

2 hp Right Angle Disc Sander Depressed Center Wheel Grinder

PD22-07
September, 2022
Replaces PD04-51

Safety, Operation and Maintenance – Save This Document and Educate All Personnel

Model	RPM	Spindle
50348	6,000	5/8"-11 Male

GRINDER



**LIMITED
LIFETIME
WARRANTY**

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⚠ WARNING

Read and understand this tool manual before operating your air tool. Follow all safety rules for the protection of operating personnel as well as adjacent areas. Always operate, inspect and maintain this tool in accordance with the American National Standards Institute (ANSI). Safety Requirements for the Use, Care and Protection of Abrasive Wheels – ANSI B7.1, and Safety Requirements for Abrading Materials with Coated Abrasive Systems – ANSI B7.7, Compressed Air and Gas Institute (CAGI) Safety Code for Portable Air Tools – B186.1, Code of Federal Regulation – CFR 29 Part 1910, International Organization for Standardization (ISO) Hand Held Non-Electric Power Tools – Safety Requirements ISO 11148 series and applicable State and Local Regulations.



Read and understand tool manual before work starts to reduce risk of injury to operator, visitors, and tool.



Eye protection must be worn at all times, eye protection to conform to ANSI Z87.1.



Ear protection to be worn when exposure to sound, exceeds the limits of applicable Federal, State or local statutes, ordinances and/or regulations.



Practice safety requirements. Work alert, have proper attire, and do not operate tools under the influence of alcohol or drugs.



Respiratory protection to be used when exposed to contaminants that exceed the applicable threshold limit values required by law.



Air line hazard, pressurized supply lines and flexible hoses can cause serious injury. Do not use damaged, frayed or deteriorated air hoses and fittings.

Some dust created by sanding, grinding, drilling, and other construction activities contain chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints
- Crystalline silica from bricks and cement and other masonry products
- Arsenic and chromium from chemically treated lumber

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

SAFETY and OPERATING INSTRUCTIONS



Carefully Read and Understand the General and Grinder sections found in Tool Safety and Operating Guidelines (PN00001676) Before Handling or Using Tool.

Carefully Read all instructions before operating or servicing any Dynabrade® Abrasive Power Tool. Products offered by Dynabrade are not to be modified, converted or otherwise altered from the original design.

Tool Intent: Depressed Center Wheel Grinders are intended for use in industrial applications and used only by skilled, trained professionals in accordance with the instructions in this manual. This pneumatic tool is designed for grinding a variety of materials including metal, stone, fiberglass or plastic surfaces using 7/8" center hole type 27 reinforced grinding wheels. Use in any other manner or with other accessories could lead to unsafe operating instructions.

DO NOT USE Tool for Anything Other Than Its Intended Applications.

Training: Proper care, maintenance, and storage of your air tool will maximize tools performance and reduce chance for accident.

Employer's Responsibility: Provide operators with safety instructions and training for safe use of tools and accessories.

Report to Your Supervisor any Condition of the Tool, Accessories or Operation you Consider Unsafe.

MAINTENANCE INSTRUCTIONS

Important: To keep tool safe, a Preventative Maintenance Program is recommended. The program should include inspection of the tool and all related accessories and consumables, including air lines, pressure regulators, filters, oilers, etc. refer to ANSI B186.1 for additional maintenance information. If accessory or tool breakage occurs, investigate failure to determine the cause and correct before issuing tool for work. Use the following schedule as a starting point in developing a Preventative Maintenance Program. If tool does not operate properly (RPM, Vibration, Start/Stop) after these scheduled checks or at any time, the tool must be repaired and corrected before returning tool to use.

