

# Dynaflex® II

## Motor and Machine Parts

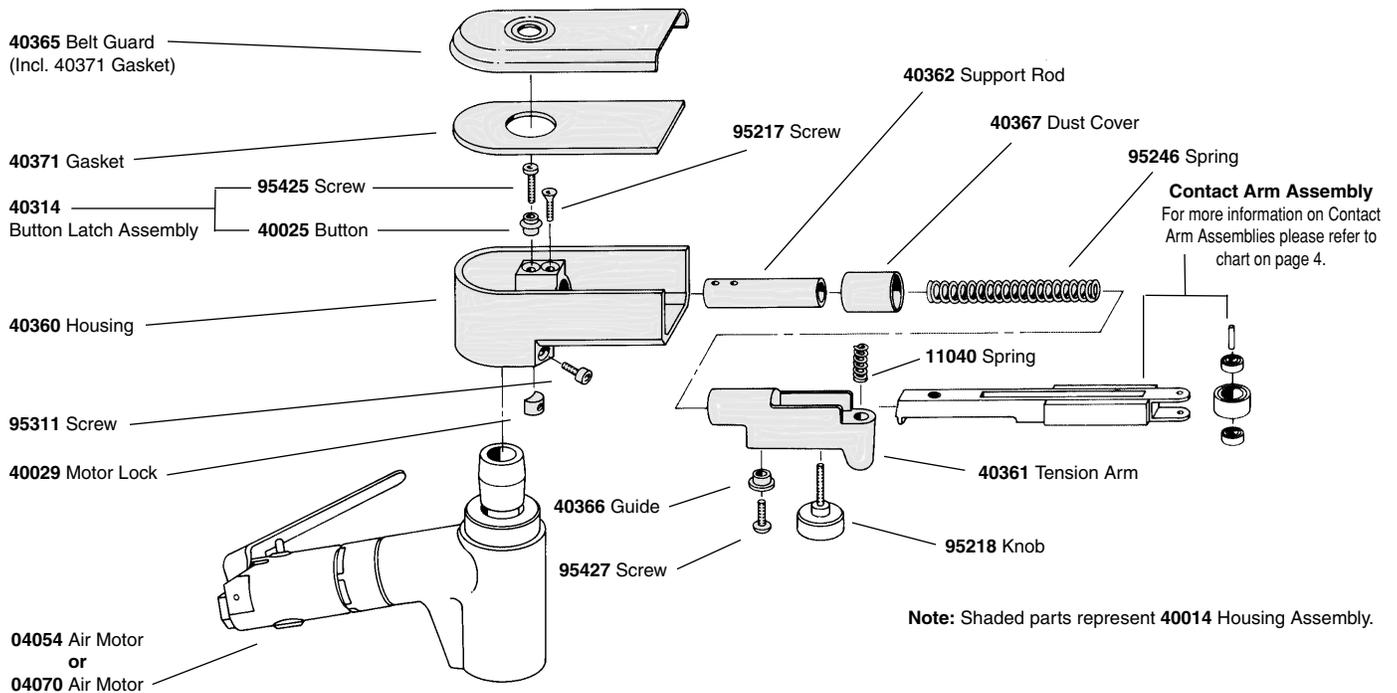
### Models:

- 40320 — Standard Machine**
- 40330 — Vacuum Machine**
- 40335 — “NWN” Dynaflex II**

