



**MODEL T32337**  
**20-GALLON OIL-FREE QUIET**  
**SERIES AIR COMPRESSOR**  
**OWNER'S MANUAL**  
*(For models manufactured since 05/22)*



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#CS22205 PRINTED IN CHINA

V2.04.22

**\*\*\*Keep for Future Reference\*\*\***



# **WARNING!**

**This manual provides critical safety instructions on the proper setup, operation, maintenance, and service of this machine/tool. Save this document, refer to it often, and use it to instruct other operators.**

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

**The owner of this machine/tool 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, cutting/sanding/grinding tool 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.**

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# INTRODUCTION

## Contact Info

We stand behind our machines! If you have questions or need help, contact us with the information below. Before contacting, make sure you get the **serial number** and **manufacture date** from the machine ID label. This will help us help you faster.

Grizzly Technical Support  
1815 W. Battlefield  
Springfield, MO 65807  
Phone: (570) 546-9663  
Email: techsupport@grizzly.com

We want your feedback on this manual. What did you like about it? Where could it be improved? Please take a few minutes to give us feedback.

Grizzly Documentation Manager  
P.O. Box 2069  
Bellingham, WA 98227-2069  
Email: manuals@grizzly.com

## Manual Accuracy

We are proud to provide a high-quality owner's manual with your new machine!

We made every effort to be exact with the instructions, specifications, drawings, and photographs in this manual. Sometimes we make mistakes, but our policy of continuous improvement also means that **sometimes the machine you receive is slightly different than shown in the manual.**

If you find this to be the case, and the difference between the manual and machine leaves you confused or unsure about something, check our website for an updated version. We post current manuals and manual updates for free on our website at [www.grizzly.com](http://www.grizzly.com).

Alternatively, you can call our Technical Support for help. Before calling, make sure you write down the **manufacture date** and **serial number** from the machine ID label (see below). This information is required for us to provide proper tech support, and it helps us determine if updated documentation is available for your machine.

**Grizzly Industrial** MODEL GXXXX  
MACHINE NAME

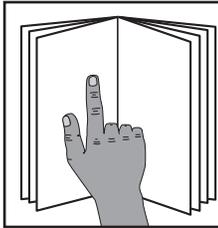
SPECIFICATIONS	WARNING!
Motor: _____	To reduce risk of serious injury when using this machine:
Specification: _____	1. Read manual before operation.
Specification: _____	2. Wear safety glasses and respirator.
Specification: _____	3. Make sure safety is correctly adjusted/setup and
Weight: _____	4. power is connected to grounded circuit before starting.
Date: _____	5. Make sure the motor has stopped and disconnect
_____	6. power before adjustments, maintenance, or service.
_____	7. DO NOT expose to rain or dampness.
_____	8. DO NOT modify this machine in any way.
_____	9. _____ended.
_____	10. _____ of drugs or alcohol.
_____	11. Maintain machine carefully to prevent accidents.

Manufactured for Grizzly in Taiwan





# Controls & Components



## **!WARNING**

To reduce your risk of serious injury, read this entire manual **BEFORE** using machine.

## **!WARNING**

Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to decrease the risk of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

## **!CAUTION**

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.

Refer to the following figures and descriptions to become familiar with the basic controls and components of this machine. Understanding these items and how they work will help you understand the rest of the manual and minimize your risk of injury when operating this machine.

## Air Input

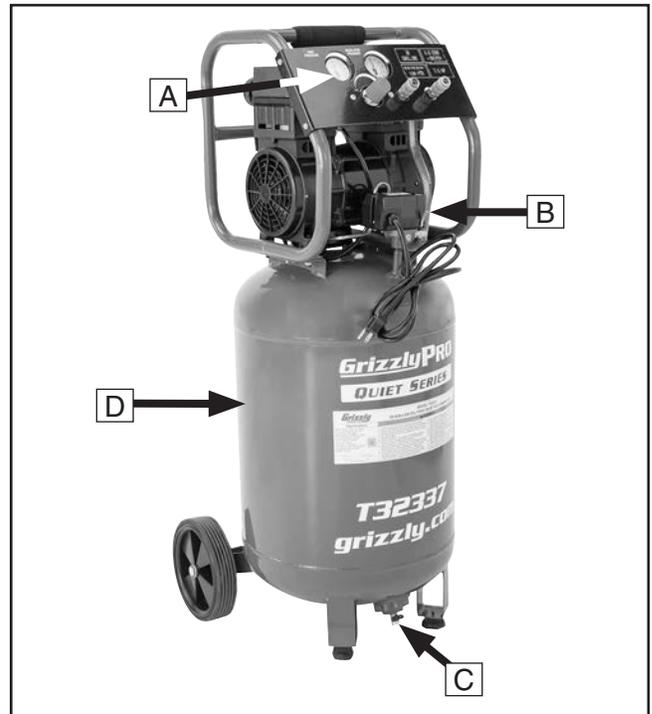


Figure 1. Front air input components.

- A. **Tank Pressure Gauge:** Indicates pressure of air in tank.
- B. **Exhaust Tube:** Transfers compressed air from pump to tank.
- C. **Drain Valve:** Drains built-up moisture from tank when ball valve is opened.
- D. **Tank:** Holds up to 20 gallons of pressurized air.

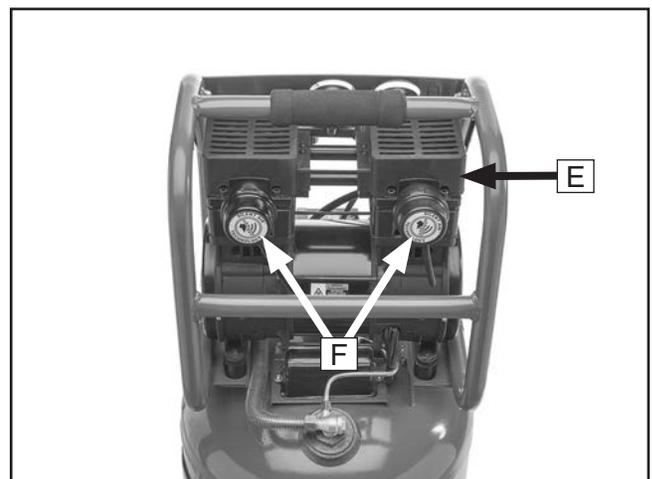


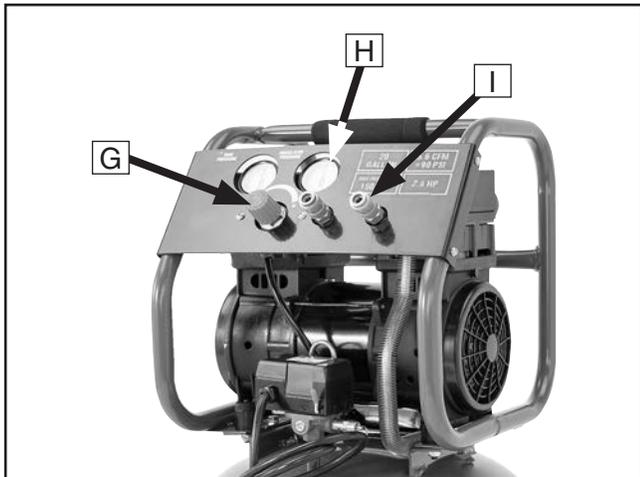
Figure 2. Rear air input components.



**E. Dual Compressor Pump:** Uses piston to draw in and compress air before transferring air into tank.

**F. Air Filters:** Clean air entering compressor pump.

### Air Output/Delivery



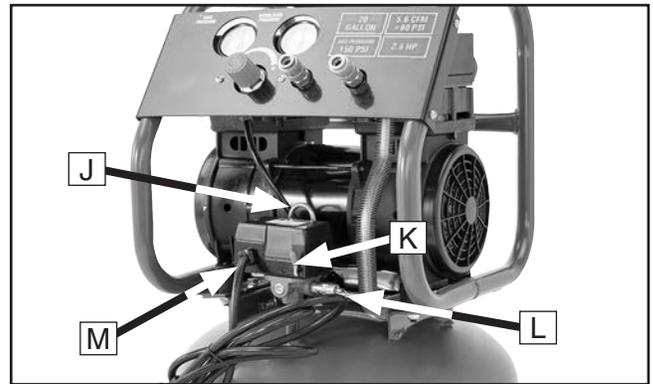
**Figure 3.** Air output components.

**G. Regulator Knob:** Adjusts pressure of air delivered to quick-connect ports. Turn clockwise to increase pressure and counterclockwise to decrease pressure.

**H. Line Pressure Gauge:** Indicates pressure of air at quick-connect ports.

**I. Quick-Connect Port (1 of 2):** Secures and releases air hose when pressed in.

### Automatic Pressurization



**Figure 4.** Pressurization components.

**J. Discharge Line:** Releases air from compressor pump and outlet line when tank pressure exceeds 150 PSI (cut-out pressure).

**K. Pressure Switch Lever:** Toggles pressure switch between OFF and AUTO modes. Machine is **OFF** in OFF mode, and will continue to pressurize when in AUTO mode.

**L. Safety Relief Valve:** Pops open to release tank pressure in the event that pressure switch fails to stop motor at cut-out pressure.

**M. Pressure Switch:** Turns motor **ON** when tank pressure drops below 120 PSI (cut-in pressure) and switch is in AUTO position. Switch contains pressure relief valve that will activate discharge line when tank pressure exceeds 150 PSI (cut-out pressure) or pressure switch is turned **OFF**.





# MACHINE DATA SHEET

Customer Service #: (570) 546-9663 · To Order Call: (800) 523-4777 · Fax #: (800) 438-5901

## MODEL T32337 20-GALLON OIL-FREE QUIET SERIES AIR COMPRESSOR

### Product Dimensions:

Weight ..... 136 lbs.  
 Width (side-to-side) x Depth (front-to-back) x Height ..... 20 x 17 x 43-1/2 in.  
 Footprint (Length x Width) ..... 19-1/2 x 13 in.

### Shipping Dimensions:

Type ..... Cardboard Box  
 Content ..... Machine  
 Weight ..... 158 lbs.  
 Length x Width x Height ..... 21 x 18 x 48 in.

### Electrical:

Power Requirement ..... 120V, Single-Phase, 60 Hz  
 Full-Load Current Rating ..... 13.5A  
 Minimum Circuit Size ..... 15A  
 Connection Type ..... Cord & Plug  
 Power Cord Included ..... Yes  
 Power Cord Length ..... 72 in.  
 Power Cord Gauge ..... 14 AWG  
 Plug Included ..... Yes  
 Included Plug Type ..... 5-15  
 Switch Type ..... Pressure Switch

### Motors:

#### Main

Horsepower ..... 2.5 HP  
 Phase ..... Single-Phase  
 Amps ..... 13.5A  
 Speed ..... 1725 RPM  
 Type ..... Induction  
 Power Transfer ..... Direct  
 Bearings ..... Shielded & Permanently Lubricated

### Main Specifications:

#### Operation Information

Compressor Style ..... Vertical  
 Pump Type ..... One-Stage  
 Max. Airflow/Delivery (at 40 PSI) ..... 6.2 SCFM  
 Max. Airflow/Delivery (at 90 PSI) ..... 5.6 SCFM  
 Cut-Out Pressure ..... 150 PSI  
 Cut-In Pressure ..... 120 PSI  
 Duty Cycle ..... 50/50  
 Tank Size ..... 20 Gallons  
 Number of Cylinders ..... 2  
 Pump Lubrication ..... Oil-Free  
 Drain Valve Type ..... Ball-Valve  
 Roll Cage ..... Yes  
 Regulator ..... Yes



**Output Port Information**

Connection Type ..... Quick-Coupler  
Connection Size ..... 1/4" NPT  
Number of Connections.....2  
Hose Included ..... No

**Construction Information**

Tank.....Steel  
Valves.....Brass-Coated  
Cage/Frame.....Steel  
Paint Type/Finish.....Enamel

**Other Specifications:**

Country of Origin..... China  
Warranty..... 1 Year  
Serial Number Location ..... ID Label  
Sound Rating ..... 60-73 dB

**Features:**

- Sound Rating of Under 73 dB
- Oil-Free Lubrication
- 20-Gallon Tank with Maximum Airflow of 5.6 SCFM at 90 PSI
- Ball-Valve Drain Control
- Durable Roll Cage with Wheels & Feet for Protected Portability
- Included Air Regulator for Airflow Adjustment
- Two Quick-Coupler Hose Connections
- Internal PTC Overload Protection



# SECTION 1: SAFETY

## For Your Own Safety, Read Instruction Manual Before Operating This Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words 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. Always use common sense and good judgment.

