

## PCTH TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Thermostat closes but nothing happens	1. No electrical power	1. Provide electrical power
	2. Fuse blown	2. Replace
	3. Thermostat defective	3. Replace
	4. Blower defective	4. Replace
	5. Wire(s) loose or disconnected	5. Repair
Thermostat closed: blower running: NO spark	1. Air flow sensing orifice blocked	1. Clear blockage of orifice in snubber
	2. Air flow switch lines plugged	2. Clean
	3. Exhaust vent or inlet air piping or cap restricted	3. Remove restriction
	4. Exhaust vent or inlet air piping is longer than allowed or diameter is too small	4. Rework to proper length, replace with proper diameter seal joints
	5. Control compartment not sealed/fastened down	5. Reseal [box press. 0.32-0.39"wc (8-10mm-wc)]
	6. Air flow switch (low) defective	6. Replace ONLY. DO NOT adjust
	7. Ignition wire disconnected	7. Reconnect (ensure power is off)
	8. Ignition wire defective	8. Replace
	9. Ignitor defective	9. Replace
	10. Ignition detection control (IDC) defective	10. Replace
Thermostat closed: blower running spark generated, burner fails to ignite	1. Gas supply closed	1. Open all incoming gas cocks/valves
	2. Ignitor defective	2. Replace
	3. Gas orifice dirty or restricted	3. Clean
	4. Gas valve fails to open when power applied	4. Replace gas valve
	5. Gas supply inlet pressure low	5. Provide required gas pressure
	6. Exhaust vent piping or cap restricted	6. Remove restriction
Ignition occurs, burner cycles off and will not recycle	1. No electrical ground	1. Connect to true earth ground
	2. Gas supply inlet pressure low	2. Provide required gas pressure
	3. Ignition detection control (IDC) defective	3. Replace
	4. Ignitor defective	4. Replace
	5. Exhaust vent piping or cap restricted	5. Remove restriction
Ignition occurs, burner cycles off and on.	1. Gas supply inlet pressure low	1. Provide required gas pressure
	2. Exhaust vent piping or cap restricted	2. Remove restriction
	3. Air flow switch(es) defective	3. Replace ONLY. DO NOT adjust
	4. Thermostat location inappropriate	4. Relocate thermostat
Burner "pops" during light-off (delayed ignition)	1. Exhaust venting or inlet air ducting improper	1. Correct the condition
	2. Burner core defective	2. Replace
	3. Building pressure negative	3. Provide combustion air from outdoors
	4. Ignitor defective	4. Replace
Heater efficiency reduced	1. Gas supply inlet pressure low	1. Provide required gas pressure
	2. Gas orifice dirty or restricted	2. Clean
	3. Foreign matter inside burner core	3. Clean
	4. Heater cycles on and off	4. Check previous symptom, relocate thermostat
	5. Blower assembly clogged	5. Clean as required
	6. Reflector dirty and reflectivity reduced	6. Clean with mild soap and water and soft cloth
Visual inspection of burner not possible	1. Sight glass (observation port) dirty or sooted	1. Clean sight glass
Radiant tubes leaking combustion gases	1. Tube connection loose	1. Replace
	2. Tube developing holes or cracks	2. Replace
	3. Exhaust vent piping or cap restricted	3. Remove restriction
Condensation	1. Exhaust vent length too long	1. Correct condition
	2. Exhaust vent piping gauge to light	2. Replace vent pipe minimum 26 gauge (0.4mm)
	3. Combustion air intake restricted	3. Remove restriction
	4. Lack of sufficient insulation	4. Correct
Tube corroding	1. Combustion air contaminated	1. Provide clean combustion air from outdoors
Exhaust stack sooting	1. Combustion air available is insufficient	1. Provide (1) one square inch of free air per 1000 BTUH input (22cm <sup>2</sup> /kW)
	2. Gas improper	2. Correct
	3. Exhaust vent length too long	3. Correct
	4. Combustion air piping length/diameter improper	4. Correct
	5. Blower dirty	5. Clean
	6. Blower weak	6. Replace
	7. Control compartment not sealed/fastened down	7. Reseal [box press. 0.32-0.39"wc (8-10mm-wc)]