

Grizzly Industrial, Inc.®

MODEL H3273 42-PIECE AIR TOOL SET INSTRUCTION MANUAL



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#BL11194 PRINTED IN CHINA

WARNING!

This manual provides critical safety instructions on the proper setup, operation, maintenance and service of this machine/equipment.

Failure to read, understand and follow the instructions given in this manual may result in serious personal injury, including amputation, electrocution or death.

The owner of this machine/equipment is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, blade/cutter integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

WARNING!

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

- Lead from lead-based paints.
- Crystalline silica from bricks, 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

WARNING

For Your Own Safety Read Instruction Manual Before Operating This Equipment

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words which are intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.



Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

This symbol is used to alert the user to useful information about proper operation of the equipment.

WARNING

Safety Instructions for Pneumatic Tools

- 1. READ THIS MANUAL.** This tool may cause personal injury if used incorrectly. This manual contains proper safety and operating instructions that must be followed to reduce this risk.
- 2. WEAR EYE PROTECTION.** This tool may throw small fragments during operation, which may cause serious eye injury. Always wear ANSI approved safety glasses or face shield to reduce your risk from this hazard.
- 3. WEAR A RESPIRATOR.** This tool may produce fine dust during operation, which can cause respiratory injury if inhaled. Always wear a respirator NIOSH approved for the type of material being processed.
- 4. WEAR HEARING PROTECTION.** Operating this tool for prolonged time periods may damage your hearing. Your risk depends on length and frequency of use. To reduce your risk of this hazard, wear hearing protection.
- 5. MAINTAIN SAFETY GUARDS.** Your tool may be equipped with safety guards or other structural components designed to reduce the risk of injury during operation. Never modify or operate this tool with any guards or components removed or damaged.
- 6. KEEP CHILDREN AWAY.** Prevent children from injury by keeping them away from this tool. Disconnect and lock the tool away when not in use.

7. **AVOID ENTANGLEMENTS.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry, which may get caught in moving parts, when operating this tool. Wear a protective hair covering to contain long hair.
8. **USE CORRECT AIR PRESSURE.** Exceeding the maximum PSI rating of this tool may cause unpredictable operation or bursting.
9. **DISCONNECT AIR PRESSURE** before servicing, changing accessories, or moving to another location. Never leave this tool unattended when connected to air.
10. **SECURE TOOLING.** Always verify tooling is secure before operation.
11. **SHARP SURFACES. DO NOT** place hands near the tooling surfaces when in operation.
12. **REMOVE ADJUSTING KEYS AND WRENCHES AFTER USE.** These tools become dangerous projectiles if left on the tool when it is started.
13. **AVOID FLAMMABLES.** Do not use this tool around any flammables that may be ignited by sparks.
14. **SECURE WORK.** Use clamps or a vise to hold work when practical. It is safer than using your hand and frees both hands to operate tool.
15. **MAINTAIN TOOLS WITH CARE.** Keep tools lubricated and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
16. **DO NOT FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
17. **CHECK FOR DAMAGED PARTS BEFORE USING.** Check for binding and alignment of parts, broken parts, part mounting, loose bolts, and any other conditions that may affect operation. Repair or replace damaged parts before operating.
18. **USE GOOD LIGHTING.** Keep work area well lighted. Dark work areas increase risk of accidental injury.
19. **AVOID UNINTENTIONAL OPERATION.** Always disconnect air when not in use, and do not carry tool with hand on trigger.
20. **USE THE RECOMMENDED ACCESSORIES.** Consult owner's manual for recommended accessories. Using improper accessories may increase the risk of injury.
21. **NEVER ALLOW UNTRAINED USERS TO USE THIS TOOL WHILE UNSUPERVISED.**
22. **IF YOU ARE UNSURE OF THE INTENDED OPERATION, STOP USING TOOL.** Seek formal training or research books or magazines that specialize in pneumatic tools.
23. **BE AWARE OF HOSE LOCATION.** Hoses can easily become a tripping hazard when laid across the floor in a disorganized fashion.
24. **DO NOT USE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL, OR WHEN TIRED.**

CAUTION

No list of safety guidelines is complete, because every work environment is different. Always consider safety first and use common sense. Failure to use this tool with caution and respect could result in serious personal injury.

INTRODUCTION

Foreword

The specifications, details, and photographs in this manual represent the Model H3273 as supplied when the manual was prepared. However, owing to Grizzly's policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly.

If you have any comments regarding this manual, please write to us at the following address:

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C/O Technical Documentation
P.O. Box 2069
Bellingham, WA 98227-2069
E-Mail: manuals@grizzly.com

Most importantly, we stand behind our tools. If you have any service questions or parts requests, please call or write us at the location listed below.

Grizzly Industrial, Inc.
1203 Lycoming Mall Circle
Muncy, PA 17756
Phone: (570) 546-9663
Fax: (800) 438-5901
E-Mail: techsupport@grizzly.com
Web Site: <http://www.grizzly.com>

Specifications

Impact Wrench

Drive Size 1/2"
No Load Speed 7000 RPM
Max. Torque 230 ft/lb (310N.m)
Air Inlet 1/4" NPT
Air Hose ID 3/8"
Operating Air Pressure..... 90 PSI
Min. Required Air Flow..... 8 CFM
Max. Sound Level..... 104 dB
Socket Sizes..... 7/16"-1"
Weight 4.7 lbs

Air Hammer

Chisel Shank OD..... 10mm
Bore Diameter 3/4"
Blows Per Min 4500
Air Inlet 1/4" NPT
Air Hose ID..... 3/8"
Operating Air Pressure..... 90 PSI
Min. Required Air Flow..... 3 CFM
Max. Sound Level..... 108 dB
Weight 2.5 lbs

