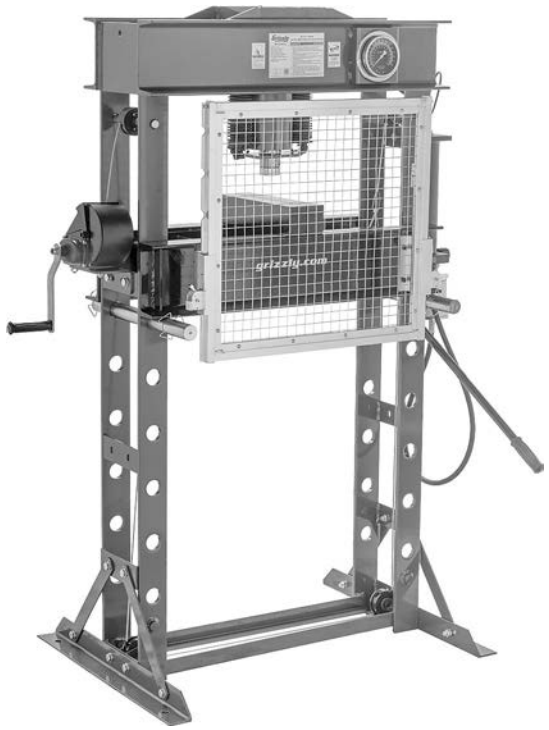
MODEL T34349
50-TON HYDRAULIC SHOP PRESS
OWNER'S MANUAL
(For models manufactured since 12/24)



#KS23489 PRINTED IN CHINA V1.03.25

******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.

Table of Contents

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

⚠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.

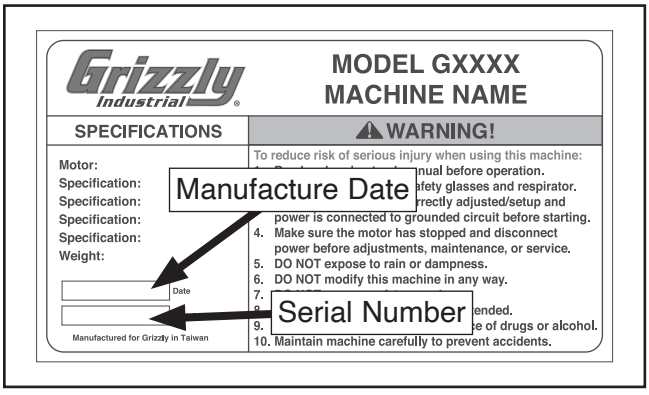
Manual Accuracy

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**.

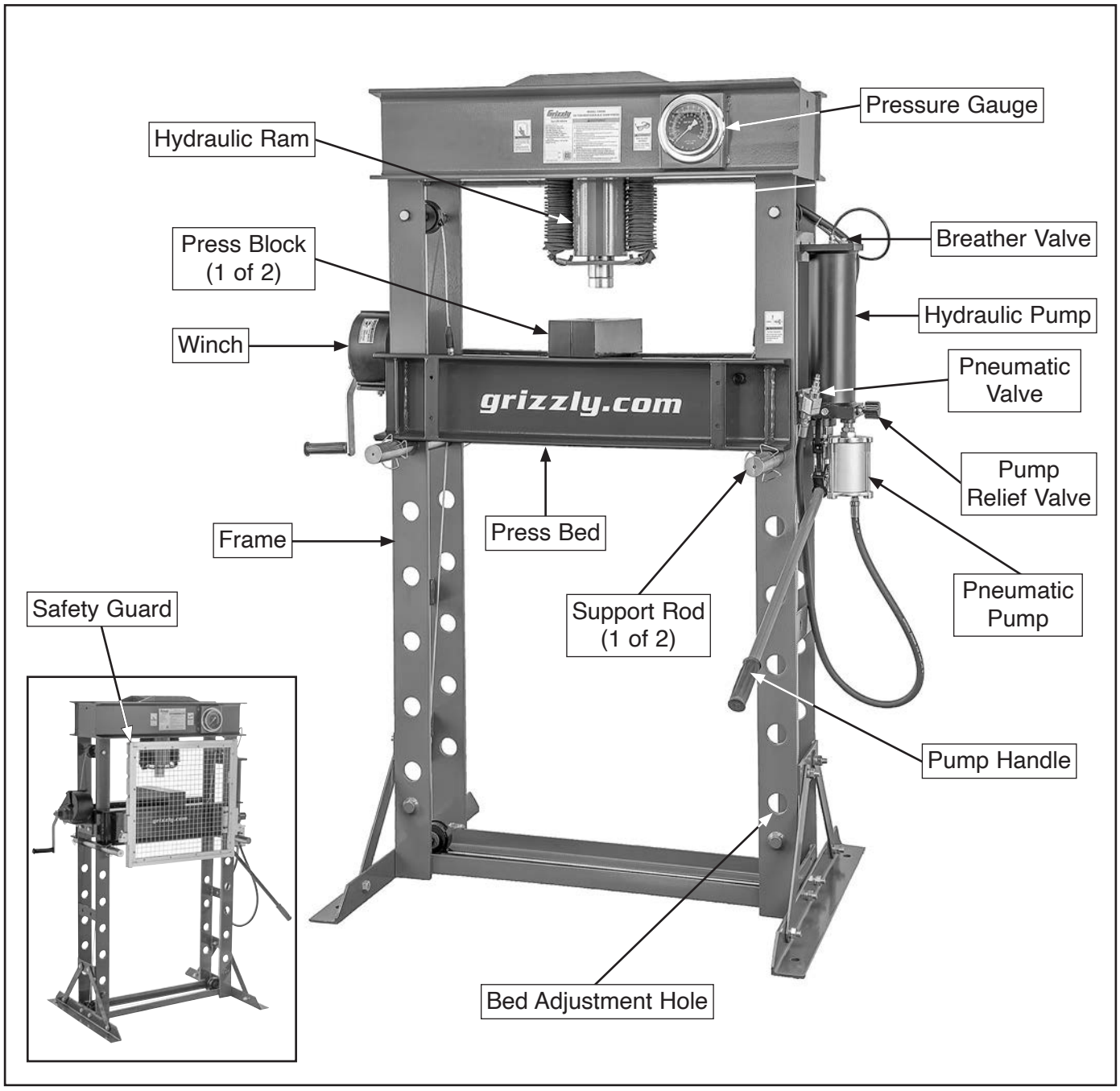
If you find this to be the case, and the difference between the manual and machine leaves you confused or unsure about something, check our website for an updated version. We post current manuals and manual updates for free on our website at **www.grizzly.com**.

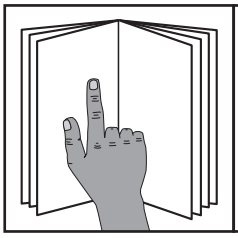
Alternatively, you can call our Technical Support for help. Before calling, make sure you write down the **manufacture date** and **serial number** from the machine ID label (see below). This information is required for us to provide proper tech support, and it helps us determine if updated documentation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



Identification

Become familiar with the names and locations of the controls and features shown below to better understand the instructions in this manual.

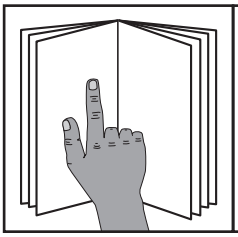




⚠WARNING

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

Controls & Components



⚠WARNING

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

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.

Main

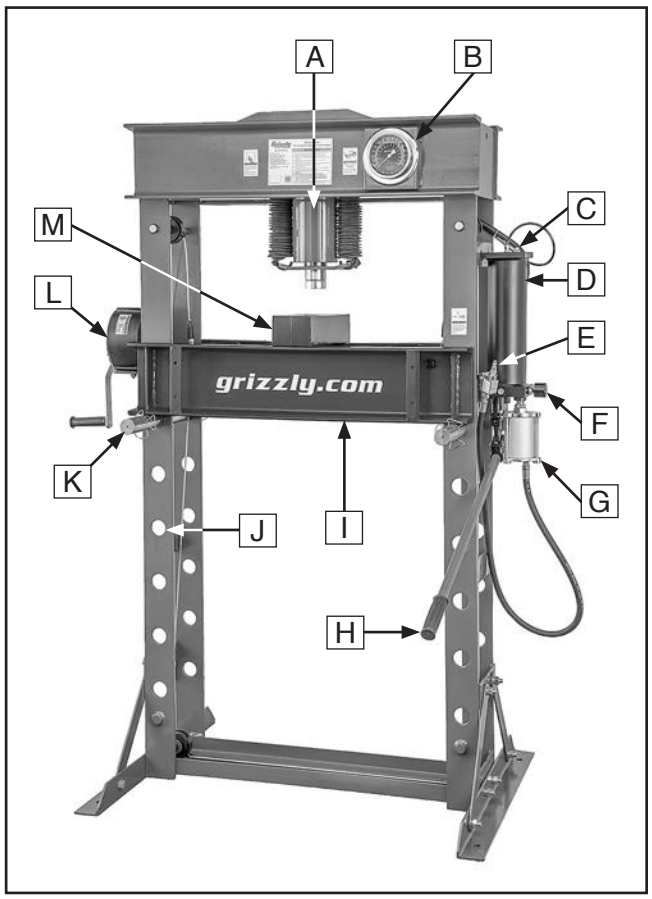


Figure 1. Main component overview.

A. Hydraulic Ram: Applies up to 100,000 lbs. (50 U.S. tons) of pressure against workpiece. Operates using incoming air pressure for rapid downward movement, or manual pump handle for slower downward movement.

B. Pressure Gauge: Shows hydraulic pressure (in tons) being applied to workpiece.

C. Breather Valve: Prevents excess hydraulic pump pressure.

D. Hydraulic Pump: Holds hydraulic fluid for operation of hydraulic ram.

E. Pneumatic Valve: Connects to pressurized air supply (not included) to provide pressure for lowering hydraulic ram.

IMPORTANT: Maximum incoming air pressure is 123 PSI!

F. Pump Relief Valve: Releases pressure from hydraulic ram to release workpiece.

G. Pneumatic Pump: Generates hydraulic pressure in ram when connected to pressurized air supply. Moves ram downward.

H. Pump Handle: Moves ram downward when pumped up and down.

I. Press Bed: Platform that supports workpiece and press blocks.

J. Bed Adjustment Holes: Holds support rods to position press bed at desired height.

K. Support Rod (1 of 2): Supports press bed using bed adjustment holes in machine frame.

L. Winch: Raises and lowers press bed to adjust bed height.

M. Press Block (1 of 2): Supports workpieces too small to be supported by press bed.

MACHINE DATA SHEET

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

MODEL T34349
50-TON HYDRAULIC SHOP PRESS

Product Dimensions:

Weight	582 lbs.
Width (side-to-side) x Depth (front-to-back) x Height	51 x 66 x 41 in.
Footprint (Length/Width)	39-1/2 x 29-1/2 in.

Shipping Dimensions:

Type	Wood Crate
Content	Machine
Weight	698 lbs.
Length x Width x Height	75 x 37 x 16 in.
Must Ship Upright	No

Main Specifications:

Operation Information

Ram Maximum Applied Force	100,000 lbs. (50 US Tons)
Ram Maximum Stroke	7-1/2 in.
Gauge Convention	US Tons & Metric Tons
Ram Piston Diameter	2.285 in.
Ram Face Diameter	2 in.
Maximum Distance to Table	33 in.
Minimum Distance to Table	5-1/2 in.
Bed Support Pin Diameter	1-9/16 in.
Number of Bed Adjustment Holes	6
Bed Adjustment Hole Spacing	5-1/2 in. On Center
Hand Winch Lifting Capacity	2,000 lbs.
Hydraulic Fluid Type	Standard Hydraulic Jack Oil
Working Air Pressure	109 - 123 PSI
Air Input Connection Type	Industrial Quick-Coupler Plug (Male)

Construction

Frame	Steel
Base	Steel
Press Blocks	Steel
Paint Type/Finish	Powder Coated

Other Specifications:

Country of Origin	China
Warranty	1 Year
Approximate Assembly & Setup Time	2 Hours
Serial Number Location	ID Label
ISO 9001 Factory	Yes

Features:

Pneumatic and Hydraulic Hand Pump Operation
Adjustable Safety Guard
Winch and Pulley System for Lifting and Lowering Bed
Built-In Pressure Gauge
Includes (2) Steel Press Blocks and (1) 1/4", 3/8", and 1/2" Industrial Quick-Coupler Plug (Male).

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 loose clothing, gloves, neckties, 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 Hydraulic Presses

⚠WARNING

Serious injury can occur from getting hands, fingers, etc. crushed by ram or workpieces. Death can result from getting accidentally injected by hydraulic oil. Workpieces ejected by press can strike operator or bystanders. To minimize risk of injury, anyone operating this machine MUST completely heed hazards and warnings below.

CRUSHING HAZARD: Ram can crush fingers, hands, or other body parts. Always keep body parts away from ram during operation.

CAPACITY: Never exceed pressure rating of hydraulic system. Doing so could result in machine failure, explosion of high pressure components, or bodily injury as a result of flying debris or sudden unexpected movement or breakage.

BED SUPPORT RODS: Always ensure bed support rods evenly support press bed. Failure to support press bed could lead to bed accidentally dropping during setup or operation, which may result in crushing injury.

WORKPIECE SUPPORT: When a part is pressed free, a workpiece may shift suddenly or fall from the press, causing a crushing injury to your foot or leg. Use a catch basket and support long or awkward workpieces with stands or chains, or have an assistant support a long workpiece during pressing operations.

WORKPIECE POSITION: Workpieces positioned off-center below hydraulic ram can be ejected unexpectedly, striking operator or bystanders with great force. Always ensure workpiece is positioned so force is evenly distributed. Immediately stop and retract ram if workpiece shifts during pressing operation.

OIL INJECTION HAZARD: Keep body parts away from any high-pressure hydraulic leak. Pressure developed from this machine may be high enough to penetrate your skin and enter your bloodstream. Hydraulic oil injected into your bloodstream is a medical emergency. If not treated immediately, this blood poisoning could result in an aggressive infection, amputation, or death.

PROJECTILE HAZARD: Always use safety guard at highest position possible to shield entire operating area when using press. Pressing workpieces may create an explosive hazard, causing machine damage and serious personal injury. Being hit by a launched workpiece or press tooling can cause severe impact injury or death. Stand out of the way of any possible projectile path. Never press with rods or pins that are long enough to shift off-center and kick out under a load. Never stack rods and spacers to create an extended press pin. If pressing must occur with an extended press pin, the pin must be fastened with a safety chain or the press pin must be enclosed in a safety cage to eliminate a projectile hazard.

MAINTENANCE/SERVICE: Always bleed air from hydraulic system and purge all hydraulic pressure before performing any inspections, adjustments, and maintenance.

Additional Safety for Hydraulic Systems

⚠WARNING

Infection, amputation, or death can result from contact with leaking hydraulic fluid under high pressure. Additionally, leaking hydraulic fluid is a serious slip hazard and fire hazard. To reduce these risks, anyone operating this machine MUST completely heed the hazards and warnings below.

INJECTION INJURIES. Immediately seek medical attention if injection injury occurs. Leaking hydraulic fluid often has enough pressure to penetrate skin, which can lead to infection, amputation, or death. Hydraulic fluid can enter the skin through small wounds that are barely noticeable. Minimizing the time between injury and removal of the injected material is critical to successful treatment.

CHECK FOR LEAKS. Never use your hands to check for hydraulic leaks. Small leaks can be invisible to the naked eye. Use a piece of wood or cardboard to find suspected leaks.

EYE INJURIES. Safety glasses may not be sufficient to protect against pressurized hydraulic fluid. Depressurize hydraulic system before approaching a known leak.

FLUID CONTAMINATION. Make sure hydraulic system maintenance is performed in a clean and dust-free work area. Remove all contaminants from near hydraulic system openings and components prior to maintenance, to prevent debris from entering the hydraulic system. Always use lint-free rags when cleaning components. Contaminated hydraulic fluid may damage the machine and cause hydraulic system failure that can result in serious injury or death.

DO NOT OPERATE WITH LEAKS. Immediately stop machine and depressurize hydraulic system if a leak is discovered or suspected. Operating hydraulic system with leaks may increase the hazard of the situation and damage the machine.

