SERVICE DATA SHEET

Gas Range with ES 330/340 Electronic Oven Control

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.

Convection/Speed Bake Mode (some models)

The Convection or Speed Bake mode uses the addition of a fan to move the heated air already in the oven. Moving the heated air helps to destratify the heat and cause uniform heat distribution. Cooking times can be reduced by as much as 30%. The air is drawn in through a fan shroud located in the rear wall of the oven. It is then discharged around the outer edges of this shroud. The air circulates around the food and then enters the shroud again. As with conventional gas ranges, there is still an oven vent which discharges behind the top cooking surface.

To set the oven for Convection or Speed Bake mode, follow these steps:

1. Program the oven as you normally would for baking.
2. Push and release the **Convection/Speed Bake** momentary rocker switch. The indicator light will glow, signifying that the Convection/Speed Bake mode has been activated. **The fan will not come on for the first six minutes, unless the center of the oven temperature is above 350°F when the Convection/Speed Bake mode is activated.** This is to allow for clean combustion in the gas oven. Six minutes after the Convection/Speed Bake mode is activated, the fan will come on. The fan stays on when the oven door is closed and shuts off while the oven door is opened. The fan will continue to operate until baking is complete.
3. To cancel the Convection/Speed Bake function, press **CANCEL** or **CLEAR** on the oven control as you would to cancel any baking function.

NOTE: The **Convection/Speed Bake** mode will not work during a clean or broil cycle.

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 **CANCEL** or **CLEAR** to end bake mode.

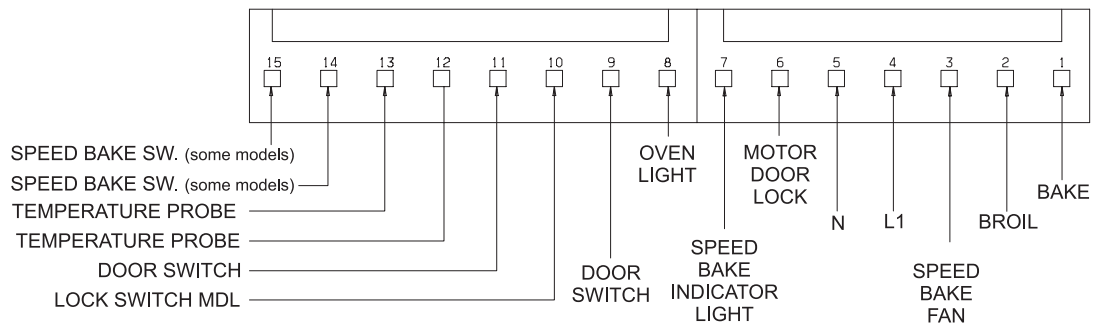
Temperature Adjustment

1. Set EOC to bake at 550°F.
2. Within 5 seconds of setting 550°F, press and hold the bake pad for approximately 15 seconds until a single beep is heard (longer may cause **F11** shorted keypad alarm).
3. Calibration offset should appear in the display.
4. Use the slew keys to adjust the oven temperature up or down 35°F in 5°F increments.
5. Once the desired (-35° to 35°) offset has been applied, press **CANCEL** or **CLEAR**.

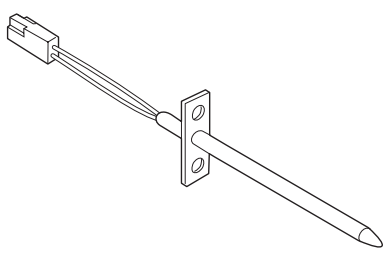
Note: Changing calibration affects both Speed Bake and normal bake modes. The adjustments made will not change the self-cleaning temperature.

