For Serial No. 00D1000 and Higher

Parts Page Reorder No. PD10•34
Effective September, 2010
Supersedes PD00•51

.5 hp Die Grinder

Straight-Line, 3" Extension, Rear Exhaust

SAFETY, OPERATION AND MAINTENANCE - SAVE THIS DOCUMENT, EDUCATE ALL PERSONNEL

Model	RPM	Collet
53510	18,000	1/4"
53511	20,000	1/4"
53512	18,000	6 mm
53513	20,000	6 mm



Model 53511 Shown

DYNABRADE 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 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.

	**Read and understand tool manual before work starts to reduce risk of injury to operator, visitors, and tool.**	**Practice safety requirements. Work alert, have proper attire, and do not operate tools under the influence of alcohol or drugs.**	
	**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 statues, ordinances and/or regulations.**	
	**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 INSTRUCTIONS



CAREFULLY READ AND UNDERSTAND PNEUMATIC TOOL SAFETY GUIDELINES (P/N 00001676) 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: Die Grinders are ideal for deburring, deflashing, surface preparation, cleaning and finishing using proper accessories.

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.

OPERATING & MAINTENANCE INSTRUCTIONS

Important: To keep tool safe, a Preventative Maintenance Program is recommended. The program should included inspection of the tool and all related accessories and consumables, including air lines, pressure regulators, filters, oilers, etc. refer to ANSI 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 as diagramed below.
- Each tool should have its own dedicated hose connected to an air supply manifold. Quick disconnects should be installed at the manifold in an effort to reduce contamination into the 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: **10681** 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 one drop of air lube per minute for each 20 SCFM (example: if the tool specification states 40 SCFM, set the drip rate on the filter-lubricator to 2 drops per minute) Dynabrade Air Lube (P/N **95842**: 1pt/473ml) is recommended.

MAINTENANCE:

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 Dynabrade Air Lube (P/N **95842**: 1pt/473ml) 10W/NR. (1 Drop per 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.)
- 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 or once a week which ever comes first:

- Check free speed of tool without the abrasive accessory mounted. Measure RPM (speed) with tachometer and with an air pressure gage connected at the air inlet of the tool. Maximum air pressure while the tool is running should read 90 PSIG (6.2 Bar). If a governed tool is operating at a higher speed than the RPM marked on the tool housing, the tool must be serviced and corrected before use. A non-governed tool may exceed the RPM marked on the tool by 10% when operated at free speed with no accessories.

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.
- DO NOT clean or maintain tools with chemicals that have a low flash point (example: WD-40®).
- 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.
- After maintenance is performed on tool, add a few drops of Dynabrade Air Lube (P/N **95842**) 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).
- 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:

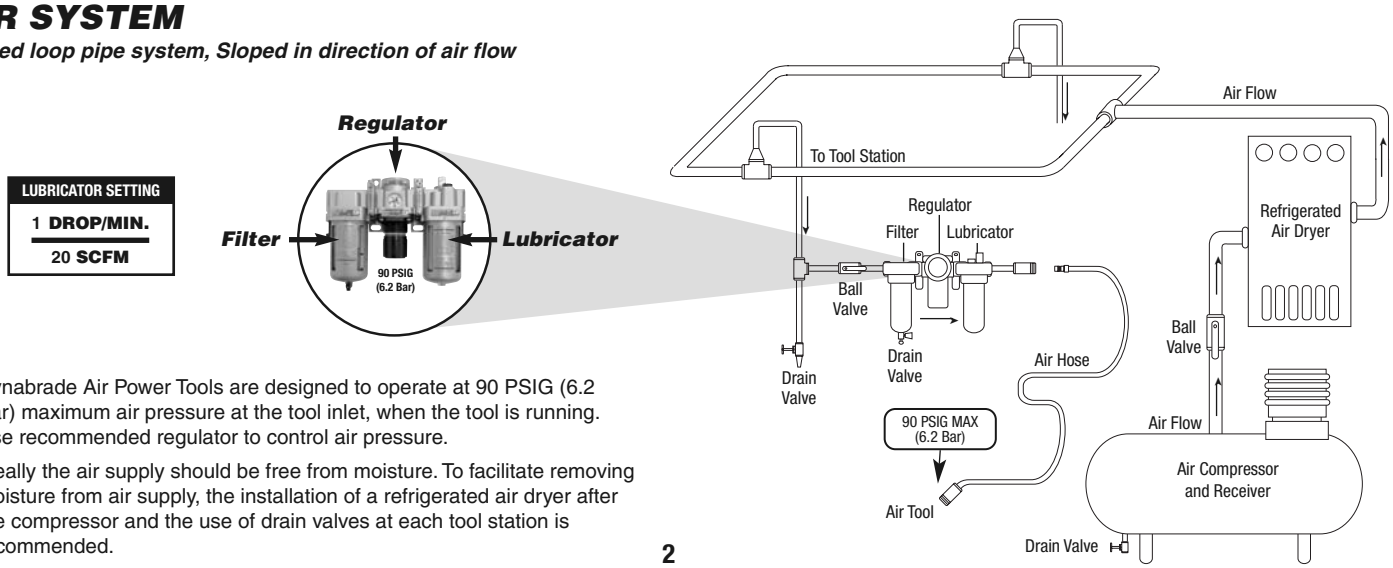
When tool has reached its end of useful service, disassemble tool into its primary components (i.e. steel, aluminum and plastic part) and recycle or discard per local, state and/or federal regulations as to not harm the environment.

