

### Tools and Equipment Required

- 2 mm Allen Wrench.
- 6 mm Allen Wrench.
- Torque wrench capable of 23 N-m (17 ft-lb).

### **⚠ IMPORTANT**

This procedure must be performed in a clean environment using clean Parts, Tools and Lubricants

### **🌱 ENVIRONMENTAL CONCERNS**

Protection of the natural fundamentals of life is one of our predominant tasks. We are continuously improving the protection of the environment as far as applications are concerned. We encourage you to contribute your share to comply with this demand. In connection with work to be performed, the environmental regulations of the machine manufacturer must be respected.

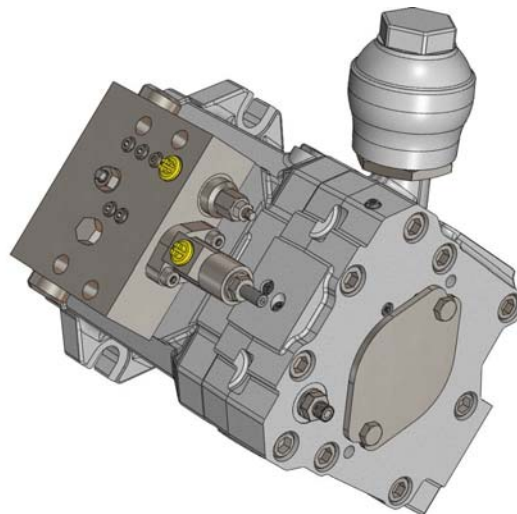
In general:

- Greases and oils which cannot be used any more have to be collected. They are normally a threat to water reserves and must be kept away from the environment.
- Adhere to national and local regulations for waste disposal.

### **⚠ IMPORTANT**

This document was created using an HPR-02 pump with TL2 control; it is also valid for HPR-02 pumps with ETP controls.

For a better view, some of the images in this document show the pump control only. It is not necessary to remove the control from the pump in order to complete this procedure.



The following chart shows necessary steps and changes required for different states of operation with the Mechanical Horsepower control:

Operating State	Z1 Port	Z2 Port	Internal Plug	External Connection between Z1 and Z2
Z1 and Z2 are disabled	Externally connected to Z2	Externally connected to Z1	No Plug	An External connection Between Z1 and Z2 is required
Only Z1 is enabled	Controlling pressure is required	Metal plug	No plug	No external connection required
Only Z2 is enabled	Must be connected to tank	Controlling pressure is required	Internal plug must be installed	No external connection required
Both Z1 and Z2 are enabled	Controlling pressure is required	Controlling pressure is required	Internal plug must be installed	No external connection required

### Procedure to install the internal plug to enable Z2 function



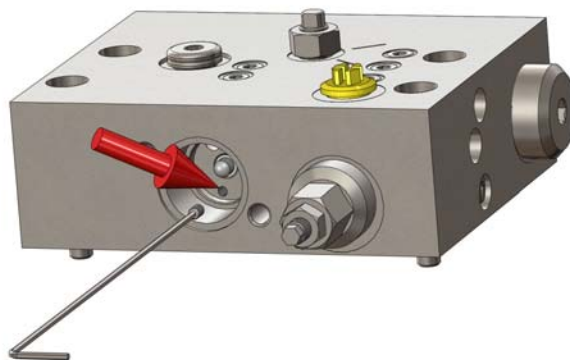
1. Remove the two bolt holding the horsepower adjustment assembly as shown here.



2. Remove the horsepower adjustment assembly as shown here.



3. Inspect the o-ring on the horsepower adjustment assembly, replace it if necessary.



4. Install the M4X6 plug (P/N 9133339061) in the threaded passage and torque it to 1.70 N-m (15 in-lb) shown here.



A better view of the control block with the plug installed.



5. Install the horsepower adjustment assembly as shown here.



6. Install the two bolts and torque them to 23 N-m (17 ft-lb).

### 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](http://www.lindeamerica.com) (Web Site)