

Dynaline File Board Sander

Two-Handed Air-Powered, 2,400 Strokes Per Minute

PD22-06
September, 2022
Replaces PD00•85

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

Model	Pad Size	Description
51350	2-3/4" x 11"	Tool Only
51351	Long File	Versatility Kit

SANDER



**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, and Safety Requirements for Abrading Materials with Coated Abrasive Systems – ANSI B7.7, 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 ISO 11148 series 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: Dynaline File Boards are intended for use in industrial applications and used only by skilled, trained professionals in accordance with the instructions in this manual. This pneumatic tool is designed for sanding and finishing a variety of materials including wood, metal, plastic, fiberglass, solid surfaces, composites, rubber, glass and stone. Use in any other manner or with other accessories could lead to unsafe operating instructions.

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:

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 lubricator at 2 drops per minute). Dynabrade Air Lube (P/N 95842: 1pt. 473ml.) is recommended.
4. An Air Line Filter-Regulator-Lubricator must be used with this air tool to maintain all warranties. 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. Operates 55 SCFM @ 100 PSIG has 1/2" NPT female ports. If Dynabrade air lube is not compatible with paint system it may be substituted with a compatible air tool lubricant with water absorbing properties to prevent internal components from rusting.
5. Use only genuine Dynabrade replacement parts. To reorder replacement parts, please specify the Model #, Serial # and RPM of your machine.
6. A Motor Tune-Up Kit (P/N **96531**) is available which includes assorted parts to help maintain motor in peak operating condition. Please refer to Dynabrade's Preventative Maintenance Schedule for a guide to expectant life of component parts.
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, ketones, chlorinated hydrocarbons or nitro carbons.

DISASSEMBLY/ASSEMBLY INSTRUCTIONS

IMPORTANT: Manufacturer's warranty is void if tool is disassembled before warranty expires. A complete Tune-Up Kit, (P/N **96531**), is available which includes assorted parts to maintain motor in tip-top shape. A Motor Repair Kit (P/N **96046**) is available which contains special tools for disassembly/assembly of machine.

GEARBOX DISASSEMBLY:

1. Disconnect tool from power source.
2. Invert machine and secure in vice, using **57092** Collar (Supplied in **96046** Repair Kit) or padded jaw.
3. Disconnect sanding pad by removing **95885** Screws (2) with a 3 mm wrench.
4. Remove gearbox assembly by removing **95642** Screws (2) and **95641** Hex Nuts with a phillips head screw driver.
5. Carefully separate **57427** Gearbox Halves. Remove one gearbox half, making sure no parts fall to the ground.
6. Remove and set aside the **57433** Slide-Board on non-vacuum models (**57432** on vacuum models), **57431** Transfer Pinion (2), **57438** Counterweight Assembly, **57445** Needle Bearing and the other **57427** Gearbox half.
7. Clean grease off old dirty components and inspect for damaged parts.

MOTOR DISASSEMBLY:

1. Insert **56058** Lock Ring Wrench (Supplied in **96046** Repair Kit) into corresponding tabs of lock ring and unscrew. Pull with a side to side action to remove motor from housing. Motor may now be serviced.
2. Remove **54467** Retaining Ring/Planetary Gear Assembly using (2) **50679** 26 mm wrenches (Supplied in **96046** Repair Kit). Set aside. **Note:** See Planetary Gear Disassembly.
3. Remove **57056** Rear Plate by holding onto **51354** Cylinder and pressing **54470** Rotor Pinion out of **01206** Bearing.
4. Remove **57113** Blade (5), rotor set and **56047** Rotor Key.
5. Disassemble **57437** Front Plate by pressing **54470** Rotor Pinion through front plate. **Note:** One **01139** Bearing will remain on rotor pinion. To remove press pinion through remaining bearing.
6. Press **01206** Rear Bearing from **57056** Bearing Plate.

PLANETARY GEAR DISASSEMBLY:

1. Insert **54470** Rotor Pinion into the center of the planetary gear assembly. Install the **56047** Rotor Key into the key way of the rotor pinion, and hold the rotor pinion in a soft aluminum or bronze jaw vice.
2. Place a 26 mm wrench on the flats of the **54467** Retaining Ring and an adjustable 3 mm pin spanner wrench into the two empty holes on the **57430** Cam Assembly. Turn counterclockwise to loosen and remove

the cam assembly.

3. Remove **95593** Set Screw from retaining ring/planetary gear assembly using a 5/64" allen wrench.
4. Remove **54465** Planetary Carrier by pressing out from **01139** Bearing. **06213** Gears (2) and **54475** Shafts (2) can now be removed from planetary carrier.
5. Remove **54468** Ring Gear by tapping retaining ring on a hard surface. Once the ring slides towards the front, it will be necessary to use your fingers to remove it the rest of the way. **Note:** If hard to remove, heat may be applied to retaining ring and pliers used to remove gear.
6. Press **01139** Bearing from **54467** Retaining Ring.

