



# Liebert Xtreme Density Pump (XDP) Unit Warranty Inspection Check Sheet

**The following information must be completed and forwarded to your local Liebert sales office to establish your equipment warranty.**

Installer \_\_\_\_\_ Address \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Owner \_\_\_\_\_ Address \_\_\_\_\_  
 \_\_\_\_\_

Owner e-mail address \_\_\_\_\_

Date of Installation: \_\_\_\_\_

Was the unit received in good condition?     Yes                       No

If no, was the freight carrier notified?        Yes                       No

Have the manuals been kept in the units?     Yes                       No

**PRE-START-UP**

**XDP Serial Number:** \_\_\_\_\_

**XDP Model Number:** \_\_\_\_\_

This XDP is providing cooling fluid for:

XDO    Qty \_\_\_\_\_               XDV    Qty \_\_\_\_\_               XDH    Qty \_\_\_\_\_

XDR    Qty \_\_\_\_\_               XDS    Qty \_\_\_\_\_

Is XDIO Communications being deployed?                       Yes                       No

**PUMP #1    H.P.** \_\_\_\_\_                      **Serial No.** \_\_\_\_\_

**PUMP #2    H.P.** \_\_\_\_\_                      **Serial No.** \_\_\_\_\_

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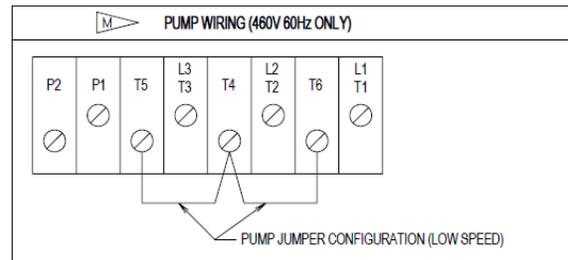
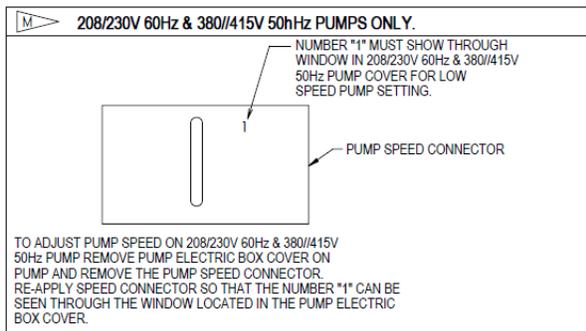


## WARNING

Arc flash and electric shock hazard. Open all local and remote electric power disconnect switches, verify with a voltmeter that power is off and wear personal protective equipment per NFPA 70E before working within the electric control enclosure or any hazardous voltage electric connection enclosure. Failure to comply can cause serious injury or death.

With the electric power to the unit OFF check the following items as noted:

- Remove the electrical cover from each pump. Verify the pumps are set-up for low speed operation.



- Internal piping clamps tight and secure.
- Field piping properly supported and secure.
- R134A field piping properly sized according to the User Manual.
- XDP is charged with at least 80% of calculated charge on R134A side of the system.
- ALL electrical connections are tight and properly terminated.
- CAN Communication cable has been correctly installed between XDP and XD Modules.
- Remote Sensors A & B are installed according to User Manual.
- Equipment is installed level.
- Remove all debris from unit area.
- ALL isolation ball valves in the XDP are open.
- ALL isolation ball valves are open to the XD Modules.

## Liebert Xtreme Density Pump (XDP) Unit Warranty Inspection Check Sheet

Filter drier by-pass ball valves are closed so that the refrigerant flow is through the filter drier.

Verify Proper Water/Glycol Maintenance/Treatment has been performed.

Yes       No (if no, conformation available please inform end user)

Strainers                       Shut off valves                       Filters                       Bleed valves

By-pass Flow Controllers are installed and positioned correctly per the following table.

In the table below is the recommended number of by-pass flow controllers that need to be opened based on the Cooling Modules Total Nominal kW.

<b>Liebert XDP</b>	
<b>Cooling Modules Cumulative Model Size kW</b>	<b>Required Number of Open Bypass Flow Controllers</b>
48 to 63	3
64 to 95	2
96 to 127	1
128 to 160	0

### Pumping Unit Inspection

*Note: Heat load is required for a proper start-up of this system.*



### **WARNING**

**Risk of electric shock, contact with high speed moving parts and hot surfaces, Can cause serious injury or death. Use extreme caution when working inside the unit cabinet of an energized unit near bare live hazardous voltage terminals and hot surfaces such as motors.**

1. Check voltage at disconnect and record.

**L1-L2** \_\_\_\_\_      **L2-L3** \_\_\_\_\_      **L1-L3** \_\_\_\_\_

2. Close all local and remote electric power disconnect switches. Verify with a voltmeter that power is on and the supply voltage matches the marked unit voltage rating.

# Liebert Xtreme Density Pump (XDP) Unit Warranty Inspection Check Sheet



## WARNING

Arc flash and electric shock hazard. Wear personal protective equipment per NFPA 70E before working within the electric control enclosure or any hazardous voltage electric connection enclosure. Use extreme caution when checking the status of live hazardous voltage circuits. Failure to comply can cause serious injury or death.

- Check unit electrical phasing with a phase meter. If phasing is incorrect, change wiring at input source to unit. Do not change any unit or component phasing.
- Check the pumps for proper rotation by bumping the contactors.

### For 460V units

Use the Grundfos rotation device provided. This device must be held against the pump housing at the inspection screw located on the end bell of the pump motor prior to energizing the pumps.

### For 208V units

View the LED on the pump.

