

## **Tankless Water Heater** Error Code List

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	Air Supply or Exhaust Blockage	Check all vent components for proper connections. Check that nothing is blocking the flue inlet or exhaust. Ensure proper venting materials were used. Ensure condensation collar was installed correctly. Ensure heat exchanger fins, fan, and air intake are not blocked.
11	No Ignition	Ensure you have gas to the appliance. 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.
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. 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.
14	Overheat Wrap Fault	Ensure high fire and low fire manifold pressure are correct. Check gas type of unit and ensure it matches gas type being used. Check heat exchanger for cracks and/or separations. Ohm out safety circuit. Check for improper conversion of product. Check for restrictions in air flow 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 setpoint temperature below 180F at high altitude.
16	Over Temperature Warning	Check for clogged heat exchanger. Check for restrictions in air flow around unit and vent terminal. Check for a foreign materials in combustion chamber and/or exhaust piping.



## **Tankless Water Heater** Error Code List

21 Malfunction of A Filter Switch  24 Malfunction of O Switch  29 Heat Exchanger Temp. Too Low  31 Water Inlet Tem Sensor Fault  33 Outgoing Water Temperature Se  34 Combustion Air Temperature Se  35 Improper Therm Connections  51 Gas Inlet Solence Fault  52 Modulating Sole Fault  53 Fault  54 Combustion Fand  55 Modulating Sole Fault  56 Communication Fault  76 Communication Remote Control  77 Fan Motor Curre		Remedy
Filter Switch  Malfunction of O Switch  Page Heat Exchanger Temp. Too Low  Water Inlet Temp. Sensor Fault  Combustion Air Temperature Se  Improper Therm Connections  Improper Therm Connections  Modulating Sole Fault  Combustion Fault  Gas Inlet Solence Fault  Combustion Fault  Fault  Gas Inlet Solence Control Fault  Control Fault  Communication Remote Control		
Switch  29 Heat Exchanger Temp. Too Low  31 Water Inlet Temperature Sensor Fault  33 Outgoing Water Temperature Sensor Fault  34 Combustion Air Temperature Sensor Fault  51 Gas Inlet Solence Fault  52 Modulating Sole Fault  61 Combustion Fault  71 Gas Inlet Solence Control Fault  72 Flame Sensing I Fault  76 Communication Remote Control	Air Intake	Make sure air filter door is properly seated.  Make sure front panel is properly installed.
29 Heat Exchanger Temp. Too Low 31 Water Inlet Tem Sensor Fault  33 Outgoing Water Temperature Se  34 Combustion Air Temperature Se  35 Improper Therm Connections 51 Gas Inlet Solence Fault 52 Modulating Sole Fault  61 Combustion Fan  71 Gas Inlet Solence Control Fault  72 Flame Sensing I Fault  76 Communication Remote Control	Operational	Press max button on PCB to reset.
Temp. Too Low Water Inlet Tem Sensor Fault  33 Outgoing Water Temperature Se  34 Combustion Air Temperature Se  35 Improper Therm Connections 51 Gas Inlet Solence Fault 52 Modulating Sole Fault  51 Combustion Fan  52 Flame Sensing I Fault  53 Flame Sensing I Fault  54 Communication Remote Control		Press min button on PCB to reset.
Temp. Too Low Water Inlet Tem Sensor Fault  33 Outgoing Water Temperature Se  34 Combustion Air Temperature Se  35 Improper Therm Connections 51 Gas Inlet Solence Fault 52 Modulating Sole Fault  51 Combustion Fan  52 Flame Sensing I Fault  53 Flame Sensing I Fault  54 Communication Remote Control	r Outlet	Replace PCB Clean heat exchanger air inlet
33 Outgoing Water Temperature Se  34 Combustion Air Temperature Se  35 Improper Therm Connections  51 Gas Inlet Solence Fault  52 Modulating Sole Fault  61 Combustion Fan  71 Gas Inlet Solence Control Fault  72 Flame Sensing Improper Therm Connections  73 Gas Inlet Solence Control Fault  74 Flame Sensing Improper Therm Connections  75 Communication Remote Control		Glean fleat exchanger all lillet
33 Outgoing Water Temperature Se  34 Combustion Air Temperature Se  35 Improper Therm Connections  51 Gas Inlet Solence Fault  52 Modulating Sole Fault  61 Combustion Fan  71 Gas Inlet Solence Control Fault  72 Flame Sensing I Fault  76 Communication Remote Control	nperature	Check sensor wiring for damage.
34 Combustion Air Temperature Se  35 Improper Therm Connections  51 Gas Inlet Solend Fault  52 Modulating Sole Fault  61 Combustion Fan  71 Gas Inlet Solend Control Fault  72 Flame Sensing I Fault  76 Communication Remote Control		Ohm out sensor
34 Combustion Air Temperature Se  35 Improper Therm Connections  51 Gas Inlet Solend Fault  52 Modulating Sole Fault  61 Combustion Fan  71 Gas Inlet Solend Control Fault  72 Flame Sensing I Fault  76 Communication Remote Control		Check and clean scale from sensor. Replace sensor.
34 Combustion Air Temperature Se  35 Improper Therm Connections  51 Gas Inlet Solend Fault  52 Modulating Sole Fault  61 Combustion Fan  71 Gas Inlet Solend Control Fault  72 Flame Sensing I Fault  76 Communication Remote Control	r	Check sensor wiring for damage.
35 Improper Therm Connections 51 Gas Inlet Solence Fault 52 Modulating Sole Fault 61 Combustion Farm 71 Gas Inlet Solence Control Fault 72 Flame Sensing If Fault  76 Communication Remote Control		Ohm out sensor
