



Fast Track Trouble shooting

Model: NX583G0VB



IMPORTANT SAFETY NOTICE – “For Technicians Only” This service data sheet is intended for use by persons having electrical, electronic, and mechanical experience and knowledge at a level generally considered acceptable in the appliance repair trade. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible, nor assume any liability for injury or damage of any kind arising from the use of this data sheet.

Publication # SM NX583

Production Date: 08/12/14

Support Information:

HELP: 1-888-751-4086 (Tech Sup. – ASC/SSD)

1-866-894-0637 (Tech Sup. - FE/ME)

GSPN: <http://gspn3.samsungcsportal.com/main.jsp>

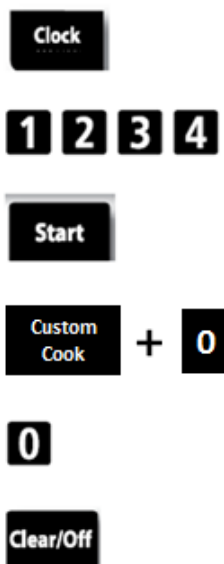
PLUS ONE: <http://my.plus1solutions.net/clientPortals/samsung>

Bulletins:

DIAGNOSTIC MODE

There are two kinds of error codes. One denotes an oven temperature sensor error and the other denotes a safety error.

1. Press Clock pad.
2. Press the number pads 1,2,3 and 4. Make sure the Timer and Warming Drawer are both turned OFF.
3. Press the Start pad.
4. Press the Custom Cook and the 0 number pads at the same time for 2 seconds. Error codes are displayed.
5. Press the 0 number pad, to display the latest 5 error codes. But, if the power is interrupted and the oven turns off, the stored error codes are deleted.
6. Press the Clear/Off pad to return to normal display mode.



Oven Sensor Error

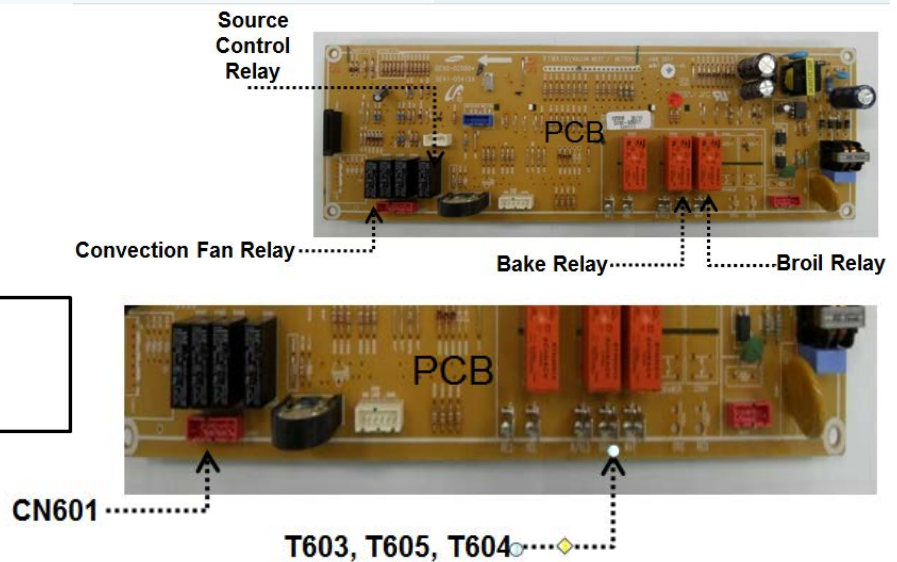
Failure Code	Cause	Solution
E-27	Oven Sensor Opened (Over 2950Ω)	1. Disconnect electrical Power to the range. Remove the upper rear cover panel. Measure the sensor resistance:1080Ω at the room temperature → If there are any problems, replace the oven temperature sensor.
E-28	Oven Sensor Shorted (Under 930Ω)	2. If there is not any problem with oven temperature sensor, Please check whether there is a damaged terminal or wire on harness. 3. Disconnect the oven sensor connector from the PCB. Check resistance of oven sensor connector on PCB (Normal:2850Ω)

