

**Effective Serial Number Reference Table**

Model Number	Serial Number
40320, 40321	36300
40326	1284
40330	3001
40335	1129

**Models:**

- 40320 – Standard Machine**
- 40326 – 20-1/2" Long Belt Machine**
- 40330 – Vacuum Machine**
- 40335 – "NWN" Dynafite II**

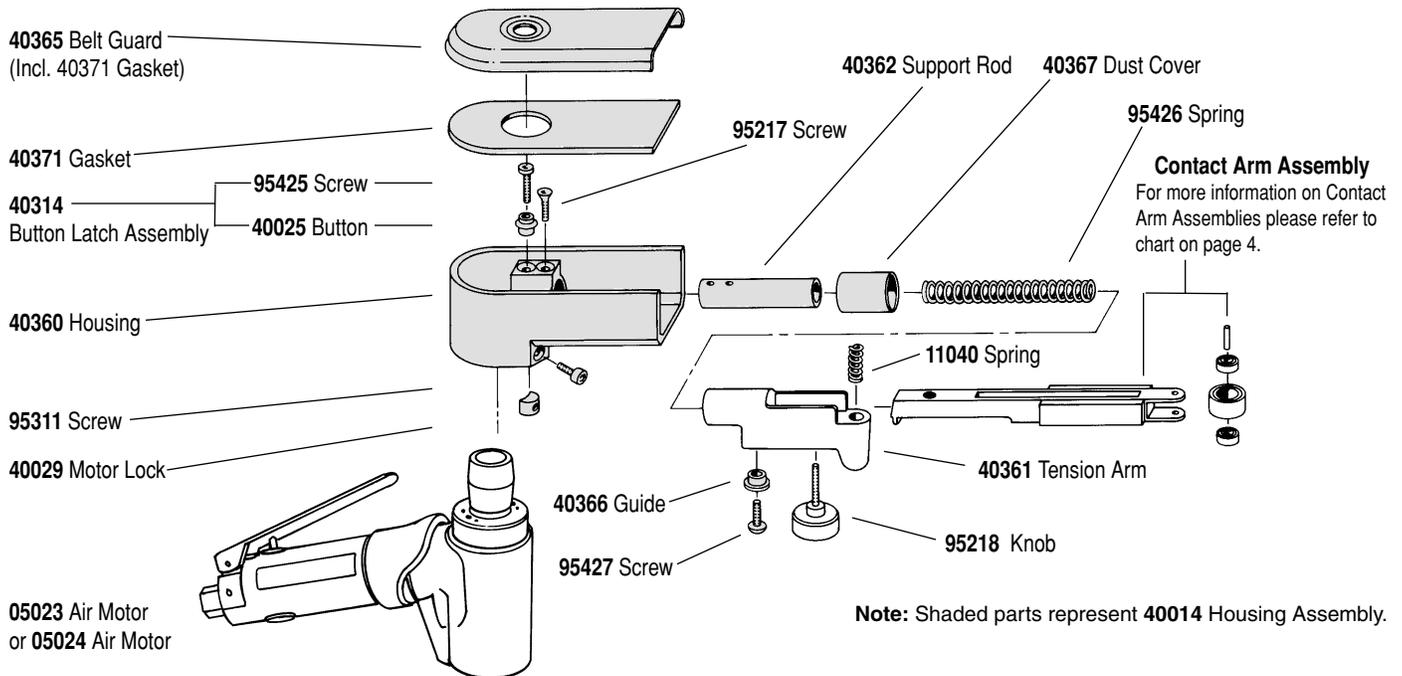
# Dynafite® II

## Motor and Machine Parts

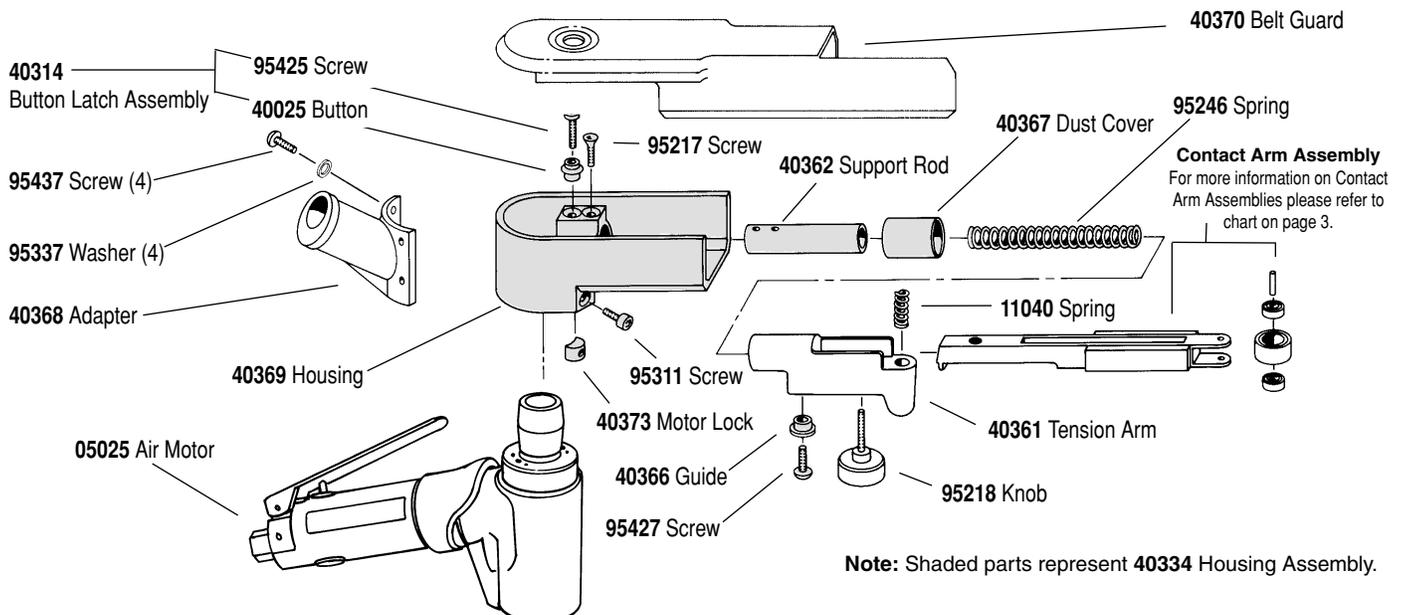


Always operate, inspect and maintain this tool in accordance with the Safety Code for portable air tools (ANSI B186.1) and any other applicable safety codes and regulations. Please refer to Dynabrade's Warning/Safety Operating Instructions for more complete safety information.

