

REPORTED PROBLEM:

The pump does not run.



SYSTEM VOLTAGE:

- 120V

PROBABLE CAUSES:

- Faulty pump.
- The system pack's circuit board may have a blown fuse (F2).
- Faulty circuit board in the system pack.

TROUBLE SHOOTING STRATEGY:

- Verify voltage at the system pack's terminal block.
- Verify voltage at the GFCI (Ground Fault Circuit Interrupter).
- Verify the fuse (F2) is good on the system pack's circuit board.
- Verify the pump is connected properly to the system pack's circuit board at J23.
- Put the system in Priming Mode, and verify voltage at the pump connector (J23) on the system pack's circuit board. The system is in Priming Mode when the topside panel displays "Pr."

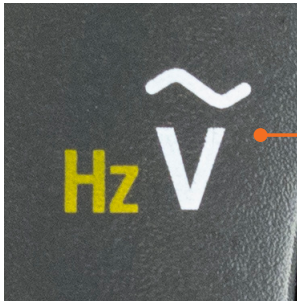
IMPORTANT TROUBLESHOOTING CONCEPTS:

- Troubleshoot the pump while the system is in Priming Mode. Priming Mode lasts approximately 4-6 minutes. Why does the system need to be in Priming Mode? The spa technician knows how the system behaves while in Priming Mode, making troubleshooting easier.
- Set the volt meter to AC voltage before measuring voltage. "AC" stands for alternating current.
- Voltage measurements that vary plus or minus 10% are accurate. For example, if a 120V component is measured between 108V - 132V, the reading is accurate.

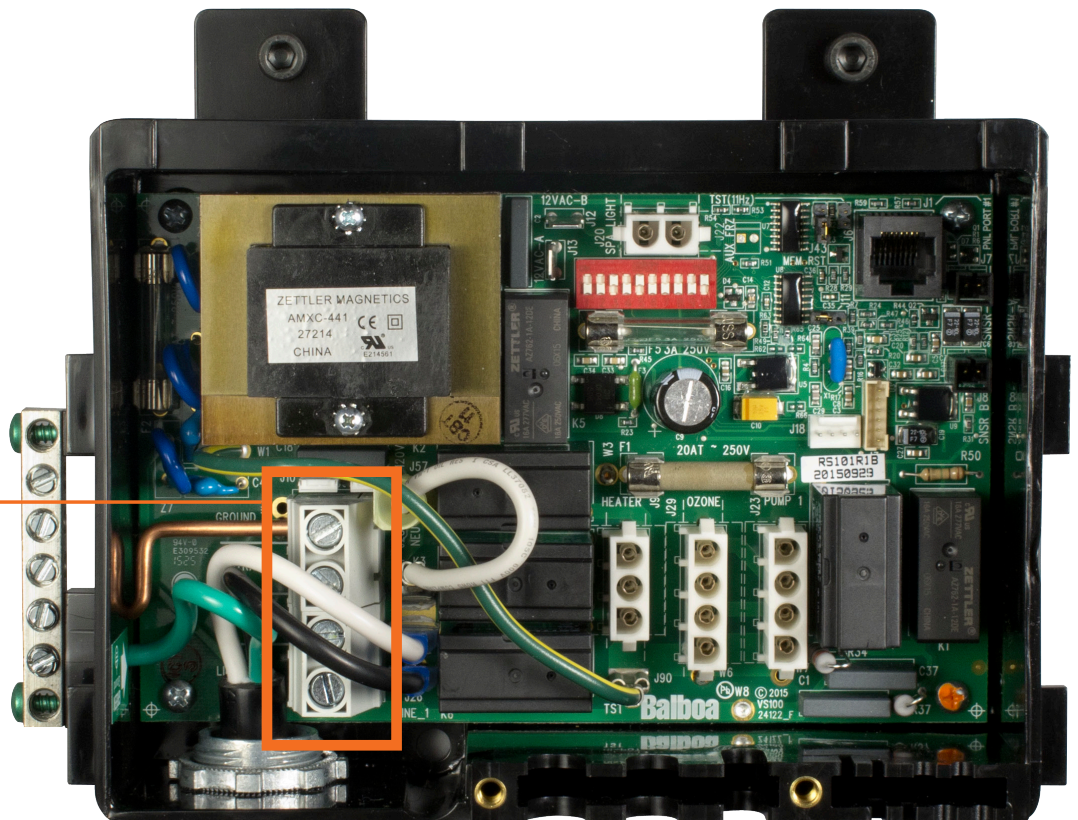
STEP 1

Use a voltmeter to verify voltage at the terminal block.

