Appliance Diagnostic Modes Range

imagination at work

GE Consumer & Industrial Technical Training

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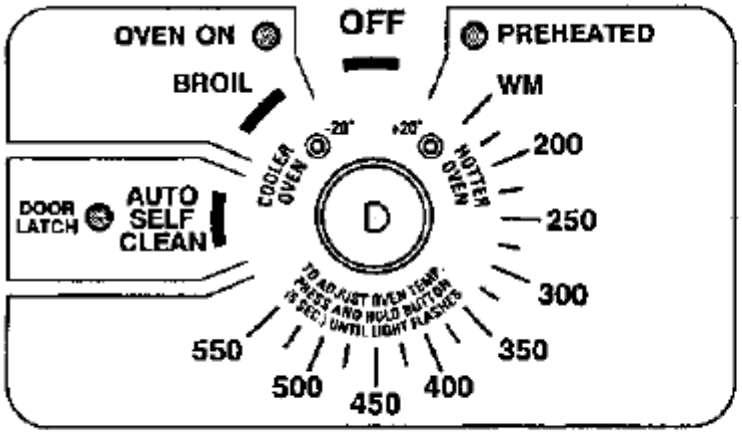
- JD966/JDP46/JSP46/JSP56/JS966 Series (#31-9074)
- JB905/968/988 Series (#31-9106)
- J2S968/JGS968/JGSP48 Series (#31-9105)
- JP938/968 Series (#31-9070)
- JP392/393/692/693R Series (#31-20236)
- JS998/JT930/JT980/ZET3038/ZET3058 Series (#31-9115)

Quick Set 1 ERC

QUICK SET - 1 Bake Temperature Adjustment:

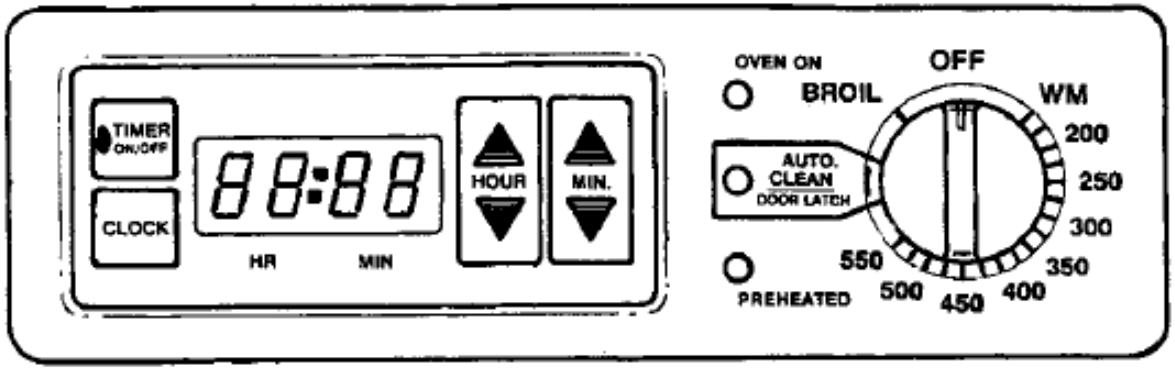
1. Turn Select Knob to "OFF" and remove.
2. The oven temperature can be increase or decrease 20° by pressing and holding either the button by the +20° or -20°. The following lights will flash when the temperature change has been recognized:

- **Preheat Light -** Oven Adjusted 20°F Hotter than Normal.
- **Door Latch Light** - Oven Adjusted 20°F Cooler than Normal.
- **Oven On Light** - Factory Setting (Nominal).
- When the button is released the light will stop flashing and the new temperature is set.

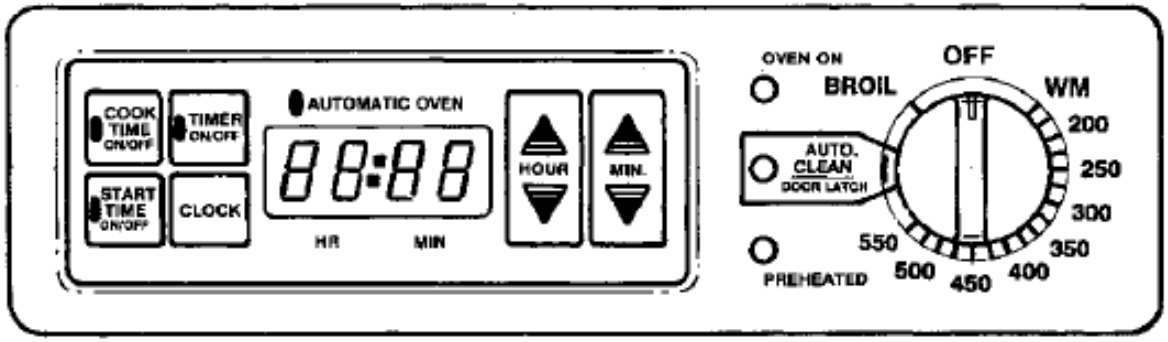


NOTE:
To determine if the oven temperature has been increase or decreased, Press and Hold the opposite adjustment button from the direction you wish to adjust oven temperature and observe which light comes on.
Example: You want to increase oven temperature - Press the Cooler Oven Button.
If Door Latch Light comes on the temperature has not been previously changed. If the Oven On Light comes on the oven temperature has been previously increased.

Quick Set 2 & 3 ERC



QS-2 or Version "B"

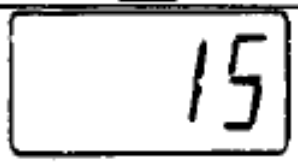
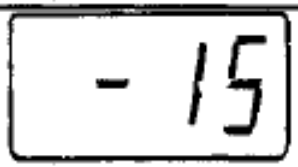


QS-3 or Version "C"

Quick Set 2 & 3 ERC

QUICK SET - 2 & 3 Bake Temperature Adjustment:

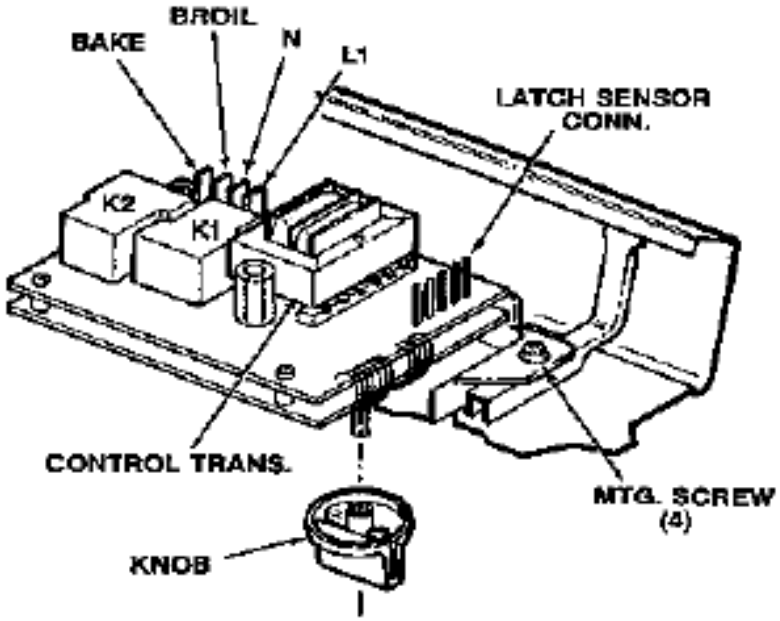
The Bake Temperature can be adjusted by ±35°F in 5° increments.
To Adjust Oven Bake Temperature:

1. Press and hold both the **INCREASE** and **DECREASE HOUR** Pads for about 4 seconds. Display will change from time of day to show 00.	
2. Raise or lower oven temperature by using the Hour Increase/Decrease Pads.	
3. Using the up HOUR Pad arrow will increase temperature in 5° increments up to 35°. The display will show the temperature without a + sign.	
4. Using the down HOUR Pad arrow will decrease temperature in 5° increments up to 35°. The temperature will be displayed with a - sign in front of the number.	
5. Approx. 5 seconds after temperature is changed the display will return to time of day and oven is ready for use.	

