For Serial Number 7H2560 and Higher

Models:
53070 — 400 RPM
53071 — 650 RPM
53072 — 950 RPM

Key

- O — Oil
- G — Grease
- N/UP — New/Updated Part or Assy.
- L — Loctite/Hernon: **L_2 = Loctite #271, L_3 = Loctite #609, L_4 = Hernon #940**
- T — Torque: N•m x 8.85 = In. - lbs. **T_2 = 17 N•m, T_3 = 23 N•m, T_4 = 28 N•m**

Parts Page Reorder No. PD98•11
Effective January, 1998
Supersedes PD96•47

.3 Hp/7°/Rear Exhaust Drill

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. See inside for Important Operating, Maintenance and Safety Instructions.**

New/Updated Parts - Effective Serial Number 7H2560 and Higher.
02696 Bearing Replaces 02650 Bearing. • 02673 Rear Bearing Plate Replaces 01474 Rear Bearing Plate. • 02679 Shield added.

Index Key

No.	Part #	Description
1	53032	Drill Chuck
2	53153	Planetary Housing
3	01041	Grease Fitting
4	50784	Set Screw
5	50782	Adapter
6	54552	Bearing
7	54475	Gear Shaft
8	50780	Planetary Carrier
9A	54519	400 RPM Gear
	54519	650 RPM Gear
	06213	950 RPM Gear
9B	54519	400 RPM Gear
	06213	650 RPM Gear
	06213	950 RPM Gear
10	54468	Ring Gear
11A	53151	400 RPM Pinion
	53151	650 RPM Pinion
	53150	950 RPM Pinion
11B	53151	400 RPM Pinion
	53150	650 RPM Pinion
	53150	950 RPM Pinion
12	50778	Spacer
13	40544	Bearing
14	53161	Front Bearing Plate
15	50777	Rotor
16	01480	Motor Blades (4)
17	01476	Cylinder
18	50767	Pin
19	02673	Rear Bearing Plate
20	02696	Bearing
21	02679	Shield
22	50776	Housing
23	01548	Gasket
24	01461	Lock Nut
25	01558	Collar
26	95523	O-Ring
27	01470	Insert
28	53044	Housing - 53070
	53055	Housing - 53071
	53056	Housing - 53072
29	01448	Throttle Lever
30	95558	Retaining Ring
31	12132	Pin
32	01449	Valve Stem
33	95730	O-Ring
34	01024	O-Ring
35	01469	Regulator
36	01464	Seal
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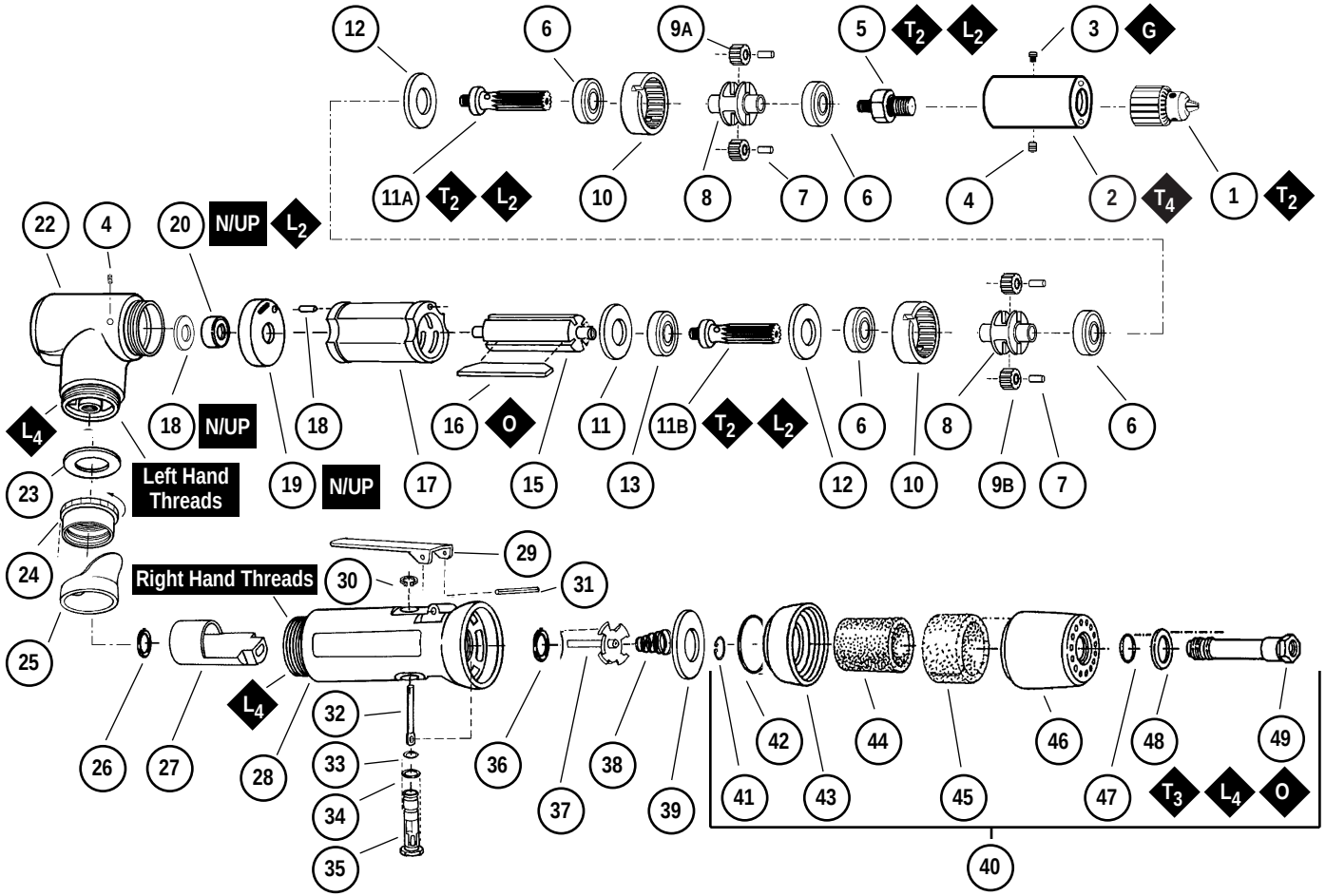
38	01468	Spring
39	01564	Air Control Ring
40	94520	Muffler Assy.
41	95711	Retaining Ring
42	95438	O-Ring
43	94521	Muffler Base
44	94524	Sintered Muffler
45	94525	Felt Muffler
46	94522	Muffler Cap
47	95375	O-Ring
48	94526	Spacer
49	94523	Inlet Adapter



