Troubleshooting Guide PH

Symptom	Possible Cause	Corrective Action
Burning of gas-air mixture inside plenum (flashback).	• Heater mounted at incorrect angle. • Excessive drafts. • Gas leaking at orifice. • Separation of ceramic grids. • Ceramic grids cracked.	• Mount at a 0˚- 30˚angle from horizontal. • Relocate heater or shield from draft. • Check with leak detector solution. • Replace burner. • Replace burner.
Delayed ignition.	• Electrode out of specification. • Low gas pressure. • Partially blocked orifice. • Improper orifice size. • Incorrect gas.	• See ignition system insert. • See Section 2.0, Gas Supply. • Clean or replace gas orifice. • Consult distributor. • See unit rating plate.
Low ceramic surface temperature or excessive rollout.	• Dirty or plugged burner ceramics. • Partially blocked orifice. • Low inlet gas pressure. • High or low manifold gas pressure. • Foreign matter in venturi tube. • Excessive dark spots on burner. • Gas supply piping too small. • Incorrect gas.	• See periodic maintenance instructions. • Remove and clean. • See Section 2.0, Gas Supply. • Adjust main valve regulator as specified. • See periodic maintenance instructions. • See periodic maintenance instructions. • Increase inlet pressure or replace piping. • See unit nameplate.
Control system overheating.	• Heater not mounted correctly. • Heater mounted too close to ceiling.	• Mounting angle 0°- 30°. Level left to right. • Observe clearance to combustibles.
Gas odor.	• Loose pipe connection.	• Check connections. Tighten as necessary.
Heater cycles repeatedly.	• Heater located in drafty area. • Low gas pressure. • Thermostat located in drafty area. • Defective flame electrode or circuit board.	• Relocate or shield from draft. • See Section 2.0, Gas Supply. • Relocate thermostat. • Replace electrode and/or circuit board.
No spark; no ignition.	• Lack of 120V or 24V incoming voltage. • Open high voltage wire. • Fan not operating. • Improper electrode gap. • Loose or open wire connection. • Pressure switch not satisfied. • Poor or no equipment ground. • Unit in “safety lockout” mode. • Defective control module.	• Check power supply. • Isolate an ohm for resistance, replace if 0. • Locate source of electrical problem or replace faulty fan. • See Ignition System specifications. • Check all wires, tighten or replace. • Verify fan operation. Remove obstructions. • Check all connections, provide positive earth ground. • Interrupt power source, repeat trial for ignition. • Replace circuit board.
Heater lights, and “locks out” after approximately 10 seconds.	• Poor or no equipment ground. • Polarity is reversed. • Low gas pressure. • Electrode not sensing. • Heater mounted at incorrect angle. • Defective control module.	• Check all connections, provide positive earth ground. • 120VAC to black, neutral to white. • See Section 2.0, Gas Supply. • Relocate or replace if electrode is defective. • Mounting angle 0˚- 30˚. • Replace circuit board.
Spark is present. No main gas operation. Unit “locks out”.	• Gas valve in “OFF” position. • Defective gas valve. • Defective control module.	• Turn to “ON” position. • Isolate and check for resistance, replace if 0. • Replace circuit board.
Heater will not shut off.	• Defective thermostat or wiring. • Gas valve stuck or open. • High gas pressure.	• Replace thermostat or repair wiring. • Replace gas valve. • See Section 2.0, Gas Supply.