Reversible Air Drill

Free Speed..... 1800 RPM
Drilling Capacity..... 3/8"
Air Inlet 1/4" NPT
Air Hose ID 3/8"
Minimum Required Air Flow 6 CFM
Operating Air Pressure..... 90 PSI
Weight 2.4 lbs

Die Grinder

Collet Size 1/8" and 1/4"
 No Load Speed 22,000 RPM
 No. of Grinding Stones 10
 Air Inlet 1/4" NPT
 Air Hose ID 3/8"
 Operating Air Pressure 90 PSI
 Min. Required Air Flow 4 CFM
 Maximum Sound Level 93.8 dB
 Weight 1.2 lbs

Random Orbit Sander

Pad Size (Diameter) 5 3/4" x 3/8"
 Spindle Thread Nut Size 5/16" x 24 NF
 No Load Speed 9t000 RPM
 Air Inlet 1/4" NPT
 Air Hose ID 3/8"
 Operating Air Pressure 90 PSI
 Min. Required Air Flow 6 CFM
 Weight 3.2 lbs

Inventory

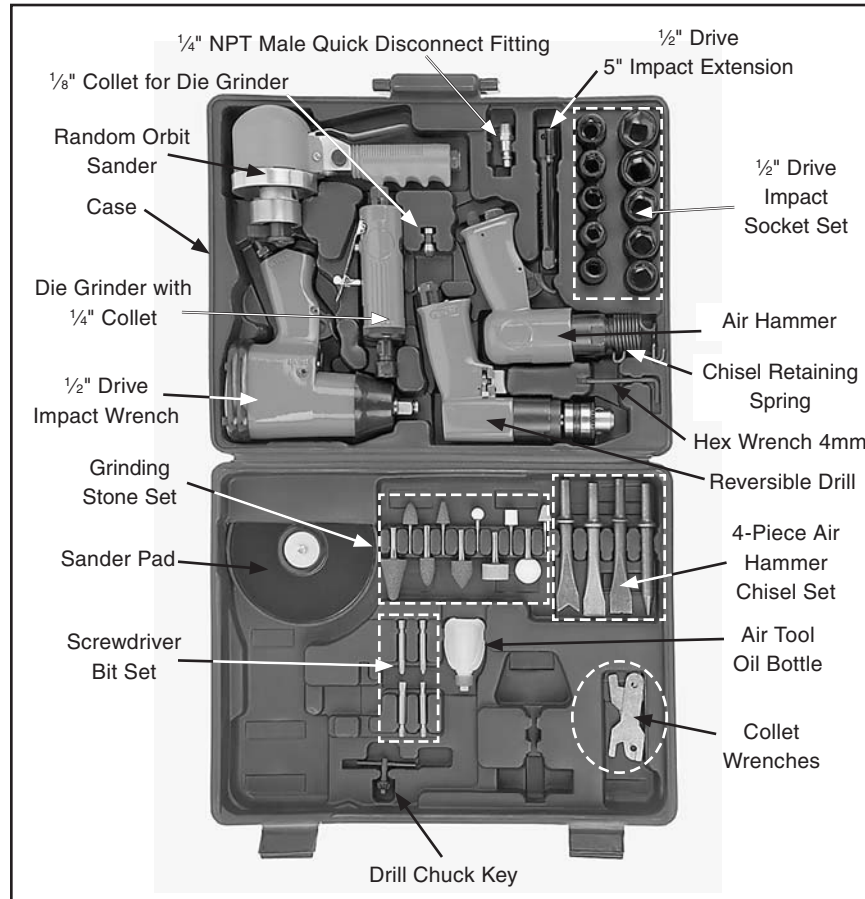
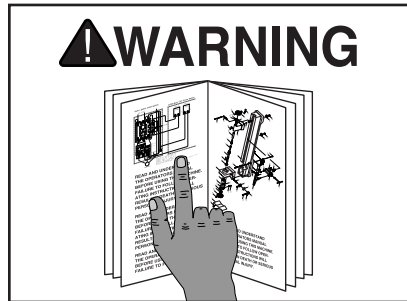


Figure 1. Model H3273 Inventory.

OPERATIONS



Read the manual before operation. Become familiar with this tool, its safety instructions, and its operation before beginning any work. Serious personal injury may result if safety or operational information is not understood or followed.

WARNING	
	LUNG/EAR INJURY HAZARD! Wear protective equipment when using this tool.
	ACCIDENTAL START HAZARD! Disconnect before service or tool changes.
	AIR PRESSURE HAZARD! Never exceed max PSI rating for tool.
	EYE INJURY HAZARD! Wear protective equipment when using these tools.

Air Supply

The air tools require 90 PSI to operate correctly. To improve the lifespan of the impact wrench, air hammer, reversible drill, and die grinder, use a filter/lubricator/regulator setup shown in **Figure 2**. Otherwise, lubricate daily with a couple of drops of pneumatic tool oil directly into the tool's air inlet fitting

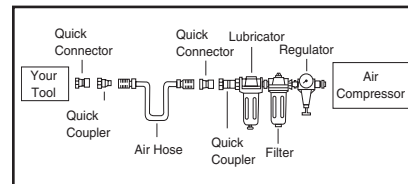


Figure 2. Installed filter lubricator regulator.

We do not recommend using a filter/lubricator/regulator for the random orbit sander (see **Sander Maintenance on Page 9** for further details).

Install the included 1/4" NPT quick-disconnect fitting (**Figure 1**) into the bottom of the air inlet on any of the tools in this kit, install tooling, then attach the tool to an air hose set at 90 PSI. Always DISCONNECT THE TOOL FROM THE AIR SUPPLY before changing tooling!

Tip: To maximize the torque and efficiency of the air tools in this kit, connect them to a 3/8" air line with a 3/8" coupler with 1/4" NPT threads (not included).

