SPX POWER TEAM®

SPX Corporation
5885 11th Street
Rockford, IL 61109-3699 USA

Tech. Services: (800) 477-8326
Fax: (800) 765-8326
Order Entry: (800) 541-1418
Fax: (800) 288-7031

Internet Address:
http://www.powerteam.com

Form No. 102888

Assembly and Operating Instructions for:

SPA556
SPE556-E
SPM556

SHOP PRESS

Max. Capacity: 55 Ton

NOTE:

- **For a detailed parts list or to locate a Power Team Authorized Hydraulic Service Center, contact your nearest Power Team facility. A list of all Power Team facilities is located at the end of this document.**
- **Carefully inspect the press upon arrival. The carrier, not the manufacturer, is responsible for any damage resulting from shipment.**

SAFETY DEFINITIONS

Safety symbols are used to identify any action or lack of action that can cause personal injury. Your reading and understanding of these safety symbols is very important.

DANGER - Danger is used only when your action or lack of action will cause serious human injury or death.

WARNING - Warning is used to describe any action or lack of action where a serious injury can occur.

IMPORTANT - Important is used when action or lack of action can cause equipment failure, either immediate or over a long period of time.

SAFETY PRECAUTIONS

These instructions are intended for end-user application needs. Many problems with new equipment are caused by improper operation or installation. For a detailed parts list or to locate a Power Team Authorized Hydraulic Service Center contact your nearest Power Team facility. A list of all Power Team facilities is located at the end of this document.

WARNING: It is the operator's responsibility to read and understand the following safety statements,

- **Only qualified operators should install, operate, adjust, maintain, clean, repair, or transport this machinery.**
- **These components are designed for general use in normal environments. These components are not specifically designed for lifting and moving people, agri-food machinery, certain types of mobile machinery or special work environments such as: explosive, flammable or corrosive. Only the user can decide the suitability of this machinery in these conditions or extreme environments. Power Team will supply information necessary to help make these decisions.**

SAFETY PRECAUTIONS - CONTINUED

⚠ WARNING: To help prevent personal injury,

GENERAL

- **ALWAYS read and carefully follow the operating instructions and safety precautions before assembling or using this press. Most problems with new equipment are caused by incorrect operation or assembly.**
- **Read and carefully follow the operating instructions and safety precautions for the pump and cylinder used with this press.**
- **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 your nearest Power Team facility (see listing at the end of this document).**

SET-UP

- **The owner/operator of this press must see that it is installed and operated according to federal (OSHA), state, local European (EU), and other safety standards where applicable.**
- **Install 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 due to flying objects, falling objects, shifting loads and other hazards.**
- **This press is designed for shop maintenance applications. Guards, enclosures, monitors, interlocks, controls, restraints, and other devices must be used by the owner/operator when this press is used for specific applications with hazards best known by the owner/operator. For information regarding other applications, contact your nearest Power Team facility (see listing at the end of this document).**
- **Additions of specific safety equipment, such as permanent enclosures, guards or shields, light curtains, etc., to the press must be on separate, free-standing structures, or clamped to the press frame without cutting, drilling, welding or otherwise modifying the press structure or affecting it's function. Such modifications can cause equipment damage and/or personal injury.**
- **Modifications to the structure and function of this press are not permitted, voids the warranty, may cause personal injury, and voids the Declaration of Incorporation.**
- **Any press accessories, fixtures, plates, or special equipment used with the press must have a maximum tonnage rating equal to or higher than the maximum tonnage rating of the press, or breakage and possible injury can occur.**
- **The owner/operator of the press must ensure that all safety-related decals are installed, maintained, and replaced if they become hard to read.**

OPERATION

- **The press operator and anyone within sight of the press must wear protective eyewear that meets the requirements of OSHA, ANSI Z87.1-1968, or applicable EU standards.**
- **It is the owner/operator's responsibility to use appropriate guarding to contain any pieces that might break or fly apart when applying force. For added protection, always wrap the workpiece in a protective blanket before applying force. Contact your nearest Power Team facility (see listing at the end of this document) for more information about protective blankets.**
- **Keep hands out of the work area during a pressing operation.**
- **Workpieces must be well supported and aligned so that cylinder/ram force is straight, and parts being pressed cannot slip out or break.**
- **Use caution when loading and unloading the press.**

SAFETY PRECAUTIONS - CONTINUED

BOLSTER ADJUSTMENT

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

- **Keep hands, feet, legs, etc. out from under the bolster. Accidental slippage can result in personal injury.**
- **When raising or lowering the bolster, place a support pin all the way through the front and the 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. Failure to do so can result in personal injury if the bolster falls.**
- **Bolster support pins must be securely in place and all cables slack before placing a workpiece on the press bed or starting a pressing operation. Stay out from underneath the bolster.**
- **Regularly inspect the entire length of the lifting cables, and replace any cable that appears frayed, worn, or crushed. The cables must run on the pulleys properly, and the pulleys must be free to turn. Proper cable maintenance will help prevent accidental cable breakage.**

ASSEMBLY

(Item numbers refer to Figure 1)

IMPORTANT: During the assembly of the press, hand tighten nuts and bolts unless otherwise directed. Use a wrench on nuts and bolts after the assembly has been completed.

