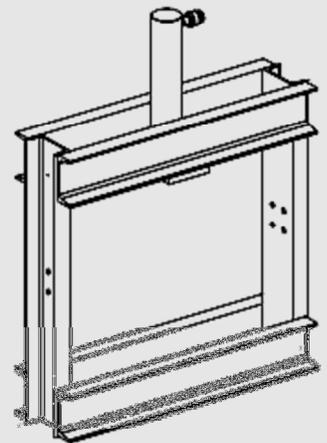
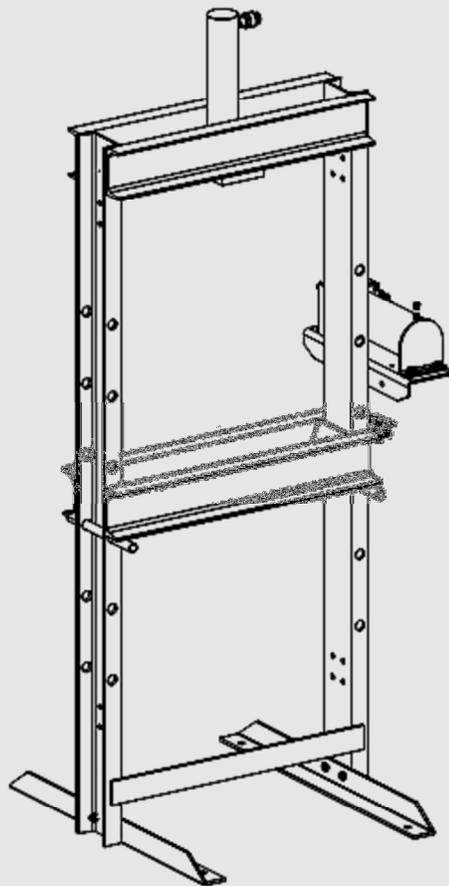


MAHLE CBP-10 / CBP-10A & CSP-10 / CSP-10A

EN

Operation Manual
Shop press





**EVERY PERSON WHO OPERATES THIS
EQUIPMENT NEEDS TO KNOW AND
UNDERSTAND ALL OF THE INFORMATION IN
THIS MANUAL – FAILURE TO DO SO COULD
RESULT IN SERIOUS INJURY OR DEATH.**

**READ THIS MANUAL
CAREFULLY AND
RETAIN FOR YOUR
RECORDS**

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1. Safety Regulations

1.1 Warnings

- △ Failure to follow all of these safety instructions can lead to severe injury or death. Contact the manufacturer at the numbers or address printed on the back cover of this manual if you have any questions.
- △ **Anyone who operates this equipment must read and understand all the instructions and warnings provided with this product before being allowed to use it.** All operators must be careful, competent, trained, and qualified in the safe operation of the product. The owner (or other responsible individual) must ensure that any operator observes the proper safety procedures for using this press at all times. If the operator does not read well or is not fluent in English, the owner / manager must read and review the instructions and warnings in the manual with the operator in the operator's native language to be sure that the operator will use the press properly.
- △ **The owner / manager must keep this manual for future reference,** and make sure the warning labels on the product are legible and intact at all times. Replacement labels and manuals are available from the manufacturer. Call the manufacturer using the contact information on the back cover of this manual if you have any questions.
- △ **Proper safety equipment must be worn when using the press.** The proper safety equipment shall be worn at all times by the operator using the press. When in use, anyone in the area where there is a risk of injury shall be notified. You will also need to refer to OSHA standards for the proper personal protective equipment.
- △ **Never overload the press.** The maximum capacity of the press is 10 tons (20,000 lbs) of pushing force. If you need more capacity than this, use a press that has a higher maximum capacity.
- △ **The owner of this press must ensure it is installed and operated according to federal (OSHA), state, and local safety standards.** The Free Standing Model shall be anchored prior to use.
- △ **Protect hands, feet and other body parts when using this press.** Do not allow hands, feet and all other body parts to pass underneath the lower bolster at any time during use of the press. If this warning is not heeded, accidental slipping may result in possible serious injury and/or death.
- △ **Keep hands, feet, and other body parts out of the work area while pressurizing the press.** NEVER align or hold the work pieces while pressurizing the press. The press has an extended air hose (if equipped with air pump) or pump handle (if equipped with manual pump) that allows the operator to stand away from the work piece during operation. Optional guards are available from the manufacturer.
- △ **Avoid off-center loads.** The work pieces must be in line and centered with the ram and secured so that they cannot become free and come out from underneath ram. Work pieces must be supported so that they cannot slip out during operation.
- △ **If equipped with an adjustable bolster, NEVER use press until bottom bolster is fully engaged** and supported by the bolster pins.
- △ **Never use adapters for pushing that have a capacity rating that is lower than the press's tonnage rating.** Doing so can lead to breakage of the adaptor which can cause possible damage or injury from flying projectiles.
- △ **NEVER modify the product in any way.** No alterations shall be made to this product. Modifications may cause the press to perform improperly, resulting in injury or death. Any alterations to unit will void any warranty or liability of the manufacturer.
- △ **Never use aftermarket accessories on the press unless authorized by manufacturer.**
- △ **Failure to understand and obey this warning may result in personal injury or death.**