Impact Wrench

Your new 1/2" drive impact wrench (**Figure 1**) will generate up to 230 ft/lbs. of torque. Included in this kit is a 1/2" drive impact socket set with 10 common sizes, and a 5" socket extension. Only use thick-walled impact sockets, such as the ones included with this kit.

Common thin-walled chrome sockets may shatter if used as impact sockets, causing serious injury.

At the end of the handle you can adjust the torque setting by pushing the knob in and turning the knob to 1, 2, 3, or 4; 1 is the lowest torque setting.

To change the impact rotation, push the slide button toward the front of the gun for clockwise rotation and to the rear for counterclockwise rotation.

Air Hammer

Your new air hammer (**Figure 1**) is a great tool for chipping and chiseling welds, stone, wood, tiles, grout and many other materials. But remember, never change chisels with the air hammer still connected to the air supply.

Before your first use, position the chisel retaining spring onto the end of the air hammer by threading it on in a clockwise rotation until the retainer is completely seated and it stops.

Four of the most common chisels are included in this set. To install and remove a chisel, push the chisel retaining spring tang (**Figure 3**), so the retainer spring "U" clears the chisel retaining shoulder and insert or remove a chisel of your choice.

Note: If you have difficulty bending the retainer spring to fit the bit, loosen or remove the spring and insert the bit into the spring prior to threading it on the hammer.



Figure 3. Chisel installation.

-6-

Make sure that when the chisel is installed, the retainer spring "U" is holding the chisel as shown in (**Figure 4**).

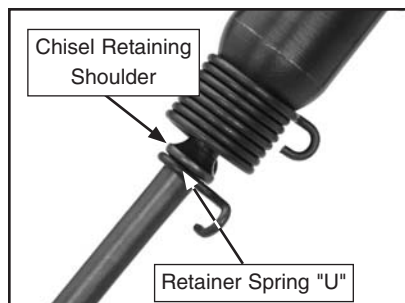


Figure 4. Safe chisel position.

To control the chisel hammer rate and the hammering force, turn the knurled thumb knob on the end of the handle. Rotating clockwise reduces the hammer rate and the hammering force.

Reversible Air Drill

Your air drill accepts drill bits with a shaft up to $\frac{3}{8}$ " diameter. The four included screwdriver bits can also be used with this drill. See the Grizzly catalog or www.grizzly.com for a complete listing of available drill bits and accessories.

To install a drill bit:

1. DISCONNECT THE DRILL FROM THE AIR SUPPLY!
2. Insert the chuck key into the chuck, (**Figure 5**) turn the key to loosen the jaws enough to allow the bit shaft to fit inside the chuck.

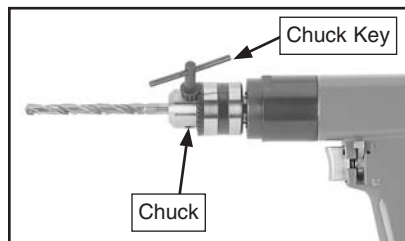


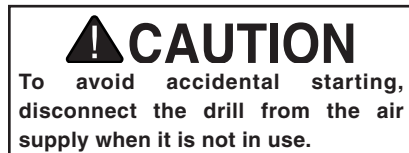
Figure 5. Installing a bit.

Model H3273 42-Piece Air Tool Set

3. Insert the bit at least $\frac{3}{8}$ " into the chuck, then tighten the chuck with the key by turning it clockwise. Make sure the bit will not pull out.

To use the drill:

1. Attach the $\frac{1}{4}$ " NPT male quick connect fitting to the air inlet plug.
2. Attach the drill to an air supply set at 90 PSI.
3. Hold the drill securely, and using the trigger to control RPM, ease the working end of the bit against the workpiece with a light, but steady pressure.
4. To reverse the direction of the drill, push the lever down to the "R" position for counterclockwise rotation.



Die Grinder

Your die grinder accepts grinding stones with $\frac{1}{8}$ " or $\frac{1}{4}$ " shafts and can generate up to 22,000 RPM. With the included $\frac{1}{8}$ " and $\frac{1}{4}$ " collets, you can use the 10 assorted grinding stones for a variety of grinding chores.

To install a bit:

1. DISCONNECT THE GRINDER FROM THE AIR SUPPLY!
2. Use the two included wrenches to loosen the collet nut, as shown in **Figure 6**.

Note: *It is not necessary to completely remove the collet nut from the shaft unless you are also changing the collet.*

Model H3273 42-Piece Air Tool Set

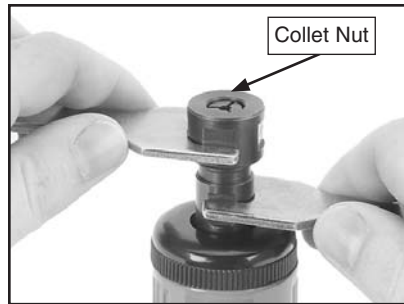
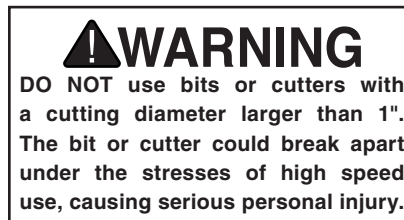


Figure 6. Loosening the collet.

3. Insert at least $\frac{1}{2}$ " of the bit into the collet.
4. Hand tighten the collet nut, then use the collet wrenches to tighten the collet nut. Verify that the tooling bit is secure and will not pull out.



To change a collet:

1. DISCONNECT THE GRINDER FROM THE AIR SUPPLY!
2. Remove the collet nut from the grinder, then remove the collet from the shaft.
3. Insert the desired collet and tighten the collet nut with the included wrenches.

Always test the grinder on a scrap piece of material similar to the workpiece. Trial and error is the best way to determine the ideal setup.