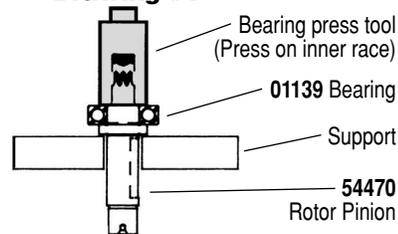
Motor disassembly complete.

PLANETARY GEAR REASSEMBLY:

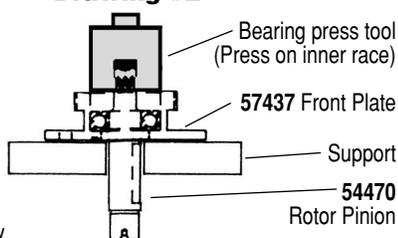
Important: Be certain all parts are cleaned, properly greased and in good repair before reassembly.

1. Press **01139** Bearing into **54467** Retaining Ring.
2. Place **54468** Ring Gear into **54467** Retaining Ring lining up one of the notches with set screw hole.
3. Hand tighten **95593** Set Screw in place using 5/64" hex key.
4. Install lightly greased planetary carrier. Place **54475** Shafts into gears.
5. Slide entire planetary carrier assembly into **54467** Retaining Ring (1/4"-28 female thread facing down).
6. Insert **54470** Rotor Pinion into the center of the planetary gear assembly. Install **56047** Rotor Key into the key way of the rotor pinion.
7. Apply 1 drop of #271 Loctite® (or equivalent) to the threads of **57430** Cam Assembly.
8. Place a 26 mm wrench on the flats of the **54467** Retaining Ring and an adjustable 3 mm pin spanner wrench into the two empty holes on the **57430** Cam Assembly. Turn clockwise to install the cam assembly.

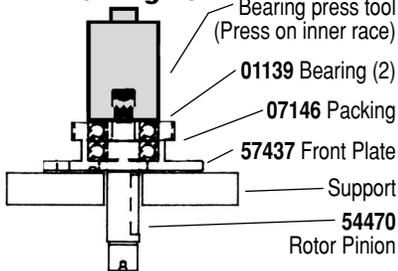
Drawing #1



Drawing #2



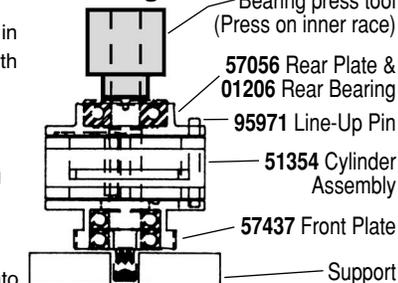
Drawing #3



MOTOR REASSEMBLY:

1. Press **01139** Bearing onto rotor pinion until seated against shoulder as shown in drawing 1.
2. Press assembly into **57437** Front Bearing Plate as shown in drawing 2 and check for smooth rotation.
3. Place **07146** Packing in front plate bore and press **01139** Bearing into bore onto packing as shown in drawing 3.
4. Invert rotor pinion in support. Install **56047** Rotor Key and **57113** Blade and Rotor Set onto rotor pinion. Use as many shims as needed to achieve a 0.001" gap between the rotor and the front bearing plate. **Note:** Blades should be lightly lubricated with Dynabrade Air Lube P/N **95842** (or equivalent) before installation.