COMPONENT REPLACEMENT. Only use high-pressure hydraulic hose and steel hydraulic fittings with compatible threads when replacing components in the hydraulic system. DO NOT overtighten or use soft metal fittings such as brass or aluminum.

DEPRESSURIZE FOR MAINTENANCE. Always purge air and depressurize hydraulic system before performing any service or maintenance. Verify hydraulic pressure is at 0 PSI before proceeding with maintenance.

PREVENTING LEAKS. Always support and restrain hydraulic hoses to minimize friction during operation that could lead to machine damage that may result in serious injury. Regularly inspect and perform maintenance on the hydraulic system. Following a regular schedule will decrease the likelihood of damage to the machine and reduce the risk of associated hazards.

Additional Safety for Compressed Air

⚠WARNING

Serious impact injuries can occur from bursting air components. Eyes and other soft tissues can be easily injured by air streams and debris projected by compressed air. To reduce these risks, operator and bystanders MUST completely heed the warnings below.

PROPER PPE. Always wear ANSI-approved eye and hearing protection. Pneumatic components can propel objects and debris at high speeds or even explode. Air escaping from pneumatic components and connections can exceed safe noise exposure limits and may cause hearing damage with prolonged exposure.

AIR SUPPLY. Only supply clean, dry, regulated compressed air for operations. Never exceed maximum operating pressure or components may burst and cause injury. Never use oxygen, carbon dioxide, combustible gases, or any bottled gas as air source, as these can explode.

INTEGRITY OF AIR COMPONENTS. Inspect air tank, attachment connections, hoses, fittings, and valves for rust, damage, leaks, weakness, looseness, or excessive wear and repair/replace damaged components before operating. Do not attempt to modify, weld on, or repair tank because doing so could cause it to burst. Replace a damaged tank immediately.

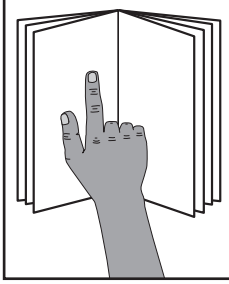
AIR ATTACHMENTS. Never use damaged components—they are more likely to rupture. Use proper air hose for connections and confirm air hose is long enough to reach work area without stretching. Always relieve line pressure before connecting or disconnecting air supply or tools. Disconnect air supply when not in use.

MODIFICATIONS. DO NOT adjust or remove safety relief valve. Safety relief valve is designed and adjusted for correct tolerances and abilities of air supply 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.

DAILY MAINTENANCE. Drain moisture from air supply tank daily to prevent internal corrosion that will weaken tank.

SECTION 2: SETUP

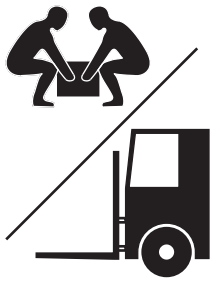


⚠WARNING

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!



⚠WARNING

HEAVY LIFT!

Straining or crushing injury may occur from improperly lifting machine or some of its parts. To reduce this risk, get help from other people and use a forklift (or other lifting equipment) rated for weight of this machine.

Needed for Setup

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

Description	Qty
• Forklift or Hoist (rated for at least 875 lbs.)	1
• Lifting Straps (rated for at least 875 lbs.)	2
• Additional Person	1
• Safety Glasses (for each person)	1 Pr.
• Goggles	1 Pr.
• Face Shield	1
• Power Drill w/Phillips Head Bit #2	1
• Crowbar/Pry Bar	1
• Hex Wrench 6mm	1
• Wrenches or Sockets 12, 14, 17mm	1 Ea.
• Wrenches or Sockets 19mm	2
• Socket Wrench	As Needed
• Air Hose w/Quick-Disconnect Socket (¼", ⅜", or ½")	1
• Air Supply (rated for at least 109 PSI)	1
• Disposable Rags	As Needed
• Disposable Gloves	As Needed
• PTFE Thread-Sealant Tape	As Needed
• Cleaner/Degreaser (**Page 14**)	As Needed
• Mounting Hardware (**Page 20**)	As Needed

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.*

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.

Crate Inventory (Figure 2) **Qty**

A. Hydraulic Press 1
B. Winch w/Mounting Bracket..... 1
C. Hydraulic Pump w/Pneumatic Cylinder 1
D. Press Blocks..... 2
E. Support Rods 2
F. Safety Guard 1
G. Retaining Rings 4
H. Pump Handle..... 1
I. Safety Guard Mounting Brackets 2
J. Frame Supports..... 2
K. Angle Braces 4
L. Quick-Disconnect Plugs 3/8", 1/2"..... 1 Ea.
M. Hardware (Not Shown)
—Hex Bolts M12-1.75 x 35 (Supports)..... 12
—Hex Nuts M12-1.75 (Supports) 12
—Flat Washers 12mm (Supports) 12
—Lock Washers 12mm (Supports) 12
—Cap Screws M8-1.25 x 30 (Guard) 4
—Hex Nuts M8-1.25 (Guard)..... 4
—Flat Washers 8mm (Guard) 4
—Lock Washers 8mm (Guard)..... 4
—Hex Bolts M10-1.5 x 20 (Pump) 4
—Flat Washers 10mm (Pump) 4
—Hex Bolts M12-1.75 x 35 (Winch)..... 2
—Hex Nuts M12-1.75 (Winch)..... 2
—Flat Washers 12mm (Winch)..... 2
—Lock Washers 12mm (Winch)..... 2
—Hex Bolts M8-1.25 x 16 (Handle)..... 1
—Flat Washers 8mm (Handle)..... 1

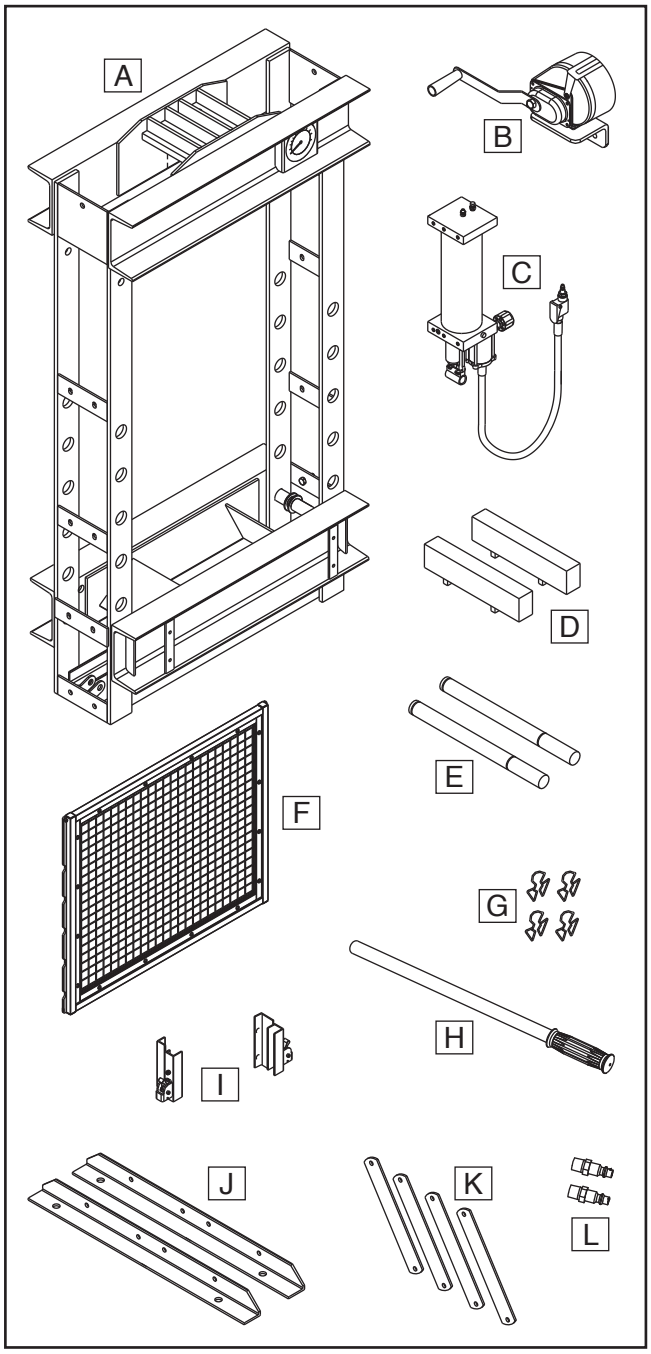
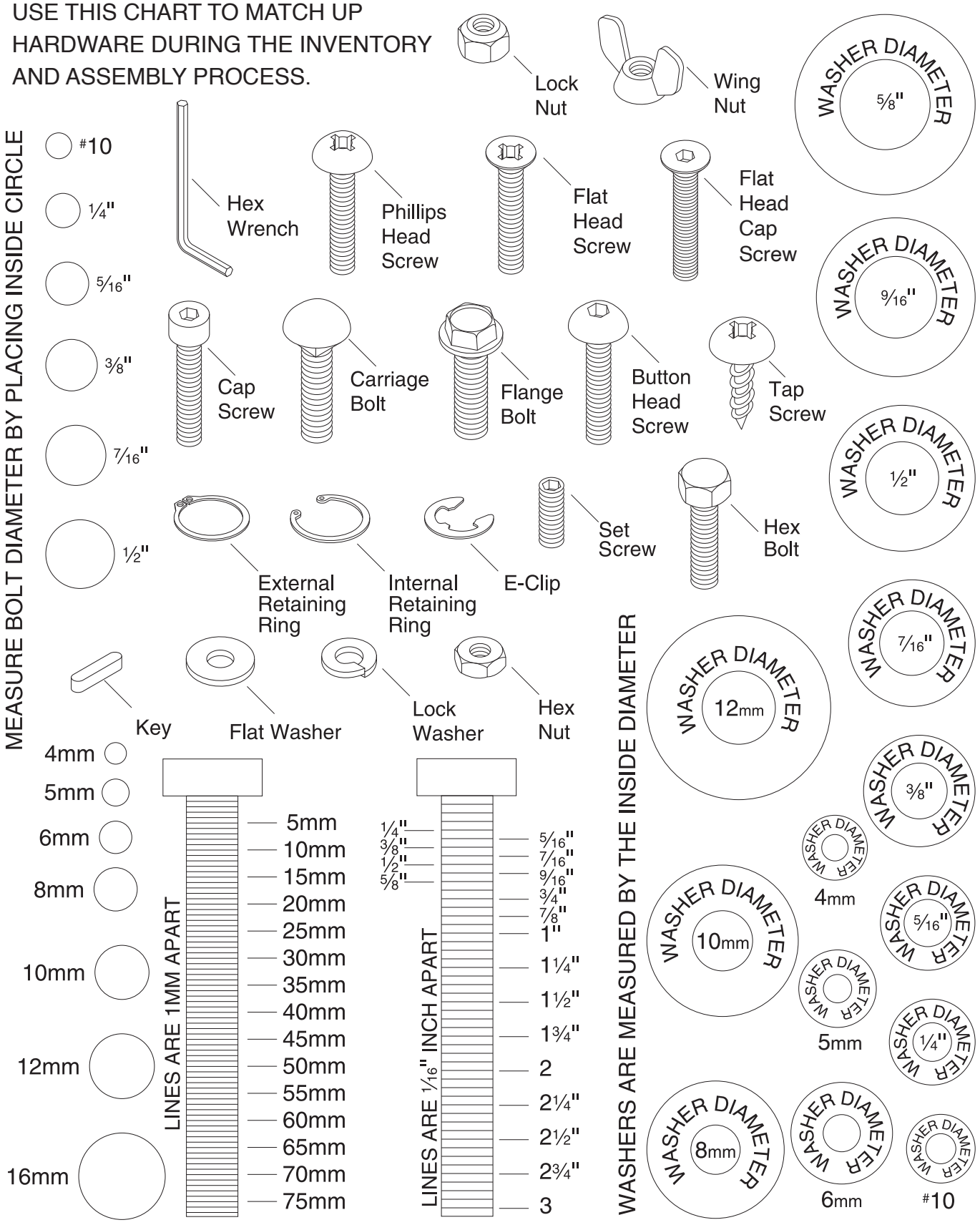


Figure 2. Crate inventory.

Hardware Recognition Chart

USE THIS CHART TO MATCH UP HARDWARE DURING THE INVENTORY AND ASSEMBLY PROCESS.



Cleanup

The unpainted surfaces of your machine are coated with a heavy-duty rust preventative that prevents corrosion during shipment and storage. This rust preventative works extremely well, but it will take a little time to clean.

Be patient and do a thorough job cleaning your machine. The time you spend doing this now will give you a better appreciation for the proper care of your machine's unpainted surfaces.

There are many ways to remove this rust preventative, but the following steps work well in a wide variety of situations. Always follow the manufacturer's instructions with any cleaning product you use and make sure you work in a well-ventilated area to minimize exposure to toxic fumes.

Before cleaning, gather the following:
- Disposable rags
- Cleaner/degreaser (WD•40 works well)
- Safety glasses & disposable gloves
- Plastic paint scraper (optional)

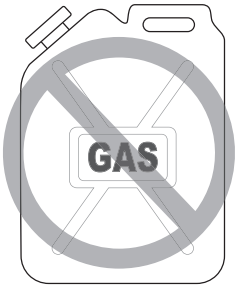
Basic steps for removing rust preventative:

1. Put on safety glasses.

2. Coat the rust preventative with a liberal amount of cleaner/degreaser, then let it soak for 5–10 minutes.

3. Wipe off the surfaces. If your cleaner/degreaser is effective, the rust preventative will wipe off easily. If you have a plastic paint scraper, scrape off as much as you can first, then wipe off the rest with the rag.

4. Repeat **Steps 2–3** as necessary until clean, then coat all unpainted surfaces with a quality metal protectant to prevent rust.



⚠WARNING

Gasoline and petroleum products have low flash points and can explode or cause fire if used to clean machinery. Avoid using these products to clean machinery.

⚠CAUTION

Many cleaning solvents are toxic if inhaled. Only work in a well-ventilated area.

NOTICE

Avoid harsh solvents like acetone or brake parts cleaner that may damage painted surfaces. Always test on a small, inconspicuous location first.

T23692—Orange Power Degreaser
A great product for removing the waxy shipping grease from the ***non-painted*** parts of the machine during clean up.

Order online at www.grizzly.com OR Call 1-800-523-4777

Figure 3. T23692 Orange Power Degreaser.

Site Considerations

Physical Environment

The physical environment where the machine is operated is important for safe operation and longevity of components. For best results, operate this machine in a dry environment that is free from excessive moisture, hazardous chemicals, airborne abrasives, or extreme conditions. Extreme conditions for this type of machinery are generally those where the ambient temperature range is outside 41°–104°F; the relative humidity range is outside 20–95% (non-condensing); or the environment is subject to vibration, shocks, or bumps.

Space Allocation

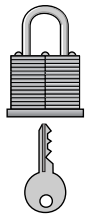
Consider the largest size of workpiece that will be processed through this machine and provide enough space around the machine for adequate operator material handling or the installation of auxiliary equipment. With permanent installations, leave enough space around the machine to open or remove doors/covers as required by the maintenance and service described in this manual. **See below for required space allocation.**

Weight Load

Refer to the **Machine Data Sheet** for the weight of your machine. Make sure that the surface upon which the machine is placed will bear the weight of the machine, additional equipment that may be installed on the machine, and the heaviest workpiece that will be used. Additionally, consider the weight of the operator and any dynamic loading that may occur when operating the machine.

Lighting

Lighting around the machine must be adequate enough that operations can be performed safely. Shadows, glare, or strobe effects that may distract or impede the operator must be eliminated.



⚠CAUTION

Children or untrained people may be seriously injured by this machine. Only install in an access restricted location.