Set the volt meter to AC voltage. "AC" stands for alternating current.



Terminal Block



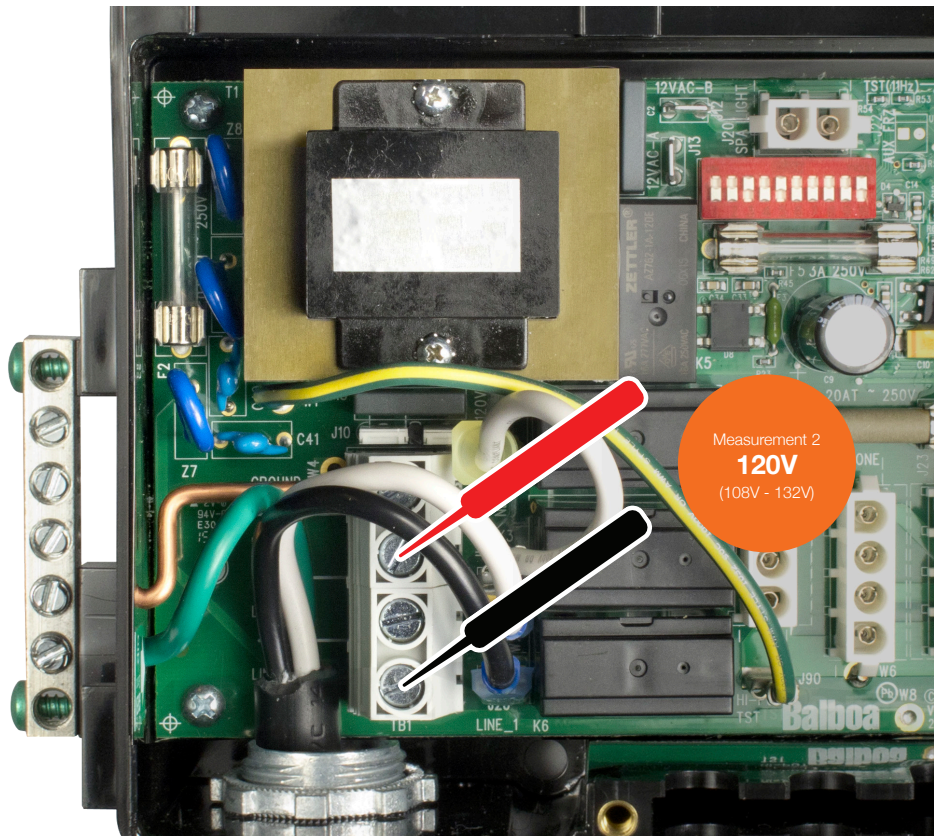
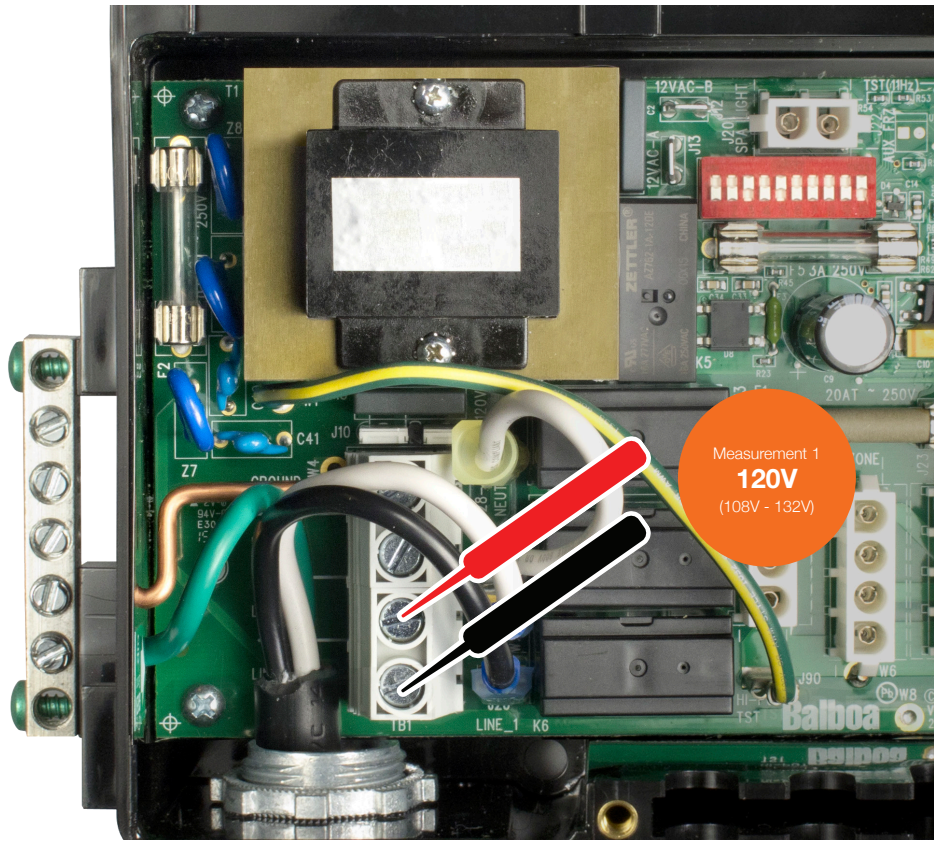
STEP 1