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.

AIR SYSTEM

Closed loop pipe 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.

MODELS:
53510, 53511
53512, 53513

3" Extension Die Grinder
Complete Assembly

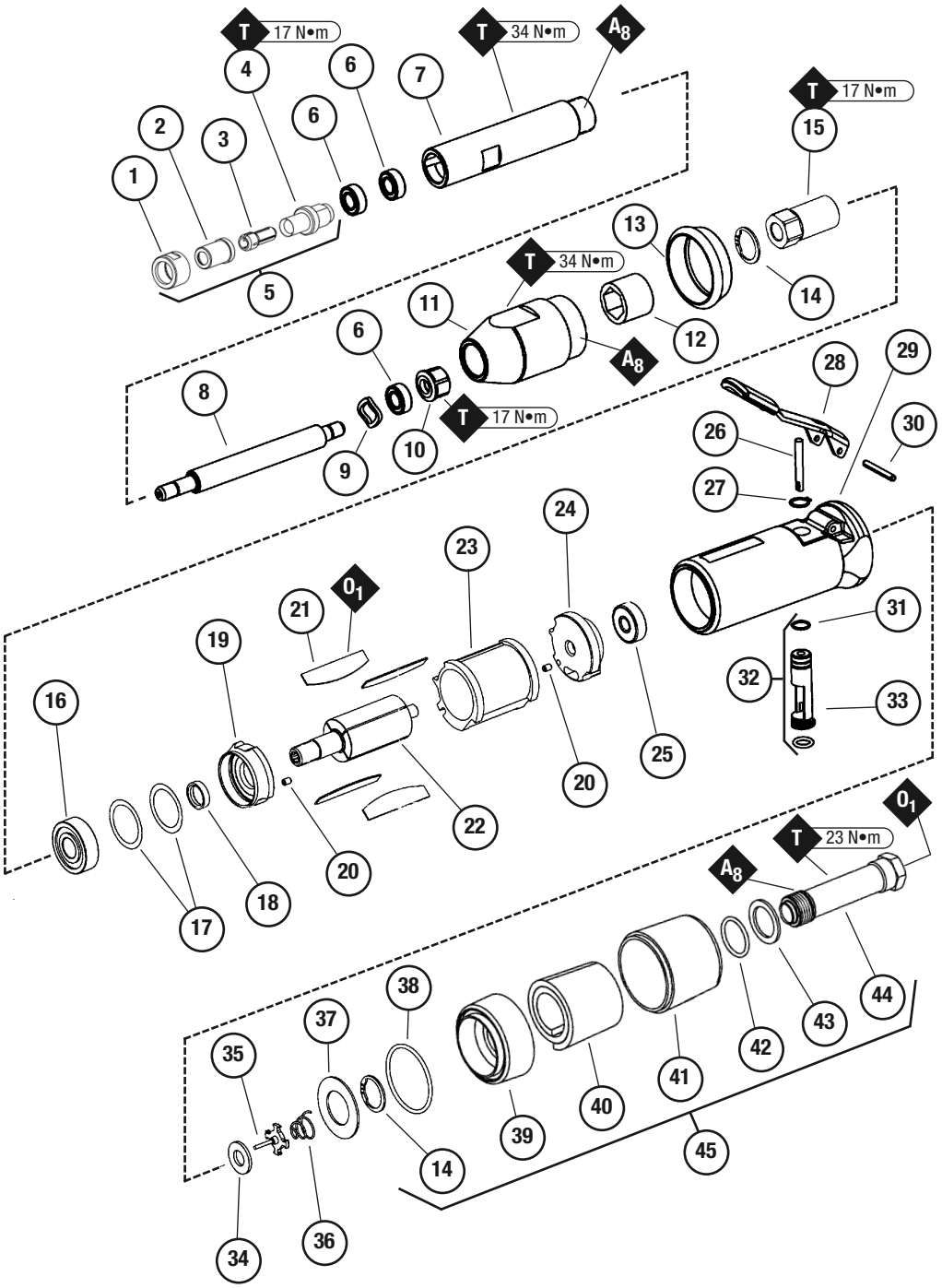
KEY

- **O** Oil: O_1 = Air Lube
- **A** Adhesive: A_8 = Loctite #567
- **T** Torque: N•m x 8.85 = In. - lbs.

Always follow adhesive manufacturers cleaning and priming recommendations.

INDEX KEY

No.	Part #	Description
1	51098	Retaining Nut
2	51107	Cap
3	01485	1/4" Collet Insert
	01497	6 mm Collet Insert
4	51105	Collet Body
5	51124	1/4" Collet Assembly
	51125	6 mm Collet Assembly
6	51078	Bearing (3)
7	53558	Spindle Housing
8	53556	Spindle
9	51075	Wavy Washer (2)
10	53551	Coupling Nut
11	53550	Adapter
12	51072	Coupler
13	53175	Collar
14	95711	Retaining Ring (2)
15	51066	Rotor Nut
16	01007	Bearing
17	01121	Shim Pack (3/pkg.)
18	01010	Spacer
19	01008	Front Bearing Plate
20	50767	Pin (2)
21	01011	Vanes (4/pkg.)
22	01148	Rotor
23	01013	Cylinder
24	01245	Rear Bearing Plate
25	01015	Bearing
26	01477	Valve Stem
27	95558	Retaining Ring
28	57344	Throttle Lever
	01089	Safety Throttle Lever (Optional)
29	53495	Housing - **53510**
	53496	Housing - **53511**
	53497	Housing - **53512**
	53498	Housing - **53513**
30	01017	Spring Pin
31	95730	O-Ring
32	01247	Speed Regulator Assy.
33	01024	O-Ring
34	01464	Seal
35	01472	Tip Valve
36	01468	Spring
37	01642	18,000 Rpm Air Control Ring
	01606	20,000 Rpm Air Control Ring
38	95438	O-Ring
39	94521	Muffler Base
