

XV. Troubleshooting

WARNING

Turn off power to boiler before replacing fuses or working on wiring.

Table 15.1: No Error Code Displayed

CONDITION	POSSIBLE CAUSES
Boiler does not run, no lights are on or flashing	<ul style="list-style-type: none"> • No 120VAC Power at boiler. Check breaker and wiring between breaker panel and boiler • Fuse on main PCB is blown (Figure 15.2). Check for short in boiler wiring, then replace with an identical 4.0A fuse.
Lamp 1 flashes every two seconds, but boiler does not respond to a call for heat.	<ul style="list-style-type: none"> • Problem with thermostat or zone wiring
Combi boiler does not respond to a call for domestic hot water (DHW).	<ul style="list-style-type: none"> • Domestic draw less than 0.5GPM • Defective flow switch (LED inside flow switch will glow red when it responds to a call for DHW). • Inlet and outlet connections reversed.
Combi boiler responds to a call for DHW, but hot water output is inadequate.	<ul style="list-style-type: none"> • Draw rate is in excess of that shown in Table 2.2 • Inlet and/or manifold pressures incorrect (see Start-up Section). • Plate heat exchanger is fouled. • DHW filter is dirty
Boiler responds to a call for heat, but room temperature never gets high enough to satisfy room thermostat	<ul style="list-style-type: none"> • Air in radiation • Inlet and/or manifold pressures incorrect (see Start-up Section). • No flow, or insufficient flow, through system. • Boiler is undersized. • Insufficient radiation
Boiler short cycles AND heat (or DHW) output is inadequate	<ul style="list-style-type: none"> • Flue gas recirculation into combustion air • See causes for inadequate heat or DHW above

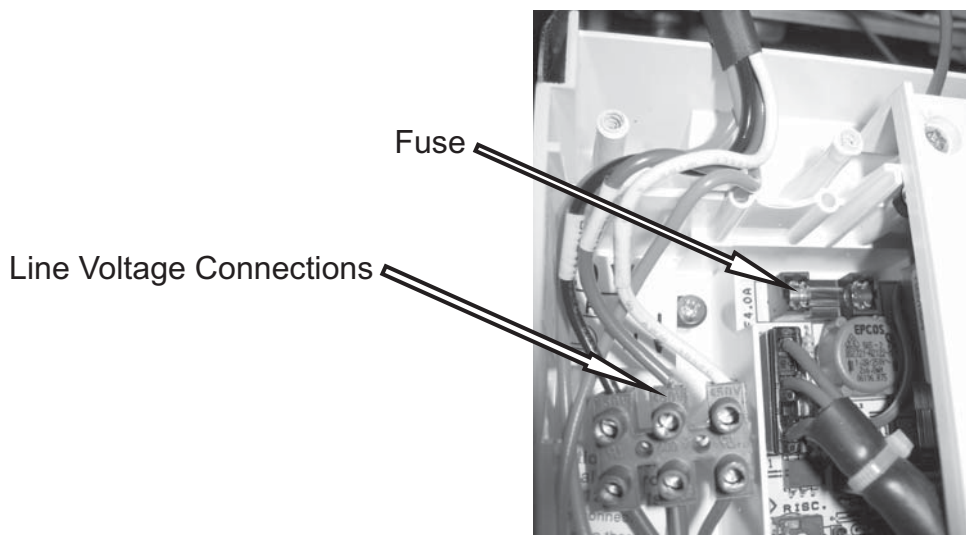


Figure 15.2: Fuse Location

Table 15.3: Error Codes

Lamp Number			Flame L.O. Lamp	Meaning	Corrective Action
1	2	3			
				Differential Water Pressure Switch Failed to Close After 180s	Reset the boiler by turning the Heating System Knob to "0" for a few seconds, then returning it to its original position. Then: <ul style="list-style-type: none"> • Verify that that boiler and system are purged of air • Verify that there is at least 4.5psi at the boiler gauge • Verify that circulator is running • Close the throttling valve on the supply more or install flow restrictor in supply (see piping section)
				Failure to Establish Flame or Blocked Condensate Trap or Reversed Line Voltage Polarity (Note: LED #2 will not illuminate until error has been present for 4 minutes)	Reset the boiler by turning the Heating System Knob to "0" for a few seconds then returning it to its original position. Push Flame Reset Button. Then verify that: <ul style="list-style-type: none"> • Gas line is purged of air (new installations) • Inlet gas and manifold pressures are correct (see Start-up Section) • Manifold pressure is correct (see Start-up section) • Electrodes have a gap of 0.149" – 0.157" • Electrodes, flame rod, and wiring are in good condition • Condensate trap is draining correctly • 120VAC exists between the hot (brown) connection and ground and <u>not</u> between the neutral (blue) and ground.
				Air Pressure Switch Problem or Supply Limit Open or Flue Gas Limit Open (Note: LED #2 will not illuminate until error has been present for 4 minutes)	Use the flow chart in this section to diagnose the exact problem.
				Defective Supply Sensor	Replace Supply Sensor
				Defective DHW Sensor	Replace DHW Sensor
				Excessive Temperature on Primary Circuit	Consult Factory
				Consult Factory	
				Consult Factory	

Lamp OFF	Lamp ON	Flashing lamp, alone or simultaneously with another lamp.	Flashing lamp, alternate with another lamp

Figure 15.4 Flow Chart for Isolating Limit and APS Errors (See Table 15.3)