Voltage measurements that vary plus or minus 10% are accurate. For example, if a 120V component is measured between 108V - 132V, the reading is accurate.

Measurements 1 and 2 should be 120V.

If they are 120V, go to step 2.

If they are not 120V, there may be problems with the GFCI cord or electrical outlet. Go to step 3.

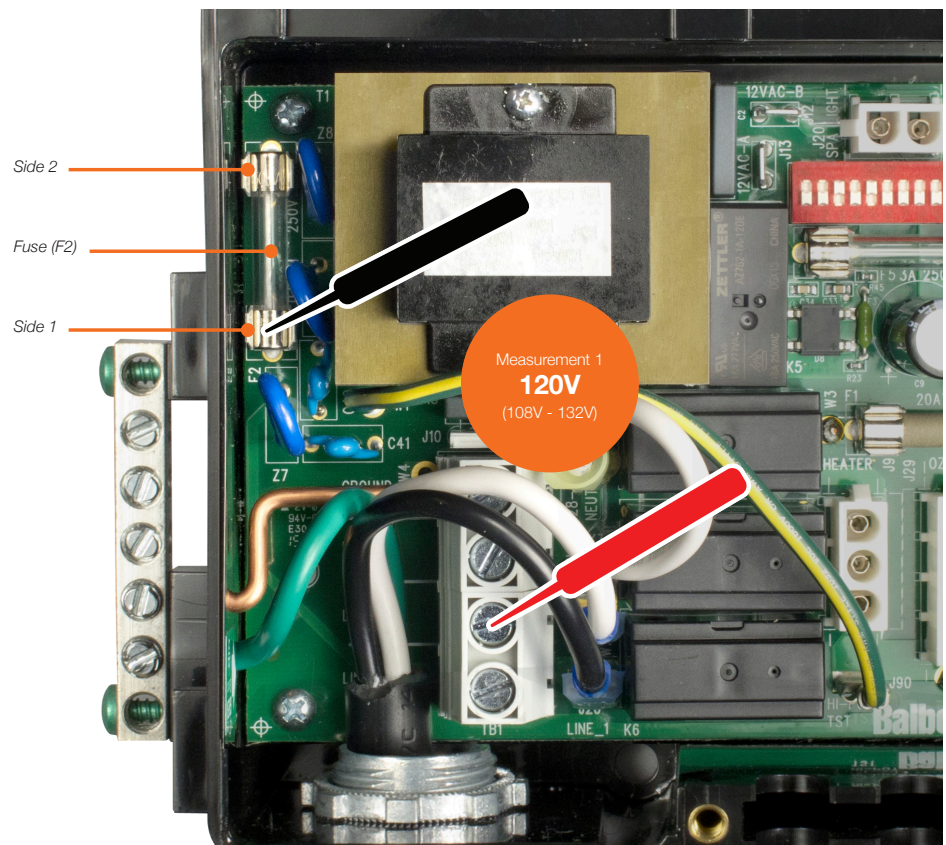


STEP 2

Verify the fuse (F2) is good by measuring voltage between the terminal block and the fuse. Set the volt meter to AC voltage. Measure voltage on both sides of the fuse.

Measurement 1

This determines if voltage is flowing from the terminal block to the fuse.

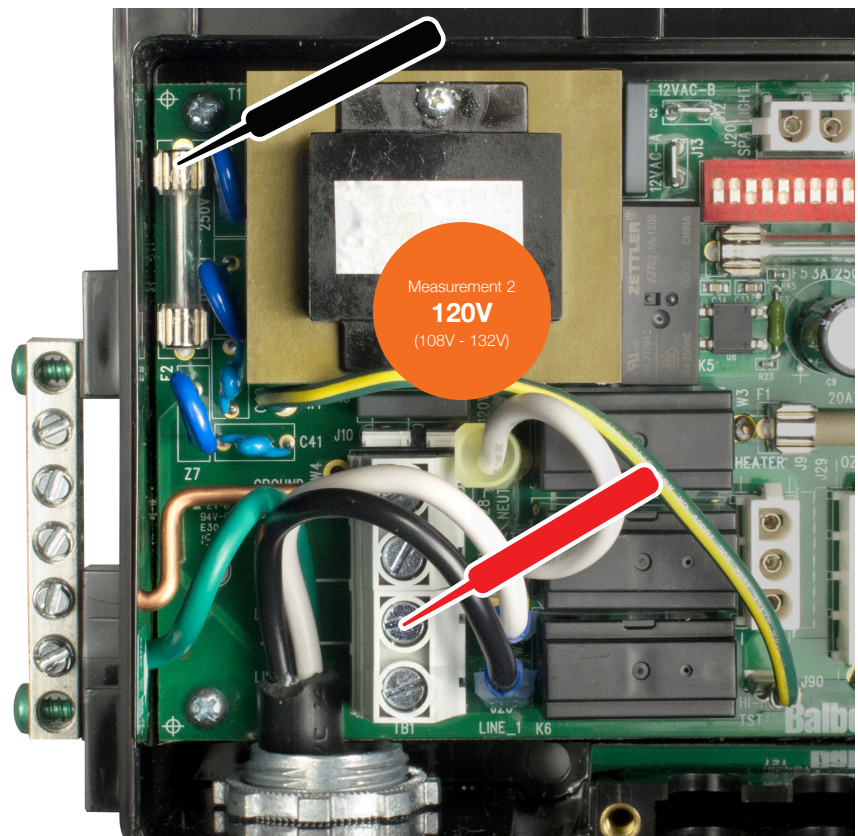


Measurement 2

This determines if the fuse is good.

If measurement 2 is approximately zero volts, the fuse is bad. Replace it.

If measurement 2 is 120V, the fuse is good, but the system pack is bad. Replace the system pack.



STEP 3

Remove GFCI from the outlet, and verify the voltage.

