



Before Starting Your New Power Unit . . .

Congratulations! You've purchased a quality power unit from Continental Hydraulics - a leading designer and builder of power units. Proper attention to start-up procedure will help assure that your power unit will give long, trouble-free service. Please review and follow the procedures below. If you have any questions or comments, please call us at (952) 895-64800.

We inspect every power unit for circuit integrity. We test at maximum pressure and flow based on electric motor capacity. Any special pump or relief valve setting you've requested have been made, and noted on a card attached to the component that was set.

Units shipped without special settings are set at low pressure - around 300 PSI.

I. Fill the Reservoir

Use premium grade hydraulic fluid to fill the reservoir. Recommended fluid viscosity is as follows:

Maximum System Pressure	Minimum Operating Viscosity	Recommended Operating Viscosity	Recommended Minimum Fluid Viscosity Rating
1000 PSI	80 SUS	100-250 SUS	ISO 32 (150 SUS @ 100° F)
1500 PSI	100 SUS	150-250 SUS	ISO 46 (220 SUS @ 100° F)
2000 PSI	120 SUS	150-250 SUS	ISO 46 (220 SUS @ 100° F)
3000 PSI	120 SUS	150-250 SUS	ISO 46 (220 SUS @ 100° F)

FILL THROUGH A SUITABLE FILTER, COMPATIBLE WITH THE FLUID. Check the fluid code on the Model Designation Label affixed to your power unit. (Fig. 1)

- H1 = Hydraulic Oil
- H2 = Water-in-Oil Emulsion
- H3 = Phosphate Ester
- H4 = Water Glycol
- H5 = Automatic Transmission Fluid

If the fluid you are using does not match the code on the label, contact your nearest Continental Hydraulics Representative before operating the power unit.

For cold weather operation, down to 0° F, premium multi-purpose automatic transmission fluid (ATF) Type "A", or Type "F" may be used. When using ATF, reservoir temperature should not exceed 130° F.

Maintain fluid level. During normal operation, fluid should be visible in the sight gauge.

II. Alignment



CAUTION: Before energizing the power unit, make sure that any resulting equipment motion will not cause personal injury or equipment damage.

Great care has been taken to protect your power unit during shipment. However, no one can predict the amount of jarring and shaking that the unit will be subjected to. Therefore, all foot bracket type pump/motor assemblies should be checked for proper alignment before start up. This can be accomplished by wiring the motor to a proper electrical source. Check the motor nameplate for correct wiring on dual voltage motors. Jog the motor to check rotation. Polyphase motors are bidirectional. Proper rotation can be established by reversing any two power leads.

The electrical characteristics of control valves are shown on their solenoids. Make sure they are wired to a matching voltage/cycle source.



CAUTION: Energizing both solenoids on the same double solenoid valve could cause the coils to burn out.

III. Pressure Adjustment - Pressure Compensated Pumps

After the pump has been primed, run it for several minutes at lower than normal pressure, with an open, or intermittently open system to permit oil flow. This will purge entrapped air from the pump and system.

Pressure adjustment should be made when the circuit is in a no-flow condition, with the electric motor running, and after the pump has been primed and the system bled.

Fluid Code

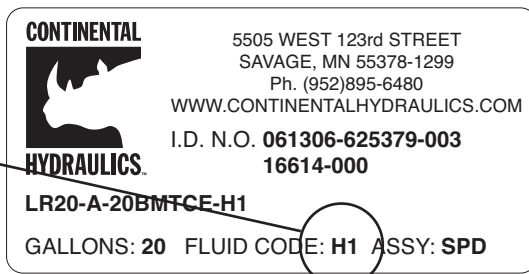


Figure 1

Pressure compensated pumps will operate in a no-flow condition without damage. System pressure should be set as low as possible to overcome dynamic pressure drop and provide acceleration required to move the load.



Never operate above rated pressure indicated on the pump nameplate.

Fixed displacement pumps should have a relief valve installed as close to the pump outlet as possible. This valve should be set 200-300 PSI higher than the maximum system working pressure.



Failure to use some type of relief or unloading circuit with a fixed displacement pump is dangerous, and is not approved by Continental Hydraulics.

All piston pumps and vane pumps operated above 1500 PSI valve in their circuit. The relief valve should be set at a minimum of 100 PSI above operating pressure.

If the unit you received is not equipped with a relief valve, and if it is equipped with a piston pump or vane pump operating above 1500 PSI, check to see that there is a relief valve elsewhere in the circuit. If you need advice, contact your nearest Continental Hydraulics Distributor.

IV. Operating Temperature

For most industrial applications, and operating temperature of 140° F is considered maximum. The system should be designed so that heat rise at the reservoir does not exceed 40° F above ambient air temperature.

At higher temperatures it will be difficult to maintain reliable and consistent hydraulic control. At higher temperatures, hydraulic fluid deteriorates, and component life is reduced.



CAUTION: Hydraulic fluid at temperatures greater than 140° F poses a significant threat of burns.

V. Fluid Level, Fluid Cleanliness, Pressure Gauges

Always maintain operating oil level at a level visible on the sight gauge. When starting up the system, be sure to check the oil level after the system is filled. Add oil as needed. Low oil level can cause the system to draw in air or cause excessive heat in the system.

Most foreign material in a system flushes to the reservoir after a few hours of operation. We recommend that you drain the tank, replace the fluid, change the filter, and clean the strainer after 3-5 hours of operation. After the initial cleaning, the strainer should be cleaned at a minimum of every 4000 hours of operation. More frequent cleaning is required if the power unit and actuators are used in a highly contaminated atmosphere such as a foundry or lumber mill.

If the unit is equipped with a pressure/return filter, replace the element as needed to assure fluid cleanliness. We recommend specifying filters equipped with indicators that identify when it's time to change elements.

Pressure gauges should have some type of shut-off so they can be shut off when they are not being read. Occasionally, the shut-off valve should be opened at atmospheric pressure to exhaust any pressurized fluid between the gauge and the valve.

Should any component malfunction, contact your nearest Continental Hydraulics Distributor for advice about the most effective means of repair.

Good preventive maintenance is the best insurance against unscheduled downtime. Unscheduled downtime is usually more expensive than providing good preventive maintenance.



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