Drawing #4



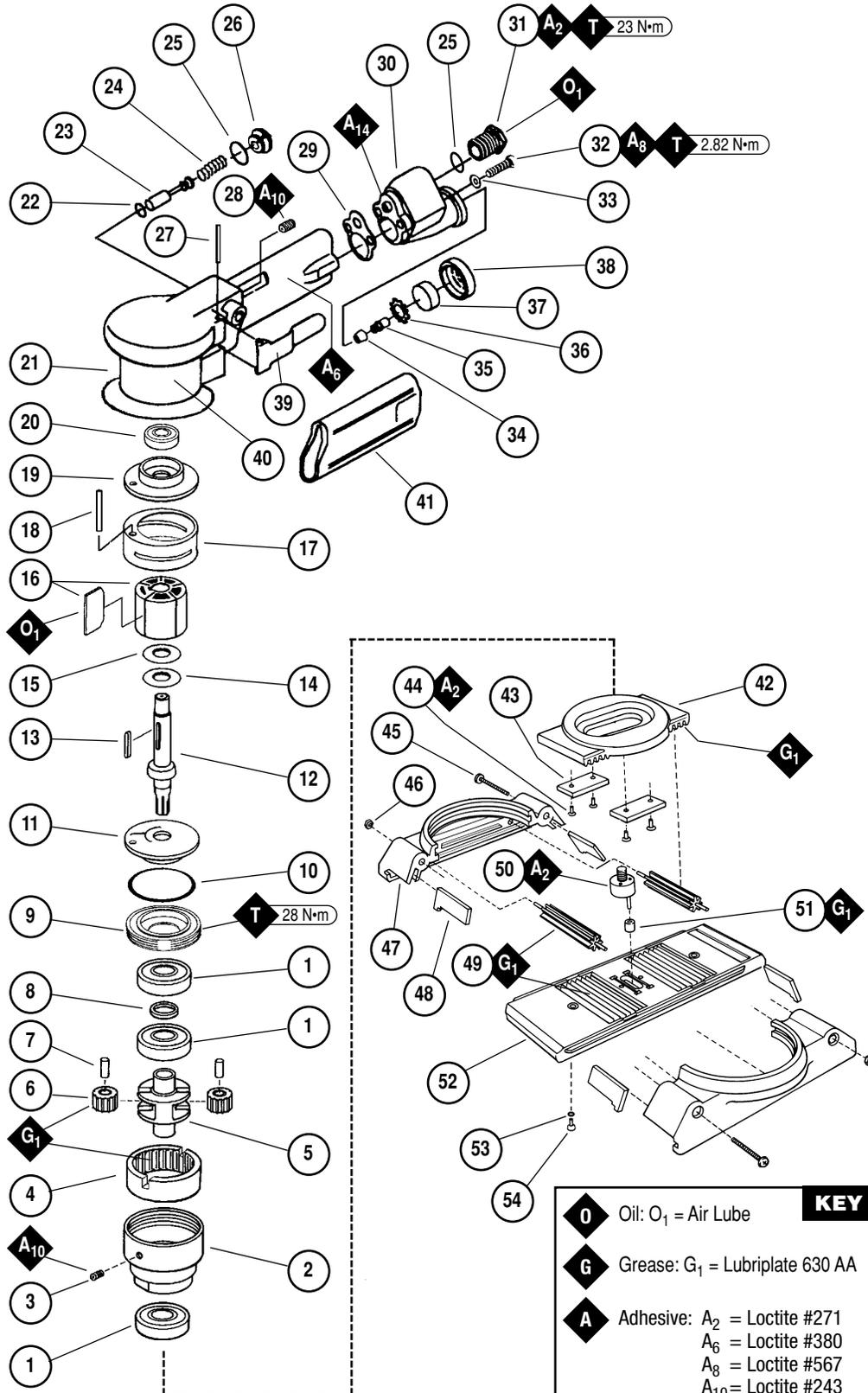
5. Place **51354** Cylinder Assembly over rotor. The "short" line-up pin goes toward the front plate.
6. Place **57056** Rear Plate (with **01206** Bearing pressed into place) over shaft and "long" end of line-up pin. Press fit in place as shown in drawing 4.

Models

51350 - 11" Long File, Tool Only
51351 - Versatility Kit

Dynaline File Board Sander

Two-Handed Air-Powered, 2,400 Strokes Per Minute



ITEM	P/N	DESCRIPTION	QTY.
1	01139	BEARING	3
2	54467	RETAINING RING	1
3	95593	SET SCREW	1
4	54468	RING GEAR	1
5	54465	PLANETARY CARRIER	1
6	06213	GEAR (INCLUDING 01033 BEARING)	2
7	54475	SHAFT	2
8	07146	PACKING	1
9	56046	LOCK RING	1
10	50659	LOCK RING SEAL	1
11	57437	FRONT BEARING PLATE	1
12	54470	ROTOR PINION	1
13	56047	ROTOR KEY	1
14	95988	SHIM	1
15	95972	SHIM	2
16	57113	ROTOR/BLADE SET (5/PKG.)	1
17	51354	CYLINDER	1
18	95971	LINE-UP PIN	1
19	57056	REAR BEARING PLATE	1
20	01206	BEARING	1
21	54183	MOTOR HOUSING	1
22	01020	O-RING	1
23	56029	VALVE STEM	1
24	54192	VALVE SPRING	1
25	95523	O-RING	2
26	56076	REAR BEARING PLATE	1
27	01017	PIN	1
28	95020	SET SCREW	1
29	54193	GASKET	1
30	54186	ADAPTER	1
31	01494	INLET BUSHING	1
32	95720	SCREW	2
33	01791	LOCK WASHER	2
34	54689	ADAPTER	1
35	56091	NOZZLE	1
36	54199	MUFFLER SEAT	1
37	54195	MUFFLER	3
38	54194	MUFFLER CAP	1
39	54187	THROTTLE LEVER	1
40	51358	HOUSING COVER	1
41	54188	RUBBER GRIP	1
42	57438	COUNTER WEIGHT	1
43	57439	RAIL	2
44	96027	SCREW	4
45	95462	SCREW	2
46	95641	NUT	2
47	57424	GEAR BOX	2
48	57429	FELT SEAL	4
49	57431	TRANSFER PINION	2
50	57430	CAM ASSEMBLY	1
51	57445	NEEDLE BEARING	1
52	57433	SLIDE BOARD	1
53	01211	LOCK WASHER	2
54	95885	SCREW	2

