

Gibraltar/Waterfall

Disassembly and Troubleshooting



Safety

- Drain water prior to disassembly.
- Disconnect from power source.
- Only use replacement parts sold by Waterways to maintain UL Certification.

Recommended Tool List

1. Drill with #2 Phillips bit. **Caution: When using a battery operated drill set the drill torque on a low setting. Over torquing screws can damage cabinet parts.**
2. Magnetized tray to hold screws.
3. Volt/Amp meter.
4. Large small multi screw driver kit.
5. Needle nose pliers
6. Wire cutters.
7. Reservoir nut removal tool.
8. Zip ties
9. Paper towels.



Optional Test Equipment

This is meter can be plugged directly into an outlet. Select amp setting. On tests requiring amperage draw the amperage can be observed on this meter. Most stores that sell testing equipment sell this meter for under \$25.00



Good To Have Support Strut

Cut $\frac{3}{4}$ " PVC pipe to 26"

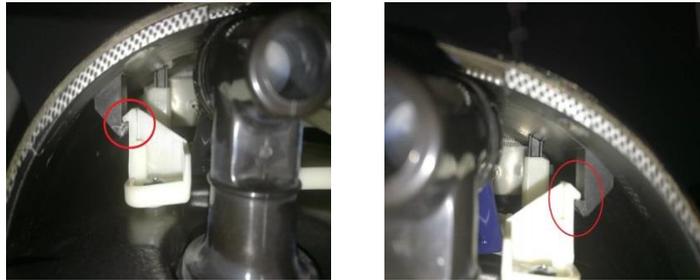
Cut a tab at 25 $\frac{1}{2}$ "

Insert tab into midpan and over the bolt.



Waterfall Faucet Cover Removal

1. Please note two flanges between front panel and cabinet, which had been improved to make sure the panel is tightly connected to the cabinet.



2. Each time you remove or install the panel, you need to start from one side to the other side.

Please note following pictures, which display panel removal and installation:

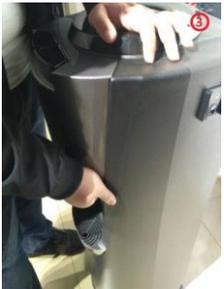
REMOVE

- (1) Pull the panel from one side

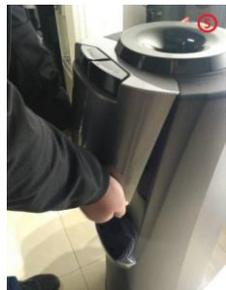




(1) Pull the panel from other side



(2) Move the panel up, away from the cabinet



(1) Assemble the panel mounting column with the top of the cabinet



Pat the panel from one side, and then pat



Cabinet Removal

Process for cabinet removal Gibraltar/Waterfall is similar.
Photos shown are Gibraltar

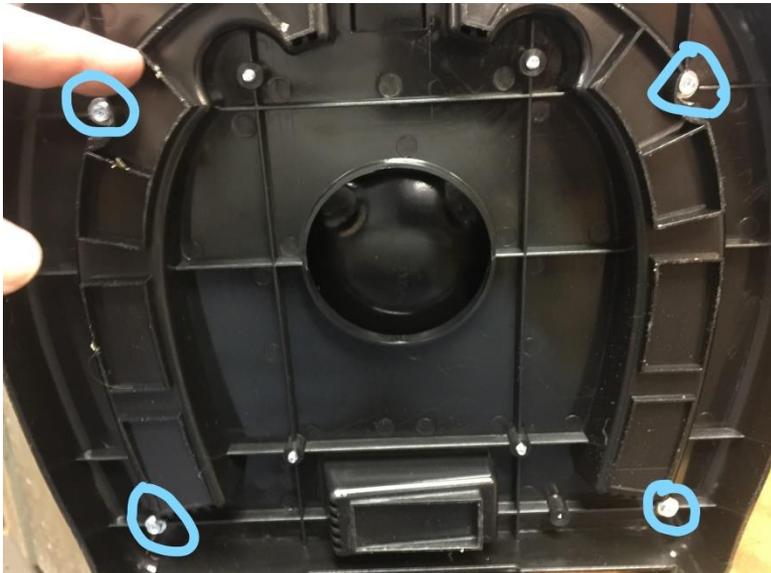
Remove Faucets



Remove Faucet Washers



Lay cooler down and remove the 4 screws that secure cabinet to base plate



Stand cooler up and remove the 2 screws that secure cabinet to the mid pan assembly