To use the grinder:

1. Attach the appropriate male quick connect fitting to the air inlet plug.
2. Attach the grinder to an air supply set at 90 PSI.
3. Hold the grinder securely.
4. Turn the grinder **ON** by depressing the trigger.
5. Securely hold the grinder, and using the trigger to control RPM, ease the working end of the bit against the workpiece with a light, but steady, pressure.
6. To turn the grinder **OFF**, release the trigger.
7. To avoid accidental starting, disconnect the grinder from the air supply when it is not in use.

Daily Maintenance

The following recommendations apply to the air impact hammer, impact wrench, die grinder, and reversible drill. These air tools **MUST** have 2-3 drops of oil directly dropped into the air fitting before each use, as shown in **Figure 7**.

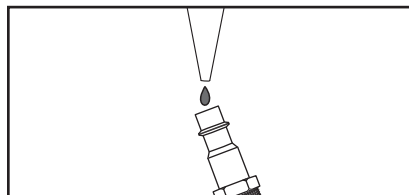


Figure 7. Lubricating directly into air fitting.

In addition, we recommend using an in-line filter, lubricator, and regulator, as shown in **Figure 2**. If an inline lubricator is not used, add 2-3 drops of oil into the tool air inlet every 2 hours of continued use.

These procedures should be done after each use:

- Before putting the air tool away, put 2-3 drops of oil into the air supply fitting.

Note: For the impact wrench, you must also remove the 4mm plug, put 2-3 drops of oil into the hole, and reinstall the plug.

- Wipe the tool exterior and sockets, bits, or chisels with a slightly oiled cloth. Your goal is to leave a light film of oil on the tools to prevent rust.

Random Orbit Sander

Your random orbit sander generates up to 9,000 RPM and accepts 6" pressure sensitive adhesive (PSA) sanding discs in a variety of grits to help tackle large sanding jobs. Choose between rotary mode, for quickly removing surface material, or orbital mode, for finishing work.

To assemble the sander:

1. Thread the sanding pad onto the drive spindle (**Figure 8**) and tighten with a 17mm wrench.

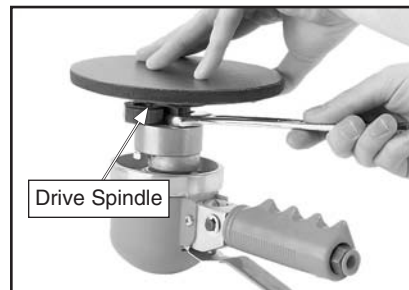


Figure 8. Installing sanding pad.

2. Install the included 1/4" NPT male quick-disconnect fitting into the bottom of the sander handle.

3. Attach a 6" pressure sensitive adhesive (PSA) sanding disc to the sanding pad as shown in **Figure 9**.



Figure 9. Attaching sanding disc.

To operate the sander:

1. Plug the tool into compressed air.
2. Hold the sander and press the throttle lever (**Figure 10**).

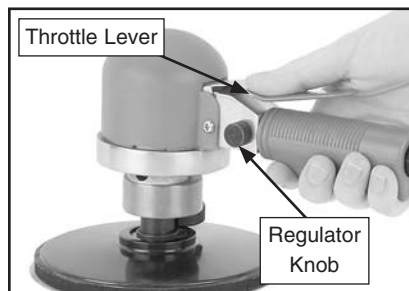


Figure 10. Sander controls.

3. Turn the regulator knob (**Figure 10**) to adjust the speed of the sanding disc.
4. Remove pressure on the throttle lever to stop the sander.

To change operating modes:

1. DISCONNECT THE SANDER FROM THE AIR SUPPLY!
2. To operate the sander in rotary mode, position the drive spindle so the rotor shaft moves freely, as shown in **Figure 11**.

Model H3273 42-Piece Air Tool Set

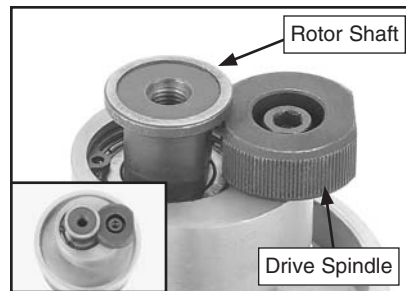


Figure 11. Sander in rotary mode (pad removed for clarity).

3. To operate the sander in random orbital mode, turn the drive spindle so the knurled face of the drive spindle contacts the flat of the rotor shaft (**Figure 12**).

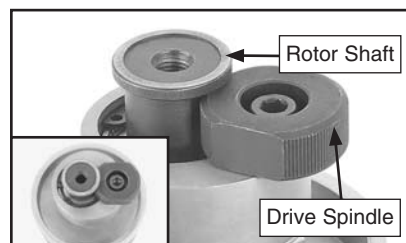


Figure 12. Sander in random orbital mode (pad removed for clarity).

4. Plug the tool into compressed air.
5. When the sandpaper loses its effectiveness, disconnect the tool, remove sandpaper from the pad, and replace with a new disc.

Sander Maintenance

Lubricate the random orbit sander at the beginning of the sanding task. Place one or two drops of pneumatic tool oil directly into the air fitting as shown in **Figure 7**.

A filter/lubricator/regulator set up is not recommended, as excess oil in the tool could spray onto the workpiece.

Run the sander for a few minutes to eject excess oil, then wipe the tool down with a rag and begin sanding. Oil the tool after use so it will not corrode in storage.

ACCESSORIES

6" PSA Aluminum Oxide Sanding Discs (3 Pack):

G1445—60 Grit
G4236—80 Grit
G1446—100 Grit
G4237—120 Grit
G1447—150 Grit
G4238—180 Grit
G4239—220 Grit

H3175— $\frac{1}{4}$ " NPT Female, Quick Coupler

H3176— $\frac{1}{4}$ " NPT Male, Quick Coupler

H3177— $\frac{1}{4}$ " NPT Male, Plug

H3178— $\frac{1}{4}$ " NPT Female, Plug

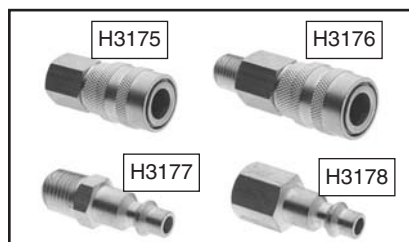


Figure 13. $\frac{1}{4}$ " NPT air fittings.