2. Foreword

2.1 From the manufacturer

Thank you for your purchase. To complement the offering of A/C, fluid and nitrogen service equipment, MAHLE Service Solutions has partnered with Gray Manufacturing to provide the highest quality hydraulic and pneumatic equipment available for the professional service technician. This equipment adheres to high standards promised in the MAHLE guarantee including the assurance of innovation and reliability that comes with the Gray Manufacturing name. Please contact MAHLE Service Solutions' customer service at (800) 468-2321 or tech.mss@us.mahle.com with any comments or questions.

3. Symbols Use

3.1 Signal words

Signal words call attention to a safety message or messages, or a property damage message or messages, and designate a degree or level of hazard seriousness. Signal words used in this manual include:

Keyword	Probability of occurrence	Severity of danger if instructions not observed
DANGER	Immediate impending danger	Death or severe injury.
WARNING	Possible impending danger	Death or severe injury
CAUTION	Possible dangerous situation	Minor injury
NOTICE	Possible damage to property	Possible property damage

4. Responsibilities

4.1 Receiving inspection

Before attempting to operate this equipment, thoroughly read and understand this manual. Completely remove all tape and packaging. Inspect the equipment immediately upon delivery. If shipping damage is evident, inform the delivering carrier immediately and contact the manufacturer using the contact information on the back cover of this manual.

4.2 Owner and/or operator responsibilities

The owner and / or user must have an understanding of the manufacturer's operating instructions and warnings before using this equipment. Personnel involved in the use and operation of equipment shall be careful, competent, trained, and qualified in the safe operation of the equipment and its proper use when servicing motor vehicles and their components. Warning information should be emphasized and understood.

The owner / manager must make this manual available to all personnel using this equipment at your direction. They must read and understand the contents of this manual. If the operator is not fluent in English, the manufacturer's instructions and warnings shall be read to and discussed with the operator in the operator's native language by the purchaser / owner, making sure that the operator comprehends its contents and observes the proper procedures for use of this equipment.

Owner and / or user must study and maintain for future reference the manufacturer's instructions. Owner and / or user are responsible for keeping all warning labels and instruction manuals legible and intact. Replacement labels and literature are available from the manufacturer.

5. Specifications

5.1 CBP-10 & CSP-10

Freestanding model	US units	Metric units
Maximum capacity	20,000 lb	9,072 kg
Maximum stroke	10 in	25.4 cm
Width	25.125 in	63.8 cm
Depth	28 in	71.1 cm
Height	59 in	149.9 cm
Inside clearance – side to side	22 in	55.9 cm
Throat minimum – bottom of ram to top of bolster	5.875 in	14.9cm
Throat maximum – bottom of ram to top of bolster	35.875 in	91.1 cm
Weight	180 lb	81.6 kg
Minimum air pressure required at rated capacity*	95 psi	6.5 bar
Maximum air pressure*	200 psi	13.8 bar

*Specification is only applicable if unit equipped with optional air pump

Benchtop model	US units	Metric units
Maximum capacity	20,000 lb	9,072 kg
Maximum stroke	10 in	25.4 cm
Width	25.125 in	63.8 cm
Depth	7.125 in	18.1 cm
Height	24.5 in	62.2 cm
Inside clearance – side to side	22 in	55.9 cm
Throat minimum – bottom of ram to top of bolster	15.5 in	39.4 cm
Throat maximum – bottom of ram to top of bolster	15.5 in	39.4 cm
Weight	130 lb	59 kg
Minimum air pressure required at rated capacity*	95 psi	6.5 bar
Maximum air pressure*	200 psi	13.8 bar

