MODEL T34347
20-TON HYDRAULIC SHOP PRESS
OWNER'S MANUAL
(For models manufactured since 12/24)

#KS23441 PRINTED IN CHINA V1.02.25

******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.

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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

⚠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.

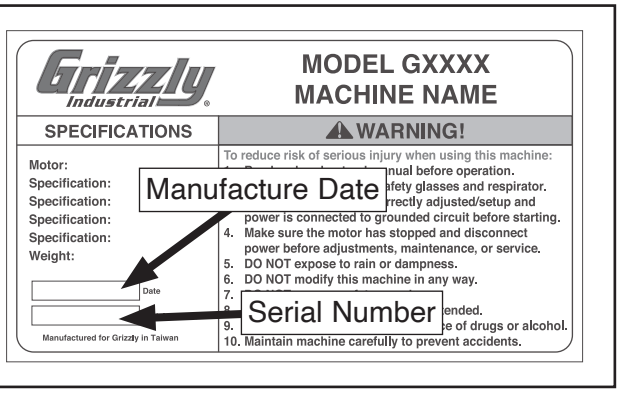
Manual Accuracy

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**.

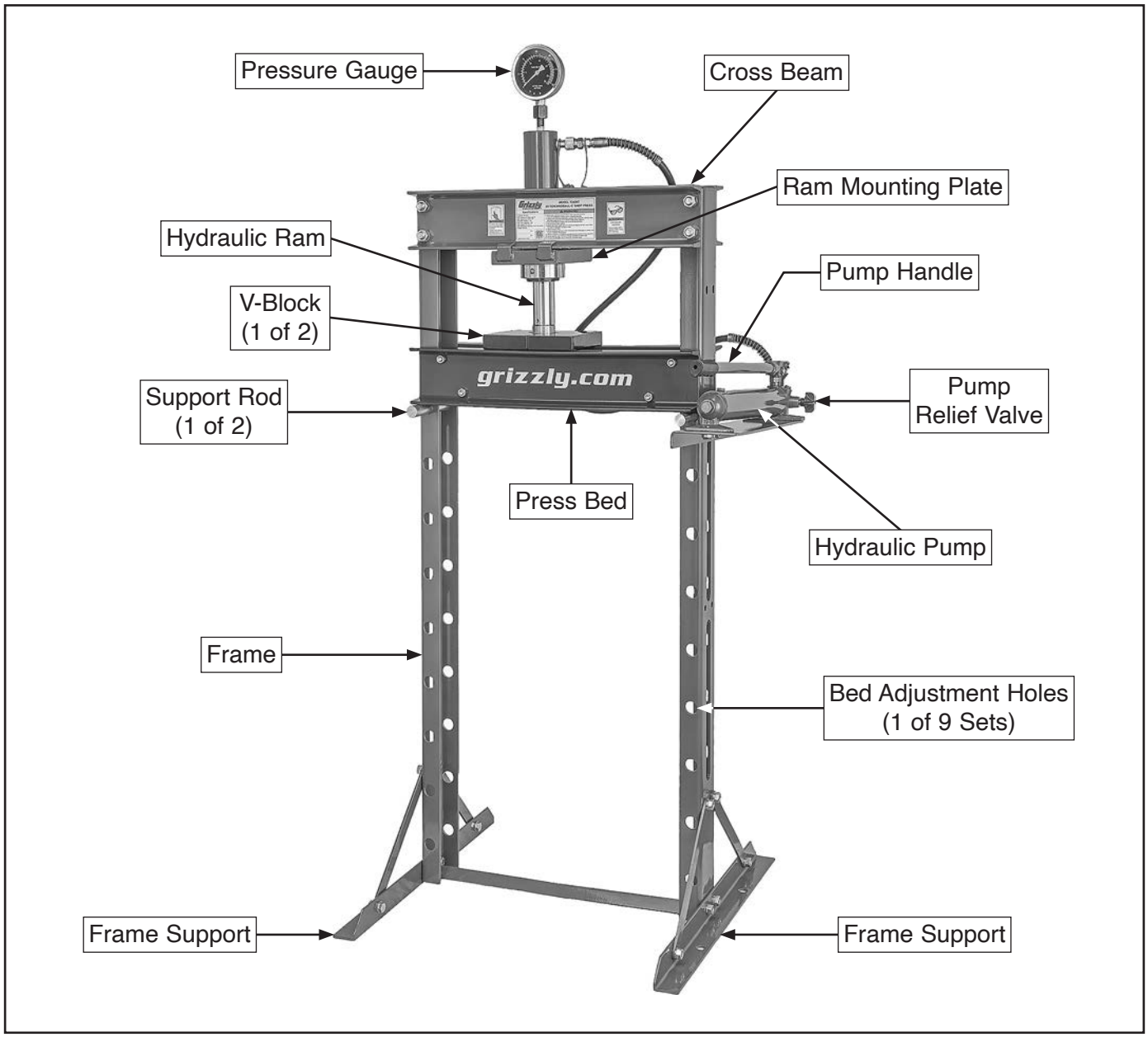
If you find this to be the case, and the difference between the manual and machine leaves you confused or unsure about something, check our website for an updated version. We post current manuals and manual updates for free on our website at **www.grizzly.com**.

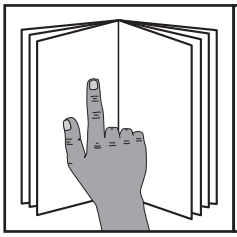
Alternatively, you can call our Technical Support for help. Before calling, make sure you write down the **manufacture date** and **serial number** from the machine ID label (see below). This information is required for us to provide proper tech support, and it helps us determine if updated documentation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

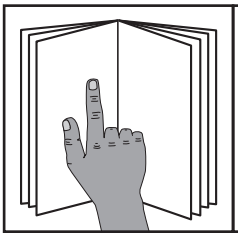




⚠WARNING

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

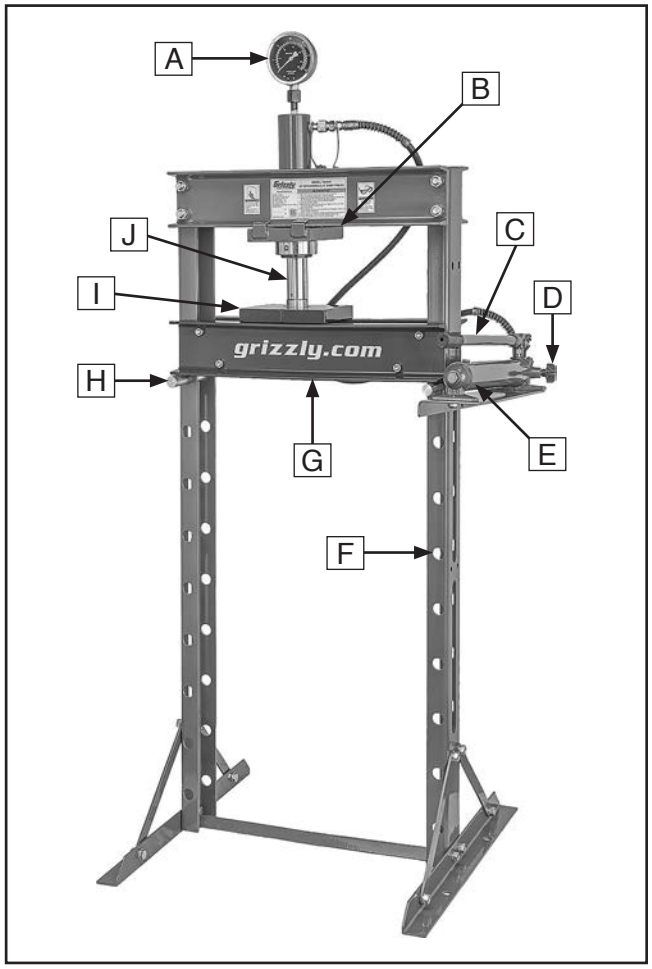


Figure 1. Main components overview.

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

B. Ram Mounting Plate: Secures hydraulic ram. Can be manually positioned left/right along length of cross beam.

C. Pump Handle: Generates hydraulic pressure in ram when pumped up and down. Moves ram downward.

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

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

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

G. Press Bed: Platform that supports workpiece and V-blocks.

H. Support Rods: Supports press bed using bed adjustment holes in machine frame.

I. V-Blocks: Supports round workpieces or workpieces too small to be supported by press bed.

J. Hydraulic Ram: Applies up to 40,000 lbs. (20 U.S. tons) of pressure against workpiece.

MACHINE DATA SHEET

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

MODEL T34347
20-TON HYDRAULIC SHOP PRESS

Product Dimensions:

Weight	209 lbs.
Width (side-to-side) x Depth (front-to-back) x Height	33 x 27-1/2 x 70 in.
Footprint (Length/Width)	29 x 27-1/2 in.

Shipping Dimensions:

Type	Wood Crate
Content	Machine
Weight	234 lbs.
Length x Width x Height	61 x 11 x 11 in.
Must Ship Upright	No

Main Specifications:

Operation Information

Ram Maximum Applied Force	40,000 lbs. (20 US Tons)
Ram Maximum Stroke	7-1/2 in.
Gauge Convention	US Tons & Metric Tons
Ram Piston Diameter	2.36 in.
Ram Face Diameter	1.89 in.
Maximum Distance to Table	38-1/2 in.
Minimum Distance to Table	7/8 in.
Bed Support Pin Diameter	1 in.
Number of Bed Adjustment Holes	9
Bed Adjustment Hole Spacing	4-1/2 in. On Center
Hydraulic Fluid Type	Standard Hydraulic Jack Oil

Construction

Frame	Steel
Base	Steel
Table Plates	Steel
Paint Type/Finish	Powder Coated

Other Specifications:

Country of Origin	China
Warranty	1 Year
Approximate Assembly & Setup Time	45 Minutes
Serial Number Location	ID Label
ISO 9001 Factory	Yes

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.

