

SERVICE DATA SHEET

Electric Ranges with ES330/335/345 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 electrical 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

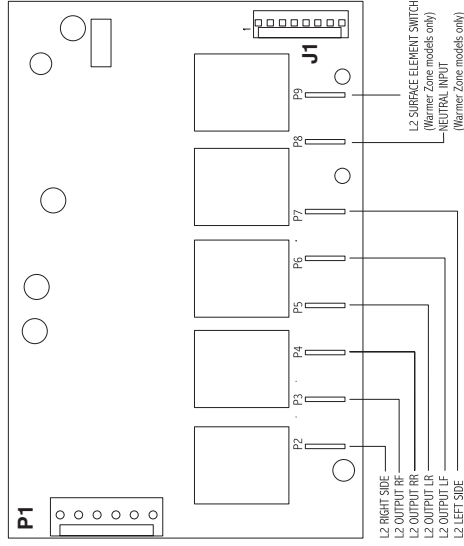
Set the electronic oven control for normal baking at 350°F. Obtain an average oven temperature after a minimum of 5 cycles. Press **STOP/CLEAR** to end bake mode.

TEMPERATURE ADJUSTMENT

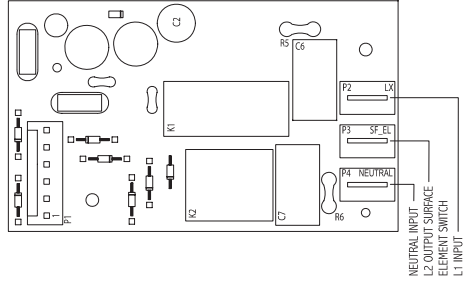
1. Set EOC to bake at 550°F.
2. Within 5 seconds of setting 550°F, press and hold the bake pad for approximately 15 seconds until a single beep is heard (longer may cause F11 shorted keypad alarm).
3. Calibration offset should appear in the display.
4. Use the slow keys to adjust the oven temperature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

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

COOKTOP LOCKOUT PCB (some models)



SIMMER SELECT PCB (some models)



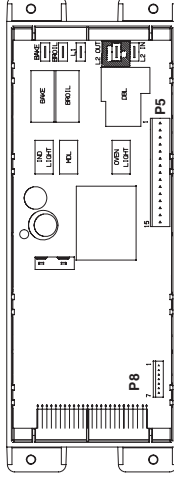
RESISTANCE TEMPERATURE DETECTOR

| 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 | 1862 ± 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

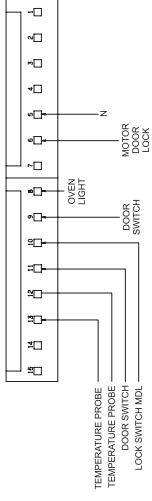
p/n 316441479(0608)

ELECTRONIC OVEN CONTROL (REAR VIEW)

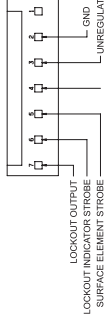


E.O.C. ELECTRICAL CONNECTIONS

P5 Connections



P8 Cooktop Lockout Connections (some models)