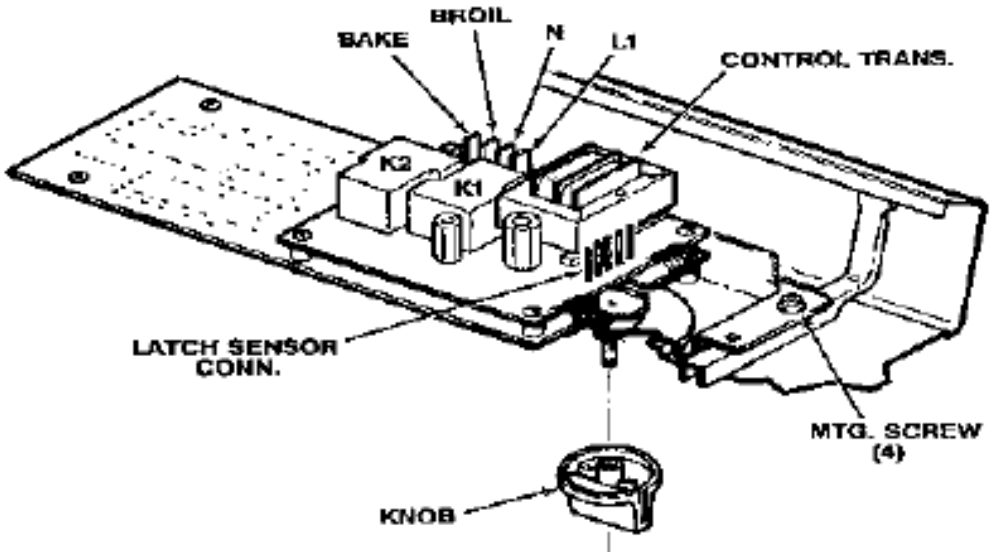
Quick Set 2 & 3 ERC

The back of the Quick Set Controls contain 2 relays, control transformer, sensor connector, latch switch connector and four terminals (L-1, N, Bake & Broil). The smart board is physically larger on QS-1 & 2 because of the display.

QUICK SET-1



QUICK SET 2 & 3



CONTROL VOLTAGES:

Quick Set 2 & 3 ERC

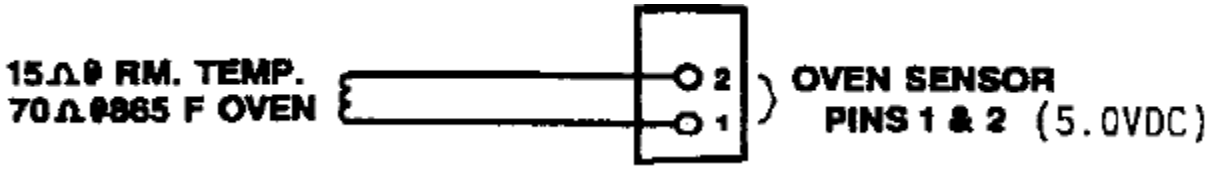
NOTE: All Quick Set Controls have **Single Line Break.**
The following voltages must be present on the control board with the Select Knob in the "OFF position.

TERMINALS	VOLTAGE
L-1 to N	120 volts (all the time) control transformer
L-1 to BAKE	240 volts (Knob in "OFF" position)
L-1 to BROIL	240 volts (Knob in "OFF" position)

Static Tape: On the face of the control running from the shaft of the switch over to the mounting flange is a piece of metal tape. The purpose of the tape is to ground the shaft of the control to guard against static discharge which can damage the circuit boards.

SENSOR & LOCK CIRCUIT

SENSOR CIRCUIT	TO CHECK SENSOR CIRCUIT:
The Sensor Circuit consists of: • Sensor • Sensor Wiring and Connector	1. Disconnect Power to Range and unplug sensor. 2. Measure resistance of Sensor - 15Ω at 75° F. room temperature. (Voltage at terminals on control measures 5.0 VDC.

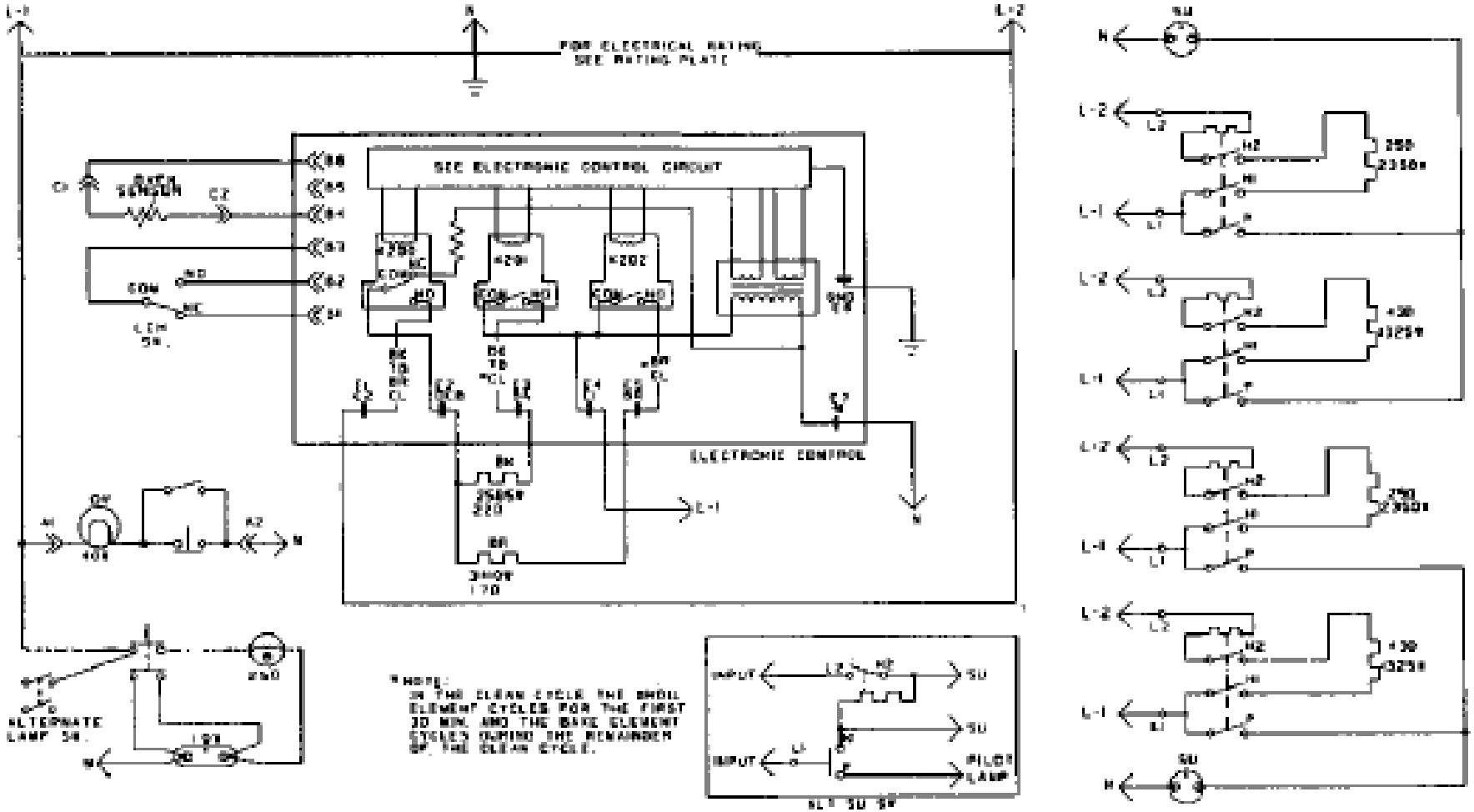


Quick Set 2 & 3 ERC

FLASHING LIGHT CODES

LIGHT	MEANING
Preheat Light Flashing - with control knob in any position except "OFF"	Shorted / open Sensor or Sensor Circuit Shorted to range frame.
Door Latch Light Flashing	• Control set to cooking mode with door locked • Control set to clean with door unlocked.
Oven On and Door Latch Light Flashing	The clean cycle has timed out and Select Knob has not been turned to "OFF" and door unlatched.