HANDS AND FINGERS: Always keep hands and fingers away from ram during operations to avoid contact. If hands or fingers enter ram path during use, serious injury may occur.

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.

AVOIDING PROJECTILE INJURIES: 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.

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.

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.

OIL INJECTION: 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. Keep body parts away from any high-pressure hydraulic leak.

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.

MAINTENANCE/SERVICE: Always purge air from hydraulic system and bleed off 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.

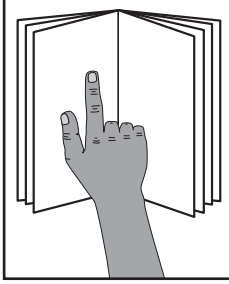
DO NOT OPERATE WITH LEAKS. Immediately stop machine and depressurize hydraulic system if a leak is discovered or suspected. Operating hydraulic system with leaks may increase the hazard of the situation and damage the machine.

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.

SECTION 2: SETUP

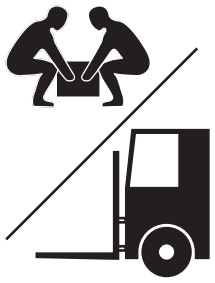


⚠WARNING

This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before operating 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
• Additional Person	1
• Safety Glasses (for each person)	1
• Open-End Wrenches 14, 27mm	1 Ea.
• Wrenches or Sockets 17, 19, 24mm	2 Ea.
• Socket Wrench	As Needed
• Pin-Type Spanner Wrench 3¾"	1
• Step Ladder	1
• Disposable Rags	As Needed
• Disposable Gloves	As Needed
• Cleaner/Degreaser (**Page 13**)	As Needed
• PTFE Thread-Sealant Tape	As Needed
• Mounting Hardware (**Page 15**)	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.** Bed Beams 2
- **B.** Cross Beams 2
- **C.** Columns 2
- **D.** Frame Supports 2
- **E.** Bed Spacers 4
- **F.** Center Brace 1
- **G.** Support Rods 2
- **H.** Pump Mounting Bracket 1
- **I.** Angle Braces 4
- **J.** Press V-Blocks 2
- **K.** Ram Mounting Plate 1
- **L.** Hydraulic Pump 1
- **M.** Pressure Gauge 1
- **N.** Hydraulic Ram 1
- **O.** Hardware Bag (Not Shown)
  - —Hex Bolts M16-2 x 35 (Cross Beam) 8
  - —Hex Nuts M16-2 (Cross Beam) 8
  - —Flat Washers 16mm (Cross Beam) 8
  - —Lock Washers 16mm (Cross Beam) 8
  - —Hex Bolts M12-1.75 x 35 (Center) 4
  - —Hex Nuts M12-1.75 (Center) 4
  - —Flat Washers 12mm (Center) 4
  - —Lock Washers 12mm (Center) 4
  - —Hex Bolts M10-1.5 x 25 (Angle Brace) 8
  - —Hex Nuts M10-1.5 (Angle Brace) 8
  - —Flat Washers 10mm (Angle Brace) 8
  - —Lock Washers 10mm (Angle Brace) 8
  - —Hex Bolts M12-1.75 x 25 (Bracket) 2
  - —Hex Nuts M12-1.75 (Bracket) 2
  - —Flat Washers 12mm (Bracket) 2
  - —Lock Washers 12mm (Bracket) 2
  - —Hex Bolts M10-1.5 x 130 (Bed Beam) 4
  - —Hex Nuts M10-1.5 (Bed Beam) 4
  - —Flat Washers 10mm (Bed Beam) 4
  - —Lock Washers 10mm (Bed Beam) 4
  - —Hex Bolts M8-1.25 x 16 (Pump) 3
  - —Flat Washers 8mm (Pump) 3

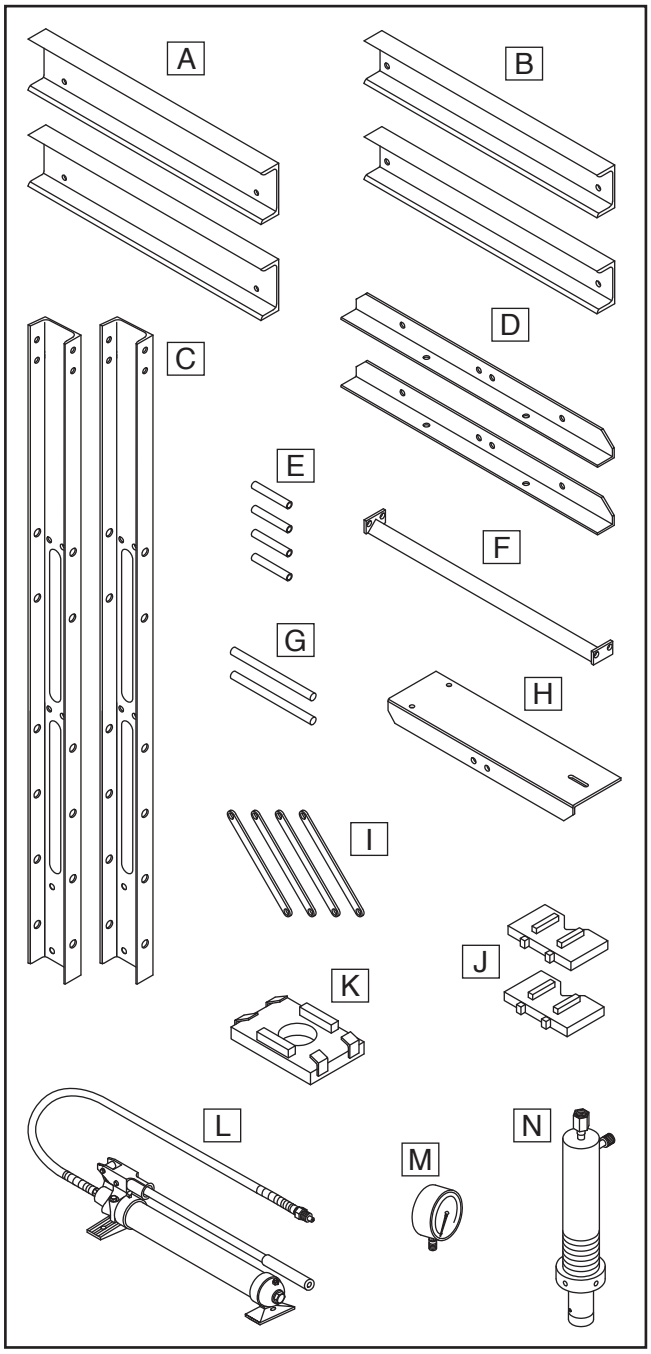
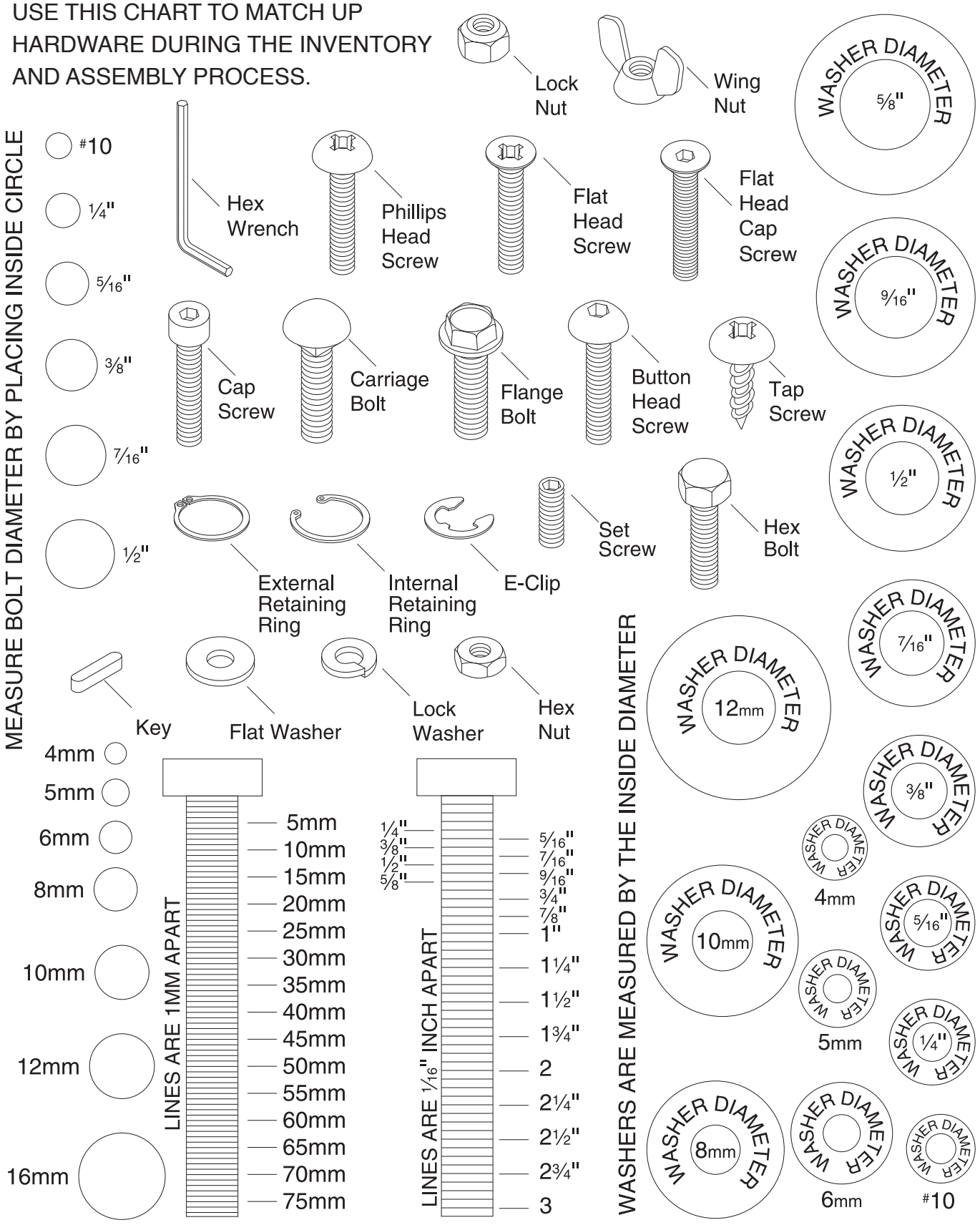