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.
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.

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 @ 90 PSI has 3/8" NPT female ports.
5. Use only genuine Dynabrade replacement parts. To reorder replacement parts, specify the **Model #**, **Serial #** and **RPM** of your machine.
6. A motor tune-up kit (P/N **96174**) is available which includes assorted parts to help maintain motor in peek operating condition. Please refer to Dynabrade's Preventative Maintenance Schedule (PD98•02) 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, 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.

Disassembly/Assembly Instructions - .3 Hp/7°/Rear Exhaust

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.

New/Updated Parts - Effective Serial Number 7H2560

02696 Bearing Replaces 02650 Bearing.
02673 Rear Bearing Plate Replaces 01474 Rear Bearing Plate.
02679 Shield added.

Motor Disassembly:

1. Disconnect tool from power source.
2. Secure air tool in vise using 52296 Repair Collar. Remove drill chuck.
3. With an adjustable pin wrench, remove 53153 Planetary Housing by turning counter-clockwise.
4. Remove 50784 Set Screw and pull 50782 Adapter and first planetary carrier assembly from 53153 Planetary Housing.
5. Press planetary carrier assembly from rear 54552 Bearing. Remove ring gear and gears from 50780 Planetary Carrier.
6. Secure planetary carrier in vise and remove 50782 Adapter. Press carrier from front 54552 Bearing. Remove 50778 Spacer.
7. Remove second planetary gear assembly.
8. Press planetary carrier assembly from rear 54552 Bearing. Remove ring gear and gears from 50780 Planetary Carrier.
9. Press carrier from front 54552 Bearing.
10. Grab onto pinion and pull motor assembly from motor housing.
11. Press 50777 Rotor from 02673 Rear Bearing Plate. Press 02696 Rear Bearing from rear bearing plate, remove 02679 Shield.
12. Remove cylinder and rotor blades from rotor.
13. 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).
14. Press pinion and rotor through 40544 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 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 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 40544 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 02696 Rear Bearing and slip bearing and 02679 Shield 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 02673 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.
8. Press Front 54552 Bearing onto front end of first 50780 Planetary Carrier.
9. Install gears and 54475 Gear Shafts onto planetary carrier.
10. Slip 54468 Ring Gear over gears and press rear 54552 Bearing onto planetary carrier.
11. Press front 54552 Bearing onto front end of second 50780 Planetary Carrier.
12. Install gears and 54475 Gear Shafts onto planetary carrier.
13. Slip 54468 Ring Gear over gears and press rear 54552 Bearing onto planetary carrier
14. Apply one drop of #271 Loctite® to threads of 50782 Adapter. Install adapter onto planetary carrier (torque 17.0 N•m/150 in. - lbs.).
15. Place 50778 Spacer onto pinion. Slip complete planetary carriers onto pinion in motor housing.
16. Install 53153 Planetary Housing onto housing to secure motor (torque 28 N•m/250 in. - lbs.). Line up slot in ring gear with 50784 Set Screw hole, install 50784 Set Screw into hole to lock motor in place.
17. Install drill chuck onto adapter.

Motor Reassembly Complete.

(continued on next page)

Disassembly/Assembly Instructions (continued)

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).
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 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.).
9. Replace air fitting. Secure inlet adapter with a wrench before tightening air fitting.
10. 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

Loctite® is a registered trademark of Loctite Corp.

Optional Accessories

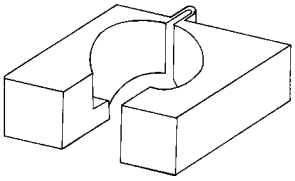
Dynaswivel®

- Swivels 360° AT TWO PIVOT POINTS allowing the air hose to drop directly to the floor while providing superb tool handling.
- New 94300 1/4" NPT, non-marring composite construction.

95461 – 3/8" NPT
95462 – 1/2" NPT
95490 – 3/4" NPT

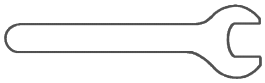
96173 Motor Tune-Up Kit

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



52296 Repair Collar

- Specially designed collar for use in vise to prevent damage to valve body housing during disassembly/assembly.



Open-End Wrenches

95262 – 14 mm open-end
95281 – 19 mm open-end

Visit our new Web Site via Industry.Net MROP On-Line: http://www.dynabrade.industry.net **E-Mail:** DynaTalk@aol.com

DYNABRADE®

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