SERVICE DATA SHEET
Electric Ranges with 3XX Electronic Oven Controls

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.

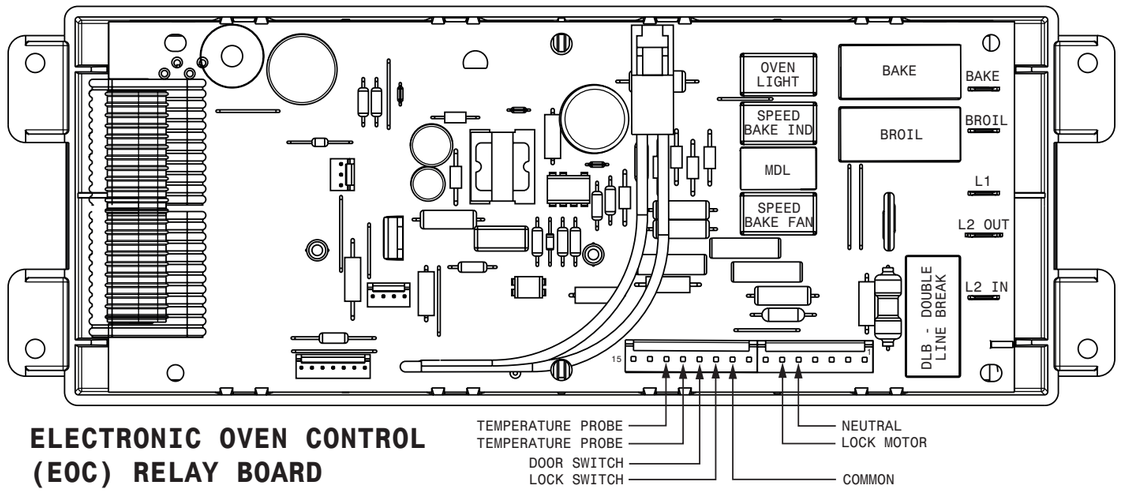
Oven Calibration

Set the electronic oven control for normal baking at 350°F. Obtain an average oven temperature after a minimum of 5 cycles. Press **Stop/Clear/Cancel** to end bake mode.

Temperature Adjustment

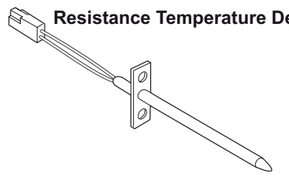
1. Press Bake.
2. Set the temperature to 550°F (288°C) by pressing and holding the UP arrow key.
3. Within 3 seconds, press and hold Bake until numeric digit(s) appear. Release Bake key. The display now indicates the amount of degrees offset between the original factory temperature setting and the current temperature setting. If the oven control has the original factory calibration, the display will read 00.
4. The temperature can now be adjusted up or down 35°F (19°C), in 5°F increments. Press and hold the UP arrow key to adjust the temperature higher until the desired amount of offset appears in the display. When lowering the oven temperature using the DOWN arrow key, a minus sign (-) will appear before the number to indicate that the oven will be cooler by the displayed amount of degrees.
5. When you have made the desired adjustment, press OFF to go back to the time of day display.

Note: Changing calibration affects normal Bake mode. The adjustments made will not change the Self-Cleaning cycle temperature.