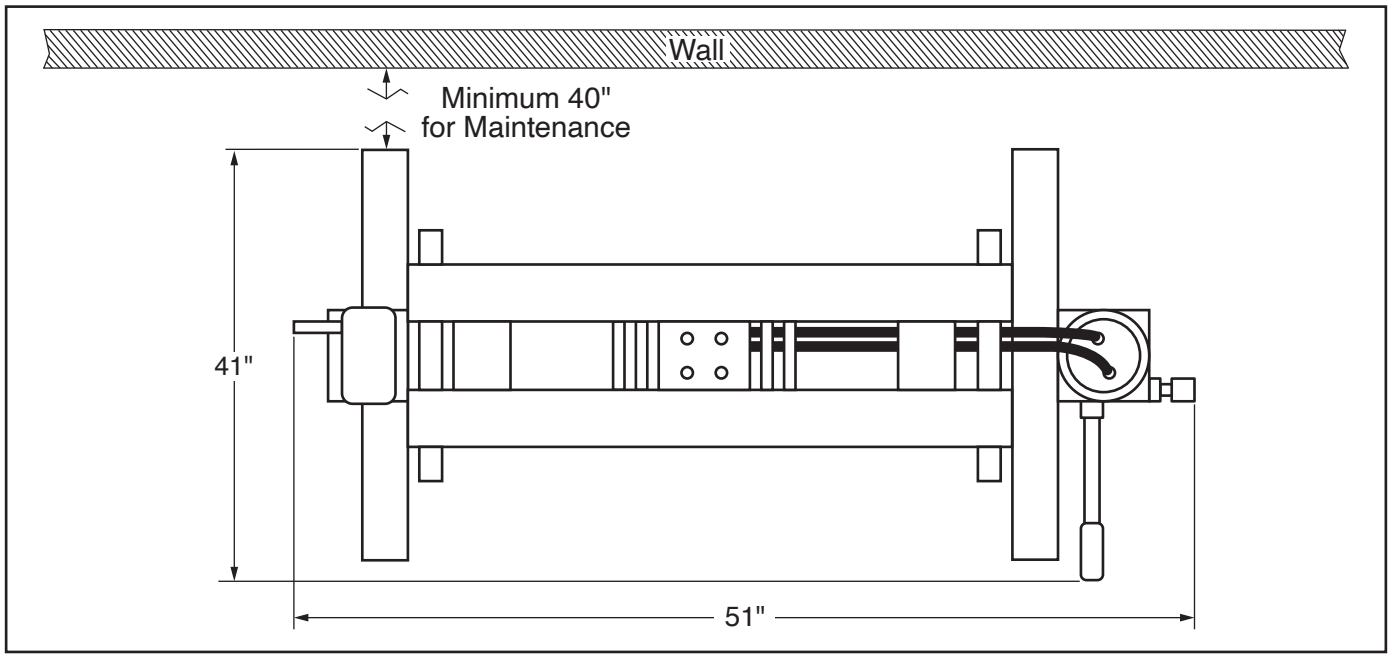
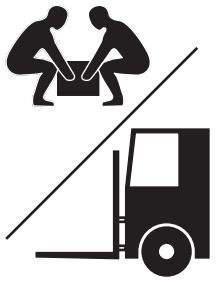


Figure 4. Minimum working clearances.

Assembly



⚠WARNING

HEAVY LIFT!

Straining or crushing injury may occur from improperly lifting machine or some of its parts. To reduce this risk, get help from other people and use a forklift (or other lifting equipment) rated for weight of this machine.

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. Move crate to desired location, then remove crate top and sides, loose items inside crate, and any loose items secured to press bed.

Note: *Leave winch and winch mounting bracket secured to column with shipping wrap at this time.*

2. Route (2) lifting straps between cross beams (see **Figure 5**).

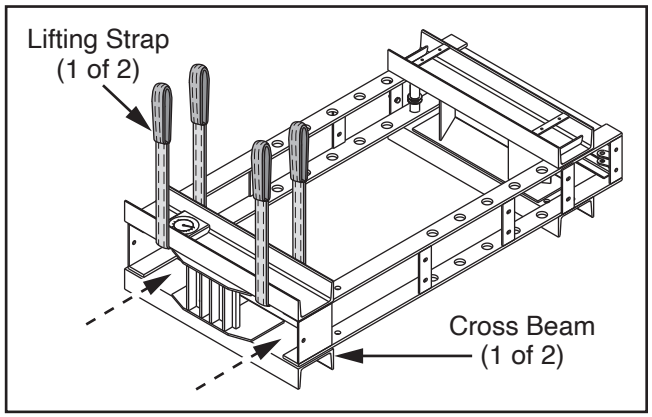


Figure 5. Lifting straps routed between cross beams.

NOTICE

Prevent lifting straps from binding on hydraulic system components while lifting machine, or damage to the hydraulic system may occur.

3. Center lifting equipment over machine and connect lifting straps.

IMPORTANT: Evenly balance lifting straps to help prevent machine from tilting when lifted.

4. Raise lifting equipment until lifting straps are taut, then verify lifting straps are not binding on hydraulic system components.

5. Lift machine high enough to clear pallet, then move pallet from beneath machine.

6. Lower machine to floor, but keep tension on lifting straps to prevent sudden machine movement.

7. Remove shipping wrap securing winch, then install winch and winch mounting bracket on left column with (2) M12-1.75 X 35 hex bolts, 12mm flat washers, 12mm lock washers, and M12-1.75 hex nuts (see **Figure 6**).

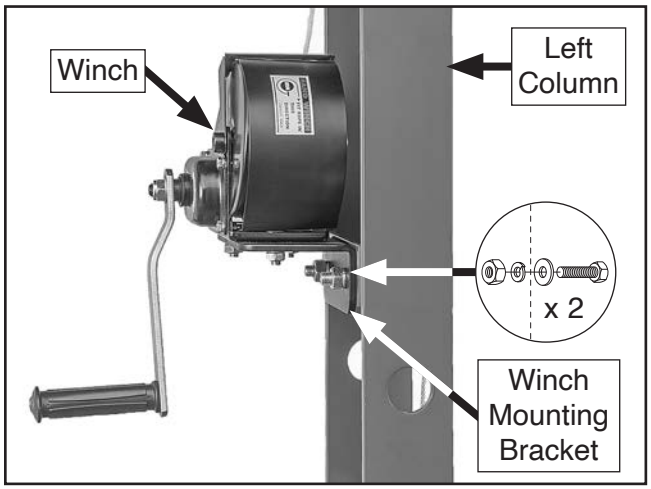


Figure 6. Winch and winch mounting bracket installed on left column.

8. Rotate winch handle clockwise to raise bed above second set of bed adjustment holes from the bottom (see **Figure 7**).

9. Install (1) retaining ring on front groove in each support rod (see **Figure 7**).

   Note: *Retaining ring groove closest to end of support rod should be positioned at rear of machine (see **Figure 7**). This provides a "handle" on front of support rods.*

⚠CAUTION

ALWAYS verify bed support rods are supporting bed evenly! Failure to support press bed evenly could lead to bed accidentally dropping during setup or operation, which may result in crushing injury.

10. Insert (2) support rods through bed adjustment holes (see **Figure 7**), and install (1) retaining ring on rear groove in each support rod to secure (see **Figure 8**).

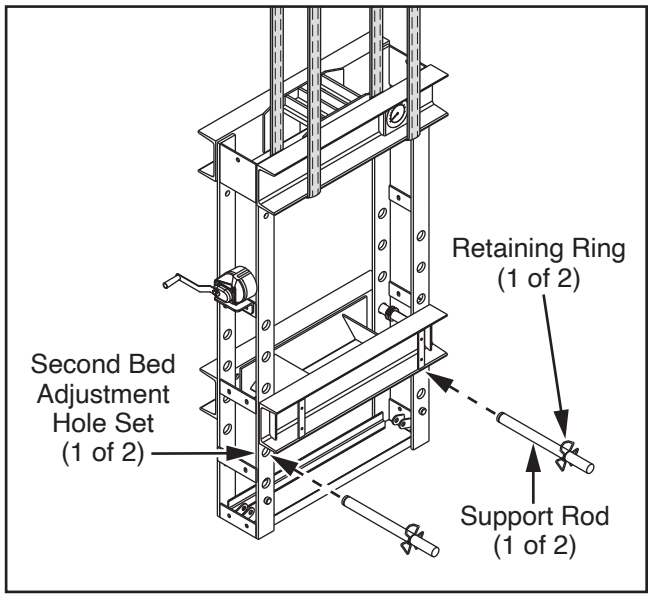


Figure 7. Bed raised above second set of bed adjustment holes.

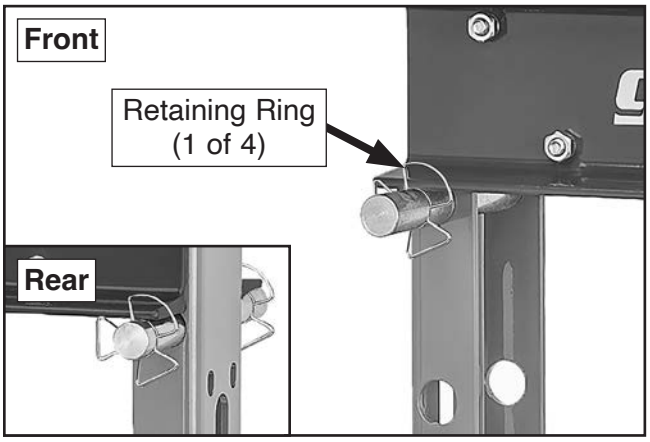


Figure 8. Example of retaining rings on support rods.

11. Rotate winch handle counterclockwise to lower bed between retaining rings on support rods (see **Figure 9**).

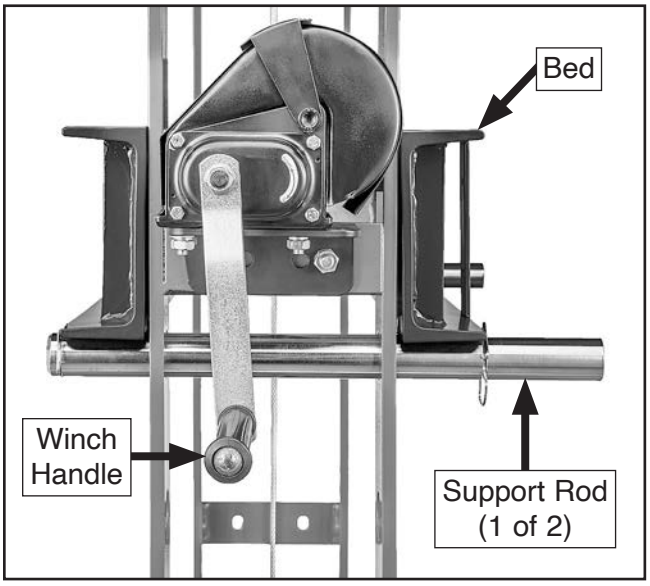


Figure 9. Bed lowered on support rods.

12. Attach (2) frame supports to columns using (4) M12-1.75 x 35 hex bolts, 12mm flat washers, 12mm lock washers, and M12-1.75 hex nuts (see **Figure 10**). Do not fully tighten fasteners at this time.

13. Attach (4) angle braces to frame supports and columns using (8) M12-1.75 x 35 hex bolts, 12mm flat washers, 12mm lock washers, and M12-1.75 hex nuts (see **Figure 10**). Do not fully tighten fasteners at this time.

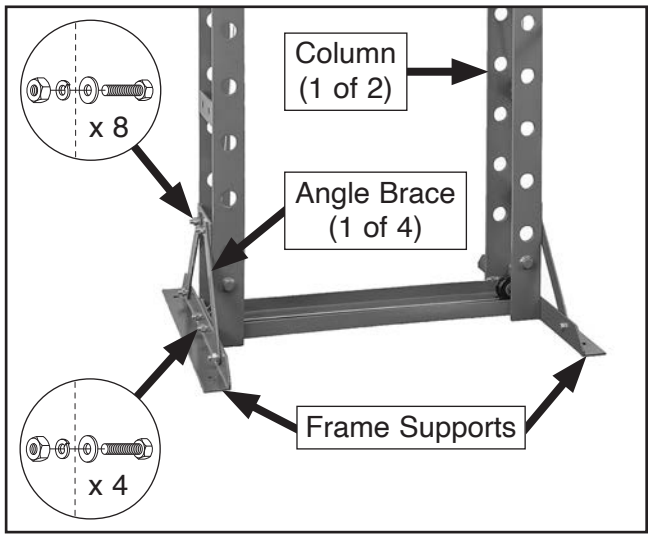


Figure 10. Angle braces attached to frame supports and columns (bed removed for clarity).

14. Lower machine all the way and fully tighten fasteners installed in **Steps 12–13**, then remove (2) lifting straps.

15. Mount hydraulic pump to right column with (4) M10-1.5 x 15 hex bolts and 10mm flat washers (see **Figure 11**).

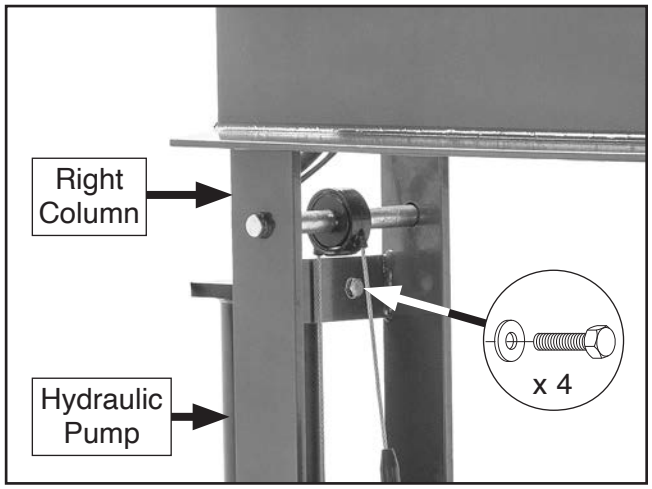
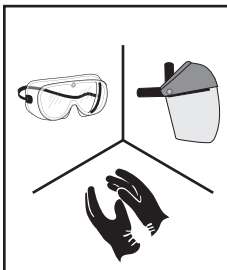


Figure 11. Hydraulic pump mounted on right column.



⚠WARNING

POISON HAZARD

Hydraulic oil is poisonous. Use personal protection when handling hydraulic oil, and immediately clean up any spills.

16. Remove caps sealing hydraulic hose and hydraulic hose fitting on pump, then connect hydraulic hose to fitting on rear of hydraulic pump (see **Figure 12**).

Note: *Use PTFE thread-sealant tape on threaded fittings to ensure a proper seal during pressing operations.*

17. Remove caps sealing return line and return line fitting on pump, then connect return line to fitting on top of hydraulic pump, as shown in **Figure 12**.

Note: *Use PTFE thread-sealant tape on threaded fittings to ensure a proper seal during pressing operations.*

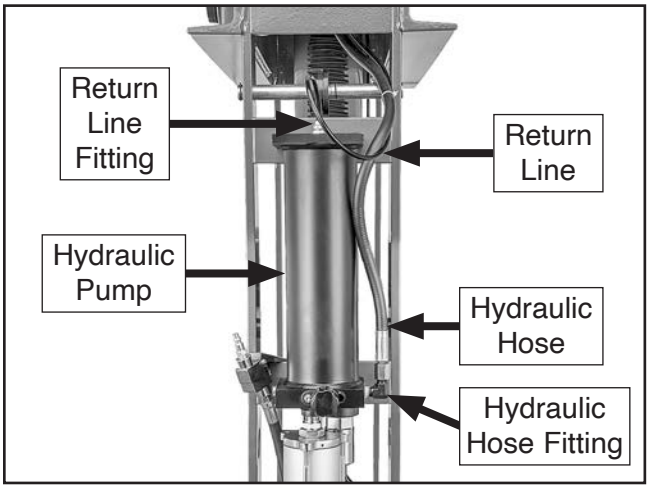


Figure 12. Hydraulic hose and return line connected to hydraulic pump.

18. Install hydraulic pump handle on hydraulic pump with (1) M8-1.25 x 16 hex bolt and 8mm flat washer (see **Figure 13**).