Safety Error

Failure Code	CAUSE	Solution
E-08	Oven heating error (Temperature dose not reach 125°F[52°C]in 10 minutes.) (Self Clean, Convection Bake, Convection Roast, or Broil)	1. Disconnect power. Open the rear cover. Disconnect the two harness connectors to the oven temperature sensor resistance:1080Ω at the room temperature → If there are any problems, replace oven temperature sensor.
E-0A	Oven overheating error. (Temperature dose not reach 650°F[343°C] in any cooking function, except Self Clean)	2. Check the broil and bake burners to make sure they are lighting and burning properly. 3. Check whether DLB , Broil& Bake Ignitor and Warming Drawer relay is working normally. 4. Make sure all harness connections are properly connected and securely fastened to the PCB. 5. Check the resistance of oven temperature sensor connector on PCB (Normal : 2850Ω)

- * Measure oven sensor resistance.
(1080Ω at the room temperature)
- * Check the oven sensor harness connections at the PCB.

- * Check the Control Relay, Bake and Broil harness connections to the PCB.
- * Make sure the harness connectors are completely seated in the CN601, T603, T604, T605 terminals on the PCB



Safety Error

Failure Code	CAUSE	Solution
-SE-	Shorted Key (Key pad is pressed for 60 seconds.)	1. Check the membrane wire harness to make sure it is properly connected with PCB 2. Disconnect the membrane wire harness. Check the harness, Membrane and PCB for short circuits. 3. If there is not a problem with connector on main PCB and membrane harness, replace the PCB.
E-OE	Door locking error (Door lock in wrong position after 1minutes.)	1. Disconnect electrical power to the range. Remove the rear cover panel. Make sure the wiring harness is properly connected to the motorized door lock assembly. 2. Check motorized door lock assembly for proper operating resistance. 3. With operating door lockout, measure a voltage of connector on harness which is linked with door lock motor. (Normal :Voltage : AC 120V) 4. Check the door locking switch to make sure it is working properly.

SE

Check to see if Connector pin on (CN301) & any pin on the MAIN PCB have a short



Key Connector (CN301)

PCB (Back)

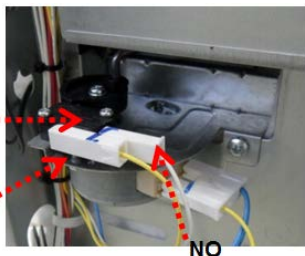
Check to see if the membrane keypad & membrane bracket have a short



< Membrane & Bracket Assembly >

E-OE

Door lock Switch
COM



*Check whether voltage(AC 120V) is offered to lock motor with letting lock work or not.

* Check the door lock switches(com-NO)
* Measure resistance of Lock motor coil.
(1750~1850Ω at the room temperature)

*Check whether harness connected normally into CN501 on PCB.

*Measure resistance CN501 on PCB.
(COM-NO: ∞ at the room temperature)
*COM : Yellow Wire *NO : White Wire



