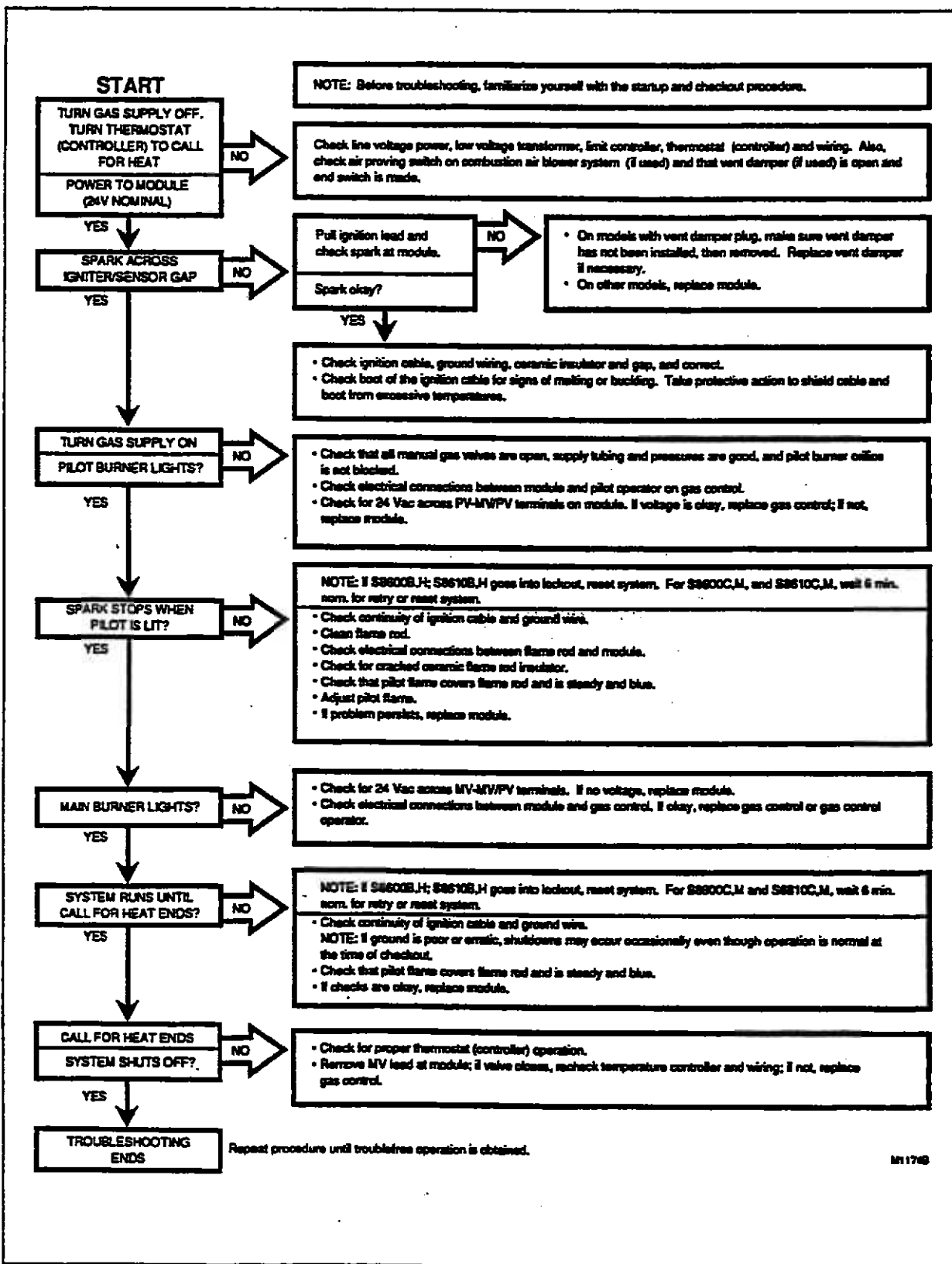


Honeywell

Intermittent Pilot System TROUBLESHOOTING S8600, S8610



TROUBLESHOOTING

Check installation instructions and wiring diagram to be sure the ignition system is properly installed.