INSTALLATION

- To ensure long life and dependable service, use a Closed Loop Air System and Filter-Regulator-Lubricator as diagramed below.
- Each tool should have its own dedicated hose connected to an air supply manifold. Quick disconnects should be installed at the manifold in an effort to reduce contamination into the tool.
- It is strongly recommended that all Dynabrade rotary vane air tools be used with a Filter-Regulator-Lubricator to minimize the possibility of misuse due to unclean air, wet air or insufficient lubrication. Dynabrade recommends the following: **10690** Air Line Filter-Regulator-Lubricator — Provides accurate air pressure regulation, two-stage filtration of water contaminants and micro-mist lubrication of pneumatic components.
- Dynabrade recommends one drop of air lube per minute for each 20 SCFM (example: if the tool specification states 40 SCFM, set the drip rate on the filter-lubricator to 2 drops per minute) Dynabrade Air Lube (P/N **95842**: 1pt/473ml) is recommended.

MAINTENANCE SCHEDULE

Daily (every 8 hours):

- Inspect tool and accessories for damage or broken parts. Replace items as necessary to ensure proper operation and safety.
- Lubricate motor as recommended. Use Dynabrade Air Lube (P/N **95842**: 1pt/473ml) 10W/NR. (1 Drop per minute of air lube per 20 SCFM.)
- Check air line pressure with a gage. (MAX. 90 PSIG or 6.2 Bar operating pressure at the air inlet of the tool.)
- Right angled gear and wick system through gear case grease fitting with 3 plunges of gear oil (P/N **95848**) and grease gun (P/N **95541**). (Prime grease gun prior to greasing.)
- Check tool for proper operation: If operating improperly or demonstrates unusual vibration, the tool must be serviced and problem corrected before further use.

Every 20 Hours or Once a Week Which Ever Comes First:

- Check free speed of tool without the abrasive accessory mounted. Measure RPM (speed) with tachometer and with air pressure set at 90 PSIG while the tool is running. If a governed tool is operating at a higher speed than the RPM marked on the tool housing, the tool must be serviced and corrected before use. A non-governed tool may exceed the RPM marked on the tool by 10% when operated at free speed with no accessories.
- If tool is running fast look for worn, damaged or missing governors, air control rings and silencers. Special care must be taken when servicing governors and speed control devices. Injection molded governor assemblies are non-serviceable and must be replaced.
- If tool is running slow look for clogged inlet screen, air stream, silencer(s) or a malfunctioning governor (see concerns for servicing governors). Service as required.

Every 50 Hours:

- Lubricate planetary gears through gear case grease fitting with 3 plunges of grease (P/N **95542**) and grease gun (P/N **95541**). (Prime grease gun prior to greasing.)

REPAIR

- Use only genuine Dynabrade replacement parts to ensure quality. To order replacement parts, specify Model#, Serial# and RPM of your air tool.
- Mineral spirits are recommended when cleaning the tool and parts. Do not clean tool or parts with any solvents or oils containing acids, esters, ketones, chlorinated hydrocarbons or nitro carbons.
- DO NOT clean or maintain tools with chemicals that have a low flash point (example: WD-40®).
- A Motor Tune-Up Kit is available which includes high wear and medium wear motor parts.
- Air tool markings must be kept legible at all times, if not, reorder housing and replace. User is responsible for maintaining specification information.
- After maintenance is performed on tool, add a few drops of Dynabrade Air Lube (P/N **95842**) to the tool inlet and start the tool a few times to lubricate air motor. Verify RPM (per 20 hr maintenance schedule), vibration and operation.

HANDLING & STORAGE

- Use of tool rests, hangers and/or balancers is recommended.
- Protect tool inlet from debris (see Notice).
- DO NOT carry tool by air hose or near the tool throttle lever.
- Store accessories in protective racks or compartments to prevent damage.
- Follow the handling instructions outlined in the operating instructions when carrying the tool and when changing accessories.
- Protect accessories from exposure to water, solvents, high humidity, freezing temperature and extreme temperature changes.

END OF USE/DISPOSAL

When tool has reached its end of useful service, disassemble tool into its primary components (i.e. steel, aluminum and plastic part) and recycle or discard per local, state and/or federal regulations as to not harm the environment.

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.

DISASSEMBLY/ASSEMBLY INSTRUCTIONS

IMPORTANT: The manufacturer's warranty is void if the tool is disassembled before the warranty expires.