### Models: 40320 Standard Machine, 40335 "NWN" Machine



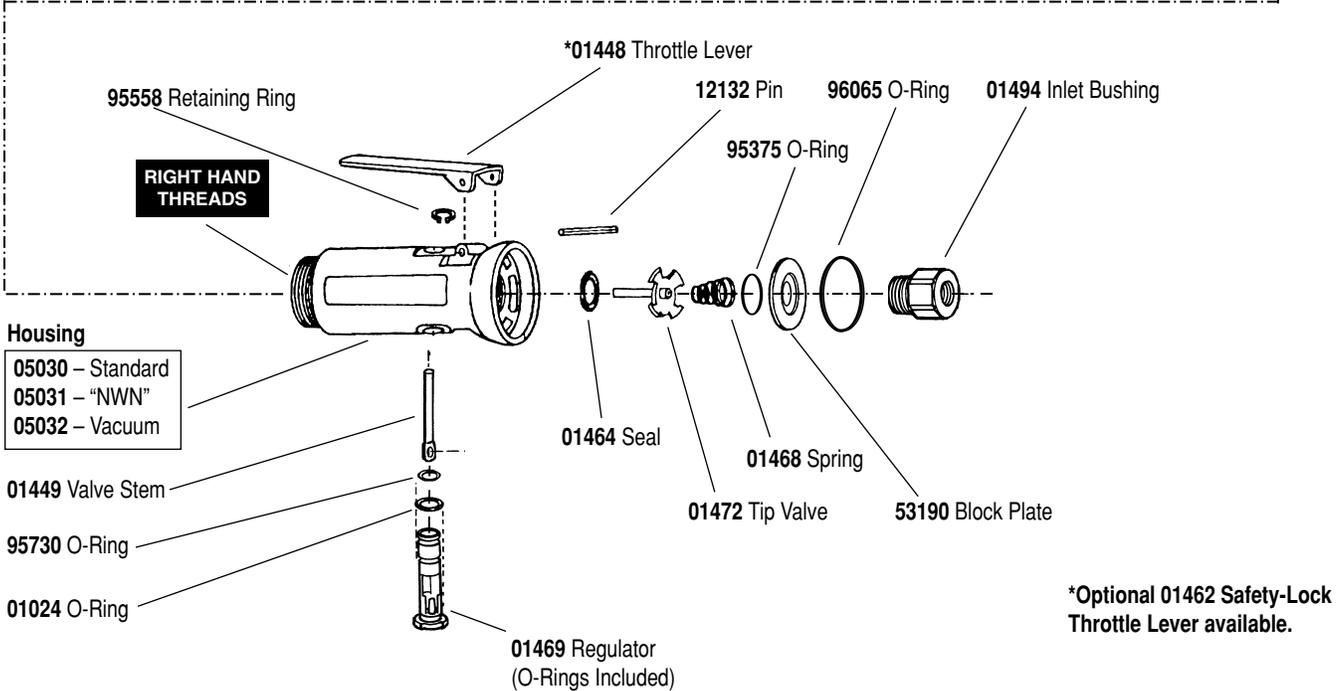
