SPX POWER TEAM®

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Form No. 102720

Operating Instructions for:

SPE100 Series
SPF100
SPM100 Series

100 TON PRESS

This heavy-duty press can handle all your really tough pressing jobs. Wide open uprights (over 1 ft./305 mm) allow easy side loading. The ram head glides smoothly along the upper bolster on rollers, allowing fast and easy horizontal adjustments. The upper bolster can be lowered 8" (203 mm) for convenient positioning.

SAFETY PRECAUTIONS

WARNING: To prevent personal injury,

- **Read and carefully follow these operating instructions and safety precautions before assembling or using the press. Read and carefully follow the operating and safety precautions for the pump and the ram used with the press. Most problems with new equipment are caused by incorrect operation or assembly.**

- **Presses can exert extremely high forces at moderate hydraulic pump pressures. If you have any questions concerning how much force is exerted at a given pressure, contact Technical Services.**
- **This press is designed for shop maintenance applications. For more information about other applications, contact Technical Services.**
- **The owner of the press must see that it is installed and operated according to federal (OSHA), state, and local safety standards.**

- **Locate the press in an isolated area, or shield the press to minimize danger to others. Hydraulic pressure can cause materials to break, possibly resulting in personal injury.**
- **Wear protective eyewear that meets the requirements of ANSI Z87.1 and OSHA.**
- **Keep hands out of the work area during a pressing operation.**
- **Work pieces must be well supported and aligned so when pressure is exerted, parts being pressed do not slip out or break.**
- **To prevent accidental slippage, do not place work pieces 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. Any pushing or pulling adapters used with this press must have a maximum tonnage rating equal to, or higher than, the maximum tonnage rating of the press, or breakage can occur.**
- **The owner of the press must replace all safety-related decals if they become to hard to read.**
- **It is impossible for the manufacturer to provide practical "all-purpose" shielding because this is a general purpose press that can be used in many different applications. The owner of the press must supply shielding that is practical and necessary for each application. Some safety is provided by wrapping the piece in a protective blanket, such as those offered in the Power Team catalog, before applying pressure.**

SAFETY PRECAUTIONS (CONT.)

Bolster Adjustment:

WARNING: A winch and cable assembly support the bolster when the support pins are not in place. The following rules must be observed to prevent personal injury:

- **Keep hands, feet, etc. out from under the bolster. Accidental slippage can result in personal injury.**
- **To prevent slippage, all bolster support pins must be in place, and all cables slack, before placing a work piece on the press bed or starting a pressing operation.**
- **To prevent cable breakage, never raise or lower the bolster while it holds a load.**
- **When raising or lowering the bolster, remove the work piece. Insert a support pin all the way through the front and back uprights in the highest hole under the bolster that will not interfere with the new bolster position. Remove your hands from the support pins after the pins are in place to avoid personal injury should the bolster fall.**
- **Inspect the entire length of the lifting cables at least every three months. Replace any cable that appears frayed, worn, or crushed. The cables must run on the pulleys easily, and the pulleys must be free to turn. Careful cable maintenance will help prevent cable breakage.**

ASSEMBLY

Remove banding from the press and shipping pallet, and remove all cartons. Stand the press upright. Refer to the parts list, and follow these instructions during the assembly of hydraulic components and accessories.

1. Remove the lock ring and spring from the winch handle. Turn the handle 180°. Assemble the lock ring and spring again.
2. Refer to the parts list for the location of the pump mounting bracket. Mount the bracket using two hex hd. cap screws and nuts.
3. Place the pump on the bracket. Thread four machine screws through the bracket into the bottom of the pump reservoir.
4. Clean the threads on the hydraulic hose(s) and in the fittings. Assemble the hose(s) to the pump.
5. The gauge can be mounted to the pump's gauge port with a 45° elbow as shown in Fig. 1. The gauge can also be mounted at the ram by using a tee adapter between the swivel fitting and hose. If you are using a double-acting ram, install the gauge in the top swivel fitting. (See Fig. 2.) In either case, install a pipe plug in the pump's gauge port.
6. Thread the other end of the hose(s) into the swivel fitting(s) on the ram. **Note:** Seal hydraulic connections with a high quality pipe thread sealant.