Figure 2. Crate inventory.

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)

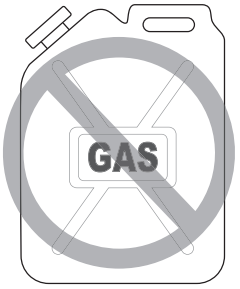
Basic steps for removing rust preventative:

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.

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

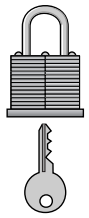
Consider the largest size of workpiece that will be processed through this machine and provide enough space around the machine for adequate operator material handling or the installation of auxiliary equipment. With permanent installations, leave enough space around the machine to open or remove doors/covers 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.

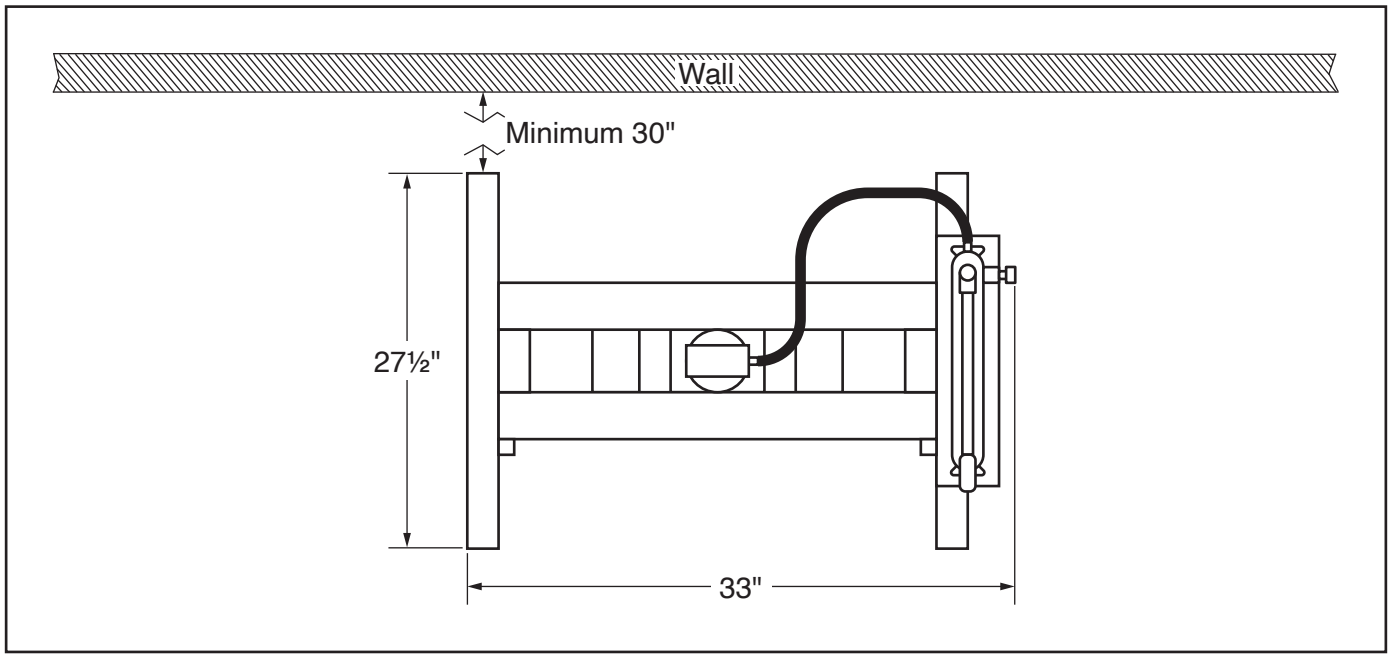


Figure 4. Minimum working clearances.

Anchoring to Floor

Number of Mounting Holes 4
Diameter of Mounting Hardware..... ½"

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.

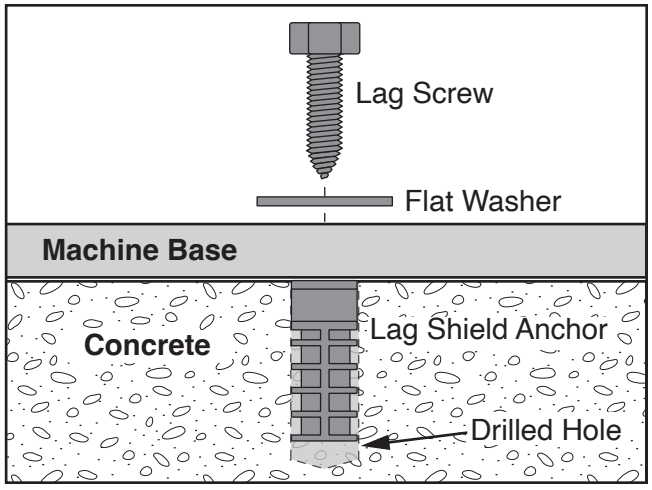


Figure 5. Popular method for anchoring machinery to a concrete floor.

Assembly

⚠CAUTION

This machine is very heavy. Reduce risk of strain or injury by getting help when lifting.

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. With help from an assistant, stand (2) columns upright and attach (2) frame supports and center brace using (4) M12-1.75 x 35 hex bolts, 12mm flat washers, 12mm lock washers, and M12-1.75 hex nuts, as shown in **Figure 6**.

2. Attach (4) angle braces to frame supports and columns using (8) M10-1.5 x 25 hex bolts, 10mm flat washers, 10mm lock washers, and M10-1.5 hex nuts, as shown in **Figure 6**.

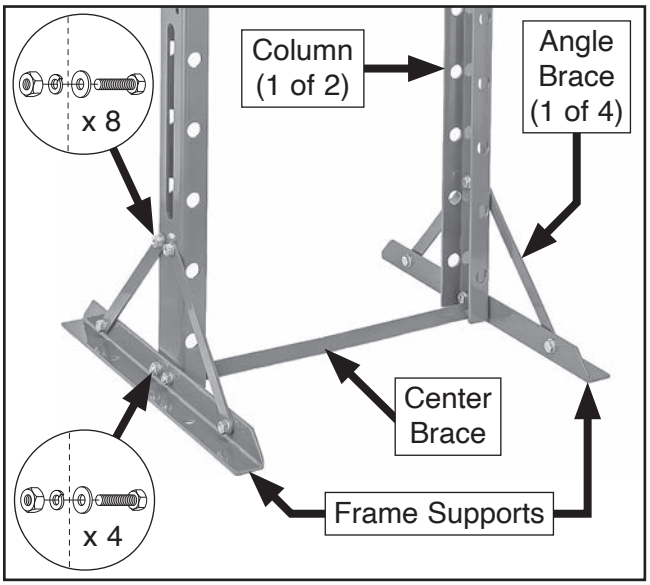


Figure 6. Center brace and angle braces attached to frame supports and columns.

3. With help from an assistant, secure (2) cross beams to top of columns with (8) M16-2 x 35 hex bolts, 16mm flat washers, 16mm lock washers, and M16-2 hex nuts, as shown in **Figure 7**.

IMPORTANT: When installing second cross beam, position (4) ram mounting plate tabs (see **Figure 7**) over bottom edges of cross beams.

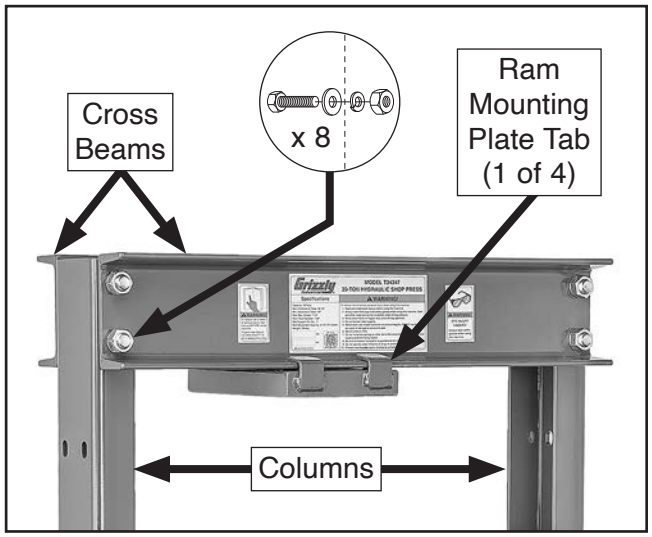


Figure 7. Cross beams and ram secured to columns.