H3258—Filter/Lube/Regulator $\frac{3}{8}$ " NPT

H3259—Filter/Lube/Regulator $\frac{1}{2}$ " NPT

These units are indispensable for prolonging the lifespan of your air tools. Filter keeps water/rust out. Lubricator features adjustable automatic lubrication. Regulator allows you to control the optimum PSI delivery for each air tool. Maximum pressure for each unit is 150 PSI.



Figure 14. Models H3258 & H3259 Filter/Lubricator/Regulators.

G8114— $\frac{3}{8}$ " x 25 Ft. Air Hose

G8115— $\frac{3}{8}$ " x 50 Ft. Air Hose

G8116— $\frac{3}{8}$ " x 100 Ft. Air Hose

Multi-purpose red rubber air hose is flexible and abrasion resistant. Rated for 200 PSI, this air hose has a bursting strength of 800 PSI. $\frac{1}{4}$ " NPT ends.



Figure 15. Red rubber air hose.

H3275— $\frac{1}{4}$ " x 25' Recoil Air Hose

H3276— $\frac{1}{4}$ " x 50' Recoil Air Hose

These recoil air hoses are ideal for nailers and staplers because they are light weight and offer maneuverability in tight places that is unmatched by rubber hoses. Coiled springs protect the ends from kinking. (Prices are less than you'll spend on lunch!)

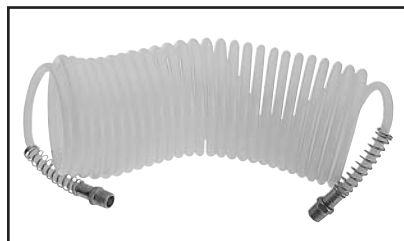


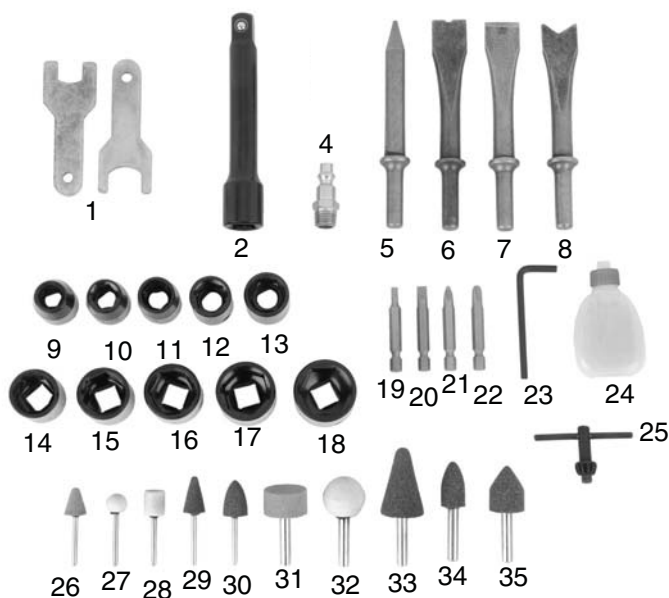
Figure 16. Recoil air hose.

G2820—Pneumatic Tool Oil 8 oz.

G2821—Pneumatic Tool Oil 1 Pint

Use the right oil! This pneumatic tool oil offers outstanding heat displacement and friction reduction without eating away at delicate air components like detergent motor oils. Stock up with extra bottles to avoid costly downtime.

