SAUNA360

Limit switch replacement for Pro and Laava Sauna Heaters

(kit is only needed for heaters produced before 2022)

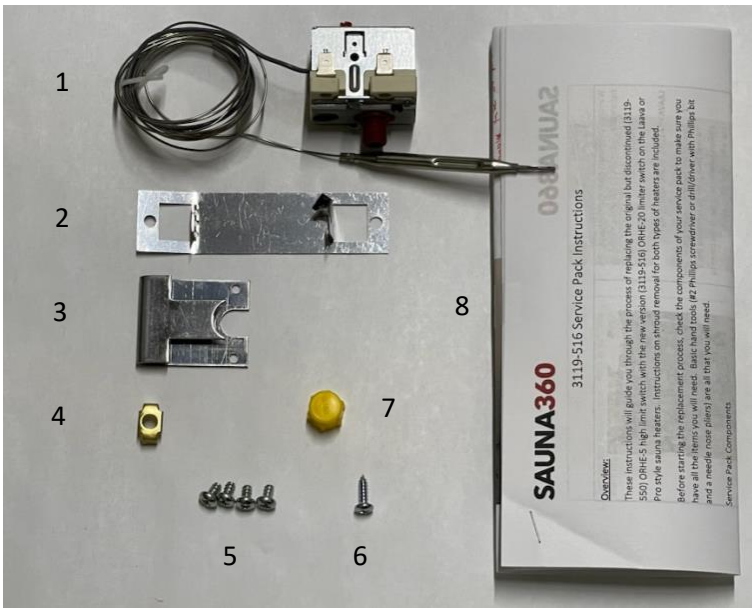
Overview:

These instructions will guide you through the process of replacing the original but discontinued (3119-550) ORHE-5 high limit switch with the new version (3119-516) ORHE-20 limiter switch in the Laava or Pro style sauna heaters. Instructions on shroud removal for both types of heaters are included.

Before starting the replacement process, check the components of your service pack to make sure you have all the items you will need. Basic hand tools (#2 Phillips screwdriver or drill/driver with Phillips bit and a needle nose pliers) are all that you will need.

Laava heater starts on page 2, Pro heater on page 4.

Service Pack Components



1	ORHI-20 Limiter Switch
2	Capillary Bulb Bracket
3	ORHE-20 Adapter Plate
4	Brass Cable Retainer
5	4.2x6mm blunt screw (4)
6	3.9x13mm screw, sharp (1)
7	Dust cap
8	Instructions

Warning: disconnect power to the heater before attempting any of these steps!

LAAVA HEATER SHROUD REMOVAL:

1. Remove the electrical access cover, and the rear back plate by removing the 2 Phillips screws that secure the cover to the wire terminal block assembly.

2. Remove the two rear corner caps by removing the single black Phillips screw located in the center of each cap.

3. Remove the vertical corner shrouds by sliding them up.

4. Remove the two Phillips screws at the top/inside of the back plate (access from rock compartment) and slide the back plate up and out of the way.

5. Remove the wire terminal block assembly by loosening/removing the 4 Phillips screws that secure the plate to the heater chassis.

Note: this plate has many wires attached to it. You only need to pull the plate forward enough to gain access to the existing limiter switch.

Proceed to "Old Switch Removal" section

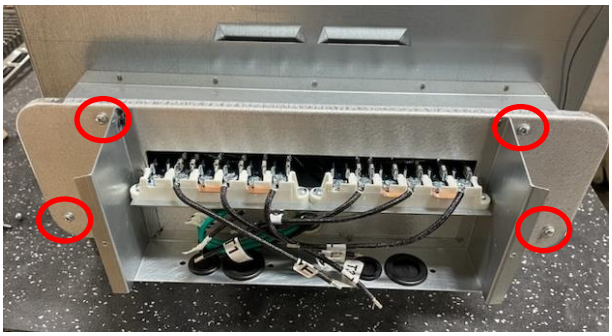
PRO HEATER SHROUD REMOVAL:

1. Remove the electrical access cover by removing the two Phillips retaining screws.

2. Remove the upper trim ring by removing the 6 Phillips screws indicated at right with red dots.

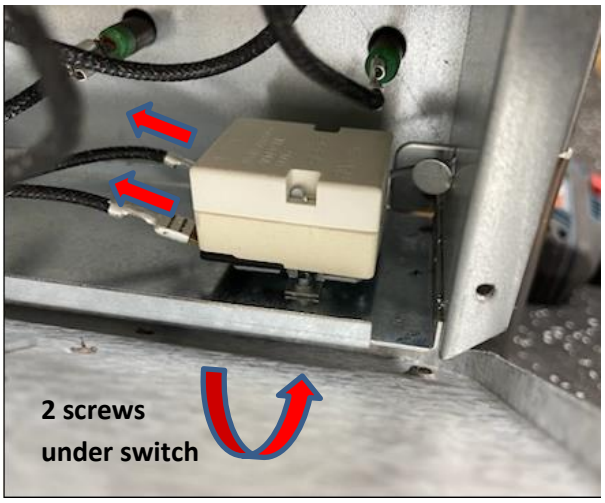
3. Remove the 3 Phillips screws that secure the outer shroud. (one on front and one on left and right sides). Slide shroud up and off the main chassis.

4. Remove the terminal block assembly screws (4) so you can tip the terminal block assembly forward to access the high limit switch.



OLD SWITCH REMOVAL:
(same applies to Pro and Laava models)

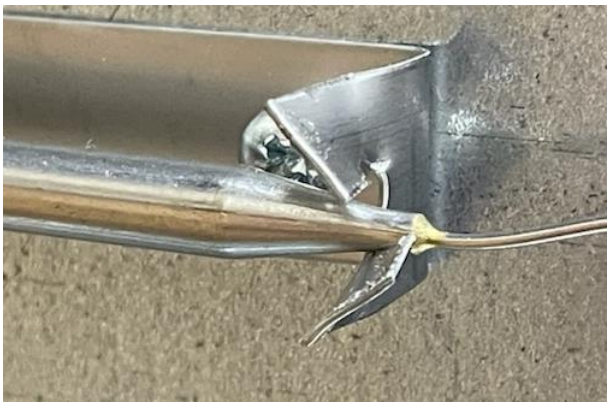
1. Remove the original limiter switch
   - Remove both Phillips mounting screws from underside of chassis.
   - Remove both high limit wires from switch terminals.



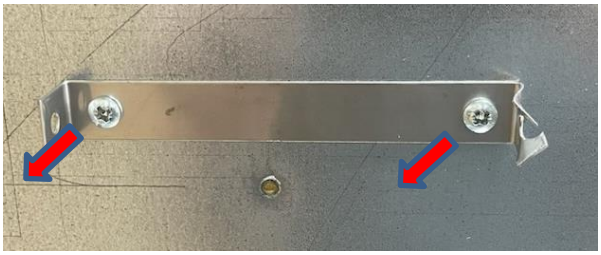
REMOVE OLD BULB MOUNTING BRACKET:

1. Bend the capillary bulb retainer open to release the bulb from the bracket.

2. Un-wind the capillary coil so the capillary tube/bulb can be pulled through the rubber grommet in the side of the electrical compartment.



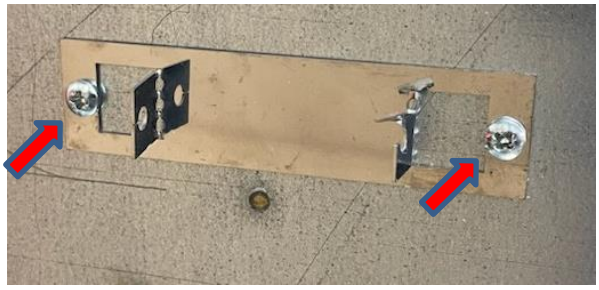
3. Remove the old capillary bulb mounting bracket



INSTALL NEW BULB MOUNTING BRACKET:

1. Install the new capillary bulb mounting bracket.

Note: bend the two square tabs on each end so they are 90° to the bracket before mounting the new bracket to the heater. Twist the right tab open to facilitate installation of the new capillary bulb.