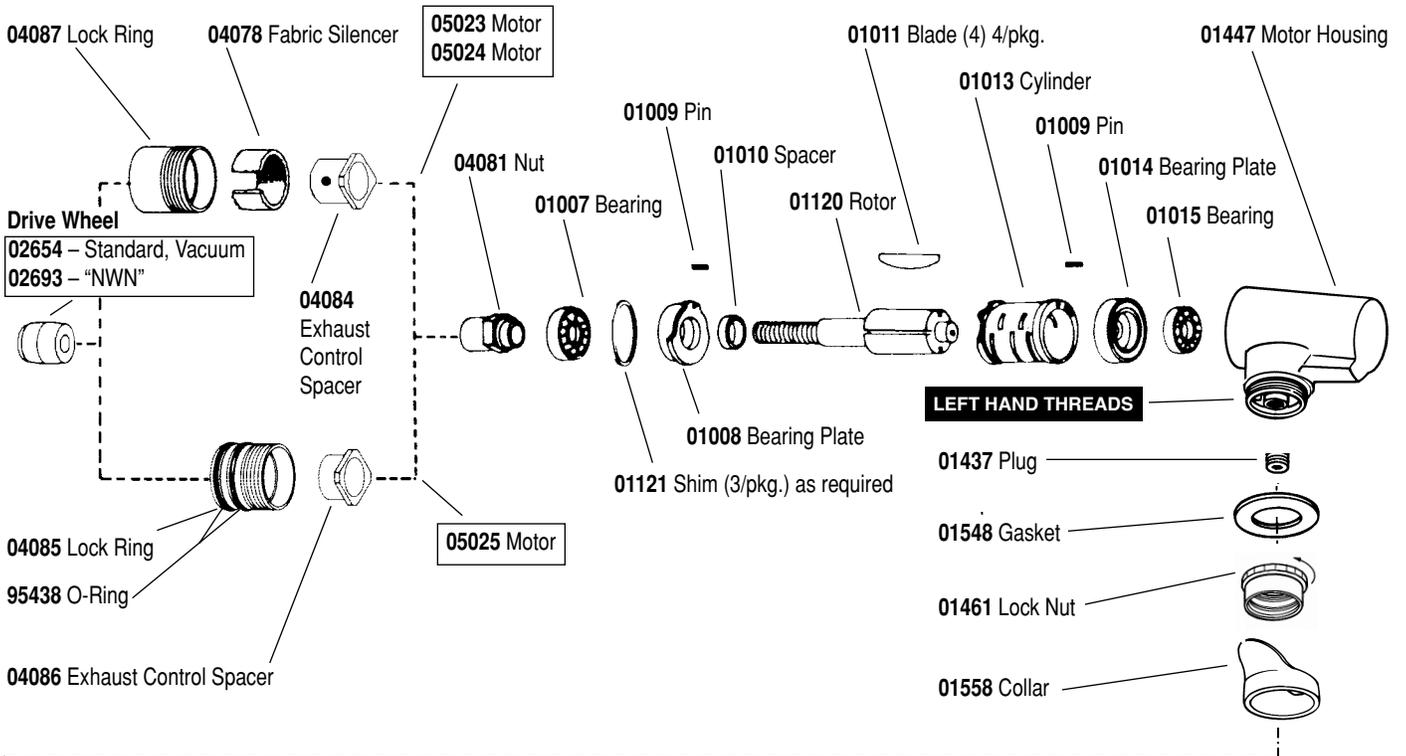
### Model: 40330 Vacuum Machine



See page 2 for 05023, 05024 and 05025 Motor Assemblies.