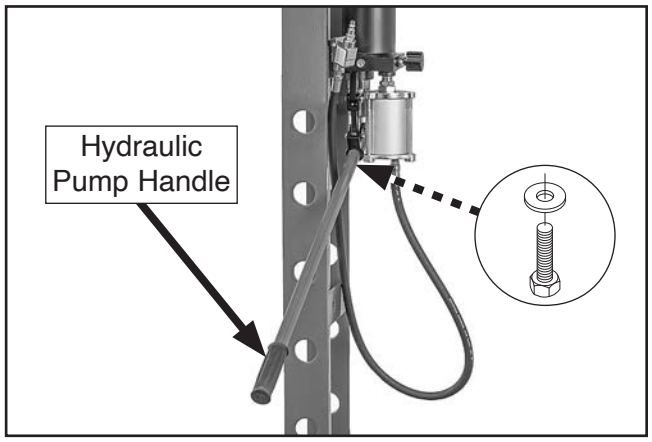


Figure 13. Hydraulic pump handle installed (bed removed for clarity).

19. Anchor machine to floor as described in **Anchoring to Floor** on **Page 20**, then proceed to **Step 20**.

20. Rotate winch handle clockwise to raise bed above top bed adjustment hole set.

21. Remove (2) retaining rings on rear of support rods, then remove (2) support rods.

22. Insert (2) support rods through top bed adjustment holes (see **Figure 14**), and install (1) retaining ring on rear groove in each support rod.

23. Rotate winch handle counterclockwise to lower bed onto support rods (see **Figure 14**).

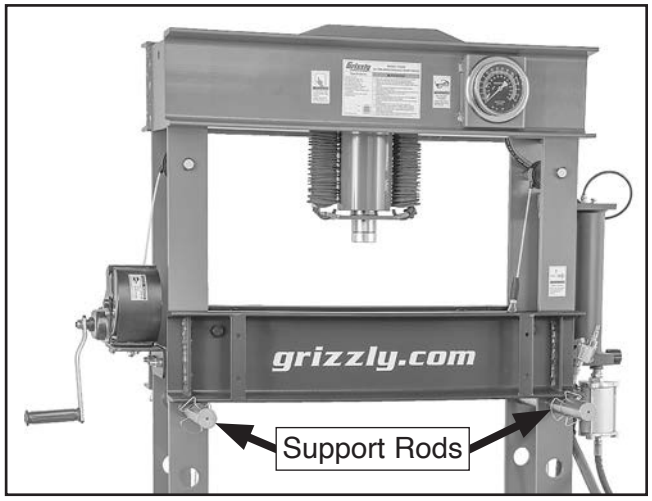


Figure 14. Bed raised to upper operating height.

24. Install (2) safety guard mounting brackets on front of press bed using (4) M8-1.25 x 30 cap screws, 8mm flat washers, 8mm lock washers, and M8-1.25 hex nuts (see **Figure 15**).

25. Rotate (2) safety guard locks outboard to release locks, then install safety guard (see **Figure 15**).

Note: *Cap screws on safety guard frame should be positioned on top.*

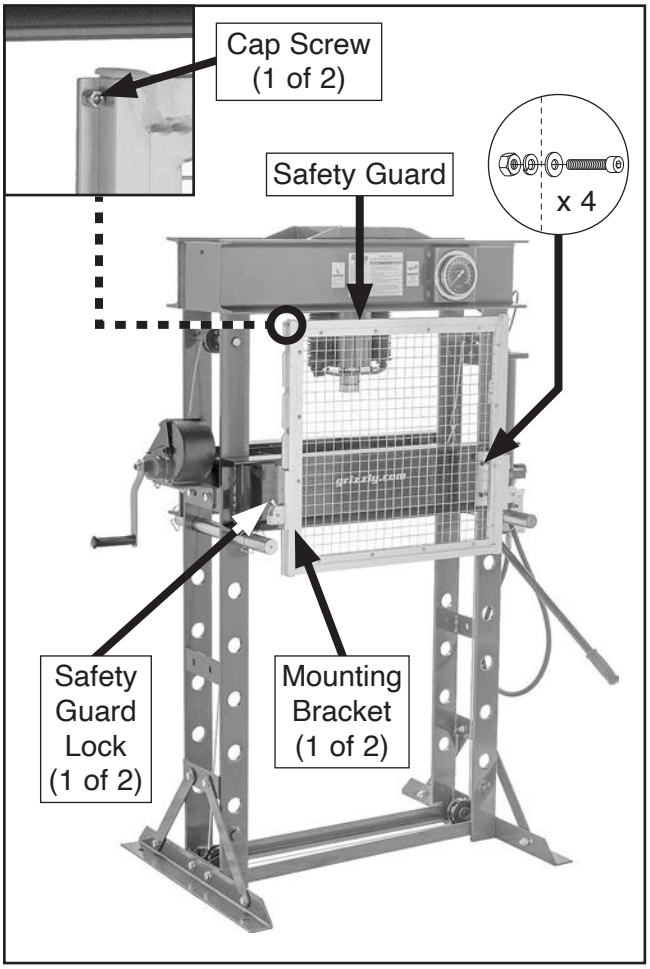


Figure 15. Safety guard installed on front of press bed.

26. Adjust safety guard and secure as shown in **Adjusting Safety Guard** on **Page 24**.

27. If connecting an incoming air supply, follow instructions in **Steps 1–4** of **Pneumatically Adjusting Pressure** on **Page 26**.

28. Place (2) press blocks on press bed as desired (see **Figure 16**).

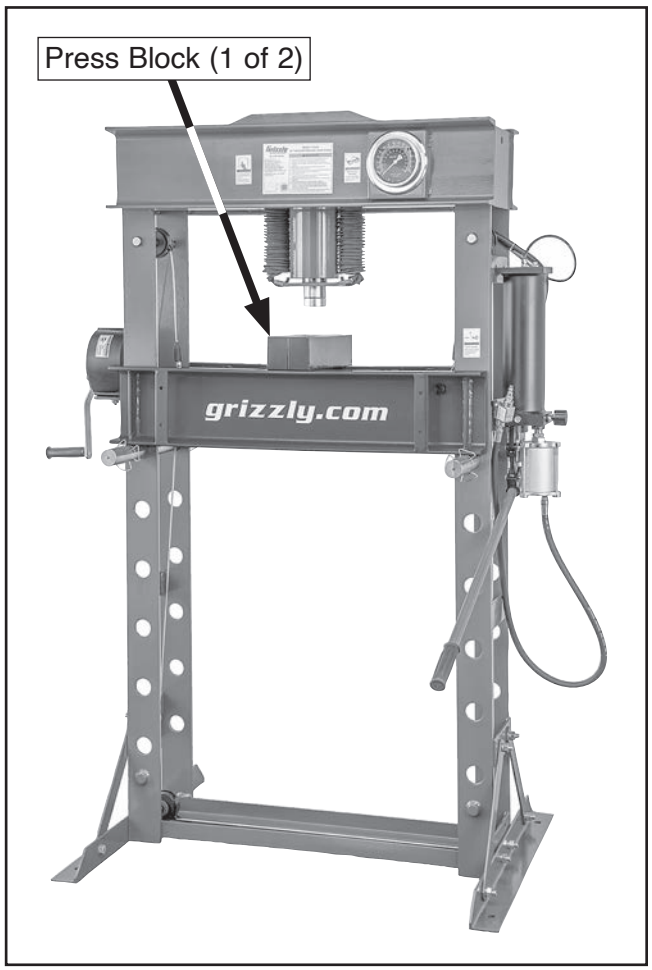


Figure 16. Blocks on press bed (safety guard removed for clarity).

29. Proceed to **Bleeding Hydraulic System** on **Page 30** before beginning operations.

Anchoring to Floor

Number of Mounting Holes 4
Diameter of Mounting Hardware..... 5/8"

Anchoring machinery to the floor prevents tipping or shifting that may occur during operations involving large or heavy workpieces. Due to the dynamic forces encountered during operations with this machine, you MUST secure the machine to the floor.

If the machine will be installed in a commercial or workplace setting, local codes may legally require that it be anchored to the floor.

Anchoring to Concrete Floors

Lag shield anchors with lag screws (see below) are a popular way to anchor machinery to a concrete floor, because the anchors sit flush with the floor surface, making it easy to unbolt and move the machine later, if needed. However, anytime local codes apply, you MUST follow the anchoring methodology specified by the code.

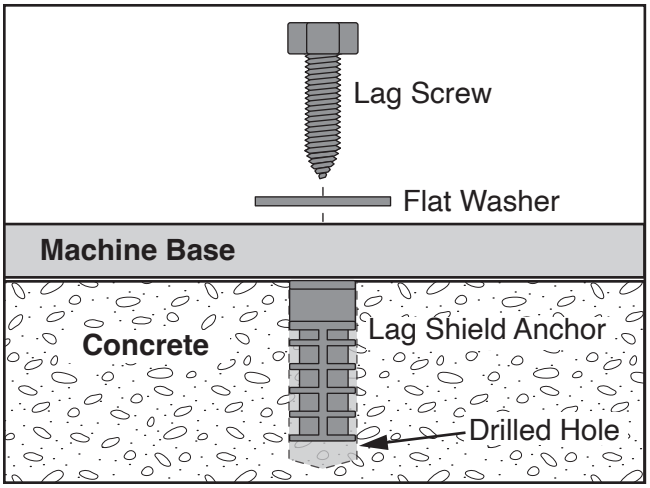


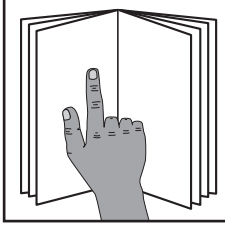
Figure 17. Popular method for anchoring machinery to a concrete floor.

SECTION 3: 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.

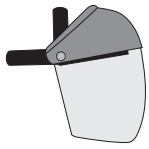


⚠WARNING

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

⚠WARNING

To reduce risk of eye injury from flying debris, always wear safety glasses and a face shield when operating this machine.



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.

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

1. Examines workpiece to make sure it is suitable for pressing.
2. Adjusts press bed height to accommodate workpiece.
3. Lowers safety guard and places workpiece on press bed or press blocks as needed, and centers workpiece pressing point under ram.
4. Raises safety guard to highest position possible to shield entire operating area.
5. Puts on safety glasses and face shield.
6. Closes pump relief valve and opens breather valve on hydraulic pump.
7. Pumps handle or connects pressurized air supply and uses air to lower ram until it just touches workpiece.
8. Verifies workpiece has not shifted position and completes pressing operation.
9. Releases hydraulic pressure to raise ram, and removes workpiece from press bed.

Workpiece Inspection

Some workpieces are not safe to press or may require modification before they are safe to press. Follow the inspection procedures on this page before selecting a workpiece for press operations.

⚠WARNING

Always use minimum amount of pressure required when operating and DO NOT compress springs or any object that could potentially fracture and create an explosive hazard, or machine damage and serious personal injury could occur.

Follow these inspection procedures before pressing a workpiece:

- **Observe workpiece setup.** Viewing the workpiece from multiple angles may reveal an unsafe press condition. ALWAYS ensure ram is centered over workpiece before attempting any operation.

- **Protection from falling workpieces.** Injury to the operator or damage to the machine and workpiece can occur if workpiece becomes dislodged during press operation. Verify workpiece has not shifted position, is fully supported, and is square with the ram before beginning operations.

  Note: *Place padding around the machine to protect from falling workpieces.*

- **Material strength.** Verify workpiece material will fully withstand pressure applied by press during operation.

- **Assembled parts.** Disassemble any unnecessary parts before pressing to prevent hidden components (springs, retainers, irregular-shaped objects, etc.) from being ejected from press and causing serious personal injury or damage to machine.

- **Cleaning and inspecting material.** Clean workpiece and ensure that all foreign material or damage is removed from the workpiece being pressed. Apply a light machine oil sparingly to bearings and bushings before assembling to help prevent components seizing during operation.

- **Special considerations.** This press is designed for molding, casting, and forming metal workpieces, and assembling/disassembling bearings and bushings. Pressing workpieces beyond the range of this design may require alternative support that is outside the scope of this manual.

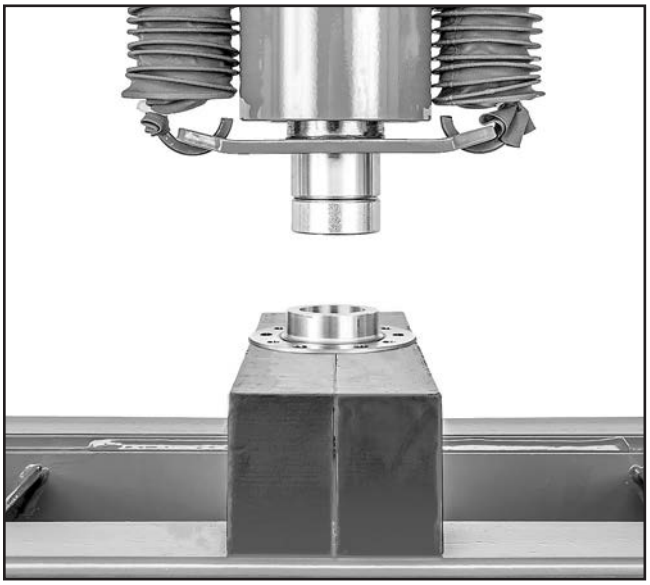


Figure 18. Example of typical hydraulic press operation using blocks on press bed.

Adjusting Press Bed Height

NOTICE

Machine damage may occur if ram exerts maximum force when extended beyond 75% of its total length. DO NOT over-extend ram; raise bed as necessary to reduce ram stroke.

It is important that the press bed be set to keep the workpiece as close to the ram as possible to ensure optimum operation.

To adjust press bed height:

1. Rotate pump relief valve and breather valve (see **Figure 19**) counterclockwise to release hydraulic system pressure.

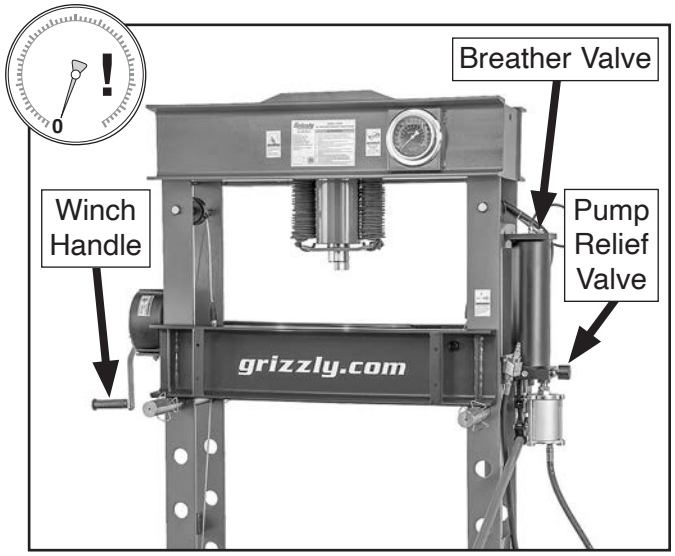


Figure 19. Location of pressure relief/press bed components (safety guard removed for clarity).

2. Remove workpiece and blocks from press bed, if installed.

3. Rotate winch handle (see **Figure 19**) clockwise to raise bed off of support rods.

4. Remove (2) retaining rings on rear of support rods, then remove (2) support rods.

5. Rotate winch handle and adjust press bed height depending on desired operation:

   — Rotate *clockwise* to *raise* bed.

   — Rotate *counterclockwise* to *lower* bed.

⚠CAUTION

ALWAYS verify bed support rods are supporting bed evenly! Failure to support press bed evenly could lead to bed accidentally dropping and separating from winch during setup or operation, which may result in crushing injury.

6. Insert (2) support rods through desired bed adjustment holes, then rotate winch handle counterclockwise to lower bed onto support rods.

7. Install (2) retaining rings removed in **Step 4** on rear grooves in support rods to secure (see **Figure 20**).

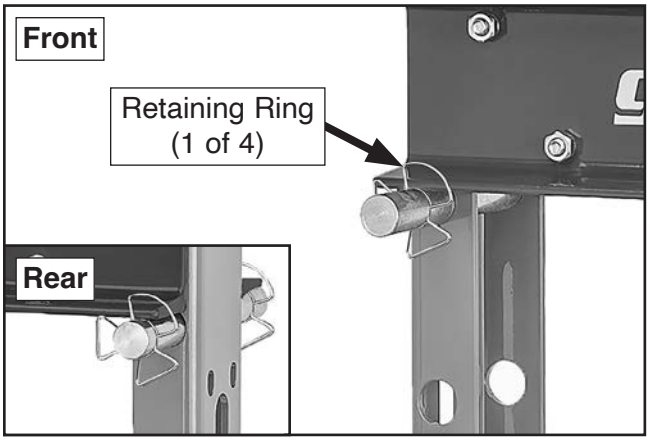


Figure 20. Example of retaining rings on support rods.

