

High Limit (HL)

This message appears when the High Limit Sensor reads 119 degrees

Your Dimension One Spa is outfitted with a number of safety messages. One of them, the “High Limit” error message, can be caused by a few things but will always trigger an automatic shut off of the heater, allowing the water temperature to drop. Let’s review the easy, (and free), things first. To save time, work through these steps in the order listed below.

Step 1: False Error

Turn off the power at the GFCI for 1 minute, and then turn it back on. If the message clears, it was likely a false error reading. Your spa should now return to its normal operation.



Step 2: Temperature Reading Accurate

Using a digital thermometer, compare it to the reading on the upper control display panel. They should be within a few degrees of each other. A large disparity may indicate a temperature sensor issue.



Step 3: Excessively Hot Water

If the water in your spa is actually over 104 degrees, turn off power to the spa, open the cover and let the temperature drop to at least 97 degrees. Once the water has cooled, turn the power back on. If the problem was indeed the temperature of the water, the error will now clear and your spa will return to normal operation.



Step 4: Dirty Filters

If your filters are dirty they may cause the small circulation pump to work too hard. Remove your filter(s) and **turn the power off for 1 minute, and then back on**. If this action clears the error message, it is time to clean your filter(s). If they are over 2 1/2 years old, it may be time to replace them. If removing the filters does not clear the error, continue reading for more options.



Step 5: Dirty Filter Screen

If your spa was made between 2004-2014, (and has 2 filters), the mesh screen inside one of the filter screens may need to be cleaned. **Turn off power to the spa at the GFCI**. Remove the filter associated with the circulation pump, (the one on the right as you are standing at the filters and outside the spa). Remove the black filter screen and locate the mesh screen inside it. Pull the mesh screen out of the plastic filter screen and flush the debris off the screen with fresh water. Re-assemble everything and turn the power back on. (For more details on this procedure, see “Cleaning Your Filters and Mesh Screen” in the Do It Yourself section of our website.) If these actions clear the error message, your spa should now return to normal function.



Step 6: Hot Heater Barrel

While the **power to the spa has been on for at least 1 minute**, touch the heater barrel in a few places. If the tube is very hot to the touch, the heater relay is probably stuck closed. Give us a call to confirm your diagnosis and possibly order a new circuit board.



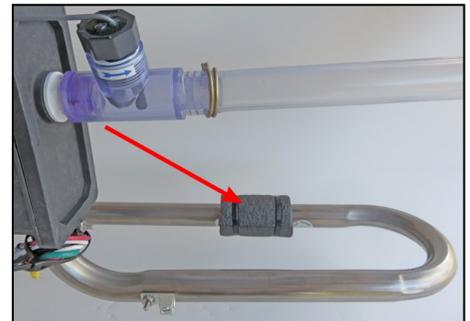
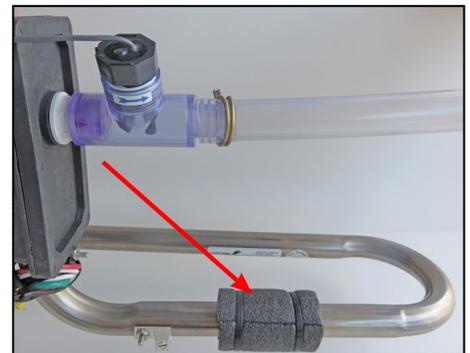
Step 7: Circulation Pump Burnout

If you have tried all of the above actions and you are still experiencing a High Limit error, your circulation pump may have burned out. With the power on for at least 3 minutes, locate the circulation pump within your spa equipment area. If the small circulation pump has a red or blue body, place your fingers on it for up to 8 seconds. If the motor is too hot, you won't be able to leave your fingers there very long. This will indicate that your pump has burned out or clogged and needs replacing. Give us a call to confirm your diagnosis and order a new pump.



Step 8: Hot Spot

There may be a "hot spot" on your spa's heater that causes the High Limit Sensor to activate. **Turn off the power at the GFCI.** Locate the foam insulating pad on the heater bar. The High Limit Sensor resides under the pad. (Top photo). Slide the pad and Sensor around the bend to the back of the heater bar. (Bottom photo). **Turn power back on at the GFCI.** This action moves the sensor away from the "Hot Spot", and your spa should return to normal function.



Step 9: Defective Sensor

If none of the above actions resolve the "High Limit" error, replace the sensor itself. Give us a call to confirm your diagnosis and order a new sensor.

Step 10: Defective Lower Circuit Board

If a new High Limit Sensor does not resolve the problem, you'll likely need to replace the entire lower circuit board. (This occurs 10% of the time). Give us a call to confirm your diagnosis and order a new board.

Got a Question?

Call Toll Free (866) 418-1840

www.EasySpaParts.com