

# PELLET TROUBLE SHOOTING

SYMPTOM	CAUSE	CORRECTION
<p><b>Power light not on</b></p>	<p>Power at outlet</p> <p>Fuse blown on circuit board</p> <p>Faulty wiring</p> <p>Faulty circuit board</p>	<p>Verify proper voltage and polarity at the outlet. Verify power cord is plugged into the outlet.</p> <p>Replace fuse / Check for short</p> <p>Inspect / Repair stove wiring</p> <p>Replace circuit board</p>
<p><b>One or both blowers do not run in test mode</b></p> <p><b>Note: Blower voltages shown on DDM screens are APPROXIMATE voltages. The DDM is not a volt meter. Use a volt meter to insure accurate measurements.</b></p> <p><b>Note: Combustion blower voltage should equal line voltage in test mode on high speed. Voltage will vary during stove operation depending on heating demand.</b></p>	<p>Power at outlet</p> <p>Feed rate / Test mode knob out of alignment</p> <p>Blower fan blade obstructed</p> <p>Faulty blower motor</p> <p>Faulty wiring</p> <p>Faulty circuit board</p>	<p>Verify proper voltage and polarity at the outlet</p> <p>Verify when knob is turned fully clockwise the knob arrow points to "6" Verify knob settings with DDM.</p> <p>Remove / Clean obstruction from blower fan blade</p> <p>Verify that when corresponding light on the control is lit there is voltage/ground to the blower motor. If voltage/ground is present and the blower will not run, replace the blower motor.</p> <p>Inspect / Repair wiring</p> <p>Both combustion and distribution blowers should run on high for approx. 1 minute after turning the feed rate knob to test mode. After 1 minute the blowers will alternate between high and low every minute. When one blower is on high the other blower will be on low. The blower lights on the control board will burn bright when that blower is on high and dim when that blower is on low. Verify proper control operation.</p>
<p><b>Feed motor will not run in test mode.</b></p> <p><b>*Feed motor will only run for the first minute after turning the unit to test mode*</b></p>	<p>Low draft</p> <p>Faulty differential switch</p> <p>Faulty feed motor</p> <p>Faulty hopper lid switch</p> <p>Faulty wiring</p> <p>Faulty circuit board</p>	<p>Install draft meter and verify draft settings. The draft differential switch must have at least <b>-.17" W.C.</b> to close and complete ground circuit to the feed motor.</p> <p>After verifying draft readings are correct, jump differential switch. Turn unit to test mode. If the feed motor runs check for obstruction in differential switch tube or hopper filter/muffler. If no obstruction and the draft readings are correct, replace the differential switch.</p> <p>Verify when the feed motor light on the control is on voltage/ ground are present at the feed motor. If voltage/ground are present and the feed motor will not run, replace the feed motor.</p> <p>Verify hopper lid switch operation when hopper lid closed. Broken or mis-adjusted lid switch will not allow power to feed motor.</p> <p>Inspect / Repair stove wiring</p> <p>Verify when the stove is turned to test mode the feed motor light is lit for 1 minute. Verify voltage/ ground to the motor when the feed motor light is lit..</p>

SYMPTOM	CAUSE	CORRECTION
<p><b>Stove will not light in Auto.</b>  <b>All motors run in test mode.</b></p> <p style="text-align: right;">continued</p>	<p>Fuel problem</p> <p>Improper igniter installation</p> <p>Draft problem</p> <p>Dirty stove and venting</p> <p>Back draft damper sticking</p> <p>Temp dial setting</p> <p>Low voltage</p>	<p>Verify proper amount of pellets in the burn pot. Turn the stove to test to purge pellets into the burn pot if necessary. Pellets should only cover area of burn pot directly above igniter bracket. Check that pellets are dry and in good condition.</p> <p>Verify igniter and mounting bracket assembled/installed properly. Igniter bracket must be tight against burn pot - no gap between surfaces.</p> <p>Connect draft meter and verify draft readings.</p> <p>Clean stove and venting. Check for clogged holes in the burn pot. Clean area under the burn pot where the igniter is located. Clean igniter.</p> <p>Verify that back draft damper located in the air inlet moves freely.</p> <p>Set temp dial above room temperature. The stove will not light unless the temp dial is at least 2 degrees above the room sensing probe temperature. Verify temp dial setting and room sensor accuracy with DDM.</p> <p>Verify voltage and polarity at the outlet. Verify voltage/ground at igniter terminals. Low voltage will cause the igniter temperature to be low.</p>
<p><b>Stove will not light in Auto.</b>  <b>All motors run in test mode.</b></p> <p style="text-align: right;">continued</p>	<p>Faulty room sensing probe</p> <p>Faulty ESP probe</p> <p>Faulty igniter</p> <p>Faulty draft differential switch</p> <p>Obstruction in feeding system</p> <p>Faulty wiring</p> <p>Faulty circuit board</p>	<p>Verify room sensing probe is installed correctly. Check for a four blink status. The stove will not light in auto and room temp with a four blink status error. Check for loose room sensing probe connections. Verify room sensor temperature accuracy with DDM. Install or replace room sensing probe.</p> <p>Verify ESP temperature accuracy with DDM. Replace ESP probe</p> <p>Check if igniter is getting hot when igniter light on the control is lit. The igniter ground circuit is wired through the draft differential switch. Check if voltage/ ground is present at the igniter when the igniter light on the control is lit. Check the resistance of the igniter. Resistance should be 47-50 ohms. Replace igniter if needed.</p> <p>The draft differential switch will not close allowing voltage to the igniter if the draft is less than <b>-17"W.C.</b> If the draft readings are correct and jumping the differential switch allows the stove to light, check for obstruction in the differential switch tube or hopper filter/muffler. Replace differential switch if needed.</p> <p>Check for obstruction in hopper, feeder and auger tube.</p> <p>Inspect / Repair wiring from the control to the igniter.</p> <p>If everything above checks out correctly and no voltage to the igniter, replace the circuit board.</p>
<p><b>Erratic operation.</b></p>	<p>Power at the outlet</p> <p>Obstruction in feeding system</p> <p>Faulty ESP probe</p> <p>Faulty wiring</p> <p>Faulty room sensing probe</p> <p>Faulty circuit board</p>	<p>Verify proper voltage and polarity at the outlet</p> <p>Check for obstruction in hopper, feeder and auger tube.</p> <p>Verify ESP temperature accuracy with DDM. Replace ESP probe</p> <p>Inspect / Repair stove wiring</p> <p>Check connections and location of room sensing probe. Verify room sensor accuracy with DDM. Replace room sensing probe if needed.</p> <p>Verify proper control operation. Replace circuit board if not controlling properly.</p>

