

# Dynascaler®

## Models:

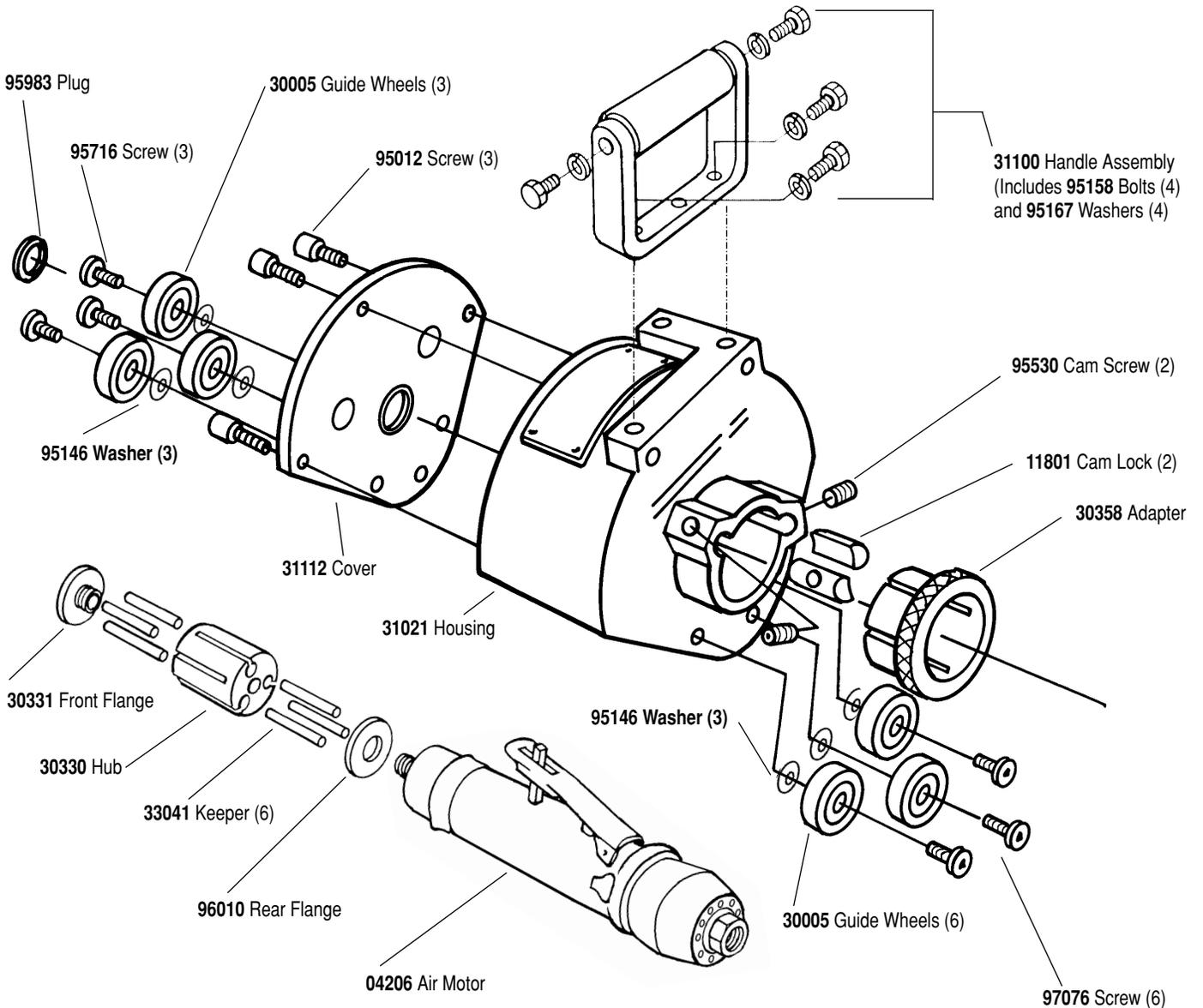
- 30304 – 2" wide for work on inside of pipe.
- 30336 – 2" wide for work on flats.