Quick Set 2 & 3 ERC



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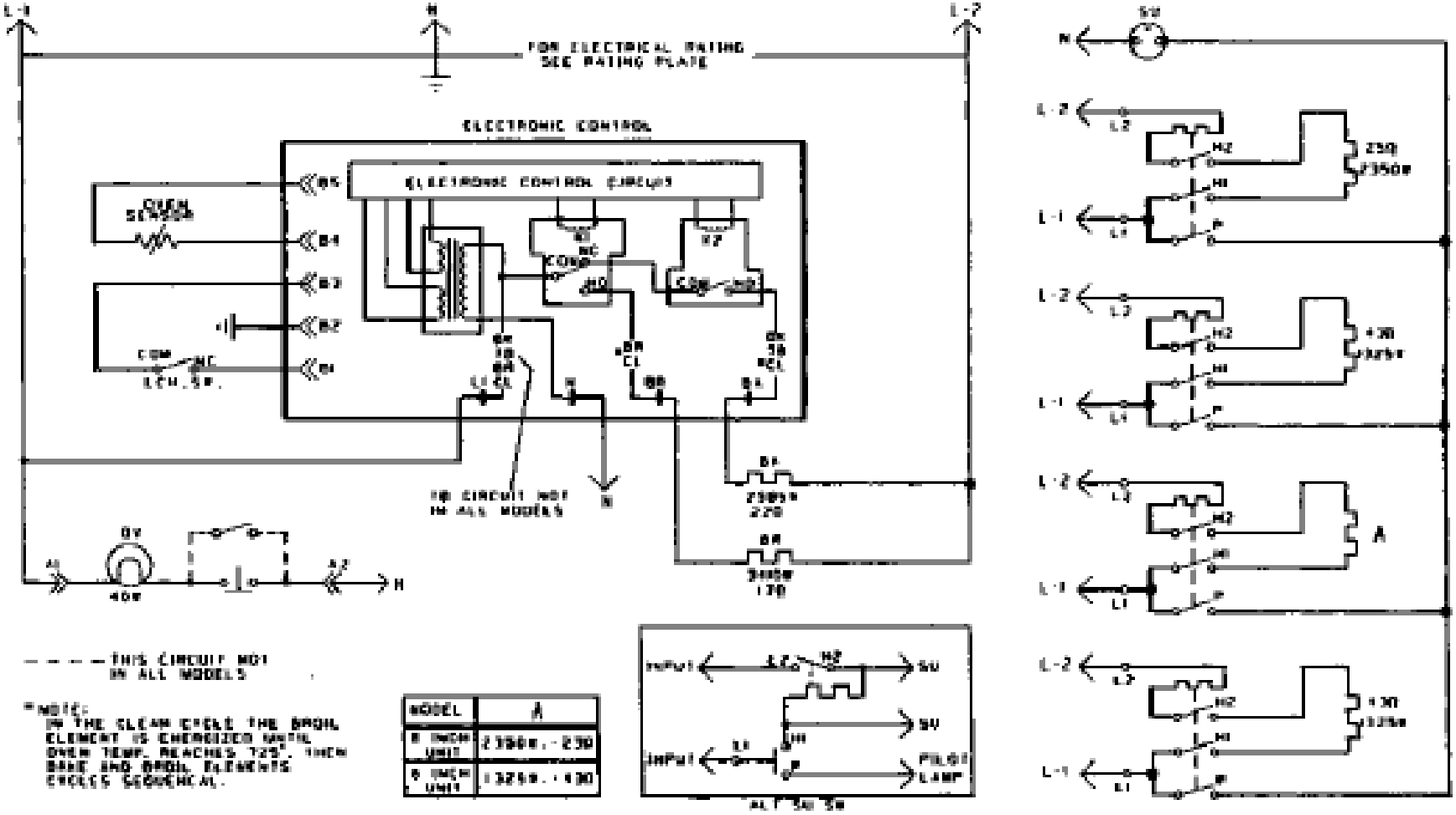
Quick Set 2 & 3 ERC



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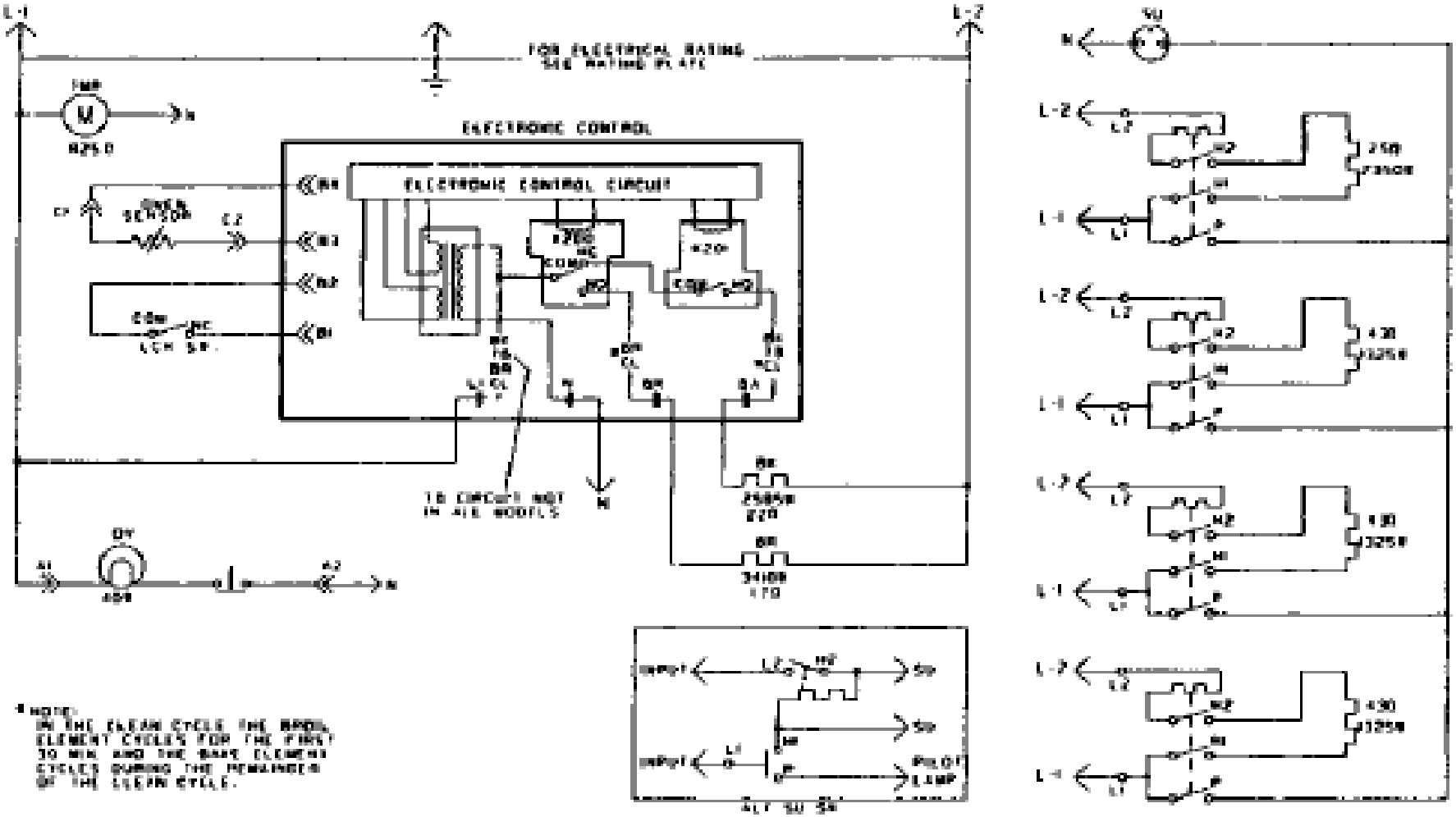
Quick Set 2 & 3 ERC