Adjusting Safety Guard

⚠WARNING

ALWAYS use safety guard when operating press. Pressing workpieces may create an explosive hazard, causing machine damage and serious personal injury.

The Model T34349 includes a safety guard in front of the press bed to help protect operator from objects ejected during pressing operations.

IMPORTANT: Safety guard should always be located at highest position possible to shield entire operating area.

To adjust safety guard:

1. Rotate (2) safety guard locks outboard to release locks (see **Figure 21**).

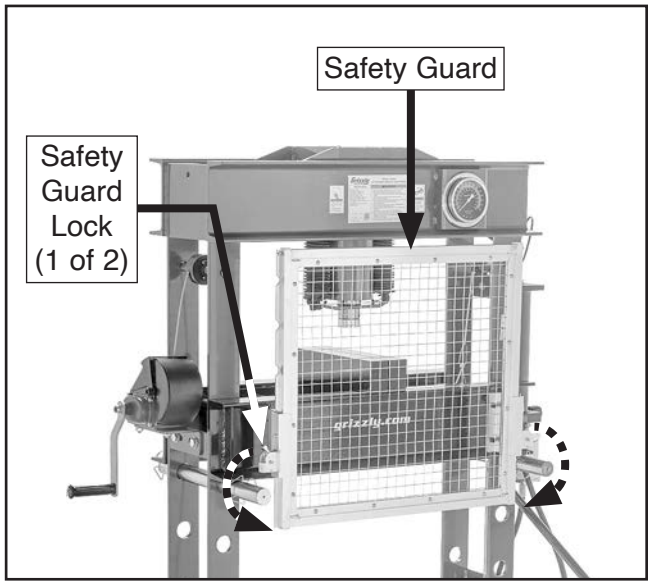


Figure 21. Location of safety guard components.

2. Raise or lower safety guard as desired until detent on safety guard frame is positioned next to safety guard lock (see **Figure 22**).

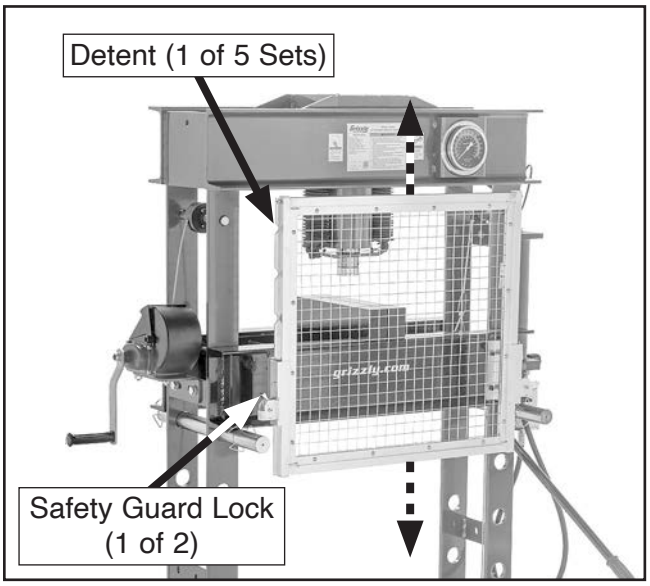


Figure 22. Location of safety guard lock and frame components.

3. Rotate (2) safety guard locks inboard into detents on safety guard frame to engage locks (see **Figure 23**).

   Note: *Gently pull safety guard up and down to ensure locks are fully engaged in detents.*

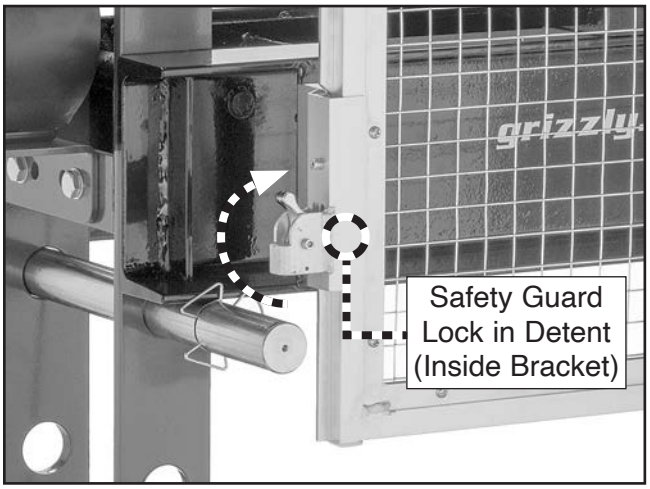


Figure 23. Safety guard lock engaged.

Adjusting Pressure

⚠CAUTION

NEVER exceed maximum rated pressure of 100,000 lbs. (50 U.S. tons) or machine damage and personal injury could occur!

⚠CAUTION

Always open breather valve before operating press. Excessive pressure in hydraulic pump may damage machine and cause serious personal injury.

The Model T34349 features a hydraulic pump capable of being manually actuated by pumping the handle, or pneumatically actuated by connecting the pneumatic valve to a pressurized air supply (not included).

Force applied to the workpiece is measured in U.S. tons and metric tons on the pressure gauge (see **Figure 24**).

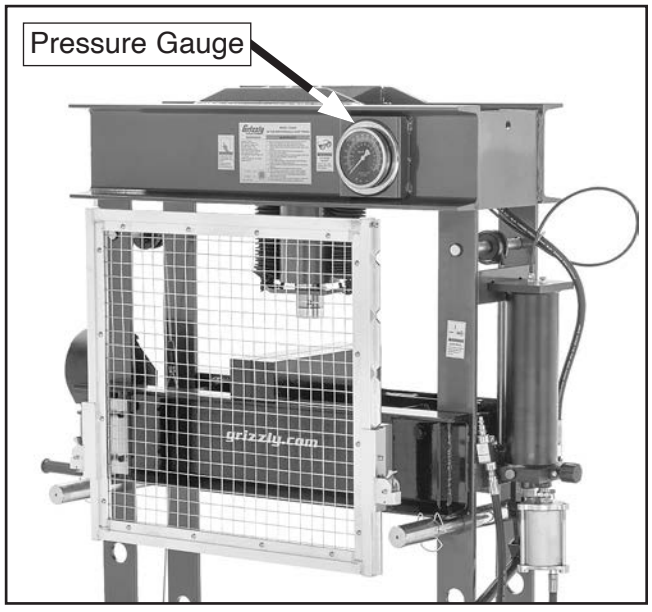


Figure 24. Model T34349 pressure gauge.

Manually Adjusting Pressure

The amount of force applied to the workpiece can be adjusted using the pump relief valve and the pump handle (see **Figure 25**).

IMPORTANT: Always ensure breather valve is open before adjusting hydraulic pressure!

To manually adjust pressure:

1. Rotate pump relief valve (see **Figure 25**) as needed depending on operation:

   — Rotate pump relief valve fully *clockwise*, then pump handle to *increase* pressure.

   — Rotate pump relief valve *counterclockwise* to *decrease* pressure.

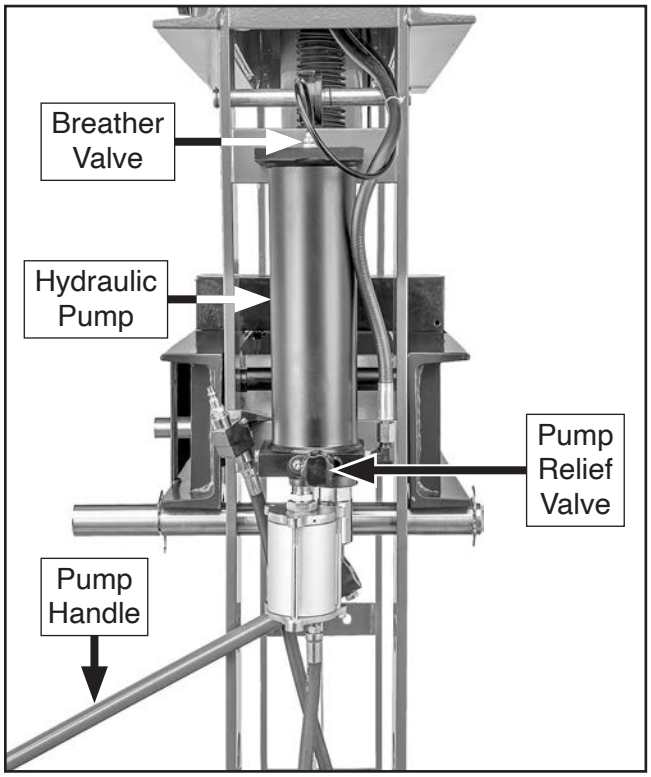
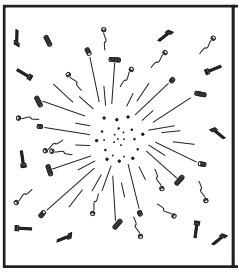


Figure 25. Location of hydraulic system components (safety guard removed for clarity).



⚠WARNING

123 PSI
MAX AIR PRESSURE!
Exceeding this PSI may result in injury or machine damage.

Pneumatically Adjusting Pressure

The amount of force applied to the workpiece can be adjusted using the pump relief valve and the pneumatic valve (see **Figure 26**).

IMPORTANT: Always ensure breather valve is open before adjusting hydraulic pressure!

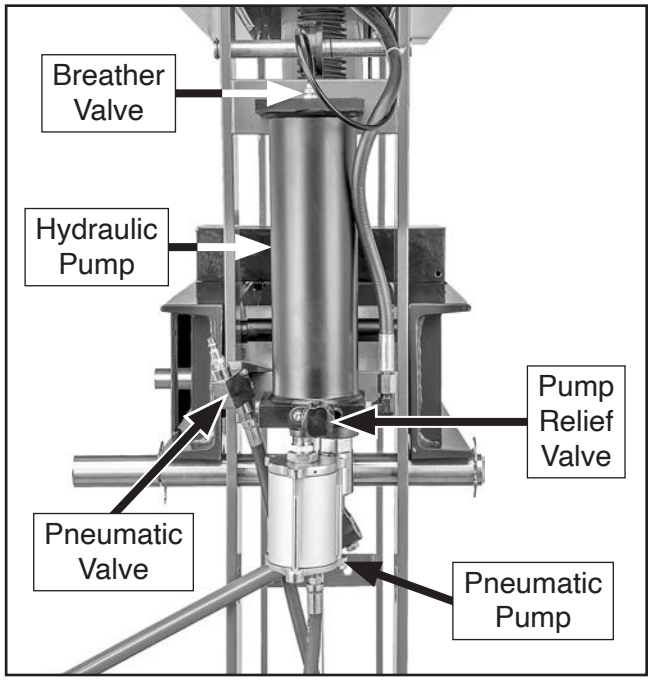


Figure 26. Location of hydraulic system pneumatic components.

Items Needed **Qty**
Adjustable Wrench 1
Pressurized Air Supply (109–123 PSI) 1
Air Hose w/Industrial Quick-Disconnect Socket (¼", ⅜", or ½")..... 1
Quick-Disconnect Plug (⅜" or ½") .... As Needed
PTFE Thread-Sealant Tape..... As Needed

To pneumatically adjust pressure:

1. VERIFY INCOMING AIR SUPPLY IS 0 PSI!

2. Rotate pump relief valve counterclockwise to open hydraulic system (see **Figure 26**).

3. Configure pneumatic valve for incoming air hose fitting:

   — If incoming air hose has a ¼" quick-disconnect socket, proceed to **Step 4**.

   — If incoming air hose has a ⅜" or ½" quick-disconnect socket, remove ¼" quick-disconnect plug on pneumatic valve and replace with matching fitting size.

   Note: *Use PTFE thread-sealant tape on threaded fittings to ensure a proper seal during pressing operations.*

4. Connect incoming air hose fitting to pneumatic valve, as shown in **Figure 27**.

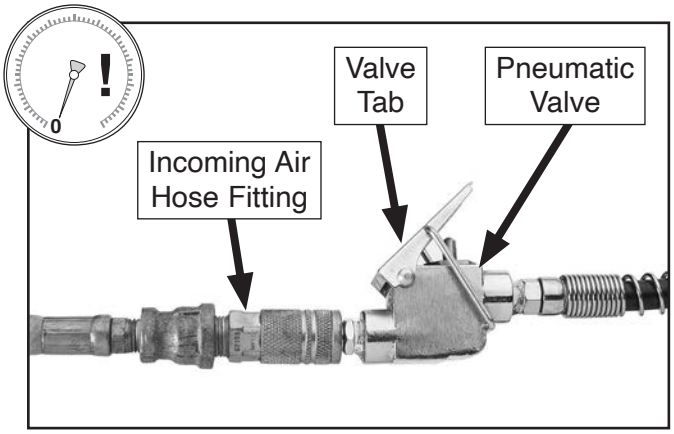


Figure 27. Example of incoming air hose connected to pneumatic valve.

5. Adjust incoming air supply pressure to 109–123 PSI.

6. Adjust pump relief valve and press valve tab (see **Figure 27**) as needed depending on desired operation:

   — Rotate pump relief valve fully *clockwise*, then press valve tab to *increase* pressure.

   — Rotate pump relief valve *counterclockwise* to *decrease* pressure.

   Note: *For precise application of ram force on workpiece, pump handle to increase pressure incrementally. Refer to pressure gauge for actual workpiece pressure.*

Pressing Workpiece

Refer to **Additional Safety for Hydraulic Presses** on **Page 8**, **Additional Safety for Hydraulic Systems** on **Page 9**, and **Additional Safety for Compressed Air** on **Page 10** before beginning operations. See **Workpiece Inspection** on **Page 22** before selecting a workpiece to press.

The Model T34349 is designed for molding, casting, and forming metal workpieces, and assembling/disassembling bearings and bushings. Pressing workpieces beyond the range of this design may require using an appropriate fixture that is outside the scope of this manual.

IMPORTANT: *Never exceed maximum applied pressure of 100,000 lbs. (50 U.S. tons).*

To press a workpiece:

1. Adjust press bed height (see **Adjusting Press Bed Height** on **Page 23**) to allow ram adequate space for operation.

2. Lower safety guard and place workpiece on press bed or blocks and center under ram (see **Figure 28**).

   — If pressing a small workpiece, use blocks to provide additional support.

   — If pressing a large workpiece, place workpiece directly on press bed.

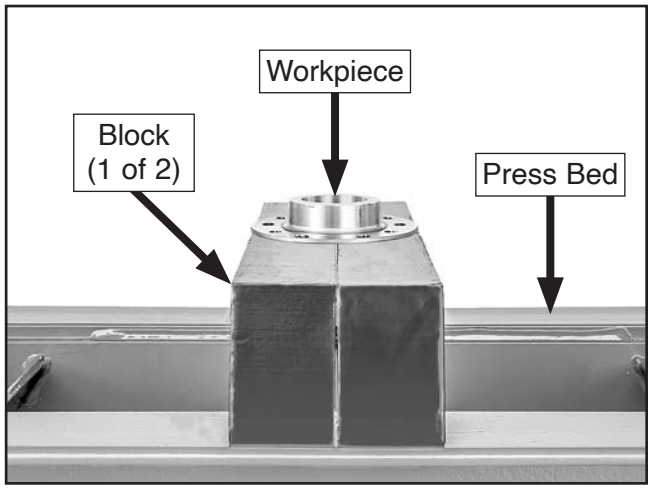
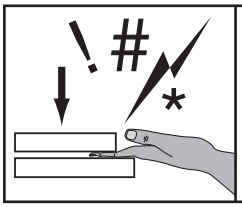


Figure 28. Workpiece positioned on blocks and centered under ram.

3. Raise safety guard, then rotate pump relief valve clockwise to close hydraulic system.



⚠WARNING

Crushing hazard! Always keep hands clear when using this machine.

4. Adjust pressure (see **Adjusting Pressure** on **Page 25**) to lower ram until it just touches workpiece (see **Figure 29**).

Figure 29. Ram extended to workpiece.

⚠CAUTION

Always ensure workpiece is positioned so force is evenly distributed. Off-center workpieces can be ejected unexpectedly from force of hydraulic ram, striking operator or bystanders and causing impact injury.