Remove the 2 screws that secure cabinet to base pan.



Spread the bottom of cabinet lift up and away from the cooler chassis.

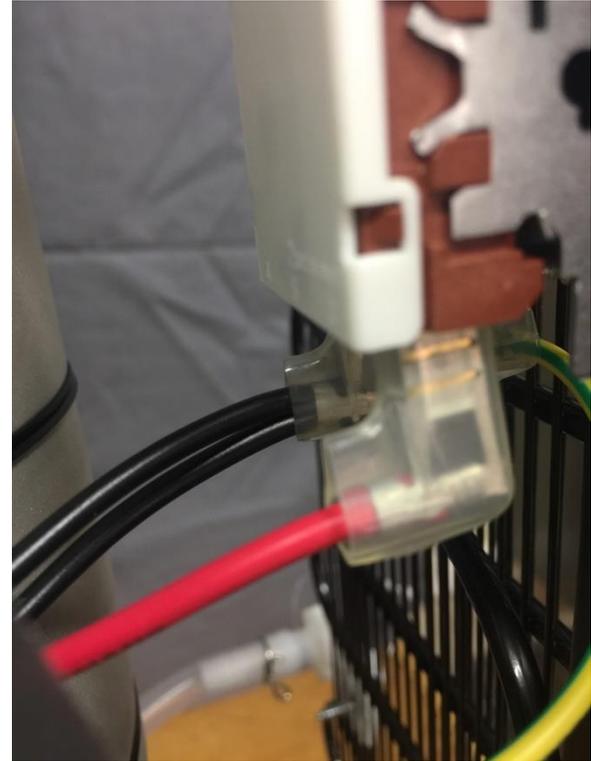


Troubleshooting Not Cooling

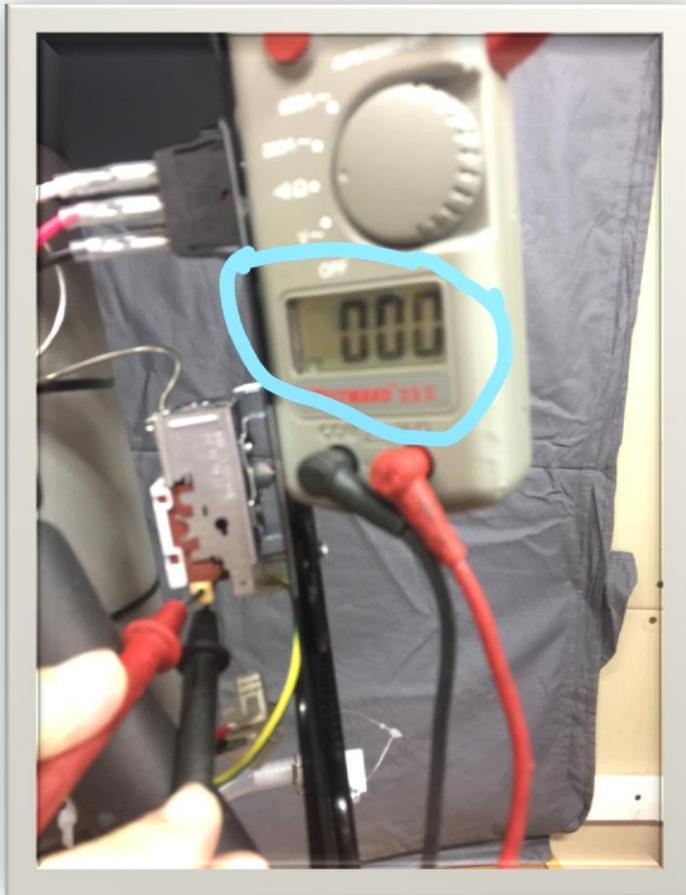
Check cold control has not been turned off. Turn clockwise until stopped then turn back $\frac{1}{4}$ turn,



Check wires connected to cold control.



