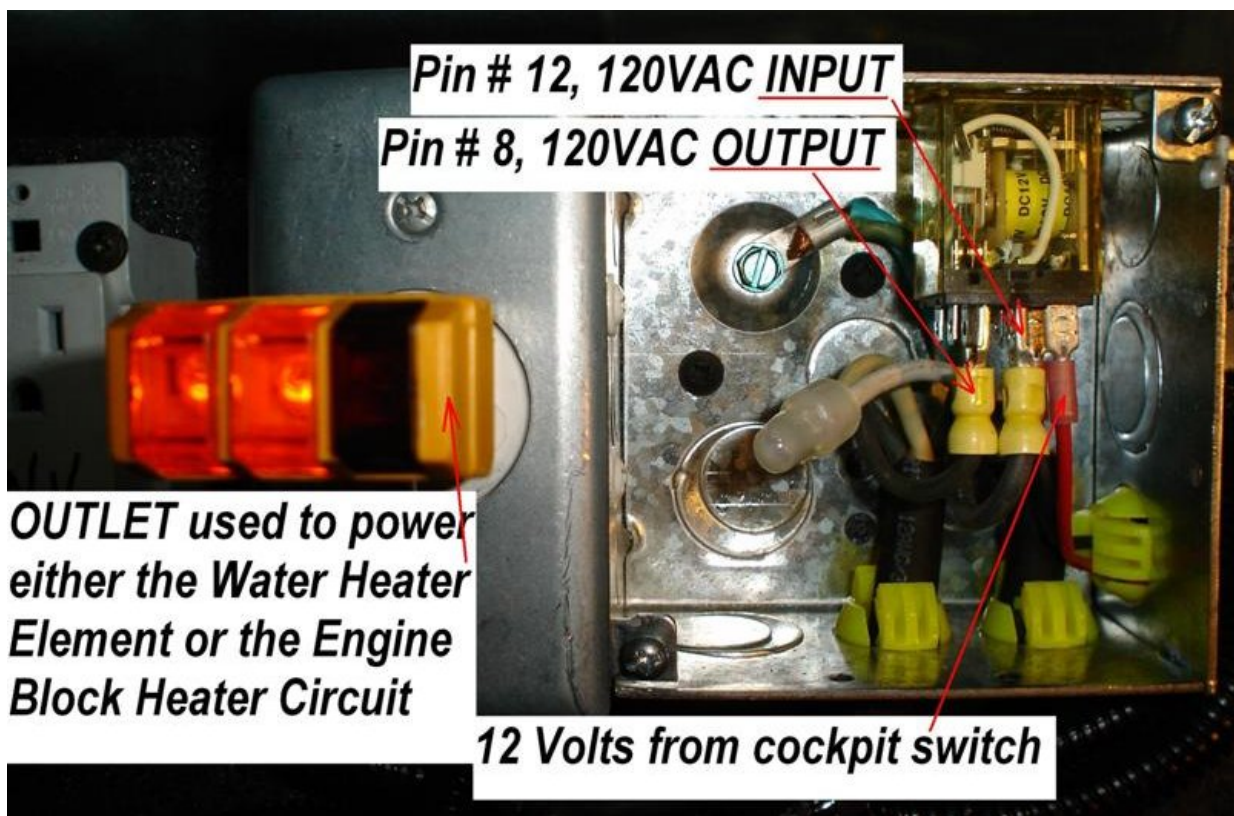


12 volt Controlled Water Heater and Engine Block Heater Circuits

Tiffin motorhomes designed and uses a 12 volt DC controlled circuit. The circuit is used to control (turn **ON**) a 120 VAC outlet. Tiffin uses this circuit to control the 120 AC volts to either the 120 volt water heater element or the 120 AC volts to the engine block heater circuit.

Tiffin uses a 12 VDC switch with an interior light (which illuminates when the switch is ON) to control the above circuits. The water heater switch is located in the same compartment as the LP water heater switch. The engine block heater switch is usually located on the driver's side console.

Below is a picture with captions of the engine block heater circuit on my Phaeton.

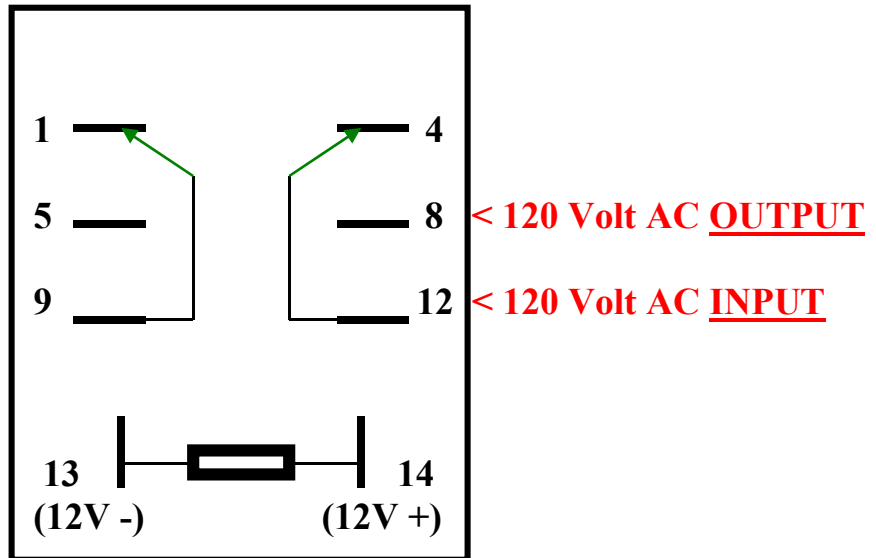


The picture has a circuit tester plugged into the output outlet of the circuit. I have the console switch controlling the engine block heater turned **ON** at the driver's console. The relay contacts are closed and 120 volts is supplied to the outlet. The internet link below will take you to information on this relay:

<http://www.galco.com/scripts/cgiip.exe/wa/wcat/itemdtl.r?pnum=RH2B-UT-DC12-IDEDEC&mfgr=IDEDEC>

The pictorial below is an electrical drawing of the RH-2B-UT DC 12V relay.

**12 Volt Control
Switch turned OFF**



As can be seen in the color picture of this circuit, only four wires are connected to the relay. The two white insulated wires are connected together. The two green ground wires are connected together and attached to the metal box, grounding the box to the chassis frame. The 120 Volt AC BLACK wire INPUT is connected to relay **Pin # 12**. The 120 Volt AC BLACK wire OUTPUT is connected to relay **Pin # 8**. **Pin # 13** is connected to the relay 12 volt DC ground and relay **Pin # 14** is connected to the 12 volt DC supplied by the cockpit control switch for either the water heater element or the engine block heater circuits. **When the control switch is turned ON the relay closes contacts # 5 and # 8 and opens contacts # 1 and # 4, making 120 volts AC available on the circuit outlet.**

**12 Volt Control
Switch is turned ON**