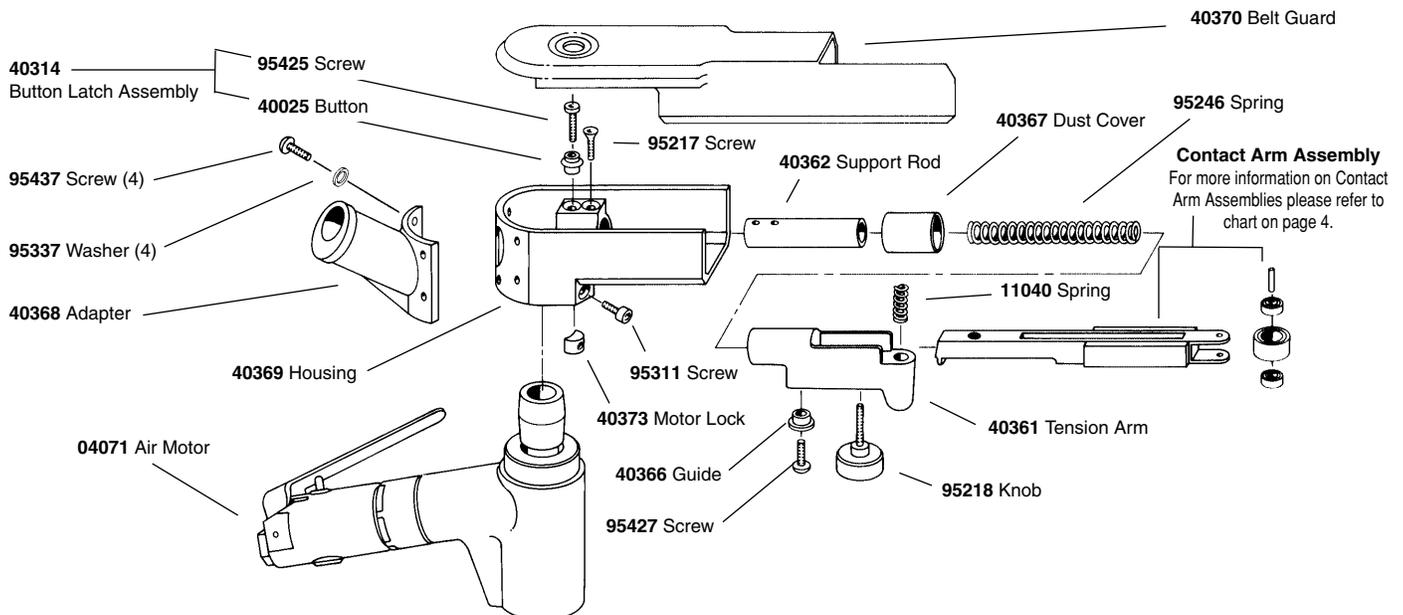


Always operate, inspect and maintain this tool in accordance with the Safety Code for portable air tools (ANSI B186.1) and any other applicable safety codes and regulations. Please refer to Dynabrade's Warning/Safety Operating Instructions for more complete safety information.