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

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

**⚠ CAUTION** 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** Alerts the user to useful information about proper operation of the machine to avoid machine damage.

## Safety Instructions for Machinery

### ⚠ WARNING

**OWNER'S MANUAL.** Read and understand this owner's manual **BEFORE** using machine.

**TRAINED OPERATORS ONLY.** Untrained operators have a higher risk of being hurt or killed. Only allow trained/supervised people to use this machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make your workshop kid proof!

**DANGEROUS ENVIRONMENTS.** Do not use machinery in areas that are wet, cluttered, or have poor lighting. Operating machinery in these areas greatly increases the risk of accidents and injury.

**MENTAL ALERTNESS REQUIRED.** Full mental alertness is required for safe operation of machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

**ELECTRICAL EQUIPMENT INJURY RISKS.** You can be shocked, burned, or killed by touching live electrical components or improperly grounded machinery. To reduce this risk, only allow qualified service personnel to do electrical installation or repair work, and always disconnect power before accessing or exposing electrical equipment.

**DISCONNECT POWER FIRST.** Always disconnect machine from power supply **BEFORE** making adjustments, changing tooling, or servicing machine. This prevents an injury risk from unintended startup or contact with live electrical components.

**EYE PROTECTION.** Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are **NOT** approved safety glasses.



# WARNING

**WEARING PROPER APPAREL.** Do not wear clothing, apparel or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to reduce risk of slipping and losing control or accidentally contacting cutting tool or moving parts.

**HAZARDOUS DUST.** Dust created by machinery operations may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material. Always wear a NIOSH-approved respirator to reduce your risk.

**HEARING PROTECTION.** Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

**REMOVE ADJUSTING TOOLS.** Tools left on machinery can become dangerous projectiles upon startup. Never leave chuck keys, wrenches, or any other tools on machine. Always verify removal before starting!

**USE CORRECT TOOL FOR THE JOB.** Only use this tool for its intended purpose—do not force it or an attachment to do a job for which it was not designed. Never make unapproved modifications—modifying tool or using it differently than intended may result in malfunction or mechanical failure that can lead to personal injury or death!

**AWKWARD POSITIONS.** Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.

**CHILDREN & BYSTANDERS.** Keep children and bystanders at a safe distance from the work area. Stop using machine if they become a distraction.

**GUARDS & COVERS.** Guards and covers reduce accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged, and working correctly **BEFORE** operating machine.

**FORCING MACHINERY.** Do not force machine. It will do the job safer and better at the rate for which it was designed.

**NEVER STAND ON MACHINE.** Serious injury may occur if machine is tipped or if the cutting tool is unintentionally contacted.

**STABLE MACHINE.** Unexpected movement during operation greatly increases risk of injury or loss of control. Before starting, verify machine is stable and mobile base (if used) is locked.

**USE RECOMMENDED ACCESSORIES.** Consult this owner's manual or the manufacturer for recommended accessories. Using improper accessories will increase the risk of serious injury.

**UNATTENDED OPERATION.** To reduce the risk of accidental injury, turn machine **OFF** and ensure all moving parts completely stop before walking away. Never leave machine running while unattended.

**MAINTAIN WITH CARE.** Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. A machine that is improperly maintained could malfunction, leading to serious personal injury or death.

**DAMAGED PARTS.** Regularly inspect machine for damaged, loose, or mis-adjusted parts—or any condition that could affect safe operation. Immediately repair/replace **BEFORE** operating machine. For your own safety, **DO NOT** operate machine with damaged parts!

**MAINTAIN POWER CORDS.** When disconnecting cord-connected machines from power, grab and pull the plug—**NOT** the cord. Pulling the cord may damage the wires inside. Do not handle cord/plug with wet hands. Avoid cord damage by keeping it away from heated surfaces, high traffic areas, harsh chemicals, and wet/damp locations.

**EXPERIENCING DIFFICULTIES.** If at any time you experience difficulties performing the intended operation, stop using the machine! Contact our Technical Support at (570) 546-9663.



# Additional Safety for Air Compressors

## WARNING

Serious impact injury or death can occur from bursting tank, attachment tool, distribution line, or hose. Contact with hot compressor parts can result in burns. Operating this tool in an environment without proper ventilation or near combustible materials can lead to explosions or fires. Eyes and other soft tissues can be easily injured by air streams and debris projected by compressed air or attachment tools. To reduce the risk of these hazards, operator and bystanders **MUST** completely heed hazards and warnings below.

**TANK INTEGRITY.** Inspect tank, attachment tools, pump, air lines, and valves for rust, damage, weakness, leaks, looseness, or excessive wear and repair/replace damaged components before operating. Replace a damaged tank immediately. **DO NOT** attempt to weld on, modify, or repair tank. Modifying tank can affect tank integrity and cause tank to burst.

**ATTACHMENT TOOLS.** Always wear ANSI-approved eye protection and any additional personal protective equipment required by attachment tools. Pneumatic tools can propel objects and debris at high speeds or even explode. Never use damaged tools—they are even more likely to rupture. **DO NOT** exceed pressure ratings of tools or attachments as lines and seals may burst. Use proper air hose for tool and confirm air hose is long enough to reach work area without stretching. Do not carry attachment tool with hand on trigger to reduce risk of accidental firing. Always relieve outlet air line and hose before attaching/removing tools. Disconnect hose or tool from compressor when not in use.

**MODIFICATIONS.** **DO NOT** adjust or remove safety relief valve, pressure switch, or otherwise modify machine. Do not install shut-off valve between compressor pump and tank. Check, safety, and pressure valves are adjusted at factory for correct tolerances and abilities of compressor and are designed to keep tank and other components from bursting.

**INTENDED USE.** **DO NOT** use compressed air as breathable air supply and **DO NOT** aim compressed air or air tools at body parts or people. Compressed air can injure or propel debris into eyes or other soft tissues. Do not use compressor to inflate low-pressure objects that are likely to burst (like children's toys).

**DAILY MAINTENANCE.** Test safety relief valve daily to dislodge any blockages and confirm it is working correctly. Drain moisture from tank daily to prevent internal corrosion that could weaken tank.

**DISTRIBUTION LINES.** Use only stainless steel, copper, or aluminum for air delivery/distribution lines. **NEVER** use PVC because it cannot withstand the pressure, heat, condensation, and oils of compressed air and may shatter, creating dangerous shrapnel.

**VENTILATION.** Only operate in well-ventilated environment that is less than 100°F and keep compressor at least 18 inches from nearest wall. **DO NOT** obstruct airflow to air filters and ventilation openings. Regularly check and change air filters to avoid buildup of impurities and reduce risk of fire.

**COMBUSTION.** Compressor motor, pressure switch, and some pneumatic attachment tools often produce sparks. Only operate compressor in area free of combustible materials to prevent fires and explosions. When spraying, locate air compressor at least 20 feet from spray area, do not smoke, and do not spray flammable material in confined area near flame/compressor. Turn compressor **OFF** when unattended. Motor could overheat and create fire hazard.

**HOT PARTS.** Discharge line and other compressor pump parts heat up during operation. Do not touch these parts during or immediately following operation to prevent burns.

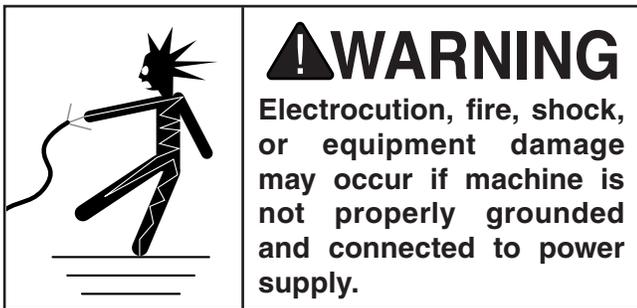
**MOVING AND SERVICING.** Disconnect power, allow compressor to cool, bleed air from system, and disconnect attachment tools and hoses before moving or servicing to prevent impact injuries, soft tissue injuries, and burns.



# SECTION 2: POWER SUPPLY

## Availability

Before installing the machine, consider the availability and proximity of the required power supply circuit. If an existing circuit does not meet the requirements for this machine, a new circuit must be installed. To minimize the risk of electrocution, fire, or equipment damage, installation work and electrical wiring must be done by an electrician or qualified service personnel in accordance with all applicable codes and standards.



## Full-Load Current Rating

The full-load current rating is the amperage a machine draws at 100% of the rated output power. On machines with multiple motors, this is the amperage drawn by the largest motor or sum of all motors and electrical devices that might operate at one time during normal operations.

### Full-Load Current Rating at 120V .. 13.5 Amps

The full-load current is not the maximum amount of amps that the machine will draw. If the machine is overloaded, it will draw additional amps beyond the full-load rating.

If the machine is overloaded for a sufficient length of time, damage, overheating, or fire may result—especially if connected to an undersized circuit. To reduce the risk of these hazards, avoid overloading the machine during operation and make sure it is connected to a power supply circuit that meets the specified circuit requirements.

## **! WARNING**

**Serious injury could occur if you connect machine to power before completing setup process. DO NOT connect to power until instructed later in this manual.**

## 120V Circuit Requirements

This machine is prewired to operate on a power supply circuit that has a verified ground and meets the following requirements:

Nominal Voltage ..... 110V, 115V, 120V  
Cycle ..... 60 Hz  
Phase ..... Single-Phase  
Power Supply Circuit ..... 15 Amps

A power supply circuit includes all electrical equipment between the breaker box or fuse panel in the building and the machine. The power supply circuit used for this machine must be sized to safely handle the full-load current drawn from the machine for an extended period of time. (If this machine is connected to a circuit protected by fuses, use a time delay fuse marked D.)

## **! CAUTION**

**For your own safety and protection of property, consult an electrician if you are unsure about wiring practices or electrical codes in your area.**

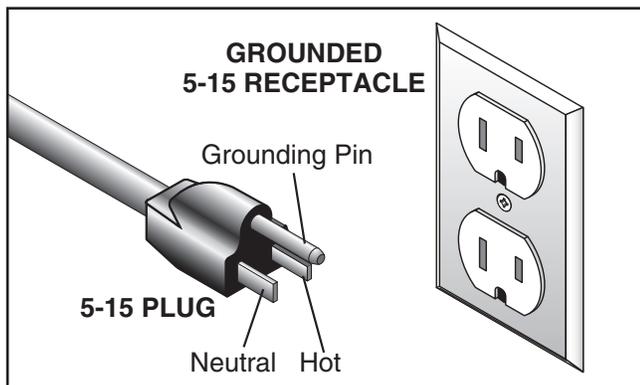
**Note:** *Circuit requirements in this manual apply to a dedicated circuit—where only one machine will be running on the circuit at a time. If machine will be connected to a shared circuit where multiple machines may be running at the same time, consult an electrician or qualified service personnel to ensure circuit is properly sized for safe operation.*



## Grounding & Plug Requirements

This machine **MUST** be grounded. In the event of certain malfunctions or breakdowns, grounding reduces the risk of electric shock by providing a path of least resistance for electric current.

This machine is equipped with a power cord that has an equipment-grounding wire and a grounding plug. Only insert plug into a matching receptacle (outlet) that is properly installed and grounded in accordance with all local codes and ordinances. **DO NOT** modify the provided plug!



**Figure 5.** Typical 5-15 plug and receptacle.

**⚠ CAUTION**

**SHOCK HAZARD!**

**Two-prong outlets do not meet the grounding requirements for this machine. Do not modify or use an adapter on the plug provided—if it will not fit the outlet, have a qualified electrician install the proper outlet with a verified ground.**

Improper connection of the equipment-grounding wire can result in a risk of electric shock. The wire with green insulation (with or without yellow stripes) is the equipment-grounding wire. If repair or replacement of the power cord or plug is necessary, do not connect the equipment-grounding wire to a live (current carrying) terminal.

Check with a qualified electrician or service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the tool is properly grounded. If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.

## Extension Cords

We do not recommend using an extension cord with this machine. If you must use an extension cord, only use it if absolutely necessary and only on a temporary basis.

