

Troubleshooting Table

#	Symptom	Cause	Remedy
1.	Pump not operating	<p>A. No power B. Pump defective C. Incorrectly wired</p> <p>D. Pump relay defective E. Current time not within time clock settings F. Controller defective</p>	<p>A. Check circuit breakers and power source. B. Replace. C. Recheck wiring including relay if using LJ controller internal clock. D. Replace pump relay. E. Set time clock and current time. F. Replace controller.</p>
2.	Flame roll-out on start-up	<p>A. Blocked flue B. Igniter out of position (delayed ignition) C. Blocked heat exchanger D. Refractory blanket out of place E. Altered draft hood F. Downdraft conditions</p>	<p>A. Remove blockage. B. Correct igniter position. C. Clean and correct as necessary. D. Correct or replace blanket as necessary. E. Install factory-provided draft hood. F. Install draft hood.</p>
3.	Spillage at draft hood	<p>A. Cold chimney B. Vent pipe pitches down to chimney C. Blocked chimney D. Draft hood altered E. Prefabricated chimney with incorrect cap</p>	<p>A. Allow heater to operate 5 minutes to create draft action. B. Reinstall vent pipe to pitch up from heater to chimney. C. Remove blockage. D. Install factory-provided draft hood. E. Install a Nationally Recognized Testing Lab (NRTL) listed vent cap.</p>
4.	Flame has lazy yellow tip	<p>A. Low primary air</p>	<p>A. Correct manifold pressure according to rating plate. Correct orifice size if necessary (see parts list). Clean burner ports if dirty.</p>
5.	Not enough heat	<p>A. Inadequate gas supply B. Low manifold gas pressure</p> <p>C. Heater size inadequate</p>	<p>A. Gas meter too small. Gas line from meter to heater too small. B. Gas pressure on heater manifold should be adjusted to 4.0"W.C. for natural gas, 9.0"W.C. for propane. C. Replace with heater of higher input.</p>
6.	Heater pounding or knocking	<p>A. Water flow through heater too low</p>	<p>A. Check temperature rise between inlet and outlet heater piping. See Section 7.7 for recommended range of temperature rise. If temperature rise is above the maximum recommended, increase pipe size or pump capacity or locate obstruction. Check for closed valve in system.</p>
7.	Heater condensing	<p>A. Low water temperature</p> <p>B. Heater plumbed backwards</p>	<p>A. Flue product moisture will condense at the start-up until the heater water temperature reaches the normal operating conditions. B. Correct plumbing.</p>
8.	Igniter lights but main burners will not come on	<p>A. Gas valve not at "on" position B. Air in gas line C. Gas valve failed</p>	<p>A. Turn knob to "on" position. B. Cycle ignition sequence until air is out of the gas line. C. Replace gas valve.</p>