### Models: 40320 — Standard Machine, 40335 — “NWN” Machine



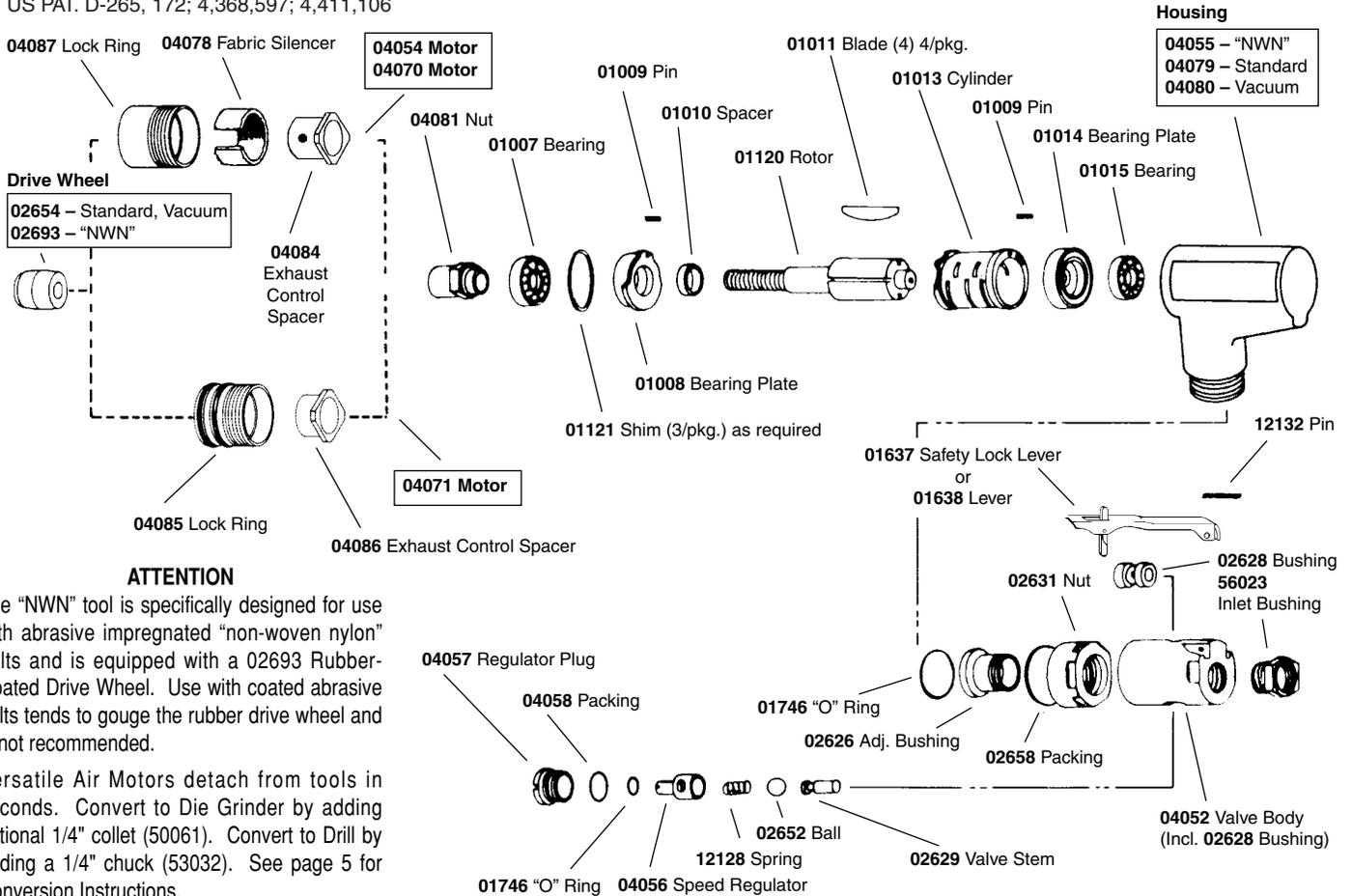
### Models: 40330 — Vacuum Machine



See page 2 for 04054, 04070 and 04071 Motor Assemblies.

**04054 — Air Motor for “NWN” Machine • 04070 — Air Motor for Standard Machine  
04071 — 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 5 for Conversion Instructions.

**Assembly/Disassembly for Dynaflex® 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 overtighten 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.

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

### Valve Stem/Body Assembly:

1. Secure motor housing in padded vise (do not over tighten vise).
2. Loosen 02631 Nut and remove valve body assembly from housing.
3. Secure valve body assembly in vise.
4. Remove 01746 O-Ring.
5. Remove 02626 Adjustable Bushing using a 15mm hex wrench.
6. Remove 02658 Packing.
7. Remove 04057 Regulator Plug.
8. Valve stem assembly components should easily fall from valve body.

### To Reassemble:

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

### 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. Reassemble valve stem/body assembly and install in motor housing.
13. 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.
14. Motor should now be tested for proper operation at 90 PSI. If motor does not operate properly, make necessary adjustments (see step 12).
15. 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 no 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 40373 Motor lock in place, install air motor into housing and secure in place with 95311 Screw.
12. Complete assembly by installing contact arm assembly, abrasive belt and 40365 Belt Guard.