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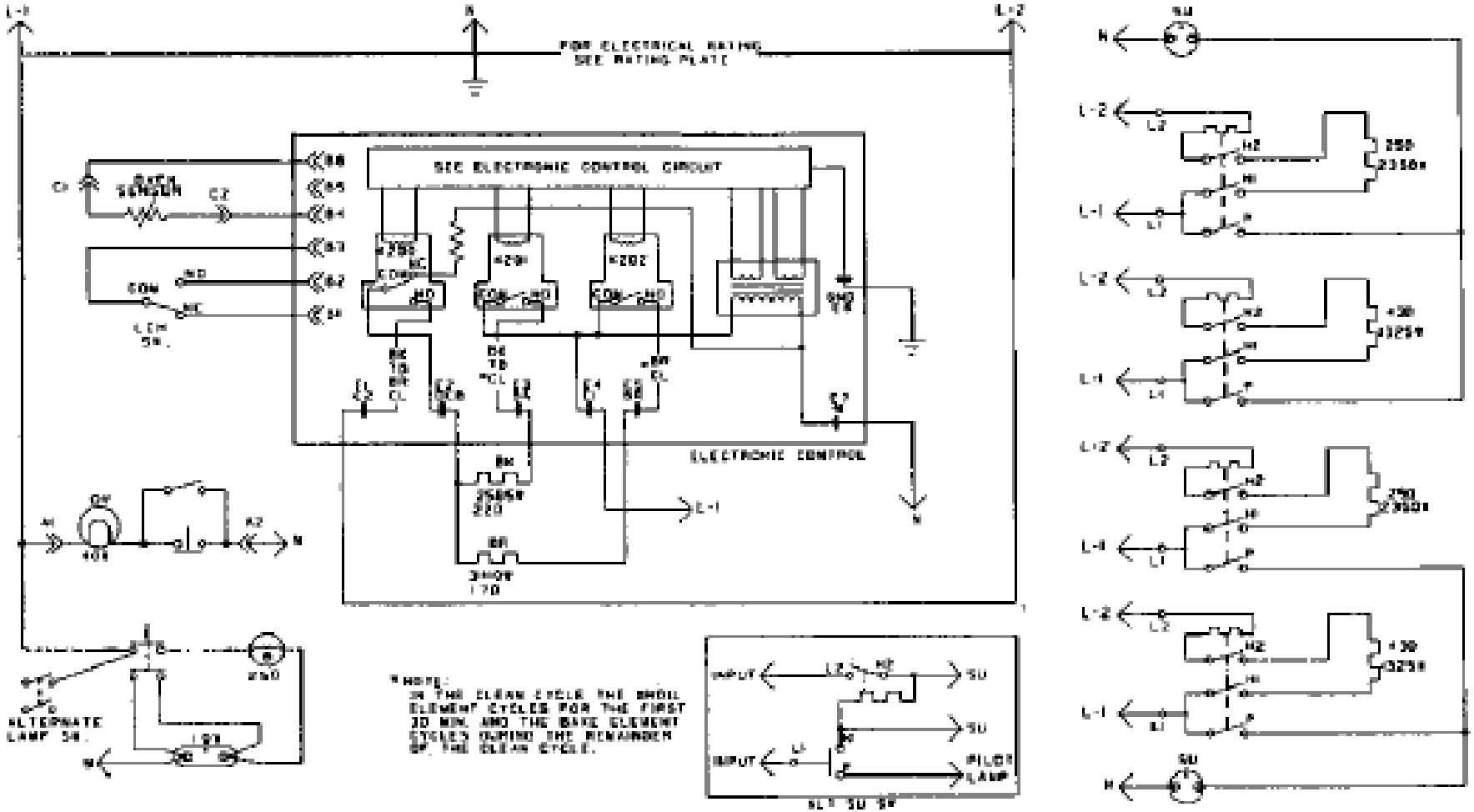
Quick Set 2 & 3 ERC



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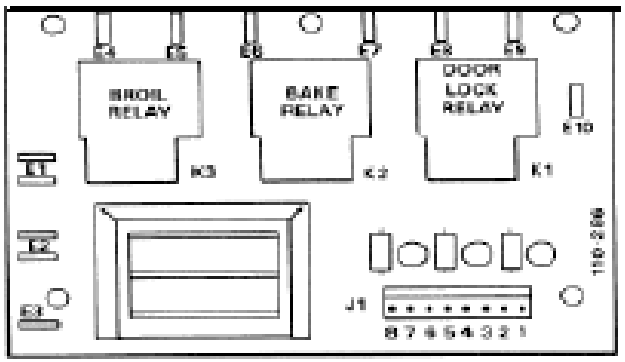
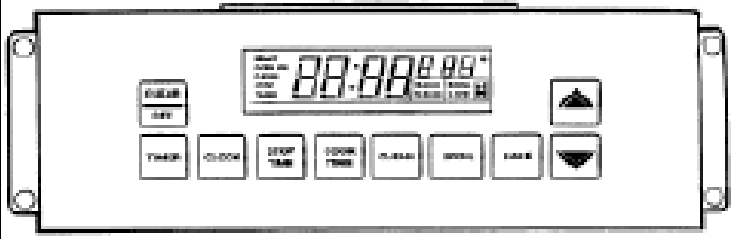
ERC Chart

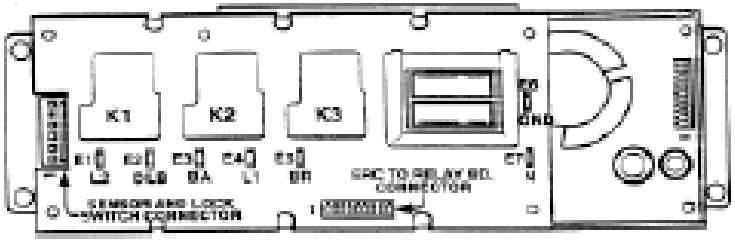
ERC



Vintage circa 1987 to 1990
Has buttons and an knob.
ERC and relay board separate.
Oven temperature adjustment:
- Set BAKE over 500
- Hold BAKE until display changes. (5 seconds)
- Adjust +/- setting with knob (+/- 35 maximum) ERC temperature setting is 20 less than actual empty oven temperature.