4. Verify ram mounting plate tabs are fully supported on both sides of cross beams (see **Figure 8**).

Figure 8. Ram mounting plate tabs supported by cross beams.

5. Remove ram collar from hydraulic ram (see **Figure 9**).

6. From above, insert hydraulic ram through hole in ram mounting plate and thread ram collar onto hydraulic ram (see **Figure 9**).

Note: *Ram collar can be tightened using a 3¾" pin-type spanner wrench in collar holes.*

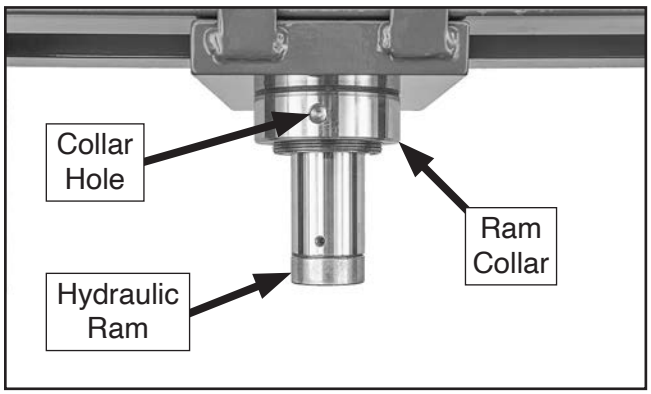


Figure 9. Hydraulic ram secured to mounting plate with ram collar.

7. Attach pump mounting bracket to right side of press with (2) M12-1.75 x 25 hex bolts, 12mm flat washers, 12mm lock washers, and M12-1.75 hex nuts (see **Figure 10**).

8. Mount hydraulic pump to pump mounting bracket with (3) M8-1.25 x 16 hex bolts and 8mm flat washers (see **Figure 10**).

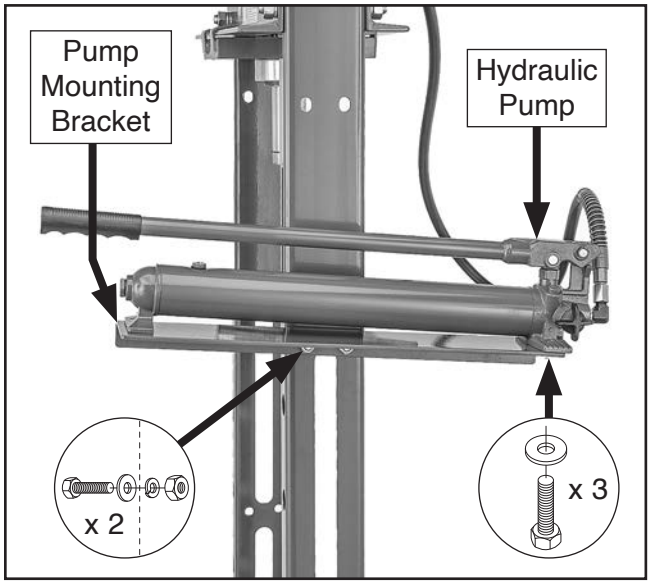


Figure 10. Hydraulic pump mounted to bracket.

9. Remove cap from threads, and connect hydraulic line from hydraulic pump to side of hydraulic ram (see **Figure 11**).

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

10. Remove cap from threads and attach pressure gauge to top of hydraulic ram (see **Figure 11**).

Note: *Use PTFE thread-sealing tape on pressure gauge threads to ensure a proper seal during pressing operations.*

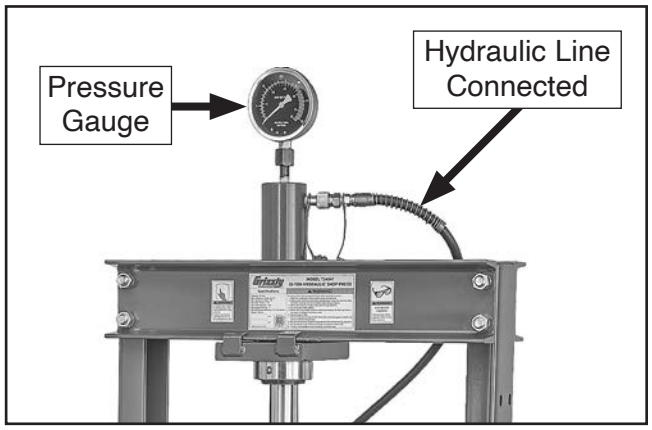


Figure 11. Pressure gauge and hydraulic line connected to hydraulic ram.

11. Assemble press bed with (4) bed spacers between (2) bed beams and secure with (4) M10-1.5 x 130 hex bolts, 10mm flat washers, 10mm lock washers, and M10-1.5 hex nuts (see **Figure 12**).

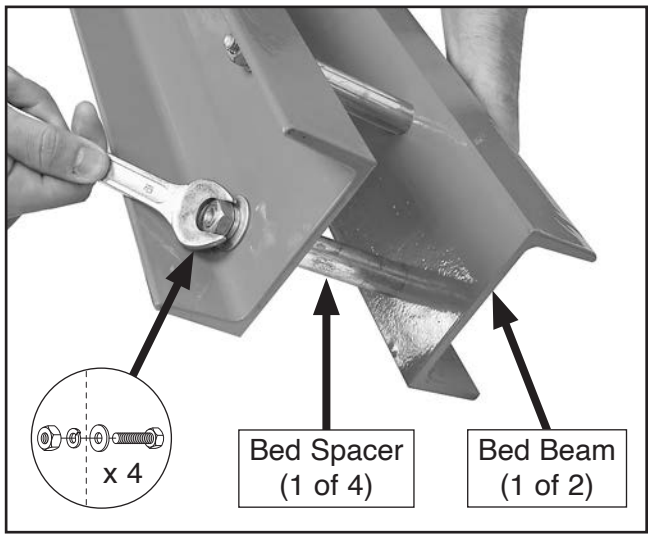


Figure 12. Assembling press bed.

⚠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.

12. Insert (2) bed support rods through bed adjustment holes, and with help from an assistant, lift press bed into position and place it on support rods (see **Figure 13**).

Note: *Lift one side of press bed higher than the opposite side to provide enough clearance for press bed to fit between columns.*

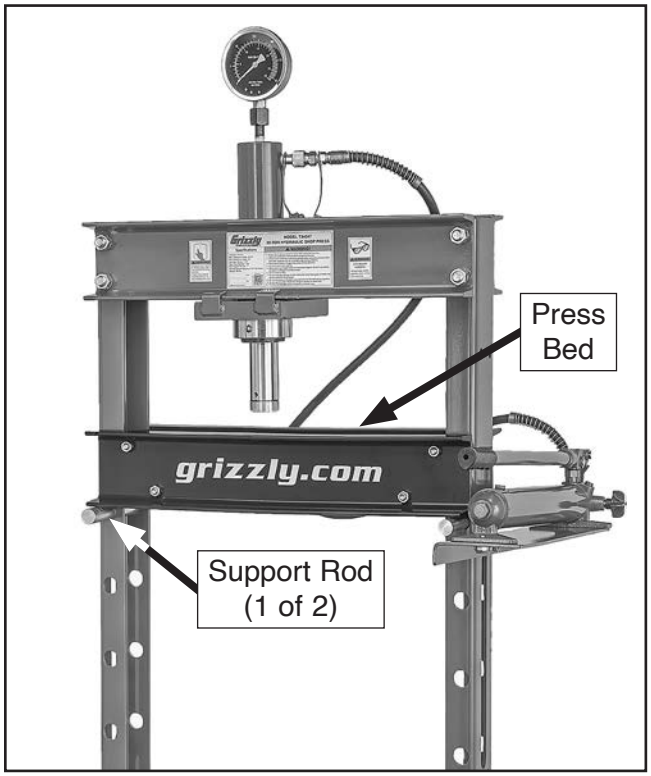


Figure 13. Press bed on support rods.

13. Place V-blocks on press bed, as desired (see **Figure 14**).

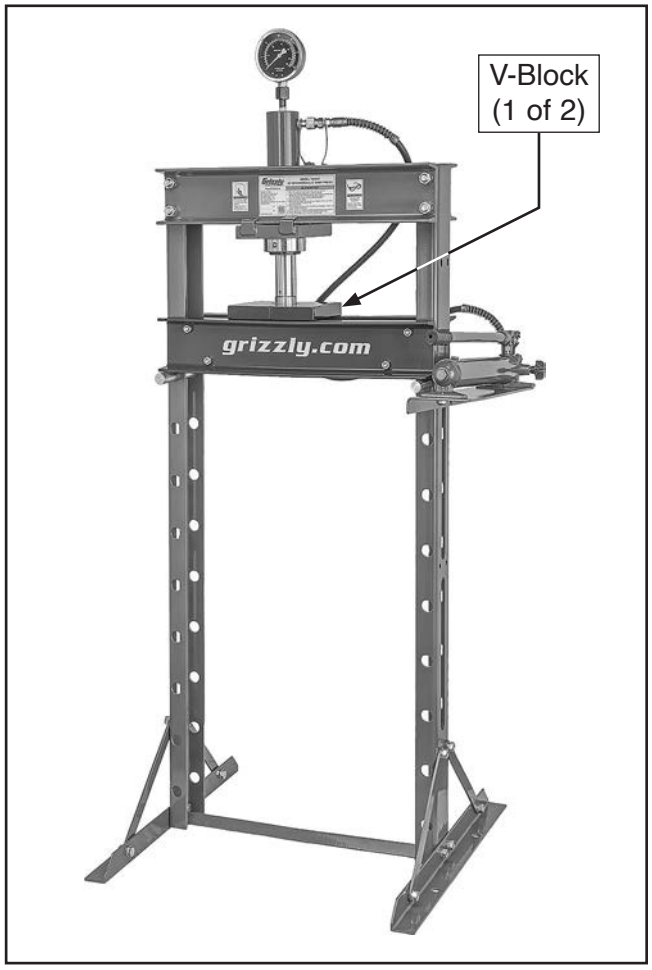


Figure 14. V-blocks on press bed.