PCB Terminal CN501

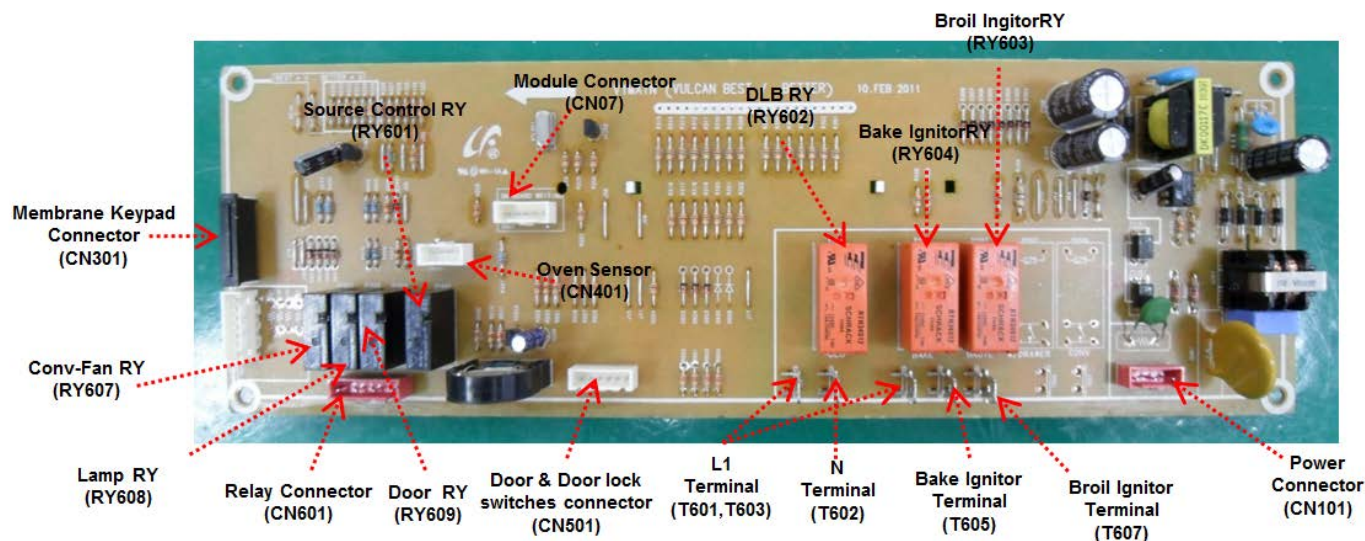
SYMPTOM	DIAGNOSIS	REMEDY												
Oven not operating (No power, No display)	* Measure the input voltage at the plug. (120VAC) * Measure the input voltage at terminal T01 on the PCB .	* Check the circuit breaker or fuse for the range circuit. * Make sure all wires are connected to the PCB.												
	* Measure the voltage at the CN01 connector on the PCB. (L1~N:120VAC)	* Repair or replace the loose or disconnected harness.												
	* Make sure that the bake, broil, and source control relays on the PCB are working normally. * Make sure the harness connections at the PCB terminals (T02, T03) have not come loose or disconnected.	* Replace the PCB if a relay has been damaged; relay is not working properly; or if the PCB have a crack in it. * Tighten or reconnect the PCB harness connections. * After confirming the harness has been connected properly to the PCB, take the following action: - Repair of replace the harness. - Replace the PCB.												
	* Measure the resistance between both ends of the oven temperature sensor. (normal : 0 ohms) * Make sure the harness connections at the PCB connector CN04 has not come loose or disconnected.	* Replace the oven temperature sensor. * Repair or replace the harness. * If problem still exists after confirming the oven temperature sensor and harness are working and connected properly, replace the PCB.												
Oven temperature rises too slowly.	* "E-08" will show on the display if the oven fails to reach 125°F(52°C) within 10 minute in a room temperature condition.	* Measure the oven temperature sensor resistance: (1080Ω at the room temperature). Replace a faulty oven temperature sensor.												
	* Make sure the harness connections at the PCB terminals (T02, T03) have not come loose or disconnected.	* Repair or replace the harness.												
	* Make sure the broil and bake burners have been adjusted properly. * Make sure the oven burner orifices are sized properly for the type of gas being used.	* Open or close the air shutter at the base of the burners to optimize the flame pattern. * Replace with properly sized orifices:<table><tr><td>Burner</td><td>NG</td><td>LP</td></tr><tr><td>Orifice</td><td>mm</td><td>mm</td></tr><tr><td>Broil</td><td>1.64</td><td>1.02</td></tr><tr><td>Bake</td><td>1.90</td><td>1.15</td></tr></table>NOTE: High-altitude orifice kits are available.	Burner	NG	LP	Orifice	mm	mm	Broil	1.64	1.02	Bake	1.90	1.15
	Burner	NG	LP											
Orifice	mm	mm												
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* Make sure that the bake, broil, and source control relays on the PCB are working normally.	* Repair or replace the faulty relay. * Make sure all harness connections are properly connected. * Replace the PCB.													

