

Instructions for Replacement of Hi-E2 Water Pressure Switch Assembly

FOR YOUR SAFETY: This product must be installed and serviced by a professional service technician qualified in pool heater installation and maintenance. Improper installation and/or operation could cause serious injury or death and will void your warranty.

**These instructions are to be used with the following Teledyne Laars Replacement Kits:
R0322900-- Pressure Switch Assembly Replacement Kit, Model EHE 220 & 350**

⚠ WARNING

If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

This document gives instructions for replacing the pressure switch assembly in all Hi-E2 Model EHE pool/spa heaters. The instructions must be followed exactly. Read through the instructions completely before starting the procedure.

A. Remove The Pressure Switch Assembly

1. Turn off the electrical power to the heater.
2. Be sure the filter pump is **OFF** and that it will remain off during this procedure.

⚠ CAUTION

If the heater is below the surface level of the water in the pool, be sure to close the complete shut-off valves leading to and coming from the pool.

3. Remove the front panel of the heater (see Fig. 1).

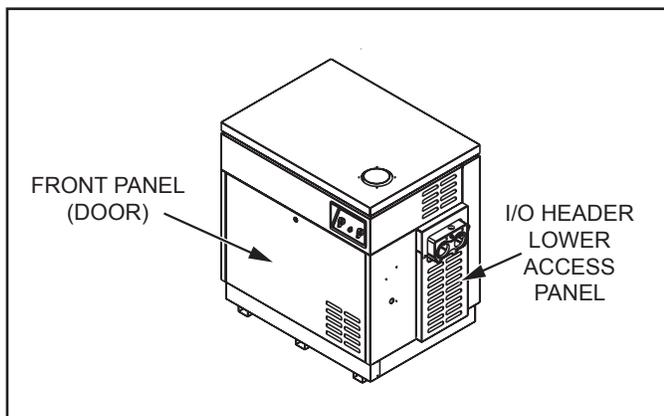


Fig. 1 Hi-E2 Door and Access Panel

4. Remove the four screws holding the lower access panel in place, under the header on the water connection side of the heater. Remove the panel (see Fig. 1).
5. Clip and remove the wire ties which hold the thermistor and hi-limit wires to the siphon loop (copper tubing).
6. Remove the plastic cable clip which holds the siphon loop to the heater frame (see Fig. 2).
7. Disconnect the black and white wires from the pressure switch.
8. Using a 7/16" wrench, loosen the compression nut located where the siphon loop enters the inlet/outlet header. Carefully pull the tubing out of the header (approximately 2½").

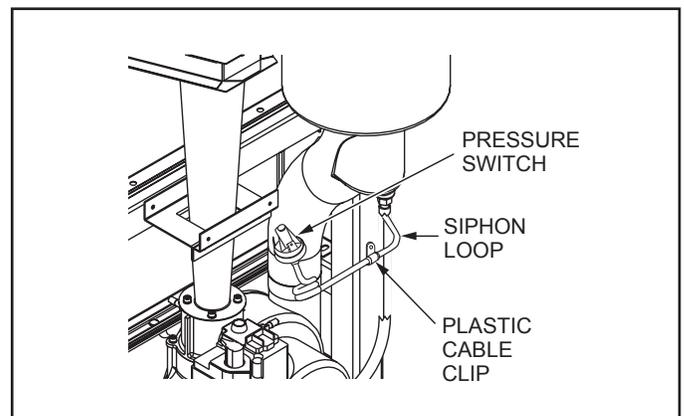


Fig. 2 Pressure Switch Components and Locations

B. Replacing the Pressure Switch Assembly

⚠ CAUTION

Before replacing the pressure switch assembly, fill the siphon loop with approximately 5 ml. of SAE 50, non-detergent oil.

1. Insert the siphon loop (copper tubing) into the brass connector fitting, located on the lower section of the inlet/outlet header, until the compression fitting seats inside the connector body.
2. Thread the compression nut onto the fitting in the inlet/outlet header, making it finger tight.
3. Place the new plastic cable clip onto the siphon loop. Position it over the hole drilled in the frame. Install using sheet metal screw.
4. Using a 7/16" wrench, tighten the compression nut 1/2 turn past finger tight.
5. Reconnect the black and white wires to the pressure switch.
6. Use wire ties to hold the thermistor and hi-limit wires to the siphon loop.
7. Turn on the electrical power to the heater.

