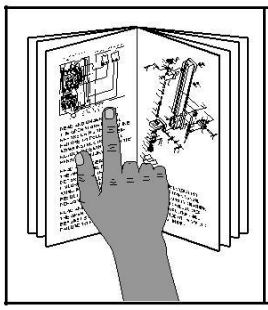
30-TON SHOP PRESS

OWNER'S Manual

Identification



⚠WARNING

To reduce the risk of serious injury when using this machine, read and understand this entire manual before beginning any operations.

A. Hydraulic Bottle Jack.
B. Pump Lever.
C. Control Valve.
D. Return Spring.
E. Arbor Plate Set.
F. Press Ram.
G. Bed Assembly.
H. Bed Lift Handle.
I. Bed Support Pin.
J. Press Base Mounting Hole.

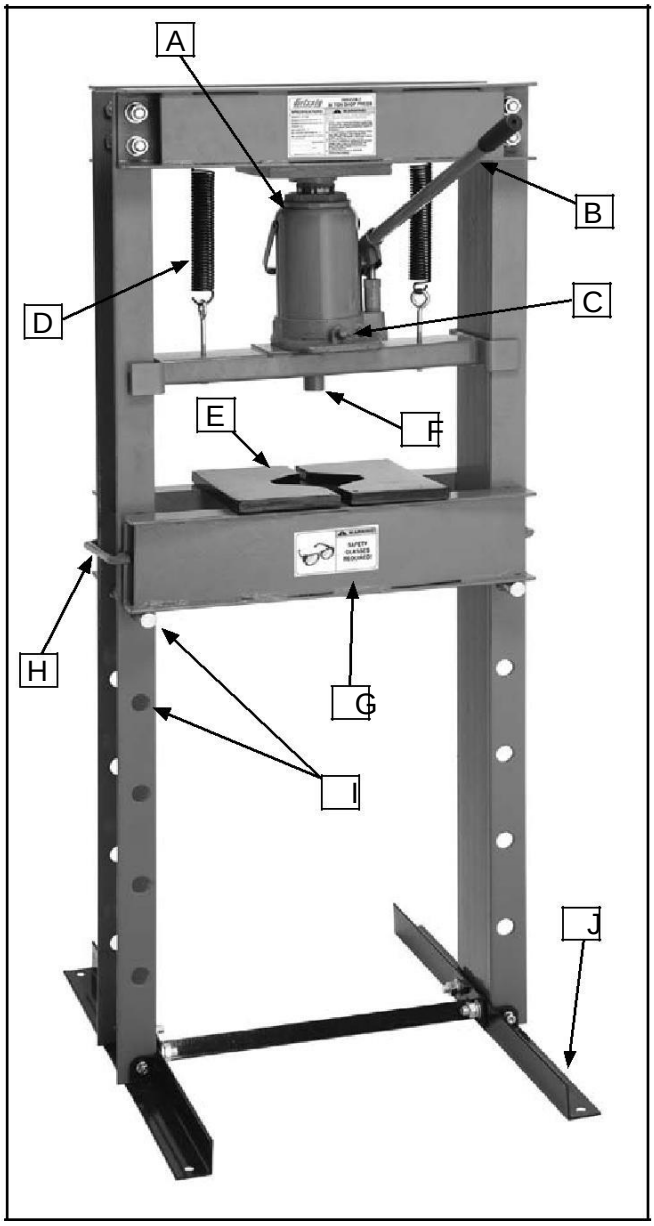


Figure 1. Identification.

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⚠WARNING

Additional Safety for Hydraulic Presses

1. **OPERATION SAFETY.** Applying pressure to parts with this press can cause them to spring out and strike you or bystanders with deadly force. Verify that bystanders are a safe distance away from the press during operations. Make sure that you are wearing gloves, safety glasses with a face shield. Heavy leather boots with extra toe protection are also required. Under certain conditions, a hard hat may be needed.

2. **CORRECT INSTALLATION.** An unse-cured press on wheels can tip when being moved or exhibit severe spring-back dur-ing heavy pressing operations, which could cause a crushing or impact injury. Do not place the press on a mobile base or install casters. The press base must be bolted to the floor.

3. **PRE USE Inspections.** A loosely assembled press can cock under a load and cause the workpiece to shift or eject resulting in an impact injury. Before use inspect the press for loose or missing bolts and pins. Verify that no cracks exist and that the hydraulic system is in full working order.

4. **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 the end of a long workpiece during pressing operations.