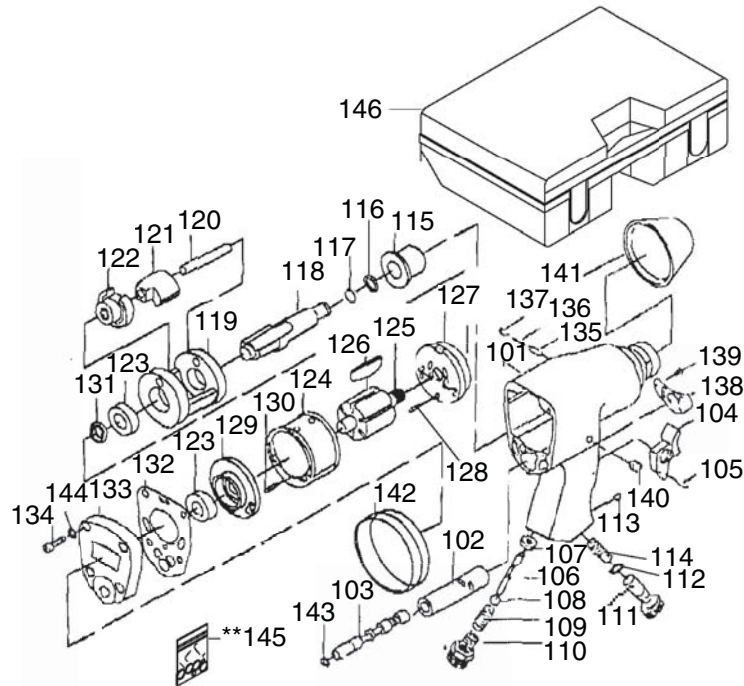
ACCESSORY PARTS*



REF	PART #	DESCRIPTION	REF	PART #	DESCRIPTION
1	PH3273001	WRENCHES (SET OF 2)	19	PH3273019	DRVR BIT 1/4" DRV X 4 FLAT TIP
2	PH3273002	5" EXTENSION 1/2" DRIVE	20	PH3273020	DRVR BIT 1/4" DRV X 6 FLAT TIP
4	PH3273004	BRASS AIR FITTING	21	PH3273021	DRVR BIT 1/4" DRV X #2 PHILLIPS
5	PH3273005	POINT CHISEL	22	PH3273022	DRVR BIT 1/4" DRV X #3 PHILLIPS
6	PH3273006	NOTCHED-SPADE CHISEL	23	PAW04M	HEX WRENCH 4MM
7	PH3273007	DOVETAIL CHISEL	24	PH3273024	AIR TOOL MINERAL OIL BOTTLE
8	PH3273008	BLADE CHISEL	25	PH3273025	CHUCK KEY
9	PH3273009	SOCKET 1/2" DRIVE X 7/16"	26	PH3273026	PINK CONE 1/8"
10	PH3273010	SOCKET 1/2" DRIVE X 1/2"	27	PH3273027	WHITE BALL 1/8"
11	PH3273011	SOCKET 1/2" DRIVE X 9/16"	28	PH3273028	WHITE CYLINDER 1/8"
12	PH3273012	SOCKET 1/2" DRIVE X 5/8"	29	PH3273029	GRAY CONE 1/8"
13	PH3273013	SOCKET 1/2" DRIVE X 11/16"	30	PH3273030	GRAY BULLET 1/8"
14	PH3273014	SOCKET 1/2" DRIVE X 3/4"	31	PH3273031	PINK CYLINDER 1/4"
15	PH3273015	SOCKET 1/2" DRIVE X 13/16"	32	PH3273032	WHITE BALL 1/4"
16	PH3273016	SOCKET 1/2" DRIVE X 7/8"	33	PH3273033	GRAY CONE 1/4"
17	PH3273017	SOCKET 1/2" DRIVE X 15/16"	34	PH3273034	GRAY BULLET 1/4"
18	PH3273018	SOCKET 1/2" DRIVE X 1"	35	PH3273035	GRAY CROWN 1/4"

* Breakdown shown for service purposes only. Not all parts are available for purchase.

IMPACT WRENCH*

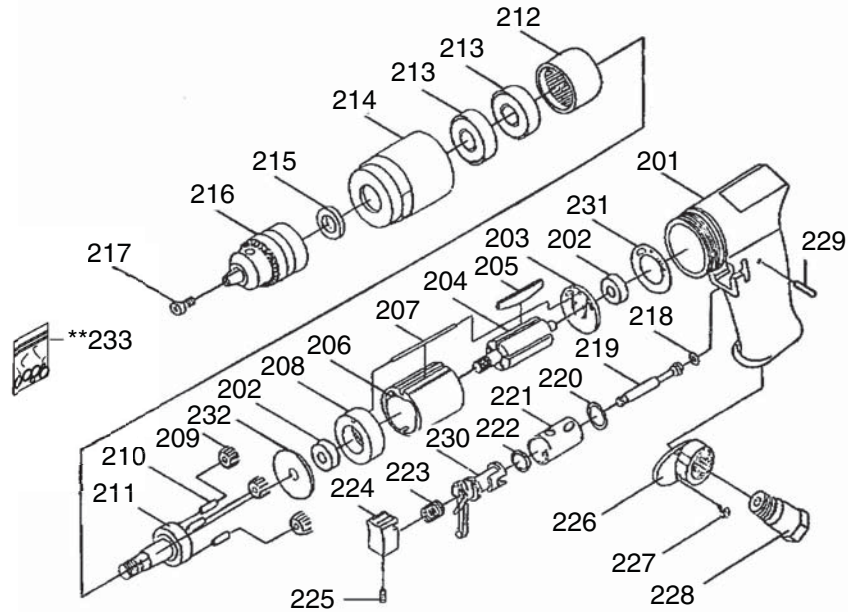


REF	PART #	DESCRIPTION	REF	PART #	DESCRIPTION
101	PH327101	HOUSING	124	PH327124	CYLINDER
102	PH327102	VALVE SLEEVE	125	PH327125	ROTOR
103	PH327103	REVERSE VALVE	126	PH327126	ROTOR BLADE
104	PH327104	TRIGGER	127	PH327127	FRONT END PLATE
105	PRP02M	ROLL PIN 3 X 16	128	PRP02M	ROLL PIN 3 X 16
106	PH327106	VALVE STEM	129	PH327129	REAR END PLATE
107	PH327107	BUSHING	130	PRP02M	ROLL PIN 3 X 16
108	PH327108	STEEL BALL	131	PH327131	OIL SEAL
109	PH327109	COMPRESSION SPRING	132	PH327132	REAR GASKET
110	PH327110	ADAPTOR 1/4 NPT	133	PH327133	REAR COVER
111	PH327111	AIR REGULATOR	134	PSB53M	CAP SCREW M5-.8 X 18
112	PORP009	O-RING 8.8 X 1.9 P9	135	PH327135	ALIGNMENT PIN 4 X 17
113	PSS07M	SET SCREW M5-.8 X 5	136	PH327136	COMPRESSION SPRING
114	PH327114	COMPRESSION SPRING	137	PSS31M	SET SCREW M5-.8 X 8
115	PH327115	ANVIL BUSHING	138	PH327138	EXHAUST COLLECTOR
116	PH327116	ANVIL COLLAR	139	PH327139	TAP SCREW #3 X 1/4
117	PORP010	O-RING 9.8 X 1.9 P10	140	PSS17M	SET SCREW M8-1.25 X 6
118	PH327118	ANVIL 1/2"	141	PH327141	RUBBER BUMPER CONE
119	PH327119	HAMMER CAGE	142	PH327142	RUBBER CUSHION
120	PH327120	HAMMER PIN	143	PH327143	O-RING
121	PH327121	HAMMER DOG	144	PLW04M	LOCK WASHER 8MM
122	PH327122	DRIVE CAM	**145	PH327145	COMPLETE O-RING KIT
123	P6001	BALL BEARING 6001ZZ	146	PH327146	CARRYING CASE

*Breakdown shown for service purposes only. Not all parts are available for purchase.

