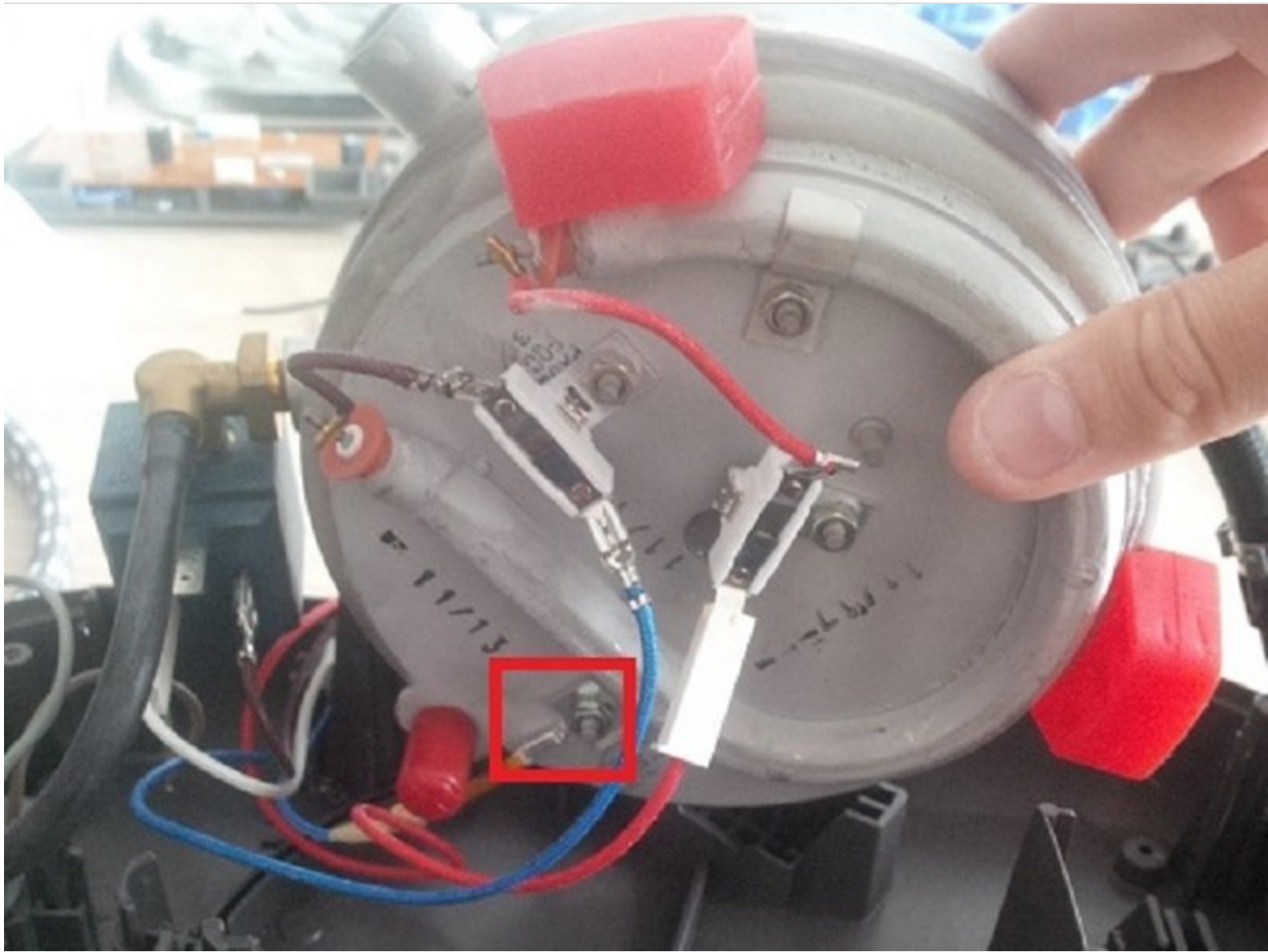




Philips Pressurised Steam Generator Iron GC8220 and Similar Models' Temperature Sensor (NTC Thermistor) Replacement

Continuing from GC8220 Teardown guide, This is about its temperature sensor.