5. Verify workpiece has not shifted position, remains fully supported, and is square with ram, then complete pressing operation.

   — If pressing workpiece to specific pressure, increase pressure until desired pressure is shown on pressure gauge.

   — If pressing workpiece to specific angle or shape, apply pressure to workpiece gradually, and regularly release pressure to check workpiece until correct angle/shape is achieved.

6. Rotate pump relief valve counterclockwise to raise ram, lower safety guard, then remove workpiece.

SECTION 4: 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.

T10456—Heavy-Duty Anti-Fatigue Mat 3' x 5'
This Heavy-Duty Anti-Fatigue Mat features beveled edges and no-slip tread for safety and comfort. Open-hole design allows liquid to drain through, so it is perfect for wet or oily conditions. Measures 3' wide x 5' long x ⅜" thick.

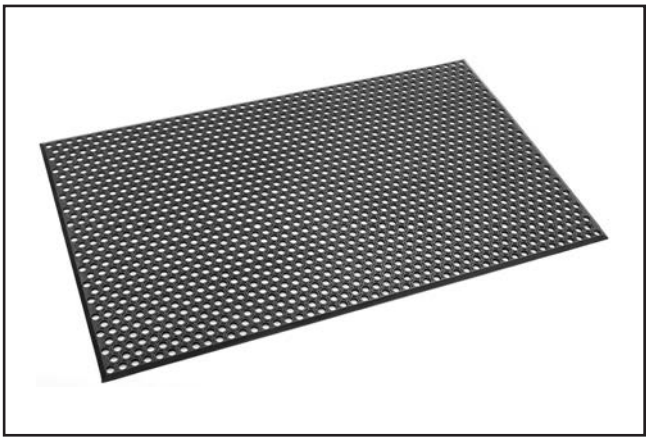


Figure 30. T10456 Heavy-Duty Anti-Fatigue Mat.

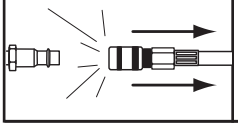
T33589—Multi-Function Magnetic LED Light
The 17½" flexible neck allows you to direct the beam where it is needed. Click the ON button once for 300 lumens of light, and again for 100 lumens. Comes with a powerful magnetic base that bonds to any ferrous surface. Includes a clamping bracket, (2) auxiliary mounts, and a threaded post insert for mounting on the dog holes of a workbench.

Figure 31. T33589 Multi-Function Magnetic LED Light.

T32323—Woodturners Face Shield
Featuring a quick-adjustment headpiece, and made of durable poly-carbonate, this shield provides security from flying chips and debris.

Figure 32. T32323 Woodturners Face Shield.

SECTION 5: MAINTENANCE

⚠WARNING	
	**EYE INJURY HAZARD!** **Always wear safety glasses while servicing to prevent serious personal injury.**
	**INJURY HAZARD!** **When servicing, always disconnect from air to prevent unexpected operation.**

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, stop using the machine immediately if you ever observe any of the items below, and fix the problem before continuing operations:

- Loose mounting bolts.
- Leaking hydraulic oil.
- Damaged seals or valves.
- Unprotected metal surfaces.
- Dust or debris around machine.
- Any other unsafe condition.

Daily
- Clean/lubricate ram piston surface.

Monthly
- Inspect support rods for wear/damage.
- Inspect press bed for wear/damage.
- Inspect winch cable for wear/damage.
- Clean/lubricate winch cable.

Annually
- Inspect hydraulic oil for contamination, and change oil if required (**Page 32**).

Cleaning & Protecting

Cleaning the Model T34349 is relatively easy. Wipe off any dust or debris with a dry cloth. If any oil or grease has built up, use a grease dissolving cleaner to remove it.

Keep metal surfaces rust free with regular applications of products like SLIPIT® (see **Figure 33**).

Bare metal surfaces can quickly develop surface rust if not coated. Machinery stored near windows in direct sunlight or where paints, thinners, or certain gasses are open to the air can experience bleaching, discoloring of paint or yellowing of clear plastic guards.

Recommended Metal Protectants

G5562—SLIPIT® 1 Qt. Gel
G5563—SLIPIT® 11 Oz. Spray

Figure 33. Recommended products for protecting unpainted cast iron/steel parts on machinery.

Lubrication

Lower ram a few inches, then wipe ram piston using a clean rag coated with light machine oil to remove debris and prevent contaminates from entering hydraulic system.

IMPORTANT: While holding rag, grasp exposed piston at the top and pull rag down across piston surface in a single motion. This helps prevent debris from becoming embedded in the ram seals.

Items Needed	Qty
Light Machine Oil	As Needed
Clean Shop Rags	As Needed
Disposable Gloves	As Needed

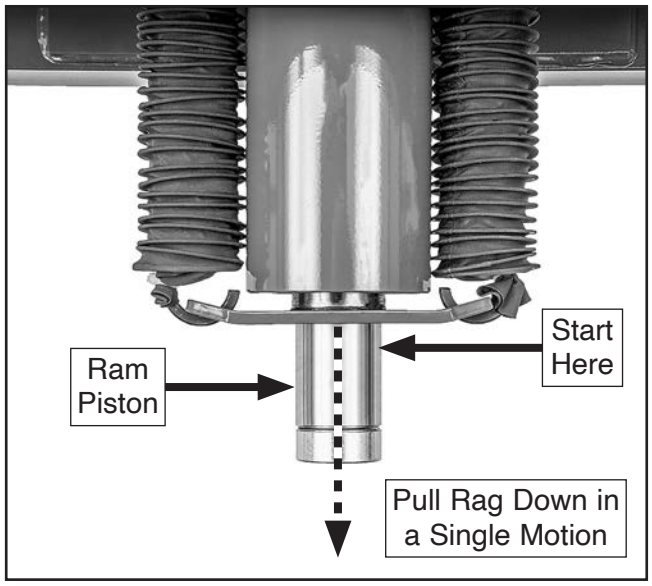


Figure 34. Cleaning direction when wiping ram piston.

Bleeding Hydraulic System

Ensure there is as little air as possible in the hydraulic system at all times. Trapped air can cause the ram to act erratically during operations. Air has been properly bled when the ram moves smoothly through its full cycle.

IMPORTANT: Always ensure breather valve is open before bleeding hydraulic system!

To bleed hydraulic system:

1. Rotate pump relief valve counterclockwise to open hydraulic system (see **Figure 35**).

2. Pump handle several full strokes to bleed air from hydraulic system (see **Figure 35**).

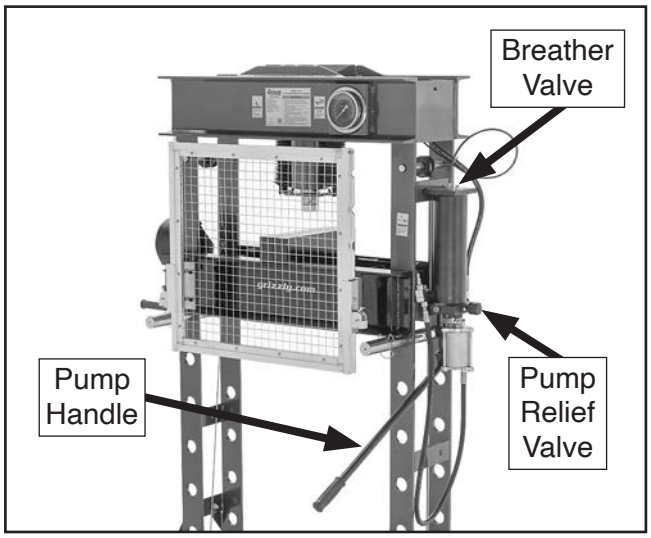


Figure 35. Location of hydraulic system components.

3. Rotate pump relief valve fully clockwise to close hydraulic system, then pump handle to cycle ram through its full range of motion.

   — If ram *does not* move, or movement is erratic, verify hydraulic oil level (see **Adding Hydraulic Oil** on **Page 31**).

   — If ram movement is smooth and consistent through its full range of motion, no further action is required.

Adding Hydraulic Oil

The Model T34349 features a sealed hydraulic system. Periodically check hydraulic oil level and add oil as needed.

Items Needed	Qty
Open-End Wrench 14mm	1
Small Funnel	1
Flashlight	1
Face Shield	1
Goggles	1 Pr.
ISO-15 or ISO-22 Hydraulic Oil	As Needed
Clean Shop Rags	As Needed
Disposable Gloves	As Needed

To add hydraulic oil:

1. VERIFY INCOMING AIR SUPPLY IS 0 PSI!

2. Ensure hydraulic pump is straight and level for inspecting hydraulic oil level accurately.

3. Rotate breather valve and pump relief valve counterclockwise to release hydraulic system pressure (see **Figure 36**).

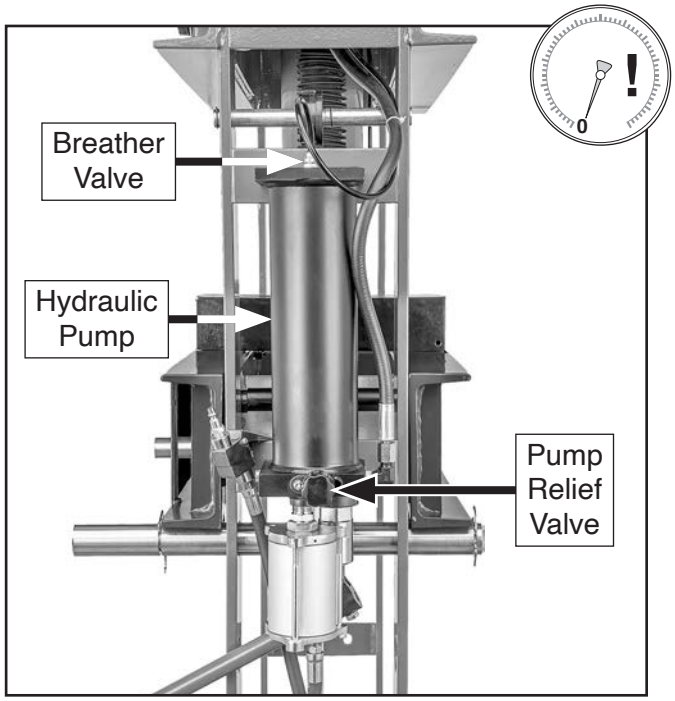
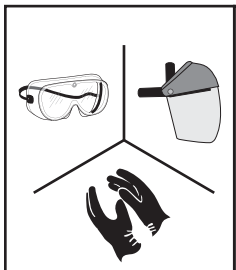


Figure 36. Location of hydraulic system components.



⚠WARNING

POISON HAZARD

Hydraulic oil is poisonous. Use personal protective equipment when handling hydraulic oil, and immediately clean up any spills.

4. Remove breather valve plug (see **Figure 37**) and verify hydraulic oil level:

— If hydraulic oil level *is* visible approximately ¼" below threads in breather valve plug hole, no additional oil is required.

— If hydraulic oil level *is not* visible, add oil until oil level reaches approximately ¼" below threads in breather valve plug hole.

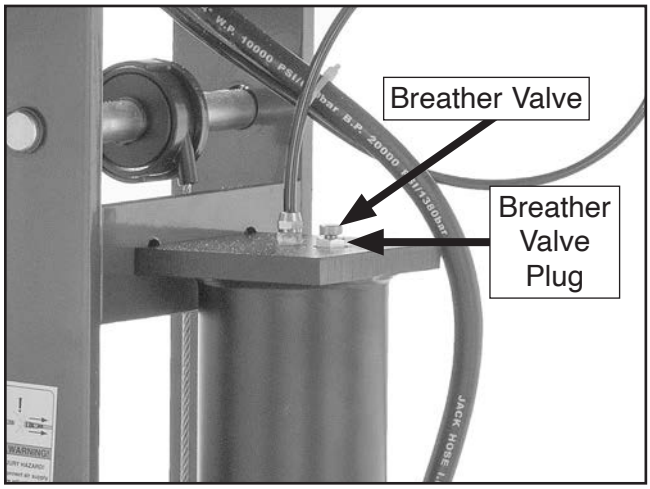


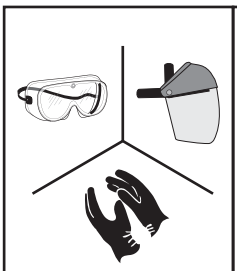
Figure 37. Location of breather valve plug.

5. Install breather valve plug and proceed to **Bleeding Hydraulic System** on **Page 30**.

Changing Hydraulic Oil

The hydraulic oil should be inspected for contamination annually, or when ram movement is erratic and hydraulic system contamination is suspected.

Synthetic hydraulic oil has a typical shelf life of five years when stored in its original container. However, the service life of hydraulic oil is shorter and may need to be replaced more frequently depending on the operating environment.



⚠WARNING

POISON HAZARD

Hydraulic oil is poisonous. Use personal protection when handling hydraulic oil, and immediately clean up any spills.

Items Needed	Qty
Wrench or Socket 14mm	1
Drain Pan or 5-Gallon Bucket	1
Small Funnel	1
Flashlight	1
Face Shield	1
Goggles	1 Pr.
ISO-15 or ISO-22 Hydraulic Oil	As Needed
Clean Shop Rags	As Needed
Disposable Gloves	As Needed

To change hydraulic oil:

1. VERIFY INCOMING AIR SUPPLY IS 0 PSI!

2. Rotate breather valve and pump relief valve counterclockwise to release hydraulic system pressure (see **Figure 38**).

3. Disconnect return line from return line fitting (see **Figure 38**), then place return line in drain pan until oil stops draining from line.

4. Remove (4) hex bolts and flat washers securing hydraulic pump (see **Figure 38**), then place hydraulic pump in drain pan.

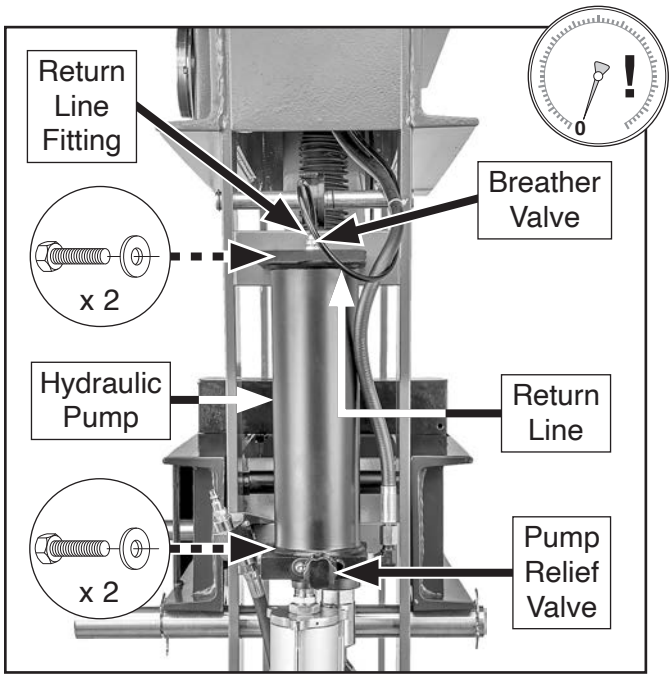


Figure 38. Location of hydraulic system components.

5. Remove breather valve plug on hydraulic pump (see **Figure 39**), and drain all hydraulic oil into drain pan.

Note: *Rotate hydraulic pump and tilt back and forth to help drain oil from pump.*

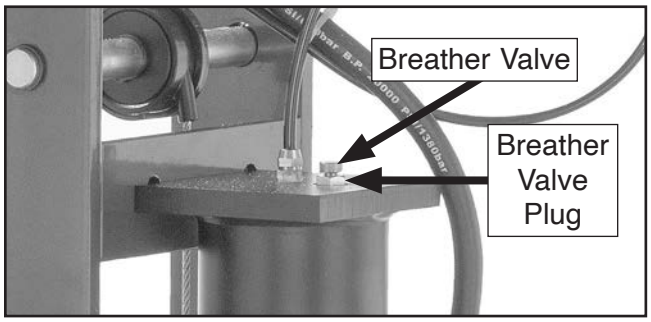


Figure 39. Location of breather valve plug.