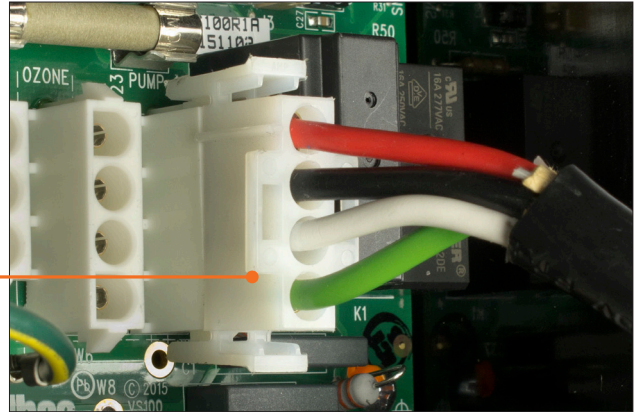
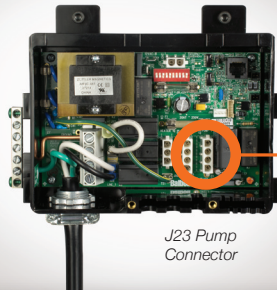
If the voltage is not 120V, the electrical service is faulty. Call an electrician.

If the voltage is 120V, the GFCI cord is bad. Replace the GFCI cord.

