

### PURPOSE

To provide instructions for using the DHLT to perform load testing of hoists.

### SCOPE

This EDOC pertains to the Harrington Hoists, Inc. Dynamic Hoist Load Tester (DHLT).

### BEFORE OPERATION

- Ensure that both the caster's pivot and wheel locks are engaged.



Figure 1 – DHLT Caster

### INSTALLING A HOIST ON THE DHLT

#### **HANGING THE HOIST**

1. The DHLT comes equipped with a winch. Use the winch to lift heavier products into place. Be smart. Do not lift anything that could possibly injure you.
2. For hoists that have a capacity of 5 Tons or smaller, suspend the hoist from the **FRONT**, size 1 master link, on the upper beam. This link will be labeled "5 Ton".
3. For hoists that have a capacity between 6 and 10 Tons, suspend the hoist from the **REAR**, size 1 ¼ master link, on the upper beam. This link will be labeled "10 Ton".

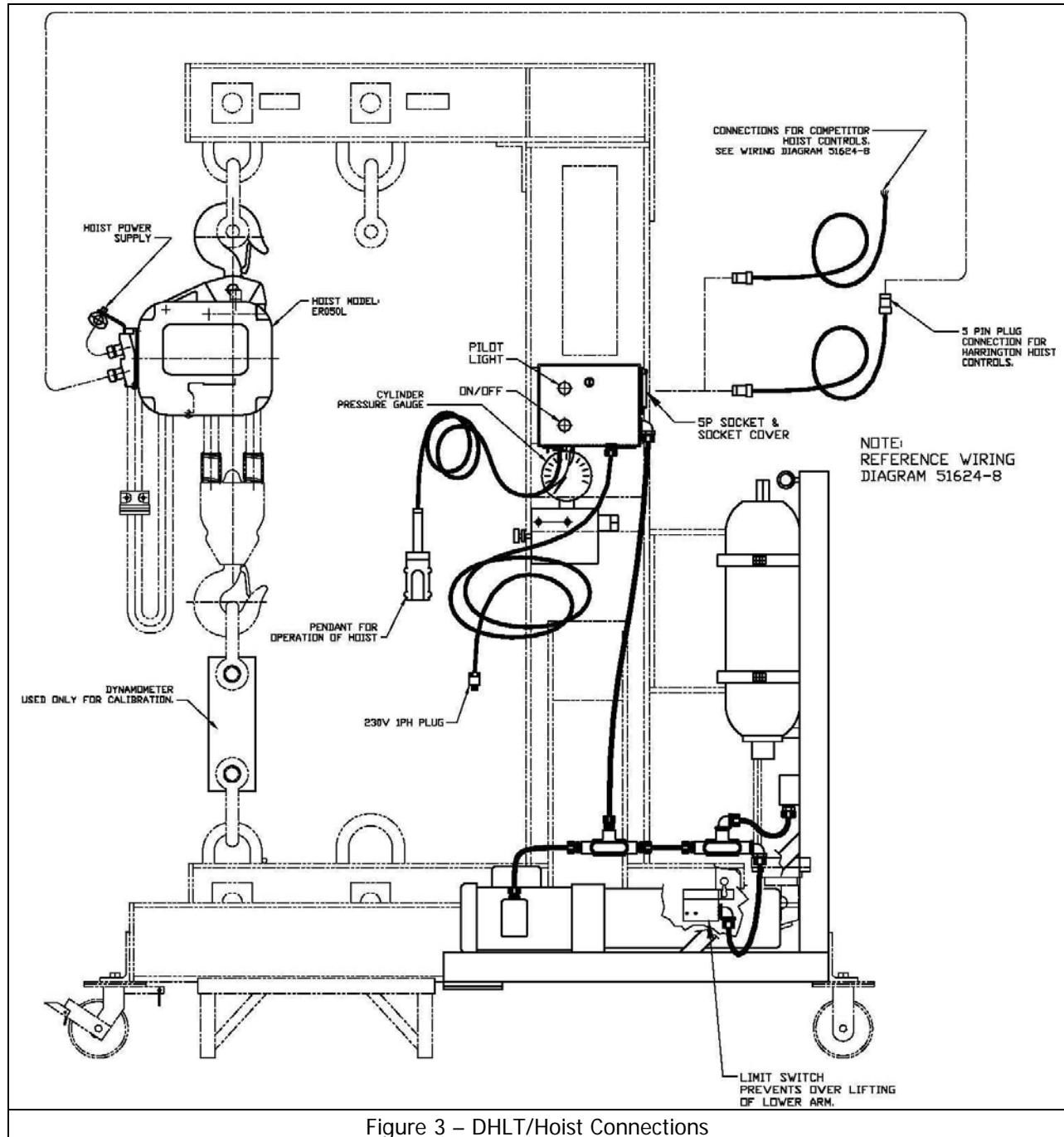


Figure 2 – Upper Master Links

4. Engage the bottom hook, of the hoist that is to be tested, on to the corresponding master link on the lower arm. These links are directly below the links on the upper beam.

### ELECTRICAL CONNECTION

- If the hoist to be tested is electrically controlled, it should be run through the DHLT control system. This is done by connecting the hoist controls into the DHLT according to Figure 3. By operating the hoist through the DHLT, you ensure the safe use of the load tester and can prevent it from being damaged.



### **DHLT OPERATION**

1. Connect the DHLT power cord to 230-1-60 (Refer to Figure 3).
2. Turn on the DHLT by depressing the red ON/OFF button on the control panel (Refer to Figure 4). When the DHLT is on, a green pilot light will illuminate.



Figure 4 – DHLT Control Panel

3. Allow the pump to fill the Accumulator.
4. The cylinder pressure is adjusted with the Regulator. While viewing the Cylinder Pressure Gauge, adjust the cylinder pressure to the corresponding setting for the capacity that is being tested (Refer to Figure 5). By setting the cylinder pressure to the corresponding capacity, you are setting the DHLT to 125% of the rated capacity.



Figure 5 – Regulator and Cylinder Pressure Gauge

### **PERFORMING A DYNAMIC TEST ON THE DHLT (POWERED HOISTS)**

1. Install the hoist as it is described under the "Installing a Hoist on the DHLT" section of this EDOC.