**Not included; or aftermarket purchase only.

REVERSIBLE AIR DRILL*



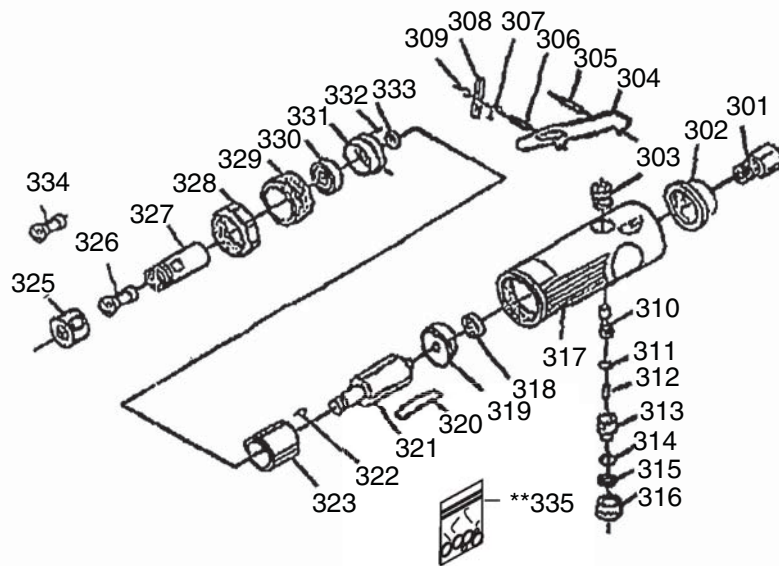
REF	PART #	DESCRIPTION
201	PH327201	HOUSING
202	PR4AZZ	BEARING
203	PH327203	END PLATE
204	PH327204	ROTOR
205	PH327205	ROTOR BLADE
206	PH327206	CYLINDER
207	PH327207	PIN
208	PH327208	FRONT PLATE
209	PH327209	INTERNAL GEAR
210	PH327210	ROLL PIN
211	PH327211	WORK SPINDLE
212	PH327212	THREAD RING GEAR
213	PR4AZZ	BEARING
214	PH327214	CLAMP NUT
215	PH327215	WASHER
216	PH327216	CHUCK
217	PH327217	CHUCK SCREW

REF	PART #	DESCRIPTION
218	PH327218	O-RING
219	PH327219	VALVE STEM
220	PH327220	O-RING
221	PH327221	BUSHING
222	PH327222	O-RING
223	PH327223	TRIGGER SPRING
224	PH327224	TRIGGER
225	PH327225	TRIGGER SCREW
226	PH327226	MUFFLE COVER
227	PS79M	PHLP HD SCR M3-.5 X 8
228	PH327228	ADAPTOR 1/4 NPT
229	PH327229	ROLL PIN 2 X 23
230	PH327230	REVERSE LEVER
231	PH327231	REAR GASKET
232	PH327232	WASHER
**233	PH327233	COMPLETE O-RING KIT

*Breakdown shown for service purposes only. Not all parts are available for purchase.

**Not included; or aftermarket purchase only.

DIE GRINDER*



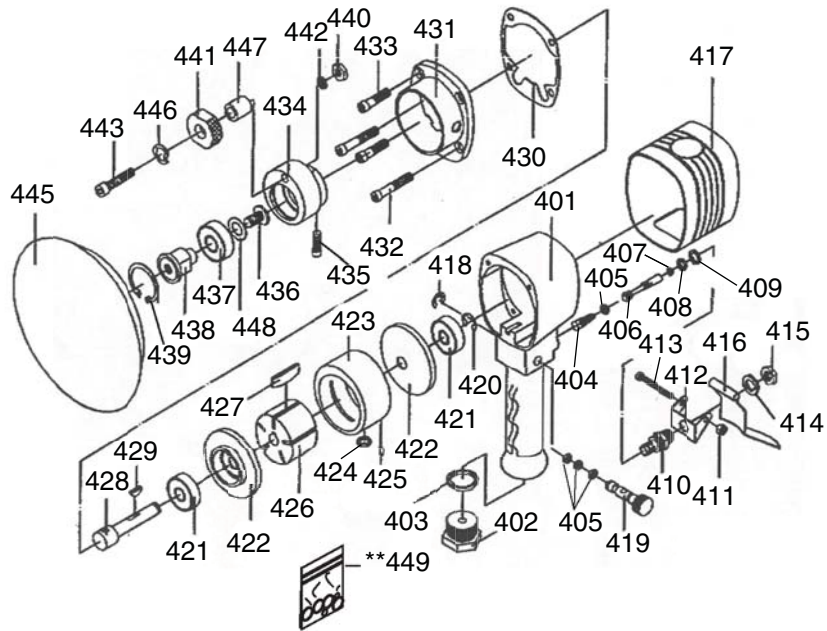
REF	PART #	DESCRIPTION
301	PH3273301	ADAPTOR 1/4 NPT
302	PH3273302	EXHAUST DEFLECTOR
303	PH3273303	VALVE
304	PH3273304	THROTTLE LEVER
305	PH3273305	ROLL PIN
306	PH3273306	ROLL PIN
307	PH3273307	COMPRESSION SPRING
308	PH3273308	SAFETY LEVER
309	PH3273309	WASHER
310	PH3273310	THROTTLE VALVE
311	PH3273311	O-RING
312	PH3273312	COMPRESSION SPRING
313	PH3273313	AIR REGULATOR
314	PH3273314	O-RING
315	PH3273315	O-RING
316	PH3273316	VALVE SCREW
317	PH3273317	HOUSING

REF	PART #	DESCRIPTION
318	PH3273318	BALL BEARING
319	PH3273319	REAR END PLATE
320	PH3273320	ROTOR BLADE
321	PH3273321	ROTOR
322	PH3273322	ROLL PIN
323	PH3273323	CYLINDER
325	PH3273325	COLLET NUT
326	PH3273326	COLLET 1/4"
327	PH3273327	SPINDLE
328	PH3273328	HOUSING CAP
329	PH3273329	JOINT
330	PH3273330	BALL BEARING
331	PH3273331	FRONT END PLATE
332	PH3273332	STEEL BALL
333	PH3273333	WASHER
334	PH3273334	COLLET 1/8"
**335	PH3273335	COMPLETE O-RING KIT

*Breakdown shown for service purposes only. Not all parts are available for purchase.

