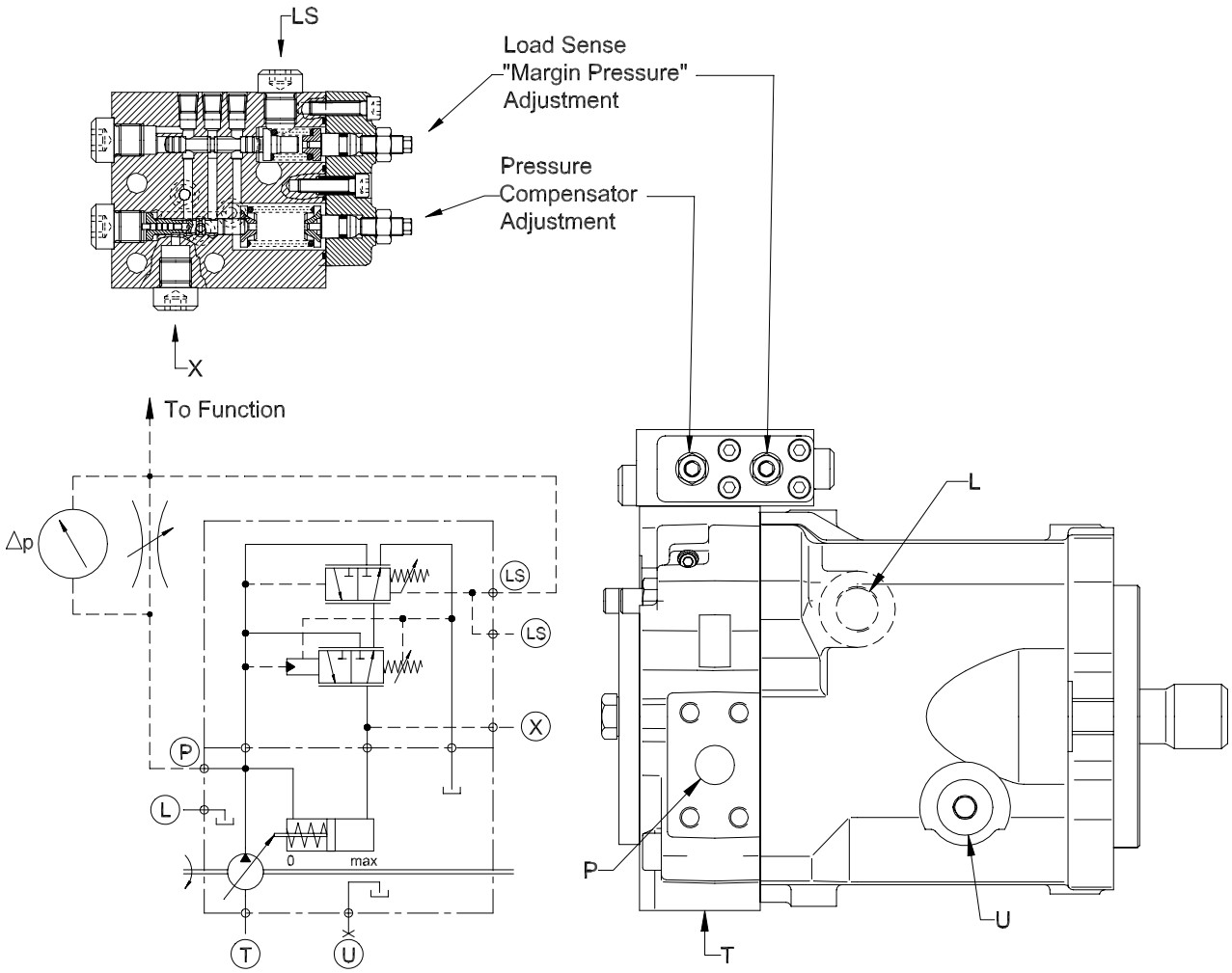

Tools/Equipment Required:

- 0-7000 psi pressure gauge or transducer
- 0-500 psi Δp-gauge
- 13mm wrench
- 6mm wrench (optional: small adjustable wrench)

WARNING:

If performing this procedure on a vehicle, care must be taken. The pump will be put on stroke during this procedure, hence all personnel should be removed from the area of the machine. If using the pump for a propelling function, then the vehicle must be safely elevated to allow the propel motor to free-wheel.