Electronic Oven Control Connections

P5 Connection



Resistance Temperature Detector



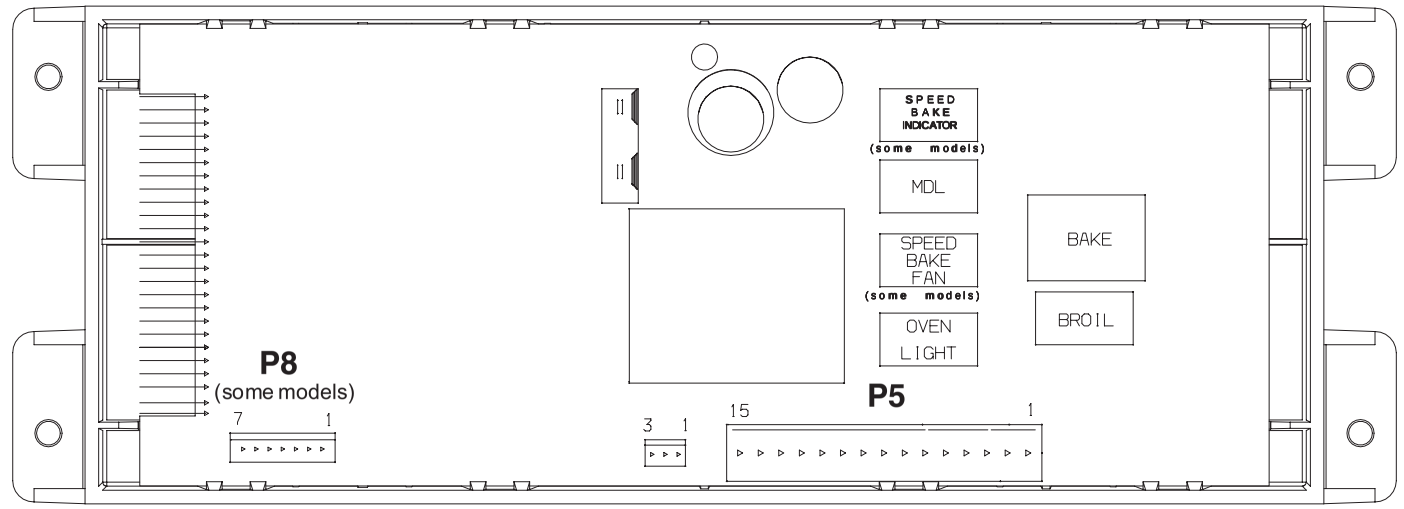
RTD SCALE	
Temperature (°F)	Resistance (ohms)
32 ± 1.9	1000 ± 4.0
75 ± 2.5	1091 ± 5.3
250 ± 4.4	1453 ± 8.9
350 ± 5.4	1654 ± 10.8
450 ± 6.9	1852 ± 13.5
550 ± 8.2	2047 ± 15.8
650 ± 9.6	2237 ± 18.5
900 ± 13.6	2697 ± 24.4

IMPORTANT

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

p/n 316458434 (0703) English

Electronic Oven Control (E.O.C. Rear View)



