

Models:

15300 - Basic Tool
15301 - Vacuum Tool
15302 - Versatility Kit

Dynaflex® III

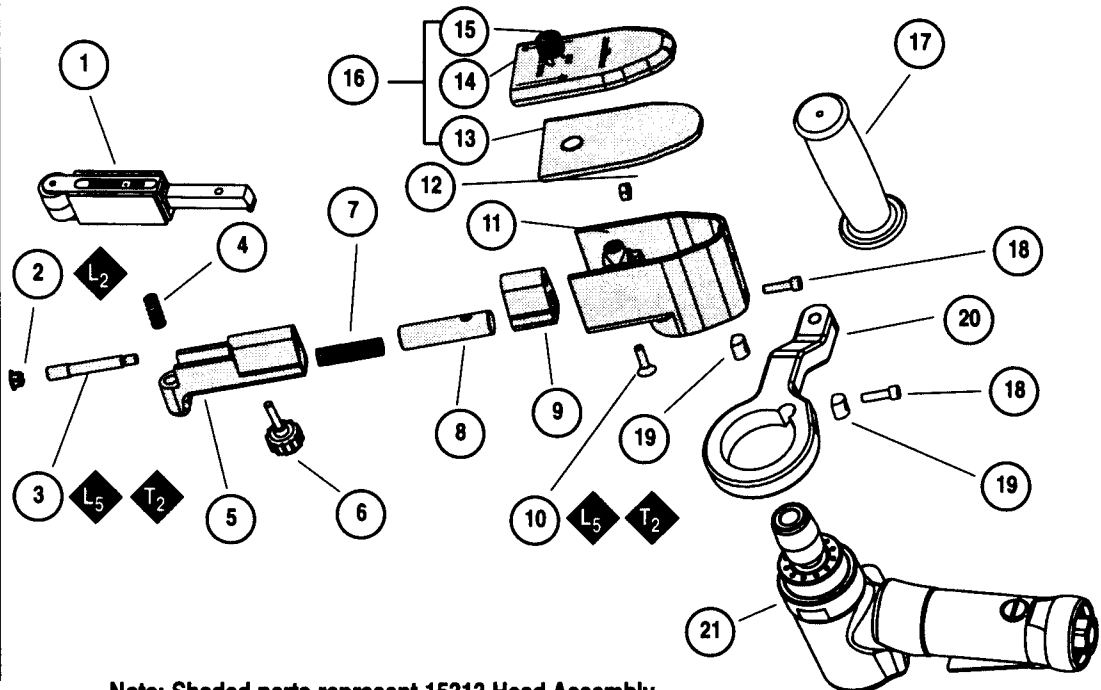
Air Motor and Machine Parts.

! 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.

15300 Tool Assembly

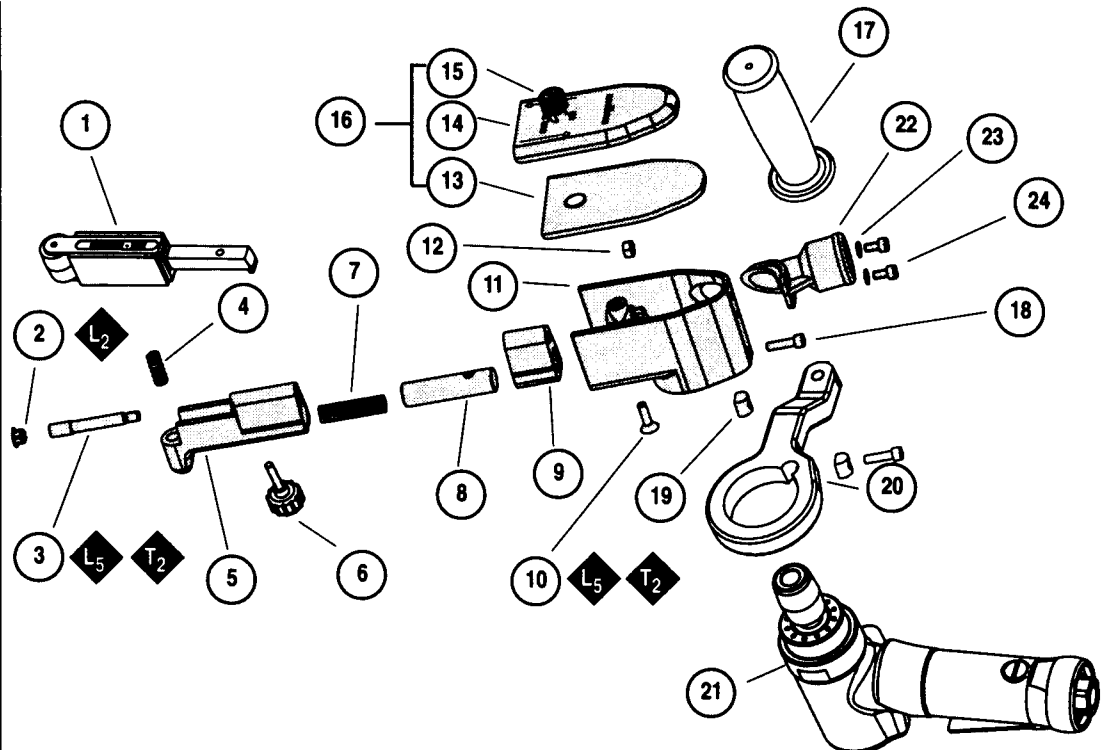
Index Key		
No.	Part	Description
1	15321	Contact Arm Assy.
2	96334	Steel Plug
3	15308	Guide Post
4	11040	Spring
5	15306	Tension Arm
6	95218	Knob Assy.
7	95426	Spring
8	15307	Tension Shaft
9	15309	Dust Cover
10	95217	Screw
11	15305	Housing
12	96335	Hex Nut
13	15311	Gasket
14	15310	Guard
15	15329	Screw
16	15312	Guard Assy.
17	53163	Handle Assy.
18	95311	Screw (2)
19	40029	Motor Lock (2)
20	15338	Handle Support
21	15331	Motor Assy.



