Parts Page Reorder No. PD97•32
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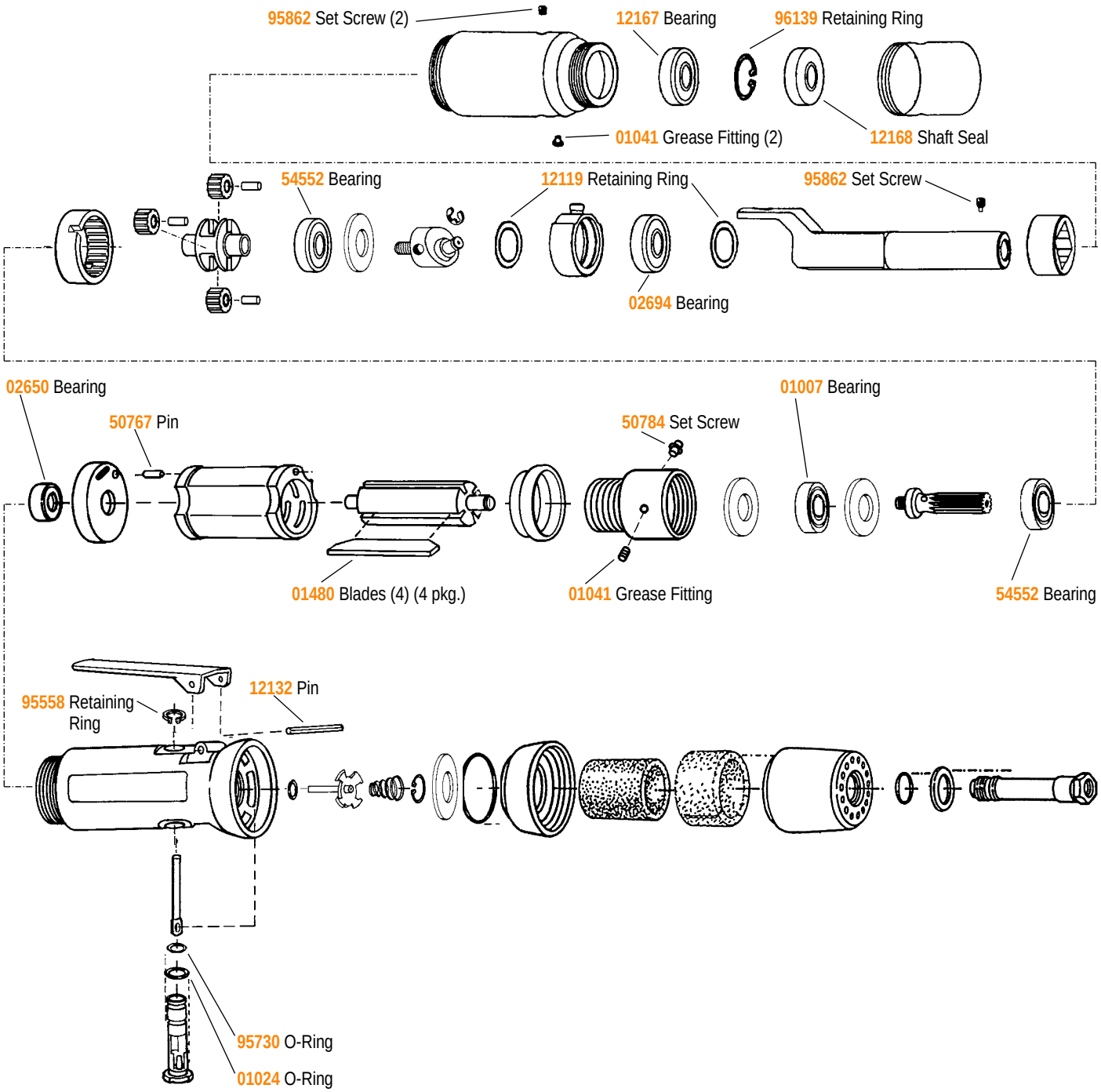
For Use With Models:
12200, 12201, 12202, 12203, 12204, 12205, 12206, 12207

96261 Motor Tune-Up Kit

Refer to appropriate parts page for additional parts identification. Parts included in kit are identified by part number.



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Tune-Up Kit Instructions

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.