Electronic Oven Control Fault Code Descriptions

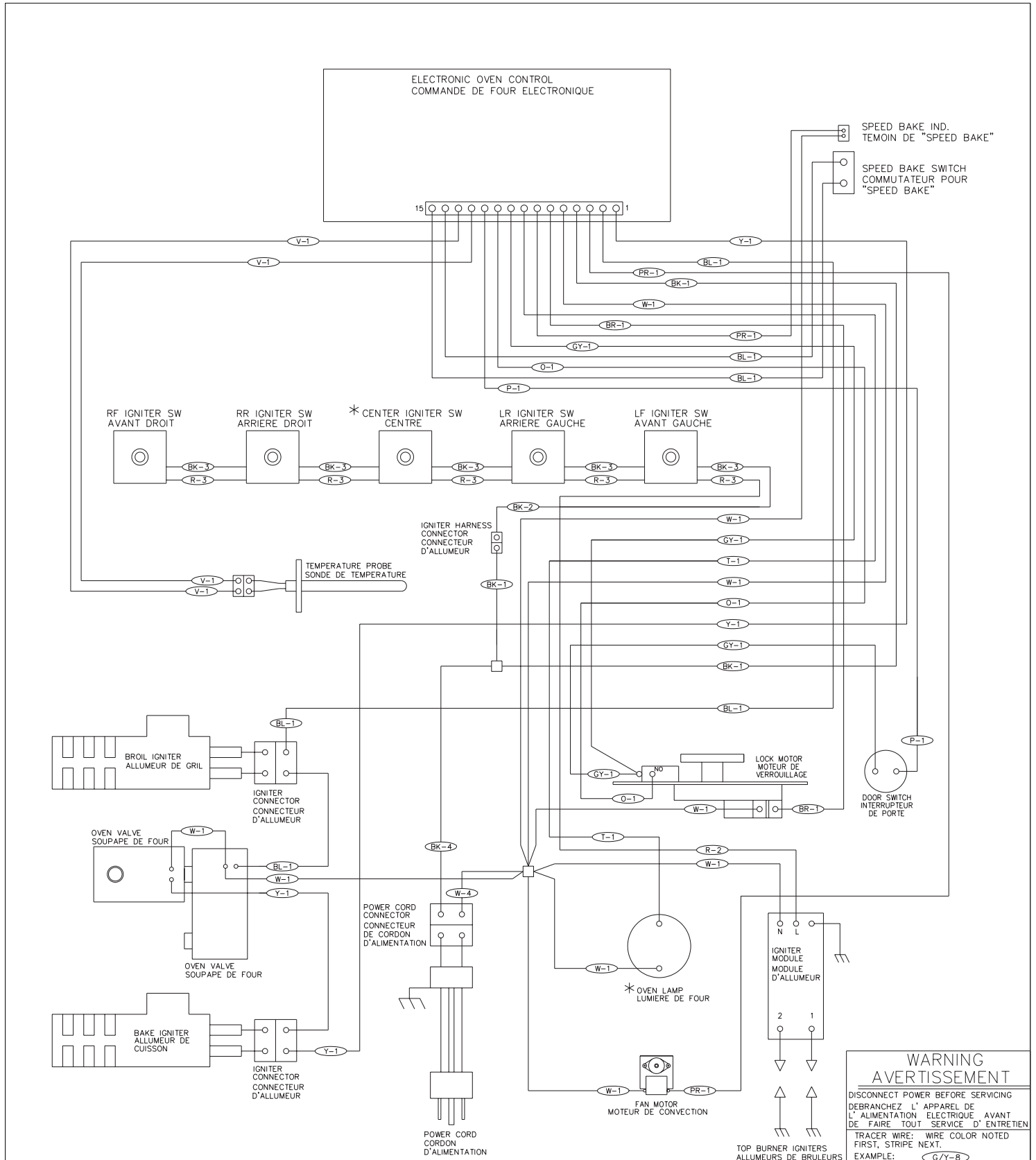
Fault Code	Likely Failure Condition/Cause	Suggested Corrective Action
F10 F11 F12 F13	**Runaway Temperature.** **Shorted Keypad.** **Bad Micro Identification.** **Bad EEPROM Identification/Checksum error.**	1. (F10 only) Check RTD Sensor Probe & replace if necessary. If oven is overheating, disconnect power. If oven continues to overheat when the power is reapplied, replace EOC. Severe overheating may require the entire oven to be replaced should damage be extensive. 2. (F11, 12 & 13) Disconnect power, wait 30 seconds and reapply power. 3. (F11, 12 & 13) If fault returns upon power-up, replace EOC.
F30 F31	**Open probe connection.** **Shorted Probe connection.**	1. (F30 or F31) Check resistance at room temperature & compare to RTD Sensor resistance chart. If resistance does not match the RTD chart replace RTD Sensor Probe. Check Sensor wiring harness between EOC & Sensor Probe connector. 2. (F30 or F31) Check resistance at room temperature, if less than 500 ohms, replace RTD Sensor Probe. Check for shorted Sensor Probe harness between EOC & Probe connector.
F40	**Cooktop Lockout error (some models).**	1. (F40) Check the wiring. 2. (F40) Replace the Cooktop Lockout Control Board. 3. (F40) Replace EOC.
F90 F91 F92 F93 F94	**Maximum oven door unlock time exceeded.** **Maximum oven door unlock attempts exceeded.** **Maximum oven door open time exceeded.** **Maximum oven door lock time exceeded.** **Maximum oven door lock attempts exceeded.**	1. (F90, 91, 92, 93 & 94) Check the wiring between EOC & Lock Motor Micro Switch. 2. (F90, 91, 92, 93 & 94) Replace the Motor Door Latch assembly if necessary. 3. (F90, 91, 92, 93 & 94) Check for binding of the Latch Cam, Lock Motor Rod & Lock Motor Cam. 4. (F90, 91, 92, 93 & 94) Check to see if Lock Motor Coil is open. If open, replace Lock Motor Assembly. 5. (F90, 91, 92, 93 & 94) Lock Motor continuosly runs - if Micro Switch is open, replace Lock Motor Assembly. 6. (F92, 93 & 94) Check oven door Light Switch - if open, replace Switch. 7. If all situations above do not solve problem, replace EOC.

