RTG 74 Tankless Fault Codes
Includes Indoor, Outdoor and Heavy Duty Models

Code	Fault	Remedy
00	1 Hour continuous combustion	Close all hot water taps to reset unit. Turn off, or remove circulation pumps (unit is not designed for continuous operation with circulation systems).
05	Imperfect Combustion Alarm	Clean air inlet filter. Clean combustion air fan. Clean heat exchanger fins. Check for adequate combustion air ventilation openings and clean if necessary. Check vent system for partial blockage and correct as necessary.
10	_Warning or Predictive Code – not a fault code._ Air Supply or Exhaust Blockage	Check all vent components for proper connections. Check that nothing is blocking the flue inlet or exhaust. Ensure condensation trap/drain was installed correctly. Ensure heat exchanger fins, fan, and air intake are not blocked.
11	No Ignition	Ensure you have gas to the appliance and valves are turned ON. Ensure gas type and pressure is correct. Bleed all air from gas lines. Ensure gas line, meter, and regulator are sized properly. Ensure appliance is properly grounded. Check gas solenoid valves for open or short circuits. Ensure igniter is operational. Check igniter wiring harness for damage. Ensure maximum vertical vent length does not exceed allowable limits. Ensure maximum horizontal vent length does not exceed allowable limits.
12	Flame Failure	Ensure you have gas to the appliance. Ensure gas type and pressure is correct. Bleed all air from gas lines. Ensure flame rod wire is connected. Check flame rod for carbon build-up. Ensure gas line, meter, and regulator are sized properly. Ensure appliance is properly grounded. Check gas solenoid valves for open or short circuits. Check power supply for loose connections. Check power supply for proper voltage and voltage drops. Disconnect remote control; see if it runs. Disconnect and re-connect all wiring harnesses on unit and PC board. Ensure proper venting material was installed. Ensure condensation collar was installed properly. Ensure maximum vertical vent length does not exceed allowable limits. Ensure maximum horizontal vent length does not exceed allowable limits.

Technical Competence, Product Confidence

11003.DOC

RTG 74 Tankless Fault Codes
Includes Indoor, Outdoor and Heavy Duty Models

13	Oxygen Depletion Sensor (Poor or Improper Combustion)	Ensure there is plenty of fresh air to the unit. Unit needs 1 square inch for each 1,000 BTU of input. That is up to 200 square inches or a space 14 ½ x 14 ½ inches.
14	Overheat Wrap Fault	Ensure high fire and low fire manifold pressure is correct. Check gas type of unit and ensure it matches gas type being used. Check heat exchanger for cracks and/or separations. Check for improper high altitude chip. Check for restrictions in airflow around unit and vent terminal. Check for a foreign materials in combustion chamber and/or exhaust piping.
15	Boiling Safety Device	Check for closed water heater inlet valve or restrictions in cold water inlet pipe (must be fully open). Check for clogged heat exchanger (scale buildup). On commercial water heater, lower set point temperature below 180F at high altitude.
16	Over Temperature Warning	Check for clogged heat exchanger. Check for restrictions in airflow around unit and vent terminal. Check for a foreign materials in combustion chamber and/or exhaust piping.
21	Malfunction of Air Intake Filter Switch	Make sure air filter door is properly seated. Make sure front panel is properly installed.
24	Malfunction of Operational Switch	Disconnect remote control and retry. Verify unit is electrically grounded. Press max button on PCB to reset. Press min button on PCB to reset.
29	Heat Exchanger Outlet Temp. Too Low	Clean air inlet screen. Clean heat exchanger fins
31	Water Inlet Temperature Sensor Fault	Check sensor wiring for damage. Ohm out sensor Check and clean scale from sensor.
33	Outgoing Water Temperature Sensor Fault	Check sensor wiring for damage. Ohm out sensor Check and clean scale from sensor.
34	Combustion Air Temperature Sensor Fault	Check sensor wiring for damage. Ohm out sensor Check and clean ambient air temperature sensor. Ensure fan blade is tight on motor shaft and it is in good condition. Check for restrictions in airflow around unit and vent terminal.
35	Improper Thermistor Connection	Check that all thermistors are connected to proper connections on PCB.
51	Gas Inlet Solenoid Valve Fault	Check gas inlet solenoid valve wiring harness for loose or damage terminals. Ohm out solenoid valve.

Technical Competence, Product Confidence

11003.DOC

RTG 74 Tankless Fault Codes
Includes Indoor, Outdoor and Heavy Duty Models

52	Modulating Solenoid Valve Fault	Check modulating gas solenoid valve wiring harness for loose or damage terminals. Ohm out solenoid valve.
61	Combustion Fan Failure	Ensure fan motor will turn freely. (Motor will operate with a small amount of restriction.) Check wiring harness to motor for damaged and/or loose connections. Check venting length not to exceed max lengths and bends.
71	Gas Inlet Solenoid Valve Control Fault	Check gas inlet solenoid valve wiring harness for loose or damage terminals. Ohm out solenoid valve.
72	Flame Sensing Device Fault	Ensure flame rod is touching flame when unit fires. Check inside burner chamber for any foreign material blocking flame at flame rod. Check all wiring to flame rod for damage. Check flame rod for proper voltage. Remove flame rod and check, clean with steel wool.
76	Communication Fault with Remote Control	Check remote control wiring for loose or damaged connections. Bypass remote control cable by connecting remote control directly to remote control terminals on PCB. Replace cable if found to be faulty. Replace remote control.
79	Fan Motor Current Fault	Ensure fan motor will turn freely. (Motor will operate with a small amount of restriction.) Check fan motor for proper voltage and for water (condensation) damage
80, 81	Gas Cut-off Failure	Ohm out all solenoid valves. Check voltage of all flame rods.
82	PCB data failure. Control board is not programmed.	Program PCB for proper altitude and fuel type circuit board with proper programming chip.
90	Blocked Flue Fault	Clean any blockage in heat exchanger, combustion fan, inlet filter, and exhaust flue.
No code	Nothing happens when water is flowing through unit.	Make sure unit is connected to proper power supply and circuit breakers are on. Make sure power supply inlet fuses are not blown. Clean inlet water supply filter. Ensure you have at least the minimum flow rate required to fire unit. On new installations ensure hot and cold water lines are not crossed. Check for bleed over. (Close cold water supply valve to water heater. Open hot water taps at fixtures. If water flows steady from hot water taps, there is a bleed over in the system.) Increase thermostat setting to highest point and retry.