**Not included; or aftermarket purchase only.

RANDOM ORBIT SANDER*

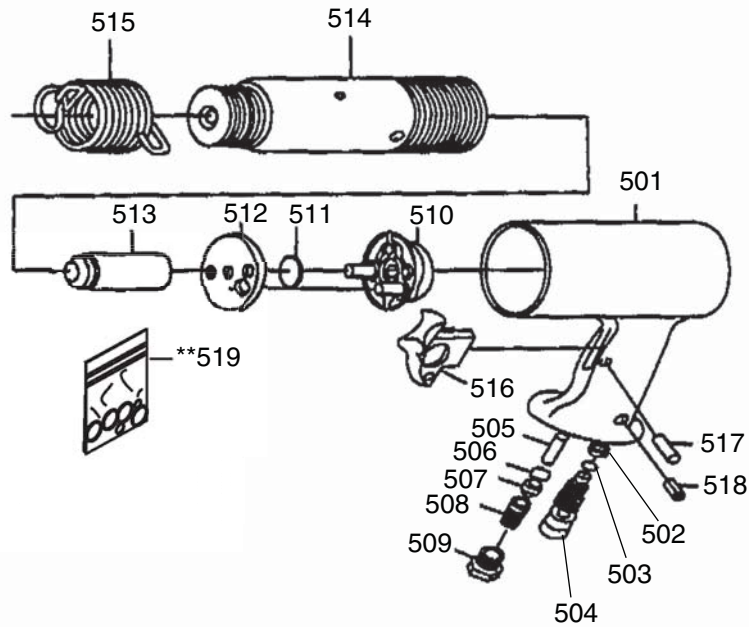


REF	PART #	DESCRIPTION	REF	PART #	DESCRIPTION
401	PH3273401	HOUSING	425	PH3273425	ALIGNMENT PIN
402	PH3273402	ADAPTOR 1/4 NPT	426	PH3273426	ROTOR
403	PH3273403	O-RING	427	PH3273427	ROTOR BLADE
404	PH3273404	VALVE SPRING	428	PH3273428	WORK SPINDLE
405	PH3273405	O-RING	429	PH3273429	WOODRUFF KEY
406	PH3273406	VALVE STEM	430	PH3273430	REAR GASKET
407	PH3273407	O-RING	431	PH3273431	REAR COVER
408	PH3273408	O-RING	432	PH3273432	CAP SCREW
409	PH3273409	O-RING	433	PH3273433	CAP SCREW
410	PH3273410	VALVE BODY	434	PH3273434	ORBITAL HUB
411	PH3273411	SCREW	435	PH3273435	SCREW
412	PH3273412	BRACKET	436	PH3273436	SCREW
413	PH3273413	TRIGGER SCREW	437	PH3273437	BALL BEARING
414	PH3273414	WASHER	438	PH3273438	DRIVE SPINDLE
415	PH3273415	HEX NUT	439	PH3273439	INT RETAINING RING
416	PH3273416	THROTTLE LEVER	440	PH3273440	CAP
417	PH3273417	HOUSING COVER	441	PH3273441	SPINDLE LOCK
418	PH3273418	E-CLIP	442	PH3273442	WASHER
419	PH3273419	AIR REGULATOR	443	PH3273443	CAP SCREW
420	PH3273420	E-CLIP	445	PH3273445	6" PAD
421	PH3273421	BALL BEARING	446	PH3273446	WASHER
422	PH3273422	END PLATE	447	PH3273447	BUSHING
423	PH3273423	CYLINDER	448	PH3273448	WASHER
424	PH3273424	O-RING	**449	PH3273449	COMPLETE O-RING KIT

*Breakdown shown for service purposes only. Not all parts are available for purchase.

**Not included; or aftermarket purchase only.

AIR HAMMER*



REF	PART #	DESCRIPTION
501	PH3273501	HANDLE
502	PH3273502	BALL SEAT
503	PH3273503	O-RING
504	PH3273504	REGULATOR
505	PH3273505	NEEDLE PIN
506	PH3273506	O-RING
507	PH3273507	PIN SEAT
508	PH3273508	COMPRESSION SPRING
509	PH3273509	ADAPTOR 1/4 NPT
510	PH3273510	UPPER VALVE CASE

REF	PART #	DESCRIPTION
511	PH3273511	VALVE DISC
512	PH3273512	LOWER VALVE CASE
513	PH3273513	PISTON
514	PH3273514	CYLINDER
515	PH3273515	CHISEL RETAINER
516	PH3273516	TRIGGER
517	PH3273517	ROLL PIN
518	PH3273518	ROLL PIN
**519	PH3273519	COMPLETE O-RING KIT

*Breakdown shown for service purposes only. Not all parts are available for purchase.

**Not included; or aftermarket purchase only.

WARRANTY AND RETURNS

Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly shall be tried in the State of Washington, County of Whatcom.

We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special, or consequential damages arising from the use of our products.

To take advantage of this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Authorization Number," which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

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Muncy, PA 17756
Phone: (570) 546-9663
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E-Mail:
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Web Site: <http://www.grizzly.com>

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