Motor Disassembly:

1. Disconnect tool from power source. Secure air tool in vise using 52296 Repair Collar.
2. With an adjustable pin wrench remove 12166 Guard by placing a 1/4" diameter pin in the guard and a 1/4"diameter pin in 12117 Slider Housing.
3. Remove 95862 Set Screw from 12122 Slider Crank. Remove 12117 Slider Housing using a 1/4" diameter pin in the hole provided and 34mm crowsfoot on 12220 Gear Case.
4. Remove 12122 Slider Crank with a 3mm allen wrench. Loosen both 95862 Set Screws in 12117 Slider Housing and remove 12125 Square Bearing.
5. Remove 12168 Shaft Seal and 12167 Bearing using a #2 arbor press.
6. Remove 12220 Gear Case and 01547 Collar from 01488 Housing. Remove 50784 Set Screw from 12220 Gear Case.
7. Press planetary carrier assembly from rear 54552 Bearing. Remove ring gear and gears from 50780 Planetary Carrier.
8. Secure planetary carrier in vise and unscrew 12120 Crank with a drift pin.
9. Remove 12174 E-Ring from 12120 Crank using a thin screwdriver. Remove 12121 Crank Pivot Plate with a bearing separator and #2 arbor press.
10. Remove 12119 Retaining Rings from crank pivot plate assembly. Remove 02694 Bearing from 12121 Crank Pivot Plate using a bearing press tool on outer race of bearing.
11. Press carrier from front 54552 Bearing. Remove 50778 Spacer. Grab onto 53151 Pinion and pull motor assembly from motor housing. Remove 50778 Spacer.
12. Press 50777 Rotor from 01487 Rear Bearing Plate. Press 02650 Rear Bearing from rear bearing plate. Remove cylinder and rotor blades from rotor.
13. Secure rotor in vise and remove 53151 Pinion from rotor by inserting a 3mm drift pin through hole in pinion and twist off (right hand threads).
14. Press 53151 Pinion and rotor through 01007 Front Bearing and 53161 Front Bearing plate.

Motor disassembly complete.

Valve Body Disassembly:

1. Position valve body in vise using 52296 Repair Collar 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 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 12132 Pin from housing and remove throttle lever.
7. Remove 95558 Retaining Ring. Push 01469 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 53161 Front Bearing Plate onto front end of 50777 Rotor (threaded end). Press 01007 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 53151 Pinion onto rotor (torque 17.0 N•m/150 in. - lbs.).
3. Apply one drop of #609 Loctite® (or equivalent) to outer race of 02650 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. Be sure 50767 Pin lines up with pin hole in front bearing plate.
6. Press 01487 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. Place 50778 Spacer over pinion and install motor assembly into motor housing. Install 12220 Gear Case onto 01488 Housing (torque 28 N•m/250 in. - lbs.).
8. Install 54522 Bearing and retaining rings into 12121 Crank Pivot Plate. Install 12121 Crank Pivot Plate onto 12120 Crank, install 12174 E-Ring onto crank.
9. Press front 54552 Bearing onto front end of 12222 Planetary Carrier. Slide 12170 Retaining Ring over bearing.
10. Install 12120 Crank onto planetary carrier. Install 54519 Gears and 54475 Gear Shafts onto planetary carrier. Slip 54468 Ring Gear over gears and press rear 54552 Bearing onto planetary carrier. Slip complete planetary carrier onto 53151 Pinion in motor housing (torque 28 N•m/250 in. - lbs.).
12. Check to see that the set screw hole in 12220 Gear Case lines up with the slot in 54468 Ring Gear. Install 50784 Set Screw.
13. Press 12167 Bearing into slider housing. Install 96139 Retaining Ring into housing. Press 12168 Shaft Seal on top of bearing with hollow side facing inward.
14. Assemble 12125 Square Bearing onto 12117 Slider Housing. Install 95862 Set Screw in slider housing to secure square bearing.
15. Install 12122 Slider Crank into slider housing, install set screw.
16. Apply grease to grease fitting in 12117 Slider Housing. **Note:** Thoroughly lubricate 12122 Slider Crank hole where 12121 Crank Pivot Plate assembles.
17. Assemble slider housing onto 12220 Gear Case torque 28 N•m/250 in. - lbs. Tighten 12166 Guard onto slider housing.

Motor reassembly complete.

Valve Body Reassembly:

1. Insert 01469 Regulator with O-rings and valve stem in place into valve body. Secure with 95558 Retaining Ring.
2. Secure valve body in vise using 52296 Repair Collar 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). Assemble sintered muffler and felt muffler together and place in 94522 Muffler Cap. Install 94521 Muffler Base onto muffler cap.
4. Install 95438 O-Ring into groove on muffler base. Place 95375 O-Ring and 94526 Spacer into recessed area of muffler cap.
5. Slip 94523 Inlet Adapter through muffler assembly and install 95711 Retainer Ring into groove on inlet adapter. Install air control ring into valve body housing.
6. Apply Hernon #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.).
7. Replace air fitting. Secure inlet adapter with a wrench before tightening air fitting. Install throttle lever and 12132 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