

Modification so your temperature gauge has an accurate reading

207

Your RV8 temperature gauge is lying!

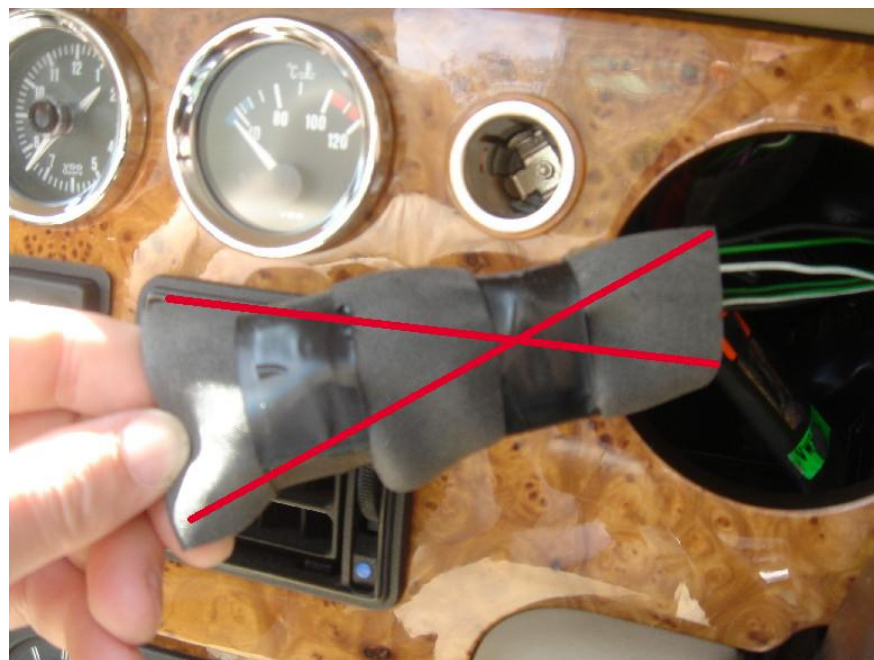
Stefan Matthaei (Woodcote Green 1250) from Munich in Germany suggests a simple modification on the wiring of the temperature gauge to allow for correct readings of the engine temperature. (Jun 04)

While reading the repair manual on the RV8's electrical instruments, I stumbled over the following paragraph:

Coolant Temperature Gauge

... the signal from the temperature sender is passed through an ECU which modifies the signal to the gauge. The needle is maintained at midpoint until a high temperature signal is given, the needle is then moved to show high temperature in the red sector.

This was an explanation for a very unpleasant experience I had experienced earlier. When my cooling fan quit working due to an electrical failure, the needle moved to red, but not slowly as one would suspect, but very fast. In effect the needle only moved very shortly before the engine was boiling. Up to this point there was no warning at all – the needle was sitting nicely centred at midpoint . . .



Temperature gauge ECU? No this is NOT THE RIGHT THING; this is in fact the dampening ECU for the fuel gauge. (Photo: Stefan Matthaei)

Looking at the wiring diagram, the ECU is easily identified but where is it in the car? It was not so easy to find! I found it accidentally when I had the tachometer removed for another instrumentation problem solving job – see RV8 Workshop



Temperature gauge ECU. (Photo: Stefan Matthaei)

Note 206. The ECU is basically behind the dashboard just loosely attached to some wires. You can find it easily if you remove the tachometer and then detach the cable from the back of the temperature gauge. Be careful to note the orientation of the connector!

The **temperature gauge ECU** is completely sealed in hard plastic. The photo below shows the unit with **step one** of the modification already completed. Cut the Green-Blue wire coming in and the Green-Black leading to gauge but do not cut them too short, in case you ever want to revert back. In fact for easier access, the whole thing can be disconnected from the wiring loom completely. The white connector shown below sits right above the tachometer hole on the back of the dashboard. The photo below shows **step two** of the modification, connect the Green-Blue wire coming in and the Green-Black leading to Gauge directly, insulate remaining ends on the ECU.

Step three is the straightforward reassembly of this element. You might want to make sure it is attached somewhere and cannot create any rattling noises. It is also worth attaching the fuel dampening ECU with similar care.

Lastly you can now enjoy accurate readings on your temperature gauge. Please note the following changes:

- Engine takes longer to warm up. This of course is not true! In fact the ECU previously just made you believe your engine was already warm, when in fact it was not.

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- Normal temperature shown is slightly lower than before, at about 85° Celsius. That is correct and a good check for your thermostat.
- Engine heats up if you press it hard at low speeds. That is in fact true and good to know.
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Finding the white connector. (Photo: Stefan Matthaei)

Once I was driving seriously in the Japanese Alps with a friend in an E-type Jaguar. The route we took was uphill, with lots of full throttle in second gear. I managed to get him off my back easily, but had to take it easy after 10 minutes or so, because the temperature indicated by the gauge was approaching 100° Celsius. My friend still thinks I was waiting for him to catch-up . . .