⚠ CAUTION

Open any complete shut-off valves that were closed to perform this procedure.

C. Testing the Pressure Switch Operation

1. Turn on the pool's filter pump.
2. Inspect and repair any leaks before continuing.
3. Set the heater power switch to the ON position and turn the temperature control dial to MAX. The heater will go through a pre-purge, then it should come on within a few moments.
4. Turn the pool filter pump off. **The heater must immediately turn off.**
5. **IMPORTANT!**
 - a. If the heater does not turn off immediately, turn the heater off by setting the power switch to the OFF position.

⚠ CAUTION

If the heater is not turned off, damage will occur. Turn the filter pump on again to circulate cool water through the heater, and refer to the following section, "Adjusting the Pressure Switch".

- b. If the heater did turn off when the pump was shut off, replace the side panel and door of the heater. Readjust the temperature control dial to desired setting.

D. Adjusting the Pressure Switch

The pressure switch is preset at the factory for normal pool installations where the water connections at the pool heater are within three feet above or below the surface level of the water in the pool. If the heater connections are not within this range, the pool heater may not operate correctly. The heater may not turn off when the pump shuts off.

The pressure switch must never be adjusted to turn the heater on! If the heater does not ignite when the pool filter turns on, then the pressure switch must be replaced by another pressure switch with the correct rating.

If the heater does not shut off when the filter pump is turned off, then the pressure switch must be adjusted by performing the following steps. If the pressure switch cannot be adjusted to turn the heater off when the filter pump is off, contact a Teledyne representative.

⚠ CAUTION

The pressure switch should be adjusted to turn the heater off when the filter pump is off. Improper adjustment of the pressure switch will damage the appliance.

To adjust the pressure switch, proceed as follows:

1. Turn the heater power switch to **OFF**.
2. Disconnect the black and white wires from the terminals on the pressure switch.
3. Pry off the rubber dust cap (see Fig. 3).
4. Make sure the pressure switch is at its lowest setting. This is done by using a 7/32" Allen wrench to turn the adjustment screw **counterclockwise** as far as it will go.

5. Start the filter pump. Connect the leads of an ohmmeter to the two terminals on the pressure switch. Confirm that the pressure switch is closed. If the switch fails to close, replace it with a switch that has a lower minimum pressure setting.
6. Use a 7/32" Allen wrench to turn the adjustment screw very slowly **clockwise** until the switch opens (see Fig. 3).
7. Using the Allen wrench, slowly turn the pressure switch adjustment screw **counterclockwise** 1/4 turn. The switch should close again.
8. Check the adjustment by turning the filter pump OFF. The switch should open immediately. If it does not, restart the filter pump and repeat steps 5 and 6. Check the adjustment again.
9. Reconnect the black and white wires to the pressure switch.
10. Return the pool temperature control to the desired setting.

It may be necessary to repeat these steps several times to get the proper setting. The switch must be set so that the heater will not fire unless the pump is running. If a proper setting cannot be reached, contact the factory service department.

Parts List

Description	Quantity
Pressure Switch Assembly	1
Connector Body	1
Plastic Cable Clip	1
Sheet Metal Screw	1
Instructions	1

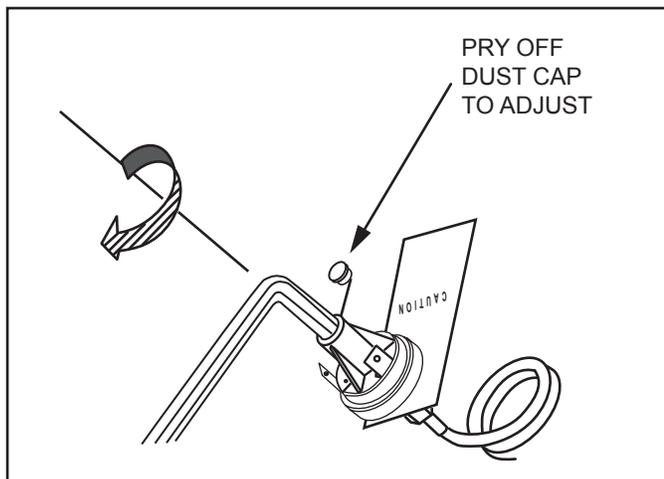


Fig. 3 Adjusting the Pressure Switch



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