NOTICE - This service data sheet is intended for use by persons having electrical and mechanical training and a level of knowledge of these subjects generally considered acceptable in the appliance repair trade. The manufacturer cannot be responsible, nor assume any liability for injury or damage of any kind arising from the use of this data sheet.

SAFE SERVICING PRACTICES
To avoid the possibility of personal injury and/or property damage, it is important that safe servicing practices be observed. The following are examples, but without limitation, of such practices,

1. Before servicing or moving an appliance remove power cord from electrical outlet, trip circuit breaker to OFF, or remove fuse.
2. Never interfere with the proper installation of any safety device.
3. GROUNDING: The standard color coding for safety ground wires is *GREEN* or *GREEN WITH YELLOW STRIPES*. Ground leads are not to be used as current carrying conductors. **It is extremely important that the service technician reestablish all safety grounds prior to completion of service. Failure to do so will create a potential safety hazard.**
4. Prior to returning the product to service, ensure that:
- All electric connections are correct and secure.
- All electrical leads are properly dressed and secured away from sharp edges, high-temperature components, and moving parts.

- All uninsulated electrical terminals, connectors, heaters, etc. are adequately spaced away from all metal parts and panels.
- All safety grounds (both internal and external) are correctly and securely reassembled.
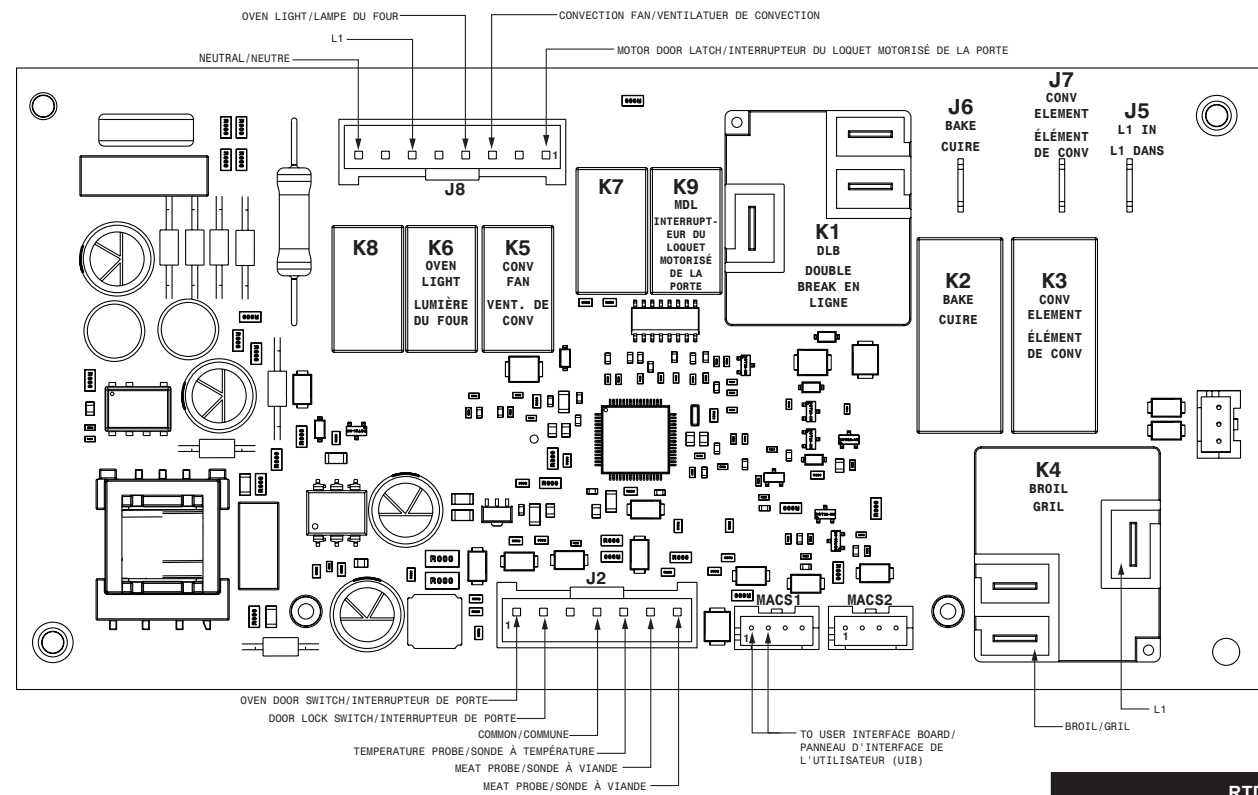
OVEN CALIBRATION
Set the electronic oven control for normal baking at 350°F. Obtain an average oven temperature after a minimum of 5 cycles. Press **OFF** keypad to end Bake mode.

TEMPERATURE OFFSET ADJUSTMENT
1. While in a non-cooking mode, press and hold the **Bake** key for 3 seconds.
2. The current calibration offset (temperature adjustment) should appear in the temperature display.
3. Use the number keypads (0-9) to enter the desired amount of adjustment (-35° to 35° F).
4. Press the **Self clean** keypad to change the sign of the adjustment to a (-) if necessary. A positive adjustment will not display a sign.
5. Once the desired adjustment (-35° to 35° F) has been entered, press the **Start** keypad to accept the change or the **OFF** keypad to reject the change.