ELECTRONIC OVEN CONTROL (EOC) RELAY BOARD

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

IMPORTANT

DO NOT REMOVE THIS BAG OR DESTROY THE CONTENTS

WIRING DIAGRAMS AND SERVICE INFORMATION ENCLOSED

REPLACE CONTENTS IN BAG

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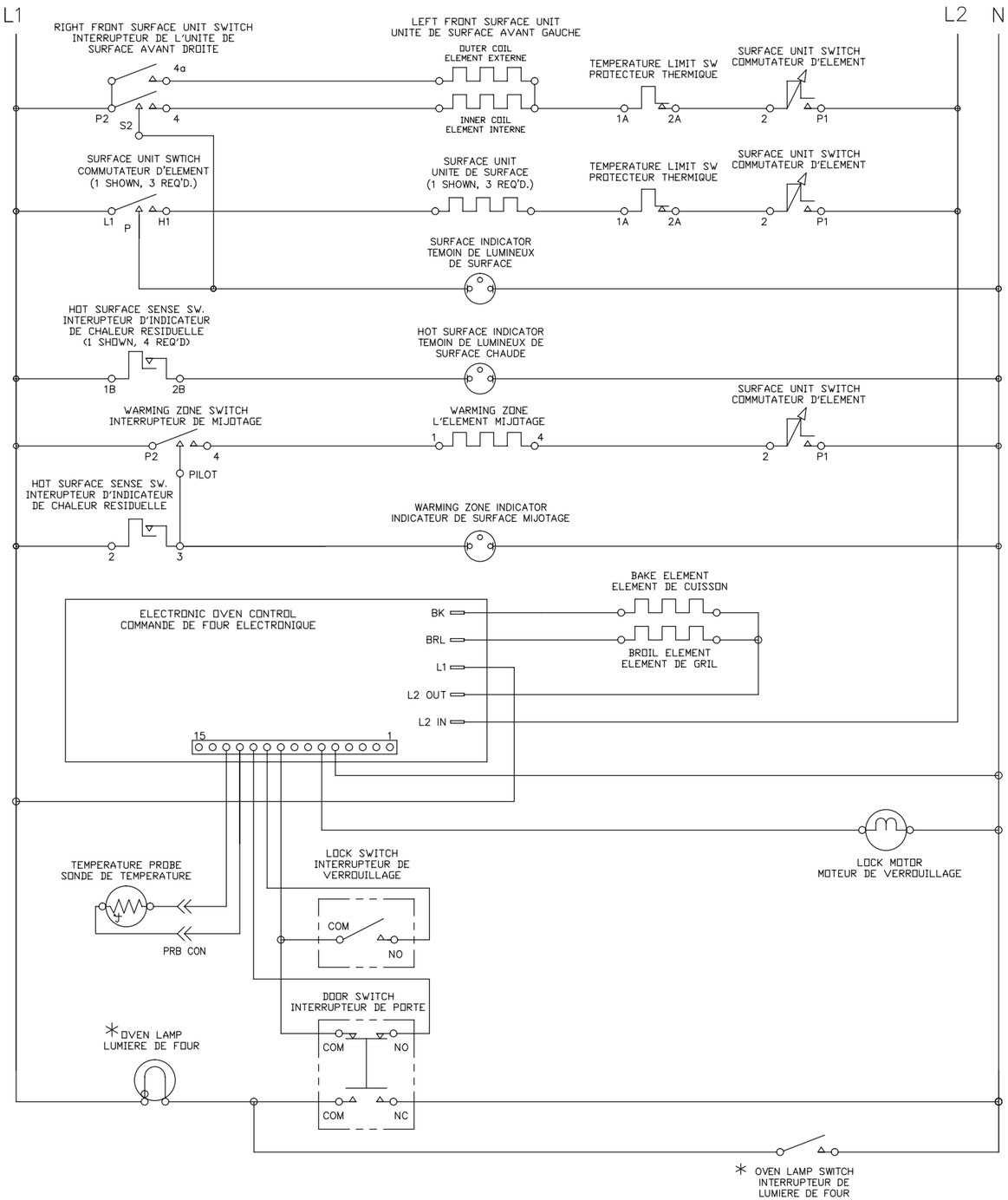
Tech Sheet Abbreviations and Terminology		
EOC = Electronic Oven Control	ESEC = Electronic Surface Element Control	TST = Touch Sensor technology (touch control glass panel)
UIB = User Interface Board	TSEC = Touch Sensor Electronic Control	RTD = Resistance Temperature Device (Temp Probe or Temp Sensor)
VSC = Variable Speed Control	PS = Power Supply Board (PS1, PS2, etc.)	TCO = Thermal Cut Out also “Thermo Disc” or “Thermal Limiter”

Electric Oven Control Fault Description

Fault Code	Likely Failure Condi-ton/Cause	Suggested Corrective Action
F10	Runaway temperature Oven heats when no cook cycle is pro-grammed.	**If Oven is cold:** 1. If fault code is present with cold oven test oven temperature sensor probe circuit resistance. Use RTD scale found in the tech sheet. 2. Replace probe or repair wiring connections if defective. 3. If temperature sensor probe circuit is good but fault code remains when oven is cold, replace the EOC. **If Oven is overheating:** 1. If oven is severely overheating/heating when no cook cycle is programmed test oven temperature sensor probe circuit resistance using the RTD scale found in the service tech sheet. Also verify that the temperature sensor probe in proper-ly installed in the oven cavity. 2. Disconnect power from the range, wait 30 seconds and reapply power. If oven continues to heat when the power is reapplied, replace the EOC. **NOTE:** Severe overheating may require the entire oven to be replaced should damage be extensive.
F11	Shorted keypad or selector switch	1. Reset poor supply to range - Disconnect power, wait 30 seconds and reapply power. 2. Check/ reset ribbon harness connections between touch panel and EOC. 3. Test keyboard circuits. Replace touch panel if defective. 4. If keyboard circuits check good, replace the EOC.
F13	Shorted oven sensor probe circuit.	1. Disconnect power, wait 30 seconds and reapply power. If fault returns upon power-up, replace EOC.
F14	Keyboard tail failure	1. Check for damage to the ribbon connection or that it is plugged in properly.
F30	Open oven sensor probe circuit.	1. (F30) 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. (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. If resistance is correct, replace the EOC.
F31	Shorted oven sensor probe circuit.	
F90	Door lock motor or latch circuit failure.	**If lock motor runs:** 1. Test continuity of wiring between EOC and lock switch on lock motor assy. Repair if needed. 2. Advance motor until cam depresses the plunger on lock motor switch. Test continuity of switch contacts. If switch is open replace lock motor assembly. 3. If motor runs and switch contacts and wiring harness test good, replace the EOC. **If lock motor does not run:** 1. Test continuity of lock motor windings. Replace lock motor assembly if windings are open. 2. Test lock motor operation by using a test cord to apply voltage. If motor does not operate, replace lock motor assy. 3. If motor runs with test cord check continuity of wire harness to lock motor terminals. If harness is good, replace the EOC.
F91		
F92		
F93		
F94		
F95		