Extension cords cause voltage drop, which can damage electrical components and shorten motor life. Voltage drop increases as the extension cord size gets longer and the gauge size gets smaller (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must be in good condition and contain a ground wire and matching plug/receptacle. Additionally, it must meet the following size requirements:

**Minimum Gauge Size ..... 12 AWG**  
**Maximum Length (Shorter is Better).....50 ft.**



# SECTION 3: SETUP

## Unpacking

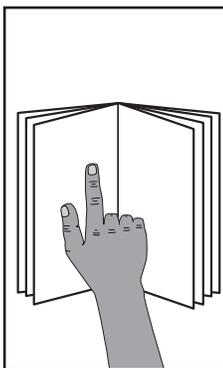
This machine was carefully packaged for safe transport. When unpacking, separate all enclosed items from packaging materials and inspect them for shipping damage. ***If items are damaged, please call us immediately at (570) 546-9663.***

**IMPORTANT:** Save all packaging materials until you are completely satisfied with the machine and have resolved any issues between Grizzly or the shipping agent. ***You MUST have the original packaging to file a freight claim. It is also extremely helpful if you need to return your machine later.***

## Needed for Setup

The following items are needed, but not included, for the setup/assembly of this machine.

Description	Qty
• Safety Glasses .....	1
• Wrenches or Sockets $\frac{9}{16}$ " .....	2
• Hearing Protection.....	1



### **!WARNING**

This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!



### **!WARNING**

Wear safety glasses during the entire setup process!

## Inventory

The following is a list of items shipped with your machine. Before beginning setup, lay these items out and inventory them.

If any non-proprietary parts are missing (e.g. a nut or a washer), we will gladly replace them; or for the sake of expediency, replacements can be obtained at your local hardware store.

Inventory (Figure 6)	Qty
A. Air Compressor (Not Shown) .....	1
B. Air Filter Assemblies.....	2
C. Shoulder Bolts $\frac{3}{8}$ "-16 x 1 $\frac{1}{2}$ " .....	2
D. Flat Washers $\frac{3}{8}$ ".....	2
E. Wheels .....	2
F. Hex Nuts $\frac{3}{8}$ "-16 .....	2
G. Internal Tooth Washers $\frac{3}{8}$ ".....	2
H. Flat Washers 13 x 14 x 2mm.....	4

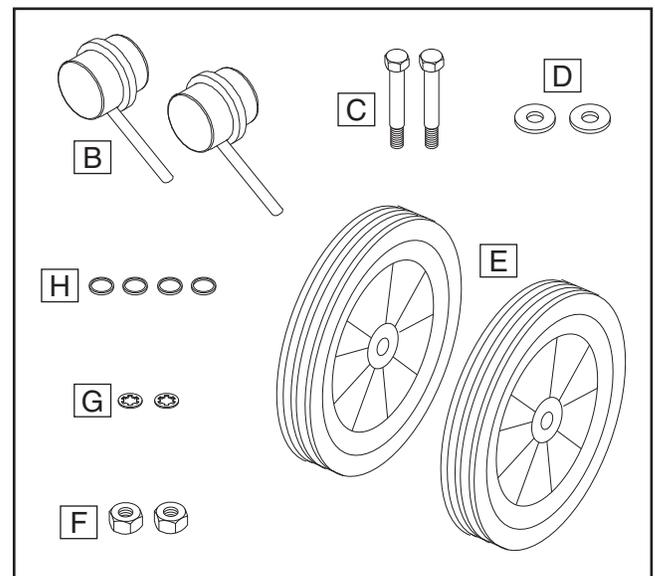


Figure 6. Inventory.

### **NOTICE**

If you cannot find an item on this list, carefully check around/inside the machine and packaging materials. Often, these items get lost in packaging materials while unpacking or they are pre-installed at the factory.



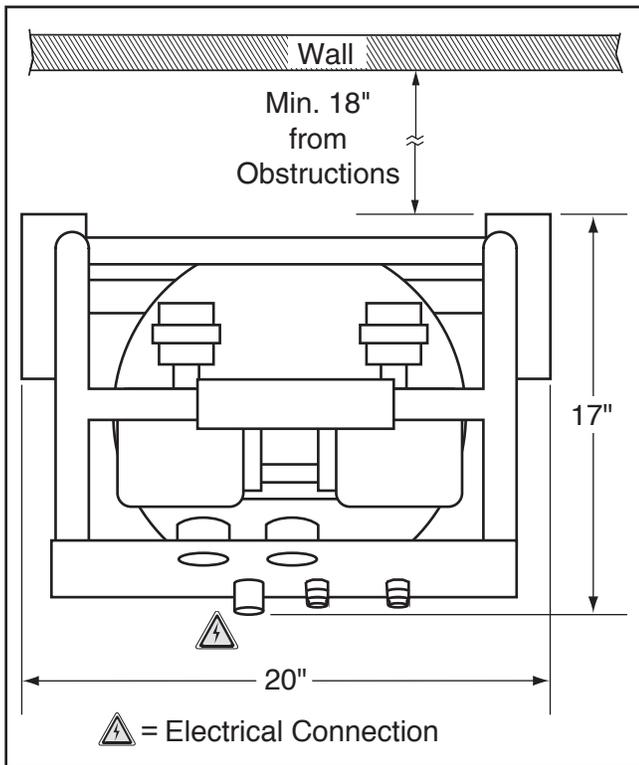
# Site Considerations

## Workbench Load

Refer to the **Machine Data Sheet** for the weight and footprint specifications of your machine. Some workbenches may require additional reinforcement to support the weight of the machine and workpiece materials.

## Placement Location

Consider anticipated workpiece sizes and additional space needed for auxiliary stands, work tables, or other machinery when establishing a location for this machine in the shop. Below is the minimum amount of space needed for the machine.



**Figure 7.** Minimum working clearances.

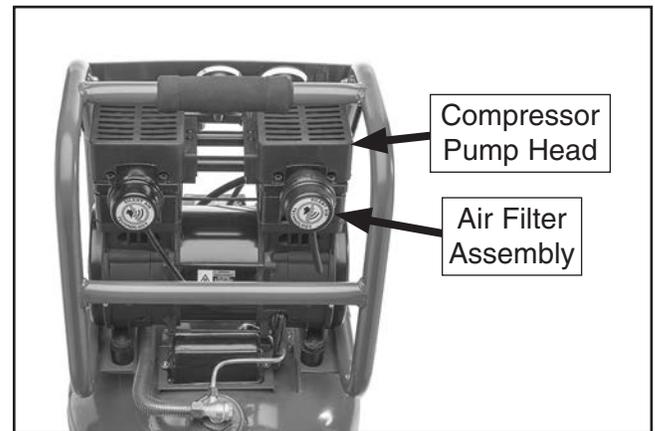
	<p><b>⚠ CAUTION</b></p> <p>Children and visitors may be seriously injured if unsupervised around this machine. Lock entrances to the shop or disable start switch or power connection to prevent unsupervised use.</p>
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# Assembly

The machine must be fully assembled before it can be operated. Before beginning the assembly process, refer to **Needed for Setup** and gather all listed items. To ensure the assembly process goes smoothly, first clean any parts that are covered or coated in heavy-duty rust preventative (if applicable).

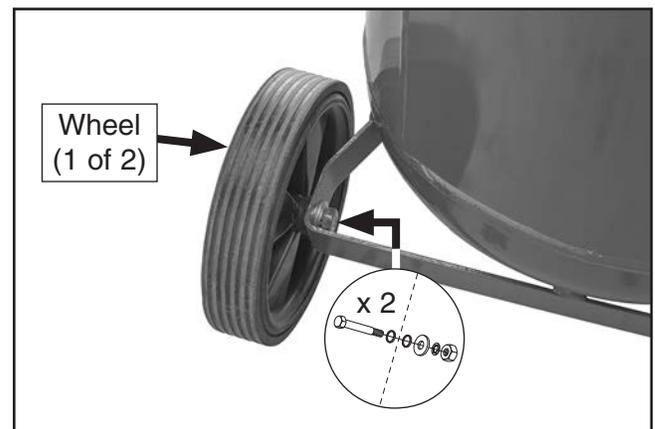
## To assemble machine:

1. Thread air filter assemblies clockwise into compressor pump heads (see **Figure 8**) and hand tighten.



**Figure 8.** Air filter assemblies installed on compressor pump.

2. Attach (2) wheels to air compressor with (2)  $\frac{3}{8}$ "-16 x  $1\frac{1}{2}$ " shoulder bolts, (4) 13 x 14 x 2mm flat washers, (2)  $\frac{3}{8}$ " flat washers, (2)  $\frac{3}{8}$ " internal tooth washers, and (2)  $\frac{3}{8}$ "-16 hex nuts (see **Figure 9**).



**Figure 9.** Wheel attached to air compressor.



# Test Run

Once assembly is complete, test run the machine to ensure it is properly connected to power and safety components are functioning correctly.

If you find an unusual problem during the test run, immediately stop the machine, disconnect it from power, and fix the problem **BEFORE** operating the machine again. The **Troubleshooting** table in the **SERVICE** section of this manual can help.

The Test Run consists of verifying the following: 1) The motor powers up and runs correctly, 2) the motor and pump turn **OFF** when the cut-out pressure is reached, and 3) the safety relief valve works correctly.

## **⚠️ WARNING**

Serious injury or death can result from using this machine **BEFORE** understanding its controls and related safety information. **DO NOT** operate, or allow others to operate, machine until the information is understood.

## **⚠️ WARNING**

**DO NOT** start machine until all preceding setup instructions have been performed. Operating an improperly set up machine may result in malfunction or unexpected results that can lead to serious injury, death, or machine/property damage.

### To test run machine:

1. Clear all setup tools away from machine.
2. Locate machine in well-ventilated area at least 18 inches from nearest wall or any obstructions.



## **⚠️ WARNING**

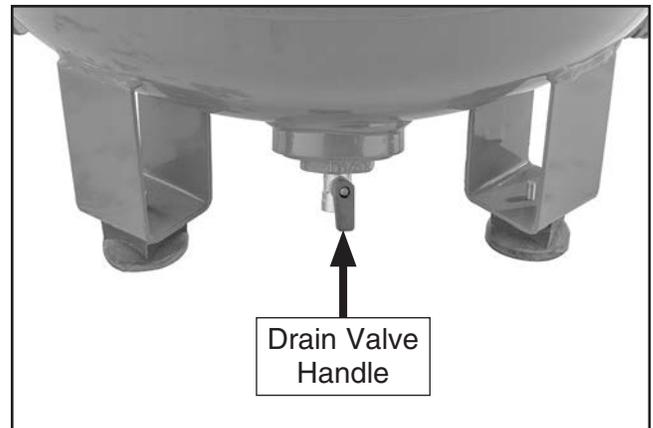
Eye injury hazard! Always wear safety glasses when handling pressurized air system.

3. Move pressure switch lever to OFF position (see **Figure 10**).



**Figure 10.** Location of pressure switch lever.

4. Turn drain valve handle all the way counter-clockwise to open (see **Figure 11**).



**Figure 11.** Drain valve handle in open position.

5. Connect machine to power supply.
6. Move pressure switch lever to AUTO position to turn machine **ON** and verify motor operation.

Motor should run smoothly and without unusual problems or noises.





7. After running compressor for 15 minutes, move pressure switch to OFF position to turn machine **OFF**.
8. Turn drain valve handle to closed position.
9. Turn machine **ON** and observe tank pressure gauge (see **Figure 12**) while tank fills.

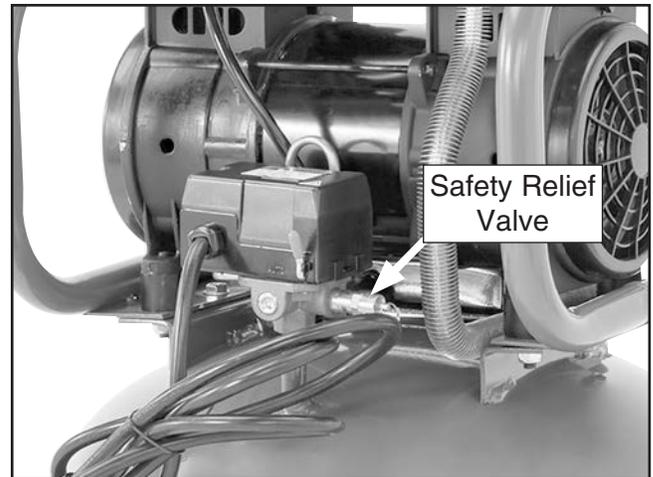


**Figure 12.** Location of tank pressure gauge.

- If motor and pump turn **OFF** when tank pressure reaches 150 PSI, then safety feature of check valve is working correctly. Proceed to **Step 10**.
- If motor and pump *do not* turn **OFF** when tank pressure reaches 150 PSI, then immediately turn **OFF** machine and disconnect it from power. Safety feature of check valve is **NOT** working properly and must be replaced before further using machine.



10. Turn machine **OFF** and slowly pull safety relief valve ring to bleed pressure from tank (see **Figure 13**).



**Figure 13.** Location of safety relief valve.

- If safety relieve valve bleeds pressure from tank, and air stops leaking when pressure is released, then safety feature of safety relief valve is working correctly. Proceed to **Step 11**.
- If safety relief valve is stuck or leaks after releasing pressure, immediately turn **OFF** machine and disconnect it from power. Safety relief valve must be replaced before further using machine.