14. Lubricate ram piston and cross beam track as instructed in **Lubrication** on **Page 26**.

15. Proceed to **Bleeding Hydraulic System** before beginning operations.

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 bleed when the ram moves smoothly through its full cycle.

To bleed hydraulic system:

1. Rotate pump relief valve counterclockwise to open hydraulic system (see **Figure 15**).

2. Pump handle several full strokes to bleed air from hydraulic system (see **Figure 15**).

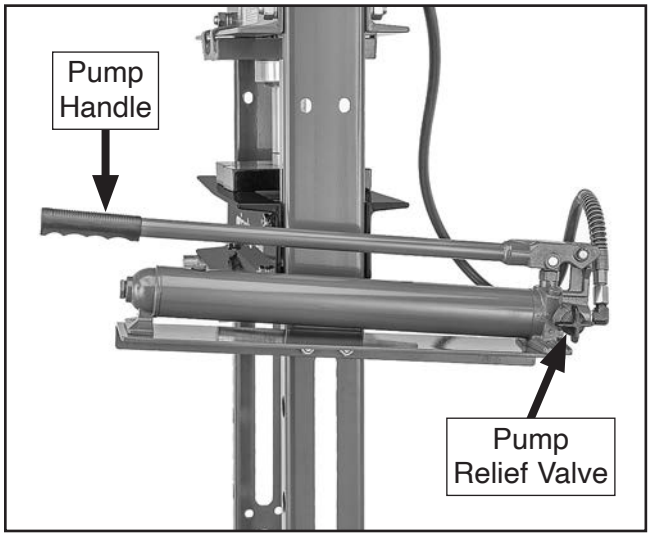


Figure 15. Location of hydraulic system components.

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, repeat **Steps 1–3**.

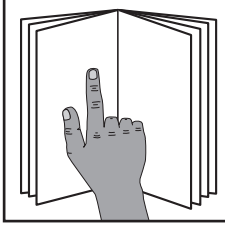
   — If ram movement is smooth and consistent through its full range of motion, no further action is required.

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.

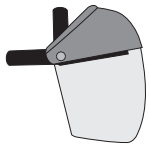


⚠WARNING

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. Places workpiece on press bed or V-blocks as needed, and either centers workpiece pressing point under ram or centers ram over workpiece pressing point.
4. Puts on safety glasses and face shield.
5. Closes pump relief valve and pumps handle to lower ram until it just touches workpiece.
6. Verifies workpiece has not shifted position and completes pressing operation.

⚠CAUTION

NEVER exceed maximum rated pressure of 40,000 lbs. (20 U.S. tons) or machine damage and personal injury could occur!

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.

7. 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

DO NOT compress springs or any object that could potentially fracture and create an explosive hazard, or serious personal injury could occur.

⚠WARNING

Always use minimum amount of pressure required when operating.

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.

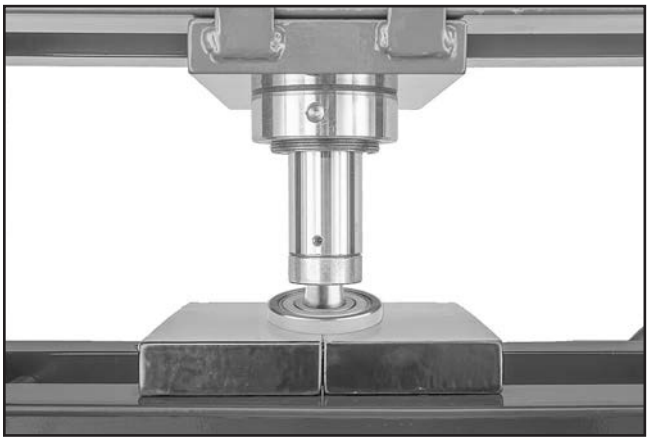


Figure 16. Example of typical hydraulic press operation using V-blocks on press bed.

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.

Item Needed	Qty
Additional Person	1

To adjust press bed height:

1. Rotate pump relief valve (see **Figure 17**) counterclockwise to release hydraulic system pressure.

2. Remove workpiece and V-blocks from press bed, if installed (see **Figure 17**).

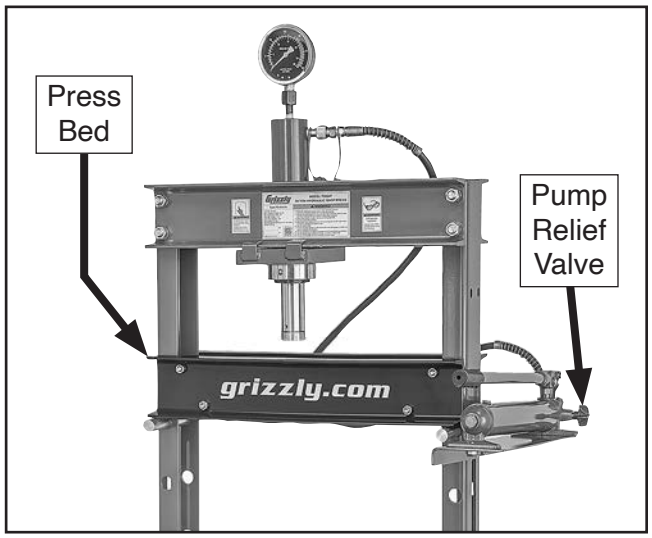


Figure 17. Location of pump relief valve and press bed.

3. With help from an additional person, lift press bed off of support rods and set aside.

   Note: *Lift one side of press bed higher than the opposite side to help clear columns during removal*.

⚠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.

4. Remove (2) support rods and insert them in bed adjustment holes at desired height (see **Figure 18**).

5. With help from an additional person, lift press bed into position and place it on support rods (see **Figure 18**).

   Note: *Lift one side of press bed higher than the opposite side to provide enough clearance for press bed to fit between columns*.

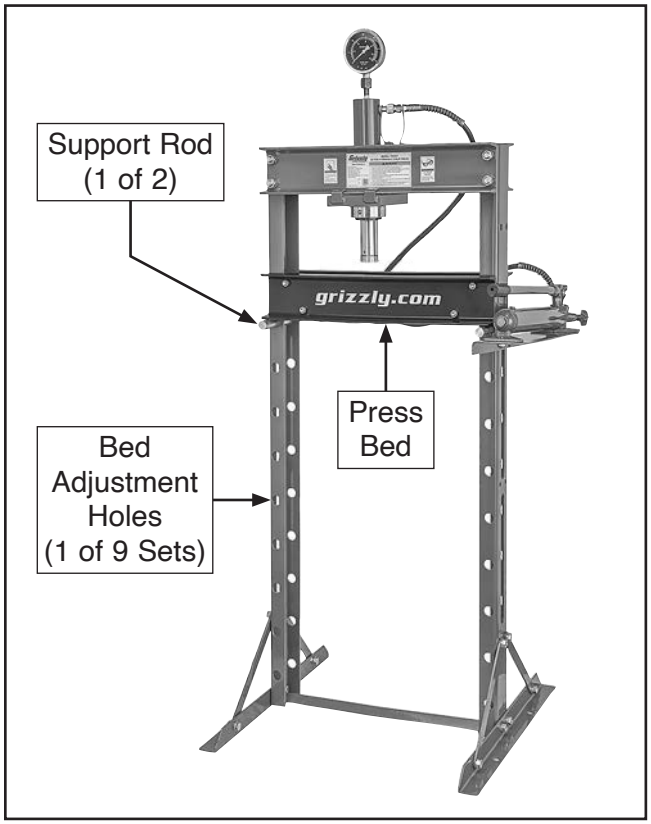


Figure 18. Location of bed height adjustment components.

Positioning Ram

The hydraulic ram can be positioned horizontally along the cross beam to align with off-center workpieces.

To position ram:

1. Adjust press bed height (see **Adjusting Press Bed Height** on **Page 21**) to allow ram adequate space above workpiece.

2. Place workpiece on press bed and slide ram mounting plate along cross beam until it is directly above workpiece press point (see **Figure 19**).