If cold control is good meter will show continuity left
If cold control is bad meter will not show countinuty right



Replacing cold control

Remove the 2 screws that secure cold control to chassis.

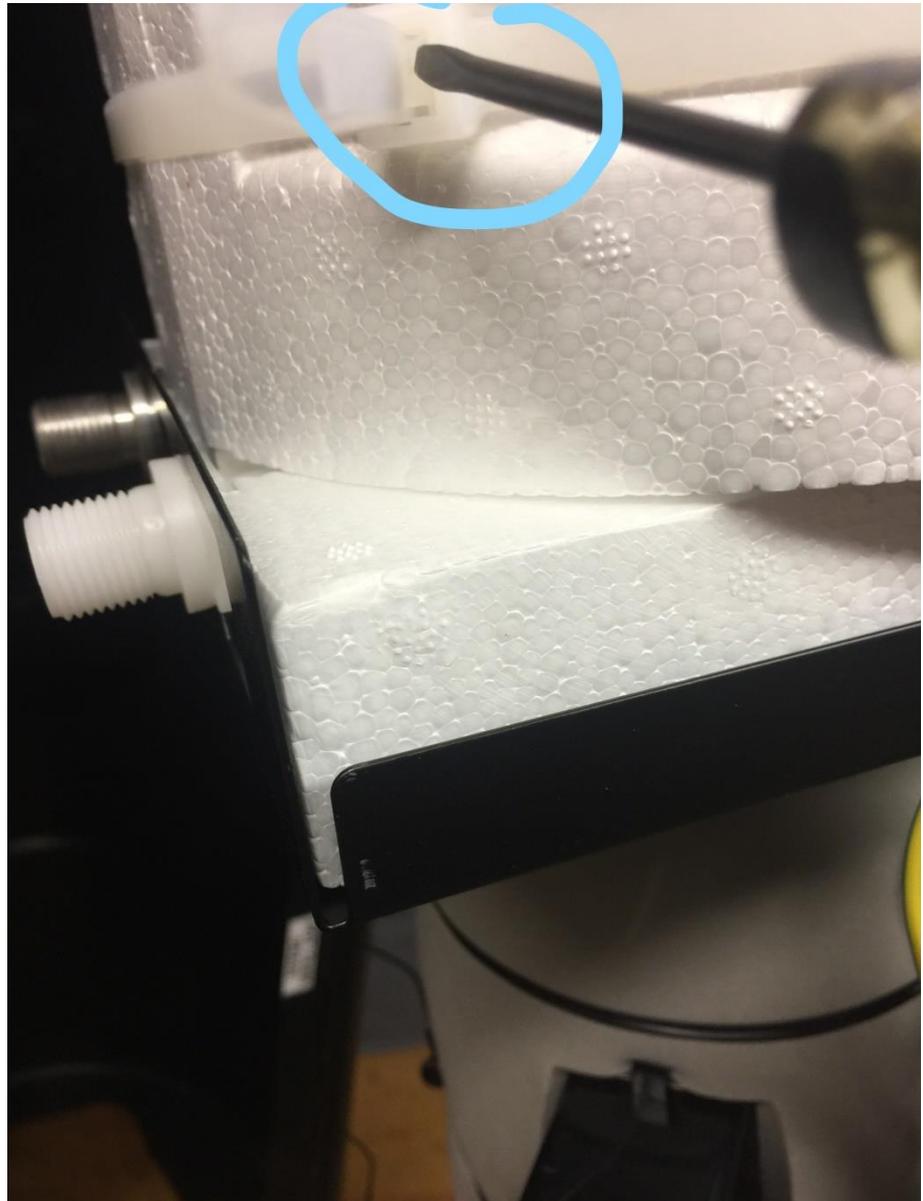
Remove bulb from thermal well. Since the thermal well is located behind the insulation the reservoir insulation will need to be removed.