Load Sense "Margin Pressure" Adjustment Procedure:

1. Install the Δp-gauge as illustrated in the schematic above. Make sure that the "HI" side of the gauge is connected to "P" and the "LO" side is connected to "LS".

NOTE:
There are two methods which can be used to set the "margin pressure" on an HPR-02 pump. The method illustrated in "Step #2" is recommended to accurately set the "margin pressure". However, the method illustrated in "Step #3" is sufficient for field adjustments or if the parameters in "Step #2" cannot be met.

The recommended pressure range for the "margin pressure" setting is 290 to 305 psi. Margin pressure set greater than 305 psi may lead to erratic and unstable performance from the pump. Margin pressure set less than 290 psi may lead to smoother or sluggish performance from the pump.

2. This is the recommended procedure to use:

   a. Set the pump input speed to 2300 RPM.

   b. Use a loading valve or relief valve to limit the pump output pressure (at port "P") to 1450±73 psi.

   c. Set the pump output flow to 18.5±1.3 GPM.

   d. Use the Δp-gauge to determine the "margin pressure" setting.

   e. To Adjust the "Margin Pressure":

      - Use the 13mm wrench to loosen the locking nut on the "Load Sense Adjustment".
      - Use the 6mm wrench to turn the "Load Sense Adjustment" stud. Turn it IN to increase the "margin pressure" setting or turn it OUT to decrease it.
      - When the desired "margin pressure" is acquired, hold the adjustment stud stationary with the 6mm wrench and tighten the locking nut with the 13mm wrench.

3. The following procedure is optional for field adjustment:

   a. Set the pump input speed to 2300 RPM. If this is not possible, set it to high idle.

   b. Actuate a function so that the pump supplies flow. If possible, limit the pump flow to 18 to 20 GPM. Also, if possible, actuate a function which only requires around 1500 psi to move.

   c. Use the Δp-gauge to determine the "margin pressure" setting.

d. To Adjust the "Margin Pressure":

- Use the 13mm wrench to loosen the locking nut on the "Load Sense Adjustment".
- Use the 6mm wrench to turn the "Load Sense Adjustment" stud. Turn it IN to increase the "margin pressure" setting or turn it OUT to decrease it.
- When the desired "margin pressure" is acquired, hold the adjustment stud stationary with the 6mm wrench and tighten the locking nut with the 13mm wrench.

Pressure Compensator Adjustment:

1. Install the 0-7000 psi pressure gauge to measure pump outlet pressure (port "P").
2. Block the pump outlet pressure (port "P"). This can be done by:
   - Deadheading a cylinder that the HPR-02 supplies flow to
   - Pinning the wheel or track motor that the HPR-02 supplies flow to
3. Make sure that all supplemental relief valves in the HPR-02 pump's circuit are adjusted **HIGHER** than the desired pump pressure compensator setting.
4. Set the prime mover to high idle.
5. Actuate the function from step #2 and read the value on the pressure gauge.
6. To Adjust the Pressure Compensator:

   - Use the 13mm wrench to loosen the locking nut on the "Pressure Compensator Adjustment".
   - Use the 6mm wrench to turn the "Pressure Compensator Adjustment" stud. Turn it IN to increase the pressure compensation setting or turn it OUT to decrease it.
   - When the desired pressure setting is acquired, hold the adjustment stud stationary with the 6mm wrench and tighten the locking nut with the 13mm wrench.

   Note: The pressure compensator spring in this control is **NOT** adjustable for the full pressure range of the pump. There are several pressure compensator springs available and each spring has a limited pressure range. Consult Linde Engineering for a listing of springs if you cannot adjust the pump control to the desired pressure setting.

*****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)