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<td>Exterior Wrap Assembly (All CBI, CBI/M)</td>
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<td>Switch, High Limit 650° Thermostat (All Heaters)</td>
</tr>
</tbody>
</table>
Troubleshooting

**Possible Cause**

1. Unit does not operate (No LED indication)
   - Unit not properly grounded
   - Check power source to determine if wiring to heater has excessive voltage drop.

2. Motor does not run (with LED indication)
   - Motor starts, then stops
   - Air proving switch contacts did not close or air proving switch opened after flame was detected.
   - See symptom #6
   - Low gas flow
   - See symptom #13

3. Motor does not start, but hums or runs slowly (2 flashes)
   - Motor trips on thermal protector
   - See symptom #4
   - Burner fluance relay (FSR) malfunction
   - Check output voltage from terminal #5 (FSR) during trial for ignition to ensure voltage exceeds 24 volts.

4. Low gas flow
   - Check power input with the heater running at terminal #9 & #4 on TB1. Voltage should be at least 30 volts. If in-correct value, check power source to determine if wiring to heater has excessive voltage drop.
   - See symptom #13
   - Flame safeguard relay module (FSR) malfunction
   - Check output voltage from terminal #5 (FSR) during trial for ignition to ensure voltage exceeds 24 volts.
   - If not, replace FSR module.

5. Motor will not light (3 flashes)
   - Low voltage to ignitor
   - Oxidation/corrosion on the flame rod
   - Sand off oxidation/corrosion.

6. High pressure regulator malfunction
   - Gas supply piping undersized
   - Analyze gas supply distribution system for proper sizing.

7. Ignitor malfunction
   - Loose or broken wire
   - Replace ignitor
   - Low air flow
   - Check for inlet and/or discharge obstruction and clean blower wheel.
   - Replace damaged blower wheel.
   - Motor does not run
   - Motor trip on thermal protector
   - Loose or broken wire
   - Repair or replace wire.

8. Low gas flow (2 flashes)
   - High limit open
   - Dirt or sediment in automatic gas valve
   - Clean and replace all gas supply lines and install a sediment trap at the heater’s gas inlet. All automatic gas valves installed on contaminated supply lines without sediment traps must be replaced.
   - Valve malfunction
   - Replace valve.
   - Ignition malfunction
   - Check for proper off-take alignment.

9. Burner will not light (3 flashes)
   - High limit open
   - Dirt or sediment in automatic gas valve
   - Clean and replace all gas supply lines and install a sediment trap at the heater’s gas inlet. All automatic gas valves installed on contaminated supply lines without sediment traps must be replaced.
   - Defective automatic gas valve
   - Replace automatic gas valve but check supply pressure to insure gas pressure is below 14” W.C. (1/2 PSI).

10. Burner will not shut off (3 flashes)
    - Dirt or sediment in automatic gas valve
    - Clean and replace all gas supply lines and install a sediment trap at the heater’s gas inlet. All automatic gas valves installed on contaminated supply lines without sediment traps must be replaced.
    - Defective automatic gas valve
    - Replace automatic gas valve but check supply pressure to insure gas pressure is below 14” W.C. (1/2 PSI).

11. Automatic gas valve not opening (3 flashes)
    - High limit open
    - Dirt or sediment in automatic gas valve
    - Clean and replace all gas supply lines and install a sediment trap at the heater’s gas inlet. All automatic gas valves installed on contaminated supply lines without sediment traps must be replaced.

12. Automatic gas valve not opening (5 flashes)
    - High limit open
    - Dirt or sediment in automatic gas valve
    - Clean and replace all gas supply lines and install a sediment trap at the heater’s gas inlet. All automatic gas valves installed on contaminated supply lines without sediment traps must be replaced.

13. Low air flow operating pressure (2 flashes)
    - High pressure regulator malfunction
    - Check regulator output setting, relief vent blockage, water or air accumulation, regulator seat sticking or undersized regulator.
    - Gas supply piping undersized
    - Analyze gas supply distribution system for proper sizing.
    - Improper manifold pressure
    - Check automatic gas valve regulator setting for compliance with heater name plate.
    - Blockage between automatic gas valve and orifice
    - Check gas way between automatic gas valve and orifice outlet and clean as required.
    - Burner flow restriction
    - Clean burner passages.
    - Orifice alignment
    - Check for proper orifice alignment.

14. Burner does not shut off
    - Dirt or sediment in automatic gas valve
    - Clean and replace all gas supply lines and install a sediment trap at the heater’s gas inlet. All automatic gas valves installed on contaminated supply lines without sediment traps must be replaced.
    - Defective automatic gas valve
    - Replace automatic gas valve but check supply pressure to insure gas pressure is below 14” W.C. (1/2 PSI).