

# Air / Hydraulic Pump Instructions



***CAUTION: Read and Understand***

These Operating, Servicing, and  
Safety Instructions, Before Using  
This Machine.

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# SAFETY

**The purpose of the safety section of this manual is to inform operators and maintenance personnel of the precautions to be taken while operating or servicing the machine. The following are a few basic guidelines to follow, but as with any type of machinery good judgment and a safe attitude should be applied at all times.**

1. Always disconnect power, lock-out and tag-out machine per OSHA regulations before attempting to service this machine.
2. Always wear safety glasses or other approved eye protection while operating or servicing the machine.
3. Keep all body parts and any foreign objects away from moving parts. Do not reach into the machine without first disconnecting all power sources.
4. Do not attempt to override any safety device on the machine.
5. Do not operate the machine if it has been damaged or is not operating properly.
6. Do not wear jewelry (watches, rings, necklaces, etc.), or loose fitting clothing while operating or servicing the machine.
7. The machine should only be operated or serviced by properly trained, authorized personnel.
8. Replacement parts should have the same specification and operation as the original parts on the machine.
9. Before starting the machine be sure it is set up properly.
10. The machine and work area should be kept neat and clean.
11. Do not operate or service any machine while under the influence of drugs or alcohol.

**NOTE: THESE SAFETY RULES ARE FOR YOUR BENEFIT TO HELP PREVENT INJURY TO YOURSELF AND/OR YOUR CO-WORKERS. REVIEW ALL SETUP AND OPERATING PROCEDURES, WHETHER COVERED OR NOT, IN THIS MANUAL TO HELP INSURE SAFE OPERATION OF THE MACHINE.**

## **HYDRAULIC SAFETY PRECAUTIONS**

### **WARNING**

#### ***General Operation***

- All WARNING statements must be carefully observed to help prevent personal injury.
- Before operating the pump, all hose connections must be tightened with the proper tools. Do not over tighten. Connections should only be tightened securely and leak-free. Over tightening can cause premature thread failure or high pressure fittings to split at pressures lower than their rated capacities.
- Should a hydraulic hose ever rupture, burst, or need to be disconnected, immediately shut off the pump and release all pressure. Never attempt to grasp a leaking pressurized hose with your hands. The force of escaping hydraulic fluid could cause serious injury.
- Do not subject the hose to potential hazard such as fire, sharp surfaces, extreme heat or cold or heavy impact. Do not allow the hose to be altered or kink, twist, curl, crush, cut, or bend so tightly that the fluid flow within the hose is blocked or reduced. Periodically inspect the hose for wear, because any of these condition's can damage the hose and possibly result in personal injury.
- Do not use the hose to move attached equipment. Stress can damage hose and possibly cause personal injury.
- Hose material and coupler seals must be compatible with the hydraulic fluid used. Hoses also must not come in contact with corrosive materials such as creosote-impregnated objects and some paints. Consult the manufacturer before painting a hose. Hose deterioration due to corrosive materials can result in personal injury. Never paint the couplers.
- Inspect machine for wear, damage, and correct function before each use. Do not use machinery that is not in proper working order, but repair or replace it as necessary.
- Replace worn or damaged safety decals.
- Modification of a product requires written Power Team authorization.
- Use only components with the same pressure rating when assembling a system or machine.

#### ***Pump***

- Do not exceed the hydraulic pressure rating noted on the pump data plate or tamper with the internal high pressure relief valve. Creating pressure beyond the rated pressure can result in personal injury.
- Before replenishing the fluid level, retract the system to prevent overfilling the pump reservoir. An overfill can cause personal injury due to excess reservoir pressure create when cylinders are retracted.

#### ***Air Supply***

- Shut off and disconnect the air supply when the pump is not in use or before breaking any connections in the system.