35 Improper Therm Connections 51 Gas Inlet Solence Fault 52 Modulating Sole Fault 61 Combustion Farm 71 Gas Inlet Solence Control Fault 72 Flame Sensing If Fault  76 Communication Remote Control		Check and clean scale from sensor.
35 Improper Therm Connections 51 Gas Inlet Solence Fault 52 Modulating Sole Fault 61 Combustion Farm 71 Gas Inlet Solence Control Fault 72 Flame Sensing If Fault  76 Communication Remote Control	<u> </u>	Replace sensor.
35 Improper Therm Connections 51 Gas Inlet Solence Fault 52 Modulating Sole Fault 61 Combustion Fan  71 Gas Inlet Solence Control Fault  72 Flame Sensing I Fault  76 Communication Remote Control		Check sensor wiring for damage. Ohm out sensor
Connections  51 Gas Inlet Solence Fault  52 Modulating Sole Fault  61 Combustion Fan  71 Gas Inlet Solence Control Fault  72 Flame Sensing I Fault  76 Communication Remote Control	onoor raan	Check and clean scale from sensor.
Connections  51 Gas Inlet Solence Fault  52 Modulating Sole Fault  61 Combustion Fan  71 Gas Inlet Solence Control Fault  72 Flame Sensing I Fault  76 Communication Remote Control		Ensure fan blade is tight on motor shaft and it is in good condition.
Connections  51 Gas Inlet Solence Fault  52 Modulating Sole Fault  61 Combustion Fan  71 Gas Inlet Solence Control Fault  72 Flame Sensing I Fault  76 Communication Remote Control		Check for restrictions in air flow around unit and vent terminal.
Connections  51 Gas Inlet Solence Fault  52 Modulating Sole Fault  61 Combustion Fan  71 Gas Inlet Solence Control Fault  72 Flame Sensing I Fault  76 Communication Remote Control	miotor	Replace sensor.  Check that all thermistors are connected to propor connections on PCB.
Fault  52 Modulating Sole Fault  61 Combustion Fan  71 Gas Inlet Solence Control Fault  72 Flame Sensing I Fault  76 Communication Remote Control	HISTOI	Check that all thermistors are connected to propor connections on PCB.
<ul> <li>Modulating Sole Fault</li> <li>Combustion Fan</li> <li>Gas Inlet Solence Control Fault</li> <li>Flame Sensing I Fault</li> <li>Communication Remote Control</li> </ul>	oid Valve	Check gas inlet solenoid valve wiring harness for loose or damage terminals.
Fault  61 Combustion Fan  71 Gas Inlet Solence Control Fault  72 Flame Sensing I Fault  76 Communication Remote Control	anaid Value	Ohm out solenoid valve.
71 Gas Inlet Solence Control Fault  72 Flame Sensing I Fault  76 Communication Remote Control	enoid vaive	Check modulating gas solenoid valve wiring harness for loose or damage terminals.
71 Gas Inlet Solence Control Fault  72 Flame Sensing I Fault  76 Communication Remote Control		Ohm out solenoid valve.
72 Flame Sensing I Fault  76 Communication Remote Control	n Failure	Ensure fan motor will turn freely. (Motor will operate with a small amount of
72 Flame Sensing I Fault  76 Communication Remote Control		restriction.)
72 Flame Sensing I Fault  76 Communication Remote Control		Check wiring harness to motor for damaged and/or loose connections.  Ohm out motor winding.
72 Flame Sensing I Fault  76 Communication Remote Control	oid Valve	Check gas inlet solenoid valve wiring harness for loose or damage terminals.
76 Communication Remote Control	iola valvo	Ohm out solenoid valve.
76 Communication Remote Control		Replace PCB
76 Communication Remote Control	Device	Ensure flame rod is touching flame when unit fires.
Remote Control		Check inside burner chamber for any foreign material blocking flame at flame rod.
Remote Control		Check all wiring to flame rod for damage.
Remote Control		Check flame rod for proper voltage.
Remote Control		Remove flame rod and check for carbon build-up, clean with sand paper.
Remote Control	- Fa	Replace flame rod.
		Check remote control wiring for loose or damaged connections.  Bypass remote control cable by connecting remote control directly to remote
79 Fan Motor Curre	1	control terminals on PCB. Replace cable if found to be faulty.
79 Fan Motor Curre		Replace remote control.
<b>79</b> Fan Motor Curre		Replace PCB.
	ent Fault	Ensure fan motor will turn freely. (Motor will operate with a small amount of
		restriction.) Check fan motor for proper voltage
		Replace PCB.
		Check fan motor for proper voltage. Replace fan motor. Replace PCB.



## **Tankless Water Heater** Error Code List

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Code	Fault	Remedy			
80,81	Gas Cut-off Failure	Ohm out all solenoid valves.			
		Check voltage of all flame rods.			
		Replace gas control valve.			
82	Gas type data failure	Program PCB for proper gas type.			
99	Blocked Flue Fault	Clean any blockage in heat exchanger, combustion fan, inlet filter, and exhaust			
		flue.			
No	Nothing happens when	Make sure unit is connected to proper power supply and circuit breakers are on.			
code	water is flowing through	Make sure power supply inlet fuses are not blown.			
,	unit.	Clean inlet water supply filter.			
		Ensure you have at least the minimum flow rate required to fire unit.			
		Check for pipe dope inside water flow control turbine.			
		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.)			