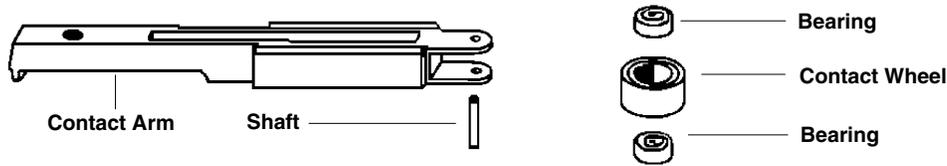
Tool assembly is complete. Please allow 30 minutes for adhesives to cure before operating tool. **Note:** Motor should operate at between 18,000 and 20,000 RPM at 90 PSI (6.2 Bar). RPM should be checked with a reed tachometer. Before operating, we recommend that 2-3 drops of Dynabrade Air Lube P/N – 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.

# 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
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 back page for Dynafite® II Abrasives and Accessories.

# 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.

# 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

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

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

## 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

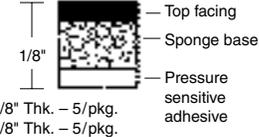
24" Long/Unit = 200 Belts		
Grit	1/4" W	1/2" W
60	90577	90579
80	90582	90583

24" Long Silicon Carbide/Unit = 200 Belts		
Grit	1/4" W	1/2" W
60	90563	90567
80	90564	90568

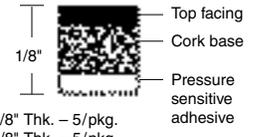
## Dynapad® Platen Pads

**Soft**  
For deburring and polishing contoured pieces.



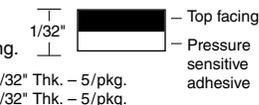
11025 - 1/2" W x 7" L x 1/8" Thk. - 5/pkg.  
11119 - 3/4" W x 7" L x 1/8" Thk. - 5/pkg.

**Hard**  
For heavy deburring and polishing.



11026 - 1/2" W x 7" L x 1/8" Thk. - 5/pkg.  
11109 - 3/4" W x 7" L x 1/8" Thk. - 5/pkg.

**Thin**  
For aggressive grinding.



11027 - 1/2" W x 7" L x 1/32" Thk. - 5/pkg.  
11129 - 3/4" W x 7" L x 1/32" Thk. - 5/pkg.

**Metal**  
For flat grinding and heavy stock removal; bolts to contact arm.



11024 - 1/2" W x 3" L (for Dynaflex II 11286 Arm only)

## 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

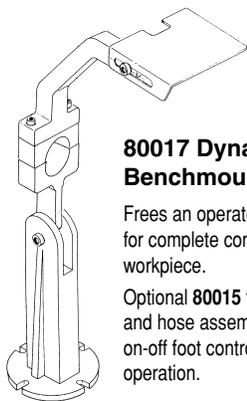
24" Long/Unit = 12 Belts		
Grit	1/4" W	1/2" W
Super fine	90397	90398
Very fine	90403	90400
Medium	90433	90434
Coarse	90460	90461

## Cloth Polishing Belts

Part Number	Size
90006	1/2" x 18"

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

## Accessories

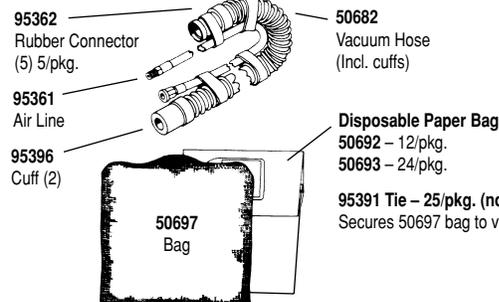


### 80017 Dynamount Benchmount

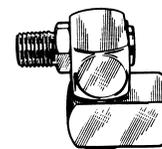
Frees an operators hands for complete control of a workpiece.

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

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



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.  
95391 Tie - 25/pkg. (not shown)  
Secures 50697 bag to vacuum hose.

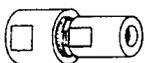


### Dynaswivel®

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

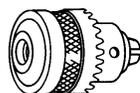
- 95460 1/4" NPT
- 95461 3/8" NPT
- 95462 1/2" NPT

### 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

95603 Motor Tune-Up Kit - Includes assorted parts to help maintain motor in tip-top shape.