NOTICE: All of the special repair tools referred to in these instructions can be ordered from Dynabrade Inc. Please refer to the parts page for proper part identification.

RIGHT ANGLE AND MOTOR DISASSEMBLY

- Shut the air supply valve and disconnect the disc grinder from the air supply hose.
- Remove the **07139** Flange with the **95051** Hex Key (3/8"). Remove the Type 27 Wheel and the **52176** Back-Up Flange.
- Remove the **52169** Handle.
- Use the **95331** Hex Key (4mm) to remove the **95897** Screws (5), and the **52149** Guard from the **52146** Housing.
- Pull the **52131** Spindle along with the associated components out of the **52146** Housing.
- Hold the **52146** Housing in a vise with aluminum or bronze jaws by holding the housing between the handle mounting boss & the **52164** Exhaust Cover.
- Roll back the **07136** Grip to expose the wrench flats on the **52123** Adapter. Use the **96079** Wrench (32mm) or an adjustable wrench to remove the **52123** Adapter from the **52146** Housing by turning it counterclockwise.
- Pull the motor assembly out of the **52146** Housing.
- Very carefully hold the pinion gear stationary in the aluminum or bronze jaws. Use an adjustable wrench to remove the governor assembly by turning it clockwise. (Left Hand Threads)
- Fasten the **96346** Bearing Separator (2") around the portion of the **52139** Cylinder that is closest to the **52140** Bearing Plate.
- Position the motor assembly with the separator in the **96232** Arbor Press (#2) so that the pinion is pointing down.
Note: Use additional blocking under the bearing separator to provide clearance for disassembling the air motor.
- Use a 3/16" dia. flat end drive punch as a press tool along with the arbor press to push the rotor out of the **01266** Bearing.
- Use the **96214** Bearing Removal Tool to remove the **01266** Bearing from the **52140** Bearing Plate.
- Remove the **95998** Retaining Ring from the pinion gear. Position the flat side of the bearing separator toward the gear teeth and fasten it to the pinion gear. Place the bearing separator along with the remaining motor components in the arbor press so that the pinion gear is pointing up. Use a 1/4" dia. flat end drive punch to push the **07108** Rotor out of the pinion gear.
- Remove the **52136** Bearing Plate, **52184** Bearing and the **52141** Shims from the rotor.
- Use a 1/4" dia. flat end drive punch to remove the **50497** Washer and the **02649** Bearing from the **52146** Housing.
- Hold the flats on the **52131** Spindle in the vise with aluminum or bronze jaws and use an adjustable wrench to remove the **52118** Spindle Nut by turning it counterclockwise.
- Use the bearing separator and the arbor press to remove the **50505** Bearing and the bevel gear.

Right Angle and Motor Disassembly Complete.

VALVE DISASSEMBLY

- Remove the **07147** Plug by turning it counterclockwise.
- Remove the **07146** Packing, the **07145** Spring, and the **07168** Valve Stem Assembly.
- Remove the **01017** Pin and the **01089** Safety Throttle Lever.

Valve Disassembly Complete.

MUFFLER DISASSEMBLY

- Use the **95266** Hex Key (3mm) to remove the **50511** Screws (2), **01791** Washers (2), **52180** Clamp and the **52164** Exhaust Cover.
- Remove the **55245** Felt Silencer and the **52165** Gasket.

Muffler Disassembly Complete.

Clean and inspect all parts before assembling.

MUFFLER ASSEMBLY

- Install the **52164** Gasket onto the **52146** Housing.
- Install the **52167** Felt Silencer into the **52164** Exhaust Cover and attach these to the **52146** Housing with the **52180** Clamp, **50511** Screws (2) & the **01791** Washers (2).

Muffler Assembly Complete.