5. **UNSAFE WORKPIECE.** Applying pres-sure to unstable objects can eject the object, causing an impact injury. Never apply pressure to balls, round objects, springs, or elastic items.

6. **AVOIDING PROJECTILE INJURIES.** Being hit with a ejected workpiece or press tooling can cause severe impact injury or death. When using the press, stand out of the way of any possible projectile path. Never press with rods or pins that are long enough to cock off-center and kick out under a load. Never stack rods and spacers to create an extended press-pin. If pressing must occur with extended press-pins, the pin must be fastened with a safety chain or the press-pin must be enclosed in a safety cage to eliminate a projectile haz-ard.

7. **CORRECT TOOLING.** Without using the correct spring caging tool or jig to hold the a spring-loaded workpiece, the workpiece may shift suddenly, ejecting springs and causing a severe impact injury. Never use this press to unload spring-loaded assem-blies without also using the correct spring caging tool or jig.

8. **CORRECTING MISALIGNED LOADS.** If a workpiece becomes misaligned during pressing operations, it may slip out of the press and cause a severe impact injury. Never attempt to realign a workpiece while it is under pressure. Relieve hydraulic pressure, and start pressing operations over if a workpiece or press pin has moved or become misaligned. Relieve hydraulic pressure if you suspect the workpiece is in a bind or structural failure is imminent.

9. **SAFE WORKING ZONE.** Tooling or arbor plates that shift and fall from the press can cause a crushing injury to your leg or foot. Keep out from under the bed, do not work under the press when it is loaded, and never leave the press loaded and unat-tended.

10. **AVOIDING INCORRECT PRESS OPERATIONS.** Some workpieces cannot withstand the force of pressing and can explode, causing an impact injury. Other workpieces have hidden retaining rings, shoulders, pins, welds, or are integral and cannot be pressed apart. Before using this press, make sure that you understand how a component is built and pressed apart.

11. **SAFE HYDRAULIC REPAIR.** Repair that is performed by an unqualified person can lead to press overload or a hydraulic line burst, causing hydraulic oil being inject-ed into your blood stream causing blood poisoning. Do not attempt to repair the hydraulic system unless you are a qualified hydraulic service professional.

12. **UNAUTHORIZED MODIFICATION.** Modifying the press frame, increasing pump relief pressure, or installing a higher capac-ity jack or hydraulic system can cause structural failure, and lead to a severe crushing injury. If the press is insufficient for your pressing task, use a press that is rated for the correct load capacity.

13. **AVOIDING SPRING-BACK HAZARDS.** Under heavy pressing operations, when some parts finally break free of the host workpiece, sudden hydraulic press unload-ing can occur in the form of spring-back. As a result a workpiece, press pin, or an arbor plate can spring up and fall from the bed, causing a crushing injury to your foot or leg. Before press operations begin, anticipate what the workpiece may do if this sudden unloading occurs, and secure the workpiece so it will not fall.

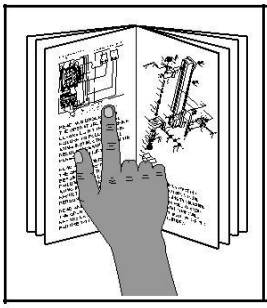
14. **AVOIDING OVERLOAD.** Using a cheater pipe for increased leverage or exceeding rated press capacity can damage the press, shatter a workpiece, or launch a press pin, causing a severe impact injury. Do not exceed the rated capacity of this press. When the press has reached its maximum pressure or the pump lever becomes stiff to operate, the press has reached its limit and the jack lever must not be pumped any further.

⚠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 pre-cautions 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 per-sonal injury, damage to equipment, or poor work results.



⚠WARNING

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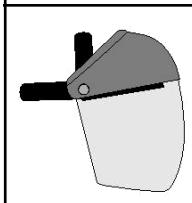
⚠WARNING

Damage to your eyes, fingers, or feet could result from using this machine without prop-er protective gear. Always wear safety glass-es, face shield, leather gloves, and leather boots that have extra toe protection.



NOTICE

If you have never used this type of machine or equipment before, We strongly rec-ommend that you read books, review industry trade 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.

Operation Overview

This overview describes you the basic process that happens during an operation with this machine. Familiarize yourself with this process to better understand the remainder of this section.

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

1. Puts on the required personal safety equip-ment, and clears away all bystanders.

2. Reviews workpiece inspection items, and prepares the workpiece to make it suitable for press operations.

3. Retracts the hydraulic ram completely, and positions the bed so there is the shortest dis-tance between the ram and workpiece.