*Specification is only applicable if unit equipped with optional air pump

6. Product Description

6.1 Component identification

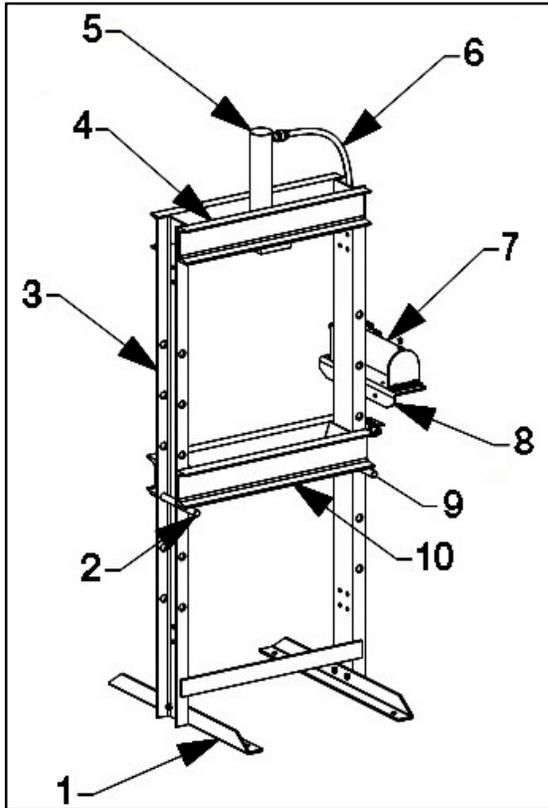


Fig. 1: Freestanding model component identification

- 1 Foot angle
- 2 Bolster pin
- 3 Press frame
- 4 Upper bolster
- 5 Hydraulic cylinder
- 6 Hydraulic hose
- 7 Hydraulic pump
- 8 Pump bracket
- 9 Bolster pin
- 10 Lower bolster

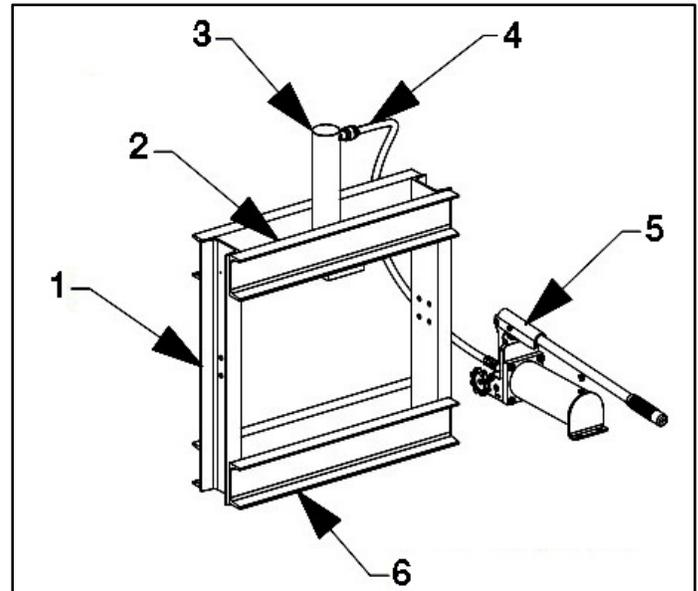


Fig. 2: Benchtop model component identification

- 1 Press frame
- 2 Upper bolster
- 3 Hydraulic cylinder
- 4 Hydraulic hose
- 5 Hydraulic pump
- 6 Lower bolster

7. Assembly Instructions

7.1 Frame installation

Freestanding model

1. Remove the press from the shipping pallet and stand upright on the floor.
2. Attach one of the angle feet to each side and fasten them with the supplied 3/8" X 1" bolts and 3/8" nuts (Fig. 1).