ELECTRONIC OVEN CONTROL FAULT CODE DESCRIPTIONS

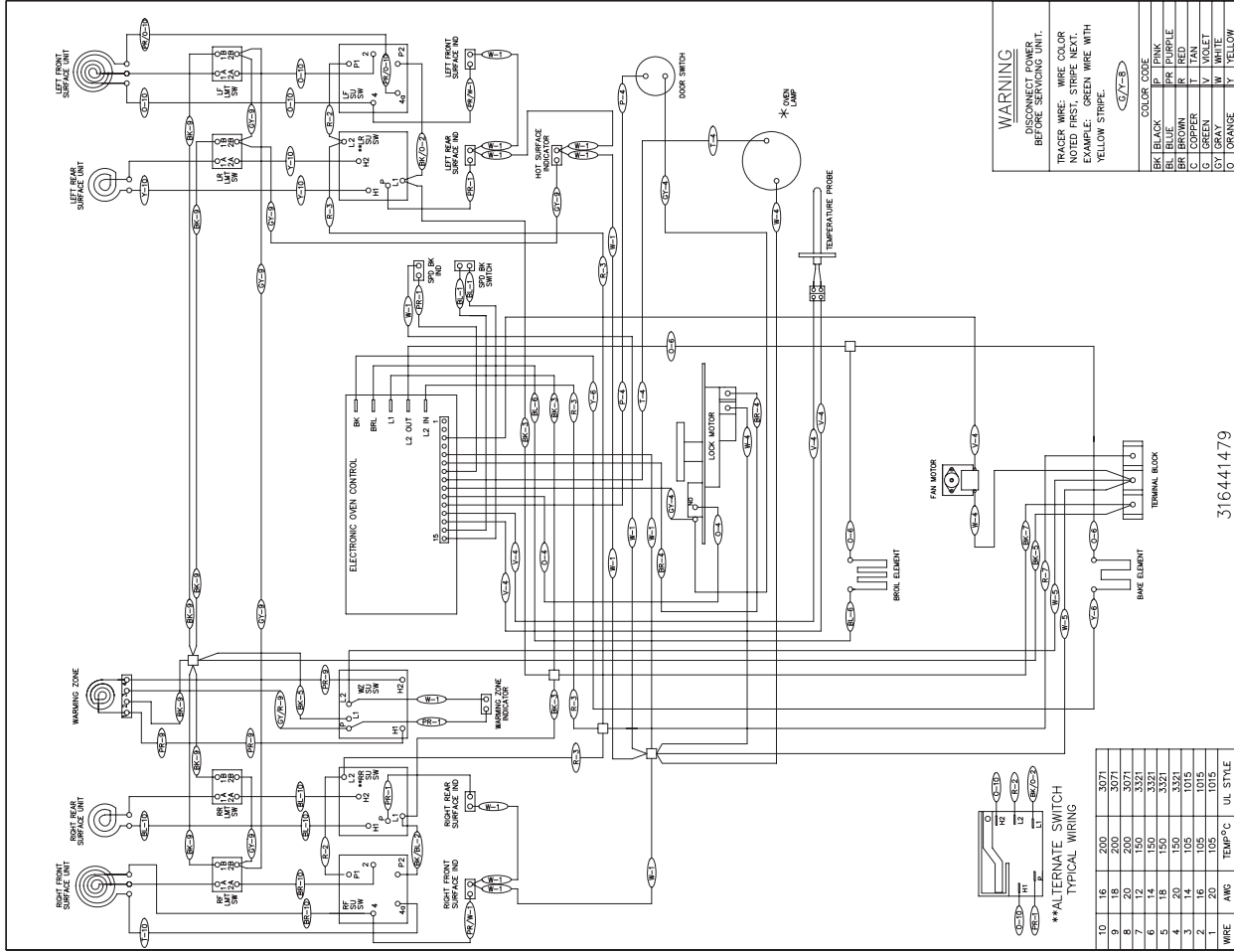
| Fault Code | Likely Failure Condition/Cause | Suggested Corrective Action |
|------------|---|---|
| F10 | Runaway Temperature. | 1. (F10 only) Check RTD Sensor Probe & replace if necessary. If oven is overheating, disconnect power. If oven continues to overheat when the power is reappplied, replace EOC. Severe overheating may require the entire oven to be replaced should damage be extensive. |
| F11 | Shorted Keypad. | 2. (F11, 12 & 13) Disconnect power, wait 30 seconds and reapply power. |
| F12 | Bad Micro Identification. | 3. (F11, 12 & 13) If fault returns upon power-up, replace EOC. |
| F13 | Bad EEPROM Identification/Checksum error. | |
| F30 | Open 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. |
| F31 | Shorted Probe connection. | 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 | Maximum oven door unlock time exceeded. | 1. (F90, 91, 92, 93 & 94) Check the wiring between EOC & Lock Motor Micro Switch. |
| F91 | Maximum oven door unlock attempts exceeded. | 2. (F90, 91, 92, 93 & 94) Replace the Motor Door Latch assembly if necessary. |
| F92 | Maximum oven door open time exceeded. | 3. (F90, 91, 92, 93 & 94) Check for binding of the Latch Cam, Lock Motor Rod & Lock Motor Cam Assembly. |
| F93 | Maximum oven door lock time exceeded. | 4. (F90, 91, 92, 93 & 94) Check to see if Lock Motor Coil is open. If open, replace Lock Motor Assembly. |
| F94 | Maximum oven door lock attempts exceeded. | 5. (F90, 91, 92, 93 & 94) Lock Motor continuously 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

| Fault Code | EOC Relays | | | | | | | Cooktop Lockout (some models) |
|-----------------|------------|-------------|------------------------|---------------------------|---------------------------------------|--------------------|---|-------------------------------|
| | 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 MDL (some models) | |
| Bake/Time Bake | X | X* | | | | | X | |
| Conv/Speed Bake | X | X* | | X | | | X | |
| Broil | | X | | | | | X | |
| Clean | | | | | | | X | |
| Unlocked | | | | | | X | | |
| Locking | | | X | | | X | | |
| Locked | | | | | | | X | |
| Unlocking | | | X | | | | X | |
| Door Open | | | | | | X | | |
| Door Closed | | | | | | | | X |
| Cooktop Active | | | | | | | | X |