## ***PREPARATION & SET-UP***

#### ***Air Supply Hook-Up***

Remove the thread protector from the air inlet of the pump. Select and install the threaded fittings which are compatible with your air supply fittings. The air supply should be 20 CFM (.57 M3/min.) and 100 PSI (7 BAR) at the pump to obtain the rated hydraulic pressure. Air pressure should be regulated to a maximum of 140 PSI (9 BAR). Secure your pump fitting to the air supply.

**WARNING:** If improperly used, pressurized equipment can be potentially hazardous. Therefore:

- Hydraulic connections must be securely fastened before building pressure in the system.
- Release all system pressure before loosening any hydraulic connection in the system.

#### ***Venting the Reservoir***

To improve hydraulic fluid delivery and increase useable hydraulic fluid capacity, remove shipping plug and install filler/vent cap before using the pump.

# HYDRAULIC SYSTEM

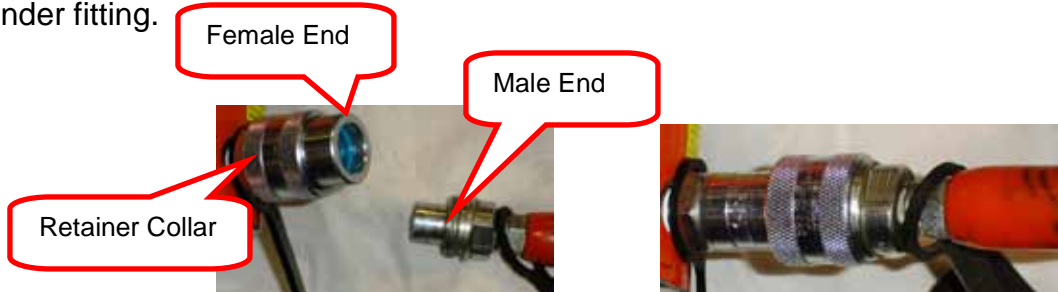
1. Remove the **RED Plug** in the pump assembly and replace with the supplied **BLACK plug**. This is the reservoir venting system and damage or inoperability may result if not changed out.