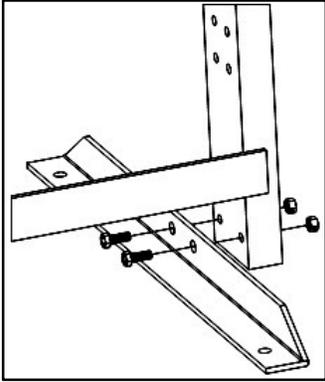


Fig. 3: Install support feet

3. The press shall be anchored to the floor to prevent tipping prior to use.

⚠ **WARNING!** Never mount the press on an uneven floor. Anchors are the responsibility of the owner.

Benchtop model

Setup press in a clean and uncluttered work area on a bench top or other structure capable of safely supporting the press.

7.2 Hydraulic cylinder installation

Install hydraulic cylinder by carefully threading cylinder into the mounting plate as shown in Fig. 4. The cylinder must be threaded in until the threads are below the bottom surface of the mounting plate as shown in Fig. 5.

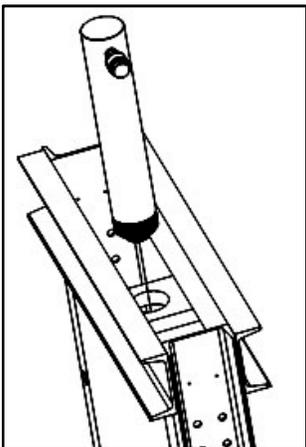


Fig. 4: Thread cylinder into mounting plate

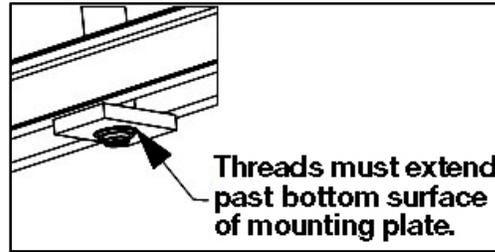


Fig. 5: Installing hydraulic cylinder

7.3 Hydraulic pump installation

Freestanding model - All pump types

Attach the pump bracket to the press frame using 3/8" X 1" bolts and 3/8" nuts as shown in Fig. 6.

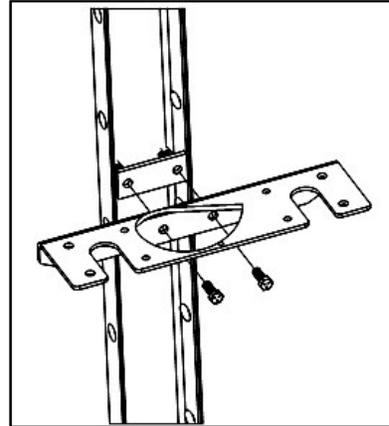


Fig. 6: Attaching pump bracket

Freestanding model with manual pump

Attach the manual pump to the pump bracket using (2) 3/8"x1" bolts and (2) 3/8"x3/4" bolts and 3/8" nuts as shown in Fig. 7.

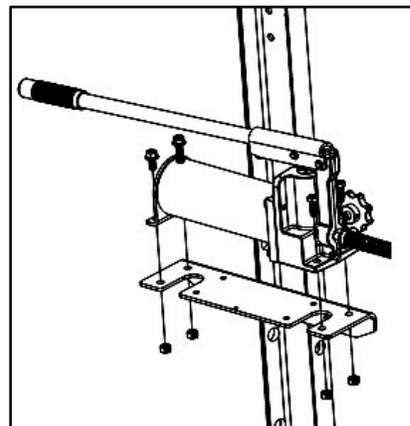


Fig. 7: Manual pump installation

Free standing model with air pump

Attach the air pump to the pump bracket using 3/8"X3/4" bolts [Item #1], 3/8" nuts [Item #2], 5/16"X3/4" bolts [Item #3], and 5/16" lock washers [Item #4] as shown in Fig 8.

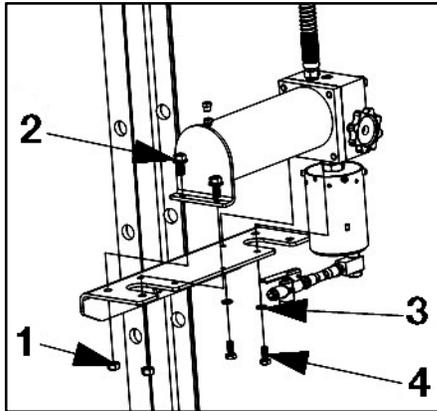


Fig. 8: Attaching air pump

Benchtop model

The pump should be secured to the bench top in a position that allows the operator of the press to press the work piece at the safest possible location.