11. Open drain valve to drain moisture from tank.

Congratulations! Test Run is complete.

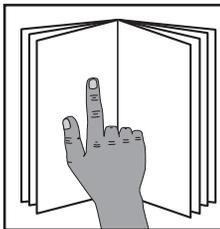


# SECTION 4: OPERATIONS

## Operation Overview

The purpose of this overview is to provide the novice machine operator with a basic understanding of how the machine is used during operation, so the machine controls/components discussed later in this manual are easier to understand.

Due to the generic nature of this overview, it is **not** intended to be an instructional guide. To learn more about specific operations, read this entire manual, seek additional training from experienced machine operators, and do additional research outside of this manual by reading "how-to" books, trade magazines, or websites.



### **!WARNING**

To reduce your risk of serious injury, read this entire manual **BEFORE** using machine.



### **!WARNING**

Eye injury hazard! Always wear safety glasses when using this machine.



### **!WARNING**

Do not touch compressor head or discharge line during use or immediately after compressor is active. These hot parts may cause burns.

To complete a typical operation, the operator does the following:

1. Puts on safety glasses.
2. Pulls safety valve ring to test valve and clear any obstructions.

3. Turns regulator knob all the way counter-clockwise.
4. Puts on any additional personal protective equipment required by operation and attachment tool.
5. Connects machine to power and turns it **ON**.
6. Allows machine to run until cut-out pressure has been reached and tank is full.
7. Turns regulator knob clockwise until line pressure gauge displays pressure lower than or equal to air tool rating.
8. Connects air hose to quick-connect coupler.
9. Connects attachment air tool to air hose.
10. While being careful not to create a tripping hazard with hose, performs operation.
11. Turns machine **OFF** and disconnects it from power.
12. Uses safety relief valve to reduce tank pressure to less than 10 PSI.
13. Disconnects attachment tool from hose.
14. Disconnects hose from compressor.
15. Opens drain valve to drain any condensation from tank.
16. Closes drain valve.

### **NOTICE**

If you are not experienced with this type of machine, **WE STRONGLY RECOMMEND** that you seek additional training outside of this manual. Read books/magazines or get formal training before beginning any projects. Regardless of the content in this section, Grizzly Industrial will not be held liable for accidents caused by lack of training.



# Choosing Air Hose

There are many options when it comes to hoses. The most important aspects for an air compressor are going to be length, diameter, and fittings. The material of the hose is also an important consideration, but this will depend more on your application and preference.

## Length

Consider your applications before deciding on a hose length. Longer hoses, or hose connections to extend hose length, can increase your mobility, but will probably result in some pressure loss.

If your work area will be small, you may be able to use a shorter hose without having to move the compressor or stretch the hose. Never pull the hose to move the compressor or put any unnecessary stress on the hose, valves, fittings, or tank.

An air compressor becomes very hot during operation, and the pressure switch and motor often produce sparks. Some applications, like spraying or sanding, involve flammable material that create a fire or combustion hazard when they are performed too close to a compressor. The hose length must allow for the air compressor to remain at least 20 feet away from the operation.

## Diameter

A larger inner diameter will allow for high airflow delivery. Refer to **Airflow Delivery (CFM)** on **Page 19** for more information. The higher CFM a tool requires, the larger the inner diameter of the hose will need to be (see **Figure 14**).

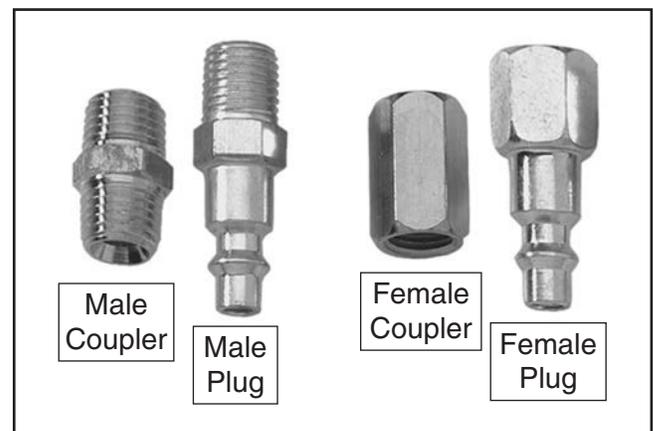
Airflow Delivery	Required ID
0–3 CFM	1/4" (3mm)
3.1–5.9 CFM	1/4"–3/8" (3mm–10mm)
6+ CFM	3/8"+ (10mm+)

**Figure 14.** Recommended hose inner diameters.

## Fittings

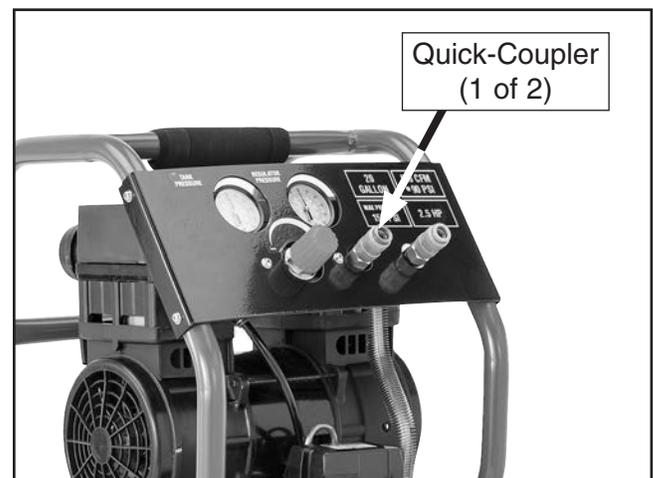
Many hoses come with fittings installed. The simplest option is to find a hose with two fittings: one that matches the compressor output port, and one that matches your intended attachment tool. If the hose does not match the port, a coupler may be needed.

You will need to determine the size of the fittings and whether they are male or female (see **Figure 15**). A male fitting can only attach to a female fitting, and vice versa. There are also a number of coupler/plug styles on the market, so be sure the two match or you will likely not have an airtight connection.



**Figure 15.** Example of male and female fittings.

The outlet ports on the T32337 are 1/4" NPT female quick-couplers (see **Figure 16**), so you will need a 1/4" NPT male plug attached to the hose for each port.



**Figure 16.** Location of quick-coupler outlet ports.



# Connecting Air Tool

There are various air tools that can be connected to your air compressor by means of an air hose, and the setup will vary little across tools, but there are a couple things to keep in mind before connecting a tool or hose.

## Airflow Delivery (CFM)

The first consideration when choosing an air tool is whether or not the air delivery is compatible with your compressor. Smaller compressors, capable of less than 5 CFM, only supply enough pressure for smaller air tools like nailers, staplers, chippers, chisels, grinders, sanders, tire inflators, and paint sprayers. Air hammers, impact wrenches, impact hammers, and blow guns will probably require a larger compressor capable of 10-110 CFM.

## Duty Cycle

The duty cycle of your compressor will also have an effect on how efficient the airflow delivery is. Refer to **Figure 17** for some common duty cycles and what they mean.

50/50	Compressor can be used for up to half of its cycle (spends same amount of time resting as it does working).
60/40	Compressor can be used for up to 60% of its cycle; spends 40% of time resting.
75/25	Compressor can be used for up to 75% of its cycle; spends 25% of time resting.
85/15	Compressor can be used for up to 85% of its cycle; spends 15% of time resting.
100	Compressor does not need to rest. Engine/motor has a cooling component allowing for constant air delivery.

**Figure 17.** Common duty cycles.

Compressing air produces a lot of heat, so the pump and motor require some resting time in order to cool down. The "cycle" of an air compressor refers to how long it takes for the compressor to be used and subsequently cooled. The duty cycle dictates what percentage of the cycle you can spend using air before it must rest.

## Operating Pressure (Pounds/Inch<sup>2</sup>)

Your second consideration should be the recommended or required operating pressure of your tool. An air tool recommended for 70 PSI should never be connected to a hose or system set to higher than that operating pressure, as the tool or valves could burst. A regulator allows tools with a lower rating than the system to still be attached, because the line can be adjusted to a safe level.

The Model T32337 has a regulator and pressure gauge for controlling and observing your line pressure, making it require very little setup.

## Connecting Air Tool

Use the following steps as a guide for attaching an air tool. As there are a wide variety of tool and hose options, your connections may differ slightly from this very simple outline.

### Items Needed

### Qty

Air Tool (Rated for 90 PSI or Less) .....	1
Air Hose.....	1
Additional Connection Fittings.....	As Needed

	<p><b>! WARNING</b>  <b>Eye injury hazard! Always wear safety glasses when handling pressurized air system.</b></p>
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<p><b>! WARNING</b>  <b>Always wear personal protective equipment required by air tool you are using. Pneumatic grinders, sanders, paint sprayers, etc., require a respirator to protect against long-term respiratory damage. Prolonged exposure to tools with high sound ratings can result in hearing loss without the use of hearing protection.</b></p>
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## To connect air tool:

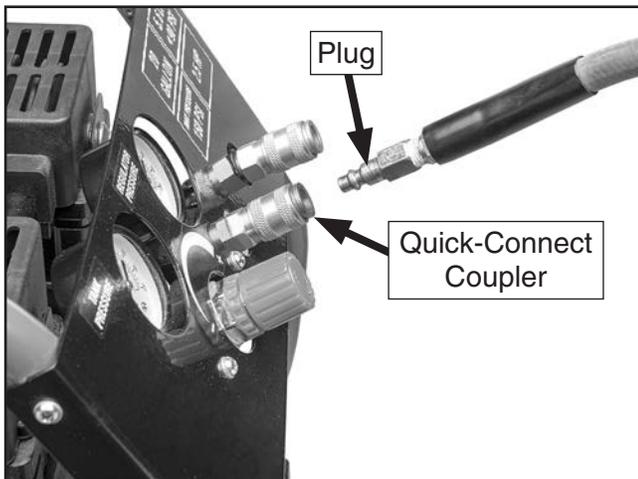
1. Turn regulator knob (see **Figure 18**) all the way counterclockwise.



**Figure 18.** Location of regulator knob.

2. Insert air hose male plug into quick-connect coupler (see **Figure 19**).

**Note:** When plug is fully seated, coupler will automatically lock it in place.



**Figure 19.** Plug inserted into coupler.

3. Connect other end of hose to air tool.

**Note:** Refer to air tool instructions for specifications, method of connection, and proper use of tool.

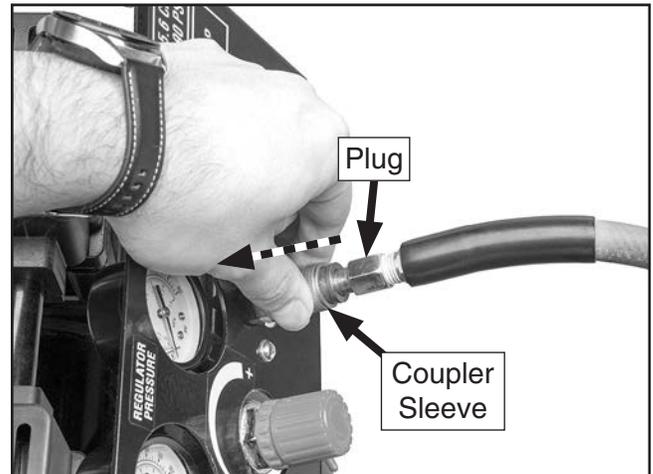
## Disconnecting Air Tool



## To disconnect air tool:

1. Turn regulator knob (see **Figure 18**) all the way counterclockwise.
2. Disconnect air tool from hose.
3. Push coupler sleeve toward compressor to release hose plug (see **Figure 20**).

**Note:** Air will escape when connection is broken if tank is still pressurized.



**Figure 20.** Pushing coupler sleeve to release plug.



# SECTION 5: ACCESSORIES

## **!WARNING**

Installing unapproved accessories may cause machine to malfunction, resulting in serious personal injury or machine damage. To reduce this risk, only install accessories recommended for this machine by Grizzly.

## **NOTICE**

Refer to our website or latest catalog for additional recommended accessories.

- H2499—Small Half-Mask Respirator
- H3631—Medium Half-Mask Respirator
- H3632—Large Half-Mask Respirator
- H3635—Cartridge Filter Pair P100

Wood dust has been linked to nasal cancer and severe respiratory illnesses. If you work around dust everyday, a half-mask respirator can be a lifesaver. Also compatible with safety glasses!