**05023 — Air Motor for Standard Machine • 05024 — Air Motor for “NWN” Machine  
05025 — Air Motor for Vacuum Machine**

US PAT. D-265, 172; 4,368,597; 4,411,106



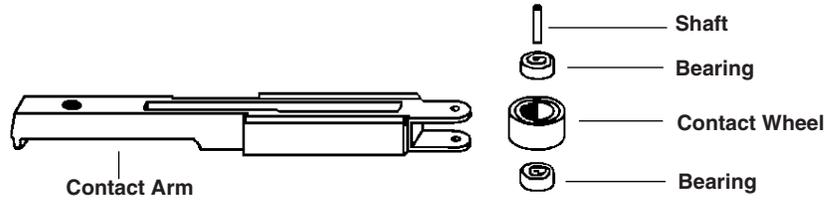
**ATTENTION**

The “NWN” tool is specifically designed for use with abrasive impregnated “non-woven nylon” belts and is equipped with a **02693** Rubber-Coated Drive Wheel. Use with coated abrasive belts tends to gouge the rubber drive wheel and is not recommended.

Versatile Air Motors detach from tools in seconds. Convert to Die Grinder by adding optional 1/4" collet (**50061**). Convert to Drill by adding a 1/4" chuck (**53032**). See page 7 for Conversion Instructions.

# Dynafite® II Contact Arm Assemblies

Contact Wheel Assembly—Includes wheel, bearing and shaft.



Dynafite® II Standard Contact Arms							
Part Number	Abrasive Belt Size	Contact Wheel Description	Comments	Contact Wheel Assembly	Contact Wheel Only	Bearing (2) Req.	Shaft
11200	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	"Stroke-Sander" Arm; 1/2" W Platen	11088 (2)	11077 (2)	11052 (4)	11055 (2)
*11201	1/2" x 18"	5/16" Dia. x 3/8" W Steel	1/2" W Platen	11068	11067	11051	11054
11202	1/4" x 18"	5/8" Dia. x 1/8" W Rubber	1/4" W Platen	11074	11073	11052	11053
11203	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	1/2" W Platen	11078	11077	11052	11054
11204	1/4" or 1/2" x 18"	1" Dia. x 3/8" W Radiused Rubber	Loose Belt Application	11080	11079	11052	11054
11206	5/8" or 3/4" x 18"	3/4" Dia. x 5/8" W Rubber	3/4" W Platen	11282	11281	11052	11285
*11220	5/8" or 3/4" x 18"	5/16" Dia. x 5/8" W Steel	Polish Turbine Blades	11352	11353	11051	11285
11280	1/4" x 18"	1" Dia. x 3/8" W Tapered Urethane	No Platen/Offset Design	11086	11085	11052	11054
11286	1/2" x 24"	5/8" Dia. x 3/8" W Rubber	1/2" W Platen	11078	11077	11052	11054
11287	5/8" or 3/4" x 20-1/2"	3/4" Dia. x 5/8" W Rubber	3/4" W Platen	11282	11281	11052	11285
*11300	1/2" x 18"	1/4" Dia. x 3/8" W Steel	Polish Turbine Blades	11332	11333	11334	11335
*11301	1/2" x 18"	5/16" Dia. x 3/8" W Steel	Polish Turbine Blades	11068	11067	11051	11054
11304	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	"Stroke-Sander" Arm-1/2" W Platen	11078	11077	11052	11054
11312	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	H.D. Version of 11203 Arm	11078	11077	11052	11054
11320	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	"Offset Arm" – prevent gouging.	11078	11077	11052	11054
11322	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	Contains two 11395 Guide Wheels – Prevents Undercutting	11090	11077	11052	95610
11325	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	1/2" W Steel Platen	11078	11077	11052	11054
11326	5/8" or 3/4" x 18"	3/4" Dia. x 5/8" W Rubber	H.D. Version of 11206 Arm	11282	11281	11052	11285
11329	1/2" x 44"	5/8" Dia. x 3/8" W Rubber	1/2" W Platen/17" Reach	11078	11077	11052	11054
*11341	1/2" x 18"	5/16" Dia. x 3/8" W Rubber	Polish Turbine Blades	11342	11343	11334	11335
*11350	3/4" x 34"	5/16" Dia. x 5/8" W Steel	Bus Bar Arm/11" Reach	11352	11353	11051	11285
**42642	5/8" or 3/4" x 18"	3/4" Dia. x 5/8" W Rubber	3/4" W Platen	42652	11281	01187	11285
**42644	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	"Stroke-Sander" Arm-1/2" W Platen	42653	11077	01187	11054
**42646	1/4" or 1/2" x 18"	1" Dia. x 3/8" W Radiused Rubber	No Platen/Offset Design	42654	11079	01187	11054
**42650	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	1/2" W Platen	42653	11077	01187	11054