Written By: Omid



INTRODUCTION

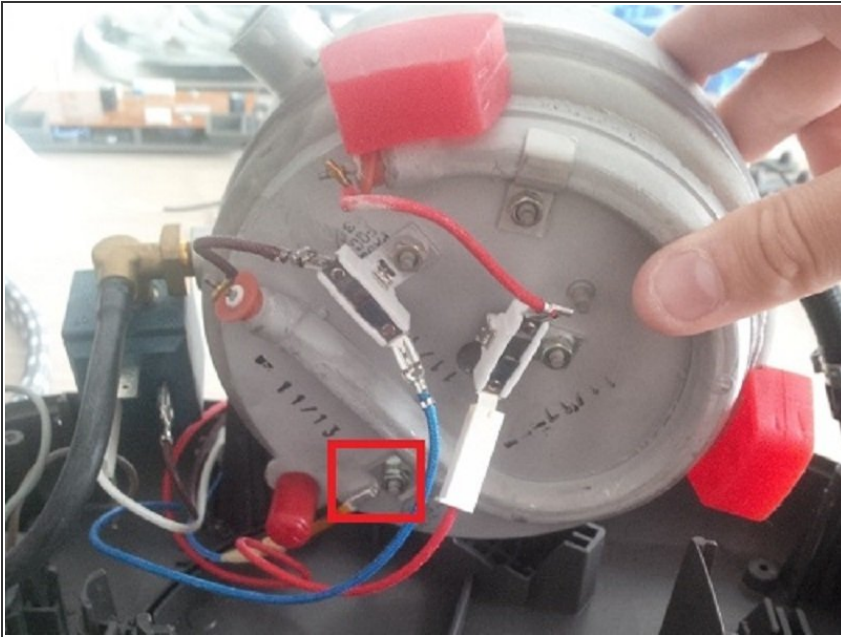
There is this great teardown guide for Philips Steam Iron:

[Philips Pressurised Steam Generator GC8220 Teardown](#)

I want to clarify about its temperature sensor; that if faulty, it will make problems for the steam function.

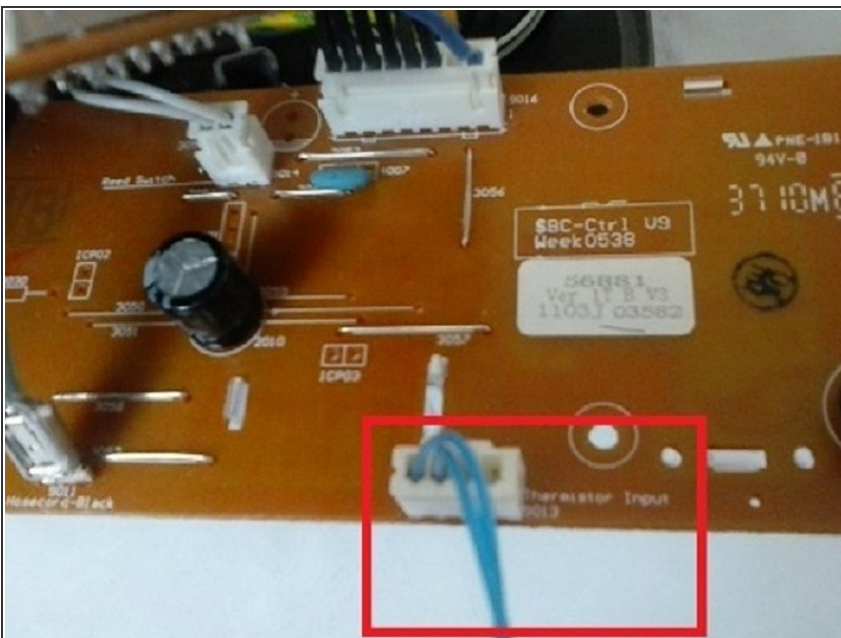
If no Philips spare part is available to you, it can be replaced with a generic from electronics component shops.

Step 1 — Temperature Sensor (NTC Thermistor)