Figure 21. Half-mask respirator with disposable cartridge filters.

## Basic Eye Protection

- T20501—Face Shield Crown Protector 4"
- T20502—Face Shield Crown Protector 7"
- T20503—Face Shield Window
- T20451—"Kirova" Clear Safety Glasses
- T20456—DAKURA Safety Glasses, Black/Clear



Figure 22. Assortment of basic eye protection.

- H4978—Deluxe Earmuffs - 27dB
  - H4979—Twin Cup Hearing Protector - 29dB
  - T31617—Foam Earplugs, 7-pairs - 32dB
- Protect yourself comfortably with hearing protection. Especially important if you or employees operate for hours at a time.

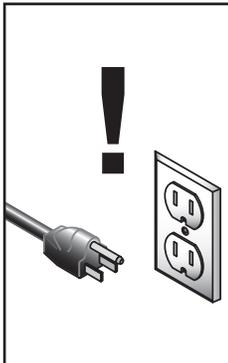


Figure 23. Hearing protection.

**order online at [www.grizzly.com](http://www.grizzly.com) or call 1-800-523-4777**



# SECTION 6: MAINTENANCE

	<p><b>⚠️ WARNING</b> Compressor will turn <b>ON</b> automatically when pressure switch is set to <b>AUTO</b>. To reduce risk of shock/accidental startup, always disconnect machine from power before adjustments, maintenance, or service.</p>
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	<p><b>⚠️ WARNING</b> Eye injury hazard! Always wear safety glasses when maintaining pressurized air system.</p>
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	<p><b>⚠️ WARNING</b> Do not touch compressor head or discharge line during use or immediately after compressor is active. These hot parts may cause burns. Allow compressor to cool before handling.</p>
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## Schedule

For optimum performance from this machine, this maintenance schedule must be strictly followed.

### Ongoing

To minimize your risk of injury and maintain proper machine operation, shut down the machine immediately if you ever observe any of the following items, and fix the problem before continuing operations:

- Damaged safety relief valve, pressure switch, or drain valve.
- Worn or damaged wires, cords, and plugs.
- Tank rust/corrosion.
- Any other unsafe condition.

### Daily Maintenance

- Open drain valve to drain any condensation.
- Test function of safety relief valve and clear any obstructions.

<p><b>⚠️ CAUTION</b> Releasing air through safety relief valve or drain valve can be extremely loud. Protect hearing with ANSI-approved hearing protection when testing/draining valves.</p>
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### Weekly Maintenance

- Check air filters.
- Clean/vacuum dust buildup off compressor.

	<p><b>⚠️ WARNING</b> Do not use flammable cleanser to clean machine. Compressor components often produce sparks that could ignite once machine is connected to power and turned <b>ON</b>.</p>
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### Semiannual Maintenance

- Check hoses/connections for leaks. If soapy water at suspected leak creates bubbles, air is escaping. Repair or replace affected parts.

## Lubrication

The Model T32337 is an oil-free air compressor, so no lubrication is necessary. Refer to the instructions of any attached air tools to determine if they require air line lubrication before they are connected.



# Draining Tank

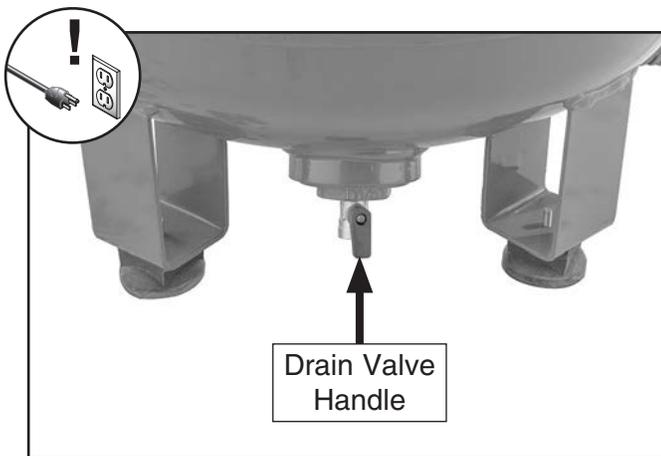
Some water may accumulate in the tank depending on usage and humidity. Drain water from the tank daily to increase the lifespan of the compressor and air tools and to prevent tank corrosion.

## To drain tank:

1. DISCONNECT MACHINE FROM POWER!



2. Use safety relief valve to reduce tank pressure to less than 10 PSI.
3. Open drain valve (see **Figure 24**) to drain condensation from tank.



**Figure 24.** Drain valve handle open.

# Checking Air Filters

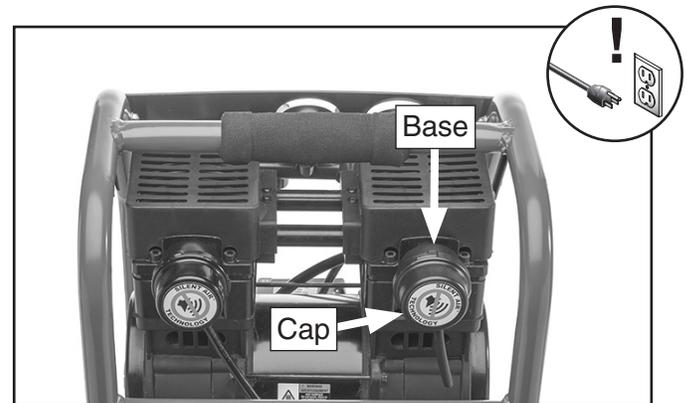
The air filters help prevent impurities and dust from entering the compressor and reduce noise. Dirty filters will result in a less efficient system and could become a fire hazard.

## To check air filters:

1. DISCONNECT MACHINE FROM POWER!



2. Use safety relief valve to reduce tank pressure to less than 10 PSI.
3. While holding base of filter assembly in place, turn filter cap counterclockwise to remove cap (see **Figure 25**).



**Figure 25.** Air filter assembly components.

— If filter is *fairly clean* and there *has not* been a drop in efficiency of compressor, replace cap. No replacement is required.

— If filter is *dirty* or *clogged*, or there *has* been a drop in efficiency of compressor, replace cap. Proceed to **Step 4**.

4. Repeat **Step 3** for second filter assembly.
5. Replace old filter(s) with new filter element(s) (refer to Part #2 in **Parts** beginning on **Page 34**).



# Machine Storage

All machinery will develop serious rust problems and corrosion damage if it is not properly prepared for storage. Use the steps in this section to ensure that your machine remains in good condition.

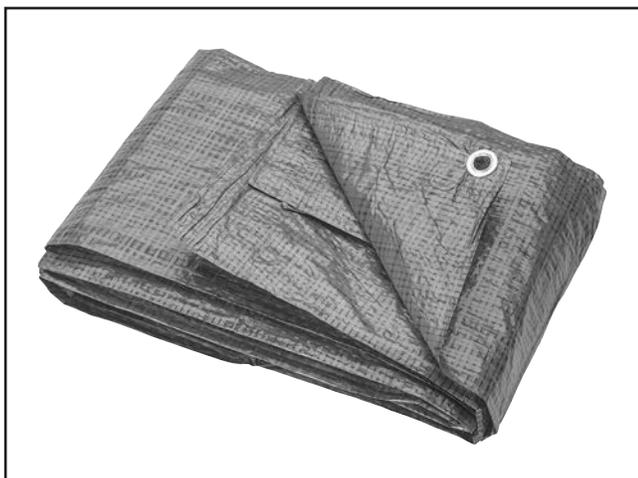
To bring machine out of storage, perform the **Test Run** beginning on **Page 15**.

	<p><b>! WARNING</b>  <b>Eye injury hazard! Always wear safety glasses when handling pressurized air system.</b></p>
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<b>Items Needed</b>	<b>Qty</b>
Cleaner/Degreaser .....	As Needed
Rags .....	As Needed
Tarp or Plastic Sheet .....	1

## T23951—Blue Tarp 8' x 10'

Made of woven polyethylene, these tarps are weather and tear resistant. They have UV lamination, heat-sealed seams, grommets, and reinforced edging with strong poly rope inside the hem on all four sides.



**Figure 26.** T23951 Blue Tarp 8' x 10'.

To prepare machine for storage:

1. DISCONNECT MACHINE FROM POWER!

<p style="text-align: center;"><b>! CAUTION</b>  <b>Releasing air through safety relief valve can be extremely loud. Protect hearing with ANSI-approved hearing protection while performing following step.</b></p>
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2. Use safety relief valve to reduce tank pressure to less than 10 PSI.
3. Open drain valve to drain any condensation from tank.
4. Disconnect air tool and hose from machine.
5. Clean machine.

	<p><b>! WARNING</b>  <b>Do not use a flammable cleanser to clean machine. Compressor components often produce sparks that could ignite once machine is connected to power and turned ON.</b></p>
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6. Cover machine with tarp or plastic sheet that will keep out dust and resist liquid or moisture. If machine will be stored in/near direct sunlight, use cover that will block UV rays.



# Checking for Leaks

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Air leaks will cause low air output and increase the time the compressor must run.

## Checking for Leaks

1. Disconnect tool and hose from compressor.
2. Turn **ON** compressor and allow tank to fill until cut-out pressure is reached (150 PSI).
3. DISCONNECT MACHINE FROM POWER!
4. Listen for sound of air to find possible leak.
  - If you *do not* hear air escaping, and pressure in tank does not change, there is no leak.
  - If you *do* hear air escaping, or pressure in tank drops even with safety relief valve and drain valve closed, proceed to **Step 5**.
5. Spray suspected air leak with soap and water solution and look for air bubbles.
  - If bubbles *do not* form, repeat at different location.
  - If bubbles *do* form, proceed to **Fixing Leaks**.

## Fixing Leaks

Item Needed	Qty
Wire Brush.....	1
Thread Sealing Tape or Pipe Dope...	As Needed

### To fix leaks:

1. DISCONNECT MACHINE FROM POWER!

 **CAUTION**

Releasing air through safety relief valve can be extremely loud. Protect hearing with ANSI-approved hearing protection while performing following step.

2. Use safety relief valve to reduce tank pressure to less than 10 PSI.
3. Open drain valve to relieve any remaining air.
4. Remove fitting or valve that is leaking.
5. Clean threads, apply thread sealing tape or pipe dope to threads, then re-install part.

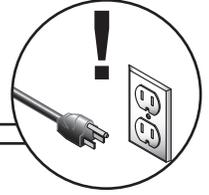
**Note:** *If a fitting or valve continues to leak after preceding steps, replace part.*



# SECTION 7: SERVICE

Review the troubleshooting procedures in this section if a problem develops with your machine. If you need replacement parts or additional help with a procedure, call our Technical Support. **Note:** *Please gather the serial number and manufacture date of your machine before calling.*

## Troubleshooting



### Motor & Electrical

Symptom	Possible Cause	Possible Solution
Machine does not start, or power supply breaker immediately trips after startup.	<ol style="list-style-type: none"> <li>1. Tank already pressurized.</li> <li>2. Internal overload tripped.</li> <li>3. Incorrect power supply voltage or circuit size.</li> <li>4. Pressure switch cut-in/cut-out settings have been adjusted incorrectly.</li> <li>5. Power supply circuit breaker tripped or fuse blown.</li> <li>6. Tripped thermal overload in motor, compressor is exceeding its duty cycle.</li> <li>7. Wiring broken, disconnected, or corroded.</li> <li>8. Check valve components are dirty/damaged.</li> <li>9. Pressure switch at fault.</li> <li>10. Internal overload at fault.</li> <li>11. Motor or motor bearings at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Motor will not start if tank is fully pressurized.</li> <li>2. Disconnect machine from power, allow pump to cool, then resume operations.</li> <li>3. Ensure correct power supply and circuit size (<b>Page 11</b>).</li> <li>4. Adjust settings (<b>Page 30</b>). Do not exceed cut-in/cut-out pressures listed on data sheet (<b>Page 6</b>) or inside pressure switch.</li> <li>5. Ensure circuit is free of shorts. Reset circuit breaker or replace fuse.</li> <li>6. Reduce load on compressor and allow longer cool down periods.</li> <li>7. Fix broken wires or disconnected/corroded connections.</li> <li>8. Clean/replace check valve components (<b>Page 29</b>).</li> <li>9. Turn compressor <b>OFF</b>, disconnect from power, and empty tank. <b>DO NOT USE</b> until switch is replaced.</li> <li>10. Replace pump.</li> <li>11. Replace motor.</li> </ol>
Machine stalls or is underpowered.	<ol style="list-style-type: none"> <li>1. Air filter(s) dirty/clogged.</li> <li>2. Pump/motor have restricted airflow.</li> <li>3. Pressure switch cut-in/cut-out settings have been adjusted incorrectly.</li> <li>4. Motor overheated, tripping internal overload; compressor is exceeding its duty cycle.</li> <li>5. Run capacitor at fault.</li> <li>6. Extension cord too long.</li> <li>7. Check valve components are dirty/damaged.</li> <li>8. Motor or motor bearings at fault.</li> <li>9. Worn valves or rings/compressor pump at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace air filter(s) (<b>Page 23</b>).</li> <li>2. Clean cylinder fins, motor fan, and vent area.</li> <li>3. Adjust settings (<b>Page 30</b>). Do not exceed cut-in/cut-out pressures listed on data sheet (<b>Page 6</b>) or inside pressure switch.</li> <li>4. Reduce load on compressor and allow longer cool down periods. Clean motor, let cool, and reduce workload. Reset breaker.</li> <li>5. Test/repair/replace.</li> <li>6. Move machine closer to power supply; use shorter extension cord.</li> <li>7. Clean/replace check valve components (<b>Page 29</b>).</li> <li>8. Replace motor.</li> <li>9. Rebuild/replace.</li> </ol>