Note: Changing calibration affects all baking modes. The adjustments made will not change the self-clean cycle temperature.
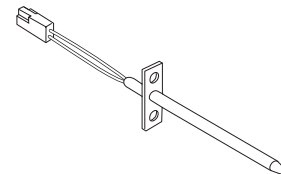
ELECTRONIC OVEN CONTROL (EOC) RELAY BOARD

IMPORTANT
DO NOT REMOVE THIS BAG OR DESTROY THE CONTENTS
WIRING DIAGRAMS AND SERVICE INFORMATION ENCLOSED
REPLACE CONTENTS IN BAG

Resistance temperature detector

RTD SCALE	
Temperature °F (°C)	**Resistance (ohms)**
32 ± 1.9 (0 ± 1.0)	1000 ± 4.0
75 ± 2.5 (24 ± 1.3)	1091 ± 5.3
250 ± 4.4 (121 ± 2.4)	1453 ± 8.9
350 ± 5.4 (177 ± 3.0)	1654 ± 10.8
450 ± 6.9 (232 ± 3.8)	1852 ± 13.5
550 ± 8.2 (288 ± 4.5)	2047 ± 15.8
650 ± 9.6 (343 ± 5.3)	2237 ± 18.5
900 ± 13.6 (482 ±7.5)	2697 ± 24.4
Probe circuit to case ground	Open circuit/infinite resistance

A13882501 REV A EN (1910)

ELECTRONIC OVEN CONTROL CODE DESCRIPTIONS

Fault Code	Likely Failure Condition/Cause	Suggested corrective action
F001, F002, F004, F005	Touch failure	1. Disconnect power, wait 30 seconds and reapply power. If fault returns upon power-up replace the Oven User Interface board.
F003	The oven user interface board is incorrectly configured.	1. Replace the oven user interface board. Make sure you install the latest revision available for this model.
F010	Oven temperature runaway: the cavity temperature has been detected in excess of the maximum safe operating temperature.	1. If oven is overheating, disconnect power. Check oven temperature probe (RTD) and replace if necessary. 2. If the oven temperature probe is good and if oven continues to overheat when power is reapplied, replace the oven relay board.
F011	Stuck key: a key has been detected has pressed continuously for 30 seconds or more.	1. If a key was pressed inadvertently for a long time this error code will be displayed. Make sure there is nothing (water, utensils) in contact with the keyboard. The fault code should go away once the key is released and the Stop key is pressed. If the F011 error comes back when a key is pressed it means the error condition is still there. If the F011 error does not come back it means the error condition is gone and the oven can be used. 2. If the fault code cannot be cleared, the board/springs alignment within the mechanical enclose maybe affected. Reinstall the board within the enclosure. 3. If reinstalling the board did not fix the problem replace the oven user interface board.
F012	Keyboard configuration alarm: the oven user interface board received from the touch micro a key code that does not match the key map.	1. Verify the unit has the proper configuration is loaded, based on the model number and parts catalog. 2. Replace the oven user interface board if the problem persists.
F013	Data written to non-volatile memory has failed verification	1. Disconnect power, wait 30 seconds and reapply power. If fault returns upon power-up replace the oven user interface.
F015	Keyboard Error	1. Disconnect power, wait 30 seconds and reapply power. If fault returns upon power-up replace the oven user interface.
F017	The oven user interface board is unable to configure the touch.	1. Disconnect power to the unit, wait 30 seconds, then reapply power. 2. Verify the unit has the proper oven user interface board and configuration, based on the model number and parts catalog. 3. If fault persists, replace the oven user interface.
F018	Oven relay board failure (wiggler)	1. Replace the oven relay board.
F019	The oven user interface board is unable to configure the oven relay board	1. Disconnect power to the unit, wait 30 seconds, then reapply power. 2. If fault returns, verify connection between the oven user interface board and the oven relay board (MACS1 or MACS2 connector) 3. Verify the unit has the proper oven user interface board and oven relay board, based on the model number and parts catalog. 4. If fault persists, replace oven user interface board. 5. If fault persists, replace the relay board.
F022	Communication failure between the oven user interface board and the oven relay board	1. Disconnect power, wait 30 seconds and reapply power. Check if error condition is still there. 2. Test wiring harness between oven user interface board and oven relay board (connector MACS1 or MACS2) 3. If wiring harness is good replace oven relay board. 4. If the problem persists replace the oven user interface.
F023	Communication failure between the oven user interface micro and the touch micro	1. Disconnect power, wait 30 seconds and reapply power. Check if error condition is still there. 2. If the problem persists replace the oven user interface.
F025, F027	The communication between the oven user interface and the oven relay board cannot be initiated.	1. Disconnect power to the unit, wait 30 seconds, then reapply power. 2. If fault returns, verify connection between the oven user interface board and the oven relay board (MACS1 or MACS2 connector). 3. Verify the unit has the proper oven user interface board and oven relay board, based on the model number and parts catalog. 4. If fault persists, replace relay board. 5. If fault persists, replace the oven user interface board.
F028, F029	The communication between the over user interface micro and the touch micro cannot be initiated.	1. Disconnect power to the unit, wait 30 seconds, then reapply power. 2. Verify the unit has the proper oven user interface board and configuration, based on the model number and parts catalog. 3. If fault persists, replace the oven user interface.
F030	Open oven temperature sensor (RTD)	1. Check probe circuit wiring for possible open or short condition. 2. Verify RTD resistance at room temperature (compare to probe resistance chart). If resistance does not match the chart, replace the RTD probe. 3. If the problem persists replace the oven relay board.
F031	Shorted oven temperature probe (RTD)	
F033	Meat probe temperature sensor shorted or too hot	1. The error is triggered if the meat probe sees a temperature in excess of 392°F. Make sure the meat probe was not used in such way that it could have seen such temperature. If the tip of the probe is not inserted in the meat it will see the cavity temperature, which can be higher than 392°F (depending on the setpoint) and trigger the alarm. 2. When the meat probe is connected to the socket inside the oven cavity, if the meat probe is not fully inserted into the socket it may short the contacts and cause the error. Make sure the probe is inserted as much as it can. 3. Verify meat probe resistance at room temperature. Compare to meat probe resistance chart. If the meat probe does not match the chart, replace it. 4. If the above steps failed to correct the problem, replace the oven relay board.