4. Verifies that both bed support pins are installed correctly, and fully supporting the bed.

5. Places a catch basket under the press with the applicable padding to protect the part when it drops.

6. Positions the arbor plates to support the workpiece and aligns the press-pin or tooling on the part to be pressed.

7. Lowers the press ram to slightly preload the workpiece.

8. Examines the setup from different angles and verifies that the press pin or tooling is main-taining alignment with the workpiece and the press ram.

9. Completes the press operation, relieves the hydraulic pressure, and allows the ram to return to the retracted position.

Controls

Review the list and **Figure 2** below to familiarize yourself with the hydraulic controls.

A. Hydraulic Bottle Jack. Houses the control valve, relief valve, hydraulic fluid, and the pump system, which create the hydraulic force required for press operations.

B. Pump Lever. Gives the press operator the leverage to operate the bottle jack pump and the press. The lever is also used to open and close the jack control valve.

C. Hydraulic Pump. Creates the pressure for the press operations.

D. Pressure Relief Valve. This valve is factory set at safe levels and should not be re-adjust-ed.

E. Press Ram. Point at which the press applies force to the workpiece or press-pin.

F. Control Valve. When rotated clockwise to the closed position, the pump and jack can per-form press operations. When rotated coun-terclockwise to the open position, applied pressure is relieved and the press and jack retract to the unloaded position.

G. Return Spring. Each spring retracts and supports the press ram assembly to the uppermost unloaded position when the con-trol valve is opened.

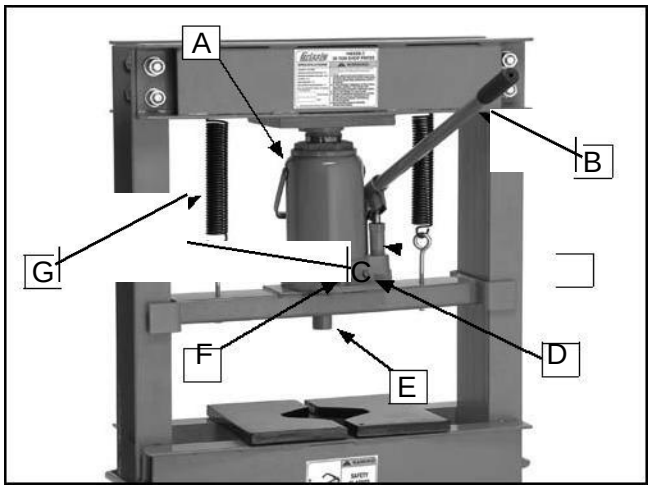


Figure 2. Pump controls.

Workpiece Inspection

Before using this hydraulic press, you must inspect the workpiece. This is not a comprehen-sive list, but rather a list of common oversights. It is up to you to address any additional spe-cial items required to prepare your workpiece for press operations. Not making the minimum inspections below can lead to galled, seized, or broken housings. In some situations, ignoring just one of the listed items can lead to a workpiece or tooling being ejected from the press, which could cause severe injury or death.

- ***Workpiece Strength:*** Make sure that the workpiece material is designed to withstand the intended force the press will apply.

- ***Workpiece Cleanliness:*** Make sure that the workpiece is clean and that all burrs, grit, rust, or damage is removed from the pressing path. Often light oiling on the components is beneficial to prevent galling or seizing.