\*Run at 45 PSI. Not recommended for Electric Dynafite® II. \*\*For use with Wet Dynafite® II. Contains sealed bearings.

See page 6 for Dynafite® II Abrasives and Accessories.

# Assembly/Disassembly for Dynafite® II

**Important:** A #2 Arbor Press is recommended for assembly/disassembly.  
**Manufacturers warranty is void if tool is disassembled before warranty expires.**

## To Disassemble:

### Housing Assembly:

1. Remove **40365** Belt Guard, abrasive belt and contact arm assembly.
2. Loosen **95311** Screw and remove air motor.
3. Loosen **95427** Screw and remove **40366** Guide, this will release **40361** Tension Arm and **95426** Spring. **Warning:** **40361** Tension Arm is spring-loaded, use caution when loosening **95427** Screw.
4. Remove **40367** Dust Cover.
5. Remove **95217** Screw, **95425** Screw and **40362** Support Rod (heating of **95217** Screw may be required. Remove **40025** Button before heating).

### Motor Assembly:

1. Secure Air Motor in a padded vise. **Important:** Do not over-tighten vise or housing could be damaged.
2. Remove Drive Wheel by inserting a 3/16" hex key through drive wheel and into the end of the **01120** Rotor/Drive Shaft.
3. Using a wrench or pliers, twist the drive wheel counterclockwise and remove.
4. Use a pin wrench to remove **04087/04085** Lock Ring (twist counterclockwise). Remove exhaust control spacer and silencer (if equipped).
5. Pull motor assembly from housing.
6. Press **01120** Rotor/Drive Shaft from **01015** Bearing and **01014** Bearing Plate.
7. Press **01015** Bearing from **01014** Bearing Plate.
8. Remove **01013** Cylinder and blades.
9. Secure **01120** Rotor in a padded vise and remove **04081** Rotor Nut (twist counterclockwise).
10. Slip off **01010** Spacer, **01008** Bearing Plate, shims and **01007** Bearing from **01120** Rotor.

### Valve Stem/Body Assembly:

1. Secure motor housing in padded vise with air inlet bushing facing upwards.
2. Unscrew **01494** Inlet Bushing from valve body and remove **53190** Block Plate and **95375** O-Ring.
3. Using needle nose pliers, remove **01468** Spring and **01472** Tip Valve. Pick out **01464** Seal.
4. Using a 2.5mm dia. drift pin, tap out **12132** Pin and remove throttle lever.
5. Remove **95558** Retaining Ring using retaining ring pliers.
6. Push **01469** Speed Regulator from housing.

## To Reassemble:

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

### Valve Stem/Body Assembly:

1. Insert **01469** Speed Regulator Assembly into valve body housing. Secure with **95558** Retaining Ring.
2. Secure valve body assembly in padded vise with air inlet facing upward and throttle lever accessible.
3. Insert **01464** Seal into housing.
4. Line up the hole in **01449** Valve Stem with the hole in the housing (looking past brass bushing). Using needle nose pliers, insert **01472** Tip Valve so that the metal pin passes through the hole in the **01449** Valve Stem.
5. Install **01468** Spring (small end first) over tip valve.
6. Lubricate **95375** O-Ring with slight amount of air-tool oil and install into **53190** Block Plate.
7. Install **53190** Block Plate, O-Ring side first, into housing.
8. Apply 1 drop of #271 Loctite (or equivalent) to threads of **01494** Inlet Bushing and install into valve body. (Torque 34.0 N•m/300 in. lbs.).
9. Install **01448** Throttle Lever and **12132** Pin. Remove valve body assembly from vise.