VALVE ASSEMBLY

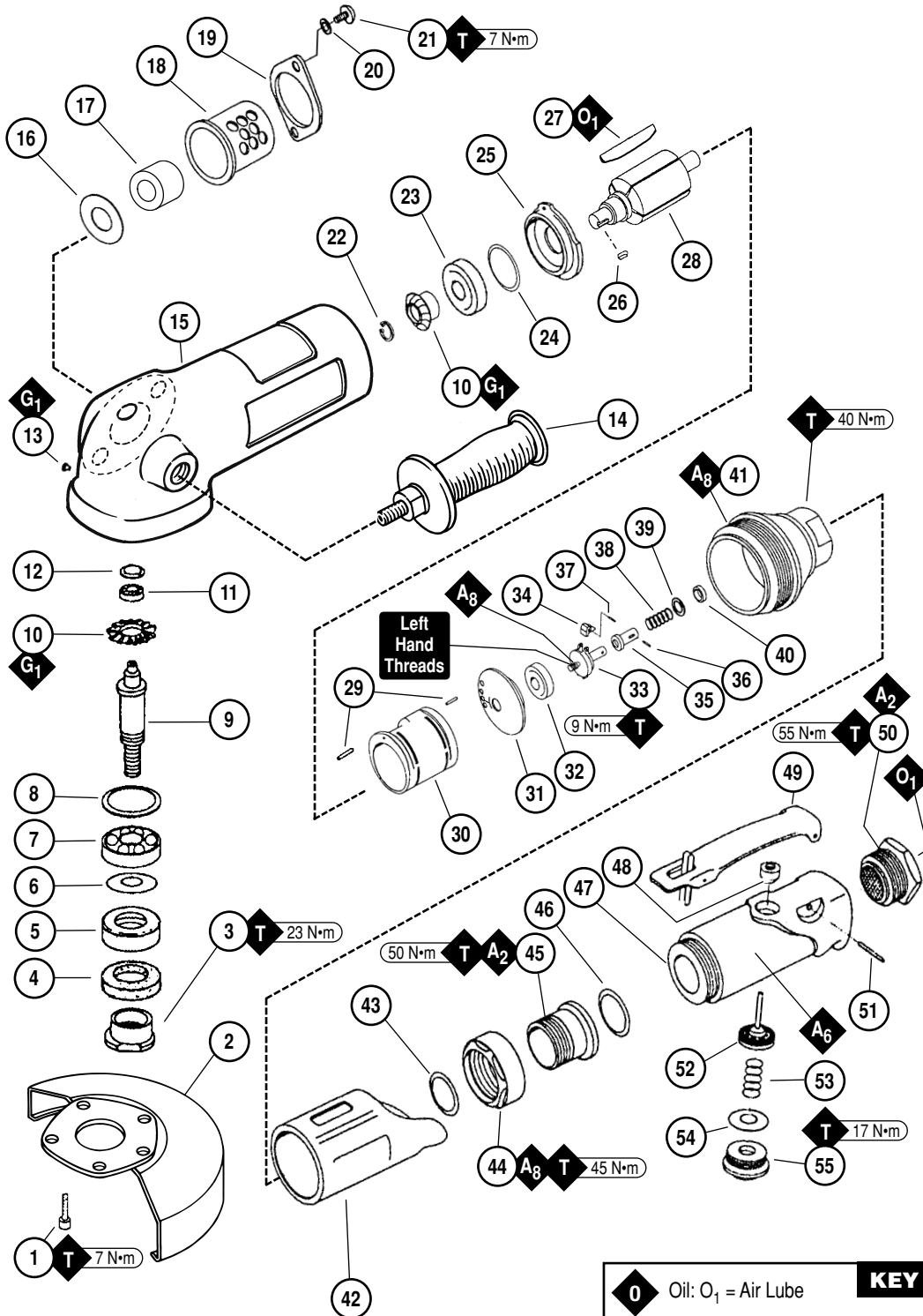
- Install the **07146** Packing onto the **07147** Plug.
- Insert the **07145** Spring into the **07168** Valve Stem Assembly and install these into the **07141** Valve Body.
- Hold the valve components in place with the **07147** Plug. (Torque to 17 N·m/150 in. lbs.)