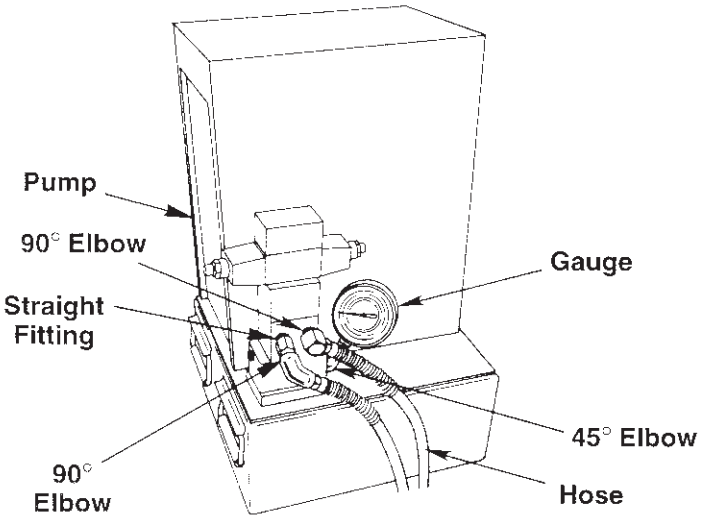

Figure 1

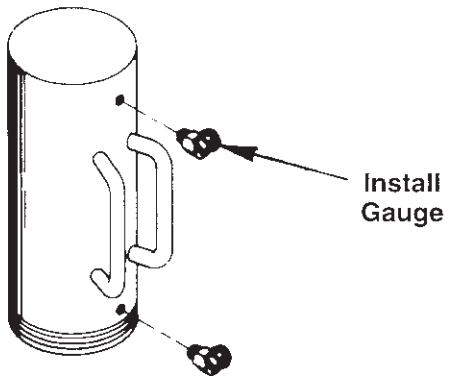

Figure 2

Assembly (contd.)

7. Air can accumulate in the hydraulic system during initial setup or after prolonged use, causing the ram to respond slowly or in an unstable manner. To remove the air, lay the ram on the floor. Extend and retract the ram several times without putting a load on the system. Air will be released through the pump reservoir.
8. Positioning the work bed:
   A. Put a small amount of tension on the cable by cranking the winch up, taking weight off the pins. This frees the pins in the end of the bolster next to the winch (or right side of the press). Pull the loose pins out.
   B. Raise the other end of the bolster by pulling slightly on the handle until the other two pins are free.
   C. Crank the winch for either up or down movement of the work bed. Reassemble the pins.

   Important: The winch has a special friction brake for holding the bolster during positioning. The friction brake is NOT designed to hold during a pressing operation, nor will it hold a work load during positioning.
9. The ram cannot be threaded into the movable head if the head is still attached to the upper bolster. (The ram's carrying handle would hit the bolster).
   A. Disassemble the hose(s) from the ram. Plug the hose end(s) and the ram's swivel fitting(s).
   B. See Fig. 3. Remove the four roll pins and spacers that connect the ram mounting plate to the threaded rods of the cylinder mounting assembly. Remove the mounting plates.
   C. Thread the ram into the mounting plate. Position the ram so the coupler points to the side of the press where the pump is mounted. **Note:** The ram handle must not interfere with the winch cable after the mounting plate and ram are installed.

WARNING: To help prevent personal injury, the ram and mounting plate MUST have maximum thread engagement to prevent the threads from stripping while the press is under full load.

   D. Due to the weight of the mounting plate and ram, the lower bolster can be used with cribbing to raise the mounting plate and ram to the top bolster.

   Important: The lower bolster should be used in this manner only during the assembly of the press because raising and lowering the bolster with a load can cause cable breakage.
   E. Fasten the mounting plate (with ram) to the threaded rods using the spacers and roll pins removed in Step B. Remove cribbing. Thread the hose(s) into the swivel fitting(s) on the ram again.