*Motor and Machine Parts  
Effective for Serial Number 1619 and Higher*

## ⚠ WARNING

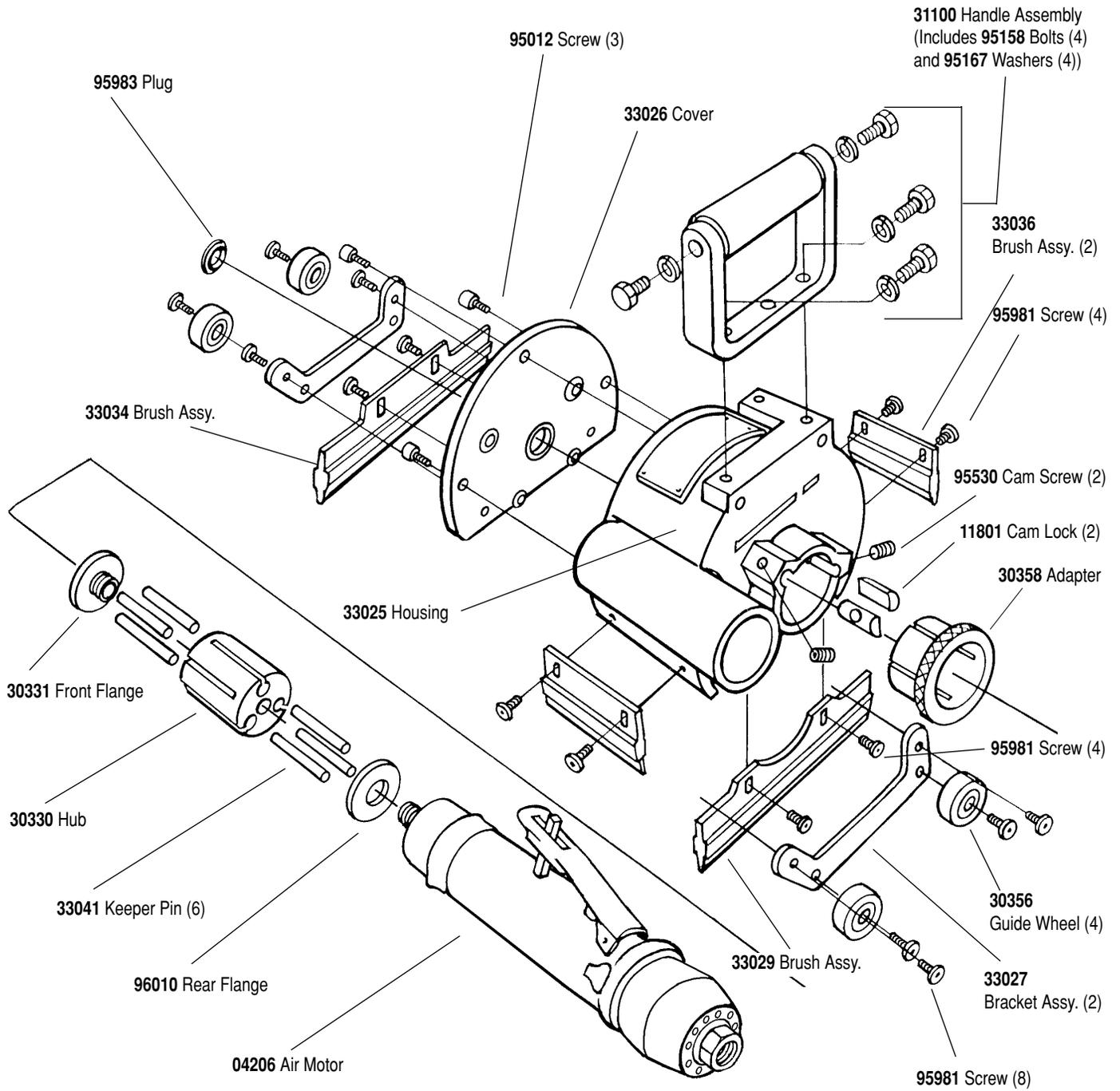
Always operate, inspect and maintain this tool in accordance with the Safety Code for portable air tools (ANSI B186.1) and any other applicable safety codes and regulations. Please refer to Dynabrade's Warning/Safety Operating Instructions for more complete safety information.