Removing The Cold Water Reservoir Insulation.

Place a narrow flat tip screw driver against the tab and push. The tab will release. Upper strap is a wire tie. Remove the cold control from the thermal install new cold control. Secure with screws and reconnect wires.

Note: Make sure wires are installed correctly.



Cooler not cooling possible relay issue. Make sure hot tank switch is turned off.

A relay is an **electromagnetic** switch operated by a relatively small electric current that can **turn** on or off a much larger electric current. The heart of a relay is an electromagnet (a coil of wire that becomes a temporary magnet when electricity **flows** through it). The relay is connected to the white wires

Overload relays protect a motor by sensing the current going to the motor. Many of these use small heaters, often bi-metallic elements that bend when warmed by current to the motor. When current is too high for too long, heaters open the **relay** contacts carrying current to the coil of the contactor. The red power wire is connected to the overload.

If either is defective always replace as a set.



Testing the relay overload

Make sure hot tank is turned off. Either clamp the amp probe around the red wire and plug in the cooler. On a properly operating relay the reading will jump up.

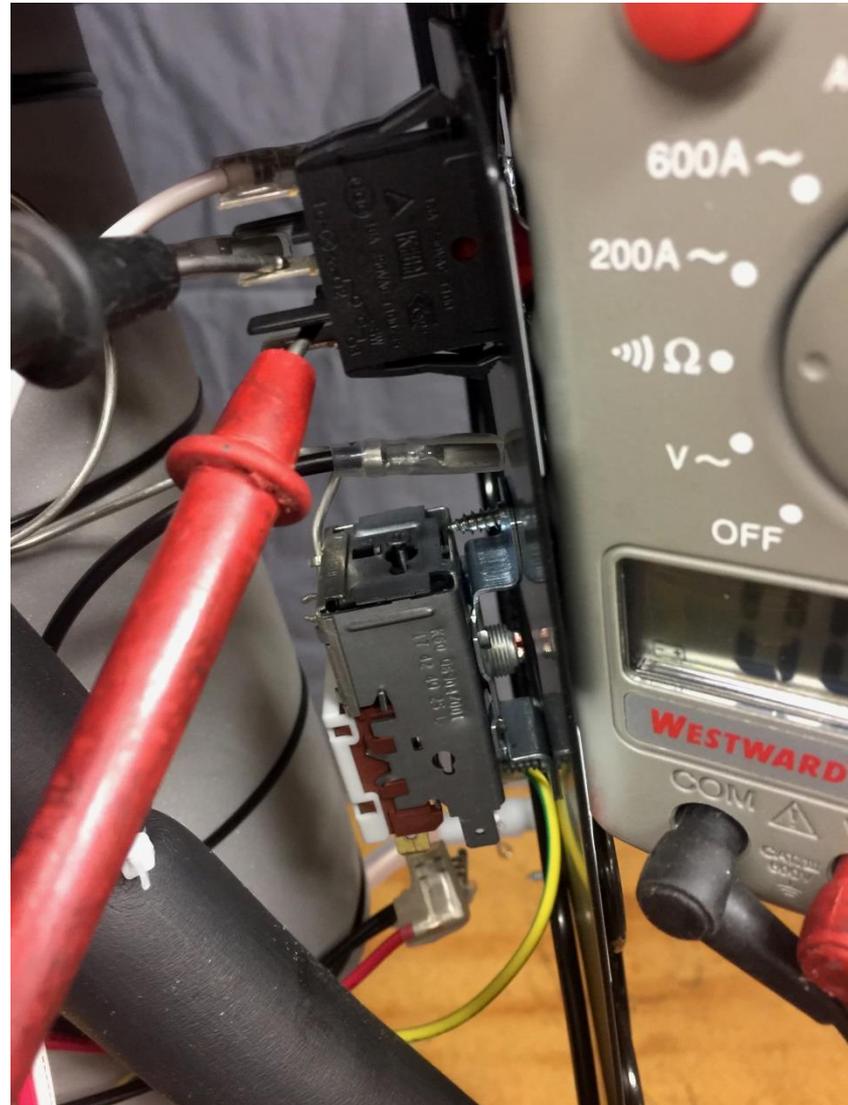


Reading should than settle down around 1 amp or slightly higher. If reading drops to zero for about 30 seconds than jumps back up to around 7 amps than down to zero. Replace both components.



Testing Hot Tank Switch

Disconnect wiring from rear of switch. Set meter to ohms (continuity) setting. With switch set to off position verify no continuity. Set switch to on position to verify continuity. Replace if bad.



Hot Controls

Hot tank temperature is controlled by a thermostat 85C (185F) and the high limit switch 96C (204F). To access these controls the cover needs to be removed. Use a #1 Phillips.

The high limit switch is on top and the thermostat on the bottom. If you suspect a component failure use the multimeter to either test for no continuity (failed hot control) or shorted control if a circuit breaker trips when the hot tank is turned on by checking for continuity between the hot control and the hot tank body.



Component Replacement

When replacing either thermostat or high limit switch make sure you apply some thermal mastic grease so the component will have good contact with the wall of the hot tank. Use the correct screw and lock washer and make sure the screws are tight. Install the wire thermals and insure they are tight. If the connector is loose and moves back and forth the component will quickly fail due to high resistance and heat.