1. Place lower bolster assembly (Item #10) on 4" blocks approximately 30" long. Blocks must lay parallel to bolster sides. **NOTE: The cable attaching holes in the bolster lifting plates must be facing up.**
2. Attach foot angles (#13) to press uprights (#4) using two 1/2" cap screws (#16) and hex nuts (#7).
3. Insert spacer (#21) through press uprights and foot angles. Attach spacer using two 1/2" washers (#20) and nut (#7).
4. Attach back upper bolster (#1) to top of uprights using six 1" cap screws (#6) and jam nuts (#5). **NOTE: The mounting holes for the cylinder/ram plate (#9) must be facing down.**
5. **For the right side:**
   a. Insert pulley axle (#24) through the front side of upright (#4).
   b. Slide pulley (#23) onto pulley axle inside upright frame. Continue inserting axle through back side of upright until it bottoms out against back bolster.

   For the left side:
   a. Insert pulley axle through front side of upright. Slide four spacers (#28) and two pulleys (#29) on pulley axle inside upright frame. Continue inserting axle through back side of upright until it bottoms out against back bolster.
6. Attach front upper bolster (#1) to uprights using six 1" cap screws (#6) and jam nuts (#5). **NOTE: The mounting holes for the cylinder/ram plate (#9) must be facing down.** Once attached, the front upper bolster holds axle pulleys in place.
7. Attach winch assembly (#17) to left upright using two 3/8" bolts (#19). Tighten these bolts securely.
8. Bring end of cable without a clevis down left side and attach to winch. See Figure 1, Detail "A".
9. Thread cable assembly (#25) over front pulley on left upright. Loop longest cable around pulley on right side and back to rear pulley on left side down to cable attaching hole on left lower bolster.
10. Loop short cable (with clevis) around pulley on right side down to cable attaching hole on right lower bolster.
11. Using winch, carefully raise lower bolster. Install bolster pins (#12) below raised bolster and lower bolster onto pins before removing blocks used in Step 1.
12. Straighten press and wrench tighten all hex nuts and cap screws.

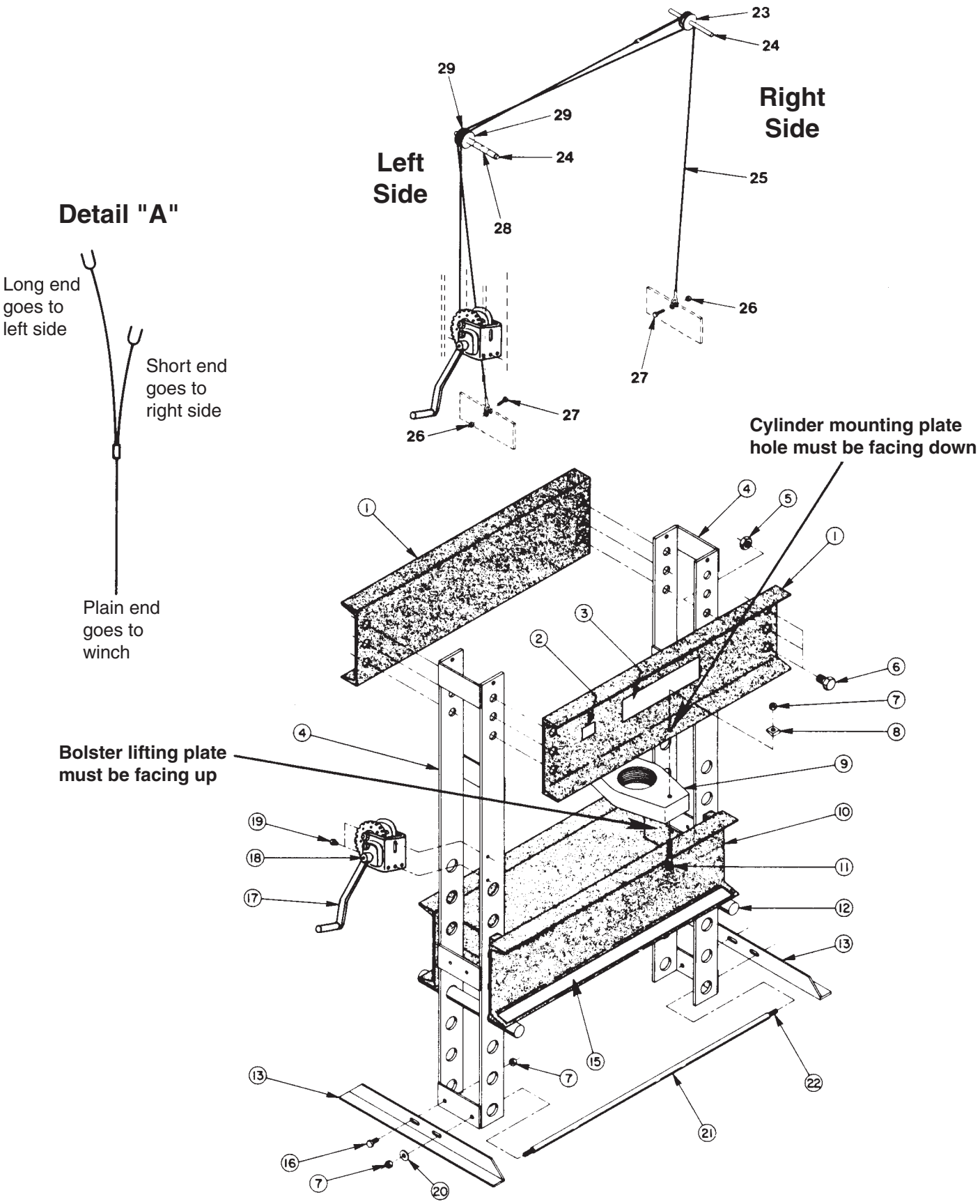
Detail "A"
Long end goes to left side
Short end goes to right side
Plain end goes to winch
Left Side
Right Side
Cylinder mounting plate hole must be facing down
Bolster lifting plate must be facing up
23
24
29
29
24
25
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FIGURE 1