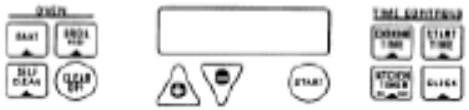
ERC II



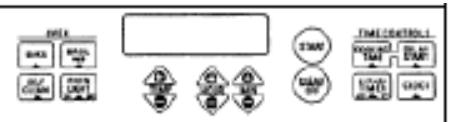


Vintage circa 1990 to 1993
Has membrane and slew (up/down) pads as integral part of control.
ERC and relay board combined
Oven temperature adjustment:
- Set BAKE over 500
- Hold BAKE until display changes (5 seconds)
- Adjust +/- with arrow pads (+/- 35 maximum)

ERC III



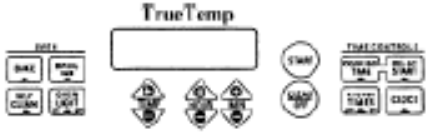
Self Clean Oven Tactile Control



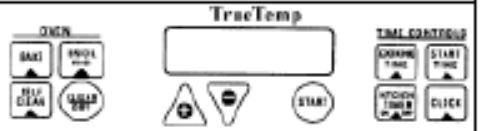
Self Clean Oven Membrane Control

Vintage 1996
Identified by **START** pad, can have separate membrane keypanel or integral tactile pads.
Has added "**SPECIAL FUNCTIONS**" features - use **SPECIAL FUNCTIONS** to calibrate oven temperature.
To enter **SPECIAL FUNCTIONS**:
Hold **BAKE** and **BROIL** until **SF** appears in display (5 seconds)
BROIL - Allows chage from F to C **CLOCK** - 12 hour, 24 hour, or blank **COOKING TIME** - Toggles 3 hour food warming feature
START TIME or **DELAY START** - Toggles 12 hour bake shut off/3 hour broil shut off to constant on mode
SELF CLEAN - Toggles control lock out (Self clean only) **+/- pads** - Change display setting speed (increase/decrease)
CLOCK and **KITCHEN TIMER** - Sales demo mode cycles through operating modes

ERC IV



Self Clean Oven Membrane Control



Self Clean Oven Tactile Control

Vintage 1997, one of the QuickSet Family of controls.
Indentified by **START** pad, the words **TrueTemp** written on the ERC face, and large graphics.
Has features of ERC III plus enhanced oven temperature control for more precise baking.
Continued use of **SPECIAL FUNCTIONS** (See ERC III), Additionally, Has fault code retrival capabilities and diagnostic testing.
FAULT CODE RETREVIAL:
Simultaneously pres **COOK TIME** plus **DELAY START** plus the number **9** pad or the **DOWN** arrow pad to display fault codes.
DIAGNOSTIC TESTING:
Remove power to product for 8 seconds
Simultaneousley press **COOK TIME** plus **DELAY START** plus the number **8** pad or the **UP** arrow pad, **TEST** will apear in display
CONVECTION FAN - Press **CONVECTION ROAST** to energize fan **BAKE** - Press **BAKE**, then hold **START** to energize bake element
BROIL - Press **BROIL**, then hold **START** to energize broil element **CONVECTION** - Press **CONVECTION BAKE**, then hold **START**
LOCK MOTOR - Hold **SELF CLEAN** pad to energize circuit, watch display, 1 = door unlocked, 0 = door locking or unlocking, 2 = door locked

ERC V

Vintage 1998
Added capacitive discharge control, enhanced control programming.
Features and appearance similar to ERC IV

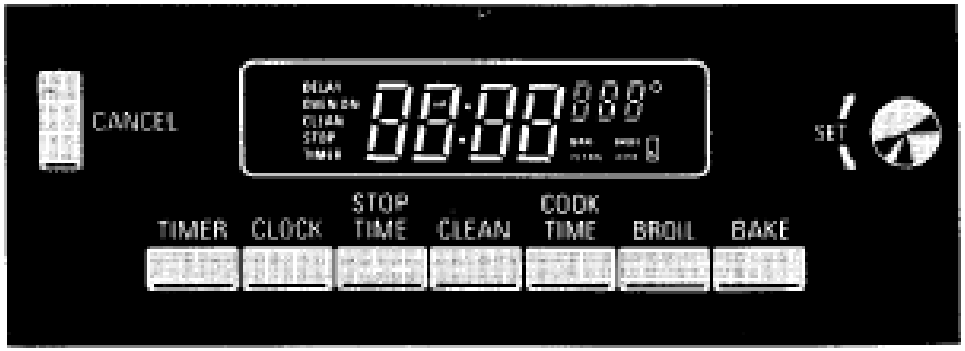
ERC “F” Code Chart

FAILURE CODES					MEANING	CORRECTION
ERC	ERC-II	ERC-III	ERC-IV	ERC-V		
F0	F0		F0	F0	Failed Transistor in control	Replace control if can't clear
		F0	F0	F0	Stuck key pad - may mean relay turned on.	Check overlay. disconnect keypanel (if present) for 32 seconds. Replace control if code reappears, key panel if no code
F1	F1		F1	F1	Failed transistor in control	Replace control if can't clear
		F1	F1	F1	Stuck key pad - may mean relay turned on.	Check overlay. disconnect keypanel (if present) for 32 seconds. Replace control if code reappears, key panel if no code
F2	F2	F2	F2	F2	1. Oven exceeded 590F unlocked or 990F locked. 2. High resistance connection in sensor circuit 3. Electrical disturbance (cordless phone, Ham radio, etc.) 4. Improper ground	1. Test operation of door lock switches and relay contacts. 2. Measure sensor circuit resistance at ERC connection. (1100 ohms) 3. Oven/cordless phone not on same circuit 4. Check appliance ground.
F3	F3	F3	F3	F3	1. Open sensor or sensor circuit. 2. Sensor lead shorted to ground. 3. Intermittent sensor connection.	Test resistance of sensor circuit. 1. Lead to lead. 2. Each lead to ground. 3. Use ceramic wire nuts for sensor connetion.

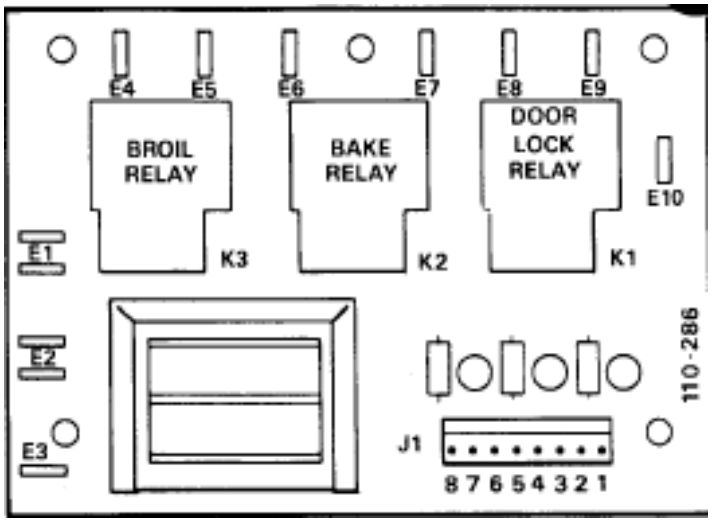
F4	F4	F4	F4	F4	Shorted sensor or shorted sensor harness.	Test resistance of sensor circuit, lead to lead and each lead to ground. Do not let connector lt contact oven liner, heat will melt and short connector.
F5					Failed transistor in control	Replace control
		F5	F5	F5	Loss of relay drive circuit	Clear, replace control if code reappears. Check sensor/lock circuit. Do not replace control and lock motor. if code doesn't return.
F6					Problem in time keeping circuit (momentary 60 Hz change)	Reset time and/or programmed operation.
F7		F7	F7	F7	Stuck function switch	Test operation of buttons Clean lens or replace as needed.
F8	F8				Temperature processing circuit failure	Replace control
	F9				Door lock circuit problem	Check wiring and test switch
	DOOR				Door not latched for clean cycle Door latched for bake/broil Door lock circuit problem	Check latch position Check lock switch circuit
		FC	FC	FC	Door lock circuit problem	Check wiring and test switch
		FF	FF	FF	Loss of door motor safety switch	Replace control

ERC I Series

ERC



Relay Control Board



ERC I Series

TO ADJUST TEMPERATURE:

1. Push the **BAKE** button.
2. Select any temperature between 500° and 550° with the SET knob.
3. **Quickly** (within two seconds) push and hold the **BAKE** button until "00" or the previously entered calibration change is displayed. If the control beeps and flashes, push the CANCEL button and start over.
4. Turn the SET knob to adjust the temperature in 5° steps. You can raise it 35° or lower it 35°. A minus sign (-) before the number means that the oven will be cooler by the displayed amount of degrees.
5. When you have made the necessary adjustment, push the **CLOCK** or **CANCEL** button to lock in the adjustment and go back to the time of day display.

NOTE: The adjustment described above will not change the self-clean or broil temperatures and is not affected by a loss of power to the oven.