### Model 30304 – 2" wide Roto Peen



See inside for Important Operating Instructions and Accessories.

**Model 30336 – 2" wide Roto Peen, accepts vacuum hook-up**



# 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: **11289** 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 **96260**) is available which includes assorted parts to help maintain motor in peak operating condition.
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.

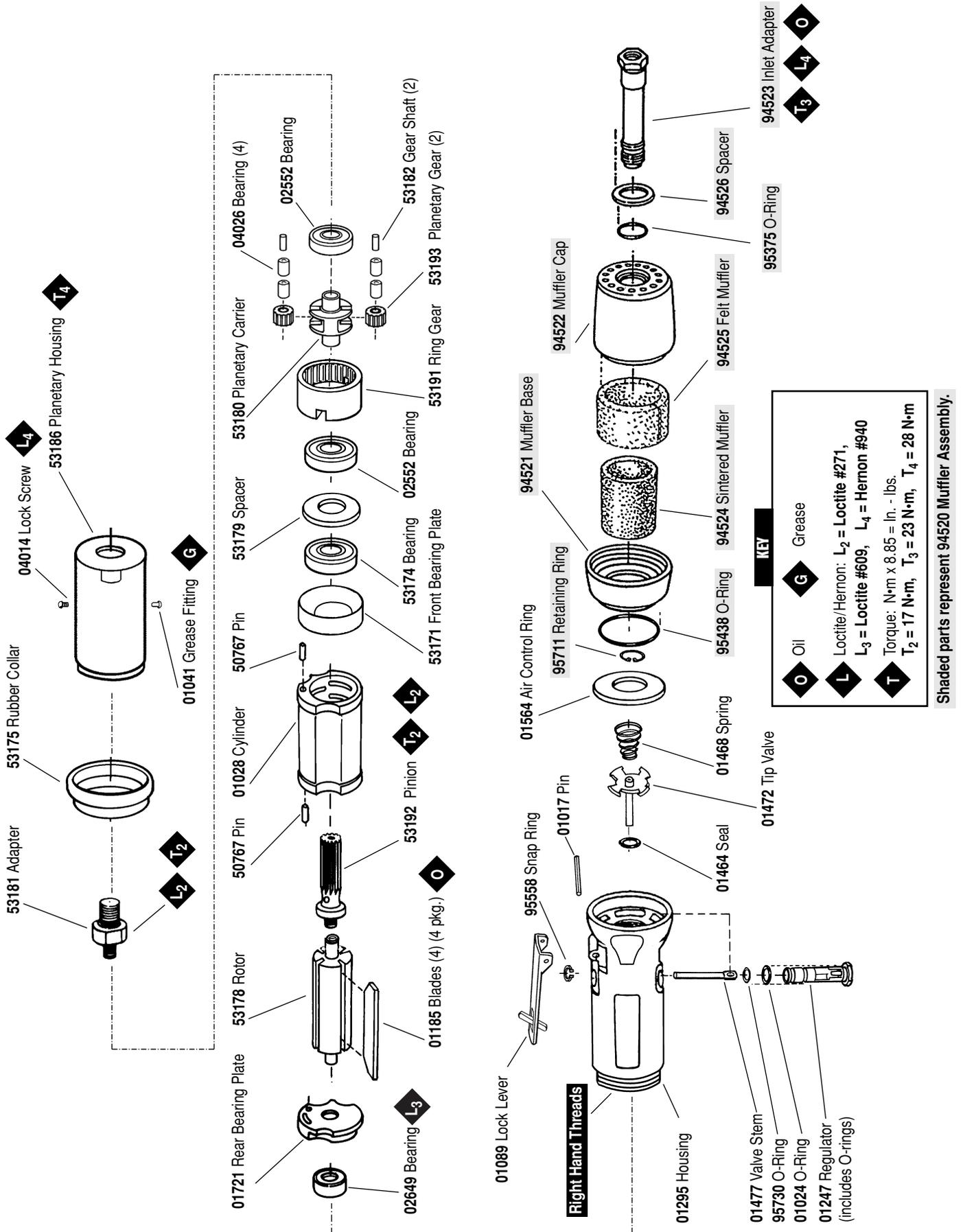
## One Year Warranty

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.

Machine Number	Length Inch (mm)	Weight Pounds (kg)	Spindle Thread	Abrasive Belt Size Inch (mm)	Air Flow Rate SCFM (LPM)	Sound Level	Motor HP (W)	RPM (Loaded)	Air Pressure PSI (Bars)
30304	11-3/4" (298)	6.2 (2.8)	1/2"-20 male	2" (51)W	38 (1,076)	94 dBA	.7 (522)	2,400	90 (6.2)
30336	11-3/4" (298)	6.5 (2.9)	1/2"-20 male	2" (51)W	38 (1,076)	94 dBA	.7 (522)	2,400	90 (6.2)

**Additional specifications:** Height 8-1/4" (210mm) • Air Inlet Thread 3/8" (9 mm) NPT • Hose Size 1/2" (13 mm)

# Dynascal® Air Motor – 04206 Motor Assembly



# Disassembly/Assembly Instructions - 3,400 RPM

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

**Please refer to parts breakdown for part identification.**

## Motor Disassembly:

1. Disconnect tool from power source. Remove hub assembly from motor spindle.
2. Loosen **95530** Cam Screws and pull motor assembly from housing. Secure air tool in padded vise. Roll back **53175** Rubber Collar.
3. With an adjustable pin wrench, remove **53186** Planetary Housing by turning counter-clockwise.