- **Green** only indication notates **proper** rotation
- **Green & Red** indication notates **incorrect** rotation.

**Pump # 1 Rotation** \_\_\_\_\_ **Pump # 2 Rotation** \_\_\_\_\_

3. Check and record control voltage transformers for proper output. (Secondary voltage should not be under 23 VAC or exceed 27 VAC under load, change tap if necessary).

T1 \_\_\_\_\_ Volt

4. Record iCOM Software Version: \_\_\_\_\_

**Note:** The software version is located in the Network Menu that is located in Service Menus.

5. Record XDIO Software Version: \_\_\_\_\_

**Note:** The software version is located in the XDIO Menu that is located in Service Menus.

6. Turn on fans at XD Cooling Modules.

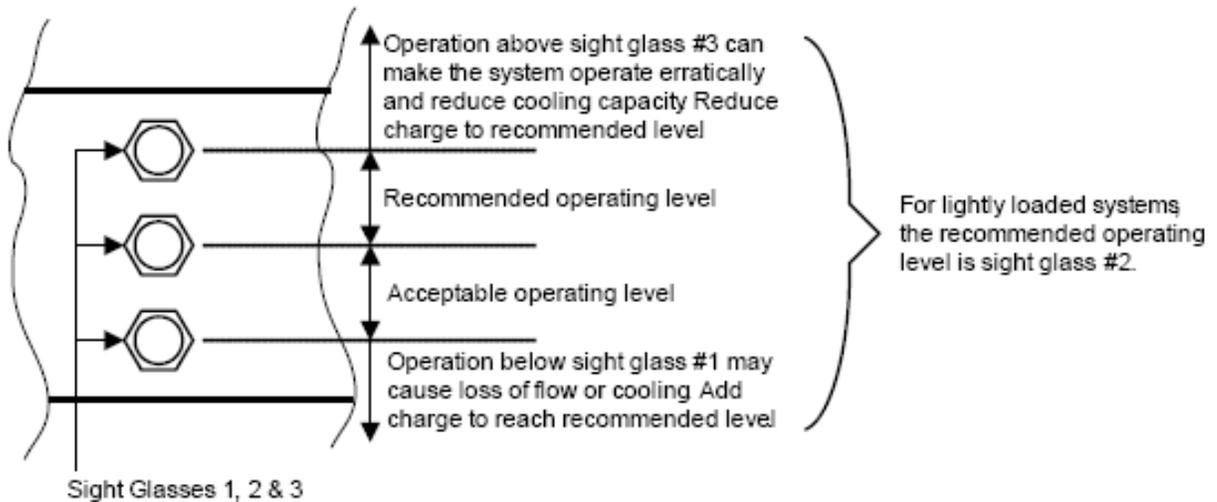
## Liebert Xtreme Density Pump (XDP) Unit Warranty Inspection Check Sheet

**Note:** If XDIO Communications is being used, the Cooling Module fans will automatically come on when the XDP is turned ON at the I/O switch.

7. Turn unit ON at I/O switch on display.

**Note:** If the pumps of the XDP cannot maintain flow and continue to switch over due to starting difficulties, turn the unit off and allow the receiver to refill with refrigerant. Once the receiver has a refrigerant level in the second sight glass, try to restart the XDP.

8. Once constant flow is established, verify that the level in the receiver sight glass is between the 2<sup>nd</sup> and 3<sup>rd</sup> sight glass after 10-15 minutes of operation. If refrigerant level is low, add addition refrigerant until the proper refrigerant level is achieved. See diagram below.



9. Test the differential pressure switch by intentionally closing the ball valve on the discharge line of the operating pump to prevent further flow. An alarm should annunciate following this for "Loss of Flow on P1". Confirm that the switch has opened on low pressure (below 6 psi).

10. Check pump amps and record after the charge in the system is topped off.

**Pump #1**

L1 \_\_\_\_\_ L2 \_\_\_\_\_ L3 \_\_\_\_\_ Fuse Size \_\_\_\_\_

**Pump #2**

L1 \_\_\_\_\_ L2 \_\_\_\_\_ L3 \_\_\_\_\_ Fuse Size \_\_\_\_\_

## Liebert Xtreme Density Pump (XDP) Unit Warranty Inspection Check Sheet

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11. Check pump operating pressure and record.

**Pump #1**

**Suction Pressure** \_\_\_\_\_ **Discharge Pressure** \_\_\_\_\_

**Pump #2**

**Suction Pressure** \_\_\_\_\_ **Discharge Pressure** \_\_\_\_\_

12. Record the following Chilled Water data.

**Supply Chilled Water GPM:** \_\_\_\_\_

**Chilled Water Inlet Temperature:** \_\_\_\_\_

13. Record the following Refrigerant data.

**Leaving Refrigerant Temperature:** \_\_\_\_\_

# Liebert Xtreme Density Pump (XDP) Unit Warranty Inspection Check Sheet

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*Your start-up is now complete.*

Your input is important to us. Did you encounter any factory or field issues? If YES, please check the YES box and supply detailed description below. If NO, please check the NO box; however please feel free to provide any additional comments or suggestions.

YES

NO

Comments:

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**START-UP**

PERFORMED BY: \_\_\_\_\_  
(Please print name)

START-UP DATE: \_\_\_\_\_

COMPANY: \_\_\_\_\_

PHONE #: \_\_\_\_\_

### IMPORTANT:

This form must be properly completed and returned to your local Liebert Sales Office. If you do not know who your local Liebert sales office is, call 1-800-LIEBERT or check our website at:

<https://www.vertivco.com/en-us/products/brands/liebert/>