

## 4.2 GENERAL TROUBLE SHOOTING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Thermostat closed, fan does not operate.	<ol style="list-style-type: none"> <li>1. Blown fuse.</li> <li>2. Faulty thermostat.</li> <li>3. Disconnected wire.</li> <li>4. Faulty fan.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace.</li> <li>2. Replace.</li> <li>3. Repair.</li> <li>4. Replace.</li> </ol>
Thermostat closed. Fan operates. No spark.	<ol style="list-style-type: none"> <li>1. Loose or disconnected wire.</li> <li>2. Box lid or gasket not in place.</li> <li>3. Plugged pressure switch lines.</li> <li>4. Plugged or restricted exhaust vent.</li> <li>5. Faulty pressure switch.</li> <li>6. Faulty circuit board.</li> <li>7. Faulty ignitor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Repair, as required.</li> <li>2. Put in place.</li> <li>3. Clean as necessary.</li> <li>4. Remove foreign matter.</li> <li>5. Replace only. Do not adjust.</li> <li>6. Replace circuit control.</li> <li>7. Replace.</li> </ol>
Thermostat closed. Fan operates. Heater sparks. After 10 seconds ignitor shuts off. No reignition.	<ol style="list-style-type: none"> <li>1. Closed gas supply.</li> <li>2. Dirty or resisted orifice.</li> <li>3. Faulty valve. Disconnected wire.</li> <li>4. Inlet pressure exceeds 14" W.C.P.</li> <li>5. Improper electrode gap.</li> </ol>	<ol style="list-style-type: none"> <li>1. Open all gas connections.</li> <li>2. Remove and clean with a soft object.</li> <li>3. Replace or repair.</li> <li>4. Lower inlet pressure.</li> <li>5. Confirm gap size is between 3/16" &amp; 1/4".</li> </ol>
Thermostat closed. Fan and ignitor operate. Ignition occurs. Burner cycles off and will not recycle.	<ol style="list-style-type: none"> <li>1. No electrical ground.</li> <li>2. Faulty circuit control.</li> <li>3. Low gas pressure.</li> <li>4. Open circuit control connection.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect electrical ground to junction box.</li> <li>2. Replace.</li> <li>3. Provide required gas pressure.</li> <li>4. Repair or replace.</li> </ol>
Thermostat closed. Fan and ignitor operate. Ignition occurs. Burner cycles off. Burner cycles on.	<ol style="list-style-type: none"> <li>1. Low gas pressure.</li> <li>2. Baffle improperly positioned.</li> <li>3. Faulty pressure switch.</li> <li>4. Restricted flue vent.</li> <li>5. Improper electrode gap.</li> </ol>	<ol style="list-style-type: none"> <li>1. Provide required gas pressure.</li> <li>2. Reposition baffle at vent end.</li> <li>3. Replace.</li> <li>4. Remove foreign matter.</li> <li>5. Confirm gap size is between 3/16" &amp; 1/4".</li> </ol>
Loss of heater efficiency.	<ol style="list-style-type: none"> <li>1. Low gas pressure.</li> <li>2. Dirty or restricted orifice.</li> <li>3. Foreign matter inside burner.</li> <li>4. Unit cycles on and off.</li> <li>5. Reflector is sooted and has lost its reflective ability.</li> <li>6. Reflector not in place.</li> <li>7. Clogged fan blower.</li> </ol>	<ol style="list-style-type: none"> <li>1. Provide required gas pressure.</li> <li>2. Remove and clean with a soft object.</li> <li>3. Clean as necessary.</li> <li>4. Check previous symptom.</li> <li>5. Clean with aluminum cleaner and soft wiping cloth.</li> <li>6. Put in place.</li> <li>7. Clean.</li> </ol>
Radiant tube leaking burnt gases.	<ol style="list-style-type: none"> <li>1. Loose tube connections.</li> <li>2. Holes or cracks in radiant tubes.</li> </ol>	<ol style="list-style-type: none"> <li>1. Assure that tube is fully inserted into flared end and properly clamped.</li> <li>2. Replace.</li> </ol>
Condensation.	<ol style="list-style-type: none"> <li>1. Stack length too long.</li> <li>2. Light gauge flue stack used.</li> <li>3. Contaminated combustion air.</li> </ol>	<ol style="list-style-type: none"> <li>1. Shorten stack.</li> <li>2. Minimum of 26 gauge vent pipe required.</li> <li>3. Provide fresh air inlet duct.</li> </ol>
Tube Bowing.	<ol style="list-style-type: none"> <li>1. Insufficient combustion air.</li> <li>2. Overfired.</li> <li>3. Contaminated combustion air.</li> <li>4. Heater unable to expand properly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Provide 2 sq. in. of free air per 5000 BTU<sub>h</sub> of input.</li> <li>2. Check gas pressure and orifice size.</li> <li>3. Provide fresh air inlet duct.</li> <li>4. Remount with flexible inlet or vent pipe.</li> </ol>
Tube corroding.	<ol style="list-style-type: none"> <li>1. Contaminated combustion air.</li> </ol>	<ol style="list-style-type: none"> <li>1. Provide fresh air inlet duct.</li> </ol>
Visual inspection of burner operation not possible.	<ol style="list-style-type: none"> <li>1. Dirty or sooted sight glass.</li> <li>2. Unit mounted upside down.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove, clean or replace.</li> <li>2. Mount correctly.</li> </ol>
Stack sooting.	<ol style="list-style-type: none"> <li>1. Insufficient combustion air.</li> <li>2. Improper gas.</li> </ol>	<ol style="list-style-type: none"> <li>1. Provide 1 sq. in. of free air for every 5000 BTU<sub>h</sub> of input.</li> <li>2. Correct with proper gas input.</li> </ol>
Odor or fumes in space.	<ol style="list-style-type: none"> <li>1. Vaporized solvents decomposing when contacting radiant tubes.</li> <li>2. Evaporation of oils/solvents at floor levels.</li> <li>3. Lift trucks.</li> <li>4. Loose tube connections.</li> </ol>	<ol style="list-style-type: none"> <li>1. Address ventilation concerns.</li> <li>2. Address ventilation concerns.</li> <li>3. Address ventilation concerns/repairs.</li> <li>4. Tighten to 50-100 lb.-ft.</li> </ol>