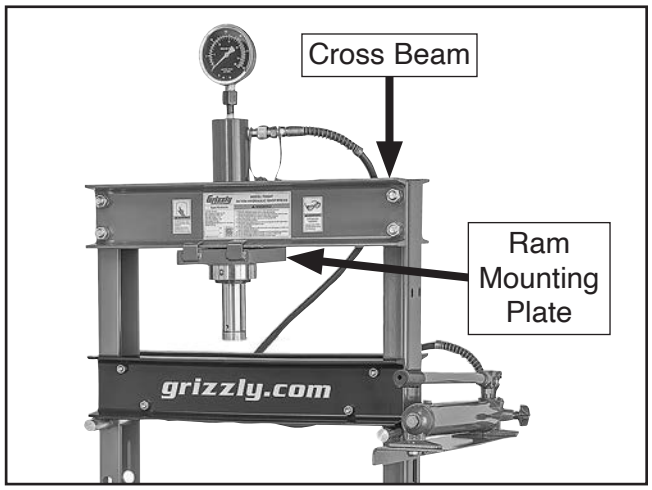


Figure 19. Location of hydraulic ram positioning components.

3. Lower ram until it just touches workpiece to verify ram remains stationary and workpiece does not shift during operation.

Adjusting Pressure

⚠CAUTION

NEVER exceed maximum rated pressure of 40,000 lbs. (20 U.S. tons) or machine damage and personal injury could occur!

Force applied to the workpiece is measured in U.S. tons and Metric tons on the pressure gauge (see **Figure 20**).

The amount of force applied to the workpiece is adjusted using the pump relief valve and the pump handle (see **Figure 20**).

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

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

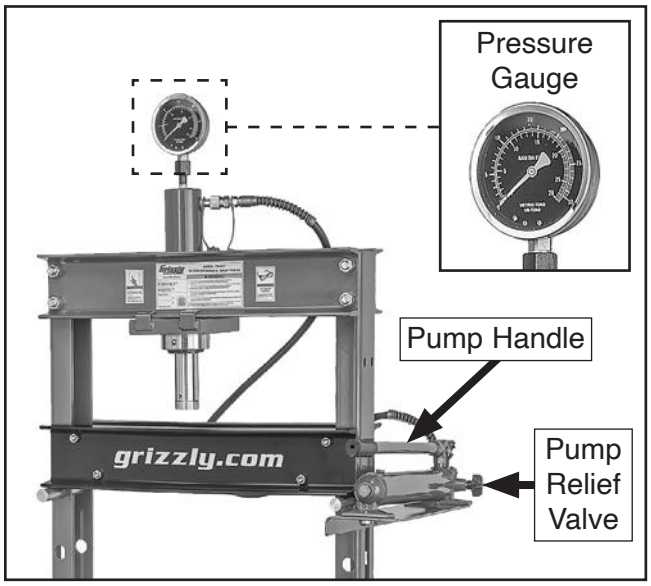


Figure 20. Location of hydraulic system components.

Pressing Workpiece

Refer to **Additional Safety for Hydraulic Presses** on **Page 8** and **Additional Safety for Hydraulic Systems** on **Page 9** before beginning operations. See **Workpiece Inspection** on **Page 20** before selecting a workpiece to press.

The Model T34347 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.

IMPORTANT: Never exceed maximum applied pressure of 40,000 lbs. (20 U.S. tons).

To press a workpiece:

1. Adjust press bed height (see **Adjusting Press Bed Height** on **Page 21**) to allow ram adequate space for operation.

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.

2. Place workpiece on press bed or V-blocks and center under ram (see **Figure 21**).

   — If pressing a small or round workpiece, use V-blocks to provide additional support.

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

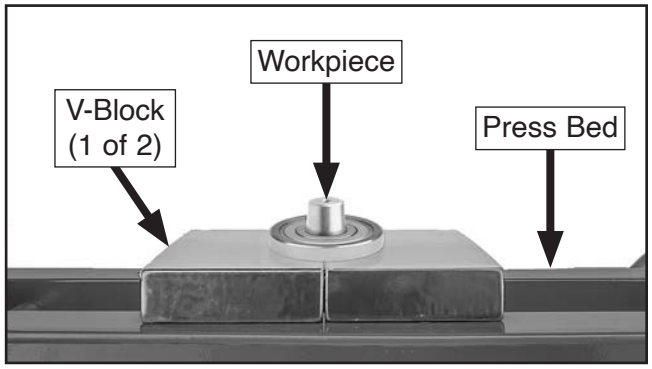
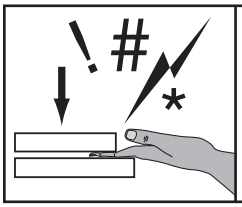


Figure 21. Workpiece centered under ram.

3. Rotate pump relief valve clockwise to close hydraulic system.



WARNING

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

4. Pump handle to lower ram until it just touches workpiece, as shown in **Figure 22**.

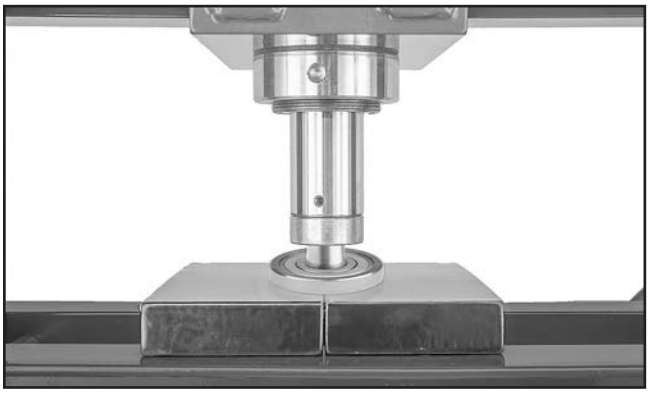


Figure 22. Ram extended to workpiece.

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, pump handle 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, 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.

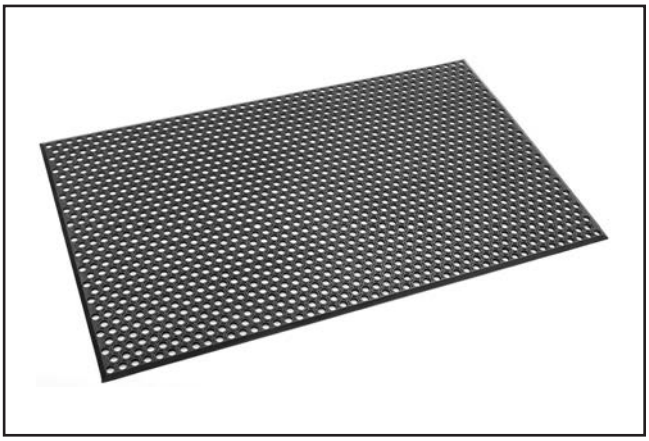


Figure 23. T10456 Heavy-Duty Anti-Fatigue Mat.

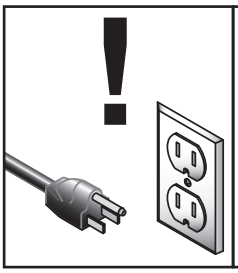
T33589—Multi-Function Magnetic LED Light
The 17½" flexible neck allows you to direct the beam where it is needed. Click the ON button once for 300 lumens of light, and again for 100 lumens. Comes with a powerful magnetic base that bonds to any ferrous surface. Includes a clamping bracket, (2) auxiliary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

Figure 24. 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 25. T32323 Woodturners Face Shield.

SECTION 5: MAINTENANCE



⚠WARNING
To reduce risk of shock or accidental startup, always disconnect machine from power before adjustments, maintenance, or service.

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 items below, and fix the problem before continuing operations:

- Check/correct loose mounting bolts.
- Check/correct leaking hydraulic oil.
- Clean/protect unprotected metal surfaces.
- Clean dust or debris around machine.
- Correct any other unsafe condition.

Daily
- Clean/lubricate ram cross beam track.
- Clean/lubricate ram piston surface.

Monthly
- Inspect support rods for wear/damage.
- Inspect press bed for wear/damage.

Annually
- Inspect hydraulic oil for contamination, and change oil if required (**Page 27**).

Cleaning & Protecting

Cleaning the Model T34347 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 26**).

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

Lubrication

Clean off the ram mounting plate and cross beam tracks with a clean rag and apply light machine oil for smooth operation (see **Figure 27**). Move ram mounting plate through its full range of motion several times to evenly distribute oil.

Wipe ram piston using a clean rag coated with light machine oil to remove debris and prevent contaminates from entering hydraulic system (see **Figure 27**).

Items Needed	**Qty**
Light Machine Oil	As Needed
Clean Shop Rags	As Needed

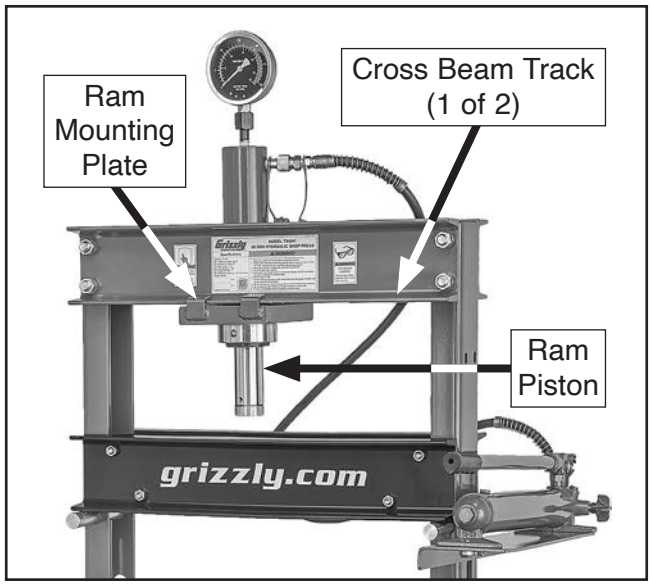


Figure 27. Location of lubrication points.