All models and pumps

After mounting the hydraulic pump, remove the fill plug [Item #1] from the hydraulic reservoir. Install the provided breather vent plug [Item #2] and tighten securely.

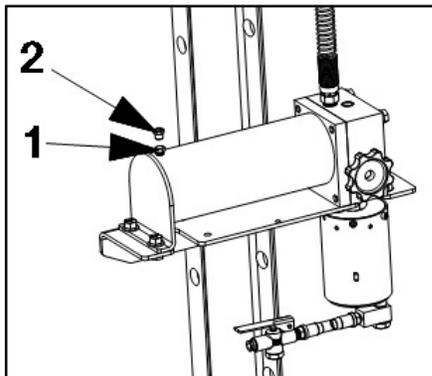


Fig. 9: Installing breather vent plug

7.4 Hydraulic hose connection

Remove the protective cap and seal from the fitting on the hydraulic cylinder. These items are removed by loosening the knurled part of the fitting and then removing the cap and rubber seal.

Attach the hose from the hydraulic pump to the fitting on the cylinder and hand tighten the knurled part of the fitting to secure the connection.

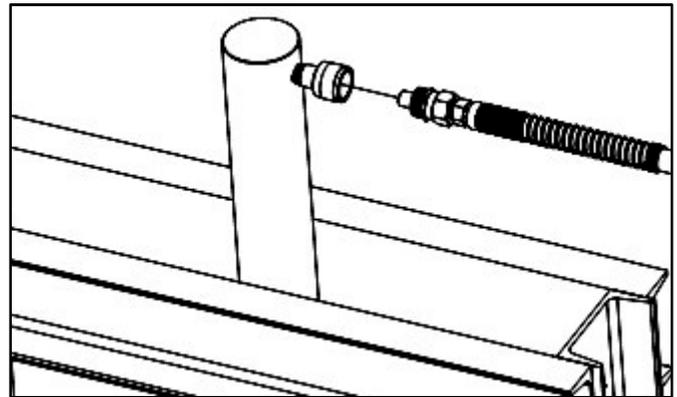


Fig. 10: Connecting hydraulic hose

7.5 Optional accessory kit installation

The hydraulic cylinder features an internally threaded ram that allows the use of pushing adapters. The flat cap supplied with the cylinder must be removed in order for the pushing adapters to be installed. The cap is removed by pulling downward until it is free. If the o-ring separates from the flat cap during removal, make sure it is removed from the ram before installing adapters.

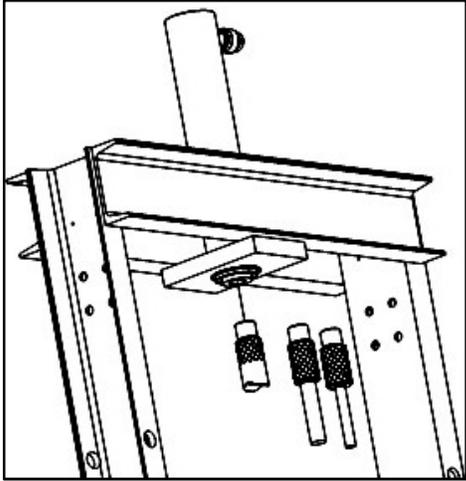


Fig. 11: Remove cap to install pushing adapter

⚠ WARNING! Do NOT use the press unless either the flat cap supplied with the cylinder or a manufacturer supplied pushing adapter is installed in the cylinder ram. The work piece may be ejected and the ram may be damaged if used without the proper pushing adapter.

Once the flat cap is removed any of the pushing adapters can be installed in the ram by threading the adapter in until it is fully seated.

⚠ WARNING! Do NOT use the pushing adapters unless they are fully threaded into the ram. Using the adapters while partially installed could result in damage to or failure of the adapter.

The V-blocks are set up to be positioned flat or on end to suit the job at hand. The rotating stops on each end of the V-blocks are to keep the V-blocks on the bolster while placing your work piece in position. The V-blocks should always be aligned on the bolster to allow the stops to hang down freely to ensure the V-blocks do not slip off the bolster.

