

## ST-VM, GQ, SST & RH TROUBLESHOOTING

Check for symptoms and possible causes in the order presented from the top of this chart to the bottom. The symptoms and possible causes are in a logical progressive order as in a flow chart.		
SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
<b>New Installation.</b>	1. Heaters not isolated during high pressure leak testing.	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.
<b>Gas Odor.</b>	1. Gas pipe joints loose.	1. Check joints with soap solution, tighten as needed.
<b>Blower / PL-1 light does not come on when system energized.</b>	1. Power supply fuse defective.	1. Replace fuse.
	2. 115 VAC not reaching heater.	2. Check thermostat and wiring and fix.
	3. Blower defective.	3. Replace blower.
<b>Pressure switch does not close / PL-2 light does not come on.</b>	1. Inlet or exhaust piping not the proper size and length. (Refer to manual.)	1. Replace piping as required.
	2. Inlet or exhaust termination fittings not to factory specifications.	2. Replace fittings as required.
	3. Inlet or exhaust blocked.	3. Clear blockage.
	4. Airflow tubing or snubber orifice blocked in one or both tubes.	4. Clear blockage.
	5. Blower wheel dirty or damaged.	5. Clean or repair wheel.
	6. Airflow pressure switch defective.	6. Replace airflow pressure switch.
<b>Ignitor does not spark / PL-3 light does not come on.</b>	1. 115 VAC not reaching the Ignition Detection Control (IDC) due to loose wire or connector.	1. Repair loose wire or connector.
	2. High-voltage wire loose or damaged.	2. Secure high-voltage wire or replace ignitor.
	3. Ignition Detection Control (IDC) defective.	3. Replace IDC box.
<b>Burner does not ignite. (There are three trials-for-ignition before the IDC goes into lockout).</b>	1. Gas supply not turned on.	1. Open all manual gas supply valves.
	2. Ignitor not sparking at the tips.	2. Measure spark gap and adjust gap as necessary to 5/32" [0.156" (3.96mm)].
	3. Ignitor not sparking at correct gap.	3. Replace ignitor.
	4. Gas inlet pressure not correct. (See serial plate). Gas inlet piping not sized correctly.	4. Replace inlet gas piping with correct size pipe.
	5. Gas inlet pressure not correct. (See serial plate). Gas supply regulator not set correctly.	5. Adjust gas supply regulator to set inlet pressure to proper level. (See serial plate).
	6. Gas supply regulator sticking.	6. Replace gas supply regulator.
	7. Combination gas valve not in the ON position.	7. Turn combination gas valve to the ON position.
	8. Ignition Detection Control (IDC) not sending 115VAC to combination gas valve.	8. Replace IDC box.
	9. Combination gas valve defective.	9. Replace combination gas valve.
	10. Combination gas valve outlet (manifold) pressure not correct. (See serial plate).	10. Adjust combination gas valve regulator to set inlet (manifold) pressure to proper level.
	11. Main or sub gas orifice blocked by spider web, etc.	11. Clear blockage.
	12. Gas orifice(s) or air orifice not correct size.	12. Install correct size gas orifice(s) or air orifice.
<b>Spark does not stop when the burner ignites.</b>	1. Power supply not grounded to a true earth ground.	1. Install a true earth ground to the power supply.
	2. Flame sensor wire loose or damaged.	2. Secure flame sensor wire or replace wire harness to IDC box.
	3. Flame signal not at least -17 VDC.	3. Check gas inlet and manifold pressures compared to the possible causes in the previous symptom where the burner does not ignite.
	4. Ignition Detection Control (IDC) is defective.	4. Replace IDC box.
<b>Burner does not stay lit until the thermostat is satisfied.</b>	1. Flame sensor wire is loose or damaged.	1. Replace wire harness to IDC box.
	2. Inlet or exhaust partially blocked.	2. Clear blockage.
	3. Airflow pressure switch erratic or defective.	3. Consult factory or replace airflow pressure switch.
	4. Flame signal not at least -17 VDC.	4. Check gas inlet and manifold pressures compared to the possible causes in the previous symptom where the burner does not ignite.
	5. Ignition Detection Control (IDC) defective.	5. Replace IDC box.
<b>Heater will not turn off.</b>	1. Thermostat defective.	1. Replace thermostat.