## Motor & Electrical (Cont.)

Symptom	Possible Cause	Possible Solution
Machine has vibration or noisy operation.	<ol style="list-style-type: none"> <li>1. Motor or component loose.</li> <li>2. Wheels or machine feet loose.</li> <li>3. Motor fan rubbing on fan cover.</li> <li>4. Motor bearings at fault.</li> <li>5. Compressor pump at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace damaged or missing bolts/nuts or tighten if loose.</li> <li>2. Tighten fasteners.</li> <li>3. Fix/replace fan cover; replace loose/damaged fan.</li> <li>4. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.</li> <li>5. Compressor piston rod/bearings/crankshaft is worn. Rebuild or replace pump.</li> </ol>
Motor runs continuously.	<ol style="list-style-type: none"> <li>1. Machine is undersized.</li> <li>2. Regulator needs to be adjusted for lower airflow delivery.</li> <li>3. Air leak in tank or delivery pipes.</li> <li>4. Pressure switch at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use a smaller attachment tool or a larger air compressor.</li> <li>2. Turn regulator knob counterclockwise to decrease line PSI.</li> <li>3. Check air tank, pipes, and all connections for leaks (<b>Page 25</b>). Do not attempt to repair leaking/damaged tank, only replace.</li> <li>4. Turn compressor <b>OFF</b>, disconnect from power, and empty tank. DO NOT USE until switch is replaced.</li> </ol>
Pressure relief valve stays open and motor will not stop running.	<ol style="list-style-type: none"> <li>1. Pressure switch cut-in/cut-out settings have been adjusted incorrectly.</li> <li>2. Pressure switch at fault, unit is trying to overpressurize tank.</li> <li>3. Pressure relief valve at fault/relieving pressure too early.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust settings (<b>Page 30</b>). Do not exceed cut-in/cut-out pressures listed on data sheet (<b>Page 6</b>) or inside pressure switch.</li> <li>2. Turn compressor <b>OFF</b>, disconnect from power, and empty tank. DO NOT USE until switch is replaced.</li> <li>3. Replace.</li> </ol>

## Operation

Symptom	Possible Cause	Possible Solution
Air leaks from pressure switch.	<ol style="list-style-type: none"> <li>1. Check valve components are dirty/damaged.</li> <li>2. Pressure switch at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean/replace check valve components (<b>Page 29</b>).</li> <li>2. Turn compressor <b>OFF</b>, disconnect from power, and empty tank. DO NOT USE until switch is replaced.</li> </ol>
Low pressure in tank, or tank pressure drops after compressor is turned <b>OFF</b> .	<ol style="list-style-type: none"> <li>1. Drain valve is open.</li> <li>2. Air filter(s) dirty/clogged.</li> <li>3. Regulator needs to be adjusted for lower airflow delivery.</li> <li>4. Pressure switch cut-in/cut-out settings have been adjusted incorrectly.</li> <li>5. Air leak in tank or delivery pipes.</li> <li>6. Check valve components are dirty/damaged.</li> <li>7. Pressure relief valve releasing below 150 PSI.</li> <li>8. Gasket(s) leaking.</li> <li>9. Worn pump piston rings.</li> </ol>	<ol style="list-style-type: none"> <li>1. Close drain valve.</li> <li>2. Replace air filter(s) (<b>Page 23</b>).</li> <li>3. Turn regulator knob counterclockwise to decrease line PSI.</li> <li>4. Adjust settings (<b>Page 30</b>). Do not exceed cut-in/cut-out pressures listed on data sheet (<b>Page 6</b>) or inside pressure switch.</li> <li>5. Check air tank, pipes, and all connections for leaks (<b>Page 25</b>). Do not attempt to repair leaking/damaged tank, only replace.</li> <li>6. Clean/replace check valve components (<b>Page 29</b>).</li> <li>7. Replace pressure relief valve.</li> <li>8. Check gaskets on cylinder head assemblies, repair or replace as needed.</li> <li>9. Inspect and replace pump piston rings.</li> </ol>
Compressor knocking.	<ol style="list-style-type: none"> <li>1. Air filter(s) dirty/clogged.</li> <li>2. Piston assembly loose.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace air filter(s) (<b>Page 23</b>).</li> <li>2. Inspect and repair piston and connecting rod.</li> </ol>



## Operation (Cont.)

Symptom	Possible Cause	Possible Solution
Compressor does not build air pressure, or does not reach full pressure.	<ol style="list-style-type: none"> <li>1. Drain valve is open.</li> <li>2. Tank needs to be drained.</li> <li>3. Air filter(s) dirty/clogged.</li> <li>4. Air leak in tank or delivery pipes.</li> <li>5. Check valve components are dirty/damaged.</li> <li>6. Reed valve(s) not sealing.</li> <li>7. Head gasket or valve body gasket leaking.</li> <li>8. Worn pump piston rings.</li> <li>9. Broken crankshaft or connecting rod.</li> </ol>	<ol style="list-style-type: none"> <li>1. Close drain valve.</li> <li>2. Open drain valve to drain condensation, then close.</li> <li>3. Replace air filter(s) (<b>Page 23</b>).</li> <li>4. Check air tank, pipes, and all connections for leaks (<b>Page 25</b>). Do not attempt to repair leaking/damaged tank, only replace.</li> <li>5. Clean/replace check valve components (<b>Page 29</b>).</li> <li>6. Remove cylinder head and replace reed valve(s).</li> <li>7. Remove cylinder head and replace gasket(s).</li> <li>8. Inspect and replace pump piston rings.</li> <li>9. Replace or rebuild compressor pump.</li> </ol>
Air leaks from air filter(s).	<ol style="list-style-type: none"> <li>1. Check valve components are dirty/damaged.</li> <li>2. Reed valve(s) not sealing.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean/replace check valve components (<b>Page 29</b>).</li> <li>2. Remove cylinder head and replace reed valve(s).</li> </ol>
Air tools have oily discharge.	<ol style="list-style-type: none"> <li>1. Tank needs to be drained.</li> <li>2. In-line oiler is out of adjustment (if used).</li> <li>3. In-line filter is damaged or missing (if used).</li> <li>4. Compressor pump is at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Open drain valve to drain condensation.</li> <li>2. Adjust in-line oiler drip ratio or use correct viscosity oil.</li> <li>3. Replace filter or in-line filter assembly.</li> <li>4. Worn compressor piston, rings, or valves. Rebuild or replace pump.</li> </ol>
Air tools have watery discharge or get cold and freeze up with ice during use.	<ol style="list-style-type: none"> <li>1. Tank needs to be drained.</li> <li>2. In-line water separator is full (if used).</li> <li>3. Ambient environment has too much humidity.</li> </ol>	<ol style="list-style-type: none"> <li>1. Open drain valve to drain condensation.</li> <li>2. Drain water separator.</li> <li>3. Install in-line air dryer and water separator.</li> </ol>
Air tool has low supply pressure but compressor has sufficient air pressure.	<ol style="list-style-type: none"> <li>1. Air hose is too long.</li> <li>2. Regulator needs to be adjusted for higher airflow delivery.</li> <li>3. Machine is undersized.</li> <li>4. In-line filter is damaged or clogged (if used).</li> <li>5. In-line water separator is full (if used).</li> <li>6. Pressure switch cut-in/cut-out settings have been adjusted incorrectly.</li> <li>7. Air leaks in hose.</li> <li>8. Regulator at fault.</li> <li>9. Pressure gauge(s) at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use shorter hose.</li> <li>2. Turn regulator knob clockwise to increase line PSI. DO NOT exceed pressure rating of attached tool.</li> <li>3. Use a smaller attachment tool or a larger air compressor.</li> <li>4. Replace filter or in-line filter assembly.</li> <li>5. Drain water separator.</li> <li>6. Adjust settings (<b>Page 30</b>). Do not exceed cut-in/cut-out pressures listed on data sheet (<b>Page 6</b>) or inside pressure switch.</li> <li>7. Check air hoses and all connections for leaks (<b>Page 25</b>).</li> <li>8. Inspect regulator for leaks. Replace if at fault.</li> <li>9. Replace pressure gauge(s).</li> </ol>
Safety relief valve leaks.	<ol style="list-style-type: none"> <li>1. Pressure switch cut-in/cut-out settings have been adjusted incorrectly.</li> <li>2. Safety relief valve at fault.</li> <li>3. Pressure switch at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust settings (<b>Page 30</b>). Do not exceed cut-in/cut-out pressures listed on data sheet (<b>Page 6</b>) or inside pressure switch.</li> <li>2. Test/replace.</li> <li>3. Turn compressor <b>OFF</b>, disconnect from power, and empty tank. DO NOT USE until switch is replaced.</li> </ol>
Delivered air is dirty or has excessive moisture.	<ol style="list-style-type: none"> <li>1. Tank needs to be drained.</li> <li>2. Delivery pipes are dirty (if used).</li> </ol>	<ol style="list-style-type: none"> <li>1. Open drain valve to drain condensation.</li> <li>2. Remove delivery pipes, clean out and replace.</li> </ol>



# Inspecting Check Valve

The check valve pushes compressed air into the tank and prevents it from flowing back toward the pump. The diaphragm in the check valve can become damaged, twisted, or dirty and cause the valve to leak or prevent the compressor from pressurizing.

**Tool Needed** Qty  
Wrench or Socket 19mm..... 1

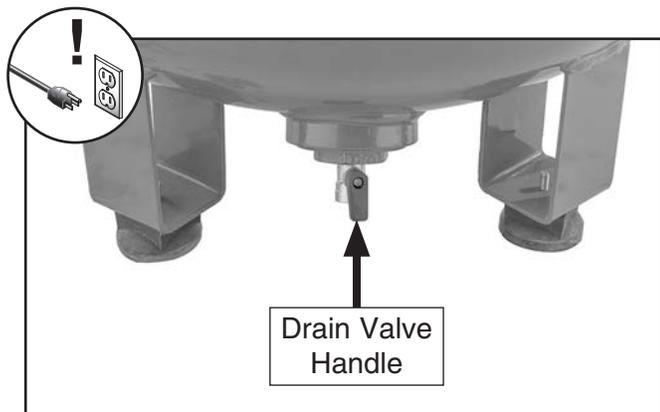
	<p><b>⚠ WARNING</b> Eye injury hazard! Always wear safety glasses when handling pressurized air system.</p>
-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------

To inspect check valve:

1. DISCONNECT MACHINE FROM POWER!

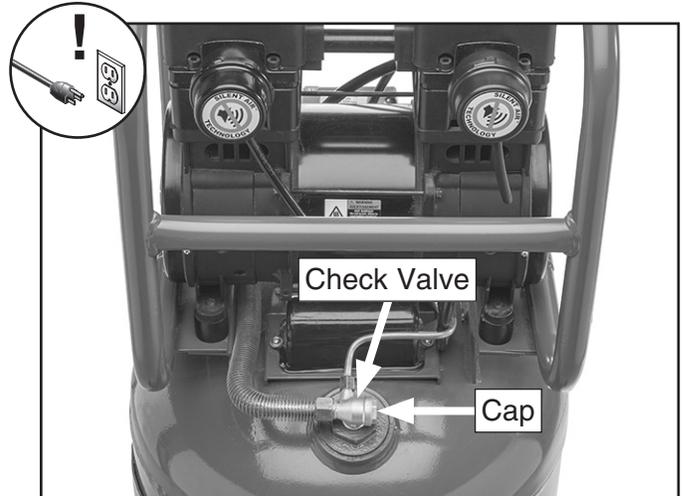
<p><b>⚠ CAUTION</b> Releasing air through safety release valve can be extremely loud. Protect hearing with ANSI-approved hearing protection while performing following step.</p>
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

2. Use safety relief valve to reduce tank pressure to less than 10 PSI.
3. Open drain valve to release any remaining air (see **Figure 27**).