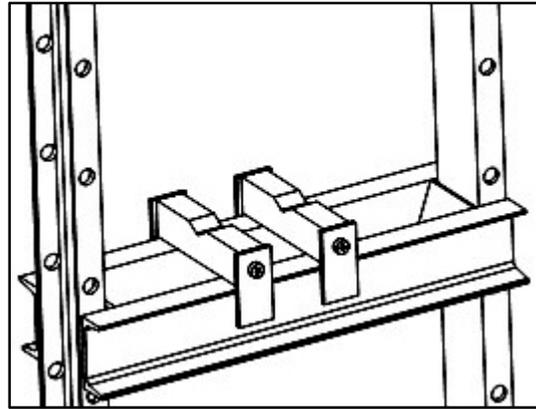


Fig. 12: Install v-blocks

⚠ WARNING! Do NOT remove the rotating stops from the ends of the V-blocks. This could cause personal injury from the V-blocks falling off the bolster on to feet or other body parts.

7.6 Optional guard installation (Freestanding model)

The instructions below are identical to those supplied with the guard. Guards can be installed on one or both sides of the press as desired.

1. Determine which side of the press the Guard Panel [#6] will be installed on. Also, decide which direction the Guard Panel [#6] should swing when opened.
2. Place a Spacer [#4] inside the bore of the Latch Pawl [#3] as shown in Fig. 13. Attach these two parts to the press using a Cap screw [#1], Washer [#2], and Nut [#5] as shown.

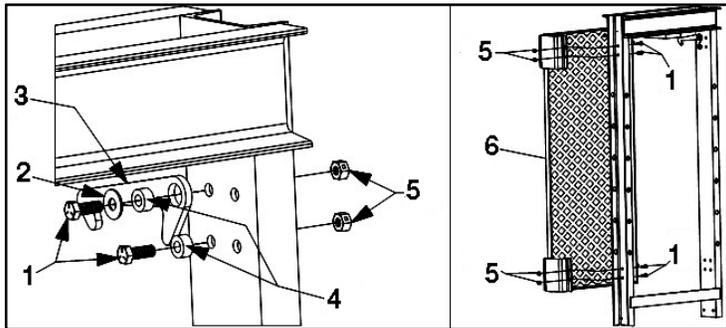


Fig. 13: Guard installation

- 1 Cap screw
- 2 Washer
- 3 Latch pawl
- 4 Spacer
- 5 Nut
- 6 Guard panel

3. Swing the Latch Pawl [#3] upward so the tab is positioned approximately as shown in Fig. 13. Install the second Spacer [#4], which acts as a travel stop for the Latch Pawl [#3], using a Cap screw [#1] and Nut [#5].
4. The Guard Panel [#6] is installed as shown in Fig. 13 using four Cap screws [#1] and four Nuts [#5]. Before fully tightening the Nuts [#5], check the alignment of the pin on the Guard Panel [#6] with the Latch Pawl [#3] and also check that the gap between the Guard Panel [#6] and the press is consistent at the top and bottom.
5. Tighten the Nuts [#5] and check that the Guard Panel [#6] opens and closes properly.

7.7 Optional guard installation (Benchtop model)

The instructions below are identical to those supplied with the guard. Guards can be installed on one or both sides of the press as desired.

1. Determine which side of the press the Guard Panel [#6] will be installed on. Also, decide which direction the Guard Panel [#6] should swing when opened.
2. Place a Spacer [#4] inside the bore of the Latch Pawl [#1] as shown in **Error! Reference source not found.**. Attach these two parts to the press using a Cap screw [#1], Washer [#2], and Nut [#5] as shown.