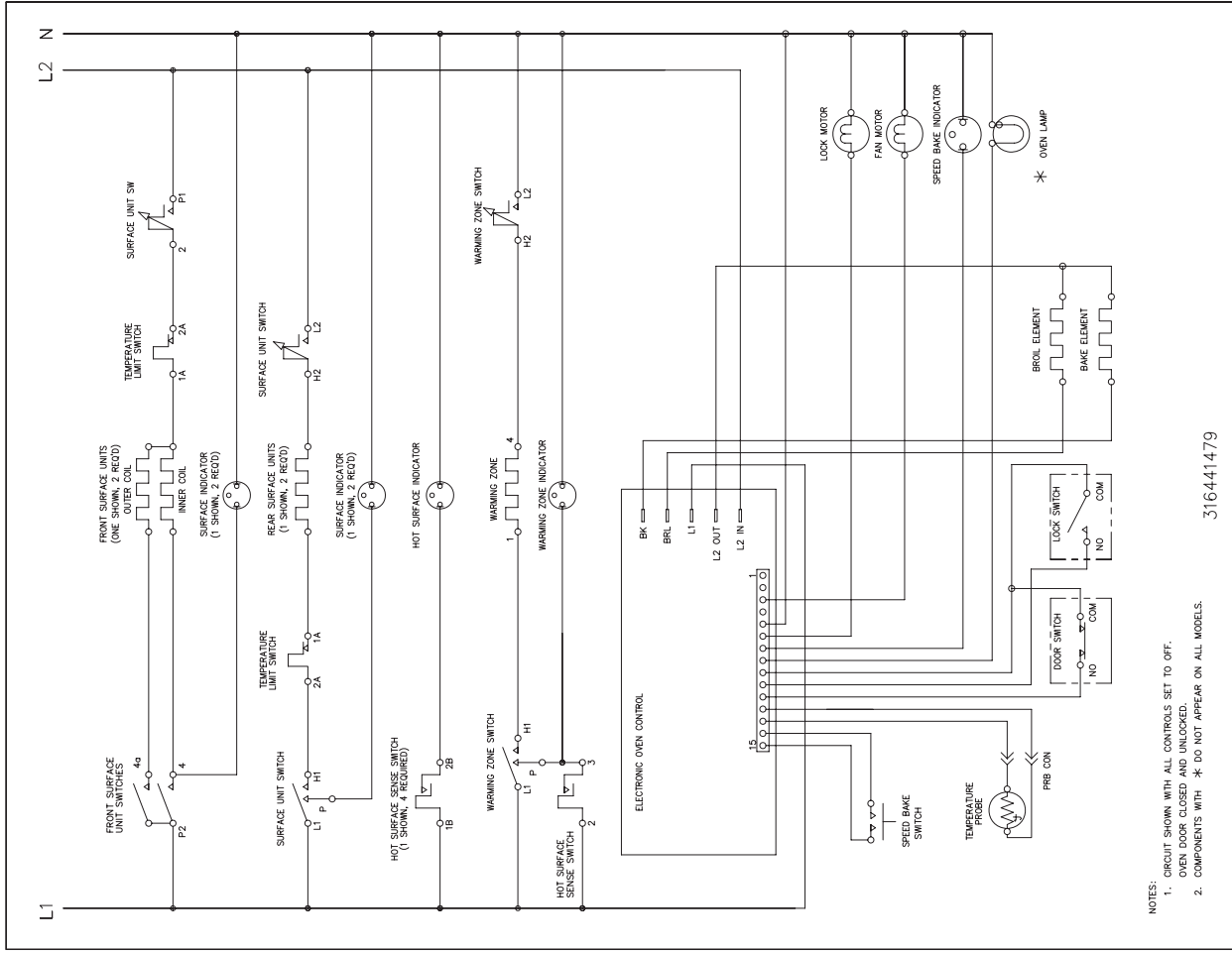
Note: X=Check listed circuits. *=-Alternates with Bake element.

GENERAL TROUBLESHOOTING DIAGRAM



31644179

GENERAL TROUBLESHOOTING SCHEMATIC



31644179