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 Ind Light	Door Switch COM-NO	Cooktop Lockout
Bake/ Time Bake	X	X*					
Conv/Speed Bake	X	X*		X	X		
Broil		X					
Clean	X						
Unlocked							
Locking			X				
Unlocking			X				
Door Closed						X	
Cooktop Active							X
Note: X=Check listed circuits. *=Alternates with Bake element							



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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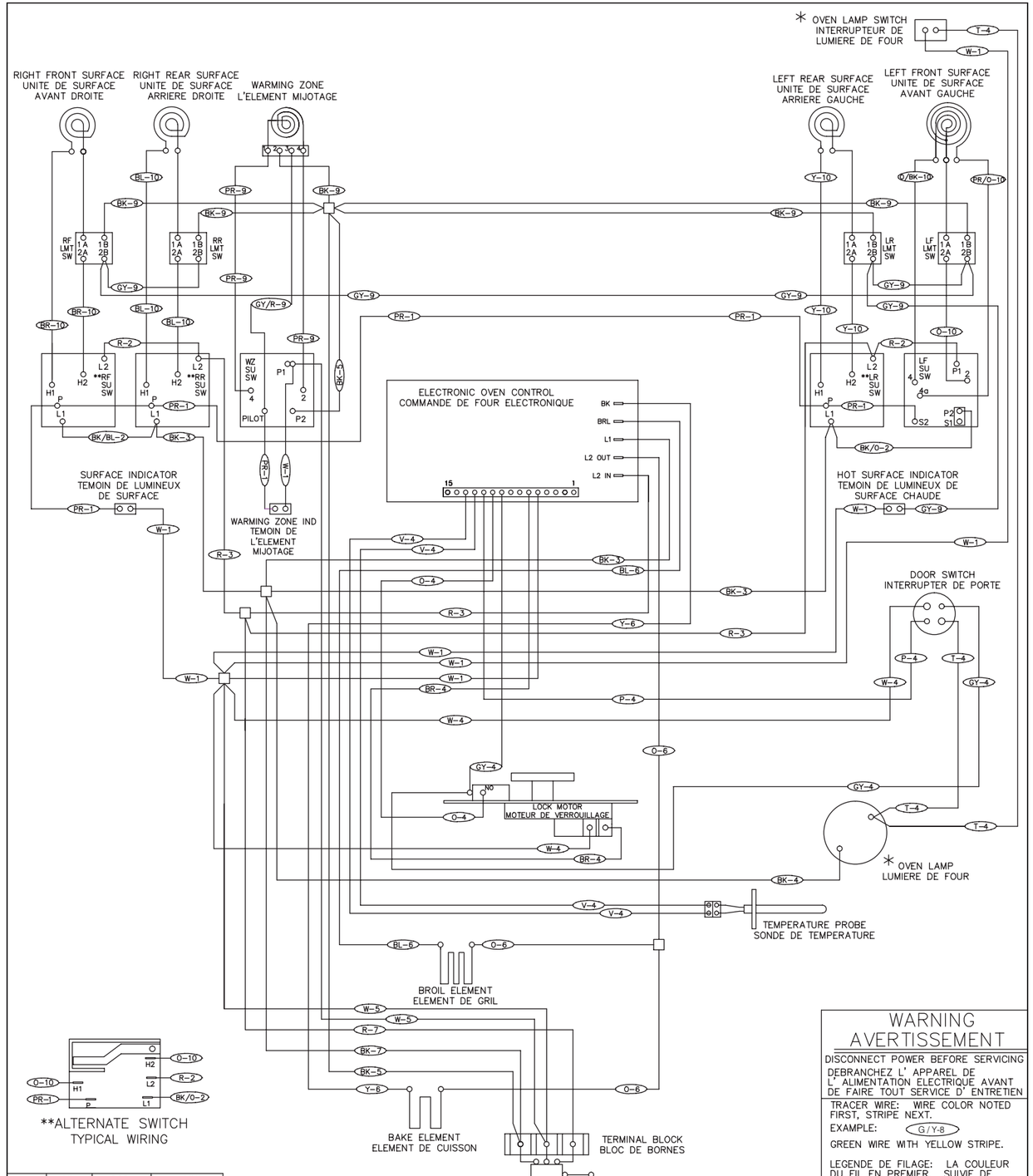

**ALTERNATE SWITCH
TYPICAL WIRING

10	16	200	3122
9	18	200	3122
8	20	200	3122
7	12	150	3321
6	14	150	3321
5	18	150	3321
4	20	150	3321
3	14	105	1015
2	16	105	1015
1	20	105	1015
WIRE	AWG	TEMP°C	UL STYLE

NOTES:
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NOTES:
1. LES ITEMS POURVUS D'NUN * NE SONT PAS COMPRIS DANS TOUS LES MODELES.

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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