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Form No. 102458

Operating Instructions for:

014-00021  
1825  
203771  
211405  
D-010077AA

## Open-Throat Shop Press®

Maximum Capacity: 17.5 Tons

These instructions are intended for various shop presses. Some models are shipped assembled and require a minor amount of assembly; others are shipped unassembled and require complete assembly. The complete assembly procedure is provided in the following instructions for your reference. Verify the contents of the shipping carton against the parts list provided to ensure all parts are present before beginning assembly.

### SAFETY PRECAUTIONS

 **WARNING:** To prevent personal injury;



- Read and carefully follow the operating instructions and safety precautions for the press, pump, and cylinder. Most problems are caused by incorrect assembly or operation.
- The owner of the press must ensure the press is installed and operated according to Federal (OSHA), state, and local safety standards.

- A press can exert an extremely high force at a moderate hydraulic pump pressure. If you have any questions about how much force is exerted at a given pressure, contact Technical Services.
- This press is designed for shop maintenance applications. For use in other applications, contact Technical Services.

### OPERATION



- Wear eye protection that meets the standards of ANSI Z87.1 and OSHA. Keep hands away from the work area. The press should be located in an isolated area or shielded to minimize danger to others. Hydraulic pressure can cause materials to break, possibly resulting in personal injury.



- It is impossible for the manufacturer to provide practical, all-purpose shielding because this is a general purpose press used in many different applications. The owner of the press must supply shielding (such as the 1230PB or 2036PB available through OTC) that is practical and specific for a particular application.

- A workpiece must be well supported and aligned to prevent slippage and breakage.
- To prevent accidental slippage, do not place workpiece on the press bed or apply hydraulic force until all bolster pins are in place and all tension has been removed from the bolster lift cables.
- Do not stress adapters beyond their capacities. Pushing or pulling adapters used with this press must have a maximum tonnage rating equal to, or greater than, the maximum tonnage rating of the press. Otherwise, breakage may occur.
- The user must ensure all safety-related decals are installed, maintained, and replaced when necessary.

**CAUTION:** Seal hydraulic connections with pipe sealant. Teflon tape may also be used to seal hydraulic connections, if only ONE layer of tape is used. Apply the tape carefully to prevent it from being pinched by the fitting and broken off inside the pipe end. Loose pieces of tape could travel through the system, obstructing the flow of oil or jamming precision-fit parts.