SYMPTOM	CAUSE	CORRECTION
<p>Stove burns properly. Distribution blower will not run.</p> <p><b>*NOTE: Distribution blower will not operate in stove temp mode until ESP probe senses approx. 155 degrees.*</b></p> <p><b>NOTE: Distribution blower will not operate in room temp mode unless the room sensor is indicating a demand for heat or if ESP temperature climbs above 360 degrees.</b></p>	<p>Power at the outlet</p> <p>Stove in manual and stove temp mode</p> <p>Dirty stove and venting</p> <p>Faulty distribution blower</p> <p>Faulty room sensor</p> <p>Faulty ESP probe</p> <p>Faulty wiring</p> <p>Faulty circuit board</p>	<p>Verify proper voltage and polarity at the outlet.</p> <p>With the control set to manual and stove temp mode and the temp dial set to 5 or less (4 or less on units with control board 3-20-05886D or newer), the distribution blower will not operate. This allows you to view a fire without blowing heat into the room.</p> <p>Clean the stove and venting</p> <p>Verify distribution blower spins freely. If voltage/ground is present at the distribution blower and the blower will not run, replace blower motor.</p> <p>Verify room sensor accuracy with DDM. Replace room sensor if needed.</p> <p>Verify probe is clean. Verify ESP temperature accuracy with DDM. Replace probe if needed.</p> <p>Inspect / Repair stove wiring.</p> <p>Verify when the distribution blower light on the control board is lit, voltage/ground is present at the distribution blower.</p>
<p>Stove burns properly. Stove will not shut down when turned to off.</p> <p><b>*NOTE: The stove will continue to feed until the ESP probe senses approx. 250 degrees.</b></p> <p><b>On newer units the ESP temperature must remain below 290 degrees for approximately 35 - 40 minutes.</b></p> <p><b>Note: The combustion blower will run until the ESP probe senses 90 degrees.*</b></p>	<p>Power at the outlet</p> <p>Mode selector knob out of alignment</p> <p>Stove in two blink status</p> <p>Dirty stove/Restricted venting</p> <p>Faulty ESP probe</p> <p>Faulty wiring</p> <p>Faulty circuit board</p>	<p>Verify voltage and polarity at the outlet.</p> <p>Turn the mode selector knob fully clockwise. Verify the pointer is at the "H" on room temp. Re-set knob if needed. Verify the status light goes out when the knob is turned to off.</p> <p>On older stoves with a feeder position micro switch, check for proper operation of the micro-switch. Stoves without a feeder position micro-switch check for missing or loose jumper at J2 on the control board. The stove will not shut down while in a two blink status error.</p> <p>Verify unit and venting clean. Fly ash accumulation will prevent heat exchange, causing extra heat in exhaust and higher ESP temperatures. Repair as needed.</p> <p>Monitor ESP temperature with DDM. If the stove is cold and continues to run, clean / replace ESP probe</p> <p>Inspect / Repair stove wiring</p> <p>Replace circuit board</p>
<p>Feed motor does not run after ignition. (Feed motor runs in test mode)</p>	<p>Power problem</p> <p>Draft problem</p> <p>Obstruction in feed system</p> <p>Faulty ESP probe.</p> <p>Faulty circuit board</p>	<p>Verify proper voltage and polarity at the outlet.</p> <p>Install draft meter and verify draft readings. At least <b>-17" W.C.</b> needed to close the differential switch and allow power to the feed motor.</p> <p>Check for obstruction in feeder and auger tube.</p> <p>Monitor ESP temperature with DDM. Clean / Replace ESP probe</p> <p>Replace circuit board</p>
<p>Stove does not burn correctly</p>	<p>Dirty stove / venting</p> <p>Fuel problem</p> <p>Feed rate setting</p> <p>Back draft damper sticking</p> <p>Obstruction in feed system</p> <p>Faulty ESP probe</p> <p>Faulty circuit board</p>	<p>Clean stove and venting. Install draft meter and verify draft readings.</p> <p>Verify pellets are dry and are in good condition.</p> <p>Verify feed rate setting. A setting of 3 to 4 works best for most pellets.</p> <p>Verify the back draft damper located in the air inlet is moving freely. If outside air is installed verify pipe is not obstructed.</p> <p>Check for obstruction in the hopper, feeder and auger tube</p> <p>Clean / Replace ESP probe</p> <p>Verify proper control operation. Replace circuit board if needed.</p>