HYDRAULIC HOOK-UP

1. Attach pump mounting bracket to right hand press upright using two 3/8" bolts and nuts.

2. Attach pump to mounting bracket using the fasteners supplied with the pump.

3. Assemble gauge and hose to pump using hydraulic hose, gauge, adapters and couplers supplied. **IMPORTANT: Use a high grade, non-hardening pipe thread sealant to seal hydraulic connections. Teflon tape can be used if only ONE layer of tape is used. Apply carefully, two threads back, to prevent the tape from being pinched by the coupler and broken off inside the system. Any loose pieces of tape could travel through the system and possibly obstruct the flow of hydraulic fluid.**

4. Attach hoses to cylinder port(s). Position cylinder on its side (with port[s] up) and at a lower level than the pump. Cycle the cylinder several times to remove trapped air. Remove hoses and fittings from cylinder to continue on with installation.

5. Thread cylinder into cylinder mounting plate. **IMPORTANT: Cylinder threads must be flush with bottom of cylinder mounting plate (full thread engagement).**

6. Place cylinder assembly on lower bolster. **IMPORTANT: Pipe plug on cylinder must face pump side of press frame.** By operating winch mechanism, raise cylinder assembly to upper bolster. Block cylinder assembly if additional height is needed so cylinder will reach upper bolster when lower bolster is raised.

7. Attach cylinder mounting plate to upper bolsters with cap screws (#11), hex nuts (#7) and beveled washers (#8). **NOTE: Place beveled washers on top of bottom lip of upper bolster. Larger dimension of beveled washer is positioned to outside of bolster to give a level surface for tightening hex nuts. See Figure 1.** With bevel washers in correct position, wrench tighten hex nuts.

8. After cylinder assembly has been secured to upper bolster, lower bolster assembly onto bolster pins. **IMPORTANT: Do not relocate cylinder assembly anywhere except intended central location. If off-center loading occurs, an excess load will be placed on the uprights. The uprights are not designed for excess loads so could result in equipment damage and/or personal injury.**

9. Bleed hydraulic system by slowly operating pump handle until an air-free stream of hydraulic fluid flows from hose. Remove pipe plug on cylinder and attach hydraulic hose. **IMPORTANT: Position hoses to avoid wear or damage during operation of the press.**

IMPORTANT: To help prevent equipment damage,

- **Retract the cylinder piston rod when it isn't being used to help prevent damage to the finished surface of the piston rod.**
- **When refilling the pump reservoir, use only high grade hydraulic fluid. *Never* use brake fluids or other substitutes.**

Note: Removed reference to HTS6 thread sealant.

POWER TEAM FACILITIES

SPX POWER TEAM®

UNITED STATES
SPX Corporation-Fluid Power
5885 11th Street
Rockford, IL 61109-3699
USA
Telephone: 1-815-874-5556
FAX: 1-815-874-7853

Cust. Service/Order Entry
Tel: *1-800-541-1418*
FAX: *1-800-288-7031*
E-mail:
info@fluidpower.spx.com

Technical Services
Tel: *1-800-477-8326*
FAX: *1-800-765-8326*

CHINA
212 Jiang Ning Road
CATIC Tower 23C
Shanghai 200041, China
Tel: *86 (21) 5289 5858*
FAX: *86 (21) 5289 5866*
E-mail:
info.asia@fluidpower.spx.com

FAR EAST
7 Gul Circle
Singapore 629563
Singapore
Tel: *(65) 6265-3343*
FAX: *(65) 6265-6646*
E-mail:
info.asia@fluidpower.spx.com

EUROPE
Albert Thijsstraat 12
6471 WX Eygelshoven
Netherlands
Tel: *31 (45) 5678877*
FAX: *31 (45) 5678878*
E-mail
info.europe@fluidpower.spx.com

For more information, Internet address: http://www.powerteam.com (or) http://www.hytec.com