6. Remove drain pan and dispose of hydraulic oil according to state and federal regulations.

7. Install hydraulic pump using fasteners removed in **Step 3**, then connect return line to return line fitting and secure.

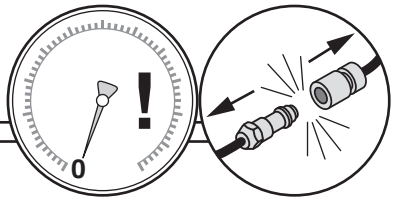
8. Ensure hydraulic pump is straight and level, then fill pump with ISO-15 or ISO-22 hydraulic oil until level reaches approximately ¼" below threads in breather valve plug hole.

9. Install breather valve plug and proceed to **Bleeding Hydraulic System** on **Page 30**.

SECTION 6: 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



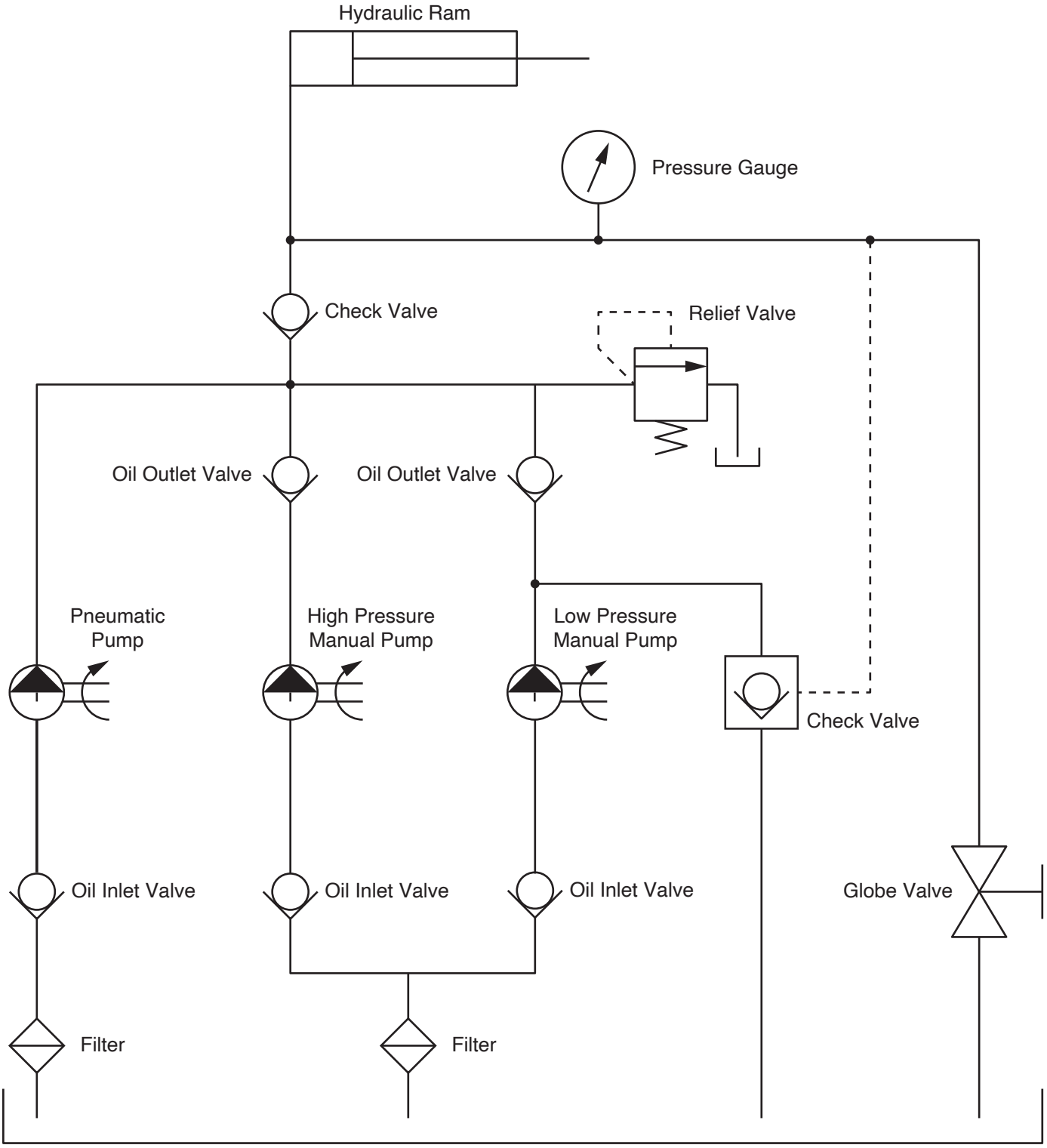
Operations

Symptom	Possible Cause	Possible Solution
Ram does not move.	1. Pump relief valve open. 2. Hydraulic oil level too low. 3. Hydraulic system leaking. 4. Obstruction in hydraulic line. 5. Air supply hose is too long. 6. Incoming air supply needs to be adjusted higher. 7. Pneumatic valve components are dirty/damaged. 8. Air leak in air connections, pump, valve(s) or air hose. 9. Pump relief valve at fault. 10. Hydraulic ram at fault. 11. Hydraulic pump at fault.	1. Tighten pump relief valve (**Page 25**). 2. Add hydraulic oil to proper level (**Page 31**). 3. Locate source of leak and replace leaking part. 4. Check hydraulic line for obstructions. 5. Use shorter hose. 6. Increase air supply to 109–123 PSI. 7. Clean/replace pneumatic valve components. 8. Check all components for leaks. Do not attempt to repair leaking/damaged components, only replace. 9. Replace pump relief valve. 10. Replace hydraulic ram. 11. Replace hydraulic pump.
Ram moves slowly or applies insufficient pressure.	1. Pump relief valve open. 2. Air present in hydraulic system. 3. Hydraulic system leaking. 4. Hydraulic pump filter clogged. 5. Incoming air supply needs to be adjusted higher. 6. Air leak in air connections, pump, valve(s) or air hose. 7. Obstruction in hydraulic hose. 8. Pump relief valve at fault. 9. Hydraulic ram at fault. 10. Hydraulic pump at fault.	1. Tighten pump relief valve (**Page 25**). 2. Bleed hydraulic system (**Page 30**). 3. Locate source of leak and replace leaking part. 4. Replace hydraulic pump filter. 5. Increase air supply to 109–123 PSI. 6. Check all components for leaks. Do not attempt to repair leaking/damaged components, only replace. 7. Check hydraulic hose for obstructions. 8. Replace pump relief valve. 9. Replace hydraulic ram. 10. Replace hydraulic pump.
Ram moves erratically.	1. Air present in hydraulic system. 2. Hydraulic oil level too low. 3. Hydraulic system leaking. 4. Hydraulic oil contaminated.	1. Bleed hydraulic system (**Page 30**). 2. Add hydraulic oil to proper level (**Page 31**). 3. Locate source of leak and replace leaking part. 4. Drain and replace hydraulic oil (**Page 32**).
Machine wobbles during operations.	1. Machine incorrectly mounted to floor. 2. Machine component(s) loose.	1. Tighten mounting hardware (**Page 20**); adjust or shim as needed. 2. Inspect fasteners for security; tighten with thread-locking fluid if required.

SECTION 7: SYSTEM SCHEMATIC

Before servicing the hydraulic and pneumatic system on your machine, refer to **Additional Safety for Hydraulic Systems** on **Page 9** for safety information about hydraulics, and **Additional Safety for Compressed Air** on **Page 10** for safety information about pneumatics to help reduce your risk of injury.

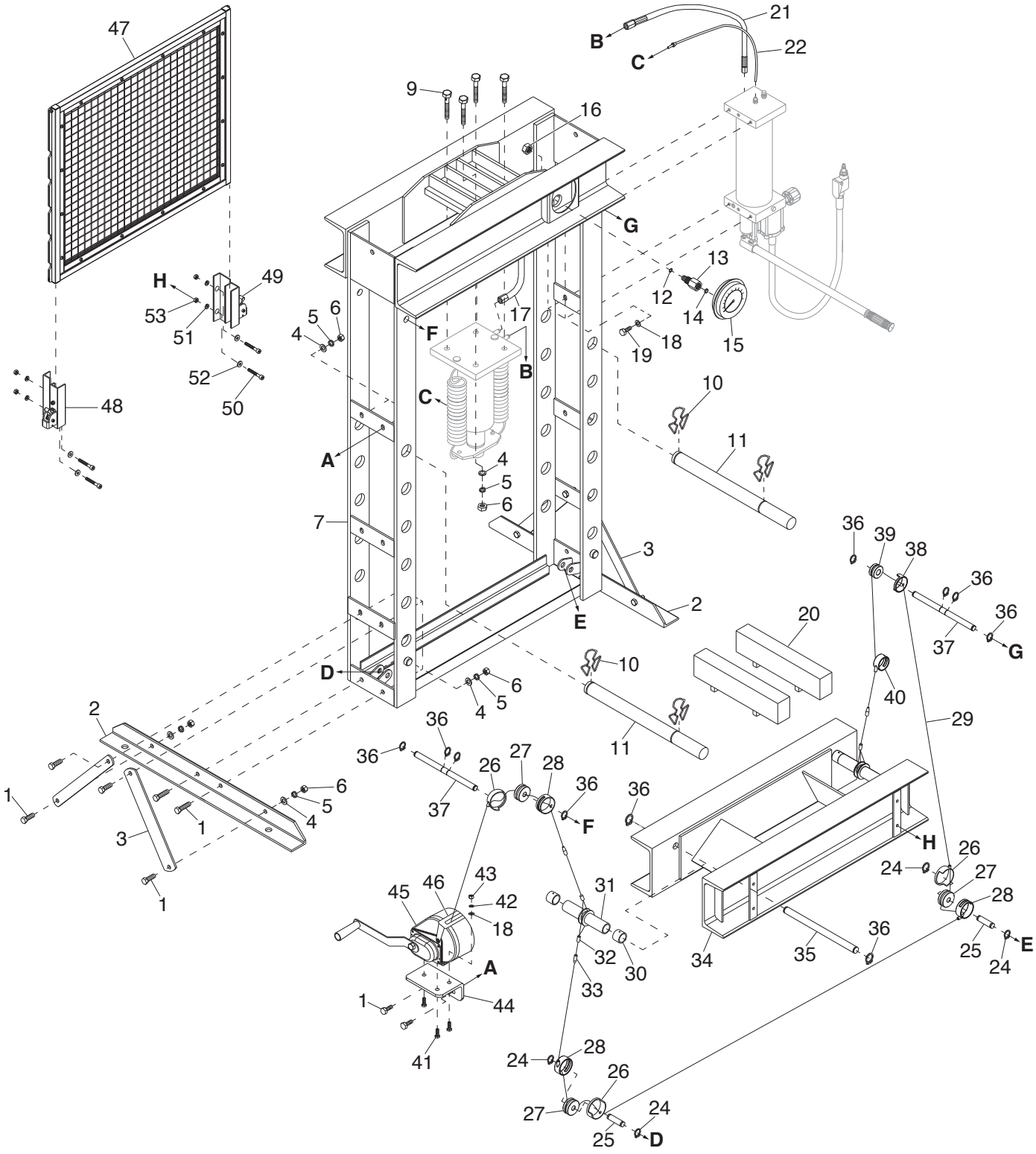
Hydraulic/Pneumatic System Schematic



SECTION 8: PARTS

We do our best to stock replacement parts when possible, but we cannot guarantee that all parts shown are available for purchase. Call **(800) 523-4777** or visit **www.grizzly.com/parts** to check for availability.

Main

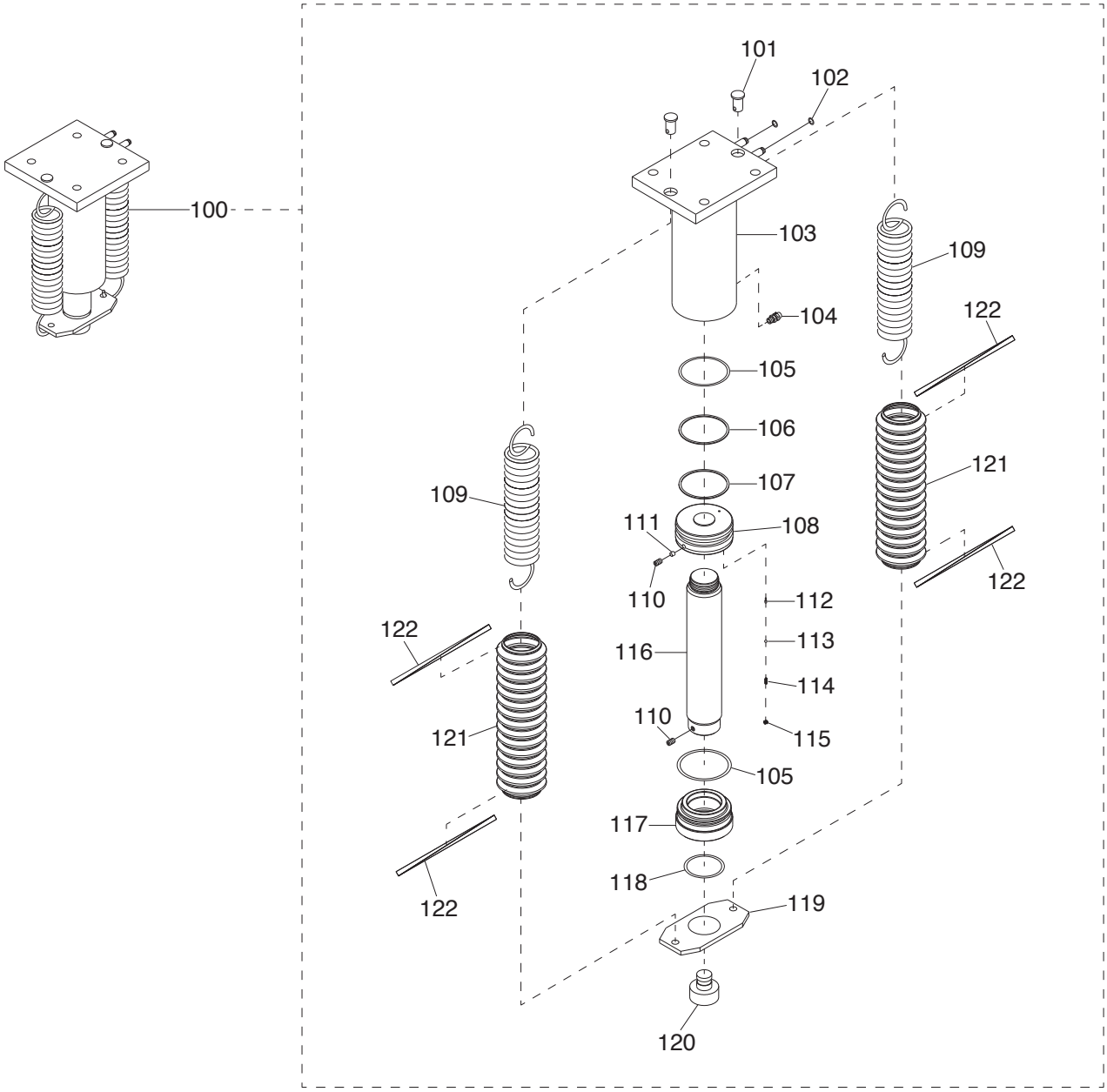


Main Parts List

REF	PART #	DESCRIPTION
1	PT34349001	HEX BOLT M12-1.75 X 35
2	PT34349002	FRAME SUPPORT
3	PT34349003	ANGLE BRACE
4	PT34349004	FLAT WASHER 12MM
5	PT34349005	LOCK WASHER 12MM
6	PT34349006	HEX NUT M12-1.75
7	PT34349007	FRAME
9	PT34349009	HEX BOLT M12-1.75 X 60
10	PT34349010	RETAINING RING
11	PT34349011	SUPPORT ROD
12	PT34349012	O-RING 5.2 X 1.9
13	PT34349013	STRAIGHT FITTING M20-1.5, M14-1.5 X 20
14	PT34349014	SEAL 10MM, NYLON
15	PT34349015	PRESSURE GAUGE
16	PT34349016	HEX NUT M20-1.5
17	PT34349017	HYDRAULIC HOSE 1/4" ID X 15" L
18	PT34349018	FLAT WASHER 10MM
19	PT34349019	HEX BOLT M10-1.5 X 20
20	PT34349020	PRESS BLOCK
21	PT34349021	HYDRAULIC HOSE 1/4" ID X 40" L
22	PT34349022	HYDRAULIC HOSE 4 X 1000MM
24	PT34349024	EXT RETAINING RING 16MM
25	PT34349025	PULLEY SHAFT, SHORT
26	PT34349026	PULLEY COVER
27	PT34349027	PULLEY WHEEL, LARGE
28	PT34349028	PULLEY GROOVE COVER