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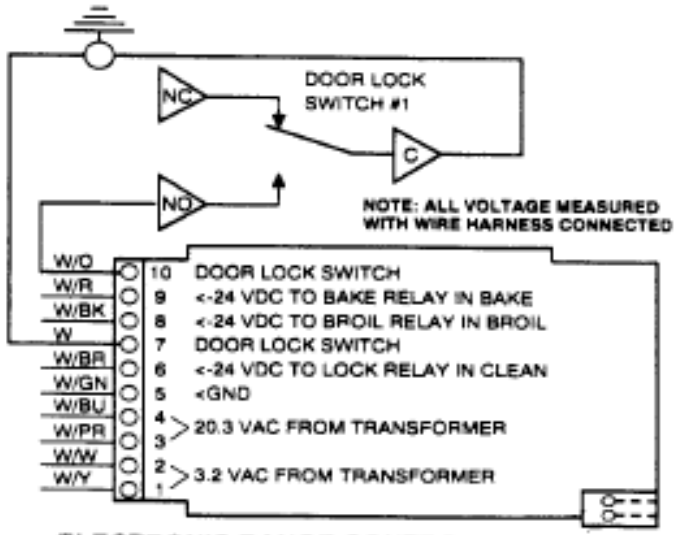
ERC I Series

ERC INPUT AND OUTPUT VOLTAGES

For the ERC to operate, it must receive the proper voltages from the step-down transformer located on the relay circuit board.

To make the voltage checks below, REMOVE POWER TO RANGE, remove ERC and position ERC to allow power to be restored safely. All harness connectors must be connected. Make the voltage measurements shown below on the main 10 pin harness connector. Place the meter leads on the exposed tabs on the side of the 10 pin harness connector.



ELECTRONIC RANGE CONTROL

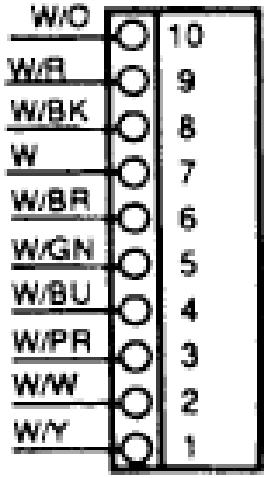
CIRCUIT	PIN(S)	VOLTAGE
INCOMING POWER FROM TRANSFORMER	1 to 2	3.2 VAC AT ALL TIMES
INCOMING POWER FROM TRANSFORMER	3 to 4	21 VAC AT ALL TIMES
ERC GROUND	5 to GND.	NEAR 0 VOLTS AT ALL TIMES
LOCK RELAY COIL	6 to 5	-24 VDC IN CLEAN
BROIL RELAY COIL	8 to 5	-24 VDC IN BROIL
BAKE RELAY COIL	9 to 5	-24 VDC IN BAKE
DOOR LOCK SWITCH NUMBER 1	10 to 7	TEST WITH OHM METER INFINITE RESISTANCE UNLOCKED; 0 OHMS LOCKED

ERC I Series

RELAY CIRCUIT BOARD TEST PROCEDURES

METHOD 1, **MEASURED FROM ERC**
WITH POWER REMOVED FROM RANGE, remove the ERC main 10 pin connector and make the resistance measurements from the exposed tabs on the side of the connector.

CIRCUITS	PINS	OHMS
TRANSFORMER SECONDARY	1 to 2	8 to 9
TRANSFORMER SECONDARY	3 to 4	5 to 6
LOCK RELAY COIL	6 to 5	550 to 600
BROIL RELAY COIL	8 to 5	550 to 600
BAKE RELAY COIL	9 to 5	550 to 600
LOCK SWITCH #1	10 to 7	0 locked; infinite unlocked

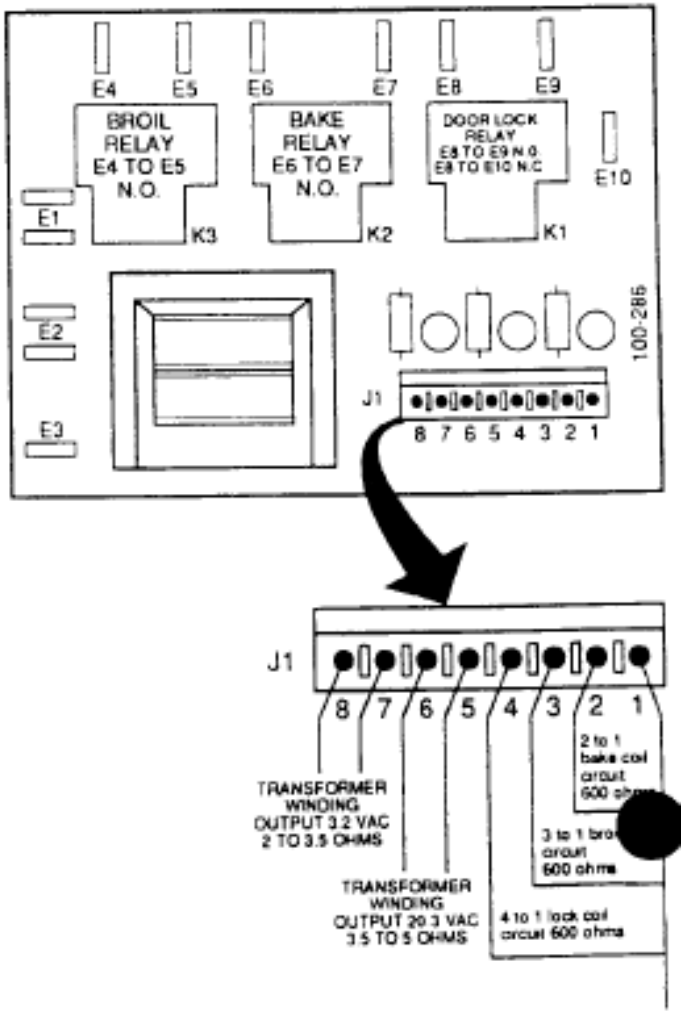


ERC I Series

METHOD 2, **MEASURED DIRECTLY ON RELAY BOARD**

CIRCUITS	PINS	OHMS	VOLTAGE
RELAY COIL GROUND	1 to GROUND	0	
BAKE RELAY COIL	1 to 2	550 to 600	-24 VDC FROM ERC
BROIL RELAY COIL	1 to 3	550 to 600	-24 VDC FROM ERC
LOCK RELAY COIL	1 to 4	550 to 600	-24 VDC FROM ERC
TRANSFORMER SECONDARY	5 to 6	5 to 6	21 VAC OUTPUT
TRANSFORMER SECONDARY	7 to 8	2 to 3	3.2 VAC OUTPUT
TRANSFORMER PRIMARY	L1 to N	130 to 150	120 VAC INPUT

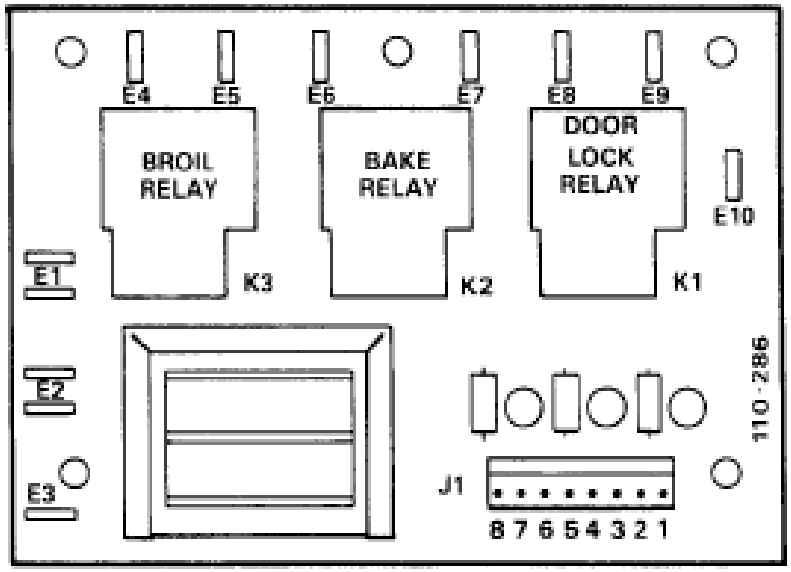
RELAY CIRCUIT BOARD LOCATED BEHIND STORAGE DRAWER IN CONTROL BOX.



