

# Dynaline File Board Sander

**Models:**

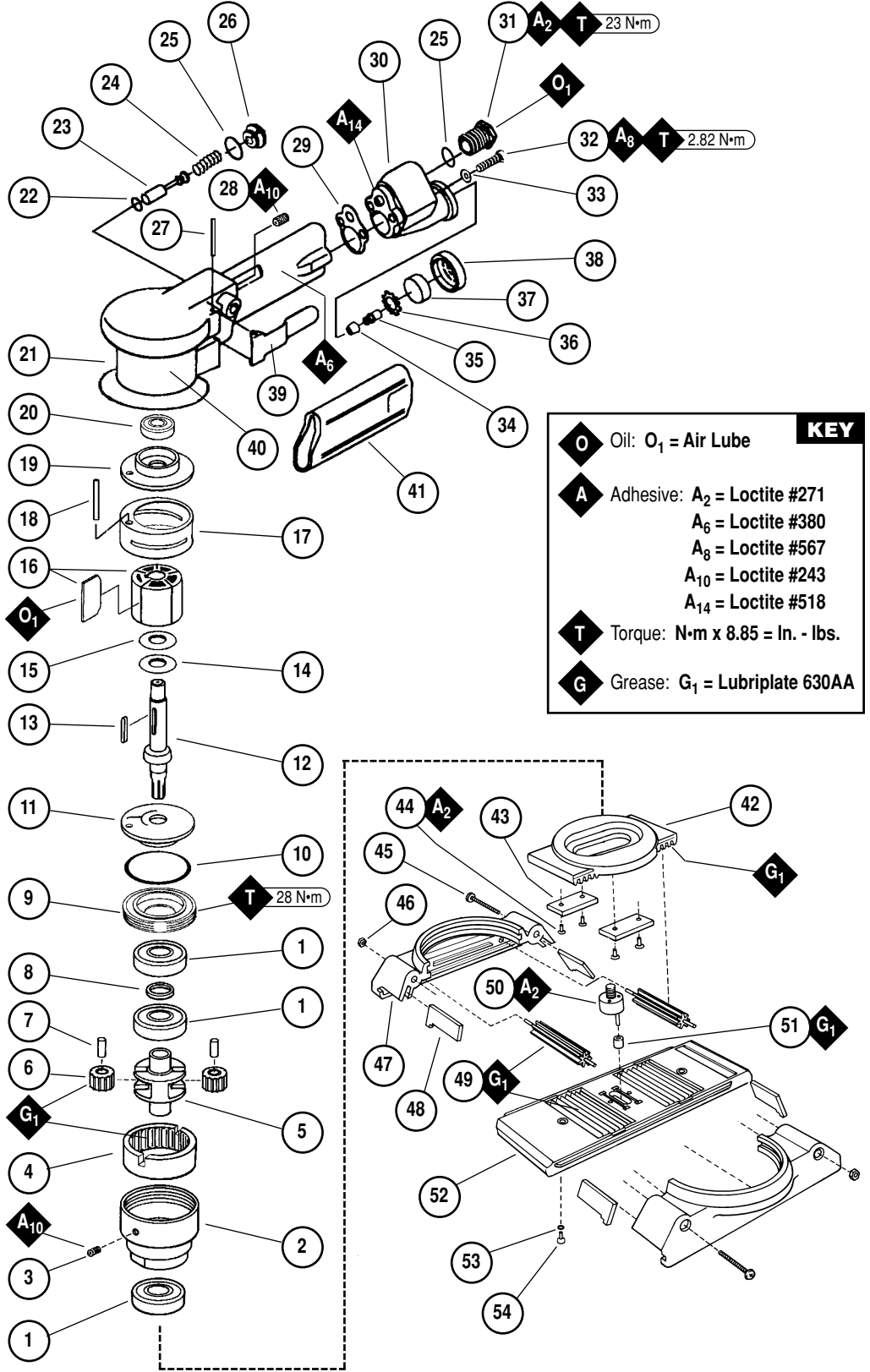
- 51350 – 11" Long File**
- 51351 – Versatility Kit**

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

## WARNING

Always operate, inspect and maintain this tool in accordance with the Safety Code for portable air tools (ANSI B186.1) and any other applicable safety codes and regulations. Please refer to Dynabrade's Warning/Safety Operating Instructions for more complete safety information.

Index Key		
No.	Part #	Description
1	01139	Bearing (3)
2	54467	Retaining Ring
3	95593	Set Screw
4	54468	Ring Gear
5	54465	Planetary Carrier
6	06213	Gear(2) (incl. 01033 Bearing)
7	54475	Shaft (2)
8	07146	Packing
9	56046	Lock Ring
10	50659	Lock Ring Seal
11	57437	Front Bearing Plate
12	54470	Rotor Pinion
13	56047	Rotor Key
14	95988	Shim
15	95972	Shim (2)
16	54491	Rotor/Blade Set (5/pkg.)
17	51354	Cylinder
18	95971	Line-Up Pin
19	57056	Rear Bearing Plate
20	01206	Bearing
21	54183	Motor Housing
22	01020	O-Ring
23	56029	Valve Stem
24	54192	Valve Spring
25	95523	O-Ring (2)
26	56076	Valve Plug
27	01017	Pin
28	95020	Set Screw
29	54193	Gasket
30	54186	Adapter
31	01494	Inlet Bushing
32	95720	Screw (2)
33	01791	Lock Washer (2)
34	54689	Adapter
35	56091	Nozzle
36	54199	Muffler Seat
37	54195	Muffler (3)
38	54194	Muffler Cap
39	54187	Throttle Lever
40	51358	Housing Cover
41	54188	Rubber Grip
42	57438	Counter Weight
43	57439	Rail (2)
44	96027	Screw (4)
45	95642	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
51	57445	Needle Bearing
52	57433	Slide Board
53	01211	Lock Washer (2)
54	95885	Screw (2)



KEY	
<b>O</b>	Oil: O <sub>1</sub> = Air Lube
<b>A</b>	Adhesive: A <sub>2</sub> = Loctite #271 A <sub>6</sub> = Loctite #380 A <sub>8</sub> = Loctite #567 A <sub>10</sub> = Loctite #243 A <sub>14</sub> = Loctite #518
<b>T</b>	Torque: N·m x 8.85 = In. - lbs.
<b>G</b>	Grease: G <sub>1</sub> = Lubriplate 630AA

# Important Operating, Maintenance and Safety Instructions

Carefully read all instructions before operating or servicing any Dynabrade® Abrasive Power Tool.

