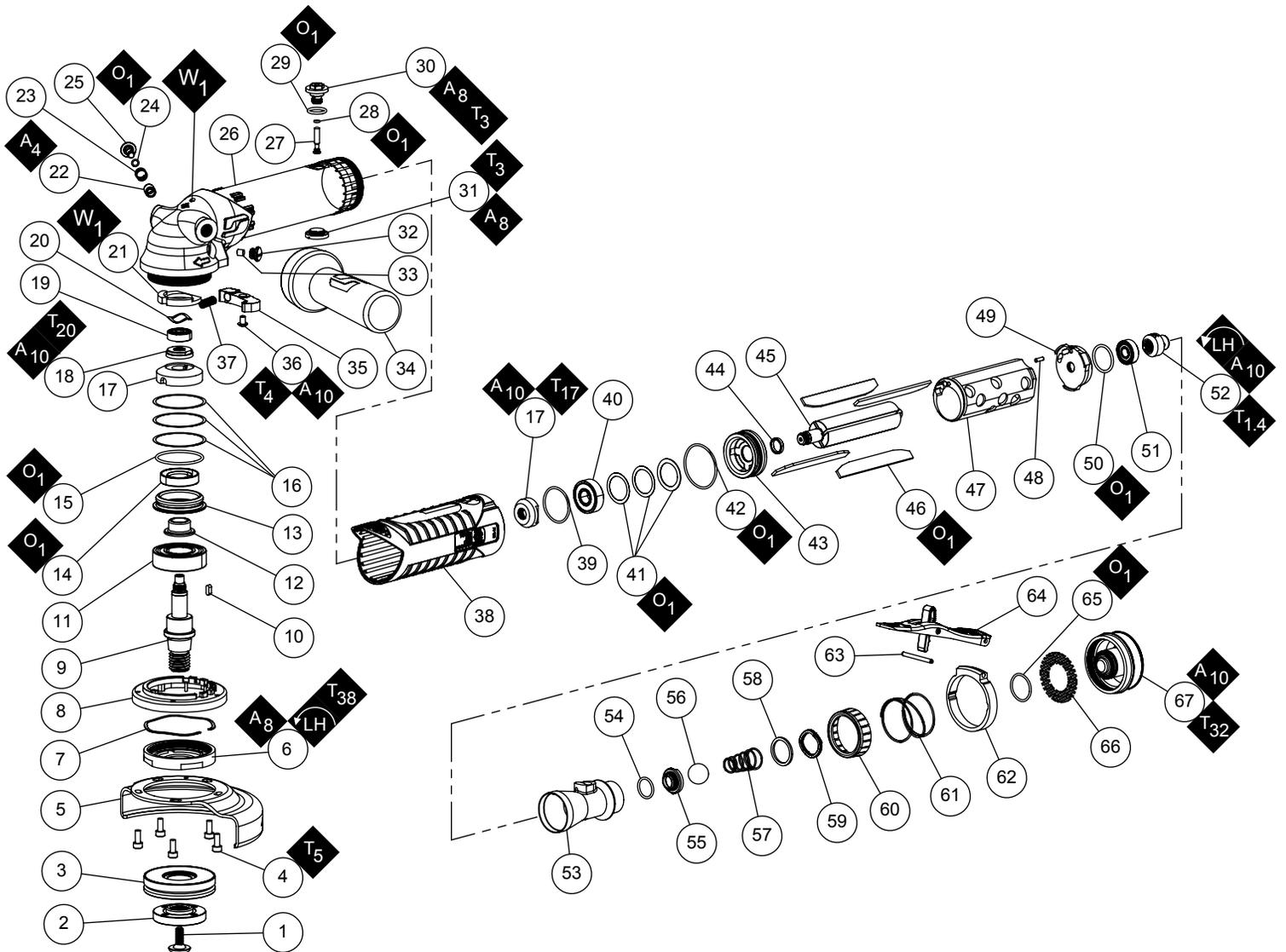
A Adhesive: A₄ = Loctite #680
A₈ = Loctite #567
A₁₀ = Loctite #243

T_x X = Torque Value (N•m)

T Torque: N•m x 8.85 = lb•in.

LH Always follow adhesive manufacturers cleaning and priming recommendations.

AR – "As Required"



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.

LIMITED
LIFETIME
WARRANTY

MACHINE SPECIFICATIONS

Model	Diameter	RPM	Autobalancer	Power	Max. Air Flow	Air Pressure	Spindle	Weight	Height	Length
58901	4.5" (115 mm)	13,000	Yes	2.3 hp (1.7 kw)	107 SCFM (3030 SLPM)	90 PSIG (6.2 Bars)	5/8"-11	4.7 lbs. (2.1 kg)	4" (100 mm)	9.5" (242 mm)
58903	5" (125 mm)	12,000		2.2 hp (1.6 kw)				4.8 lbs. (2.2 kg)		

Additional Specifications: Air Inlet Thread 3/8" NPT • Hose I.D. 1/2" (10 mm)
Visit dynabrade.com for your model's current vibration and sound data.

OPTIONAL ACCESSORIES



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



Overhose

- 3 ft. long tube with clamp.
- Reduces noise.

Part No. 59716



Dynabrade Air Lube

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

Part No. 95821: 4 oz. (118 ml)

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



Whip Hose

- 1/2" diameter air line with 3/8" NPT Male fitting on one end, 1/2" NPT Female fitting on the other end.

Part No. 59702: 5 feet



Tune-Up Kit

- Contains high and medium wear parts.

Part No. 96817

*Gears sold separately.

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

DYNABRADE, INC.

www.dynabrade.com

8989 Sheridan Drive • Clarence, NY 14031-1419 • Phone: (716) 631-0100 • Fax: 716-631-2073 • International Fax: 716-631-2524
© DYNABRADE, INC., 2025 PRINTED IN USA