40	94528	Felt Muffler
41	94522	Muffler Cap
42	95375	O-Ring
43	94526	Spacer
44	94523	Inlet Adapter
45	94519	Muffler Assembly



LIFETIME WARRANTY

To validate Dynabrade Lifetime Warrant, 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

Additional Specifications: Air Inlet Thread 1/4" NPT • Hose I.D. Size 3/8" (10 mm)
Sound Level is the pressure measurement outlined in ISO regulation ISO-15744

Model Number	RPM	hp (Watt)	Sound dB(A)	Air Consumption	Collet Size	Weight	Length	Height
53510	18,000	.5 (373)	75	30 SCFM (850 LPM)	1/4"	2.5 (1.1)	12-7/8 (327)	1-7/8 (49)
53511	20,000	.5 (373)	77	31 SCFM (878 LPM)	1/4"	2.5 (1.1)	12-7/8 (327)	1-7/8 (49)
53512	18,000	.5 (373)	75	30 SCFM (850 LPM)	6 mm	2.5 (1.1)	12-7/8 (327)	1-7/8 (49)
53513	20,000	.5 (373)	77	31 SCFM (878 LPM)	6 mm	2.5 (1.1)	12-7/8 (327)	1-7/8 (49)

OPTIONAL ACCESSORIES



96007 Motor Tune-Up Kit
- Includes assorted parts to help maintain and repair motor.

REFERENCE CONTACT INFORMATION

1. **American National Standards Institute – ANSI**
   25 West 43rd Street
   Fourth Floor
   New York, NY 10036
   Tel: 1 (212) 642-4900
2. **Government Printing Office – GPO**
   Superintendent of Documents
   Attn. New Orders
   P.O. Box 371954
   Pittsburgh, PA 15250-7954
   Tel: 1 (202) 512-1803
3. **Power Tool Institute, Inc.**
   P.O. Box 818
   Yachata, Oregon 97498-0818
   Tel: 1 (503) 547-3185
4. **European Committee for Standardization**
   Rue de Stassart 36
   B - 1050 Brussels, Belgium

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