

## Error Code

Code	Fault	Remedy
No Code	<p><u>Flow Rate/Maintenance:</u></p> <p>Nothing Happens When Water Is Flowing Through Unit. (Control Board Displays Water Temp)</p>	<ol style="list-style-type: none"> <li>1. Increase water flow rate or set higher temperature</li> <li>2. New Installations: Ensure hot and cold water lines are not crossed</li> <li>3. Check for plumbing crossover in the home</li> <li>4. Clean water inlet filter</li> <li>5. Check water flow sensor (may be jammed)</li> </ol>
P1	<p><u>Maintenance Warning:</u></p> <p>Water Flow Too Low (Unit Will Still Be Operable; Minimum Flow 0.4 GPM To Activate @ 35° ΔT)</p>	<ol style="list-style-type: none"> <li>1. Check hot water tap flow (clean aerator if necessary)</li> <li>2. Clean water inlet filter</li> <li>3. Increase flow rate or set higher temperature</li> </ol> <p>If maintenance requirements are met:</p> <ol style="list-style-type: none"> <li>1. Check water flow sensor</li> </ol>
1L	<p><u>Maintenance:</u></p> <p>Water Heater Has Buildup Of Lime/Scale Deposits</p>	<ol style="list-style-type: none"> <li>1. Flush Heat Exchanger</li> <li>2. High Altitude Installations: ensure proper altitude settings have been made</li> </ol>
03	MIC 185, MIC 6, & EZ Link	<ol style="list-style-type: none"> <li>1. Check communications cable connection</li> <li>2. Check # 4 dip switch setting is in the 'ON' position (<i>Dip Set # 1 (Top), Dip switch # 4 on the water heaters only</i>)</li> </ol>
05	<p><u>Maintenance Warning:</u></p> <p>Air Intake Or Vent Exhaust May Be Blocked (Unit Will Still Be Operable)</p>	<ol style="list-style-type: none"> <li>1. Remove any vent blockage</li> <li>2. Make sure venting meets all installation requirements</li> </ol> <p>If maintenance requirements are met:</p> <ol style="list-style-type: none"> <li>1. Check fan motor</li> </ol>
	<p><u>Installation Warning:</u></p> <p>The vent Pipes On The Vent Termination May Not Be Connected (Unit Will Still Be Operable)</p>	<p>Make sure all venting is properly sealed and meets all venting requirements (diameter; vent lengths; venting material; venting obstructions; and all other installation requirements as described in installation manual)</p> <p>If installation requirements are met:</p> <ol style="list-style-type: none"> <li>1. Check Blower Motor</li> </ol>

<p><b>10</b></p>	<p><u>Maintenance:</u> Decrease Of Ventilation Amount (Blower Motor)</p>	<p>Clean any blockage in venting, Blower Motor, air intake</p> <p><i>If maintenance requirements are met:</i></p> <ol style="list-style-type: none"> <li>1. Check Blower Motor</li> </ol>
<p><b>11</b></p>	<p><u>Installation/Gas supply:</u> Ignition Failure</p>	<ol style="list-style-type: none"> <li>1. Ensure you have gas to the appliance and valves are turned 'ON'</li> <li>2. Ensure gas type, gas pressure, and gas volume are correct</li> <li>3. Bleed all air from gas lines</li> <li>4. Ensure gas line, meter, and regulator are sized properly</li> <li>5. Ensure appliance is properly grounded</li> </ol> <p><i>If installation/gas supply requirements are met:</i></p> <ol style="list-style-type: none"> <li>1. Check Gas Control valve for open or short circuits</li> <li>2. Ensure Igniter Rod is operational</li> <li>3. Check igniter/Flame Rod(s) and Igniter/Flame Rod(s) wiring harness for damage</li> <li>4. Check Control Board</li> <li>5. Check Flame Rod Status</li> </ol>
<p><b>12</b></p>	<p><u>Gas supply/Installation/Maintenance:</u> Flame Failure (Had Main Burner, Then Lost It)</p>	<ol style="list-style-type: none"> <li>1. Ensure gas type and pressure is correct</li> <li>2. Bleed all air from gas lines</li> <li>3. Ensure Flame Rod wire(s) is connected</li> <li>4. Check Flame Rod(s) for carbon build-up</li> <li>5. Ensure gas line, meter, and regulator are sized properly</li> <li>6. Ensure appliance is properly grounded</li> <li>7. Check power supply for proper voltage and voltage drops</li> <li>8. Disconnect and re-connect all wiring harnesses on Gas Control Valve and Control Board</li> </ol> <p><i>If gas supply/installation/maintenance requirements are met:</i></p> <ol style="list-style-type: none"> <li>1. Check gas valves for open or short circuits</li> <li>2. Check flame rod(s) and flame rod(s) wiring harness for damage</li> <li>3. Check PCB</li> <li>4. Check flame rod(s) status</li> </ol>

