

# Rinnai®

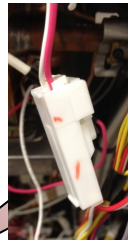
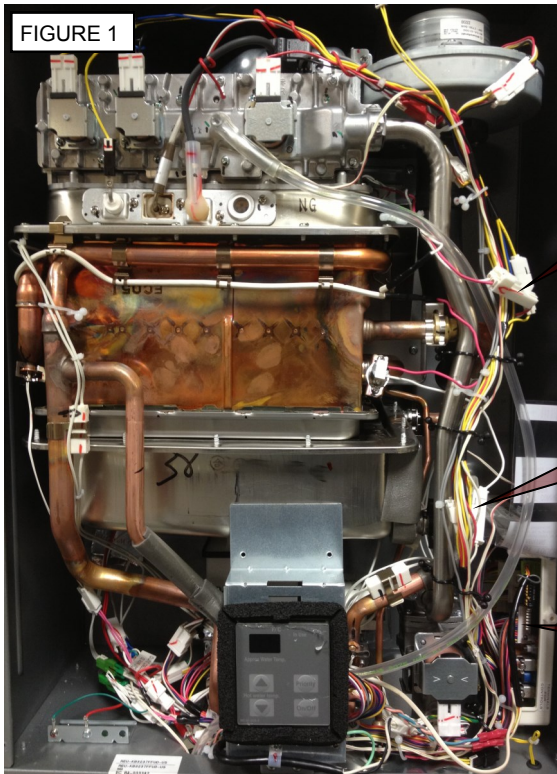
## Technical Bulletin-107 Troubleshooting Code 14 and Code 57 On KB Series Condensing Tankless Water Heaters

Code 14 will be displayed on the controller if the PCB does not see continuity through the thermal fuse circuit (thermal fuse and overheat switch #1) during the start sequence. You will need to attempt to operate the water heater in order for this code to be posted.

Troubleshooting:

1. Ensure dip switch 5 in SW2 is in the off position (SW2 is the lower or second set of white dip switches on the PC board). (FIGURE 4)
2. Disconnect the thermal fuse wiring harness connector that contains the single white wire. Connector B8 in the wiring diagram. (See FIGURE 3)
3. Place a jumper wire\* from the PCB side of the B8 connector (disconnected in step 2) to the white wire of the second thermal fuse connector containing white and red wires. Connector B7 on the wiring diagram (see FIGURE 2). Do not disconnect the B7 connector.
4. Attempt to operate the water heater. If the unit operates replace the thermal fuse. If the code 14 is posted again go to step 5.
5. If the code 14 is posted after step 4, gain access to the PCB wiring. Do not disconnect any connectors from the PCB. Place a jumper wire\* on the PCB from connector G, Pin 8 (white wire) to connector B, Pin 1 (white wire). (See FIGURE 5).
6. Attempt to operate the unit. If the unit operates replace the sensor wiring harness. If the code 14 is posted again, replace the PCB.

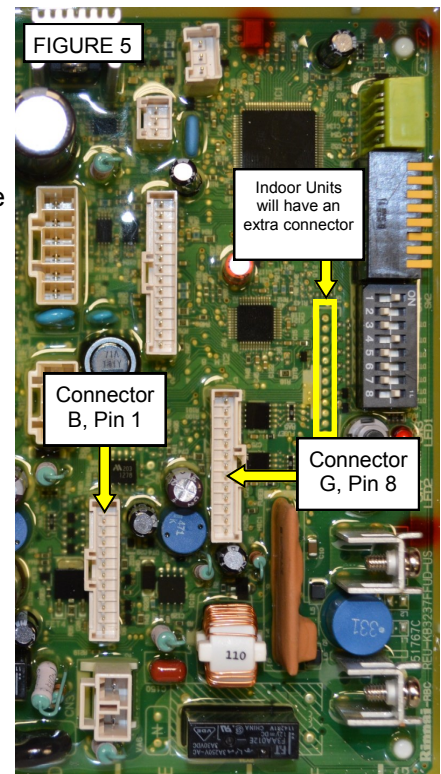
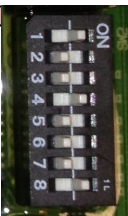
(\* **CAUTION** - Use of jumper wire is for testing purposes only. **DO NOT** leave jumper wire connected after testing completed.)



Thermal Fuse connector with red and white wires.



Thermal Fuse connector with single white wire.



### **CAUTION** ⚡

Extreme care should be used at all times to avoid direct contact with energized components inside of the unit. Parts of the PC board are supplied with 120 volts. Only trained and qualified service technicians should attempt to repair this product.