SYMPTOM	DIAGNOSIS	REMEDY											
Oven temperature rises too fast.	* The oven temperature exceeds 400°F(202°C) within 10 minutes of room temperature operation.	* Repair or replace the faulty broil or bake relay.											
	* Make sure the harness is wired correctly and does not have a short circuit in it.	* Repair or replace the harness.											
	* Make sure the oven burner orifices are sized properly for the type of gas being used.	* Replace with properly sized orifices: <table border="1"> <thead> <tr> <th>Burner</th> <th>NG</th> <th>LP</th> </tr> <tr> <th>Orifice</th> <th>mm</th> <th>mm</th> </tr> </thead> <tbody> <tr> <td>Broil</td> <td>1.64</td> <td>1.02</td> </tr> <tr> <td>Bake</td> <td>1.90</td> <td>1.15</td> </tr> </tbody> </table> NOTE: High-altitude orifice kits are available. * Replace the PCB.	Burner	NG	LP	Orifice	mm	mm	Broil	1.64	1.02	Bake	1.90
Burner	NG	LP											
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Oven is overheating in all cooking modes.	* "E-0A" will show on the display if the oven temperature reaches 650°F (343°C) in any cooking function, except self clean.	* Check the source control relay (RY01) and replace if it is not working properly. * Make sure all harness wires are securely fastened. * Check the resistance of oven temperature sensor connector on the PCB. (Normal : 2850Ω) * Replace the PCB.											
Membrane control keypads are not working properly.	* Make sure the door lock feature is not turned on.	* Unlock the controls by pressing and holding the lock key for 3 or more seconds.											
	* Check to see if the sabbath function has been turned on.	* Press and hold the Sabbath pad for at least 3 seconds. The display will show the time of day when the function is turned off.											
	* Check the membrane control harness and connectors (CN08) on the PCB and membrane control panel.	* Reconnect securely or replace damaged membrane control harness.											
	* Check connector (CN08) and/or the PCB for damage. * Check the membrane control panel for damage.	* Replace the PCB assembly. (PCB and membrane control panel.)											

SYMPTOM	DIAGNOSIS	REMEDY
Oven lamp is not working.	* Make sure the door lockout feature is not turned on.	* Unlock the controls by pressing and holding the lock key for 3 or more seconds.
	* Check for a burned out bulb.	* Replace with a 40 watt appliance bulb.
	* Check the harness connections, the oven lamp relay (RY06), and the source control relay (RY01).	* Repair or replace loose or disconnected harness. * Replace any malfunctioning relays.
	* Measure the resistance across the light ballast/socket terminals. (Normal : ∞)	* Replace the light ballast/socket. * Replace the PCB.
Convection fan is not rotated.	* Check the harness and harness connector (CN02) on the PCB and at the terminals at each convection motor.	* Reconnect a loose or disconnected harness or replace a damaged harness.
	* Check the membrane control harness and connectors (CN08) on the PCB and membrane control panel.	* Reconnect securely or replace a damaged membrane control harness.
	* Check the convection fan relay (RY05) and the connector (CN02) on the PCB.	* Replace the malfunctioning relay. * Replace the PCB.
	* Measure the resistance across the fan motor terminals.	* Replace the burned out fan motor.
The oven smells and/or smokes when it is initially started.	* This is normal.	* The insulation around the oven will give off a slight odor until the adhesive has cured. This should go away after the first couple of oven uses. * The oven is designed to burn off dirt and/or foreign substances. * If the oven is dirty, run a self-cleaning cycle. (See page 53 in the "User Manual".) A ventilation system should be used while the oven is self cleaning.
The LED display is dim or not visible.	* Check the membrane control harness and connectors (CN08) on the PCB and membrane control panel. * LED display is inferior.	* Reconnect securely or replace a damaged membrane control harness. * Replace the PCB assembly. (PCB and membrane control panel.)
The buzzer does not beep when a keypad is touched.	* Check to see if the sabbath function has been turned on. * The buzzer does not work on the PCB.	* Press and hold the Sabbath pad for at least 3 seconds. The display will show the time of day when the function is turned off. * Replace the PCB.