13	<p><u>Indoor ONLY</u></p> <p><u>Venting:</u></p> <p>Flame Rod FL-2: Reads Poor Or Improper Combustion</p>	<p>Ensure intake and exhaust venting meet all installation requirements (diameter; vent lengths; venting material; venting obstructions; and all other requirements as described in the Use &amp; Care manual <b>{Make sure exhaust is not recirculating into fresh air intake}</b>)</p> <p><i>If venting requirements are met:</i></p> <ol style="list-style-type: none"> <li>1. Remove any blockage from venting or from in front of vent termination</li> <li>2. Verify altitude settings</li> <li>3. Check Flame Rod FL-2</li> <li>4. Check Blower Motor</li> </ol>
14	<p><u>Condensing only:</u></p> <p><u>Maintenance:</u></p> <p>Flue Temperature Too High</p>	<p><u>Condensing Only:</u></p> <ol style="list-style-type: none"> <li>1. Clean blockage in heat exchanger</li> <li>2. Remove any blockage from Blower Motor and exhaust vent</li> </ol>
14	<p><u>Mid Efficiency &amp; Condensing:</u></p> <p>Over Heat Limiter (OHL) Fault</p>	<p><u>Mid Efficiency &amp; Condensing:</u></p> <p><i>If 'Condensing' maintenance requirements are met:</i></p> <ol style="list-style-type: none"> <li>1. Verify "U" connector is connected to Control Board</li> <li>2. Verify wiring harness is connected to OHL</li> <li>3. Check heat exchanger for cracks and/or separations</li> <li>4. Inspect Overheat Wrap (Overheat wrap failure: Replace unit)</li> <li>5. Check thermal overload sensor (condensing models only)</li> </ol>
15	<p><u>Maintenance:</u></p> <p>Boiling Safety Device (Heat Exchanger temperature reached 207 F degrees for more than 15 seconds)</p>	<ol style="list-style-type: none"> <li>1. Flush Heat Exchanger (lime/scale buildup)</li> <li>2. Check for closed water heater inlet valve or restrictions in cold water inlet pipe (must be fully open)</li> <li>3. On commercial water heater, lower set point temperature below 180<sup>0</sup>F at high altitudes</li> </ol> <p><i>If maintenance requirements are met:</i></p> <ol style="list-style-type: none"> <li>1. Check Heat Exchanger Thermistor</li> </ol>
16	<p><u>Maintenance:</u></p> <p>Outlet Water Temperature Is Above Remote Thermostat Setting</p>	<ol style="list-style-type: none"> <li>1. Check for clogged Heat Exchanger</li> <li>2. Check for restrictions in airflow around unit and vent terminal</li> </ol> <p><i>If maintenance requirements are met:</i></p> <ol style="list-style-type: none"> <li>1. Check Outlet Thermistor</li> <li>2. Check Heat Exchanger Thermistor</li> <li>3. Check gas valve</li> </ol>

24	Malfunction Of Operational Switch	<ol style="list-style-type: none"> <li>1. Turn off water. Disconnect Remote Control and retry</li> <li>2. Verify unit is electrically grounded</li> <li>3. Press MIN and MAX button on Control Board to reset</li> </ol>
29	<p><b><u>Condensing Only:</u></b></p> <p><b><u>Maintenance:</u></b></p> <p>Neutralizer Is clogged</p>	<p><b><u>Condensing Only:</u></b></p> <ol style="list-style-type: none"> <li>1. Ensure shipping cap for drain line is removed and drain line is not blocked</li> <li>2. Clear all neutralizer drainage ports inside of unit</li> <li>3. Clear neutralizer drainage line outside of unit</li> <li>4. Clean air inlet screen</li> <li>5. Clean heat exchanger fins</li> </ol> <p><i>If maintenance requirements are met:</i></p> <ol style="list-style-type: none"> <li>1. Check neutralizer water level electrode</li> </ol>
	<p><b><u>Mid Efficiency &amp; Condensing:</u></b></p> <p><b><u>Maintenance:</u></b></p> <p>Heat Exchanger Temperature Is Too Low</p>	<p><b><u>Mid Efficiency &amp; Condensing:</u></b></p> <ol style="list-style-type: none"> <li>1. Clean air inlet screen</li> <li>2. Clean heat exchanger fins</li> </ol>
31	Inlet Thermistor	<ol style="list-style-type: none"> <li>1. Check Thermistor wiring for damage</li> <li>2. Check and clean scale from Thermistor</li> <li>3. Ohm Thermistor</li> </ol>
32	Heat Exchanger Thermistor	<ol style="list-style-type: none"> <li>1. Check Thermistor wiring for damage</li> <li>2. Check and clean scale from Thermistor</li> <li>3. Ohm Thermistor</li> </ol>
33	Outlet Thermistor	<ol style="list-style-type: none"> <li>1. Check Thermistor wiring for damage</li> <li>2. Check and clean scale from Thermistor</li> <li>3. Ohm Thermistor</li> </ol>