SYMPTOM	CAUSE	CORRECTION
<p><b>Stove noisy when feed motor is running</b></p>	<p>Slide plate</p> <p>Faulty feed motor</p> <p>Cam bearing</p> <p>Pillow block bearings</p> <p>Auger</p>	<p>Check for obstruction in slide plate area. Check for burrs on slide plate and in the feeder housing. Check for evidence of wear on slide plate. Verify the slide plate is not warped or damaged.</p> <p>Remove feed motor and connect directly to 120 volts to check for noisy gears.</p> <p>Verify cam bearing is traveling on pusher arm properly. Adjust or replace the cam bearing.</p> <p>Verify the pillow block bearings are seated in the housing. Check for fines or dirt in the bearings. Adjust or replace pillow block bearings.</p> <p>Check for obstruction in the auger. Verify auger is not rubbing inside the feeder tube. Verify auger bearing retaining bolts are tight and the auger is not at angle in the auger tube. If the auger bearing is causing the noise, replace the auger.</p>
<p><b>Draft readings are not normal</b></p>	<p>Dirty stove / Venting</p> <p>Air inlet damper sticking</p> <p>Venting configuration</p> <p>Faulty combustion blower</p> <p>Faulty circuit board</p>	<p>Clean stove and venting. Re-check draft readings.</p> <p>Verify air inlet damper is moving freely. If outside air is installed check for obstruction in pipe.</p> <p>Verify proper venting configuration. Change venting if needed.</p> <p>Check that fan blade is tight on combustion blower motor shaft. Check operation of combustion blower. Verify combustion blower intake plate installed correctly. Replace combustion blower if needed.</p> <p>Check for proper control operation. Replace circuit board if needed.</p>
<p><b>One or both blowers run constantly when stove plugged into outlet.</b></p> <p><b>Note: Dipswitch #5 is specific to ESP used on unit. Switch #5 should be "ON" for a red wired ESP and "OFF" for a black wired ESP. Refer to tech bulletins for more details.</b></p>	<p>Power at the outlet</p> <p>Faulty ESP probe</p> <p>Faulty wiring</p> <p>Faulty circuit board</p> <p>Dipswitch settings incorrect</p> <p>Low draft problem</p> <p>Faulty hopper lid switch</p>	<p>Verify proper voltage and polarity at the outlet</p> <p>Verify ESP temperature accuracy with DDM. Replace ESP probe</p> <p>Inspect / Repair stove wiring</p> <p>Verify proper control operation. Replace circuit board if not controlling properly.</p> <p>Use DDM to verify control board dipswitches are set according to ESP wire color. Incorrect setting will show ESP temperature of 470 - 570 degrees on a cold stove. Adjust switches as needed.</p> <p>Combustion blower will not shut off if there is insufficient draft, regardless of ESP temperature. Verify draft reading at pressure switch is higher than -.17" W.C. Locate and repair/replace source of low draft.</p> <p>An open circuit in the feed motor wiring circuit, such as a faulty lid switch, draft pressure switch, loose wiring connection, or faulty feed motor will be interpreted as a low draft problem by the control board, and will cause the combustion blower to run on high speed to attempt to re-establish draft in the stove, regardless of ESP temperature. Verify lid switch operation. Repair/replace as needed.</p>

SYMPTOM	CAUSE	CORRECTION
<p><b>Stove produces whistling noise while running</b></p>	<p>Hopper seams not sealed</p> <p>Damaged/worn gaskets and seals</p> <p>Doors/ access covers loose</p> <p>Broken/skipped welds</p>	<p>Remove pellets from hopper if necessary, and verify all hopper seams are properly sealed with silicone sealer. Apply pressure to various areas around exterior of hopper and lid to change pitch of whistling noise. Reseal hopper seams as needed.</p> <p>Inspect gaskets for excessive wear or damage. Verify there are no foreign materials on sealing surfaces. Replace as needed.</p> <p>Verify all door/lid latches operate correctly, and hinges are not bent or loose. Verify feeder access cover is properly installed. Adjust or repair as needed.</p> <p>Visually inspect and verify welded seams are intact. Repair or reseal as needed</p>

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