Go through the steps in the flow chart on the other side of this page.

IGNITION SYSTEM CHECKS

STEP 1: Check ignition cable.

Make sure:

- Ignition cable does not run in contact with any metal surfaces.
- Ignition cable is no more than 36 in. [0.9 m] long.
- Connections to the ignition module and to the igniter or igniter-sensor are clean and tight.
- Ignition cable provides good electrical continuity.

STEP 2: Check ignition system grounding. *Nuisance shutdowns are often caused by a poor or erratic ground.*

A common ground, usually supplied by the pilot burner bracket, is required for the module and the pilot burner/igniter sensor.

- Check for good metal-to-metal contact between the pilot burner bracket and the main burner.
- Check the ground lead from the GND(BURNER) terminal on the module to the pilot burner. Make sure connections are clean and tight. If the wire is damaged or deteriorated, replace it with No. 14-18 gauge, moisture-resistant, thermoplastic insulated wire with 105° C [221° F] minimum rating.
 - Check the ceramic flame rod insulator for cracks or evidence of exposure to extreme heat, which can permit leakage to ground. Replace pilot burner/igniter-sensor and provide shield if necessary.
 - If flame rod or bracket are bent out of position, restore to correct position.

STEP 3: Check spark ignition circuit. *You will need a short jumper wire made from ignition cable or other heavily insulated wire.*

- Close the manual gas valve.
- Disconnect the ignition cable at the SPARK terminal on the module.

WARNING

When performing the following steps, do not touch stripped end of jumper or SPARK terminal. The ignition circuit generates over 10,000 volts and electrical shock can result.

- Energize the module and immediately touch one end of the jumper firmly to the GND terminal on the module. Move the free end of the jumper slowly toward the SPARK terminal until a spark is established.
- Pull the jumper slowly away from the terminal and note the length of the gap when sparking stops. Check table below.

ARC LENGTH	ACTION
No arc or arc less than 1/8 in. [3 mm]	Check external fuse, if provided. Verify power at module input terminal. Replace module if fuse and power is okay.
Arc 1/8 in. [3 mm] or longer.	Voltage output is okay.

STEP 4: Check pilot and main burner lightoff.

- Set the thermostat to call for heat.
- Watch the pilot burner during the ignition sequence. See if:

- Ignition spark continues after the pilot is lit.
- The pilot lights and the spark stops, but main burner does not light.
- *S8600B,H,M; S8610B,H; S8660D; S8670D only:* The pilot lights, the spark stops and main burner lights, but the system locks out.
- If so, ensure adequate flame current as follows.
 - Turn off furnace at circuit breaker or fuse box.
 - Clean the flame rod with emery cloth.
 - Make sure electrical connections are clean and tight. Replace damaged wire with moisture-resistant No. 18 wire rated for continuous duty up to 105° C [221° F].
 - Check for cracked ceramic insulator, which can cause short to ground, and replace igniter-sensor if necessary.
 - At the gas control, disconnect main valve wire from the TH or MV terminal.
 - Turn on power and set thermostat to call for heat. The pilot should light but the main burner will remain off because the main valve actuator is disconnected.
 - Check the pilot flame. Make sure it is blue, steady and envelops 3/8 to 1/2 in. [10 to 13 mm] of the flame rod.
 - If necessary, adjust pilot flame by turning the pilot adjustment screw on the gas control clockwise to decrease or counterclockwise to increase pilot flame. Following adjustment, always replace pilot adjustment cover screw and tighten firmly to assure proper gas control operation.
 - Set thermostat below room temperature to end call for heat.
- Recheck ignition sequence as follows.
 - Reconnect main valve wire.
 - Set thermostat to call for heat.
 - Watch ignition sequence at burner.
 - If spark still doesn't stop after pilot lights, replace ignition module.
 - If main burner doesn't light or if main burner lights but system locks out, check module, ground wire and gas control as described in the troubleshooting chart.