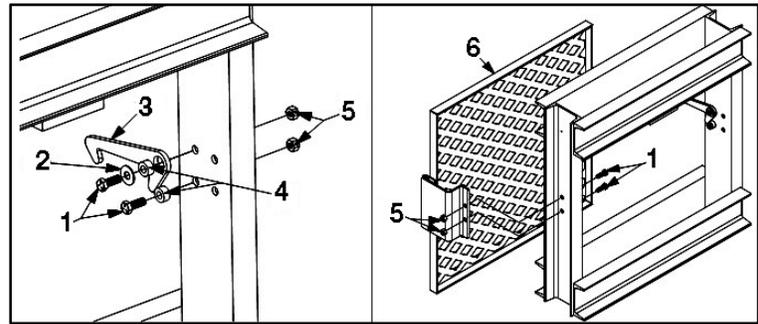


Fig. 14: Guard installation

3. Swing the Latch Pawl [#3] upward so the tab is positioned approximately as shown in **Error! Reference source not found.**. Install the second Spacer [#4], which acts as a travel stop for the Latch Pawl [#3], using a Cap screw [#1] and Nut [#5].
4. The Guard Panel [#6] is installed as shown in **Error! Reference source not found.** using two Cap screws [#1] and two Nuts [#5]. Before fully tightening the Nuts [#5], check the alignment of the pin on the Guard Panel [#6] with the Latch Pawl [#3] and also check that the gap between the Guard Panel [#6] and the press is consistent at the top and bottom.
5. Tighten the Nuts [#5] and check that the Guard Panel [#6] opens and closes properly.

8. Operation

⚠ Failure to heed the following operating instructions could lead to serious injury or death—the operator and anyone in the vicinity of the shop press would be at risk.

8.1 Inspect press for signs of damage or oil leakage

❗ Before each use, you should inspect the press for any visible signs of wear, damage, or oil leakage. See the “Inspecting the press” section for details about how to inspect the press.

⚠ **WARNING!** If you see any signs of damage, or if there is any indication that the press is not performing normally, immediately tag it “Out of Service” and call the manufacturer using the contact information on the back of this manual.

⚠ Never use a press that appears damaged in any way.

8.2 Adjustment of lower bolster height (Freestanding model only)

❗ The operator must check that the bolster pins protrude equally from each side of the press and are in full contact with the lower bolster before each use. If you need to lower or raise the lower bolster, please follow the procedures shown below.

1. While one person lifts the lower bolster off the bolster pins a second person can remove the bolster pins from the press frame. Twist and pull both pins out.

⚠ **CAUTION!** The lower bolster weighs 35 pounds and should not be raised or lowered by one person working alone. Failure to have a second person help reposition the lower bolster could result in dropping the bolster causing personal injury and/or property damage.

2. Raise or lower bolster until above the desired position.

3. Insert both bolster pins at the desired height. The bolster pins must be installed in the same hole position on the press frame so the lower bolster is approximately level. Always check that each bolster pin protrudes equally from each side of the press frame and remove your hand after pins are in place.

4. Lower the lower bolster until the lower bolster is resting on the bolster pins. The bolster must always be level after lowering onto the bolster pins.

⚠ **WARNING!** If the bolster pins show signs of damage, call the manufacturer for assistance. Never use damaged or aftermarket bolster pins.

⚠ Never allow hands, feet, or any other body parts to pass underneath the lower bolster at any time.

8.3 Positioning the workpiece

❗ Take special care in positioning the workpiece. It should always be supported by the lower bolster and centered underneath the ram of the press. When placing the workpiece check for possible hazardous situations and potential slippage prior to pressing the work piece.

⚠ **WARNING!** Always install some type of guarding prior to pressing the workpiece. Never allow hands, feet, or any other body parts to pass between the lower bolster and the workpiece at any time.

❗ The operator should always wear their PPE when working around or using the press to perform work. A face shield is of primary importance and shall be worn at all times while using the press. Check OSHA regulations for the proper PPE.

8.4 Pressing the workpiece

⚠ It is necessary for the operator to inspect for any possible hazardous situations around the surrounding area in case of accidental slippage before pressurizing the press.

⚠ **WARNING!** The owner of the press or supervisor must provide the proper protective equipment and provide the safety procedures of using the press for each application. Optional guards are available from the manufacturer.

1. The work pieces must be in line with the ram and well supported so they cannot become free and come out from underneath the ram.

2. The operator should move to the side while operating the press.

3. The operator should stand in a position away from the immediate press working area in the most advantageous position for operator protection.

4. Always alert other personnel in the immediate area that you are getting ready to press the work piece so they are aware of what you are preparing to do for their protection and safety.

Use the following procedures to operate the power unit:

- △ Inspect the power unit and ram for signs damage or oil leaks. See the “Inspecting the press” section for details.

Air Pump

1. Close (turn clockwise) the release knob until finger tight.
2. Press and hold the actuation lever on the air valve so the ram starts to extend.
3. When the desired stroke is reached, release the actuation lever on the air valve.
4. Open (turn counter-clockwise) the release knob to retract the ram. The release knob can be closed to stop the ram from retracting, if desired.