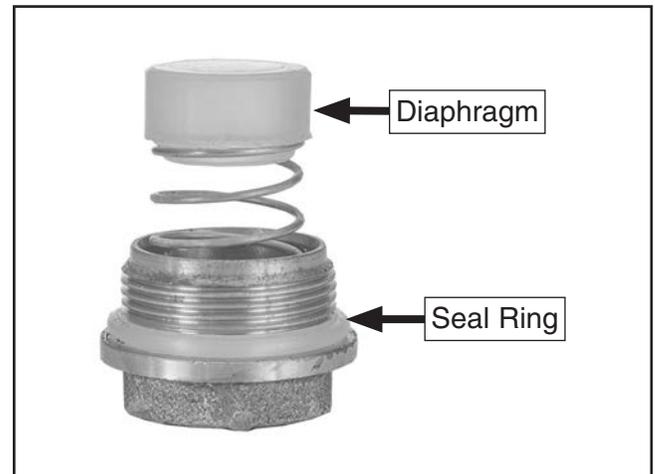
**Figure 27.** Drain valve handle open.

4. Remove cap, shown in **Figure 28**, from check valve.



**Figure 28.** Location of check valve cap.

5. Inspect seal ring and diaphragm (see **Figure 29**) for damage and dirt.



**Figure 29.** Check valve components.

6. Replace any damaged parts and clean any dirt from diaphragm and seal ring.
7. Re-install check valve/cap.

**IMPORTANT:** Make sure diaphragm presses squarely against discharge line and exhaust tube opening.

**Note:** Do not add thread sealant or thread sealing tape to cap threads. Seal ring provides sufficient sealing.



# Adjusting Cut-In/ Cut-Out Settings

The pressure switch ensures the compressor will turn **ON** when the tank pressure drops to approximately 120 PSI (the cut-in pressure), and will turn **OFF** when the tank pressure reaches 150 PSI (the cut-out pressure). Should the pressure switch fail to turn **OFF** the machine, the safety relief valve will open shortly after the pressure exceeds 150 PSI and prevent over-pressurization.

Tools Needed	Qty
Phillips Head Screwdriver #2 .....	1
Flat Head Screwdriver 1/4".....	1

**! WARNING**

Cut-in and cut-out settings have been factory set at proper PSI range. Only adjust pressure switch settings if compressor is cutting-in or cutting-out at incorrect pressures. Tank could burst if filled with more pressure than it is designed for.



**! WARNING**

Eye injury hazard! Always wear safety glasses when handling pressurized air system.

## Adjusting Cut-In/Cut-Out Settings

If the minimum and maximum tank pressure settings both have to be raised or lowered at the same time, then follow these steps.

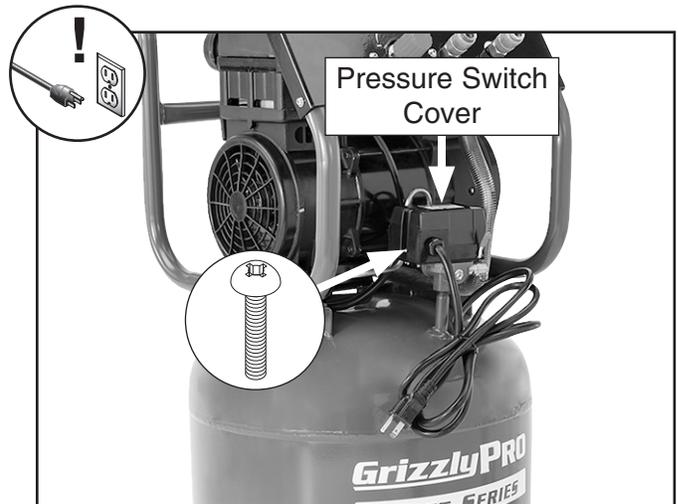
### To adjust cut-in/cut-out settings:

1. Operate compressor and record cut-in and cut-out pressures.
2. **DISCONNECT MACHINE FROM POWER!**

**! CAUTION**

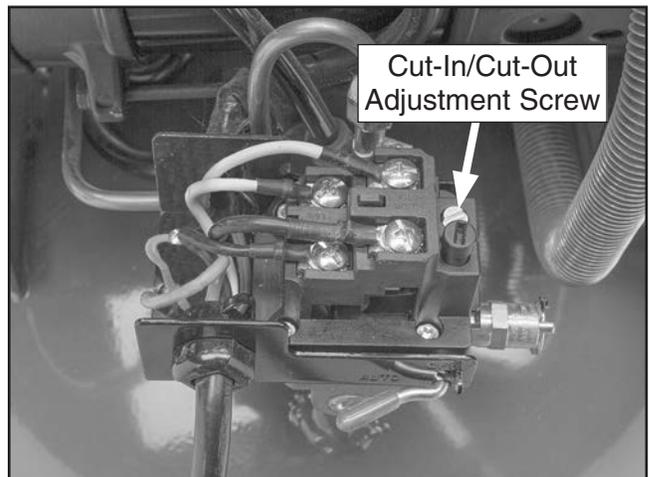
Releasing air through safety relief valve can be extremely loud. Protect hearing with ANSI-approved hearing protection while performing following step.

3. Use safety relief valve to reduce tank pressure to less than 10 PSI.
4. Remove Phillips head screw shown in **Figure 30** to remove pressure switch cover.



**Figure 30.** Location of pressure switch cover Phillips head screw.

5. Adjust screw shown in **Figure 31** to change minimum and maximum tank pressure settings.



**Figure 31.** Location of cut-in/cut-out adjustment screw.



- Turn screw half turn *clockwise* to *increase* both settings.
- Turn screw half turn *counterclockwise* to *decrease* both settings.

6. Install pressure switch cover.
7. Connect machine to power, start compressor, and cycle compressor through cut-in/cut-out pressures. If compressor does not automatically turn **OFF** at 150 PSI, turn machine **OFF** before pressure reaches 155 PSI. Adjust pressure switch settings until cut-out pressure is 150 PSI or lower.

### Adjusting Only Cut-Out Setting

If only the maximum tank pressure setting needs to be adjusted, then follow these steps. Keep in mind that the allowable pressure differential between cut-in pressure and cut-out pressure must be kept between 30–40 PSI. Exceeding this range can cause the compressor to overheat.

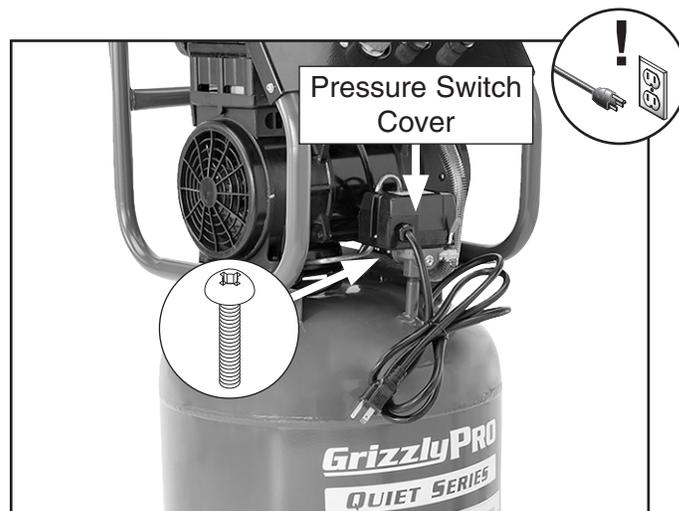
#### To adjust only cut-out setting:

1. Operate compressor and record cut-in and cut-out pressures.
2. DISCONNECT MACHINE FROM POWER!

## ⚠ CAUTION

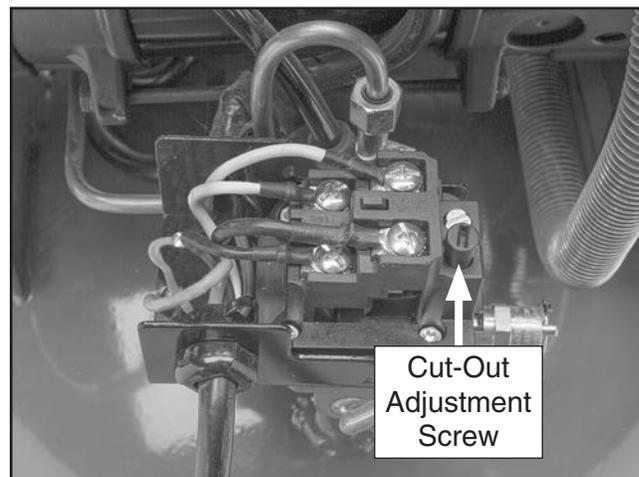
Releasing air through safety relief valve can be extremely loud. Protect hearing with ANSI-approved hearing protection while performing following step.

3. Use safety relief valve to reduce tank pressure to less than 10 PSI.
4. Remove Phillips head screw shown in **Figure 32** to remove pressure switch.



**Figure 32.** Location of pressure switch cover Phillips head screw.

5. Adjust screw shown in **Figure 33** to change maximum tank pressure setting.



**Figure 33.** Location of cut-out only adjustment screw.

- Turn screw half turn *clockwise* to *increase* tank pressure.
- Turn screw half turn *counterclockwise* to *decrease* tank pressure.

6. Install pressure switch cover.
7. Connect machine to power, start compressor, and cycle compressor through cut-in/cut-out pressures. If compressor does not automatically turn **OFF** at 150 PSI, turn machine **OFF** before pressure reaches 155 PSI. Adjust pressure switch settings until cut-out pressure is 150 PSI or lower.



# SECTION 8: WIRING

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Compare the manufacture date of your machine to the one stated in this manual, and study this section carefully.

If there are differences between your machine and what is shown in this section, call Technical Support at (570) 546-9663 for assistance BEFORE making any changes to the wiring on your machine. An updated wiring diagram may be available. **Note:** *Please gather the serial number and manufacture date of your machine before calling. This information can be found on the main machine label.*

## WARNING

### Wiring Safety Instructions

**SHOCK HAZARD.** Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!

**MODIFICATIONS.** Modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire. This includes the installation of unapproved after-market parts.

**WIRE CONNECTIONS.** All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.

**CIRCUIT REQUIREMENTS.** You MUST follow the requirements at the beginning of this manual when connecting your machine to a power source.

**WIRE/COMPONENT DAMAGE.** Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components.

**MOTOR WIRING.** The motor wiring shown in these diagrams is current at the time of printing but may not match your machine. If you find this to be the case, use the wiring diagram inside the motor junction box.

**CAPACITORS/INVERTERS.** Some capacitors and power inverters store an electrical charge for up to 10 minutes after being disconnected from the power source. To reduce the risk of being shocked, wait at least this long before working on capacitors.