Note: Shaded parts represent 15313 Head Assembly.

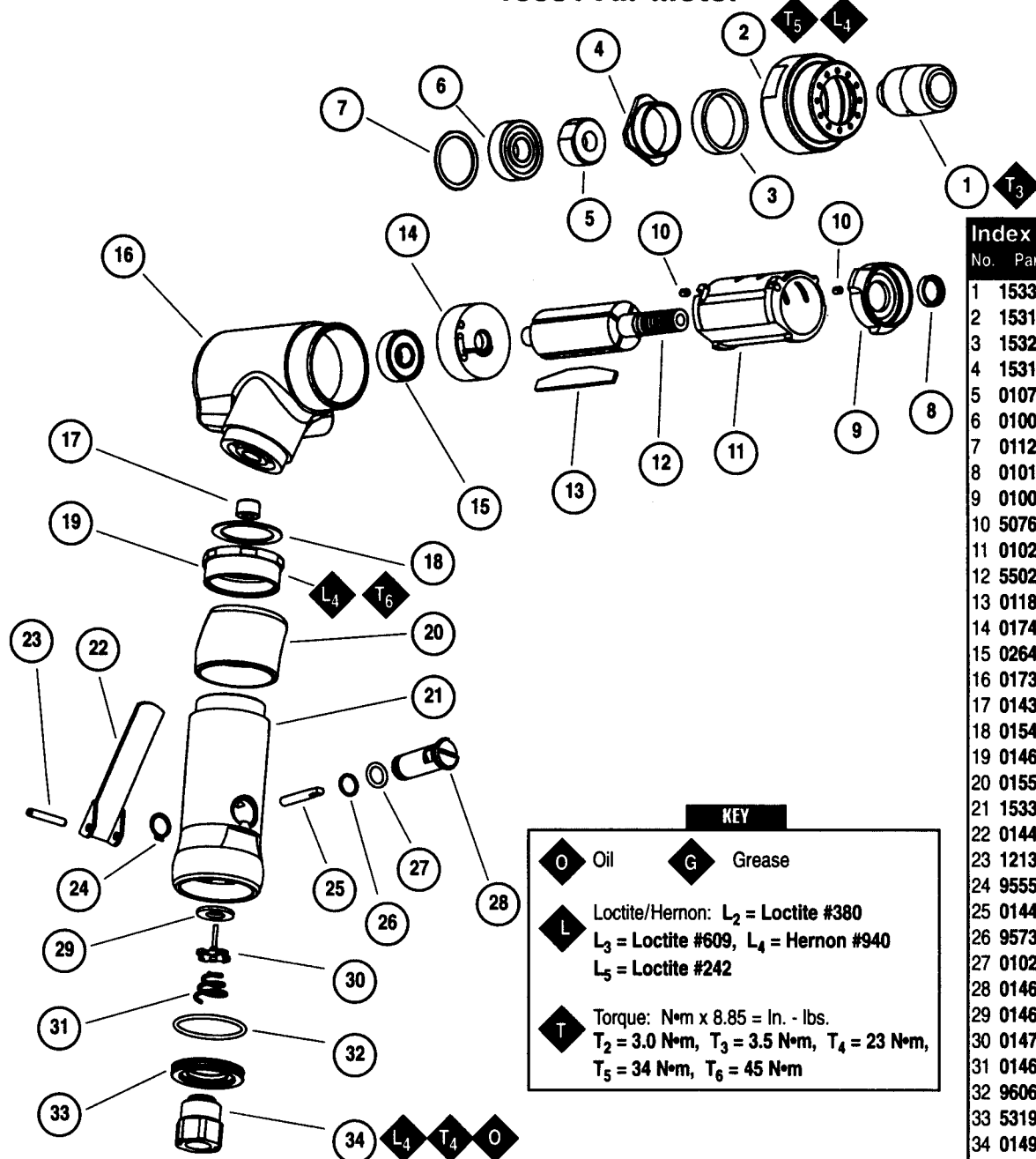
15301 Vacuum Tool Assembly

Index Key		
No.	Part	Description
1	15321	Contact Arm Assy.
2	96334	Steel Plug
3	15308	Guide Post
4	11040	Spring
5	15306	Tension Arm
6	95218	Knob Assy.
7	95426	Spring
8	15307	Tension Shaft
9	15309	Dust Cover
10	95217	Screw
11	15327	Housing
12	96335	Hex Nut
13	15311	Gasket
14	15310	Guard
15	15329	Screw
16	15312	Guard Assy.
17	53163	Handle Assy.
18	95311	Screw (2)
19	40029	Motor Lock (2)
20	15338	Handle Support
21	15331	Motor Assy.
22	15107	Vacuum Port
23	96087	Washer (2)
24	95264	Screw (2)



Note: Shaded parts represent 15335 Head Assembly.

15331 Air Motor



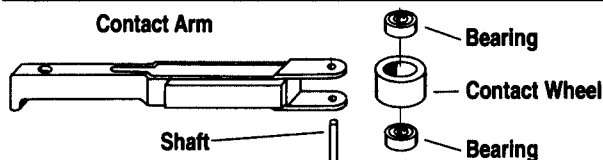
Index Key

No.	Part	Description
1	15336	Drive Wheel
2	15315	Exhaust Cover
3	15322	Felt Silencer
4	15314	Air Control Ring
5	01078	Rotor Nut
6	01007	Bearing
7	01121	Shim Pak (as req.)
8	01010	Spacer
9	01008	Bearing Plate
10	50767	Pin
11	01028	Cylinder
12	55025	Rotor
13	01185	Blade