Sheet No. 1 of 2

Issue Date: Rev. C, June 19, 2014

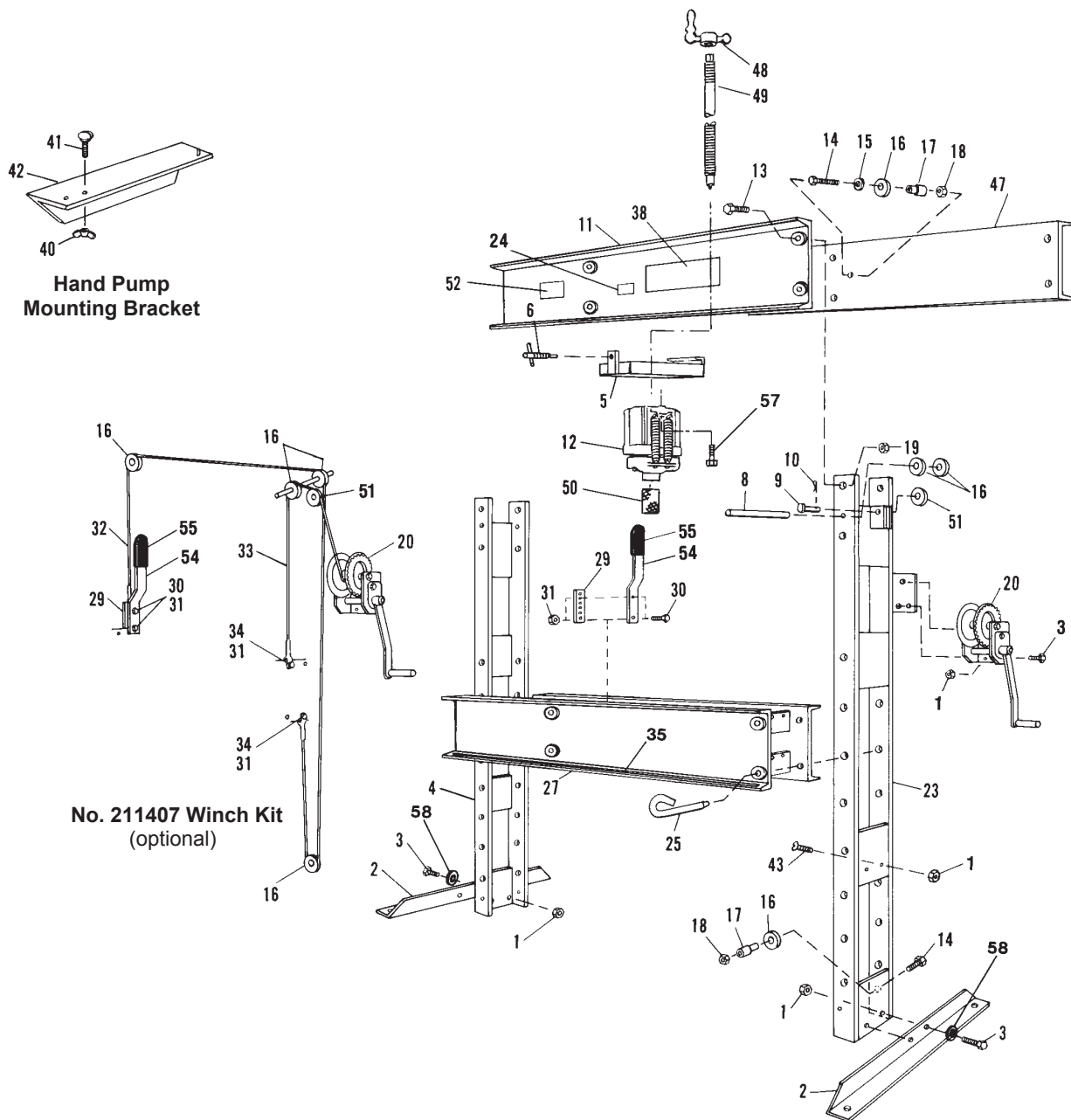
**SAFETY PRECAUTIONS (Cont.)**

**BOLSTER ADJUSTMENT:** A winch and cable assembly support the bolster when the bolster support pins are not in place.



- To prevent accidental slippage, all bolster support pins must be in place and all cables slack before a hydraulic pressing operation is performed.
- Keep hands, feet, legs, etc. out from under the bolster to prevent personal injury.
- To prevent accidental cable breakage, never raise or lower the bolster when under a load.
- When raising or lowering the bolster, place a support pin all the way through the front and back uprights in the highest hole under the bolster. Ensure the pin does not interfere with the position of the new bolster. To prevent injury, keep your hands free of the pins once the pins are in place.
- Inspect the entire length of each cable every three months. Replace any cable that is worn, frayed, or crushed. The cables must run easily along the pulleys, allowing the pulleys to turn freely.

**SHOP PRESS ASSEMBLY**



**Figure 1**

**ASSEMBLY** (This section includes instructions for installing the optional Winch Kit No. 211407.)

Remove the shipping banding that secures the press parts to the pallet. Then remove all cartons from the pallet and verify the parts received against the parts list provided.

*Note: During assembly of the press, only hand tighten the nuts and bolts. After the press is completely assembled, wrench tighten all nuts and bolts.*

1. Attach the foot angles (Figure 1, item 2) to the press uprights (Figure 1, items 23 and 4) using four ½-in. cap screws (item 3), washers (item 58), and hex nuts (item 1).

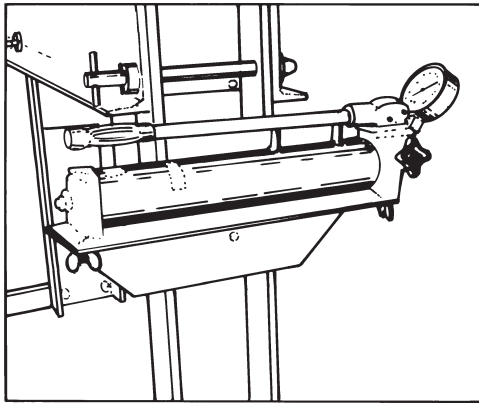
*Note: The bolster (item 27) must be positioned with the stamped number facing up and the protruding bolster end toward the left side, as you face the unit.*

2. Slide the uprights (item 4 on the left and item 23 on the right) into position and attach them to the lower bolster (item 27) using four bolster pins (item 25).
3. With the stamped part number on the upper front bolster (item 11) facing down, attach the front bolster to the uprights using four ⅞-in. cap screws (item 13) and hex nuts (item 19).
4. Insert the pulley axle (item 8) through the back hole in the top of the right-hand upright. Place two 2-in. dia. pulleys (item 16) on the axle and then push the axle into the front hole in the upright.

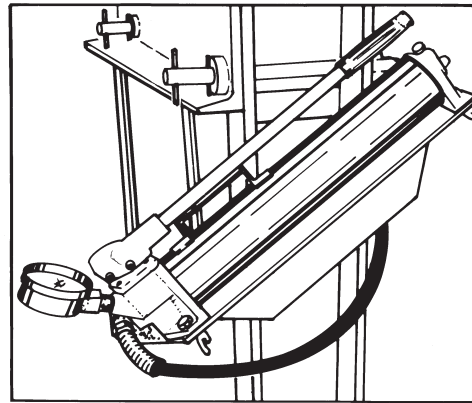
*Note: Lubricate the pulley axles using a general-purpose grease.*