Continued on page 5.

## Assembly/Disassembly for Dynafile® II (continued)

### Motor Assembly:

1. Place **01120** Rotor in a padded vise.
2. Slip **01010** Spacer onto **01120** Rotor.
3. Place a .002 shim into **01008** Bearing Plate as an initial spacing (**Note: 01121** Shim Packs contain .001 and .002 shims) and slip **01007** Bearing into plate.
4. Install **01007, 01008** Bearing/Bearing Plate onto **01120** Rotor.
5. Tighten **04081** Rotor Nut onto **01120** Rotor, torque to 150 in. lbs..
6. Check the clearance between rotor and bearing by using a .001 feeler gauge, clearance should be at .001 to .0015. Adjust clearance by repeating steps 1–5 with different shim if necessary.
7. Once proper rotor/rate clearance is achieved, install well-lubricated **01011** Blades into **01120** Rotor. Dynabrade Air Lube P/N – **95842** is recommended for lubrication.
8. Install **01013** Cylinder so it rests against the **01007** Bearing Plate. (Make sure that air inlet holes of cylinder are facing away from **01007** Bearing Plate).
9. Press **01015** Bearing into **01014** Bearing Plate. Press these parts onto **01120** Rotor. Be sure that pin and air inlet holes in bearing plate line-up with pin slot and air holes in cylinder. **Important:** Fit must be snug between bearing plates and cylinder. If too tight, rotor will not turn freely. Rotor must then be lightly tapped at press fit end so it will turn freely, while still maintaining a snug fit. A loose fit will not achieve the proper preload of motor bearings.
10. Install motor assembly in housing, make sure motor drops all the way into housing. Line-up air inlet holes in **01014** Bearing Plate with air inlet holes in housing.
11. Install exhaust control spacer, silencer and O-rings (if equipped) into lock ring. Install lock ring onto housing and torque to 300 in.lbs..
12. Motor adjustment must now be checked. With motor still mounted in vise, pull end of **01120** 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 (see instructions 1–6). Also push end of **01120** Rotor and twist (10-15 lbs. force), rotor should turn freely without drag. If drag or rub is felt then deload or add shim.
13. Motor should now be tested for proper operation at 90 PSI. If motor does not operate properly, make necessary adjustments (see step 12).
14. Install Drive Wheel.

### Housing Assembly:

1. Place **40362** Support Rod into housing.
2. Apply one drop of #271 Loctite® (or equivalent) to **95217** Screw and tighten. (Refer to housing diagram for proper location of **95217** Screw).
3. Install **40637** Dust Cover onto **40362** Support Rod.
4. Lubricate (grease) inside of **40362** Support Rod and **40361** Tension Arm.
5. Install **95426** Spring into **40362** Support Rod and place **40361** Tension Arm over **95426** Spring.
6. Place **40366** Guide onto **95427** Screw, apply one drop of #271 Loctite® (or equivalent) to screw threads.
7. Compress tension arm and secure in place with **40366** Guide/**95427** Screw.
8. Adjust **95427** Screw so that **40361** Tension Arm slides freely, but not too loose.
9. Press **40025** Button onto **95425** Screw and apply one drop of #271 Loctite® to threads.
10. Place **40365** Belt Guard over **40360** Housing, tighten **95425** with **40025** Button into **40360** Housing (make sure guard does not slide around, yet loose enough to remove or install without difficulty).
11. With **40029** Motor lock in place, install air motor assembly into housing and secure in place with **95311** Screw.
12. Complete assembly by installing contact arm assembly, abrasive belt and **40365** Belt Guard.

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

**Note:** Motor should operate at between 18,000 and 20,000 RPM at 90 PSI (6.2 Bar). RPM should be checked with a reed tachometer. Before operating, we recommend that 2-3 drops of Dynabrade Air Lube P/N – 95842 (or equivalent) be placed directly into the air inlet with the throttle lever depressed.

