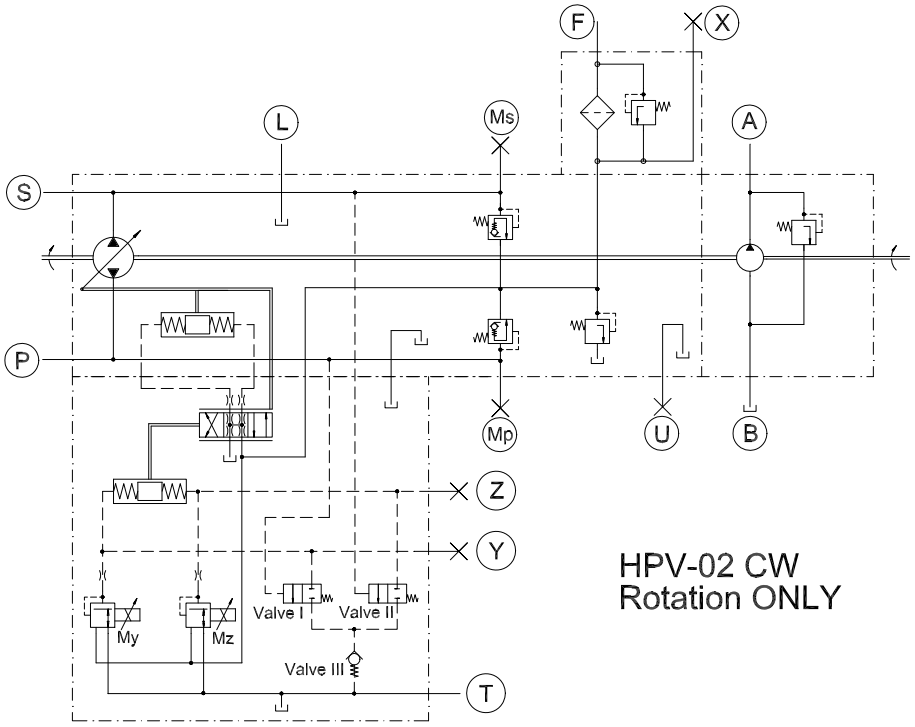
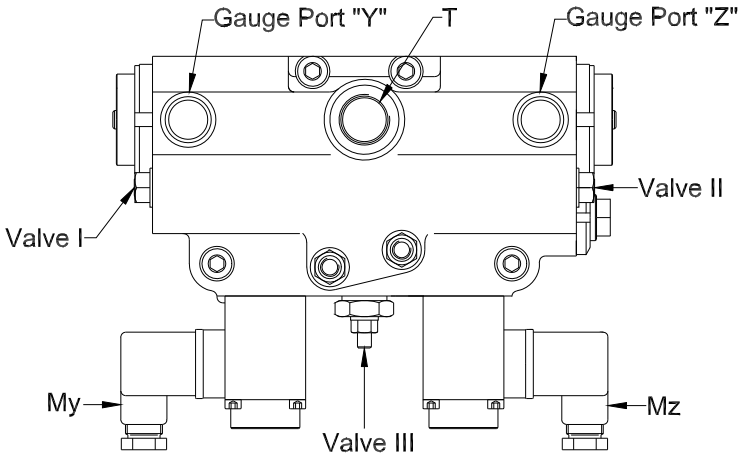
IMPORTANT: This is a "field adjustment" procedure valid for HPV-02 pumps with CW (Right-Hand) rotation and E1P Control

Notes:

- Since the oil is being bled over the main relief valves during this procedure, monitor the oil temperature in the main loop to avoid over heating.
- Oil Temperature Limitations for Linde Components: (-4)°F to 194°F (-20)°C to 90°C
- Changes to any pump setting, control supply pressure, or system hardware after the POR has been adjusted could alter the performance of the POR. It may be necessary to readjust the POR to compensate for any of these changes.
- Recommended Gauges:
  - (Qty 1) 7,500 psi Liquid-filled gauge (Qty 2 recommended for ease of testing)
  - (Qty 1) 0-200 psi Δp-gauge or Δp-transducer

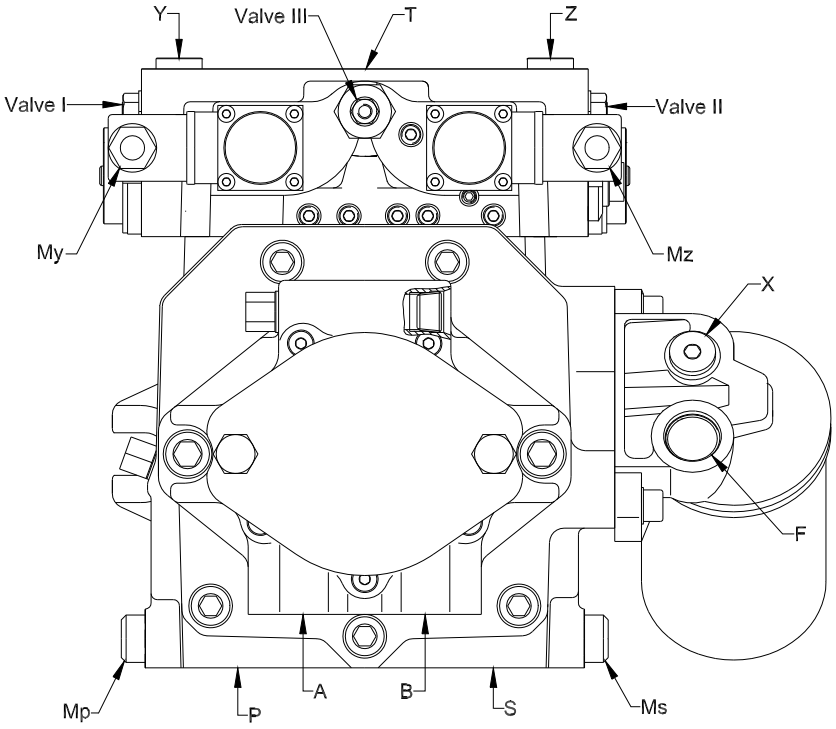


Port Identification and Adjustment Locations:



For a CW Rotation Pump:

	Energize Solenoid My	Energize Solenoid Mz
Control Pressure At Port	Y	Z
Pump Output Pressure at Port	P	S
Must Adjust	Valve I	Valve II



Pressure Override (POR) Adjustment:

1. POR Setup:

   A. Measure and record the regulation begin pressures below.

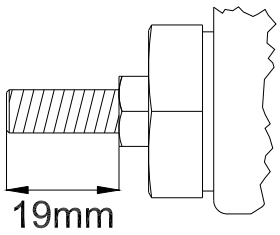
      "ΔPy-z" Regulation Begin : _____psi.....(value "a")

      "ΔPz-y" Regulation Begin : _____psi.....(value "b")

   B. Turn **OUT** the adjustment screw for "Valve III" all the way (it is mechanically restricted from being removed completely).

   C. Turn **OUT** the adjustment screw for "Valve I" and "Valve II" by 3-4 full turns.

      Warning: *Care should be taken NOT to remove the adjustment screw in "Valve I" and "Valve II" completely. Do NOT turn **OUT** the adjustment screw more than 19mm as illustrated below:*



   D. Connect the 0-7500 psi liquid-filled gauges to work port gauge ports "Mp" and "Ms".

   E. Connect the 0-200 psi Δp-gauge/transducer to control gauge ports "Y" and "Z".

"Valve I" and "Valve II" Adjustments:

A. Close OFF or block both of the pump work ports "P" and "S".

B. Energize solenoid "My" to its maximum value and hold it.

   Note: System pressure will be unstable - This is an expected pump reaction.

C. While monitoring work port pressure "P", *SLOWLY* turn the adjustment screw for "Valve I" IN until the pressure just stabilizes.

   IMPORTANT
   You must slowly turn the adjustment screw in ONLY until the pressure stabilizes and then stop. If you continue to turn the adjustment screw in, system pressure will continue to increase and an unnecessary amount of oil will be forced over the main relief valve, thus the operation of the POR will become less efficient.

D. Tighten the locking nut on "Valve I" and de-energize solenoid "My".

E. Repeat steps "A" through "D" for solenoid "Mz" while monitoring work port pressure "S" and adjusting "Valve II".

3. "Valve III" Adjustment:

A. Keep both of the pump work ports ("P" and "S") closed off or blocked.

B. Energize solenoid "My" to its maximum value and hold it.

C. Slowly turn IN the adjustment screw for "Valve III" until control pressure "ΔPy-z" is 10 - 15 psi higher than the "ΔPy-z" Regulation Begin pressure recorded above **(value "a")**.

   Record the "ΔPy-z" setting: _____ psid.....(value "e")

D. Tighten the locking nut on "Valve III" and de-energize solenoid "My".

E. Energize solenoid "Mz" to its maximum value and hold it. Verify that the pressure is 10 - 15 psi higher than the "ΔPz-y" Regulation Begin pressure recorded above **(value "b")**.

   Record the "ΔPz-y" setting: _____ psid.....(value "f")

HINT:
If "Valve III" gets too hot, it will be difficult to adjust and/or get consistent results. Allow the pump to cool off if you encounter difficulty adjusting "Valve III".

Final Adjustment:

A. IF the difference between (value "e") and (value "f") is 5 psi or less, then NO additional adjustments are required to the POR.

B. IF the difference between (value "e") and (value "f") is greater than 5 psi, then either "Valve I" or "Valve II" needs to be backed out. The side which has the higher value must be backed out until the difference between (value "e") and (value "f") is 5 psi or less.

C. Energize solenoid "My" to its maximum value and verify that work port pressure "P" is stable and control pressure does NOT increase/decrease for ~10 seconds.

D. Energize solenoid "Mz" to its maximum value and verify that work port pressure "S" is stable and control pressure does NOT increase/decrease for ~10 seconds.

Note:
If either one or both work port pressures are not stable, then repeat the POR adjustment process starting with step #1 above.

If the control pressure changes during steps "C" or "D" above, then "Valve I" and/or "Valve II" is not adjusted correctly. Repeat the POR adjustment process starting with step #1 above.

ATTENTION

You have been provided information on conversion, repair and/or service of Linde components. Proper application of the information requires specific training and may require use of specialized tooling and equipment. If you choose to proceed with the conversion, repair and/or service of the Linde component(s) absent the necessary training and/or these specialized tools, you do so at your risk.

Linde Hydraulics Corporation will accept no claim for warranty or other consideration resulting from deficiencies in the conversion, repair and/or service done in accordance with the guidance offered herein when the necessary training has not been conducted and/or required specialized tooling and equipment has not been utilized.

All requests for training must be coordinated through your Linde Account Manager. He can also provide you price and availability of any specialized tooling.

Questions regarding the information provided or this disclaimer should be addressed to the Warranty & Service Department, Linde Hydraulics Corporation.

5089 Western Reserve Road
Canfield, OH 44406
330.533.6801 (Telephone)
330.533.9873 (Facsimile)
www.lindeamerica.com (Web Site)