



# Section 6:

## Troubleshooting C-Series Stack Dryer

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# Trouble Shooting

## Electronic Control Diagnostic Lights

The electronic control has 6 diagnostic lights to aid in service of the dryer. Each pocket has indicator lights for the motor circuit, door switch circuit, and the heat circuit. When the electronic control is carefully unlocked and moved forward these lights are visible on the circuit board. They are each labeled as to function indicated.

1. When either dryer door is closed, the appropriate door light on the computer should be illuminated indicating that the door is closed.
2. When either dryer is running, the appropriate motor light on the computer should be illuminated indicating that the computer is calling for the motor to operate.
3. When either dryer is calling for heat, the appropriate heat light on the computer should be illuminated indicating that the computer is calling for heat.

An example of their function would be troubleshooting an upper dryer pocket that did not heat.

1. Start the machine and insure that it did not heat.
2. Check the upper heat light and see if it is lit.
3. If the heat light is on, this would indicate that the computer was calling for heat and that it was not at fault. You would then go on to check the rest of the heat circuit.

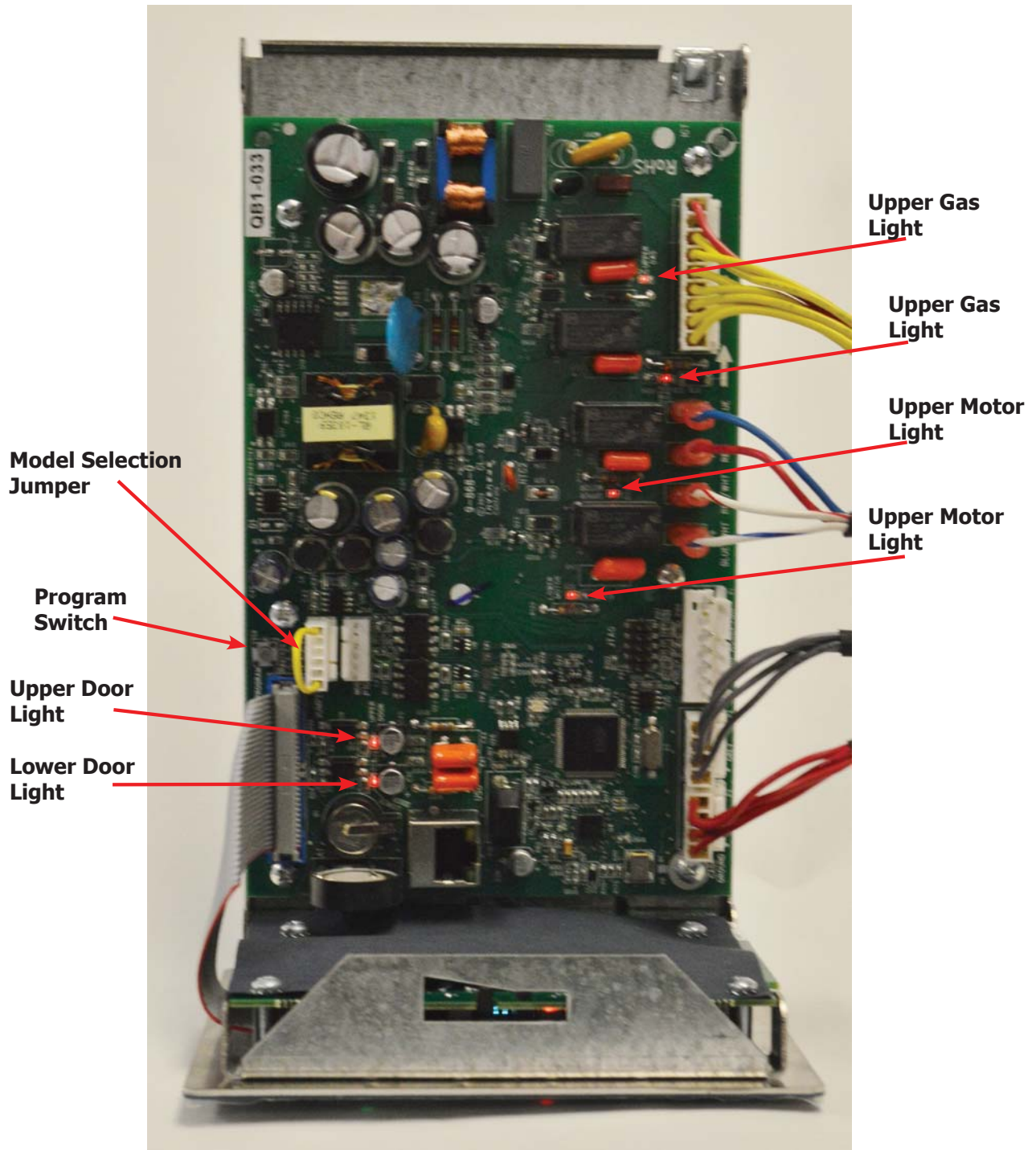


Figure: 1

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## To enter a test Cycle Mode you will have to enter the programming mode:

### MANUAL PROGRAMMING:

The dryer must be in idle mode for the manual programming menus to be accessed. Idle mode is when the dryer is not actively running a drying cycle and the vend price is displayed on the screen (for both upper and lower dryers).

To enter the manual programming mode, the control tray on the dryer must be unlocked and pulled out to reveal the programming button. The programming button is then pressed for 1 second. The control should display "DRYER PROGRAMMING".

See the figure 1

Next press Start and you can scroll through the options you will either want to select Quick test or Continuous Test depending on the length of time you require to perform the tests.

### Quick Test Option:

When the Quick Test Option is chosen, the dryer will begin a shortened dry cycle without the displayed vend price being met. The purpose of this shortened cycle is to test all major components for proper operation.

Error Codes should all function normally during this test. The display will show customer prompts in a similar way to a normal dry cycle.