ERC I Series

RELAY CONTACTS OPERATION TEST

RELAY	TERMINALS	VOLTAGE/MODE
BAKE	E6 to E7	120 IN OFF, 0 IN BAKE
BROIL	E4 to E5	120 IN OFF, 0 IN BROIL
DOOR LOCK	E8 to E9	120 IN OFF, 0 IN CLEAN



RELAY CIRCUIT BOARD

ERC I Series

FAILURE CODE	MEANING	CORRECTION
F0	o Failed Transistor in Control	o Replace Control
F1	o Failed Transistor in Control	o Replace Control
F2	o Oven exceeded 590°F with door in unlocked position or exceeded 990°F with door locked.	o Test operation of relay contacts.
	o High resistance connection within sensor circuit. (ERC reads sensor resistance, not actual oven temperature)	o See NOTE below.
	o Interference from cordless telephone, ham radios or other sources of electrical Disturbance.	o Oven and Cordless Phone cannot be on same circuit.
	o Improper Ground	o Check appliance ground.

ERC I Series

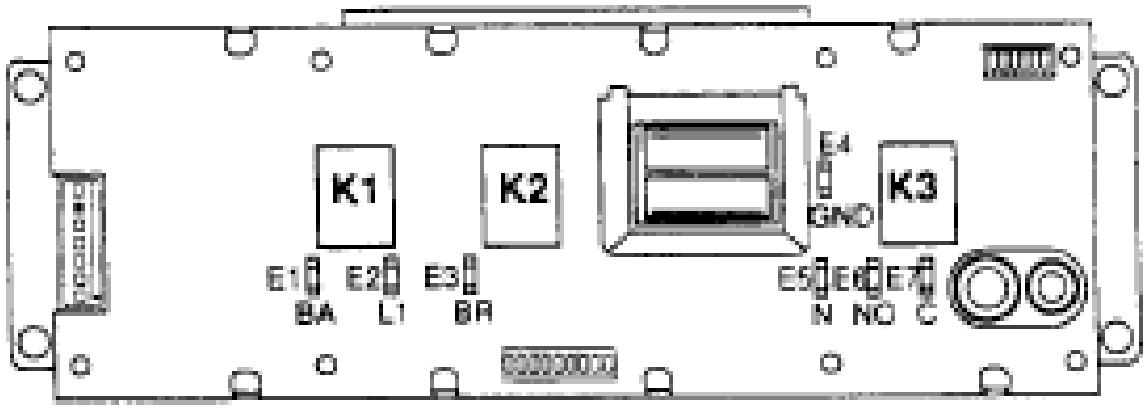
F3	o Open sensor or open sensor circuit. o Sensor lead shorted to ground o *Intermittent Sensor harness connections	o Test resistance of sensor circuit, both lead to lead and each lead to ground at ERC. o See NOTE below.
F4	o Shorted sensor or short in sensor harness o Melted sensor connector due to connector being positioned against back of oven cavity. The sensor connector must be positioned outside of the oven back, keeping the connector visible from the rear of the range.	o Test resistance of sensor circuit, both lead to lead and each lead to ground at sensor disconnect at ERC.

***NOTE:** Connections.can be intermittent due to a corrosive build-up between the connections or due to the terminals within the harness connections being bent by the insertion of an ohmmeter probe, etc.

NOTE: An open sensor circuit will result in the ERC keeping the door locked at power-up or after the clean cycle.

F5	o Failed Transistor in Control	o Replace Control
F6	o Problem within time keeping circuits due to fluctuation of the 60 Hz power supply	o Reset time and/or cooking operation if applicable.
F7	o Stuck function switch or button (BAKE, BROIL, CLEAN, etc.) on ERC.	o Test operation of buttons to ensure they move freely. If problem cannot be found, remove lens from ERC and determine if problem is in button section of lens or in ERC.
F8	o Component failure detected within ERC affecting temperature processing circuits.	o Replace Control
F9	o Problem with door lock circuit such as a pinched wire between ERC & door lock switches	o Check operation of door switch #1 and its wiring.
DOOR	o Door not locked for clean cycle or did not unlocked after clean.	o Check lock position. SEE NOTE BELOW
	o Door not closed at power-up	o With door open at power-up, the ERC will display "DOOR" for 10 minutes. After 10 minutes, the ERC will operate normally.
	o Problem in door switch circuit.	o Check door switch circuit.
	o Problem in door lock switch #1 circuit.	o Check lock switch #1 circuit

ERC II Series



ERC-II REAR

ERC II Series

5. BAKE TEMPERATURE CALIBRATION

- Press BAKE pad.
- Select any temperature above 500 degrees.
- **QUICKLY** press and hold BAKE pad approximately 5 seconds until "00" or previously entered change is displayed.
- Release BAKE pad. Tap up or down arrow to change the oven temperature +/- 35 degrees in 5 degree steps.
- Press CLOCK or CLEAR/OFF pad to return control to normal operation.

The calibration change will remain in the control memory and is not affected by power interruptions.

Step 3:
IMMEDIATELY, PRESS AND HOLD

Continue to hold **BAKE** until the display changes to show the preset oven temperature adjustment.

PRESET OVEN DISPLAY

SET BETWEEN -35°F AND +35°F

ERC II Series

RELAY CONTACT OPERATION; VOLTAGE TEST

- o Remove power to oven.
- o Gain access to back of ERC
- o Depending on the relay being tested, remove the wire from the "BA" (bake) or "BR" (broil) terminal on the relay circuit board.
- o Position wires and control to allow voltage to be safely restored to the oven.
- o With power restored, Measure the voltage available to the terminal and compare voltage readings to the chart.
- o Replace the ERC if the correct voltages are not observed.

RELAY	TERMINALS	VOLTAGE*	MODE
K1 BAKE	BA to N	120 VAC	*BAKE
K2 BROIL	BR to N	120 VAC	*BROIL
K3 LOCK	C to N	120 VAC	ALL
K3 LOCK	NO to N	120 VAC	LOCKING OR UNLOCKING

* Temperature and mode selection necessary for operation of relay contacts.

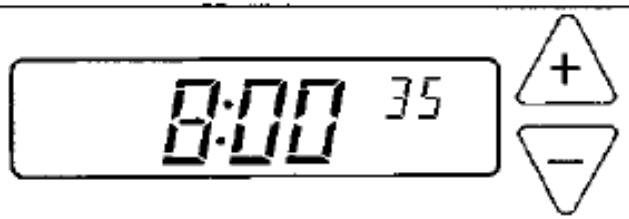
FAILURE CODE	MEANING	CORRECTION
F0 F1 FF	o Failed Transistor in Control	o If code cannot be canceled Replace Control
F2	o Oven exceeded 590°F with door in unlocked position or exceeded 990°F with door locked.	o If over temperature condition occurred, test relay operation. Look for "welded" contacts.
	o High resistance connection within sensor circuit. (ERC reads sensor resistance not actual oven temperature)	o See NOTE below.
	o Interference from cordless telephone, ham radios or other sources of electrical disturbance.	o Oven and cordless phone cannot be on same circuit.
	o Improper Ground	o Check appliance ground.
-F2- IN CLEAN	o See above plus: o Open lock circuit thermal switch.	o Check cooling fan operation or other conditions that could cause control area to overheat.
	o Lock switches 1 and 2 closed at the same time.	o Check operation of door lock switches.
F3	o Open sensor or open sensor circuit.	o Test resistance of sensor circuit, both lead to lead and each lead to ground at ERC.
	o Sensor lead shorted to ground	
	o Intermittent Sensor harness connections	o See NOTE below.