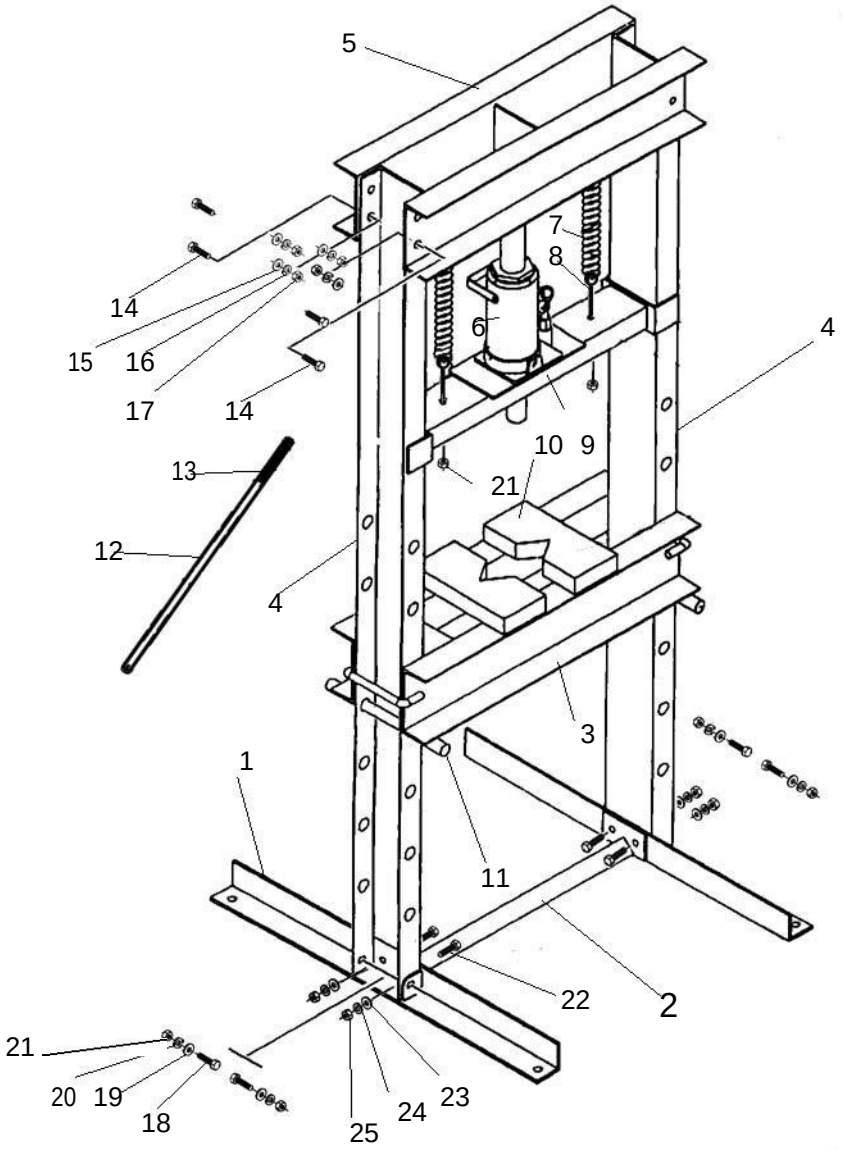
- ***Pressing Path:*** Make sure that the direction of component to be pressed on or off is cor-rect, and that the correct size of sleeve or arbor plate is used for support.

- ***Retaining Mechanisms:*** Make sure that all retaining rings, pins, or fasteners are removed, and no hidden secondary retainers are present.

- ***Hidden Projectiles:*** Some components house one or more springs. Make sure that the part to be dismantled with the press has the applicable caging system to catch the springs should the workpiece slip or open up when the retaining ring is removed and the hydraulic pressure is relieved.

- ***Special Fits:*** Make sure that the interfer-ence fits are correct before pressing a part on, and make sure that the applicable parts have been heated or chilled to the correct temperatures to avoid galling and seizing. Recognize that not all parts were designed to be pressed off, we do not advise attempting to press these types of parts off.

Main Breakdown



REF	PART #	DESCRIPTION
1	PH6228Z001	BASE LEG
2	PH6228Z002	LOWER CROSS SUPPORT
3	PH6228Z003	BED
4	PH6228Z004	U-BEAM
5	PH6228Z005	UPPER CROSS SUPPORT
6	PH6228Z006	HYDRAULIC BOTTLE JACK 30-TON
7	PH6228Z007	EXTENSION SPRING
8	PH6228Z008	EYE BOLT M8-1.25 X 100
9	PH6228Z009	PRESS BAR
10	PH6228Z010	ARBOR PLATE
11	PH6228Z011	TABLE SUPPORT PIN
12	PH6228Z012	PUMP LEVER W/GRIP
13	PH6228Z013	PLASTIC GRIP

REF	PART #	DESCRIPTION
14	PH6228Z014	HEX BOLT M16-2 X 35 C8.8
15	PH6228Z015	HEX NUT M16-2 C8.8
16	PLW10M	LOCK WASHER 16MM
17	PW08M	FLAT WASHER 16MM
18	PB07M	HEX BOLT M8-1.25 X 25
19	PW01M	FLAT WASHER 8MM
20	PLW04M	LOCK WASHER 8MM
21	PN03M	HEX NUT M8-1.25
22	PB153M	HEX BOLT M14-2 X 40
23	PW10M	FLAT WASHER 14MM
24	PLW08M	LOCK WASHER 14MM
25	PN32M	HEX NUT M14-2