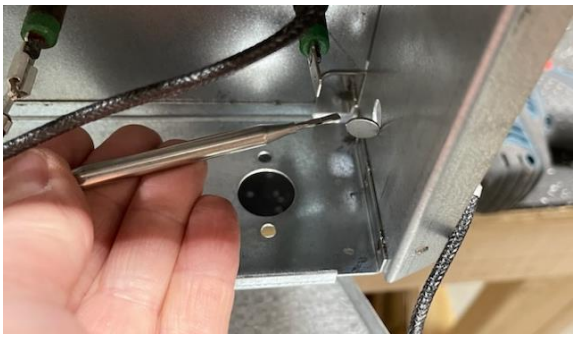


(use same screws and screw holes as old bracket)

INSTALL NEW SWITCH:

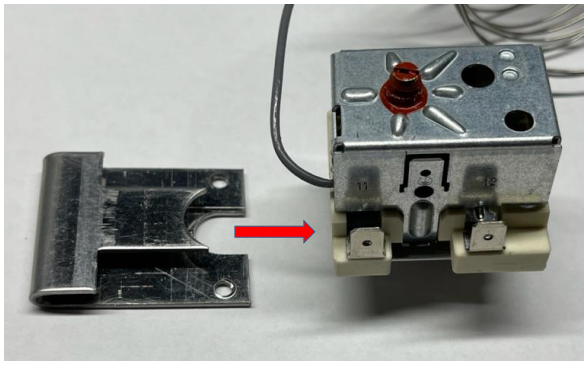
1. Locate the new mounting bracket. Pre-install 2 of the 4.2x6mm screws as shown at right, then remove them prior to installing the bracket and new limiter switch. This is required to cut the screw threads into the pre-drilled holes.

2. Carefully uncoil the new capillary tube and insert the bulb end through the opening in the side of the electrical compartment.

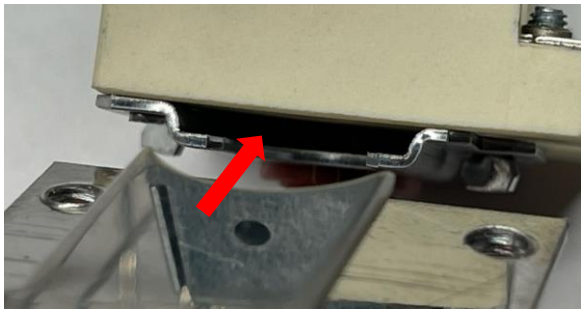


3. Pull the entire length of the capillary tubing through the hole.

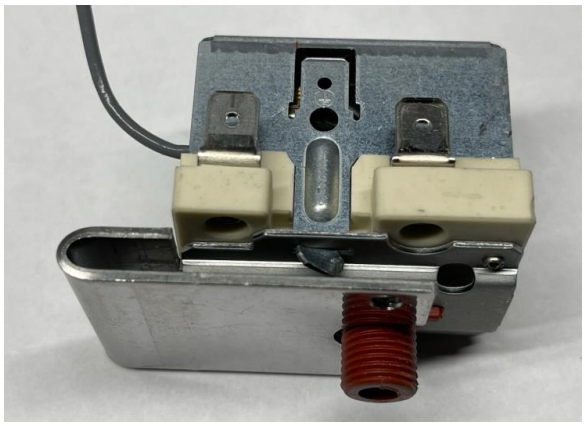
4. Slide bracket into slot on side of new limiter switch using the orientation shown at right.



- Tab with concave cut-out slides into the slot.

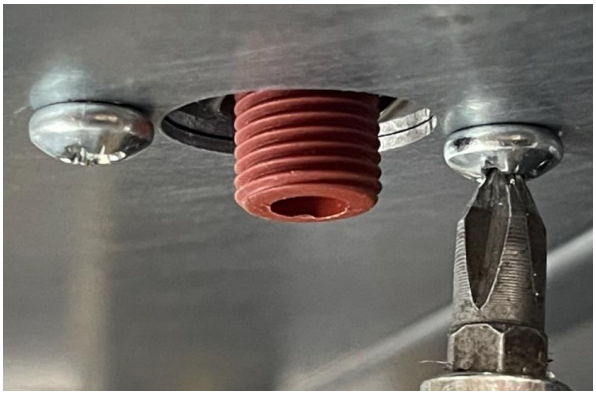


- Bracket is correctly orientated when the two wiring tabs are facing you and the bend in the bracket is on the left.