Circuit Analysis Matrix

	EOC Relays						
	L1 to Bake	L1 to Broil	L1 to Motor Door Latch	L1 to Conv/Speed Bake Fan**	L1 to Conv/Speed Bake Indicator Light **	Door Switch COM-NO	Warmer Drawer Lock Switch (Motor Door Latch)**
Bake/Time Bake	X	X*					X
Conv/Speed Bake	X	X*		X	X		X
Broil		X					X
Clean	X						
Unlocked							X
Locking			X				X
Locked							
Unlocking			X				X
Door Open							
Door Closed						X	

Note: X=Check listed circuits. *=Alternates with Bake element. **=some models

General Troubleshooting Diagram



* THESE COMPONENTS MAY NOT APPEAR ON ALL MODELS.
LES ITEMS POURVUS D' UN * NE SONT PAS COMRIS DANS TOUS LES MODELES.

4	16	125	3173
3	18	125	3173
2	20	150	3321
1	20	125	3173
WIRE	AWG	TEMP °C	UL STYLE

WARNING
AVERTISSEMENT

DISCONNECT POWER BEFORE SERVICING
DEBRANCHEZ L' APPAREL DE L' ALIMENTATION ELECTRIQUE AVANT DE FAIRE TOUT SERVICE D' ENTRETIEN

TRACER WIRE: WIRE COLOR NOTED FIRST, STRIPE NEXT.
EXAMPLE: G/Y-8
GREEN WIRE WITH YELLOW STRIPE.

LEGENDE DE FILAGE: LA COULEUR DU FIL EN PREMIER, SUIVIE DE CELLE DE TOUTE BANDE.
EXEMPLE: G/Y-8
FIL VERT AVEC BANDE JAUNE.

COLOR CODE / CODE DES COULEURS			
BK	BLACK / NOIR	P	PINK / ROSE
BL	BLUE / BLEU	PR	PURPLE/POURPRC
BR	BROWN / BRUN	R	RED/ROUGE
C	COPPER / CUIVRE	T	TAN/BRUN CLAIR
G	GREEN / VERT	V	VIOLET
GY	GRAY / GRIS	W	WHITE/BLANC
O	ORANGE	Y	YELLOW/JAUNE