KEY

- O** Oil: O₁ = Air Lube
- G** Grease: G₁ = Lubriplate 630 AA
- A** Adhesive: A₂ = Loctite #271
A₆ = Loctite #380
A₈ = Loctite #567
A₁₀ = Loctite #243
A₁₄ = Loctite #518
- T** Torque: N•m x 8.85 = lb•in.
- T_x** X = Torque Value (N•m)
(N•m x 8.85 = lb•in.)

Always follow adhesive manufacturers cleaning and priming recommendations.

DISASSEMBLY/ASSEMBLY

INSTRUCTIONS: (CONTINUED FROM PAGE 2)

1. Secure motor housing in vice, using **57092** Collar or padded jaws. Spread 2-3 drops of pneumatic tool oil around the housing bore for ease of insertion of motor assembly. Slide motor assembly into secured housing. **Note:** Be certain line-up pin enters the hole in the bottom of the housing.
8. Tighten lock ring with **56058** Lock Ring Tool to 28 N·m/250 in. - lbs.

GEARBOX REASSEMBLY:

1. Place **57428** Sliders in gearbox halves.
2. Install **57429** Felt Seals into gear housing halves. Using Dynabrade's **95542** Gear Grease (or equivalent), grease entire slider including, transfer pinion holes and grooves.
3. Grease slide board gear pack and bearing pocket. Grease **57445** Bearing. Place bearing on **57430** Cam Assembly. Grease counterweight gear packs.
4. Place counterweight over **57430** Cam Assembly with tool inverted and exhaust at six o'clock. Place cam assembly bearing at three o'clock. Take one gear box half and slide it onto the housing grooves.
5. Place transfer pinion on counter weight gear rack, sliding pinion shaft partially into mated hole on slider. Repeat for second shaft.
Important: Make sure counter weight is positioned dead center of cam assembly when transfer pinions are installed. This ensures correct timing.
6. Making sure needle bearing is still located at three o'clock, place slide board railing into groove on slider while aligning needle bearing into bearing channel on slider board.
7. Place other gearbox half onto grooves of motor housing, making sure all parts align. Press both gear box halves together.
8. Install **95842** Screws and **95841** Nuts and tighten. Reinstall Pad.

LIMITED LIFETIME WARRANTY

Dynabrade portable pneumatic power tools are rigorously inspected and performance tested in our factory before shipping to our customers. If a Dynabrade tool develops a performance problem and an inherent defect is found during normal use and service, Dynabrade will warrant this tool against defects in workmanship and materials for the limited lifetime of the tool.

MACHINE SPECIFICATIONS

Model	Power	Sound Level	Air Consumption	Strokes Per Minute	Stroke	Weight	Length	Height
51350	.25 hp (186 W)	79 dB(A)	18 SCFM (510 LPM)	2,400	3/8" (10 mm)	3.1 lb. (1.4 kg)	11" (279 mm)	3.8" (95 mm)

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

OPTIONAL ACCESSORIES



Grease and Grease Gun

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

95541: Push-type grease gun.

95544: 2.5oz. (74ml) tube.



96531 Motor Tune-Up Kit:

- Includes assorted parts to help maintain and repair motor.



96046 Motor Repair Kit:

Includes special tools for proper disassembly/assembly of the machine.

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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VALVE & SPEED REGULATOR DISASSEMBLY/ASSEMBLY:

1. Secure housing in vice using **57092** Collar or padded jaw.
2. Remove **56076** Valve plug. Remove the **95523** O-Ring.
3. Remove **54192** Spring, and **56029** Valve Stem with O-Ring.
4. Install new **95523** O-Ring onto **56076** Valve Plug, and new **01020** O-Ring onto **56029** Valve Stem.
5. Place valve stem into housing, alone with **54192** Spring.
6. Install **56076** Valve Plug and **95523** O-Ring.

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

Important: 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 penetrate motor.

Loctite® is a registered trademark of Loctite Corp.

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.