Adding Hydraulic Oil

The Model T34347 features a sealed hydraulic system. Periodically check hydraulic oil level and add oil as needed.

Items Needed	**Qty**
Phillips Head Screwdriver #2	1
Small Funnel	1
Flashlight	1
ISO-15 or ISO-22 Hydraulic Oil	As Needed
Clean Shop Rags	As Needed
Disposable Gloves	As Needed

To add hydraulic oil:

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

2. Rotate pump relief valve (see **Figure 28**) counterclockwise to release hydraulic system pressure.

3. Remove oil fill plug (see **Figure 28**) and verify hydraulic oil level.

   — If hydraulic oil level *is* visible approximately ¼" below threads in oil fill 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 oil fill plug hole.

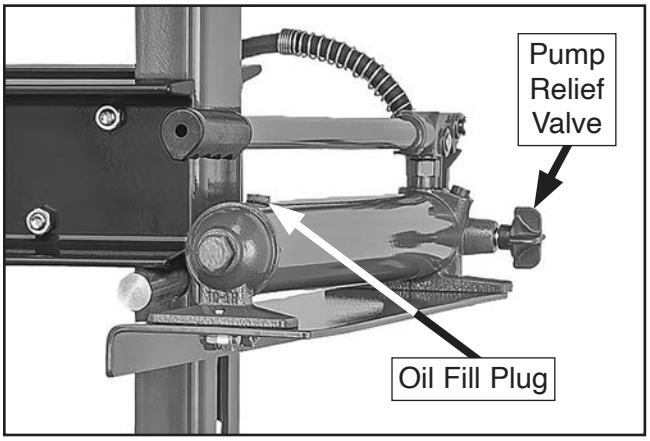


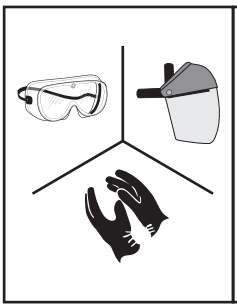
Figure 28. Location of oil fill plug.

4. Install oil fill plug and proceed to **Bleeding Hydraulic System** on **Page 18**.

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
Phillips Head Screwdriver #2	1
Wrench or Socket 14mm	1
Drain Pan or 5-Gallon Bucket	1
Small Funnel	1
Flashlight	1
Faceshield	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. Rotate pump relief valve counterclockwise (see **Figure 29**), then pump handle several times to bleed air from hydraulic system.

2. Remove hex bolts and flat washers securing hydraulic pump (see **Figure 29**), then place hydraulic pump in drain pan.

3. Remove oil fill plug on hydraulic pump (see **Figure 29**), and drain all hydraulic oil into drain pan.

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

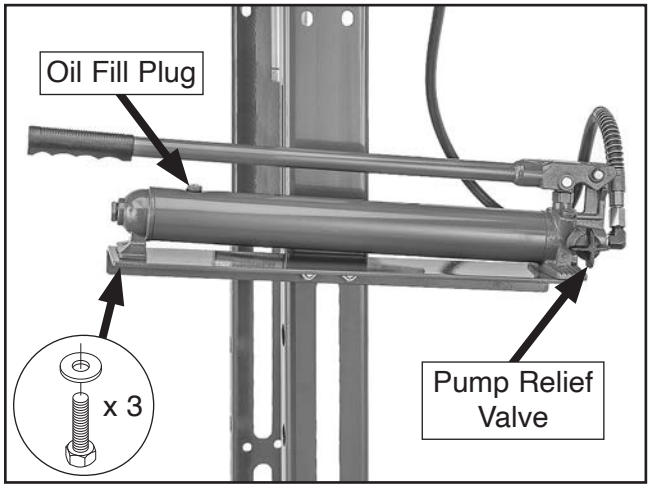


Figure 29. Location of hydraulic pump components.

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

5. Install hydraulic pump using fasteners removed in **Step 2**.

6. 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 oil fill plug hole.

7. Install oil fill plug and proceed to **Bleeding Hydraulic System** on **Page 18**.

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

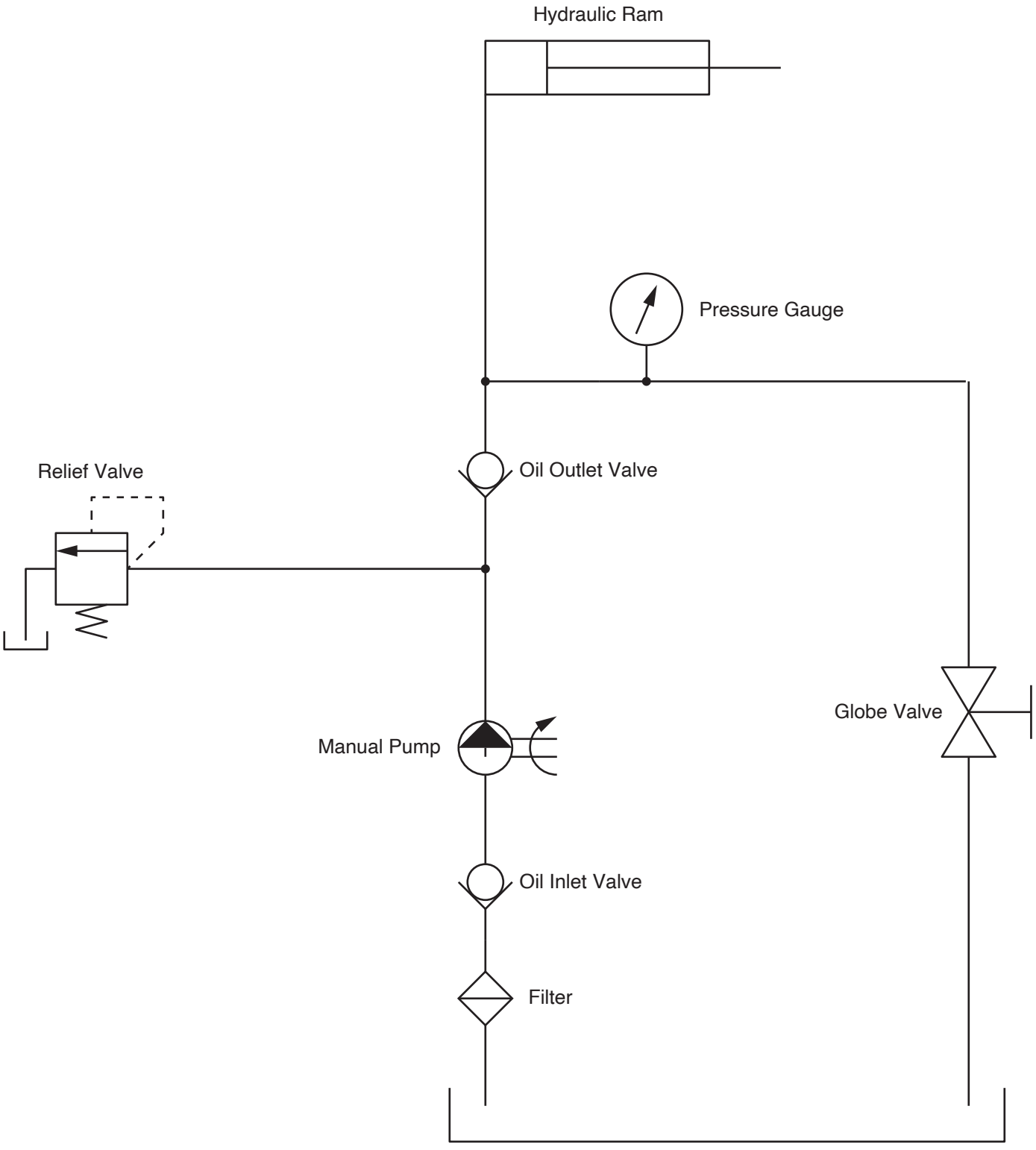
Operations

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. Pump relief valve at fault. 6. Hydraulic ram at fault. 7. Hydraulic pump at fault.	1. Tighten pump relief valve (**Page 22**). 2. Add hydraulic oil to proper level (**Page 26**). 3. Locate source of leak and repair/replace leaking part. 4. Check hydraulic line for obstructions. 5. Replace pump relief valve. 6. Replace hydraulic ram. 7. 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. Obstruction in hydraulic hose. 6. Pump relief valve at fault. 7. Ram seals at fault. 8. Hydraulic pump at fault.	1. Tighten pump relief valve (**Page 22**). 2. Bleed hydraulic system (**Page 18**). 3. Locate source of leak and repair/replace leaking part. 4. Replace hydraulic pump filter. 5. Check hydraulic hose for obstructions. 6. Replace pump relief valve. 7. Replace ram seals. 8. 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 18**). 2. Add hydraulic oil to proper level (**Page 26**). 3. Locate source of leak and repair/replace leaking part. 4. Drain and replace hydraulic oil.
Machine wobbles during operations.	1. Machine incorrectly mounted to floor. 2. Machine component(s) loose.	1. Tighten mounting hardware (**Page 15**); adjust or shim as needed. 2. Inspect fasteners for security; tighten with thread-locking fluid if required.