Hot tank boils.

If components have been replaced and the hot tank continues to boil the internal wall of the hot tank is coated with a mineral build up. The thermostat can not sense temperature correctly due to calcium build up on the tank walls. Distributors should note spring water with high mineral content and pick up coolers on a regular basis to perform hot tank descaling. Recommend use of citric acid or vinegar to remove the scale. Fill hot tank with 50/50 mixture turn on hot tank switch and allow hot tank to cycle for a few hours. Process may need to be repeated.



Heat Band

If you suspect a defective heat band remove the upper red wire (high limit switch) and the lower red wire hot thermostat. Check continuity (show) if no continuity replace heat band.



To replace heat band remove the black ties that secure insulation. Once removed pull heat band wires thru the insulation.



Replacing the heat band

Remove the 2 screws that secure the heat shield to the hot tank screws circled in blue.

Loosen the 2 screws that secure the heat band and slide it off the hot tank. If screws are not completely removed remove hot tank drain tube.

Install in reverse order.



Replacing cold water way or hot tank

Remove the 2 reservoir nuts in cold water reservoir. If a reservoir nut removal tool is not available use needle nose pliers to loosen and tighten the fittings. Lift the reservoir and move it to the right to allow for access to the waterways.



To remove cold waterway slowly lift the water way and self insulation.



After removing shelf insulation slide waterway to the right and replace with new waterway if necessary



To remove hot tank disconnect wiring, (use a phone camera to snap a photo of wiring connections) drain tube , and remove the 2 screws that secure hot tank to mid pan and remove hot tank.



Installing waterway and hot tank.

If hot tank has been removed reinstall it and secure with the 2 screws, reconnect wiring, and drain tube.

Set cold water way on insulation lower insulation while sliding the tube thru the mid pan slot and slide tube to the left.

Reinstall small insulation piece.

Install silicone washers on hot tank fitting and cold water way.

Lower cold reservoir on fittings and reinstall reservoir nuts.

Fittings should be tightened to 25"inch lbs if correct tool are available, other wise snug until tight than additional $\frac{1}{4}$ turn.

Cabinet can than be installed.