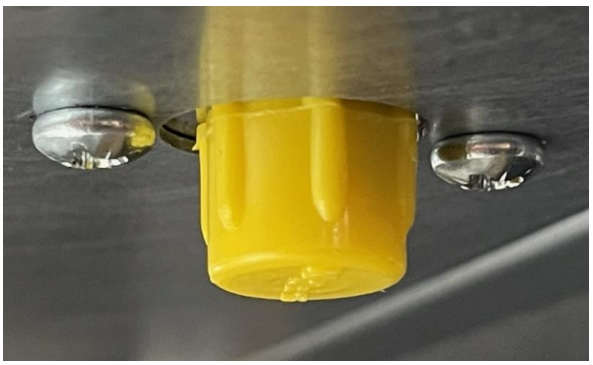
5. Position new switch into the electrical compartment with the large red/brown threaded reset boss inserted through the hole in the bottom of the electrical compartment. Wire terminals should face outward.

6. Secure with the two 4.2x6mm screws.



(view from bottom of heater)

7. Install yellow dust cap over switch reset boss.



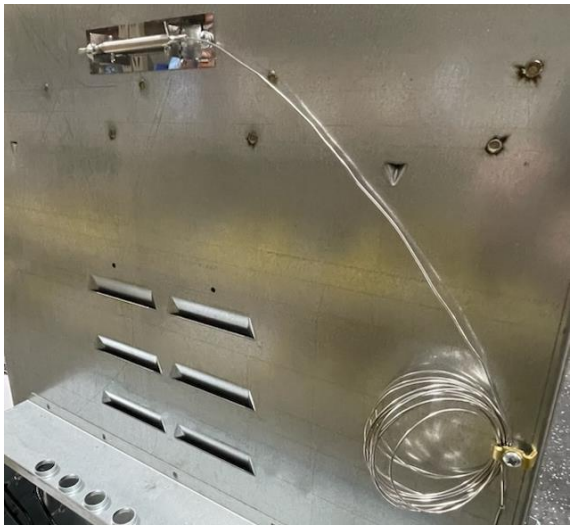
8. Wind up the excess capillary tubing in preparation for mounting the capillary bulb.

(Hint: use a 2”-3” diameter object to wrap the excess tubing around. This will prevent kinks, sharp bends and provide a professional looking installation)

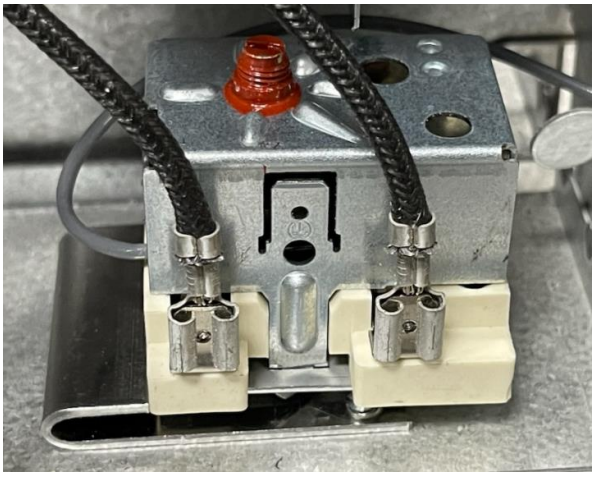
9. Secure the coil to the back of the heater using the brass cable retainer and a 3.9x13mm screw

10. Insert capillary bulb into the newly installed bracket on the back of the heater. Secure the bulb by twisting the split tab back to its original position.

- The new switch installation should look similar to that shown at right. Make sure there are no sharp bends or kinks in the capillary tubing.



11. Connect the two High Limit wires to the new switch. Following polarity is not necessary as the switch is simply providing a single-pole connection.



Re-install the terminal block assembly, electrical access cover and outer shroud components to complete the job.

Please contact your dealer or the outlet you purchased your product from for questions or support.

Common Causes of High Limit tripping

- Rocks are packed too tightly or have become broken and compacted and are restricting airflow through heater. (replace rocks annually in commercial applications)
- Insufficient sauna cabin ventilation.
- Temp sensor placement is incorrect, refer to the installation manual.
- Faulty temp sensor.
- Object (ex: towel or clothing) placed on top of heater.
- Sauna door left open during heating cycle.
- Sensor tampering or vandalism (commercial applications)

Resetting a tripped ORHE-20 High Limit Switch

Remove Yellow Dust Cap

Insert small tool into center

Note: the center plunger will not protrude from the threaded boss when the switch has tripped. Only a very light pressure with a small tool (screwdriver, paper clip, etc.) is needed to reset the switch. A very faint "click" can be heard when the switch is reset. Refer to top of page for possible cause of high limit tripping. Consult with your dealer or sauna equipment provider for further information.