## Troubleshooting Chart

<table>
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<tr>
<th>Problem</th>
<th>Possible Causes</th>
<th>Possible Solutions</th>
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<td>Blower runs when thermostat is closed.</td>
<td>1. Air flow switch not on finger tight, plus 1/4&quot; 2. Check air flow switch.</td>
<td>Replace control.</td>
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<td>Main burner won't ignite.</td>
<td>3. Loose thermocouple connection.</td>
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<td>4. Defective thermocouple.</td>
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<td>5. Defective gas control.</td>
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<td></td>
<td>6. No gas to furnace.</td>
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### Additional Notes:
- Strong arc across 1/8" gap.
- Check spark gap. Should be able to create spark.
- Check electrode for cracked or wired in.
- Adjust electrode for proper electrode setting. Replace control if necessary. Restricted.
- Check pilot adjustment screw. If open, clean tube. If clogged, replace tubing. Air or replace orifice.
- Check taper with 1/4" orifice or compressed air.
- Check tank valve, regulator, check for restricted.

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**OBO-TERM 6900 SERIES FORCED AIR FURNACE**
D. Main burner won't shut off when blower shuts off.

E. Blower won't start when thermostat is closed.

2. Open limit switch: 
   Check voltage across switch. Voltage reading indicates open switch. If defective replace.

3. Defective gas control: 
   Check control dial - must be in "on" position. Check voltage at control terminals. If 12 volts is present and burner does not light, control is defective; replace.

F. Blower won't shut off.

1. Defective gas control: 
   Replace control.

   1. No power to unit: 
      Check fuses, wiring connections. Note: special fuse in heater does not change appearance when blown.

   2. Defective thermostat: 
      Check by by-passing thermostat; if defective, replace.

   3. Broken thermostat wire: 
      Check by shorting together thermostat wire connections in heater. Repair or replace thermostat wire if needed.

   4. Defective thermostat relay: 
      Check by shorting across terminals 5 and 7 on relay. Blower should start. Replace relay if defective.

   5. Defective blower motor: 
      Apply 12 volts to black and red motor leads. If motor does not run replace motor.

   6. Stuck blower wheel: 
      Turn wheel by hand. Realign or replace wheel if necessary.

   1. Defective thermostat: 
      Check for closed thermostat contacts. If damaged or defective, replace thermostat.

   2. Short in thermostat wire: 
      Remove thermostat wire at heater. If blower stops, check wiring for shorts. Repair short or replace wire, if needed.

   3. Stuck thermostat relay: 
      Remove blue wire from terminal. Check voltage across terminals 5 and 7. No reading indicates contacts are closed. Replace relay.
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<td><strong>G. Thermostat anticipator burned out.</strong></td>
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<td><strong>4. Stuck fan switch:</strong> Check voltage across switch. No reading indicates closed contacts. If contacts remain closed after cool-down, replace fan switch.</td>
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<td><strong>H. Fuse blown.</strong></td>
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<td><strong>1. Internal short in gas control:</strong> Replace control and thermostat.</td>
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<td><strong>2. Defective blower motor:</strong> Check amp draw; replace motor if defective.</td>
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<td><strong>3. Short to ground inside unit:</strong> Check wiring connections; check for loose wires, or wire connections touching metal casing.</td>
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<td><strong>I. Pilot outage (during high fire cycle).</strong></td>
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<td><strong>1. Air restriction:</strong> Check intake and exhaust vents for air restrictions. Check draft blower wheel for tightness. Wheel should be clean for proper air flow.</td>
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<td><strong>J. Pilot outage (pilot stage).</strong></td>
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<td><strong>1. Air leak in sealed system:</strong> Check all gaskets, vent connections, draft blower assembly, etc. Air tightness is important for proper operation.</td>
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<td><strong>2. Pilot flame too large:</strong> Check gas pressure. Adjust pilot at control. If pilot orifice is damaged or enlarged, replace orifice.</td>
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<td><strong>3. Weak thermocouple:</strong> (See also Section B.) Check thermocouple output with millivolt meter and thermocouple adaptor (ITT #103050Q). If output is below 8 millivolts, replace thermocouple.</td>
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1. Detector switching relay:
    - Apply 12VDC to terminals A and B. Relay should switch.
    - If detector, replace relay.
    - Both tests, replace relay.
    - If meter shows continuity or open on test, open reading on other and repeat test. Meter should show continuity on both AC terminals in turn. Reverse probes on "A" terminal and touch other probe to check with ohm meter. Place one probe again.

2. Detector relay:
    - Transformer will cause transformer to fail. Place one probe on AC terminals, and check relay for shorts. A detector relay will cause transformer to fail. Place one probe on AC terminals, and check relay for shorts. A detector relay will cause transformer to fail.

3. Detector relay:
    - Transformer will cause transformer to fail. Place one probe on AC terminals, and check relay for shorts. A detector relay will cause transformer to fail.

4. Detector switching relay:
    - Battery to 110 volt operation. No 110 volt power to unit.
All manuals are believed to be released for distribution, and/or in the public domain.
Service manuals provided with the understanding that persons using them are well versed in proper safety practices, and are familiar with basic safety procedures, including, but not limited to safety procedures dealing with 120 volt electricity, high amperage 12 volt circuits an LPG (propane) systems.
If in doubt, consult a professional (better safe than sorry).