REF	PART #	DESCRIPTION
29	PT34349029	CABLE 4 X 4300MM
30	PT34349030	PULLEY COLLAR
31	PT34349031	IDLER PULLEY
32	PT34349032	COMPRESSION SLEEVE 5.1 X 10.1MM
33	PT34349033	CABLE STOP 14MM
34	PT34349034	PRESS BED
35	PT34349035	LIFTING ROD
36	PT34349036	EXT RETAINING RING 20MM
37	PT34349037	PULLEY SHAFT, LONG
38	PT34349038	PULLEY COVER, END
39	PT34349039	PULLEY WHEEL, SMALL
40	PT34349040	PULLEY GROOVE COVER, END
41	PT34349041	HEX BOLT M10-1.5 X 25
42	PT34349042	LOCK WASHER 10MM
43	PT34349043	HEX NUT M10-1.5
44	PT34349044	WINCH BRACKET
45	PT34349045	WINCH
46	PT34349046	CABLE GUARD
47	PT34349047	SAFETY GUARD
48	PT34349048	SAFETY GUARD MOUNT, LEFT
49	PT34349049	SAFETY GUARD MOUNT, RIGHT
50	PT34349050	CAP SCREW M8-1.25 X 30
51	PT34349051	LOCK WASHER 8MM
52	PT34349052	FLAT WASHER 8MM
53	PT34349053	HEX NUT M8-1.25

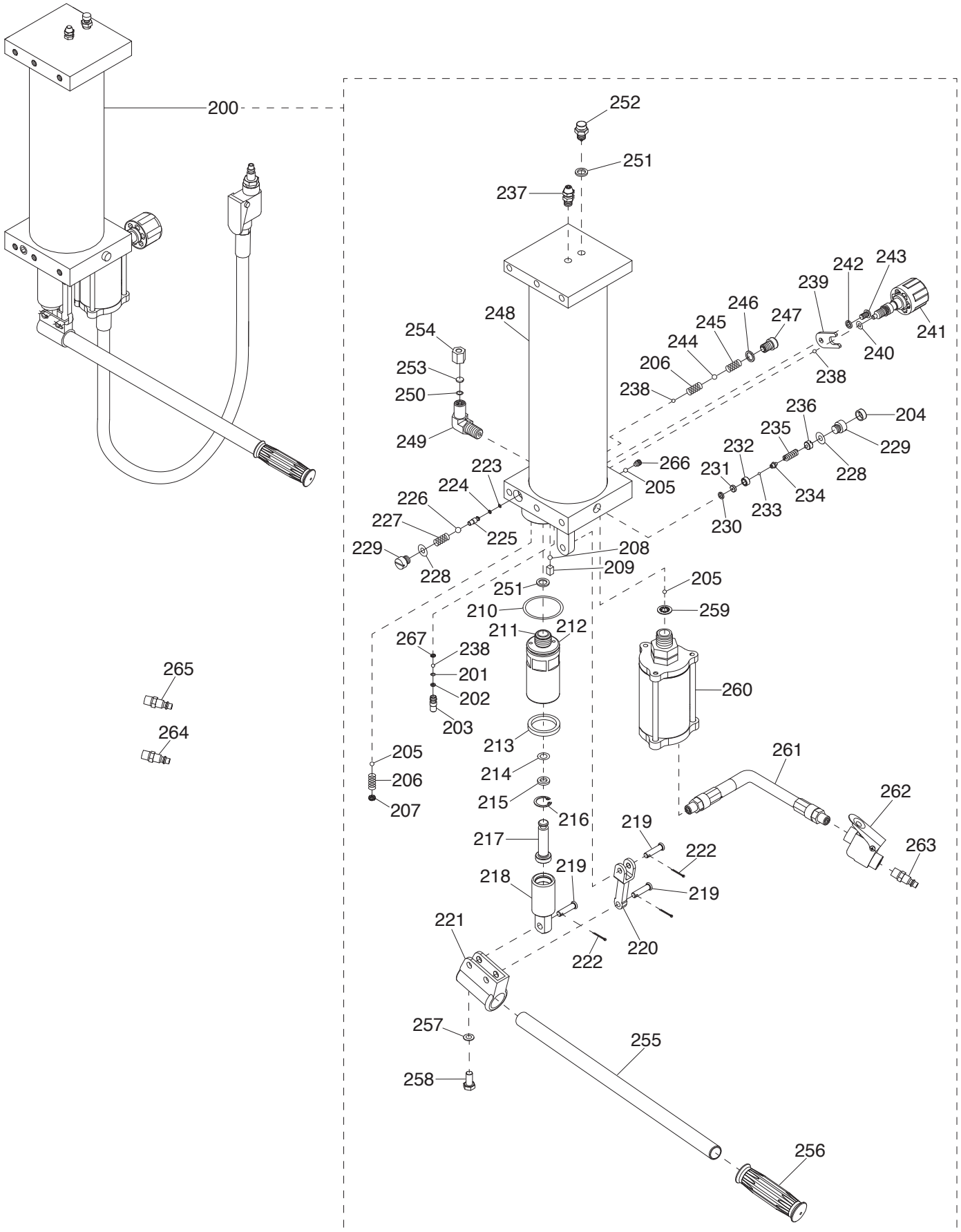
Hydraulic Ram



REF	PART #	DESCRIPTION
100	PT34349100	HYDRAULIC RAM ASSEMBLY
101	PT34349101	CLEVIS PIN 16 X 30
102	PT34349102	O-RING 5.2 X 1.9
103	PT34349103	RAM CYLINDER HOUSING
104	PT34349104	HYDRAULIC FITTING 1/8" NPT
105	PT34349105	O-RING 85 X 5
106	PT34349106	O-RING 86.4 X 4.3, PTFE
107	PT34349107	WEAR RING 86.2 X 4.4, NYLON
108	PT34349108	CYLINDER SEAT
109	PT34349109	RAM RETURN SPRING
110	PT34349110	SET SCREW M8-1.25 X 10
111	PT34349111	SEAT BLOCK, NYLON

REF	PART #	DESCRIPTION
112	PT34349112	LIMIT VALVE PISTON
113	PT34349113	STEEL BALL 3/16
114	PT34349114	COMPRESSION SPRING 1.1 X 3.7 X 5.9
115	PT34349115	LIMIT VALVE PLUG
116	PT34349116	RAM CYLINDER ROD
117	PT34349117	RAM COVER
118	PT34349118	O-RING 57.6 X 5.7 P58
119	PT34349119	RAM RETURN PLATE
120	PT34349120	RAM SADDLE
121	PT34349121	SPRING RUBBER BOOT
122	PT34349122	CABLE TIE 6"

Hydraulic Pump

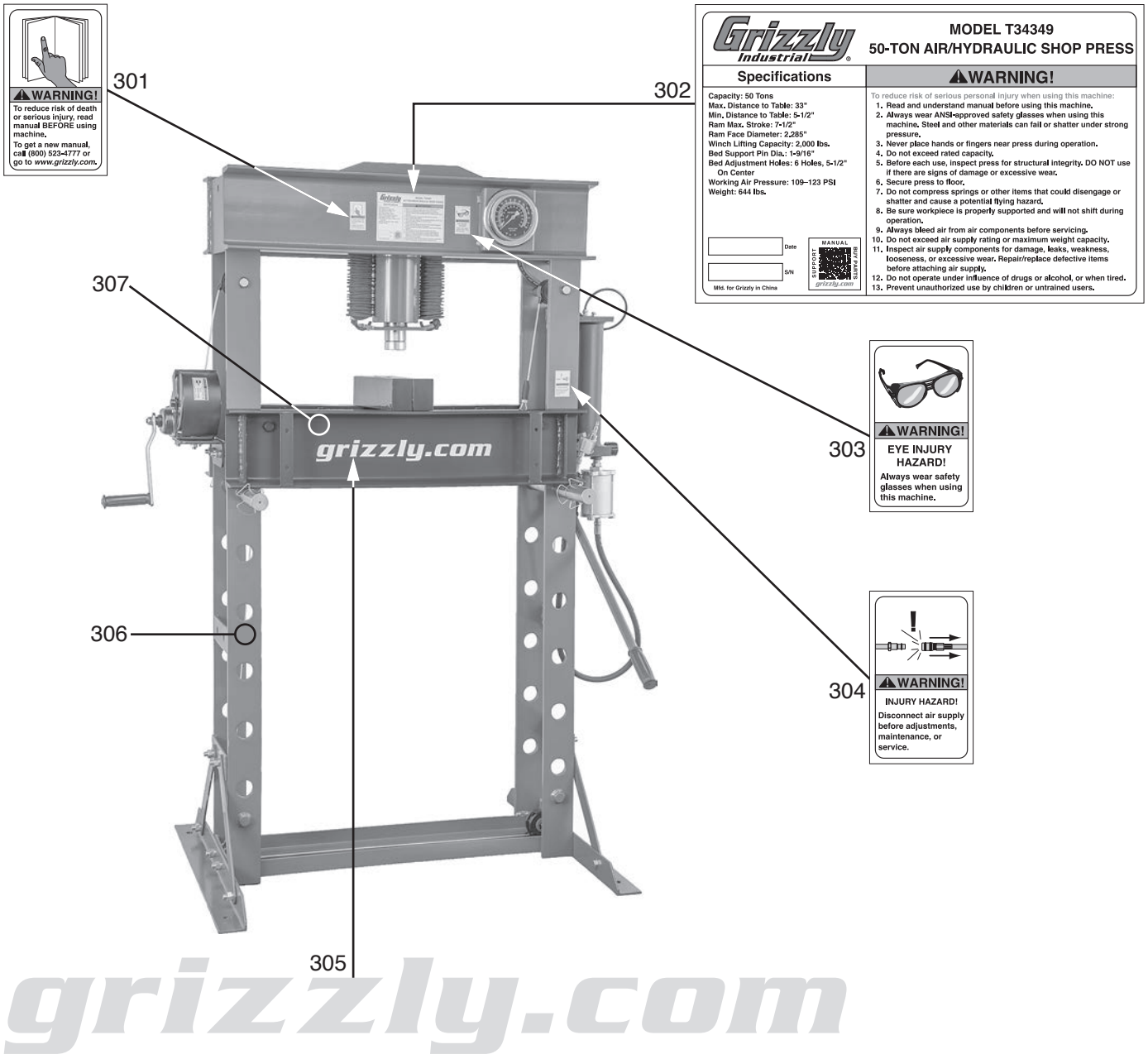


Hydraulic Pump Parts List

REF	PART #	DESCRIPTION
200	PT34349200	HYDRAULIC PUMP ASSEMBLY
201	PT34349201	O-RING 5.5 X 1.5 SM6
202	PT34349202	SEAL 5.7 X 1.1, PTFE
203	PT34349203	VALVE SEAT
204	PT34349204	SCREW CAP
205	PT34349205	STEEL BALL 6MM
206	PT34349206	COMPRESSION SPRING 0.25 X 4.5 X 5
207	PT34349207	RELIEF VALVE PLUG
208	PT34349208	STEEL BALL 6.5MM
209	PT34349209	LIMIT BLOCK 6 X 6 X 9.2MM
210	PT34349210	PUMP GASKET 12 X 34.4 X 3.1, COPPER
211	PT34349211	O-RING 34.4 X 3.1 G35
212	PT34349212	PUMP CORE SEAT
213	PT34349213	HOSE COUPLING GASKET 28 X 35.5 X 5
214	PT34349214	O-RING 6.5 X 3
215	PT34349215	SEAL 7 X 12 X 1.5
216	PT34349216	INT RETAINING RING 20MM
217	PT34349217	PUMP CORE SHAFT
218	PT34349218	PUMP HANDLE SEAT
219	PT34349219	CLEVIS PIN 8 X 32
220	PT34349220	CLEVIS ROD END
221	PT34349221	PUMP HANDLE BRACKET
222	PT34349222	COTTER PIN M2 X 20 STANDARD
223	PT34349223	O-RING 3.1 X 1.6
224	PT34349224	SEAL 3.3 X 6 X 1.2, NYLON
225	PT34349225	RELIEF VALVE SHAFT
226	PT34349226	STEEL BALL 8MM
227	PT34349227	COMPRESSION SPRING 1.4 X 5.6 X 8.4
228	PT34349228	O-RING 7.8 X 2.2
229	PT34349229	SHOULDER SCR M10-1 X 5, 14 X 7, HEADLESS
230	PT34349230	SEAL 6 X 8.6 X 1, COPPER
231	PT34349231	SPACER 2.5 X 8.5 X 3MM
232	PT34349232	HEX SHAFT COLLAR 6.2MM, M10-1
233	PT34349233	STEEL BALL 3.5MM

REF	PART #	DESCRIPTION
234	PT34349234	STEEL BALL SEAT
235	PT34349235	COMPRESSION SPRING 2 X 3.4 X 7.4
236	PT34349236	SHOULDER SCREW M10-1 X 5.5, 3 X 3
237	PT34349237	FLARED FITTING 1/8" NPT
238	PT34349238	STEEL BALL 5MM
239	PT34349239	LIMIT BRACKET
240	PT34349240	O-RING 7 X 3
241	PT34349241	KNOB BOLT M10-1 X 10
242	PT34349242	LOCK WASHER 6MM
243	PT34349243	BUTTON HD CAP SCR M6-1 X 10
244	PT34349244	STEEL BALL 7.5MM
245	PT34349245	COMPRESSION SPRING 0.4 X 6.5 X 7.3
246	PT34349246	SEAL 10.2 X 14 X 1, COPPER
247	PT34349247	CAP SCREW M10-1 X 10
248	PT34349248	PUMP CYLINDER
249	PT34349249	ELBOW FITTING 90 DEG 1/4" NPT, 12MM
250	PT34349250	O-RING 5.2 X 1.9
251	PT34349251	SEAL 10 X 15 X 2, NYLON
252	PT34349252	HEX PLUG M10-1 X 9
253	PT34349253	SEAL 12.3MM, NYLON
254	PT34349254	HOSE NUT M14-1.5
255	PT34349255	PUMP HANDLE
256	PT34349256	PUMP HANDLE GRIP
257	PT34349257	FLAT WASHER 8MM
258	PT34349258	HEX BOLT M8-1.25 X 16
259	PT34349259	INT TOOTH WASHER 7.1MM, COPPER
260	PT34349260	PNEUMATIC PUMP CORE
261	PT34349261	PNEUMATIC HOSE 3/8" ID X 48" L
262	PT34349262	PNEUMATIC VALVE
263	PT34349263	INDUSTRIAL PLUG 1/4", 1/4" NPT
264	PT34349264	INDUSTRIAL PLUG 3/8", 1/4" NPT
265	PT34349265	INDUSTRIAL PLUG 1/2", 1/4" NPT
266	PT34349266	SET SCREW M8-1.25 X 10, DOG-PT
267	PT34349267	VALVE WASHER W/SCREEN 5.5MM

Labels & Cosmetics



REF	PART #	DESCRIPTION
301	PT34349301	READ MANUAL LABEL
302	PT34349302	MACHINE ID LABEL
303	PT34349303	SAFETY GLASSES LABEL
304	PT34349304	DISCONNECT AIR LABEL

REF	PART #	DESCRIPTION
305	PT34349305	GRIZZLY.COM LABEL
306	PT34349306	TOUCH-UP PAINT, GRIZZLY GREEN
307	PT34349307	TOUCH-UP PAINT, GLOSS BLACK

⚠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.

WARRANTY & 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.

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.

For further information about the warranty, visit **https://www.grizzly.com/forms/warranty** or scan the QR code below to be automatically directed to our warranty page.

WARRANTY

grizzly.com