IMPORTANT

This document is for information only.

A person who decides to manipulate the heater is the only person responsible of what is done.

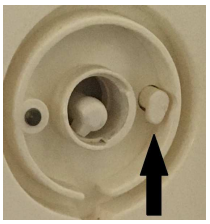
In order to work safely on the heater, it is important to turn off the breaker before manipulating it.

3 possible checks when a heater doesn't work properly.

1- Being sure the power is going to the heater. To do so, the heater must be removed from the wall in order to open the wall junction box and to check the wiring with a volt-meter. There should be around 240V. The wires must be well connected. Sometimes the wires are loose and by pulling one of them it is possible to remove it from the connector which is bad because the contact between the wires is not efficient. The ground wires must be connected together.

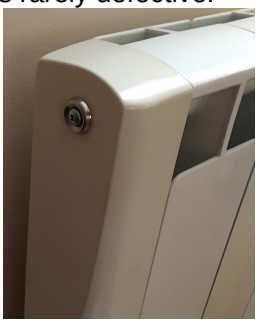
2- Being sure there isn't a wall thermostat preventing the power to go to the heater. There must not be a wall thermostat on the circuit going to the heater since the heater already has a thermostat.

3- Resetting the Ecotherm because it could be an electronic bug in the integrated thermostat. To reset it, the heater should be at the sun and at 9. Removing the 1 to 9 knob. A tip to remove easily this knob is to insert the tip of a thin screwdriver (or something else) inside the space below the knob and to flex it with a hand while the other hand is pulling the knob to remove it. The red light should be on. Press the push-button for 1 full minute until the red light flashes once or twice. Release the push-button. The reset is done. Put the knob back at 9 since it was removed at 9. Wait 1 hour on sun and 9 to check if the heater is warming up.


Push-button

What can be broken in the heater:

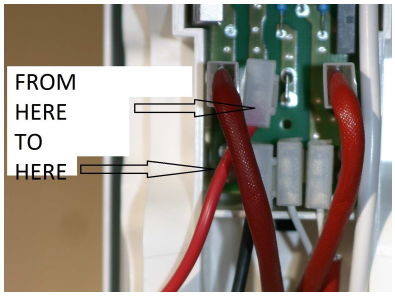
1- It could be the thermostat axle which is broken. If so, the user thinks he sets the heater at a number, but in fact it stays at the same level. So if the heater was at 1 when the axle broke, the heater will always stay at 1 even if the knob is set at an other number.
2- It could be the integrated electronic thermostat. If there is power and the thermostat light is off when the heater is at 9 and on the sun, the chances that the thermostat is broken are heavy. A defective thermostat could make the heater to be always cold or always very hot but it could also makes the heater work weirdly.
3- It could be the sensor telling the thermostat what temperature is in the room. The sensor is rarely defective.
4- It could be the heating element. It can be checked with an ohm-meter or with the bypass test described after.
5- It could be the thermal cut-off. In a 1st case, the heater is never more than warm. It is because the thermal cut-off is designed to cut the power if the heater is too hot, for instance if the heater is covered by a towel. When the thermal cut-off is not functioning well, it could cut the power and allow it to go through again. So the heater never gets a chance to give 100% of the power needed. Usually a little clic sound is heard every 30 seconds to 2 minutes when it cut the power then let it go through again. In a 2nd case, a defective thermal cut-off could also permanently cut the power which prevent completely the heater to heat. The thermal cut-off is rarely defective.
6- It could be the plastic side cover that is not well maintained in place. On the thermostat side, it is important to fix it to be sure the electric compartment is not accessible and to not have the knobs turning in the void. This is the consequence of the breakage of the plastic where the screws go on top and bottom of the cover. To fix it, it could simply be done by changing the screws that don't maintain well the cover by screws of same diameter but longer and by adding washers outside the cover as shown in the picture. Be careful to not tighten the screws with washers too much, otherwise it would break the cover. To be sure the axle is put accordingly with its knob's number, please follow the instructions given in this document.



The bypass test to check if the heating element is working:

It is possible to bypass the thermostat in order to let the electricity go directly to the heating element. Important: as long as the thermostat is bypassed, the heater will always heat at the maximum level since the thermostat is not in use to regulate it.