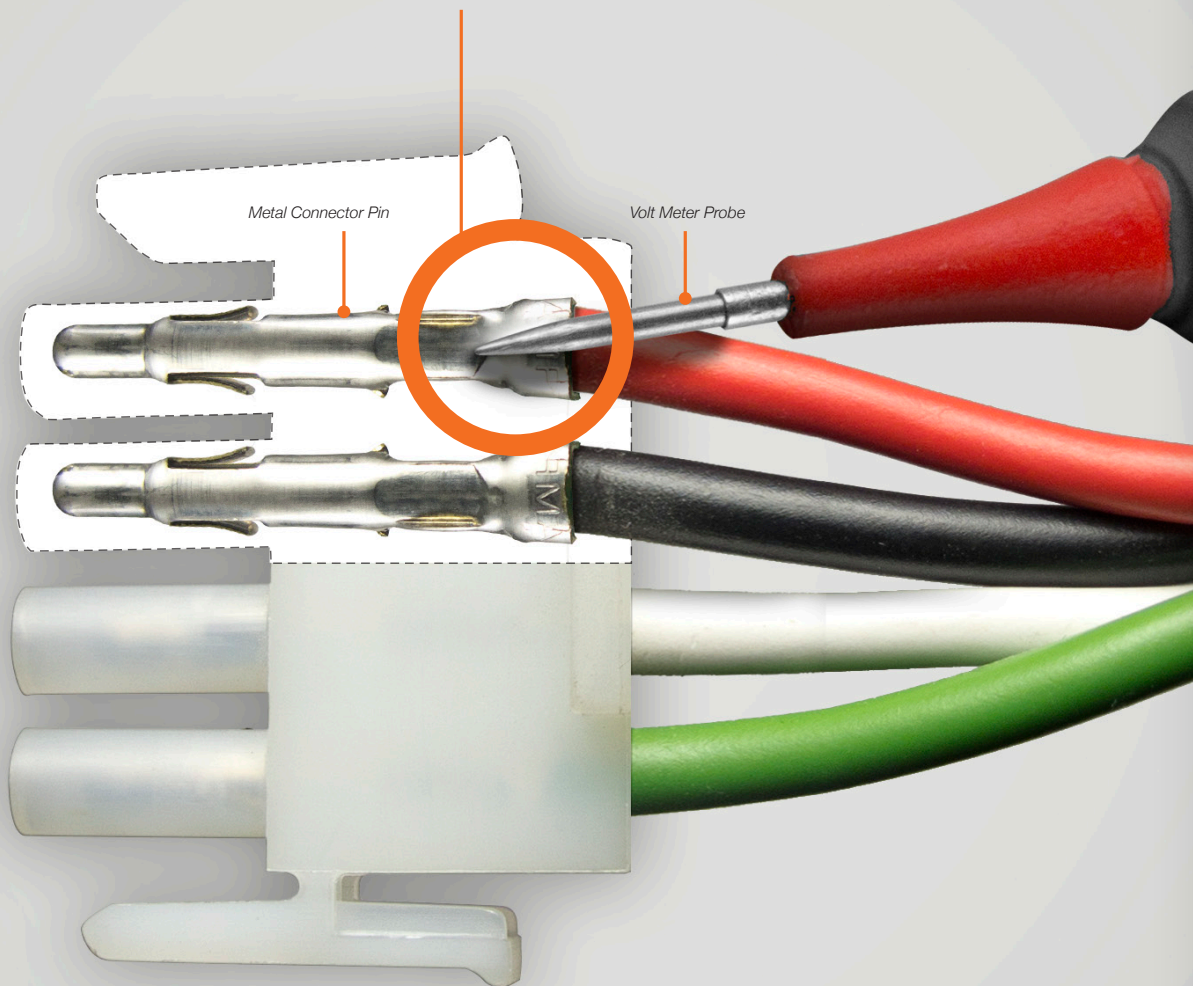


STEP 4

Verify voltage at the J23 pump connector on the system pack's circuit board.



Make sure the volt meter probe contacts the metal connector pin when measuring voltage.



STEP 4

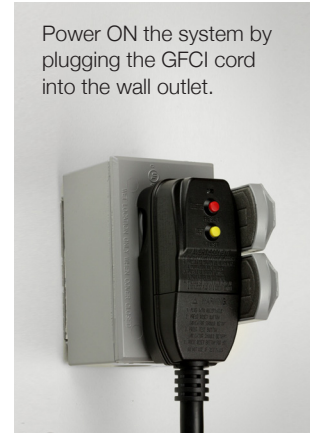
A - Put the system into Priming Mode. This is done by powering OFF the system and then powering ON the system again at the GFCI. Priming Mode lasts approximately 4-6 minutes. "Pr" appears on the topside display when the system is in Priming Mode.



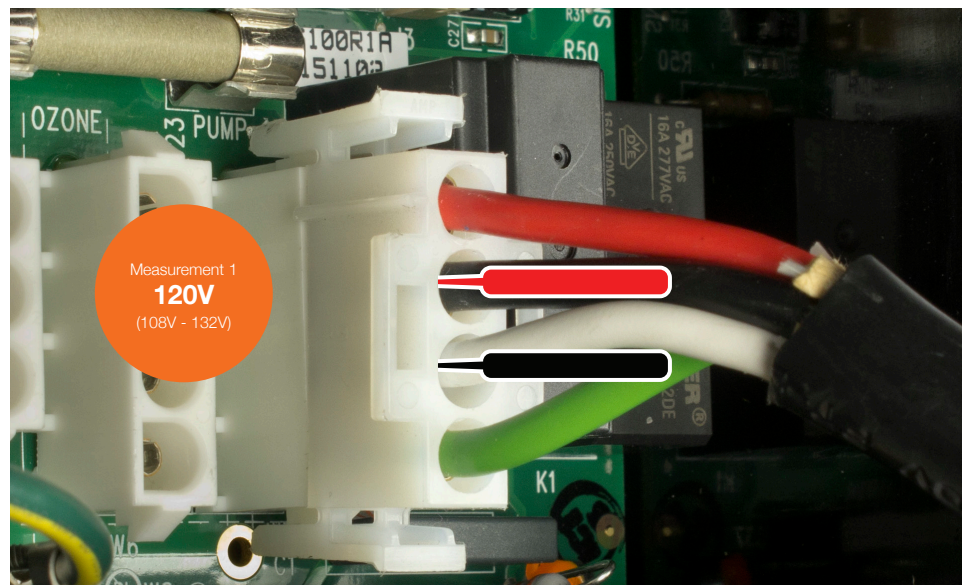
Power OFF the system by unplugging the GFCI cord from the wall outlet.



Power ON the system by plugging the GFCI cord into the wall outlet.



B - While the system is in Priming Mode, turn on the low speed pump by pressing the pump button on the topside panel. When the low speed pump is ON, measure voltage between the black and white wires on the J23 pump connector. If the voltage measurement is 120V, the pump is bad. Replace the pump.



C - While the system is in Priming Mode, turn on the high speed pump by pressing the pump button on the topside panel. When the high speed pump is ON, measure the voltage between the red and white wires on the J23 pump connector. If the voltage measurement is 120V, the pump is bad. Replace the pump.