14	01743	Bearing Plate
15	02649	Bearing
16	01739	Housing
17	01437	Screw
18	01548	Gasket
19	01461	Lock Nut
20	01558	Collar
21	15333	Housing
22	01448	Throttle Lever
23	12132	Pin
24	95558	Retaining Ring
25	01449	Valve Stem
26	95730	O-Ring
27	01024	O-Ring
28	01469	Speed Regulator
29	01464	Seal
30	01472	Tip Valve
31	01468	Spring
32	96065	O-Ring
33	53190	Block Plate
34	01494	Inlet Bushing

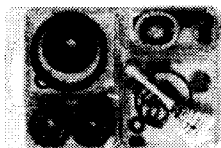
KEY

O Oil	G Grease
L Loctite/Hernon: L ₂ = Loctite #380 L ₃ = Loctite #609, L ₄ = Hernon #940 L ₅ = Loctite #242	
T Torque: N•m x 8.85 = In. - lbs. T ₂ = 3.0 N•m, T ₃ = 3.5 N•m, T ₄ = 23 N•m, T ₅ = 34 N•m, T ₆ = 45 N•m	

Contact Arms and Accessories



Part Number	Abrasive Belt Size	Contact Wheel Description	Wheel Assembly	Wheel Only	Bearing (2) Req.	Shaft
15321	18"	3/4" Dia. x 7/8" Wide	15320	15318	11052	15328
15326	24"	3/4" Dia. x 7/8" Wide	15320	15318	11052	15328



96313 Motor Tune-Up Kit:

Includes assorted parts to help maintain motor in tip-top shape.