To bypass the thermostat, one of the two 240V wires is to be removed and then connected as shown on this picture. The slot where to place this wire is free. So the two 240V wires are side by side during the bypass test:



Once the bypass is done, waiting at least 30 minutes. Then checking the heater. There are 2 possible results:

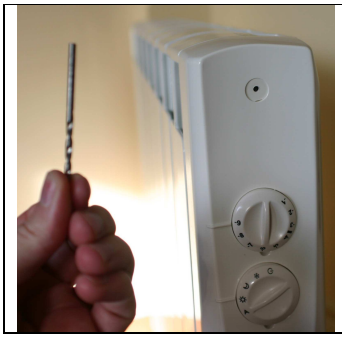
1. The heater is heating. This means the heating element is fine. At 95%, the problem is the thermostat which is likely faulty and needs a repair.
2. The heater is not heating. Likely the problem is the heating element which is faulty and needs to be changed. But it could be the thermal cut-off which is defective, which is not often. The best way to be sure is to check the heating element with a ohm-meter.

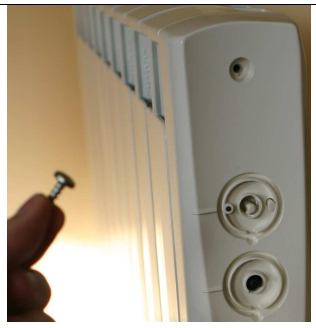
Once the bypass test is done, it is important to stop the bypass by putting the power wire at its original place.

How to open the heater:

Warning: Opening the heater can be dangerous if not done in a proper way. Opening the heater safely is the responsibility of the person who decides to manipulate it.

Before opening the heater, it is advised to place the “1 to 9” knob at 9 in order to remember when it will be time to put it back to place it at 9.
Removing the 2 knobs. To remove easily the one with the numbers, a tip is to insert the tip of a thin screwdriver (or something else) inside the space below the knob and to flex it with a hand while the other hand is pulling the knob to remove it.
Removing the 2 screws holding the side cover. They are sometimes hidden by rounds of plastic. To remove cleanly the 2 rounds, a tip is to drill a little hole at the center and insert the smooth part of the drill into the hole to be able to pull it out.

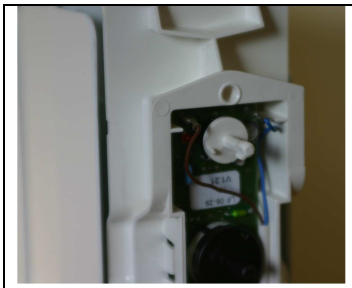




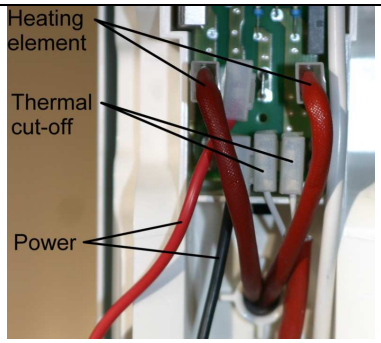
Now it is possible to remove the cover side and have access to the electronic thermostat.
If the axle has to be removed, this is the way to place it back correctly:

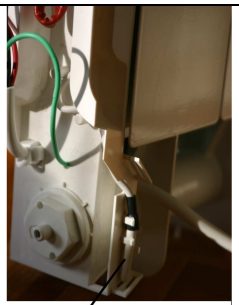
- Putting the axle into the hole (the shortest part into the thermostat)
- Turning it counter clockwise at the maximum
- The mark on the disk should be placed around 8H (if we imagine the disk is a watch)

So the thermostat is at 9, so at the highest.


Like this, the axle is placed at 9.