### Continuous Test Option:

Similar to the Quick Test, when the Continuous Test Option is chosen, the dryer will begin a dry cycle without the displayed vend price being met. However, in this case, it will be a continuously-running cycle. It will not time out after any designated amount of time.

**CAUTION:** This option is meant for factory use only. Do not operate the dryer with this cycle active without factory authorization.

# Error Codes

Symptom	Probable Cause	Suggested Remedy
TEMP SENSOR SHORT	Shorted Temperature Sensor or wire.	The dryer control shall not start until the detected short circuit is removed. Regardless of condition of short circuit, Error Code will be displayed until programming button is pressed to return machine to idle mode.
TEMP SENSOR OPEN	Open Temperature Sensor or wire	The dryer control shall not start until the detected short circuit is removed. Regardless of condition of short circuit, Error Code will be displayed until programming button is pressed to return machine to idle mode.
PCB ERROR1	Memory corrupted	Power machine down and try to reset control. Vary voltage to the control board. Check ground to board. Replace control board if error can not be cleared
PCB ERROR2	Analog/ Digital Error	Power machine down and try to reset control. Vary voltage to the control board. Check ground to board. Replace control board if error can not be cleared
COMM ERROR1	Communication Bus Error	Power machine down and try to reset control. Vary voltage to the control board. Check ground to board. Replace control board if error can not be cleared
COMM ERROR2	No Dryer Model selected	This error occurs when a pin combination on the model selection header is used that does not have a model designated for it. check connector marked Jumpers on the control board.

# TROUBLESHOOTING

Symptom	Probable Cause	Suggested Remedy
Tumbler does not turn	Drive belts	Check both drive belts. Replace if failed.
	Drive motor	Check capacitor and motor. Replace if failed
	Door switch	Check for door closed L.E.D on control board. Check door switch contacts and adjustment. Adjust or replace door switch.
	Electronic control	Is electronic control closing motor relay to power drive motor? Check for motor light on electronic control. If no light and time counting down, change control. If light is on, check for proper voltage and wiring to motor relay in rear control compartment.
	Motor run relay	Test for proper voltage to run relay coil, Test output voltage of relay when contacts ingauged. if no voltage replace relay.