**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.

# Abrasive Belts

Coated Aluminum Oxide				
18" Long/Unit = 200 Belts				
Grit	1/4" W	1/2" W	5/8" W	3/4" W
40	90220	90240	90260	90250
60	90221	90241	90261	90251
80	90222	90242	90262	90252
120	90223	90243	90263	90253
180	90224	90244	90264	90254
220	90225	90245	90265	90255
320	90226	90246	90266	90256
500	90227	90247	90267	90257
20-1/2" Long/Unit = 200 Belts				
Grit	1/4" W	1/2" W	5/8" W	3/4" W
60	90303	90317	90341	90331
80	90304	90318	90342	90332
120	90305	90319	90343	90333
24" Long/Unit = 200 Belts				
Grit	1/4" W	1/2" W		
40	90415	90441		
60	90417	90443		
80	90419	90445		
100	90420	90446		
120	90421	90447		
180	90423	90449		
220	90424	90451		
320	90425	90453		
500	90426	90455		
34" Long/Unit = 200 Belts				
Grit		3/4" W		
40		90366		
60		90367		
80		90368		
100		90369		
120		90370		

34" belts are used with optional 11350 Contact Arm Assembly. →

Coated Aluminum Zirconia				
18" Long/Unit = 200 Belts				
Grit	1/4" W	1/2" W	5/8" W	3/4" W
60	90166	90168	90170	90172
80	90167	90169	90171	90173
24" Long/Unit = 200 Belts				
Grit	1/4" W	1/2" W		
60	90577	90579		
80	90582	90583		
24" Long Silicon Carbide/Unit = 200 Belts				
Grit	1/4" W	1/2" W		
60	90563	90567		
80	90564	90568		

Abrasive Impregnated Non-Woven Nylon				
18" Long/Unit = 12 Belts				
Grit	1/4" W	1/2" W	5/8" W	3/4" W
Super fine	90158	90159	90160	90161
Very fine	90228	90248	90249	90258
Medium	90229	90292	90293	90294
Coarse	90296	90297	90298	90299
24" Long/Unit = 12 Belts				
Grit	1/4" W	1/2" W		
Super fine	90397	90398		
Very fine	90403	90400		
Medium	90433	90434		
Coarse	90460	90461		

Cloth Polishing Belts	
Part Number	Size
90006	1/2" x 18"

Note: Cloth belts recommended for use with 11204 Contact Arm Assembly only.

Dynapad® Platen Pads	
<p><b>Soft</b></p> <p>For deburring and polishing contoured pieces.</p> <p>11025 – 1/2" W x 7" L x 1/8" Thk. – 5/pkg.</p> <p>11119 – 3/4" W x 7" L x 1/8" Thk. – 5/pkg.</p>	<p>Top facing</p> <p>Sponge base</p> <p>Pressure sensitive adhesive</p>
<p><b>Hard</b></p> <p>For heavy deburring and polishing.</p> <p>11026 – 1/2" W x 7" L x 1/8" Thk. – 5/pkg.</p> <p>11109 – 3/4" W x 7" L x 1/8" Thk. – 5/pkg.</p>	<p>Top facing</p> <p>Cork base</p> <p>Pressure sensitive adhesive</p>
<p><b>Thin</b></p> <p>For aggressive grinding.</p> <p>11027 – 1/2" W x 7" L x 1/32" Thk. – 5/pkg.</p> <p>11129 – 3/4" W x 7" L x 1/32" Thk. – 5/pkg.</p>	<p>Top facing</p> <p>Pressure sensitive adhesive</p>
<p><b>Metal</b></p> <p>For flat grinding and heavy stock removal; bolts to contact arm.</p> <p>11024 – 1/2" W x 3" L (for Dynaflex II 11286 Arm only)</p>	<p>Metal</p>

## Accessories

### Vacuum Attachment for 40330 Vacuum Model Dynaflex® II

**80021 Dynamount Benchmount**

Frees an operators hands for complete control of a workpiece.

Optional **80015** Foot Switch and hose assembly provides on-off foot control of air-tool operation.

95362 Rubber Connector (5) 5/pkg.

95361 Air Line

95396 Cuff (2)

50682 Vacuum Hose (Incl. cuffs)

Disposable Paper Bag

50692 – 12/pkg.