Models

50348 - 7", 6,000RPM, Tool Only

2 hp Right Angle Disc Sander

Complete Assembly



KEY	
O	Oil: O ₁ = Air Lube
G	Grease: G ₁ = Lubriplate 630 AA
A	Adhesive: A ₂ = Loctite #271 A ₆ = Loctite #380 A ₈ = Loctite #567
T	Torque: N•m x 8.85 = lb•in.
T_x	X = Torque Value (N•m) (N•m x 8.85 = lb•in.)
Always follow adhesive manufacturers cleaning and priming recommendations.	

ITEM	P/N	DESCRIPTION	QTY.
1	95897	SCREW	5
2	52149	GUARD	1
3	52118	SPINDLE NUT	1
4	52089	WASHER	1
5	50412	FELT RING	1
6	52147	SPACER	1
7	50505	BEARING	1
8	52148	SHIM PACK (3/PKG.)	1
9	52131	SPINDLE	1
10	52184	BEVEL GEAR/PINION SET	1
11	02649	BEARING	1
12	50497	SPINDLE CAP COVER	1
13	01041	GREASE FITTING	1
14	52169	HANDLE	1
15	52146	HOUSING	1
16	52165	GASKET	1
17	55245	SILENCER	1
18	52164	EXHAUST COVER	1
19	52180	CLAMP	1
20	01791	WASHER	2
21	50511	SCREW	2
22	95998	RING	1
23	52130	BEARING	1
24	52141	SHIM PACK (3/PKG.)	1
25	52136	BEARING PLATE	1
26	50509	KEY	1
27	07109	BLADE (5/PKG.)	1
28	07108	ROTOR/SHAFT ASSY.	1
29	01673	PIN	2
30	52139	CYLINDER	1
31	52140	BEARING PLATE	1
32	01266	BEARING	1
33	52171	GOVERNOR CAGE	1
34	50530	GOVERNOR WEIGHT	1
35	50541	GOVERNOR VALVE	1
36	50468	PIN	1
37	96059	GOVERNOR PIN	2
38	52172	GOVERNOR SPRING	1
39	52173	SHIM (AS REQ.) 6/PKG.	1
40	50548	SPRING HOLDER	1
41	52123	ADAPTER	1
42	07136	GRIP	1
43	02658	PACKING	1
44	02631	NUT	1
45	02626	ADJUSTMENT BUSHING	1
46	01746	O-RING	1
47	07141	VALVE BODY (INCLUDING 07142 BUSHING)	1
48	07142	BUSHING	1
49	01089	SAFETY LEVER	1
50	01697	INLET BUSHING	1
51	01017	PIN	1
52	07168	VALVE STEM ASSY.	1
53	07145	SPRING	1
54	07146	PACKING	1
55	01747	PLUG	1

4. Install the **01089** Safety Throttle Lever holding it in place with the **01017** Pin.
Valve Assembly Complete.

RIGHT ANGLE AND MOTOR ASSEMBLY

1. Select .003" (.08mm) thickness in shims from the **52141** Shim Pack. Install the shims into the **52136** Bearing Plate and then install the **52130** Bearing.
2. Install the bearing/plate assembly onto the **07108** Rotor and hold this assembly in place with the **50509** Key, pinion gear and the **95998** Retaining Ring.
3. Use a .001" (.03mm) feeler gauge to check the clearance between the bearing plate and the face of the rotor.
4. The clearance should be .001" (.03mm) to .0015" (.04mm). If the clearance needs adjustment, repeat steps 1-4 adding or removing shims as required.
5. Lubricate the **07109** Blades (5) with the **95842** Dynabrade Air Lube (10W/NR or equivalent) and install these into the vane slots in the rotor.
6. Install the **52139** Cylinder over the **07108** Rotor so that the air inlet opening of the cylinder will line up with the air inlet opening in the **52140** Bearing Plate.
7. Use the **96232** Arbor press to install the **01266** Bearing into the **52140** Bearing Plate.
8. Use the raised inner diameter of the **96244** Bearing Press Tool so that it