4. Pull **53181** Adapter and first planetary carrier assembly from **53186** Planetary Housing.
5. Press planetary carrier assembly from rear **02552** Bearing. Remove ring gear and gears from **53180** Planetary Carrier.
6. Secure planetary carrier in vise and remove **53181** Adapter. Press carrier from front **02552** Bearing. Remove **53179** Spacer.
7. Grab onto pinion and pull motor assembly from motor housing.
8. Press **53178** Rotor from **01721** Rear Bearing Plate. Press **02649** Rear Bearing from rear bearing plate.
9. Remove cylinder and rotor blades from rotor.
10. Secure rotor in vise and remove pinion from rotor by inserting a 3mm drift pin through hole in pinion and twist off (right hand threads).
11. Press pinion and rotor through **53174** Front Bearing and **53171** Front Bearing Plate.

**Motor disassembly complete.**

## Valve Body Disassembly:

1. Position valve body in padded vise with air inlet facing up.
2. Remove air fitting by securing **94523** Inlet Adapter with a wrench and twist air fitting from inlet adapter.  
**Important: 94523** Inlet Adapter must be secured before attempting to remove air fitting to avoid damaging valve body housing.
3. Remove **94523** Inlet Adapter.
4. Remove **95711** Retaining Ring from inlet adapter and separate **94521** Muffler Base from **94522** Muffler Cap. Remove sintered muffler and felt muffler.
5. Remove **01564** Air Control Ring from valve body. Using needle nose pliers, remove **01468** Spring, tip valve and seal.
6. Using a 2.5mm drift pin, tap **01017** Pin from housing and remove throttle lever.
7. Remove **95558** Retaining Ring. Push **01247** Regulator from valve body and remove O-rings.