Symptom	Probable Cause	Suggested Remedy
Tumbler turns but no spark at burner	Glass fuse	Check small glass control fuse in back of dryer. Replace if failed.
	Temperature sensor	The temperature sensor should have between 30,000 ohms and 60,000 ohms resistance at room temperature if okay. Replace if not in this range.
	Ignition	Check for 24VAC output from transformer.
	Transformer	Replace if have 120V between black & white and no 24V between red and yellow.
	Over temperature	Check to see if manually resettable thermostat. Thermostat is kicked out. Reset by pushing red reset button.
	Ignition control	Check for 24VAC coming into the control on the at burner red wire. If voltage, then check for 24VAC out on the brown wire. Also check for spark at the ignitor. If no 24VAC output or no spark to the ignitor, replace ignition control.
	Air flow switch	Check air flow switch to be sure it closes when dryer is running. If not, adjust or replace switch.
	Hi-limit	Check for continuity. Should be 0 ohms resistance when cold. If not, replace thermostat.
	Gas supply	No gas can cause system lockout
	Electronic control	Is electronic control closing gas relay to power Control heat circuit? Check for gas light on electronic control. If no light change control. If light is on, check voltage and components in heat circuit at transformer at rear of unit.

<b>Symptom</b>	<b>Probable Cause</b>	<b>Suggested Remedy</b>
<b>Tumbler turns, ignition sparks, no flame</b>	<b>Gas supply</b>	<b>Make sure gas supply is working.</b>
	<b>Gas pressure</b>	<b>Make manometer check of gas pressure. Adjust if necessary.</b>
	<b>Spark electrode sensor</b>	<b>Check for damage to electrode or mounting. Replace if necessary.</b>
	<b>Gas valve</b>	<b>Check coil continuity, replace valve if failed.</b>
	<b>Ignition Control</b>	<b>Check for 24VAC to gas valve coils. If no voltage replace ignition control.</b>
<b>Burner Lights, but goes on and off</b>	<b>Electrodes</b>	<b>Check low voltage harness for possible wire break or cuts to allow no signal back to ignition control</b>
<b>Slow drying</b>	<b>Temperature Setting</b>	<b>Check program for correct high temperature setting. Adjust if necessary.</b>
	<b>Air flow restrictions necessary</b>	<ol style="list-style-type: none"> <li><b>1. Check lint screen and clean if necessary.</b></li> <li><b>2. Check exhaust for correct length and clean if necessary.</b></li> <li><b>3. Check exhaust damper to insure that it opens when dryer is running and closes when dryer is not in use.</b></li> <li><b>4. Check makeup air to insure that it is adequate. Increase makeup air if necessary.</b></li> <li><b>5. Check static Back pressure no more than .3</b></li> </ol>
	<b>Temperature sensor</b>	<b>The temperature sensor should have between 30,000 ohms and 60,000 ohms resistance at room temperature if okay. Replace if not in this range.</b>



<b>Symptom</b>	<b>Probable Cause</b>	<b>Suggested Remedy</b>
<b>Erratic display</b>	<b>Initial start-up</b>	<b>If erratic on initial start-up, leave power on for approximately one hour and check machine operation again.</b>
	<b>Grounding</b>	<b>Machine must be grounded by separate conductor back to neutral bar in breaker box.</b>
	<b>Program</b>	<b>Check program and make corrections if necessary.</b>
	<b>Voltage spike</b>	<b>Power down machine for 20 seconds and repower. If no improvement, replace control.</b>
<b>Manual overtemp tripping frequently</b>	<b>Recirculating chamber Lint accumulation</b>	<b>Remove manual overtemp thermostat and inspect in chamber for excessive lint build up. Access also gained to this chamber by removing recirculation duct mounted at bottom of chamber, or the panel inside burner chamber between burners and rear back panel</b>
	<b>Exhaust ducting Excessive lint buildup</b>	<b>Remove exhaust duct at rear of dryer and inspect for excessive lint build up in complete duct from dryer to where duct exits building.</b>
	<b>Clean linto of top heat air chamber above tumbler</b>	<b>Remove front panel completely. Be careful of any wiring attached. Remove heated air chamber cover and clean above tumbler back to burner housing.</b>