5. Attach the top, back bolster (item 47) to the upright using four ⅞-in. cap screws (item 13) and hex nuts (item 19).
6. Attach a 2-in. dia. pulley (item 16) to the left side of the rear upper bolster using a spacer (item 17), a ½-in. cap screw (item 14), a washer (item 15) and a ½-in. locknut (item 18).
7. Attach a 2½-in. dia. pulley (item 51) to the upper bracket of the right upright using a clevis pin (item 9) and a cotter pin (item 10).
8. Attach a 2-in. dia. pulley (item 16) to the lower bracket of the right upright using a ½-in. cap screw (item 14), a spacer (item 17), and a ½-in. locknut (item 18).
9. Fasten two cable adjustment straps (item 29) to the spacer on the left end of the lower bolster (item 27) using two ¼-in. cap screws (item 30) and ¼-in. locknuts (item 31).
10. Attach the winch and cable assembly (item 20) to the right-hand upright using two ⅜-in. cap screws (item 3) and nuts (item 1).
11. Route the short winch cable (item 33) as shown and attach it to the top right end of the lower bolster using a ¼-in. cap screw (item 34) and ¼-in. locknut (item 31).
12. Fasten the clevis end of the long cable (item 32) to the bottom of the right end of the bottom bolster using a ¼-in. cap screw (item 34) and ¼-in. locknut (item 31). Route the cable as shown.  
*Note: The adjustment strap (item 29) has a series of holes. For the following step, select the hole that allows the cable eyelet to just reach the strap without requiring the bolster to be raised.*
13. Attach the handle (item 54) to the cable adjustment strap (item 29) using a ¼-in. cap screw (item 30) and ¼-in. locknut (item 31), making sure to slide the eyelet on the end of the cable (item 32) onto the cap screw before threading on the nut.
14. Complete the installation of the handle by installing a second ¼-in. cap screw (item 30) through the handle and cable adjustment strap and securing it with a ¼-in. locknut (item 31).

**MOUNTING HYDRAULIC UNITS**



**Figure 2**



**Figure 3**

1. Attach the pump mounting bracket (item 42) to the right-hand upright using two  $\frac{3}{8}$  in. cap screws (item 43) and hex nuts (item 1).

*NOTE: The pump bracket (item 42) can be mounted in two positions, as shown in Figures 2 and 3.*

2. Attach the hand pump to the pump bracket (item 42) using thumbs screws (item 41) and wing nuts (item 40).
3. With the pipe plug on the hydraulic cylinder (item 12) facing the rear of the press, attach the cylinder (item 12) to the cylinder mounting plate (item 5) using cap screws (57) that thread into the mounting plate.
4. Attach the cylinder assembly to the upper bolster assembly by first hooking the back end of the cylinder plate over the bottom edge of the upper rear bolster. Then secure the cylinder plate to the upper front bolster by threading an adjusting screw (item 6) into the threaded hole in the front end of the mounting plate. Tightening the adjusting screw locks the cylinder assembly in place. Loosening the adjusting screw allows the cylinder plate to be repositioned anywhere along the length of the bolster assembly.
5. Insert an adjusting screw (item 49) down between the upper bolsters and through the center hole of the hydraulic cylinder. Thread a knurled pushing adapter (item 50) onto the bottom end of the adjusting screw. Attach a speed crank (item 48) to the upper end of the adjusting screw.
6. Attach the hydraulic hose and gauge to the pump, sealing all connections with pipe sealant or Teflon tape.
7. Bleed the hydraulic system. Slowly operate the pump handle until an air-free stream of hydraulic oil flows from the hose.
8. Remove the pipe plug from the cylinder and install a straight union fitting. Then fasten the hose to the fitting.
8. Straighten and align the press. Then wrench tighten all screws and nuts.

**OPERATING INSTRUCTIONS**

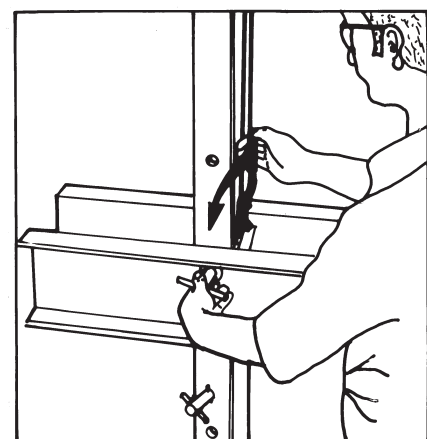
**Repositioning Bolster**

*NOTE: The cable adjusting lever is used only for alignment of the upper hole in the left-hand side of the lower bolster.*

1. Using the winch, adjust the lower bolster until the right-hand bolster hole is properly aligned to allow insertion of the bolster support pin.
2. Using the cable adjusting lever, position the bolster to permit insertion of the support pin in the upper left-hand bolster hole. See Figure 4.
3. Insert a bolster support pin on the right- and left-hand sides.

**CAUTION:**

- **Retract the cylinder when not in use, to protect the piston rod.**
- **When adding oil to the pump reservoir, use only a high-grade hydraulic oil. Never use brake fluid or other substitute.**



**Figure 4**