

RINNAI

LOCKOUT CHECK LIST

REU-2424 Series Water Heaters

1. Check inlet gas pressure:

___ The inlet gas pressure for the Rinnai REU-2424 residential and commercial unit should be 10” to 13.5” of water column on the propane gas models.

___ The inlet gas pressure for the REU-2424 residential and commercial unit should be 6” to 10” of water column on the natural gas models.

2. Check manifold gas pressure on forced low fire.

___ The forced low fire manifold gas pressure for the Rinnai REU-2424 residential and commercial unit should be 0.59” of water column on the propane gas models.

___ The forced low fire gas pressure for the REU-2424 residential and commercial unit should be 0.43” of water column on the natural gas models.

3. Check manifold gas pressure on forced high fire.

___ The forced high fire manifold gas pressure for the Rinnai REU-2424 residential and commercial unit should be 8.7” of water column on the propane gas models.

___ The forced high fire gas pressure for the REU-2424 residential and commercial unit should be 5.3” of water column on the natural gas models.

4. Check for the proper dip switch settings in the “SW1” row of dip switches:

Proper dip switch settings for the REU-2424 -W residential water heater on propane are, switch#1 **OFF**, #2 **OFF**, #3 **OFF**, #4 **ON**, #5 **OFF**, #6 **OFF**, #7 **OFF**, #8 **OFF**.

Proper dip switch settings for the REU-2424 -WC commercial water heater on propane gas are, switch#1 **OFF**, #2 **ON**, #3 **OFF**, #4 **ON**, #5 **OFF**, #6 **OFF**, #7 **OFF**, #8 **OFF**.

Proper dip switch settings for the REU-2424 -W residential water heater on natural gas are, switch#1 **ON**, #2 **OFF**, #3 **OFF**, #4 **ON**, #5 **OFF**, #6 **OFF**, #7 **OFF**, #8 **OFF**.

Proper dip switch settings for the REU-2424 – WC commercial water heater on natural gas are, switch#1 **ON**, #2 **ON**, #3 **OFF**, #4 **ON**, #5 **OFF**, #6 **OFF**, #7 **OFF**, #8 **OFF**.

5. Check for the proper dip switch settings in the “SW2” row of dip switches:

Proper dip switch settings for the REU-2424 –W and the REU-2424 –WC residential and commercial water heaters for both natural and propane gases are, switch #1 **OFF**, #2 **OFF**, #3 **OFF**.

6. Check for power supply and grounding:

___ Ensure you have 120 volts A.C. to the unit and ensure the unit is properly grounded. Do not assume you have a ground, check for ground with a voltage meter. The remote control operates off of a 12 volt D.C. signal supplied by the unit.

7. Igniter:

___ Check igniter circuit when unit is in the process of ignition, you should have 90 ~100 VAC across the two grey wires connected to the igniter module.

8. Gas, gas line, meter and/or regulator:

___ Ensure gas type matches type listed on rating plate, and ensure gas line, meter, and/or regulator were sized properly. When sizing you MUST size for 180,000 Btu’s per heater.

9. Check for faulty regulator:

___ Check regulator to ensure it is not freezing up.

10. Flame rod:

___ Check the flame rod circuit on low fire, the reading should be one micro amp or greater.

11. Check voltage and resistance readings across transformer listed below.

___ Across the black and white wires at the surge protector, you should have 110 – 125 VAC or 21 – 26 ohms. Remember anytime you are taking resistance readings disconnect power supply and isolate component being checked:

___ Across the red and black wires at connector J on the PC board (pins 1 – 2), you should have 100 – 125 VAC or 19 – 24 ohms.

___ Across the green and green wires at connector F on the PC board (pins 1 – 2), you should have 16 – 20 VAC or 3.5 – 4 ohms.

___ Across the yellow and grey wires at connector A on the PC board (pins 3 – 5), you should have 180 – 240VAC or 237 – 260 ohms.

___ Across the brown and grey wires at connector A on the PC board (pins 2 – 5), you should have 30 – 50 VAC or 3.2 – 3.7 ohms.

___ Across the orange and orange wires at connector A on the PC board (pins 1 – 4), you should have 13 – 30 VAC or 1 – 1.4 ohms.

12. Check voltage and resistance readings across the gas valve solenoids:

___ Across the pink and black wires at connector I on the PCB (pins 1 – 4) you should have 80 – 100 VDC or 0.9K – 1.5K ohms. This is SV1 or the main solenoid valve. Error code 71.

___ Across the yellow and black wires at connector I on the PCB (pins 1 – 3) you should have 80 – 100 VDC or 1.3K – 2K ohms. This is SV2 solenoid valve. Error code 71.

___ Across the blue and black wires at connector I on the PCB (pins 1 – 6) you should have 80 – 100 VDC or 1.3K – 2K ohms. This is SV3 solenoid valve. Error code 71.

___ Across the pink and pink wires at connector B on the PCB (pins 1 – 3) you should have 0.5 – 25VDC or 60 – 100 ohms. This is the POV solenoid valve. Error code 52.

13. Thermistor check:

___ Ensure the outgoing water temperature, and the heat exchanger thermistors are functioning. All thermistors can be checked by inserting meter leadings into each end of the thermistor plug. Set your meter to the 20K scale and read the resistance. The resistance reading should decrease when heat is applied to the thermistor bulb, and should increase when ice is placed against the bulb. Outgoing thermistor is an error code 32, and the one on the heat exchanger is an error code 31.

14. Exhaust and Air Intake:

___ Ensure the exhaust and air intakes are not blocked and/or clogged. .

15. Circulator:

___ Isolate the circulator pump from the plumbing system and proceed with troubleshooting. Circulating systems have check valves that can fail and allow water to bypass the unit. If water is bypassing the unit, it will not fire.

16. Filter:

___ Ensure water inlet filter is not clogged.

17. Auto Drain Down Solenoids:

___ Isolate the auto drain down system from the system to ensure water is not bypassing the unit through a check valve. If water bypasses the unit through the auto drain down the unit will not fire.