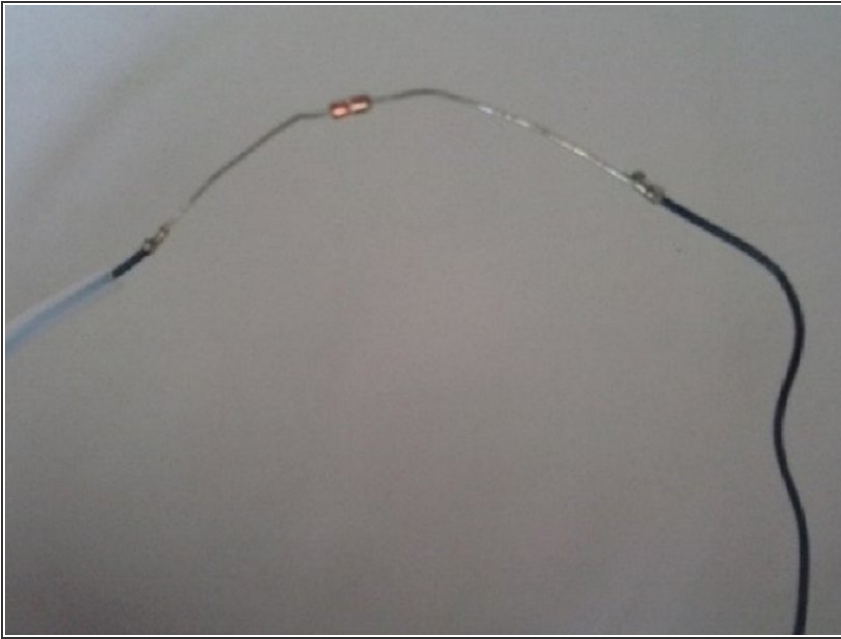
- The Temperature Sensor is attached to the bottom of the Boiler unit.
- It is an NTC Thermistor.

Step 2



- It is connected to the Main PCB.

Step 3



- It looks like a diode. But it is a resistor that changes value with temperature.

Step 4

Philips Components		Product specification																																																										
NTC thermistors, high-temperature sensors		2322 633 5/7/8																																																										
FEATURES	QUICK REFERENCE DATA																																																											
<ul style="list-style-type: none"> • Small diameter • Quick response to temperature change • High stability over a long life • Wide temperature range from -40 to +300 °C • Resistant to corrosive atmospheres and harsh environments. 	<table border="1"> <thead> <tr> <th>PARAMETER</th> <th>VALUE</th> <th>UNIT</th> </tr> </thead> <tbody> <tr> <td>Temperature range:</td> <td></td> <td></td> </tr> <tr> <td>2322 633 5....</td> <td>-40 to +200</td> <td>°C</td> </tr> <tr> <td>2322 633 7....</td> <td>0 to 300</td> <td>°C</td> </tr> <tr> <td>2322 633 8....</td> <td>0 to 300</td> <td>°C</td> </tr> <tr> <td>Resistance value at 25 °C (R₂₅)</td> <td>10 to 100</td> <td>kΩ</td> </tr> <tr> <td>Tolerance on R₂₅-value</td> <td>+5 and +10</td> <td>%</td> </tr> <tr> <td>B_{25/85}-value</td> <td>3977</td> <td>K</td> </tr> <tr> <td>Tolerance on B_{25/85}-value</td> <td>±1.3</td> <td>%</td> </tr> <tr> <td>Rated dissipation</td> <td>100</td> <td>mW</td> </tr> <tr> <td>Dissipation factor</td> <td>2.5</td> <td>mW/K</td> </tr> <tr> <td>Response time</td> <td>0.9</td> <td>s</td> </tr> <tr> <td>Thermal time constant τ</td> <td>6</td> <td>s</td> </tr> <tr> <td>Temperature coefficient at 25 °C</td> <td>-4.38</td> <td>%/K</td> </tr> <tr> <td>Climatic category:</td> <td></td> <td></td> </tr> <tr> <td>2322 633 5....</td> <td>40/155/56</td> <td></td> </tr> <tr> <td>2322 633 7....</td> <td>0/300/56</td> <td></td> </tr> <tr> <td>2322 633 8....</td> <td>40/200/56</td> <td></td> </tr> <tr> <td>Mass:</td> <td></td> <td></td> </tr> </tbody> </table>	PARAMETER	VALUE	UNIT	Temperature range:			2322 633 5....	-40 to +200	°C	2322 633 7....	0 to 300	°C	2322 633 8....	0 to 300	°C	Resistance value at 25 °C (R ₂₅)	10 to 100	kΩ	Tolerance on R ₂₅ -value	+5 and +10	%	B _{25/85} -value	3977	K	Tolerance on B _{25/85} -value	±1.3	%	Rated dissipation	100	mW	Dissipation factor	2.5	mW/K	Response time	0.9	s	Thermal time constant τ	6	s	Temperature coefficient at 25 °C	-4.38	%/K	Climatic category:			2322 633 5....	40/155/56		2322 633 7....	0/300/56		2322 633 8....	40/200/56		Mass:				
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These thermistors have a negative temperature coefficient and are mounted in a glass envelope:																																																												

- They come in a range of values. 10kOhms ~ 100 kOhms.

To reassemble your device, follow these instructions in reverse order.