2. Attach the hydraulic hose to the pump. Be sure to use a quality thread sealer on both connections

3. Attach an air line fitting for your shop air to other end of the pump.

4. Push the pump foot pedal to the release position (TOE END) to relieve all internal pressure.

5. Push the MALE hose end, from the pump, into the FEMALE Cylinder fitting.



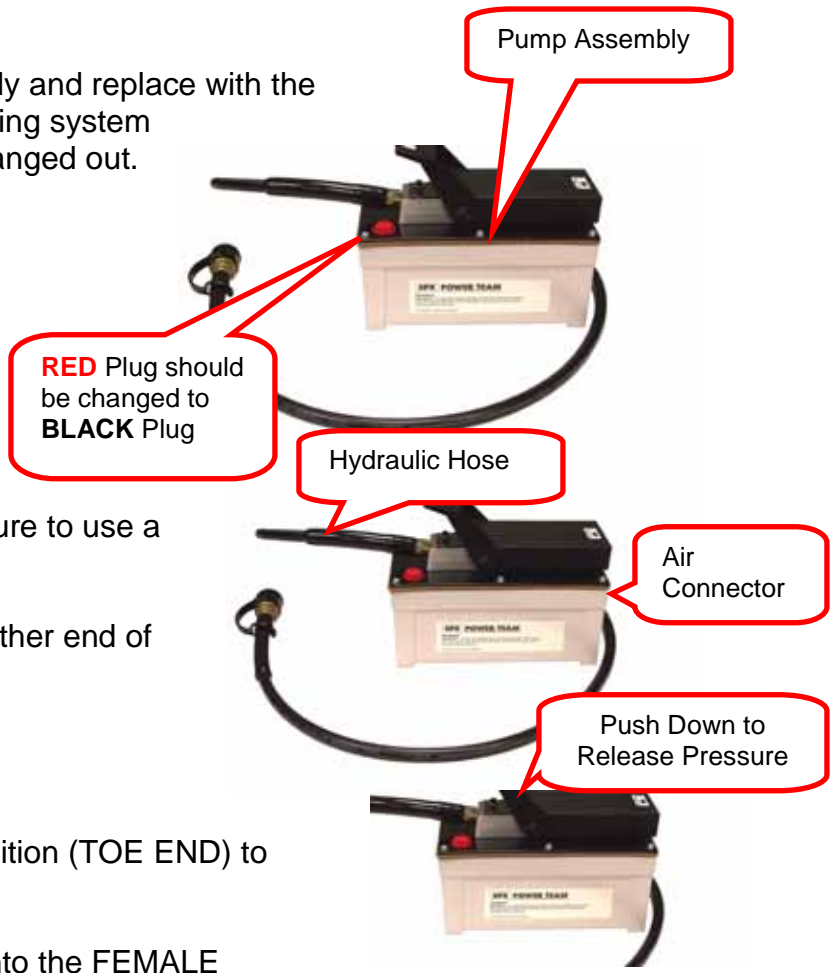
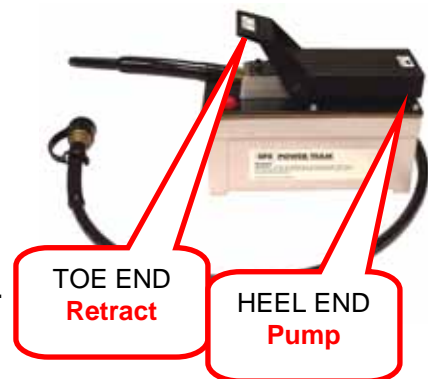
6. Thread the retainer collar hand tight. **NOTE:** This procedure will insure that the male & female fittings positively seat against each other, eliminating any possibility of air locking. **CAUTION** Failing to follow this procedure may cause the cylinder to not retract and / or leak.

## BLEED THE CYLINDER

7. Connect a compressed air supply (90PSI) to the pump.

8. Elevate the pump and hose above the cylinder.

9. Push the hydraulic pump pedal **HEEL END** to actuate the cylinder. Run the cylinder out about half way. Release the pump by pressing on the **TOE END** of the pedal. Repeat this process three or four times or until the ram cylinder movement is smooth.





# MAINTENANCE

## Inspecting The Hydraulic Fluid Level

Check the fluid level in the reservoir after every 10 hours of use. Drain and replenish the reservoir with Power Team hydraulic fluid after every 300 hours of use approximately.

<p><b>Air Hydraulic Pump</b> For pumps with a 105 cubic inch (1.71) reservoir capacity</p> <p>The fluid level should be 1/2 inch (12.7 mm) from the filler / vent cap with all cylinders retracted.</p>	<p><b>Electric Hydraulic Pump</b> For pumps with a 2 gallon (7.61) reservoir capacity</p> <p>The fluid level should be 1-3/4 inch (44.5 mm) from the filler / vent cap with all cylinders retracted.</p>
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### For Machines With:

<p><b>SPX Power Team</b> Orange &amp; White Cylinder with Black Letters White &amp; Black Pump</p>  <p>Use: AW 46 - Non Foaming Hydraulic Fluid or Flame Out # 220 Fire Resistant Hydraulic Fluid</p>	<p><b>Enerpac</b> Yellow Cylinder with Black Letters Yellow &amp; Black Pump</p>  <p>Use: ISO 7 HF 101 Gal or ISO 32 HF 100 Qt. or Mobil DTE 24 Hydraulic Oil is Compatible with Enerpac Components</p>
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## Refilling The Reservoir

If additional fluid must be added to reservoir, **use only manufacturer suggested hydraulic fluid.**

Clean the entire area around the filler plug before adding fluid to the reservoir.

Remove the filler plug and insert a clean funnel with filter.

The cylinder must be fully retracted and the air supply disconnected when adding the fluid to the reservoir.

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