

## HIGH INTENSITY TROUBLESHOOTING (1 OF 2)

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
<b>Gas Odor</b>	1. Gas pipe joints loose	1. Check joints with soap solution, tighten as needed
<b>New Installation of heaters not working</b>	1. Heaters not isolated during high pressure leak testing of gas lines	1. Replace combination gas valves on each heater
	2. All gas lines not completely bled of air	2. Disconnect flex hose at each heater until gas is present. Connect flex hose and leak test
	3. Gas supply regulator reversed	3. Remove and install properly
	4. Electrical supply line voltage & neutral polarity reversed	4. Correct electrical supply polarity
<b>No gas</b>	1. Gas supply valves not opened	1. Open all manual gas supply valves
	2. Gas supply regulator sticking	2. Replace gas supply regulator
<b>Electrical circuit closed but heater not working. (For specific control systems see Ignition and Operation section)</b>	1. Gas supply lacking caused control system lockout	1. Verify all gas supply valves are open. Purge air from gas supply line. Turn thermostat off – wait 5 minutes, then reset thermostat
	2. Line fuse blown or tripped circuit breaker	2. Replace line fuse or reset breaker
	3. Electrical power short	3. Trace and correct short
	4. Wiring disconnected	4. Repair, see wiring diagram in Ignition section
	5. No electrical earth ground	5. Provide electrical earth ground
	6. Electrical supply line voltage & neutral polarity reversed	6. Correct electrical supply polarity
	7. Exhaust fan interlock (if used) is defective	7. Replace interlock
<b>Direct spark fails to ignite main burner(s)</b>	1. Combination gas valve not in the ON position	1. Turn combination gas valve to ON position
	2. Electrode wire loose	2. Reconnect wire
	3. Electrode wire broken or frayed	3. Replace electrode
	4. Electrode ceramic cracked	4. Replace electrode
	5. Electrode improperly located	5. Relocate to correct position
	6. Gas valve fails to open when power applied	6. Replace combination gas valve
	7. Supply/manifold gas pressure too low	7. See rating plate on heater and adjust pressure(s)
	8. Ignition detection control defective	8. Replace ignition detection control
<b>Unit cycles on and off, erratic operation</b>	1. Drafty condition	1. Shield heater / thermostat from drafts
	2. Flame sensor wire loose or damaged	2. Replace wire harness to ignition detection control
	3. No electrical earth ground	3. Provide electrical earth ground
	4. Electrical supply line voltage & neutral polarity reversed	4. Correct electrical supply polarity
	5. Heat on pilot flame sensor insufficient	5. Clean pilot, check pilot orifice and alignment
<b>No pilot</b>	1. Gas line contains air	1. Purge air from gas line
	2. Pilot line, orifice, or passage blocked	2. Check and clean per Maintenance section
	3. Pilot solenoid valve inoperative	3. Replace combination gas valve
<b>Pilot goes out on 100% shut-off when hold-down button is released</b>	1. Heat on pilot flame sensor insufficient	1. Clean pilot, check pilot orifice and alignment
	2. Pilot flame sensor location improper	2. Correct position with respect to pilot
	3. Manifold gas pressure low	3. See rating plate on heater and adjust pressure
	4. Poor contact at valve end of sensing element	4. Ensure clean and proper contact
	5. Pilot flame sensor defective	5. Replace pilot flame sensor
	6. Pilot interrupter in combination gas valve defective	6. Replace combination gas valve
<b>Pilot burning, no gas to main burner(s)</b>	1. Thermostat or manual switch open	1. Raise the thermostat setting or close switch
	2. Manual valve closed on combination gas valve	2. Turn valve to "ON" position
	3. No power to solenoid in combination gas valve	3. Check power supply and furnish proper voltage
	4. Heat on pilot flame sensor insufficient	4. Clean pilot, check pilot orifice and alignment
	5. Pilot flame sensor defective	5. Replace sensor
	6. Combination gas valve defective	6. Replace combination gas valve

## HIGH INTENSITY TROUBLESHOOTING (2 OF 2)

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Heater will not turn off	1. Thermostat defective	1. Replace thermostat
Controls overheating	1. Heater mounted incorrectly	1. See Mounting and Suspending sections
Burning of gas inside burner (flash-back)	1. Heater mounted incorrectly	1. See Mounting and Suspending sections
	2. Gas leaking from: manifold, control assembly, or pilot joints causing gas ignition at orifice	2. Check joints with soap solution, tighten as needed
	3. Ceramic tile(s) cracked or separating	3. Replace burner
	4. Drafts excessive	4. Shield from drafts or relocate heater
Carbon formation on ceramic surface or burner	1. Gas supplied is wrong type	1. Check rating plate for type of gas required
	2. Venturi obstructed (by spider web)	2. Clean with a bottle brush
	3. Pilot depositing carbon	3. Clean pilot and check pilot orifice
	4. Supply/manifold gas pressure too low	4. See rating plate on heater and adjust pressure(s)
	5. Main gas orifice(s) misaligned	5. Consult sales agent or factory
Dark spots on ceramic surface	1. Foreign matter behind the ceramic surface	1. See Maintenance section
	2. Foreign matter inside burner assembly	2. Replace burner assembly
Low ceramic surface temperature	1. Venturi obstructed (by spider web)	1. Clean with a bottle brush
	2. Foreign matter in venturi	2. See Maintenance section
	3. Orifice partially blocked	3. See Maintenance section
	4. Supply gas pressure low	4. Adjust supply regulator to 7" WC (18cm WC) for natural gas, or 11" WC (28cm WC) for propane
	5. Manifold gas pressure low	5. Adjust heater regulator to 6" WC (15cm WC) for natural gas, or 10" WC (25cm WC) for propane
	6. Manifold misaligned from excessive torque applied on pipe at installation	6. Replace manifold
	7. Flue gases not adequately ventilated	7. See Ventilation Requirements section
	8. Gas supply piping too small	8. Increase supply pressure or replace piping
2-Stage transition from low-heat to high-heat does not happen	1. Ambient temperature is still in low-heat zone of thermostat	1. Check thermostat manufacturers' instructions
	2. Thermostat defective	2. Replace thermostat
	3. High-heat valve not opening	3. Replace high-heat valve
2-Stage transition from high-heat to low-heat does not happen	1. Ambient temperature has not reached low-heat zone of thermostat	1. Allow time for ambient temperature to reach low-heat zone of thermostat. Check thermostat manufacturers' instructions
	2. Thermostat defective	2. Replace thermostat
	3. High-heat valve not closing	3. Replace high-heat valve