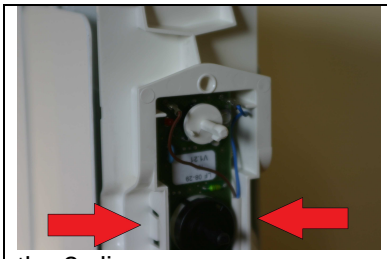

the thermostat axle

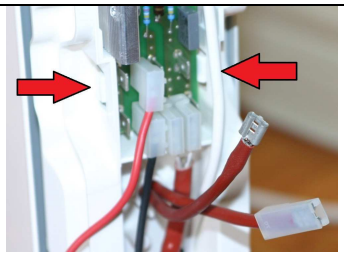


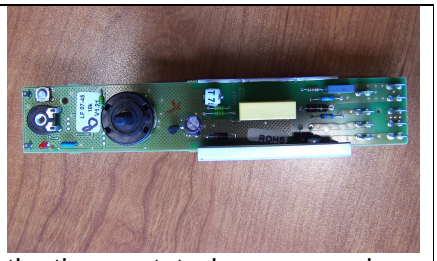


How to remove the thermostat:

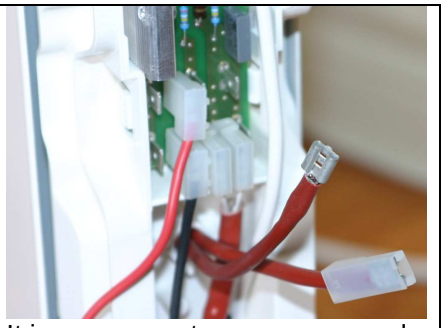
The thermostat is hold by 4 clips. It happens that some clips break while pushing them to free the thermostat. It is not a big deal because the thermostat will be hold tightly once the cover side is put back.


the 2 clips up

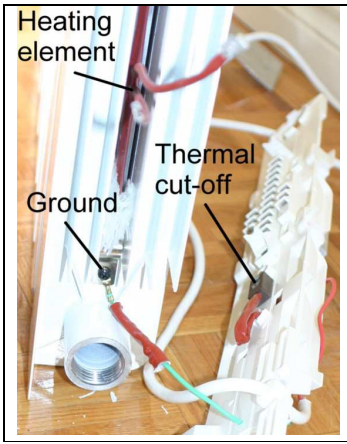

the 2 clips down

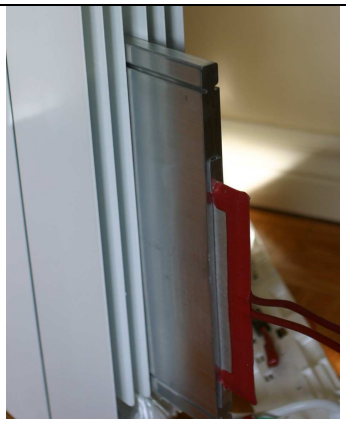

the thermostat when removed

If the element is to be changed, the following pictures describe how to have access to it. It is necessary to remove properly the plastic protection placed on both wires of the element connected to the thermostat.

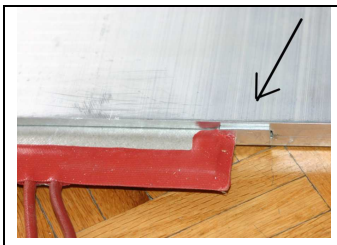

It is necessary to remove properly the plastic protection placed on both wires of the element

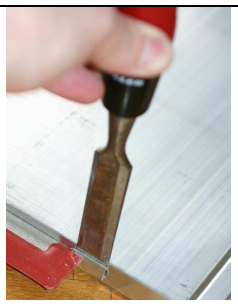
When reassembling the heater, it is important to not forget where the ground is screwed on the heater.

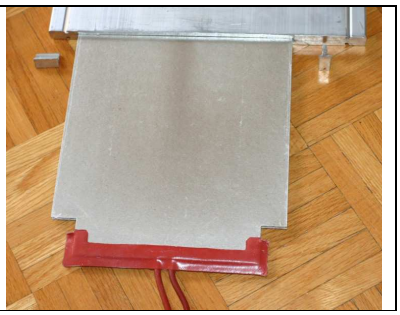




This is now how to remove the heating element from its aluminium plate.







When it is time to put the aluminium plate back into the heater, there could be some difficulties to push it into the heater. This is because of the white fabric around the plate. But this fabric is useful to avoid contact between the plate and the heater. A contact between both aluminium parts could create noises because of the dilatation. When it is difficult to push the plate into the heater, a tip consists to pull it back just a little bit and push it again. Repeating this tip each time it is difficult.