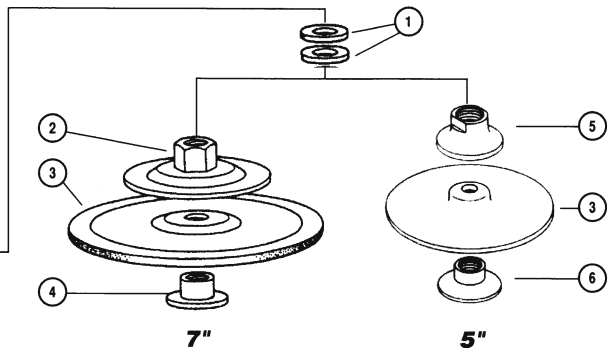
will rest against the inner race of the **01266** Bearing. Carefully press the bearing/plate assembly onto the **07108** Rotor until it touches the **52139** Cylinder. This will establish a snug fit between the bearing plates and the cylinder.

9. Hold the pinion in a vise with aluminum or bronze jaws so that the female threaded end of the rotor is pointing up.
10. Apply a small amount of the Loctite #567 (or equivalent) to the threaded stem of the **52171** Governor Cage and install the governor assembly onto the **07108** Rotor turning it counterclockwise. (Left Hand Thread) (Torque to 9 N•m/80 in. lbs.)
11. Install the motor assembly into the **52146** Housing.
12. Hold the **52146** Housing in a vise with aluminum or bronze jaws by holding the housing between the handle mounting boss and the **52164** Exhaust Cover.
13. Apply a small amount of the Loctite #567 (or equivalent) to the threads of the **52123** Adapter and install the adapter along with the valve body assembly. (Torque to 40 N•m/350 in. lbs.)

Important: Remove the tool from the vise and connect it to the air supply. Test run the tool to make sure that the air motor is functioning properly.

MOUNTING ARRANGEMENT

Index Key	
No.	Description
1	Spacers (2) As Req.
2	Wheel Adapter Back
3	7/8" I.D. Depressed Center Wheel
4	Adapter Nut
5	Back Flange
6	Front Flange
All Of The Above Are Not Included With Tool.	



LIMITED LIFETIME WARRANTY

Dynabrade portable pneumatic power tools are rigorously inspected and performance tested in our factory before shipping to our customers. If a Dynabrade tool develops a performance problem and an inherent defect is found during normal use and service, Dynabrade will warrant this tool against defects in workmanship and materials for the limited lifetime of the tool.

MACHINE SPECIFICATIONS

Model	Power	Sound Level	Air Consumption	Spindle Thread	Air Pressure	Weight	Length	Height
50348	2 hp (1,491 W)	82 dB(A)	12.6 CFM/109 SCFM (3,086 LPM)	5/8"-11 Male	90 PSIG (6.2 Bar)	8.6 lb. (3.9 kg)	15.8" (399 mm)	5.3" (132 mm)

Additional Specifications: Air Inlet Thread 1/2" NPT • Hose I.D. 1/2" (15 mm)

OPTIONAL ACCESSORIES



Grease and Grease Gun

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

95541: Push-type grease gun.

95544: 2.5oz. (74ml) tube.



Dynaswivel®

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

95462: 1/2" NPT



Motor Tune-Up Kit

- Includes assorted parts to help maintain and repair motor.

96043



Bearing Separator

96346



Bearing Removal Tool

96214



Bearing Press Tool

96240



Dynabrade Air Lube

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

95842: 1pt. (473 ml)

95843: 1 gal. (3.8 L)



Hex Key

95266: 3mm Hex Key

95051: 3/8" Hex Key



Wrench

95304: 24mm Open-End

96079: 32mm Open-End

REFERENCE CONTACT INFORMATION

American National Standards Institute (ANSI)

www.ansi.org

Compressed Air & Gas Institute (CAGI)

www.cagi.org

European Committee for Standardization

(PNEUROP)

www.pneurop.org

International Organization of Standards (ISO)

www.iso.org

U.S. Government Publishing Office (GPO)

www.gpo.gov

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