Burner/Ignition Failure Trouble Shooting Guide

Purpose: To solve burner ignition failures.

Disclaimer: Only a certified gas or electrical technician should perform the following procedures.

Start

Turn on: Blower, Drum and Gas

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Verify Power to Ignition Controller

No → Check incoming power from transformer, high limit, and vacuum sensor. Note: To check vacuum/high limit see separate attachment.

Yes

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Pilot/Igniter is Sparking

Note: Confirmed by a clicking noise.

No → Check Vacuum Sensor and High Limit—see attachment. Check igniter wire continuity by ensuring ceramic casing at the base of the igniter is intact. Also, check for breaks or loose connection in the wiring. Recommend using an OHM meter. Replace igniter if required.

Yes

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Gas Pilot Ignites

No → Verify 24 Volt AC at Combined Gas Valve with a Volt Meter set at 24 Volts AC or Higher. Ensure one probe is on P or PV Terminal and the other on C or MV/PV Terminal.

Yes

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Burners fail to Ignite

No → Ensure the Igniter Probe is in the pilot flame. Indication is a red hot igniter probe tip. Note: A dirty Roaster will disrupt airflow and may draw the pilot flame away from the Igniter Probe.

Yes

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Ensure the Igniter Probe is receiving electrical current.

No → Use a Micro Amp Meter to ensure Igniter Probe is receiving current.

Yes

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Verify 24 Volt AC at Combined Gas Valve with a Volt Meter set at 24 Volts AC or Higher. Ensure one probe is on M or MV Terminal and the other on C or MV/PV Terminal.
Attachment # 1

VACUUM SENSORS: PLEASE be aware that this may be a cleaning issue! Replacing a vacuum sensor may not eliminate the problem.

Note 1: Ensure electrical power is disconnected before working on electrical.

1. Locate the aluminum tube in the impeller compartment and ensure it is absolutely clean. If any debris or residue is evident, clean the inside of the tube. You can use a thin tool or wire to pull the residue from the bottom. You can remove the panel above the chaff compartment and remove the tube from the sensor for cleaning.

2. Follow the tube upward to the vacuum sensor, remove the sensor cover.

3. Take the normally open and the common wires and join them together under the Normally Open (N.O.) position (middle screw). Ensure you have a good connection.

4. Restore Power.

5. Turn on burner. If you hear a clicking sound the pilot is functioning properly. Turn off the electrical power and put the wires back in their original position on the vacuum sensor.

6. Clean your roaster thoroughly and then try reigniting your burners.

HIGH LIMIT:

1. Disconnect the electrical power from the Watlow high limit. It is the black molded plastic box 4” long X 2-5/8” wide.

2. Remove the Thermocouple wires Red and White TC + TC-.

3. Insert a jumper (small loop) between the TC + and TC-.

4. Reconnect electrical power

If the roaster now lights you have found the problem the thermocouple probe has failed or has a bad connection. It is tripping the high limit and shutting down the roaster.

To check if the high limit itself has failed proceed below. Disconnect the electrical power and put the wires back in their original poison. Red on Negative.

Disconnect the Normally Open and Common Wires off the terminals and connect them to each other.

Restore power. If then the roaster lights replace the high limit.