2. Follow the instructions under the "DHLT Operation" section of this EDOC.
3. Operate the hoist by using the pendant attached to the DLHT, thus lifting the lower arm. Hoists connected through the DHLT control system can lift the lower arm to the limit switch (Refer to Figure 6).

**WARNING:** If the hoist is air powered or electric powered that is not connected through the DHLT control system, the operator MUST watch the lower arm. The arm must travel so that it does not hit the limit switch (Refer to Figure 6). If the lower arm hits the limit switch and travels further, the DHLT can be damaged.



Figure 6 – DHLT Lower Limit Switch

4. Once the lower arm reaches the point of the limit switch, the test is complete. Operate the hoist, lowering the lower arm.
5. Disconnect and uninstall the hoist from the DHLT. Use the DHLT winch if necessary.

#### **PERFORMING A STATIC TEST ON THE DHLT (MANUAL HOISTS)**

1. Install the hoist as it is described under the “Installing a Hoist on the DHLT” section of the EDOC.
2. Follow the instructions under the “DHLT Operation” section of the EDOC.
3. Operate the hoist, with three tensioned cranks of a lever puller or three tension pulls of hand chain on a chain block.
  - Since the lower arm is already set to 125% of the hoist capacity, the hoist is being tested as soon as there is a force applied.
4. Leave the hoist under tension for 1 minute. Observe if there is any slipping.
5. After a minute is passed and the hoist did not slip, the test is complete. Operate the hoist, relieving the tension from the hoist.
6. Uninstall the hoist from the DHLT. Use the DHLT winch if necessary.

#### **ROUTINE START-UP AND SHUT-DOWN OF DHLT**

1. Shut-down
  - (a) Turn off DHLT by pressing the On/Off button on the test stand control panel. Pilot light will go off, and, if the pump had cycled on, it too will go off.
  - (b) Do Not open the Accumulator Discharge Valve. The system pressure will gradually dissipate as the Regulator Valve (also called the Pressure Control Valve) bleeds oil to the reservoir.
2. Start-up
  - (a) Press the On/Off button on the test stand control panel. Pilot light will energize and pump will start.
  - (b) System pressure will increase to approx. 2,200 psi at which point the pump will stop. DHLT is now ready for testing.