Code 57 will be posted if the PCB does not see continuity through the two #2 overheat switches. These overheat switches are part of the thermal fuse/overheat harness but wired in parallel to the thermal fuse and overheat switch #1.

**(NOTE: If the overheat switch #2 circuit is open the code 57 will be posted immediately once power is applied to the unit. Operation of the unit is not necessary for troubleshooting purposes. In order to reset the code 57, the water heater will need to be disconnected from electrical power. Turning the unit off at the control panel will not be sufficient.)**

Troubleshooting:

1. Ensure the connector with the white and red wires (connector B7) is securely connected (see FIGURE 7).
2. If the connector is secure and the code 57 is still posted when power is applied, disconnect power then place a jumper wire\* from the white to red wires of connector B7 (see FIGURE 7). If the code 57 is not posted when power is restored replace the thermal fuse harness.
3. If the code 57 reappears, disconnect power and gain access to the PCB. Do not disconnect any wiring from the PCB. Place a jumper wire\* from connector G, pin 8 to connector E, pin 10 (FIGURE 8). If the code 57 does not post and the unit operates, replace the sensor wiring harness. If the code 57 reappears replace the PCB.

(\* **CAUTION** - Use of jumper wire is for testing purposes only. **DO NOT** leave jumper wire connected after testing completed.)

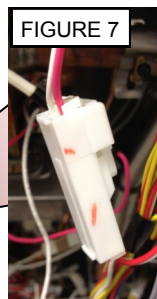
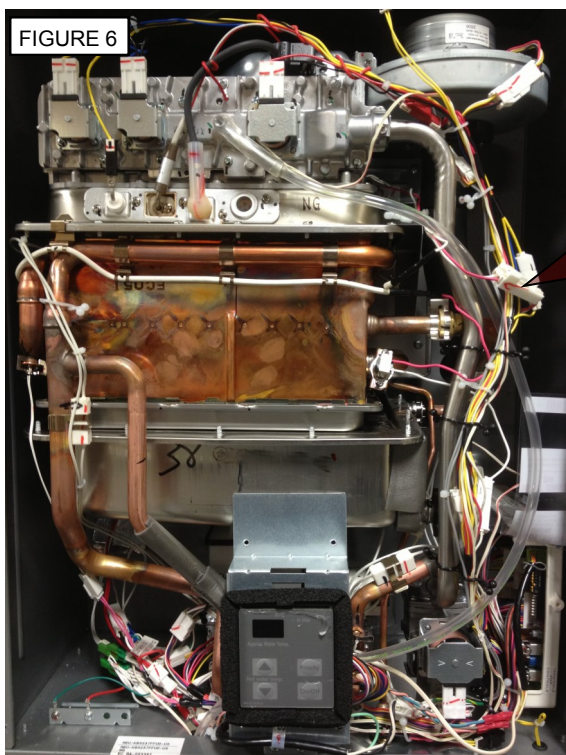
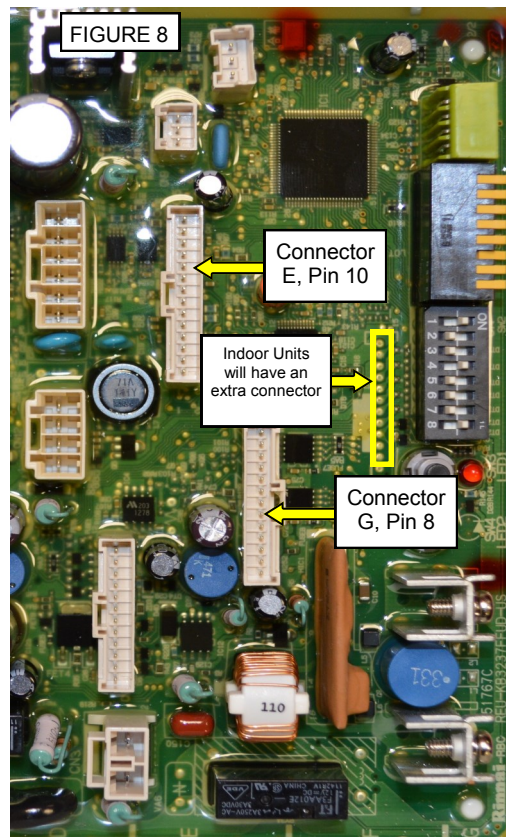


FIGURE 7 Thermal Fuse connector with red and white wires.



**⚠ CAUTION ⚡**

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