

Troubleshooting Guide DR

| Symptom | Code | Possible Cause | Corrective Action |
|---|--|---|---|
| Burning of gas-air mixture inside plenum (flashback). | A, B A, B A, B A, B A, B | <ul style="list-style-type: none"> • Heater mounted at incorrect angle. • Excessive drafts. • Gas leaking or blocked orifice/venturi. • Separation of ceramic grids. • Ceramic grids cracked. | <ul style="list-style-type: none"> • Mounting angle 20°-35° from horizontal. • Relocate or shield from draft. • Do not operate. Check with leak detector solution. • Do not operate. Replace rayhead. • Do not operate. Replace rayhead. |
| Delayed ignition. | A A, B A, B A, B A, B | <ul style="list-style-type: none"> • Electrode out of specification. • Low gas pressure. • Partially blocked orifice. • Improper orifice size. • Incorrect gas. | <ul style="list-style-type: none"> • See Figure 4.3. • See Gas Supply section. • Clean or replace. • Consult dealer. • Do not operate. See nameplate. Correct immediately. |
| Low ceramic surface temperature, excessive rollout or soot on rods. | A, B A, B A, B A, B A, B A, B A, B A, B | <ul style="list-style-type: none"> • Dirty or plugged rayhead ceramics. • Partially blocked orifice. • Low inlet gas pressure. • Low manifold gas pressure. • High manifold pressure. • Foreign matter in venturi tube. • Gas supply piping too small. • Incorrect gas. | <ul style="list-style-type: none"> • See maintenance instructions. • Remove and clean. • See Gas Supply section. • Adjust main valve regulator for 6" W.C.P. natural gas, 10" W.C. P. propane. • Adjust main valve regulator for 6" W.C.P. natural gas, 10" W.C. P. propane. • See Maintenance Section. • Increase inlet pressure or replace. • Do not operate. See nameplate. Correct immediately. |
| Control system overheating. | A, B A, B | <ul style="list-style-type: none"> • Heater not mounted correctly. • Heater mounted too close to ceiling. | <ul style="list-style-type: none"> • Mounting angle 20°-35° from horizontal. • Observe clearance to combustibles safety chart located on heater reflector. Do not operate. |
| Gas odor. | A, B B | <ul style="list-style-type: none"> • Loose pipe connection. • Pilot not lit. | <ul style="list-style-type: none"> • Check all connections with leak-detector solution, tighten as necessary. • Cycle thermostat or manually light. |
| Heater cycles repeatedly. | A, B A A, B A, B B | <ul style="list-style-type: none"> • Heater located in drafty area. • Low gas pressure. • Thermostat located in drafty area. • Weak pilot flame. • Defective flame detector. | <ul style="list-style-type: none"> • Relocate or shield from draft. • See Gas Supply section for propane. • Replace thermostat. • Clean or adjust pilot. • Replace. |
| Pilot on, no gas to main burner. | B | <ul style="list-style-type: none"> • Weak pilot flame. • No electrical power to unit. • Pilot sensor element not located in pilot flame. • Defective main valve solenoid. • Defective pilot generator or thermocouple. • Excessive thermostat wire length with millivolt system. • Manual valve off. | <ul style="list-style-type: none"> • Clean or adjust pilot. • Check thermostat, manual switch or circuit breaker. • Locate upper 3/4 of element in pilot flame. • Isolate. Ohm for resistance, replace if "0". • Replace. • Wire not to exceed length provided by factory. • Turn to "ON" position. |
| No spark; no ignition. | A A A A A A A | <ul style="list-style-type: none"> • Lack of 120V or 24V incoming voltage. • Open high voltage wire. • Improper electrode gap. • Loose or open wire connection. • Poor or no equipment ground. • Unit in "safety lockout" mode. • Defective "gas lighter" control. | <ul style="list-style-type: none"> • Proper voltage needed or repair wire. • Isolate and ohm for resistance, replace if "0". • See Figure 4.3. • Check all wires, tighten or replace. • Trace ground wire for complete circuit back to equipment ground from control. • Interrupt power source, repeat trial for ignition. • Verify proper voltage. Replace. |
| Heater lights, and "locks out" after approximately 10 seconds. | A A A A A | <ul style="list-style-type: none"> • Poor or no equipment ground. • Polarity is reversed. • Low gas pressure. • Electrode not sensing. • Heater mounted at incorrect angle. | <ul style="list-style-type: none"> • Check all connections, provide positive earth ground. • 120V to black, neutral to white. • See Gas Supply section. • Relocate or replace if defective. • Mounting angle 20°-35° from horizontal. |
| Spark is present. No main gas operation. Unit "locks out". | A A A | <ul style="list-style-type: none"> • Gas valve in "Off" position. • Defective main valve solenoid. • Defective "Gas lighter" control. | <ul style="list-style-type: none"> • Turn to "On" position. • Isolate and check for resistance. Replace if "0". • Verify proper voltage. Replace. |
| Heater will not shut off. | A, B A, B A, B | <ul style="list-style-type: none"> • Defective thermostat or wiring. • Gas valve stuck open. • High gas pressure. | <ul style="list-style-type: none"> • Replace or repair. • Replace. • See Gas Supply section. |

Code: A - Direct Spark Ignition (NFS-2/PFS-2) B - Standing Pilot (NMV-2/PMV-2)