**Disassembly complete.**

## Motor Reassembly:

**Important:** Be sure parts are clean and in good repair before reassembly. Follow all grease, oil, and torque specifications.

1. Place **53171** Front Bearing Plate onto front end of **53178** Rotor (threaded end). Press **53174** Front Bearing onto rotor and front bearing plate.
2. Secure rotor in padded vise with threaded spindle facing up. Apply one drop of #271 Loctite® (or equivalent) to threads of rotor. Using a 3mm drift pin, tighten pinion onto rotor (torque 17.0 N•m/150 in. - lbs.).
3. Apply one drop of #609 Loctite® (or equivalent) to outer race of **02649** Rear Bearing and slip bearing into bearing plate.
4. Install well lubricated blades into rotor slots. Dynabrade recommends using their **95842** Dynabrade Air Lube.
5. Install cylinder over rotor with air inlet hole in cylinder wall facing away from front bearing plate.
6. Press **01721** Rear Bearing plate on to rotor. Be sure that pin and air inlet hole in cylinder line up with air inlet hole and pin hole in bearing plate.
7. Install motor assembly into motor housing. Place **53179** Spacer on top of motor.
8. Press Front **02552** Bearing onto front end of first **53180** Planetary Carrier.
9. Install gears, **04026** Bearings and **53182** Gear Shafts onto planetary carrier.
10. Slip **53191** Ring Gear over gears and press rear **02552** Bearing onto planetary carrier.
11. Apply one drop of #271 Loctite® to threads of **53181** Adapter. Install adapter onto planetary carrier (torque 17.0 N•m/150 in. - lbs.).
12. Install **53186** Planetary Housing onto housing to secure motor (torque 28 N•m/250 in. - lbs.).
13. Roll back **53175** Collar and install motor assembly into machine housing. Tighten **95530** Cam Screws.

**Motor Reassembly Complete.**

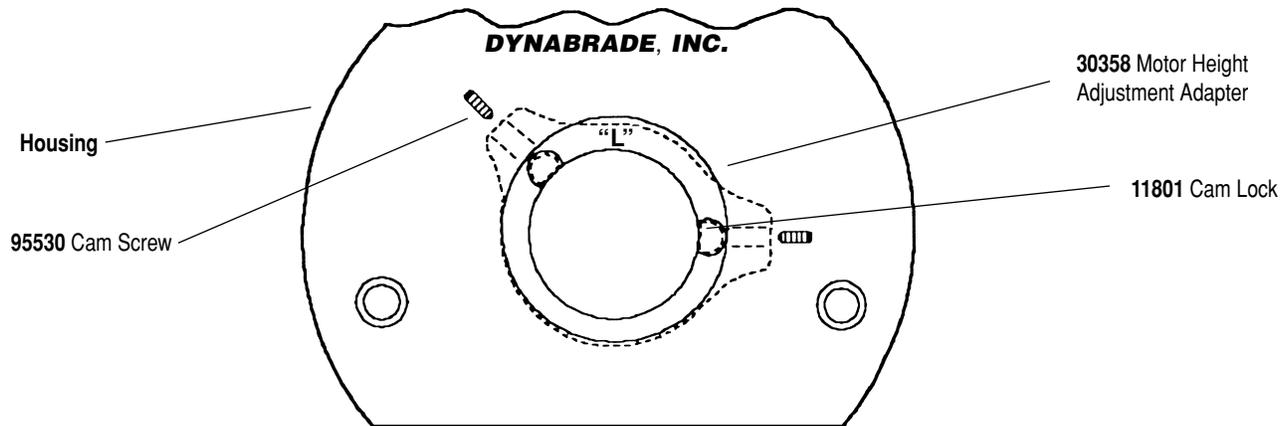
## Valve Body Reassembly:

1. Insert **01247** Regulator with O-rings and valve stem in place into valve body. Secure with **95558** Retaining Ring.
2. Secure valve body in padded vise with air inlet facing upwards. Insert **01464** Seal.
3. Line up hole in valve stem with hole in housing (looking past brass bushing). Insert **01472** Tip Valve so that the metal pin passes through the hole in the valve stem. Install **01468** Spring (small end towards tip valve).
4. Assemble sintered muffler and felt muffler together and place in **94522** Muffler Cap. Install **94521** Muffler Base onto muffler cap.
5. Install **95438** O-ring into groove on muffler base. Place **95375** O-Ring and **94526** Spacer into recessed area of muffler cap.
6. Slip **94523** Inlet Adapter through muffler assembly and install **95711** Retainer Ring into groove on inlet adapter.
7. Install **01564** Air Control Ring into valve body housing.
8. Apply Herson #940 PST Pipe Sealant to threads of **94523** Inlet Adapter and install entire muffler assembly onto valve body (torque 23.0 N•m/200 in. - lbs.).
9. Replace air fitting. Secure inlet adapter with a wrench before tightening air fitting. Install throttle lever and **01017** Pin.

**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. 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.

# Instructions for Adjusting Position of Roto-Peen to Work Surface



1. Using a hex wrench, loosen both **95530** Cam Screws located on the housing near the motor inlet hole.
2. Rotate **30358** Motor Height Adjustment Adapter for desired distance of roto-peen/motor from workpiece:

**“L” at 12 o’clock – lowest position.**

When motor height adjustment adapter is set in the “L” position (“L” at 12 o’clock), the roto-peen/motor is set at its lowest position. This position is best for low RPM operation.

**“L” at 9 or 3 o’clock – nominal/mean/middle position.**

Turning the adjustment adapter 90° to the left or right from the lowest position sets the roto-peen/motor in the nominal or mean position. This position is best for normal operating conditions (90 PSI and 2,400 RPM underload).

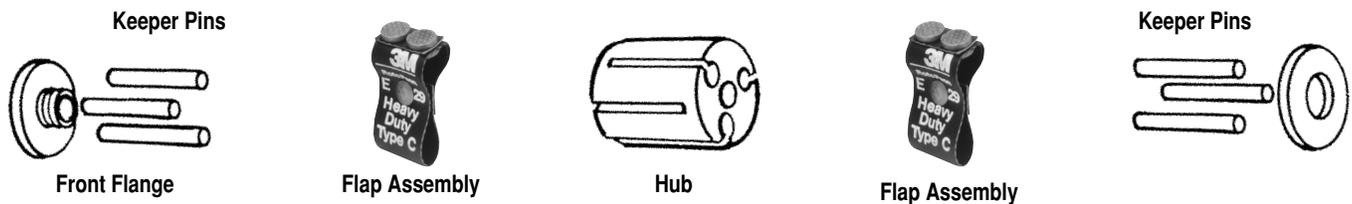
**“L” at 6 o’clock – highest position.**

Turning the adjustment adapter 180° to the left or right from the lowest position sets the roto-peen/motor at the highest distance from the workpiece.

**Note:**The adjustment adapter is preset at the factory in the highest position.

<b>⚠ WARNING</b>	Do not exceed 3,400 RPM.
	Do not operate machine without guarding in proper position.
	Disconnect power supply from tool before making any changes or adjustments to hub or flap assemblies.
	Use eye, face, hearing and body protection while operating this tool. Full face shield and muff type hearing protection is recommended.

## 3M Heavy Duty Roto Peen Mounting Instructions



**Note:** There are two types of Flap Assemblies – **Type B** and **Type C**. The identification Type B or Type C is printed on the front of each flap.