50693 – 24/pkg.

50697 Bag

95391 Tie – 25/pkg. (not shown)

Secures 50697 bag to vacuum hose.

**Dynaswivel®**

Swivels 360° at two locations which allows an air hose to drop straight to the floor, no matter how the tool is held.

- 95460 1/4" NPT
- 95461 3/8" NPT
- 95462 1/2" NPT

### 50061 1/4" Collet Assembly

### 50067 6mm Collet Assembly



Optional:

**50039 8 mm Collet Insert**

Fits inside 50067 Collet

**50065 1/8" Collet Insert**

Fits inside 50061 Collet

### 53032 1/4" Drill Chuck



Includes: 53052 Mated Chuck Key



### 96044 Motor Tune-Up Kit

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

# 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. Connect power source to tool. Be careful **not** to depress throttle lever in the process.
3. 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.
4. Always work off the return side of the abrasive belt. This will ensure superior tracking and reduce down time of tool.

## Abrasive Belt/Contact Arm Change Instructions:

### To Change Belt:

1. Disconnect power source.
2. Remove "pop-off" cover.
3. Pull back on tension arm assembly.
4. Remove and replace abrasive belt and cover.
5. Connect power source.
6. Adjust belt tracking by turning **95218** Rough Adjustment Knob to the left or right accordingly while machine is running.

### To Change Contact Arm Assembly:

1. Disconnect power source.
2. Remove "pop-off" cover.
3. Pull back on tension arm assembly and remove abrasive belt.
4. Remove **95218** Rough Adjustment Knob.
5. Remove contact arm and replace with desired arm, making sure that the tab on the end of the arm is facing downward.
6. Replace **95218** Knob.
7. Install abrasive belt and cover.
8. Connect power source and adjust belt tracking by turning **95218** Knob to the left or right accordingly while machine is running.

## Housing Angle Adjustment:

To pivot housing, loosen **95311** Screw on housing with the supplied 9/64" hex wrench (P/N – **95134**). Pivot housing to desired angle and retighten **95311** Screw.

## Conversion of Air Motor to Die Grinder or Drill:

1. Remove cover and abrasive belt.
2. Loosen **95311** Screw.
3. Twist and pull housing from motor. Amount of force required may vary.
4. Slip **95049** – 3/16" Hex Wrench (supplied in Dynaflex II Kits only) through the drive wheel and into the end of the drive shaft to prevent the drive shaft from rotating.
5. Using a wrench or pliers, twist the drive wheel counterclockwise and remove.
6. Hold the drive shaft with a 14mm wrench (supplied in Dynaflex II Kits only) and attach collet or drill chuck (see accessories on back page).
7. Use a 19mm wrench (supplied in Dynaflex II Kits only) to loosen and tighten collet cap.

## Maintenance Instructions:

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

1. All Dynabrade air motors should be lubricated with two drops of Dynabrade Air Lube (P/N **95842**: 1pt. 473ml.) placed directly into the air inlet with throttle level depressed every four hours of use.
2. An air line filter-regulator-lubricator must be used with this air tool to maintain all warranties. Dynabrade recommends the following: **11289** Air Line Filter-Regulator-Lubricator — Provides accurate air pressure regulation, two-stage filtration of water contaminants and positive-drip lubrication of pneumatic components. Operates 28 CFM @ 90 PSI has 3/8" NPT female ports.
3. Frequent drainage of water traps in air lines is recommended.
4. Some silencers on air tools may clog with use. Clean and replace as required.
5. A motor tune-up kit (P/N **96024**) is available which includes assorted parts to help maintain motor in tip-top shape.

## Safety 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.
- **Important:** User of tool is responsible for following accepted safety codes such as those published by the American National Standards Institute (ANSI).
- Tool RPM must never exceed abrasive/accessory RPM rating, regardless of tool capacity.
- Operate machine for 30 seconds before application to workpiece to determine if machine is working properly and safely before work begins.
- Always use proper guards. Make sure guards are in proper position, secure and in good repair.
- Always disconnect power supply before changing abrasive or making machine adjustments.
- Inspect abrasives and 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.



**Toll Free (U.S.A.) 1-800-828-7333**  
**Toll Free (Can.) 1-800-344-1488**