**Warning:** Hand, wrist and arm injury may result from repetitive work motion and overexposure to vibration.

**Important:** All Dynabrade Rotary Vane air tools must be used with a Filter-Regulator-Lubricator to maintain all warranties.

## Operating Instructions:

**Warning:** Eye, face, respiratory, sound and body protection must be worn while operating power tools. Failure to do so may result in serious injury or death. Follow safety procedures posted in workplace.

1. With power source disconnected from tool, securely fasten abrasive/accessory on tool.
2. Install air fitting into inlet bushing of tool. **Important:** Secure inlet bushing of tool with a wrench before attempting to install the air fitting to avoid damaging valve body housing.
3. Connect power source to tool. Be careful **not** to depress throttle lever in the process.
4. Check tool speed with tachometer. If tool is operating above 8,250 RPM the tool should be serviced to correct the cause before use.

## 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: **10681** 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, keytones, chlorinated hydrocarbons or nitro carbons.

## Safety Instructions:

Products offered by Dynabrade should not be converted or otherwise altered from original design without expressed written consent from Dynabrade, Inc.



- **Important:** User of tool is responsible for following accepted safety codes such as those published by the American National Standards Institute (ANSI).
- Operate machine for one minute before application to workpiece to determine if machine is working properly and safely before work begins.
- Always disconnect power supply before changing abrasive/accessory or making machine adjustments.
- Inspect abrasives/accessories for damage or defects prior to installation on tools.
- Please refer to Dynabrade's Warning/Safety Operating Instructions Tag (Reorder No. 95903) for more complete safety information.
- **Warning:** Hand, wrist and arm injury may result from repetitive work, motion and overexposure to vibration.

## 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.

Model Number	Length Inch (mm)	Height Inch (mm)	Weight Pound (kg)	Air Flow Rate SCFM (LPM)	Sound Level	Motor HP (W)	Air Pressure PSIG (Bars)	Stroke Inch (mm)	Strokes Per Minute
51350	11" (279)	3-3/4" (95)	3.1 lbs. (1.4)	18 (510)	85 dBA	.25 (186)	90 (6.2)	3/8" (10)	2,400

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

(PD00•85)

# Disassembly/Assembly Instructions – Dynaline Sander

**Important:** Manufacturers 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 54491 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:

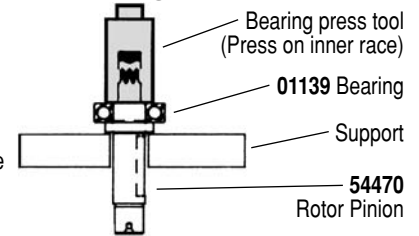
**Important:** Be certain all parts are cleaned, properly greased and in good repair before reassembly.

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.

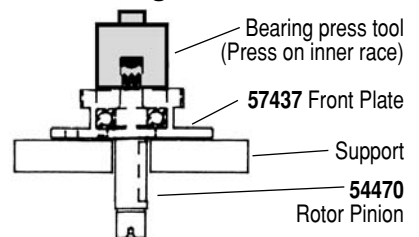
## Motor Reassembly:

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 54491 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
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.

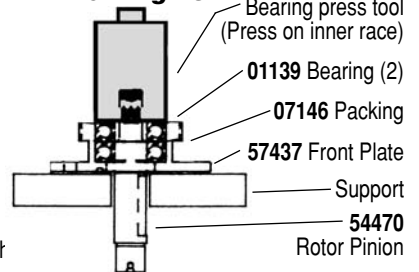
**Drawing #1**



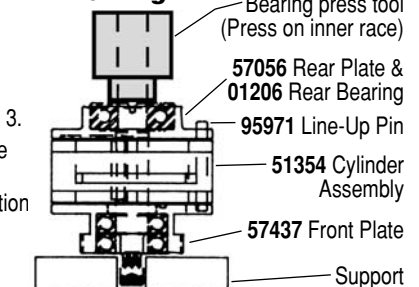
**Drawing #2**



**Drawing #3**



**Drawing #4**



(continued on next page)

## Disassembly/Assembly Instructions – Dynaline Sander (continued)

- 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.
- Tighten lock ring with **56058** Lock Ring Tool to 28 N•m/250 in. - lbs.

### Gearbox Reassembly:

- Place **57428** Sliders in gearbox halves.
- Install **57429** Felt Seals into gear housing halves. Using Dynabrade's **95542** Gear Grease (or equivalent), grease entire slider including, transfer pinion holes and groves.
- Grease slide board gear pack and bearing pocket. Grease **57445** Bearing. Place bearing on **57430** Cam Assembly. Grease counterweight gear packs.
- 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 groves.
- 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.
- 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.
- Place other gearbox half onto grooves of motor housing, making sure all parts align. Press both gear box halves together.
- Install **95842** Screws and **95841** Nuts and tighten. Reinstall Pad.

### Valve And Speed Regulator Disassembly/Assembly:

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

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## 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.

**95542:** 10oz. (283.5g) 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.