Dynaswivel® - Model 94300 - 1/4" NPT

- Swivels 360° AT TWO PIVOT POINTS allowing the air hose to drop directly to the floor while providing superb tool handling.

Model Number	Length Inch (mm)	Height Inch (mm)	Weight Pound (kg)	Abrasive Belt Size Inch (mm)	Air Flow Rate SCFM (LPM)	Sound Level	Motor HP (W)	Motor RPM	Max. SFPM (SMPM)
All Models	13.5" (342.6)	6" (152.3)	3.3 (14.7)	1/4"/1" (6.35/ 25.4)Wx18"(457.2)L	32 (906)	87 dBA	.62 (462.3)	20,000	4550 (1,382)

Additional specifications: Air Inlet Thread 1/4" (6MM) NPT • Hose Size 3/8" (9mm) • 90 PSI (6.2 Bars)

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 air tools must be used with a Filter-Regulator-Lubricator to maintain all warranties.

Operating Instructions:

Warning: Eye, face 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 at a higher speed than the RPM marked on the tool or operating improperly, 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 air motors should be lubricated. Dynabrade recommends one drop of air lube per minute for each 10 SCFM (example : if the tool specification state 40 SCFM, set the drip rate of your filter-lubricator at 4 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: 11411 Air Line Filter-Regulator-Lubricator — Provides accurate air pressure regulation, two-stage filtration of water contaminants and micro-mist lubrication of pneumatic components. Operates 40 CFM @ 100 PSI has 3/8" NPT female ports.
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 96313) 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.

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.

One Year Warranty

Following the reasonable assumption that any inherent defect which might prevail in a product will become apparent to the user within one year from the date of purchase, all equipment of our manufacture is warranted against defects in workmanship and materials under normal use and service. We shall repair or replace at our factory, any equipment or part thereof which shall, within one year after delivery to the original purchaser, indicate upon our examination to have been defective. Our obligation is contingent upon proper use of Dynabrade tools in accordance with factory recommendations, instructions and safety practices. It shall not apply to equipment which has been subject to misuse, negligence, accident or tampering in any way so as to affect its normal performance. Normally wearable parts such as bearings, contact wheels, rotor blades, etc., are not covered under this warranty.

Disassembly/Assembly Instructions - Dynaflex® III

Important: Manufacturer's warranty is void if tool is disassembled before warranty expires.

Notice: Dynabrade strongly recommends the use of their 52296 Repair Collar (sold separately) during assembly/disassembly activities. Failure to use this collar will highly increase the risk of damage to the valve body of this tool. Please refer to parts breakdown for part identification.

To Disassemble:

1. Remove Belt Guard, abrasive belt and contact arm assembly. Loosen 95311 Screw (2) and remove housing assembly and 15338 Handle from air motor.

Motor Disassembly:

1. Secure tool in a padded vise using 52296 Repair Collar or Padded Jaws. **Important:** Do not over tighten vise or housing could be damaged.
2. Twist the drive wheel counterclockwise and remove. Using a wrench remove 15315 Exhaust Cover (twist counterclockwise). Remove silencers.
3. Pull motor assembly from housing. Fasten a bearing separator around the 01028 Cylinder end, nearest the 01743 Rear Bearing Plate.
4. Place the bearing separator on the table of the arbor press, so that the spindle end of the motor is pointing towards the floor.
5. Using a 3/16" diameter drive punch as a press tool, press the rear portion of the 55025 Rotor out of the 02649 Rear Bearing.

Disassembly/Assembly Instructions - Dynabrade® III (continued)

6. Remove **01008** Front Bearing Plate, cylinder, blades, (4) and **01010** Spacer from rotor. **Note:** **01008** Front Bearing Plate, **01007** Front Bearing and **01010** Spacer are a slip fit onto rotor. Press **02649** Rear Bearing from **01743** Rear Bearing Plate.
7. With the motor now disassembled, secure the rotor body in a soft jaw vise. Remove the **01078** Rotor Nut.

Motor disassembly complete.

Valve Body Disassembly:

1. Reposition motor housing in vise so inlet bushing is facing upwards.
2. Remove **01494** Inlet Bushing from valve body housing. Using needle nose pliers, remove spring, tip valve and seal.
3. Using a 2.5mm diameter drift pin and a hammer, tap **12132** Pin out from housing and remove throttle lever.
4. Remove **95558** Retaining Ring and push **01469** Speed Regulator from Housing. **Note:** To disassemble valve body from motor housing, peel back **01558** Collar to expose **01461** Lock Nut. Unscrew lock nut/valve body from motor housing (left hand thread).