Code	Description	Steps
F050	A/D Out of Range: the oven relay board is unable to read the status of the switches (door, MDL)	1. Clear error, cycle Power a couple of times and check if error is back, if so replace Power board. 2. Replace Door switch plunger/s and reseat harness. 3. If error persists check MDL & Harness.
F090	Motor Door Lock mechanism failure. The oven control does not see the Motor Door Lock running.	1. Disconnect power to the unit, wait 30 seconds, then reapply power. Try again to make the door lock or unlock (ex: initiate a Lockout or a Clean cycle). 2. Check if the Lock Motor is running or not. If it is not running, test the wiring between the Lock Motor and the oven relay board. If the wiring is good, check if there is 120VAC at the motor when it is expected to run to see if the failure originates from a bad motor (120VAC present but not turning) or a problem with the relay board (J8 pin 1 on the oven relay board is the output to the Lock Motor). The Lock Motor can also be tested by applying 120VAC directly to the motor (unplug it from the relay board first). If the Lock Motor does not run when 120VAC is applied replace the Lock Motor Assembly. If it is the relay board that does not provide 120VAC to the Lock Motor replace the oven relay board. 3. If the Lock Motor is running but the oven control cannot find the locked or unlocked position (ex: motor turns continuously until F90 fault code is generated) the Lock Switch needs to be verified. Check wiring between Lock Switch and oven relay board. Verify with ohmmeter if the switch makes contact properly (verify continuity with ohmmeter when the switch is pressed). If the Lock Switch is defective replace the Motor Lock Assembly. 4. If all above steps failed to correct the situation, replace the oven relay board.
F095	Motor Door Lock mechanism failure. The Motor Door Lock does not stop running or the Lock Switch sends an invalid signal.	1. The problem can be caused by a faulty Lock Switch or by a defective oven relay board. If the Motor Door Lock is always running (as if the relay controlling it is stuck closed) replace the oven relay board. 2. If the motor is not always running replace the Motor Lock Assembly.
F096	The oven door has been detected open during a Self-Clean cycle.	1. This error occurs if the door switch has lost its contact during a Self-Clean cycle. Make sure the oven door closes well and fully presses on the door switch plunger when the door is locked, and no one attempted to pull on the oven door during the Self Clean cycle. 2. Test continuity of wiring between the door switch and the oven relay board, make sure the door switch is well connected. With an ohmmeter, verify the switch is closed when the plunger is pressed. If the door switch is found to be defective replace the door switch. 3. If the switch and wiring are good and the problem persists, replace the oven relay board.
User unable to enter self-clean, with all burners off	Invalid key tone when user tries to start self-clean without burners turned on.	1. Check if previous clean was run within the last 4 hours, if so clean should work after 4 hours. 2. Enter FTM and press self-clean button, if "SCC" in the temperature display. Check wiring from J2 Pin 3 to resettable thermal cutoff switch under the front right burner. Check if the resettable thermal cutoff switch under the front right burner is closed at ambient temperature, if open replace it. 3. Lastly if above steps work as expected, replace Power board.

CIRCUIT ANALYSIS MATRIX	EOC Relays						Door Switch Contacts COM-NO
	L1 to Bake	L1 to Broil	L1 to Conv Element	L1 to Conv Fan	L1 to Motor Door Latch	L1 to Oven Lamps	
Bake/ Bake Time	X*	X*	X¹	X¹			
Convection Bake	X*	X*	X	X			
Convection Roast	X*	X*	X	X			
Broil		X					
Self-Clean	X*						
Locking					X		
Unlocking					X		
Door Open						X	O
Door Closed						O	X
Oven Lamps(ON)						X	

Notes: **X** = Circuit contact closed. **O** = Circuit contacts open. ***** = Cycles as needed. **X¹** = During preheat.

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