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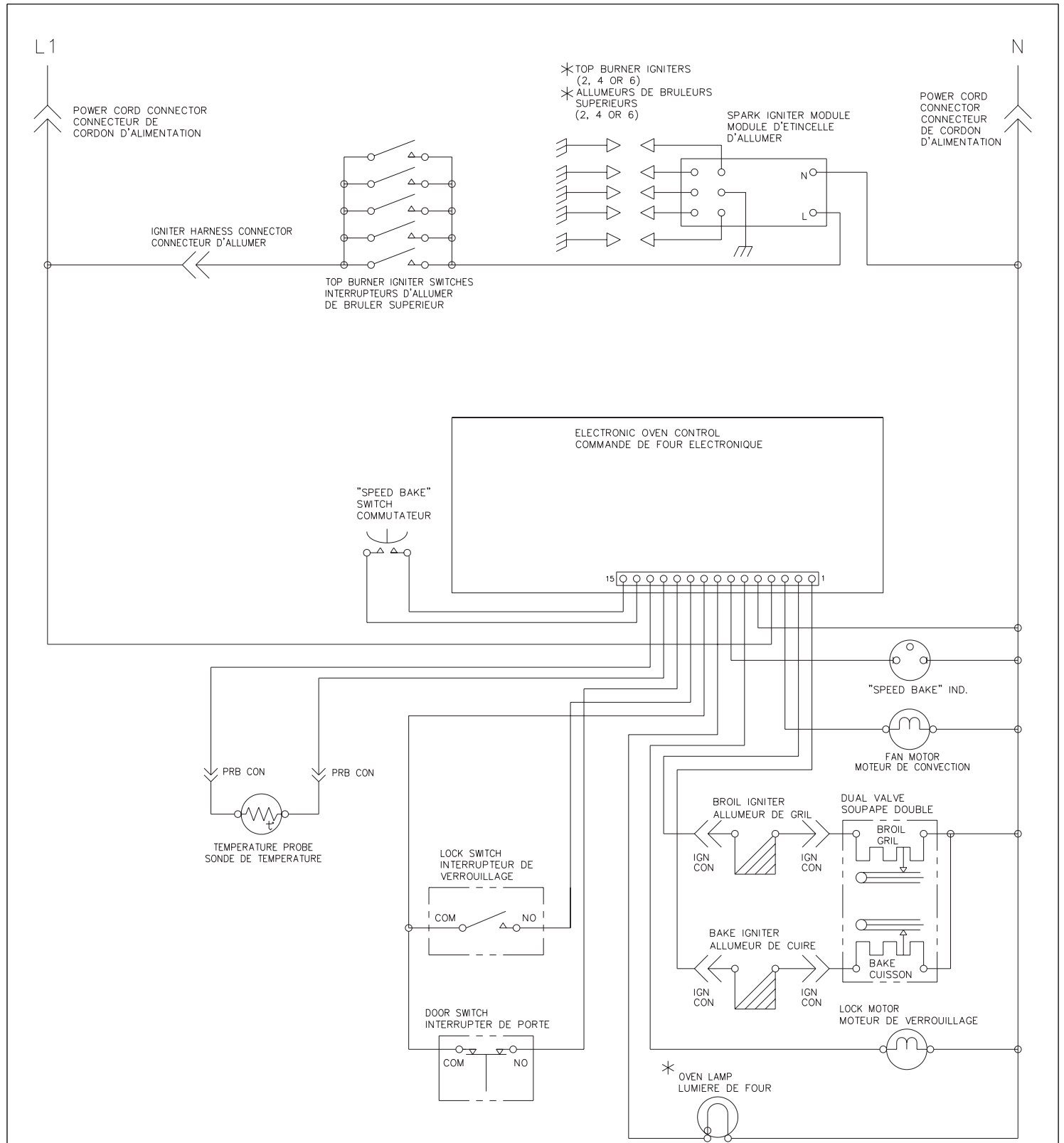
General Troubleshooting Schematic



NOTES:
1. CIRCUIT SHOWN WITH ALL CONTROLS SET TO OFF.
2. COMPONENTS WITH * DO NOT APPEAR ON ALL MODELS.

NOTES:
1. ILLUSTRATION DE CIRCUIT AVEC TOUTES LES COMMANDES REGLEES A OFF, PORTE DE FOUR FERMEE ET DEVERROUILLEE.
2. LES ITEMS POURVUS D'NUN * NE SONT PAS COMPRIS DANS TOUS LES MODELES.

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