To Reassemble - Motor Assembly:

Important: Make sure parts are clean and in good condition before reassembling.

1. Place **55025** Rotor in padded vise with threaded spindle facing upwards. Slip **01010** Spacer onto rotor.
2. Place a .002" shim into **01008** Front Bearing Plate as an initial spacing and slip **01007** Bearing into plate (**Note:** Shim Pak contains .001" and .002" shims.)
3. Install bearing/bearing plate assembly onto rotor. Tighten **01078** Rotor Nut onto Rotor (torque to 17 N•m/150 in. - lbs.).
4. Check clearance between rotor and bearing plate by using a .001" feeler gauge. Clearance should be at .001" to .0015". Adjust clearance by repeating steps 1-4 with different shim if necessary.
5. Once proper rotor/gap clearance is achieved, install well lubricated **01185** Blades (4) into rotor slots. Dynabrade recommends their air lube P/N **95842**.
6. Install cylinder over rotor. Be sure air inlet holes of cylinder face away from bearing plate and that the **50767** Pin in the front bearing plate aligns correctly with the pin-hole in the cylinder.
7. Press **02694** Rear Bearing into **01743** Rear Bearing Plate. Press bearing/bearing plate assembly onto rotor. Be sure that pin and air inlet holes line-up with pin slot and air inlet holes in cylinder. **Important:** Fit must be snug between bearing plates and cylinder. A loose fit will not achieve the proper preload of motor bearings. If too tight, rotor will not turn freely and must then be lightly tapped at press fit end so it will turn freely while still maintaining a snug fit.
8. Secure housing in vise using **52296** Repair Cover or padded jaws so motor cavity faces upwards.
9. Install motor assembly into housing (be sure motor drops all the way in). Tighten exhaust cover onto motor housing (torque 34 N•m/300 in. - lbs.).
10. Motor adjustment must now be checked. With motor housing still mounted in vise, pull end of rotor and twist (10-15 lbs. force), rotor should turn freely without drag. If drag or rub is felt, then increase preload or remove shim. Also, push end of rotor and twist (10-15 lbs. force), rotor should turn freely without drag. If drag or rub is felt, then deload or add shim.
11. Tighten **15336** Drive Wheel onto rotor (torque 3.38 N•m/30 in. - lbs.).

Motor assembly is complete.

Valve Body Assembly:

1. Insert **01469** Speed Regulator with valve stem and o-rings installed, into housing, secure with **95558** Retaining Ring.
2. Place seal into housing. Using tweezers or needle nose pliers, place the tip valve into the housing so that the pin goes into the valve stem hole of regulator assembly. Place **01468** Spring into housing with small end towards valve assembly.
3. Install **96065** O-Ring onto **53190** Block Plate and insert into back of housing with counterbore on block plate facing housing.
4. Apply Hemon #940 PST Pipe Sealant (or equivalent) to threads of inlet bushing, torque 23.0 N•m/200 in. - lbs.
5. Install throttle lever and **12132** Pin. Remove from vise.

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

Housing Assembly:

1. With **40029** Motor Locks in place, install handle support, and air motor assembly onto belt housing and secure in place by tightening **95311** Motor Lock Screw. Complete assembly by installing contact arm assembly, abrasive belt and belt guard.

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 PSI. 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.

Note: Throttle lever is preset at the factory at an 1:00 o'clock position.

Important: The regular maintenance of any air tool will contribute to greater efficiency of tool and will prolong tool life. The failure of quality pneumatic air 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. Frequent drainage of water traps in air lines is recommended. Each tool on each drop should also be equipped with a secondary air processing unit. This consists of an in-line Filter-Regulator-Lubricator. All Dynabrade air tools must be used with a Filter-Regulator-Lubricator to maintain all warranties. Our warranty obligation is contingent upon proper use of our tools and cannot apply to equipment which has been subject to misuse such as unclean air, wet air or a lack of lubrication during the use of the tool. Loctite® is a registered trademark of the Loctite Corp.

Housing Angle Adjustment:

1. Disconnect power source.
2. To pivot housing, loosen **95311** Motor Lock Screw on housing with the supplied 3/16" hex wrench (P/N - **95134**).
3. Pivot housing to desired angle and retighten the **95311** Motor Lock Screw.

Visit our new Web Site On-Line: <http://www.dynabrade.com>