SYMPTOM	DIAGNOSIS	REMEDY
None of the cooktop burners will light.	* There is no electrical power to the range.	* Plug in the power cord and/or reset the circuit breaker for the range.
	* The gas supply valve to the range is closed.	* Open the gas supply valve.
	* Check the terminals on the spark module for voltage.	* Replace the faulty spark module.
	* Check for crimped or broken gas line between the pressure gas regulator and the surface burner control manifold.	* Replace the damaged gas line.
	* Gas pressure regulator switch is closed.	* Replace the gas pressure regulator.
One cooktop burner does not light.	* Check the harness connections at the spark module.	* Reconnect loose connection or replace damaged harness.
	* Check the spark module.	* Disconnect the spark module terminal for the nonworking burner. If no voltage is measured, replace the spark module.
	* Check the electrode for that burner.	* Disconnect the electrode and check whether electrode wire or tip is broken. Replace the faulty electrode.
	* Check for a dirty surface burner orifice.	* Clean and/or replace the surface burner orifice. NOTE: Replacement orifice should always be the same size as removed.
	* Check for crimped or broken gas lines.	* Replace damaged gas lines.
	* Faulty surface burner control	* Each surface burner control is an integral part of the surface burner control manifold. Replace the manifold.
All surface burners will light, but don't stay lit.	* Check for crimped gas line between the pressure gas regulator and the surface burner control manifold.	* Replace the damaged gas line.
	* Faulty gas pressure regulator.	* Replace the gas pressure regulator.
One cooktop burner lights, but doesn't stay lit.	* Check for a dirty surface burner orifice.	* Clean and/or replace the surface burner orifice. NOTE: Replacement orifice should always be the same size as removed.
	* Check for a crimped gas line.	* Replace the crimped gas line.
	* Faulty surface burner control.	* Each surface burner control is an integral part of the surface burner control manifold. Replace the manifold.

SYMPTOM	DIAGNOSIS	REMEDY																								
Cooktop burner flames are soft blue or have yellow tips.	* This is normal.	* Soft blue flames are normal flames for NG operation. * Soft blue flames with yellow tips are normal flames for LP operation.																								
Cooktop burner flames are mostly yellow.	* Check for proper sized orifices:<table border="1"><thead><tr><th colspan="4">NX583G0VB</th></tr></thead><tbody><tr><td>LT FR</td><td>GRN</td><td>1.60</td><td>0.98</td></tr><tr><td>LT RR</td><td>PUR</td><td>1.40</td><td>0.83</td></tr><tr><td>CTR</td><td>BLUE</td><td>1.38</td><td>0.83</td></tr><tr><td>RT RR</td><td>PINK</td><td>1.01</td><td>0.62</td></tr><tr><td>RT FR</td><td>CYAN</td><td>1.92</td><td>1.06</td></tr></tbody></table> NOTE: High-altitude orifice kits are available.	NX583G0VB				LT FR	GRN	1.60	0.98	LT RR	PUR	1.40	0.83	CTR	BLUE	1.38	0.83	RT RR	PINK	1.01	0.62	RT FR	CYAN	1.92	1.06	* Replace any wrong sized orifices.
	NX583G0VB																									
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* Check for crimped or cracked gas line between the pressure gas regulator and the surface burner control manifold.	* Replace the damaged gas line.																									
* Faulty gas pressure regulator.	* Replace the gas pressure regulator.																									



Schematic Diagram (NX583G0VB series)

NOTE

1) INPUT POWER : AC120V 60Hz, 1440W, 12A

2) OVEN DOOR OPENED AND UNLOCKED