SECTION 7: HYDRAULICS

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

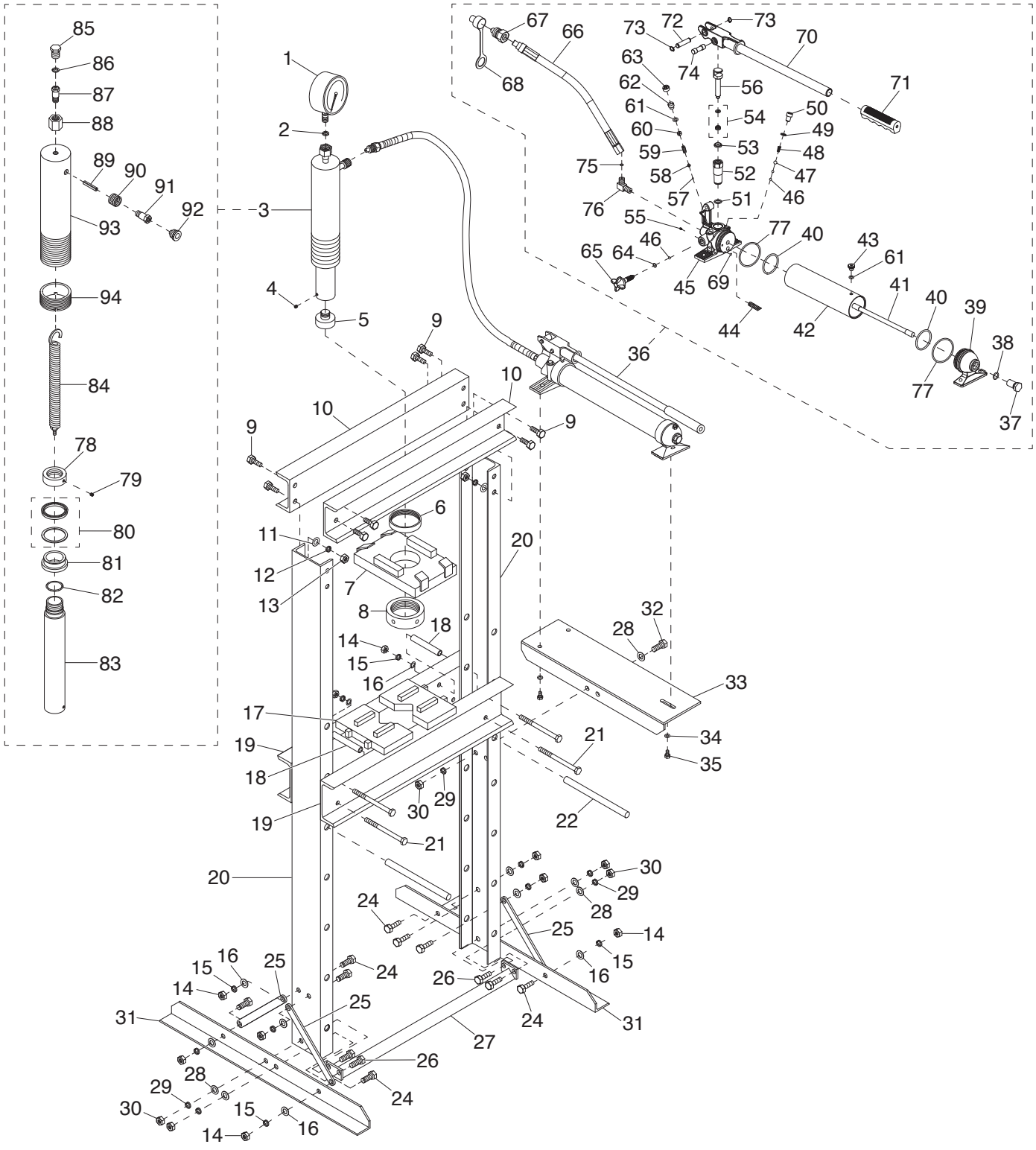
Hydraulic System Schematic



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	PT34347001	PRESSURE GAUGE
2	PT34347002	SEALING WASHER 10MM, NYLON
3	PT34347003	HYDRAULIC RAM ASSEMBLY
4	PT34347004	SET SCREW M6-1 X 8
5	PT34347005	RAM SADDLE
6	PT34347006	RAM MOUNTING NUT M72-6
7	PT34347007	RAM MOUNTING PLATE
8	PT34347008	RAM COLLAR
9	PT34347009	HEX BOLT M16-2 X 35
10	PT34347010	CROSS BEAM
11	PT34347011	FLAT WASHER 16MM
12	PT34347012	LOCK WASHER 16MM
13	PT34347013	HEX NUT M16-2
14	PT34347014	HEX NUT M10-1.5
15	PT34347015	LOCK WASHER 10MM
16	PT34347016	FLAT WASHER 10MM
17	PT34347017	PRESS V-BLOCK
18	PT34347018	BED SPACER 10ID X 22OD X 105L
19	PT34347019	BED BEAM
20	PT34347020	FRAME COLUMN
21	PT34347021	HEX BOLT M10-1.5 X 130
22	PT34347022	SUPPORT ROD
24	PT34347024	HEX BOLT M10-1.5 X 25
25	PT34347025	ANGLE BRACE
26	PT34347026	HEX BOLT M12-1.75 X 35
27	PT34347027	CENTER BRACE
28	PT34347028	FLAT WASHER 12MM
29	PT34347029	LOCK WASHER 12MM
30	PT34347030	HEX NUT M12-1.75
31	PT34347031	FRAME SUPPORT
32	PT34347032	HEX BOLT M12-1.75 X 25
33	PT34347033	PUMP MOUNTING BRACKET
34	PT34347034	FLAT WASHER 8MM
35	PT34347035	HEX BOLT M8-1.25 X 16
36	PT34347036	HYDRAULIC PUMP ASSEMBLY
37	PT34347037	PUMP PLUG M12-1.75
38	PT34347038	O-RING 13.8 X 2.4 P14
39	PT34347039	PUMP MOUNT
40	PT34347040	O-RING 48.7 X 3.5 P49
41	PT34347041	CONNECTING ROD
42	PT34347042	PUMP CYLINDER
43	PT34347043	KNURLED THUMB SCREW M10-1.25 X 10, D14
44	PT34347044	PUMP FILTER
45	PT34347045	HYDRAULIC PUMP
46	PT34347046	STEEL BALL 7/32"
47	PT34347047	STEEL BALL 8MM
48	PT34347048	CONICAL SPRING 0.4 X 6.5 X 12.5

REF	PART #	DESCRIPTION
49	PT34347049	SEALING WASHER 10MM
50	PT34347050	CAP SCREW M10-1 X 8
51	PT34347051	SEALING WASHER 12MM, COPPER
52	PT34347052	PLUNGER SEAT
53	PT34347053	FACE SEAL ADAPTER 18.5MM
54	PT34347054	U-CUP SEAL W/O-RING 12 X 6.5
55	PT34347055	SET SCREW M6-1 X 8 DOG-PT SLOTTED
56	PT34347056	PLUNGER PIN
57	PT34347057	STEEL BALL 3.5MM
58	PT34347058	STEEL BALL SEAT
59	PT34347059	COMPRESSION SPRING 2 X 7.4 X 20
60	PT34347060	SHOULDER SCREW M3-.5 X 3, 10 X 5.5
61	PT34347061	O-RING 7.8 X 2.2
62	PT34347062	SHOULDER SCREW M10-1 X 5, 14 X 7
63	PT34347063	VALVE CAP
64	PT34347064	O-RING 5.5 X 3
65	PT34347065	KNOB BOLT M10-1 X 9.5
66	PT34347066	HYDRAULIC HOSE 1/4" D X 60" L
67	PT34347067	HOSE FITTING 1/4" NPT
68	PT34347068	FITTING CAP
69	PT34347069	STEEL PLUG
70	PT34347070	PUMP HANDLE
71	PT34347071	PUMP HANDLE SLEEVE
72	PT34347072	PIVOT PIN W/GROOVES
73	PT34347073	EXT RETAINING RING 9MM
74	PT34347074	PUMP CORE AXLE
75	PT34347075	O-RING 5.2 X 1.9
76	PT34347076	ELBOW ADAPTER 1/4" NPT X 20
77	PT34347077	O-RING 52 X 1.5
78	PT34347078	RAM ADJUSTMENT NUT
79	PT34347079	SET SCREW M6-1 X 6 CONE-PT
80	PT34347080	U-CUP SEAL W/O-RING 60 X 8
81	PT34347081	PISTON SEAT
82	PT34347082	O-RING 34.4 X 3.1 G35
83	PT34347083	RAM PISTON ROD
84	PT34347084	RAM RETURN SPRING
85	PT34347085	FITTING CAP
86	PT34347086	SEALING WASHER 10MM, NYLON
87	PT34347087	ADAPTER FITTING 1/4" NPT X 16
88	PT34347088	FITTING NUT M20-1.5
89	PT34347089	ROLL PIN 10 X 50
90	PT34347090	KNURLED FITTING SLEEVE
91	PT34347091	HOSE FITTING CORE 1/4" NPT
92	PT34347092	HOSE FITTING PLUG
93	PT34347093	RAM CYLINDER BARREL
94	PT34347094	RAM LIMIT RING

Labels & Cosmetics

REF	PART #	DESCRIPTION
101	PT34347101	READ MANUAL LABEL
102	PT34347102	SAFETY GLASSES LABEL
103	PT34347103	MACHINE ID LABEL

REF	PART #	DESCRIPTION
104	PT34347104	GRIZZLY.COM LABEL
105	PT34347105	TOUCH-UP PAINT, GLOSS BLACK
106	PT34347106	TOUCH-UP PAINT, GRIZZLY GREEN

⚠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.