Manual Pump

1. Close (turn clockwise) the release knob until finger tight.
2. Quickly raise the pump handle full stroke to activate the high-speed pump circuit. You should feel the pump switch into the high-speed mode.
3. Work the pump handle up and down to extend the ram until it contacts the work piece. During pressing of the work piece the pump will automatically switch back to the low-speed mode. There may be a sudden change in the effort required to move the pump handle when the pump changes from the high-speed mode to the low-speed mode.
4. Continue working the pump handle until the desired stroke is reached.
5. Open (turn counter-clockwise) the release knob to retract the ram. The release knob can be closed to stop the ram from retracting, if desired.

9. Maintenance and Inspection

⚠ **WARNING** - The owner must inspect, or appoint a knowledgeable person to inspect the product. Visual inspection should be made before each use the equipment, checking for abnormal conditions. Regular inspections should be made weekly for daily use and monthly for intermittent use. In addition to the visual inspection, the inspector should also operate the press to assist in identifying any problems that may exist. Contact the manufacturer using the contact information printed on the back cover of this manual.

9.1 Inspection

Equipment must be removed from service and inspected for damage immediately if subjected to an abnormal shock or load. Failure to heed this warning may result in personal injury and / or property damage.

Hydraulic component inspection

- Inspect hydraulic hose and fittings for any signs of wear, damage, or oil leaks. Never use a damaged hose or fittings.
- ⚠ **WARNING!** Never bend the hydraulic hose through less than a 5 inch radius.
- ⚠ **DANGER!** Keep the hydraulic system away from flames and heat. Never impact the hydraulic system in any way.
- Make sure the release knob operates properly.
- Inspect the cylinder and ram for any signs of wear, damage, or oil leaks. The ram should be straight without any gouges, scratches, or marks. The cylinder must be free of dents, gouges, or other damage. Never use a cylinder that is damaged in any way.

Air component inspection

- ⚠ **WARNING!** This press is designed to operate with air pressure of 95 psi to 200 psi. Never exceed this rating.
- Make sure that the air valve is working properly. To prevent the risk of serious injury, the ram must stop immediately when the air valve is released.

Inspect bolster pins

- Inspect the bolster pins for any signs of damage. The pins must not be bent, cracked, corroded, or excessively worn.
- ⚠ **WARNING!** Never use bolster pins that show any sign of damage. Using damaged bolster pins can cause the pins to fail resulting in a sudden drop of the

bolster and/or sudden release of the work piece causing personal injury and/or property damage.

- ⚠ If any irregularities or problems are detected during an inspection, the press must be removed from service immediately and repaired. Contact the manufacturer using the contact information on the back cover of this manual.

9.2 Maintenance instructions

- ⚠ **WARNING** - All inspection and maintenance procedures must be performed after the product has been removed from service. Failure to do this may result in personal injury and/or property damage.

All maintenance and lubrication procedures must be performed every 2 months. To properly maintain the press, perform the following procedures:

- Check support pins for rust. Keep support pins in good working order. If they are bent, have flat spots or are excessively rusted and pitted, replace. Use only support pins supplied by the manufacturer of the press. Lightly oil the pins to prevent them from corroding.
- If equipped with the air pump, add a few drops of air tool oil to the air line and operate the pump. This will help lubricate the air piston and prevent moisture in the air line from corroding the inside of the air motor.
- Inspect the condition of all decals on the press. They should be legible and easy to read. If they become hard to read, replace them immediately.

10. Troubleshooting

This section is a list of potential problems and solutions. If the solution listed fails to correct the problem, call the manufacturer at the numbers and address printed on the back cover of this manual. Please have the model number, and serial number of your unit available.

Problem	Cause/Solution
Air motor won't run (if equipped with air pump)	<ul style="list-style-type: none"> • Airline leaks-locate and correct leaks. • Air piston sticking or stuck-add oil to air inlet to lubricate piston. • Inadequate air pressure-requires at least 95psi to generate rated load.
Oil leaks	<ul style="list-style-type: none"> • Reservoir fill plug loose-tighten fill plug
Ram will not extend	<ul style="list-style-type: none"> • Check level of oil in reservoir-if necessary, add a high-grade hydraulic fluid equivalent to Conoco MV22 Super Hydraulic Oil.

12. Notes

MAHLE

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