34	Ambient Thermistor	<ol style="list-style-type: none"> <li>1. Check Thermistor wiring for damage</li> <li>2. Check and clean Ambient Thermistor</li> <li>3. Ohm Thermistor</li> </ol> <p><i>If wiring and component readings are normal:</i></p> <ol style="list-style-type: none"> <li>1. Check for restrictions in airflow around unit and vent terminal</li> <li>2. Ensure fan blade is tight on motor shaft and spins freely</li> </ol>
35	Improper Thermistor Connection	<ol style="list-style-type: none"> <li>1. Check that all Thermistors are secured to proper connections on Control Board</li> <li>2. Check that all quick connectors between Control Board and Thermistors</li> </ol>
51	Gas Control Valve	<ol style="list-style-type: none"> <li>1. Check Gas Control Valve wiring harness for loose or damaged terminals</li> <li>2. Ohm Gas Control Valve</li> </ol>
52	PGFR Valve (Modulating Valve)	<ol style="list-style-type: none"> <li>1. Check PGFR Valve wiring harness for loose or damaged connections</li> <li>2. Ohm PGFR Valve</li> </ol>
61	<u>Installation/Maintenance:</u> Blower Motor	<ol style="list-style-type: none"> <li>1. Ensure Blower Motor will turn freely. Motor will operate with a small amount of restriction</li> <li>2. Check wiring harness to Motor for damaged and/or loose connections</li> <li>3. Check venting length not to exceed max lengths and bends</li> </ol>
65	Water Control Valve	<ol style="list-style-type: none"> <li>1. Check Water Control Valve wiring harness for loose or damaged terminals</li> <li>2. Check for proper voltage to Water Control Valve</li> </ol>
66	Water Bypass Valve	<ol style="list-style-type: none"> <li>1. Check Water Bypass Valve wiring harness for loose or damaged terminals</li> <li>2. Check for proper voltage to water by-pass solenoid</li> </ol>
71	Gas Control Valve	<ol style="list-style-type: none"> <li>1. Check Gas Control Valve wiring harness for loose or damaged terminals</li> <li>2. Ohm Gas Control Valve</li> </ol>
72	Flame Rod (Detected False Flame)	<ol style="list-style-type: none"> <li>1. Ensure Flame Rod(s) is touching flame when unit fires</li> <li>2. Check inside burner chamber for any foreign material blocking flame at Flame Rod(s)</li> <li>3. Check all wiring to Flame Rod for damage</li> <li>4. Check Flame Rod for proper voltage</li> <li>5. Remove Flame Rod and check, clean with steel wool (Do not use sandpaper)</li> </ol>

76	Communication Fault With Remote Control	<ol style="list-style-type: none"> <li>1. Check Remote Control wiring for loose or damaged connections</li> <li>2. Bypass Remote Control: connect Remote Control directly to remote connection at bottom of the heater. Replace cable if found to be faulty</li> <li>3. Remove water heater power cord from 3 prong outlet. Disconnect the Remote Control. Plug heater back into supply and test heater without Remote Control connected</li> </ol>
79	Blower Motor Current Fault	<ol style="list-style-type: none"> <li>1. Ensure Blower Motor will turn freely. Motor will operate with a small amount of restriction</li> <li>2. Check Fan Motor for proper voltage and for water (condensation) damage</li> </ol>
80 & 81	Gas Control Valve	<ol style="list-style-type: none"> <li>1. Ohm Gas Control Valve</li> <li>2. Check voltage of all Flame Rods</li> </ol>
82	<u>Installation:</u> Control Board Is Not Programmed.	Verify Program Chip is installed
90	<u>Maintenance/Installation:</u> Blocked Flue/Air Intake	Clean any blockage in Heat Exchanger, Blower Motor, inlet flue and exhaust flue
92	<u>Condensing Only:</u> <u>Maintenance Warning:</u> Neutralizer Needs To Be Replaced (Unit Will Still Be Operable)	Replace Neutralizer
93	<u>Condensing Only:</u> <u>Maintenance:</u> Neutralizer Must Be Replaced (Unit Will NOT Operate)	Replace Neutralizer
99	<u>Maintenance/Installation:</u> Blower Motor Cannot Vent	<ol style="list-style-type: none"> <li>1. Clear vent blockages</li> <li>2. Check for blocked Heat Exchanger</li> </ol>