**Type B:** For roughening of metal surface and concrete. **Type C:** For descaling metal.

1. Remove front cover guard by removing **95012** Screw (5/32" Hex Wrench).
2. Freeze motor spindle by inserting a 19mm open end wrench on wrench flats of spindle.
3. Insert a 1/4" hex key into front flange and twist counterclockwise from hub.
4. Remove hub by twisting counterclockwise from spindle.
5. Place roto peen flap assembly into slots on hub. Make sure front side of each flap is facing the same way and in the direction of rotation (printed side is front side).
6. Place a keeper pin through each flap assembly.
7. Install **96010** Rear Flange over motor spindle. Screw hub with rotor peen flaps onto spindle until snug. Be sure all flaps and keeper pins stay in proper position.
8. Install front flange (torque 150 lbs. in.).
9. Replace front cover guard.

**Important:** Heavy duty roto peen flaps must only be operated with the printed side of the flaps facing the direction of rotation or very rapid flap wear will result.

Roto Peen is a registered trademark of 3M Co.

# Accessories

## Roto Peen Flaps



• As flaps rotate against the workpiece, the shot particles mechanically fracture and remove scale and old coatings with minimal removal of the base metal.

**Type B** - For removing lighter coatings and producing a high profile surface on steel.

**Type C** - For descaling steel, removing general duty coatings from steel and concrete, and for preparing steel and concrete to accept coatings.

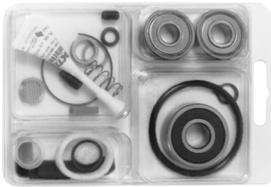
Part Number	Flap Type	Flap Width	Flap Unit
39000	C	1"	12
39001	B	1"	12
39002	C	2"	6
39003	B	2"	6



## 30330 Hub

- Six-slot hub for 2" wide flaps.
- Hub carries flexible flap assemblies of bonded shot particles.
- Roto peen flaps not included.

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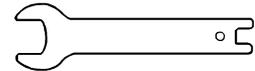
## 96260 Motor Tune-Up Kit

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

## Wrenches



- 95048 – 1/8" hex wrench
- 95135 – 5/32" hex wrench
- 95303 – 1/4" hex wrench



95281 – 19 mm open-end



## Dynabrade Air Lube

- Formulated for pneumatic equipment. • Absorbs up to 10% of its weight in water.
- Prevents rust and formation of gum and sludge.
- Keeps pneumatic tools operating longer with greater power and less downtime.

95842: 1 pt.(473 ml).      95843: 1 gal (3.8 l).

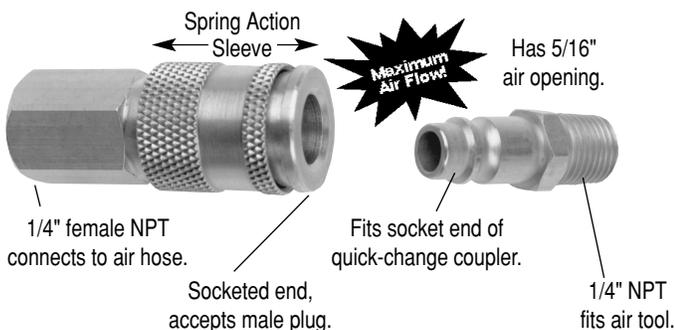
## Grease

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

95541: Push-type Grease Gun (one-hand operation). 95542: 10 oz. (283.5 g) tube.

## 95674 Coupler

## 95675 Ported Male Plug



## Universal Coupler and Plug

### 95674 Coupler

- Has 1/4" female NPT and quick-change socket. Fits most major brands of male plugs. Single-action quick connect, brass connection.

### 95675 Ported Male Plug

- Connects to female couplers and air tools. "Ported" design provides up to 35% more air flow capacity than other plug to prevent "starving" the air tool.

### 95673 Coupler/Plug Assembly

- Includes 95674 Coupler and 95675 Ported Male Plug. For quick connect/disconnect of air hose and air tool.



Visit our new Web Site via Industry.Net MROP On-Line: <http://www.dynabrade.industry.net>

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