**EXPERIENCING DIFFICULTIES.** If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (570) 546-9663.

#### NOTICE

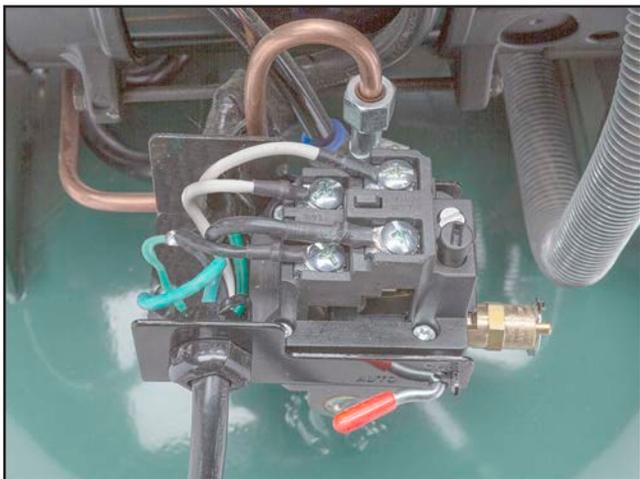
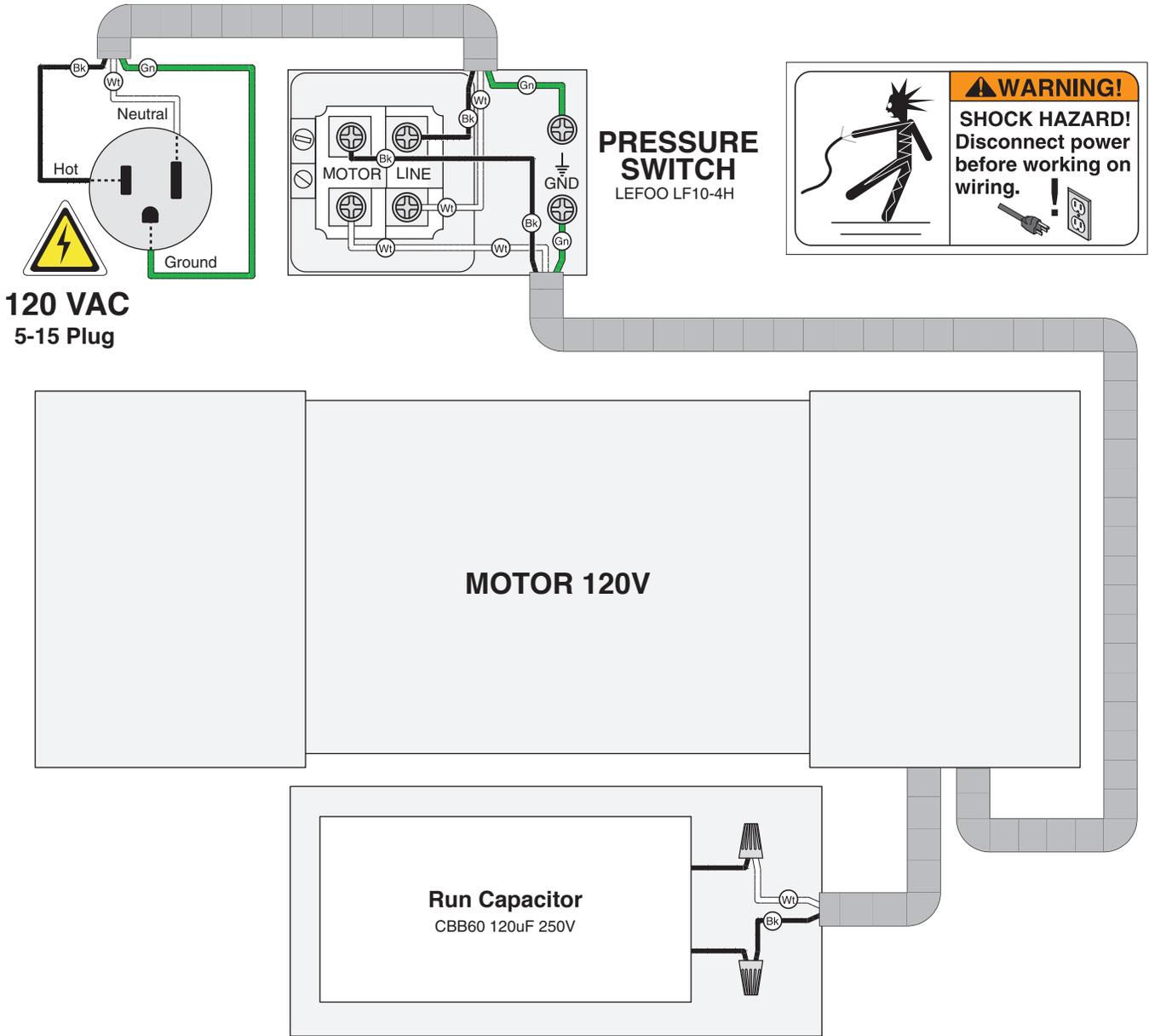
The photos and diagrams included in this section are best viewed in color. You can view these pages in color at [www.grizzly.com](http://www.grizzly.com).

#### COLOR KEY

BLACK 	BLUE 	YELLOW 	LIGHT BLUE 
WHITE 	BROWN 	YELLOW GREEN 	BLUE WHITE 
GREEN 	GRAY 	PURPLE 	TURQUOISE 
RED 	ORANGE 	PINK 	



# Wiring Diagram



**Figure 34.** Pressure switch wiring.



**Figure 35.** Run capacitor wiring.





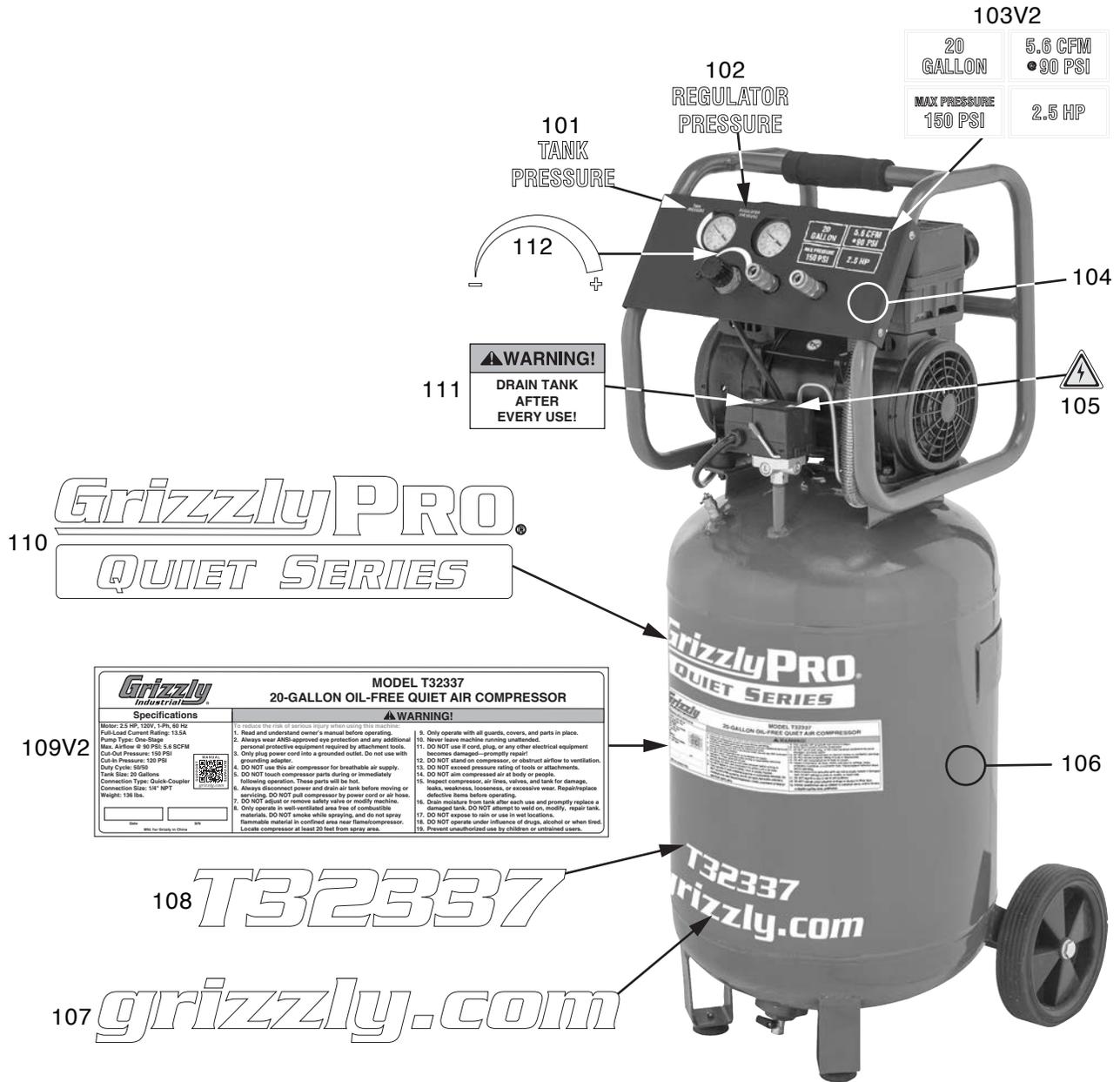
# Main Parts List

REF	DESCRIPTION	QTY
1	FILTER COVER	2
2	FILTER ELEMENT	2
3	FILTER BASE	2
4	O-RING 19 X 2.8	4
5	GASKET	12
6	CONNECTING TUBE	2
7	HEX BOLT M6-1 X 65	12
8	CYLINDER HEAD	2
9	RUBBER MAT	2
10	PHLP HD SCR M4-.7 X 8	2
11	LOCKING BLOCK	2
12	UPPER VALVE PLATE	2
13	VALVE DISC	2
14	LOWER VALVE PLATE	2
15	BUMPER	2
16	PHLP HD SCR M4-.7 X 6	2
17	O-RING 75 X 2.8	2
18	CYLINDER	2
19	PHLP HD SCR M6-1 X 16	2
20	PRESSURE PLATE	2
21	PISTON RING	2
22	CONNECTING ROD	2
23	BALL BEARING 6204ZZ	2
24	CAP SCREW M6-1 X 18	2
25	CRANKCASE	2
26	BUSHING	1
27	R CAPACITOR 120M 250V 1-3/4 X 3-1/2	1
28	HEX BOLT M5-.8 X 130	4
29	LOCK WASHER 5MM	4
30	FAN COVER	2
31	TAP SCREW M4 X 12	4
32	FAN	2
33	LOCK BLOCK	2
34	ECCENTRIC BEARING	2
35	STATOR	1
36	ROTOR	1
37	BALL BEARING 6908ZZ	2
38	EXT RETAINING RING 14MM	2
39	PAD	2
40	HEAD COVER (PLASTIC)	2
41	CAPACITOR COVER	1

REF	DESCRIPTION	QTY
42	HANDLE GRIP	1
43	ELBOW FITTING	1
44	ROLL CAGE	1
45	TUBE	1
46	LOCK RING	2
47	FLARE NUT 3/8-24	1
48	PRESSURE SWITCH LEFOO LF10-4H	1
49	CHECK VALVE NUT	1
50	CORD CLIP	2
51	POWER CORD 14G 3W 72" 5-15P	1
52	TANK PRESSURE GAUGE	1
53	CAP SCREW M6-1 X 6	1
54	LINE PRESSURE GAUGE	1
55	REGULATOR	1
56	UNIVERSAL QUICK-COUPLER 1/4" NPT	1
57	SHOULDER BOLT 3/8-16 X 9/16, 7/16 X 1-15/16	2
58	WHEEL	2
59	FLAT WASHER 3/8	2
60	HEX NUT 3/8-16	2
61	FLAT WASHER 5MM	2
62	RUBBER FOOT	2
63	HEX BOLT M5-.8 X 25	2
64	BALL DRAIN VALVE	1
65	CHECK VALVE	1
66	SAFETY VALVE	1
67	VIBRATION DAMPENER	6
68	HEX NUT M8-1.25	6
69	CONTROL PANEL	1
70	TANK	1
71	DISCHARGE TUBE	2
72	HEX BOLT M4-.7 X 10	2
73	FLAT WASHER 4MM	2
74	HEAD COVER CLAMP	2
75	PHLP HD SCR M4-.7 X 12	4
76	STRAIGHT FITTING	1
77	PHLP HD SCR M5-.8 X 12	6
78	GASKET	6
79	BLOCK PLATE	2
81	FLAT WASHER 13 X 14 X 2MM	4
82	INT TOOTH WASHER 3/8	2



# Labels & Cosmetics



REF	PART #	DESCRIPTION
101	PT32337101	TANK PRESSURE LABEL
102	PT32337102	REGULATOR PRESSURE LABEL
103V2	PT32337103V2	SPECIFICATION LABEL V2.05.22
104	PT32337104	TOUCH-UP PAINT, GRIZZLY BLACK
105	PT32337105	ELECTRICITY LABEL
106	PT32337106	TOUCH-UP PAINT, GRIZZLY GREEN

REF	PART #	DESCRIPTION
107	PT32337107	GRIZZLY.COM LABEL
108	PT32337108	MODEL NUMBER LABEL
109V2	PT32337109V2	MACHINE ID LABEL V2.05.22
110	PT32337110	GRIZZLY PRO LABEL
111	PT32337111	DRAIN TANK LABEL
112	PT32337112	REGULATOR LABEL

## **!WARNING**

Safety labels help reduce the risk of serious injury caused by machine hazards. If any label comes off or becomes unreadable, the owner of this machine **MUST** replace it in the original location before resuming operations. For replacements, contact (800) 523-4777 or [www.grizzly.com](http://www.grizzly.com).



# WARRANTY & RETURNS

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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.

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.

In the event you need to use this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return 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.

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

Thank you again for your business and continued support. We hope to serve you again soon.

To take advantage of this warranty, you must register it at <https://www.grizzly.com/forms/warranty>, or you can scan the QR code below to be automatically directed to our warranty registration page. Enter all applicable information for the product.



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