NOTE: Connections can be intermittent due to a corrosive build-up between the connections or due bent terminals within the harness connectors.

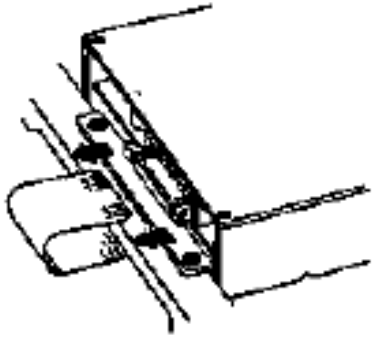
FAILURE CODE	MEANING	CAUSE OR CORRECTION
F4	o Shorted sensor or short in sensor circuit	o Test resistance of sensor circuit, both lead to lead and each lead to ground. o Melted sensor connector due to connector being positioned against back of oven cavity. The sensor connector must be positioned outside of the oven back, keeping the connector visible from the rear of the range.
F8	o Component failure detected within ERC affecting temperature processing circuits.	o Replace Control
F9	o Lock switches 1 and 2 closed at the same time.	o Test operation of switches.
DOOR	o Door lock did not advance within 8 to 10 seconds after setting clean cycle.	o Door not closed with CLEAN selected. o Door switch not operating correctly o Lock switch 2 (unlocked) stuck in closed position. o Lock motor open. o Lock relay contacts not closing.
LOCK FLASHING	o Lock switch circuit open. (Normal condition while locking or unlocking)	o Open Thermal switch in lock switch circuit due to overheating of control area. o Check fan operation. o Check lock switches.

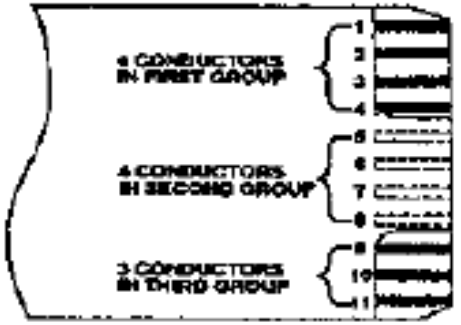
ERC IIC Series

ERC IIC Series

The bake temperature can be adjusted by ± 35°F. from the factory setting. To Adjust The Bake Temperature:	
1. Press Bake Pad.	
2. Select any temperature above 500°F. by pressing the + Pad.	
3. ***Immediately*** Press and ***Hold Bake Pad*** until "00" or previously entered temperature is displayed.	
4. Press the + or - Pad to change the oven temperature +35° or -35° in 5° steps.	
5. Press Clear / Off pad to return to normal operation.	

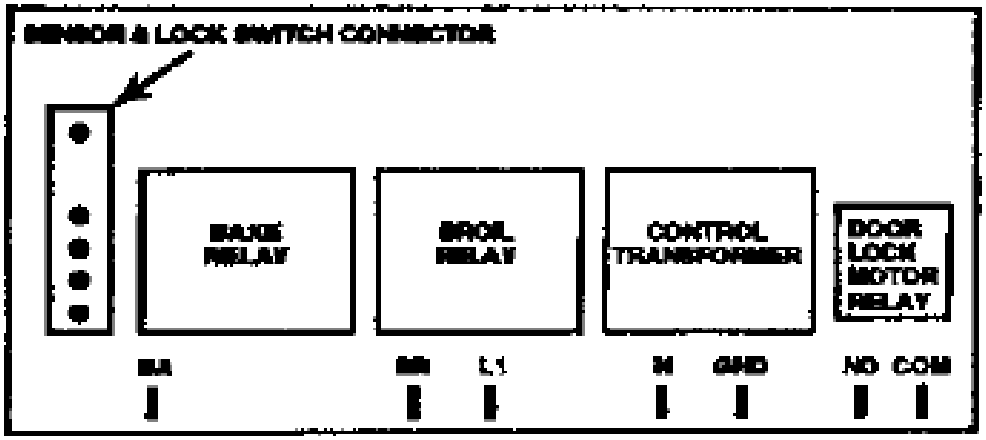
ERC IIC Series





FUNCTION	CONDUCTORS	OHMS
DOWN ARROW	1 TO 2	0 TO 150
UP ARROW	1 TO 3	0 TO 150
BROIL	4 TO 5	0 TO 80
CLEAN	4 TO 6	0 TO 80
BAKE	4 TO 9	0 TO 80
COOK TIME	8 TO 5	0 TO 150
STOP TIME	8 TO 6	0 TO 150
CLOCK	8 TO 7	0 TO 150
TIMER	8 TO 9	0 TO 150
CLEAR/OFF	10 TO 11	0 TO 150

ERC IIC Series



Control Voltages:

Terminals	Voltage and Mode of Operation
L1 - N	120 VAC all the time
L1 - BA L1 - BR	240 VAC when oven is not calling for heat (Bake & Broil Relay contacts open)
C - N NO - C	120 VAC all the time 120 VAC when locking or unlocking

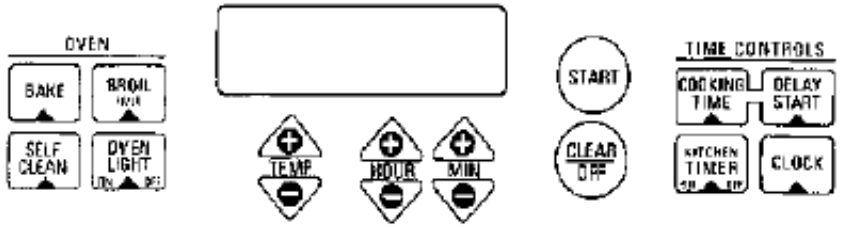
ERC IIC Series

FAILURE CODE	MEANING	CORRECTION
-F1- -F7-	Stuck Key	Determine if problem is with the Key Panel or the Control by: 1. Pushing CLEAR / OFF pad 2. Disconnecting Ribbon Cable from control and waiting at least 32 seconds see if Code reoccurs. If code reoccurs, problem is in the Control. If code does not reoccur the problem is with the key panel.
-F2-	Oven Over Temperature Exceeded 590° with door in unlocked position or 990° with door locked Remember: ERC measures resistance of sensor circuit, not actual oven temp. During Clean Operation	If actual over temperature condition did occurred: • Look for welded relay contacts. If over temperature condition did not occur: • Look for a high resistance connection or any other cause of high resistance in the sensor circuit. • Open thermal switch(self - resetting) located on floor of component compartment . Switch is normally closed and will open if area overheats due to inoperative cooling fan. Check Fan Operation. • Both Lock Sw. #1 and #2 closed at same time.
-F3- -F4-	Open Sensor Circuit or Shorted Sensor Circuit	1. Measure Sensor Circuit Resistance at Sensor / Lock Switch connector plug at ERC (should read approx. 1100Ω @ room temp.). Measure lead to lead and each lead to chassis ground. 2. Measure resistance directly across sensor (pull sensor leads into oven approx. 10" and cut leads at crimp connection and check sensor resistance). • Both sensor leads shorted to ground. • Cut or pinched sensor harness wire. • Loss of contact within sensor harness connector at back of oven or ERC. If Circuit Appears Normal: (approx. 1100Ω) • Reinstall sensor disconnect plug on ERC and measure sensor resistance from connector pin solder joints on back of ERC circuit board. If circuit is open problem is in the connector plug. Remove terminals from connector block and bend them to restore contact pressure.
-F8- -FF-	Component failure within ERC affecting temperature processing circuits	Replace Control
-F9-	Problem with Door lock circuit such as pinched wire between ERC & door lock switch (lock switch # 1).	Check wiring and test operation of switch

ERC III Series

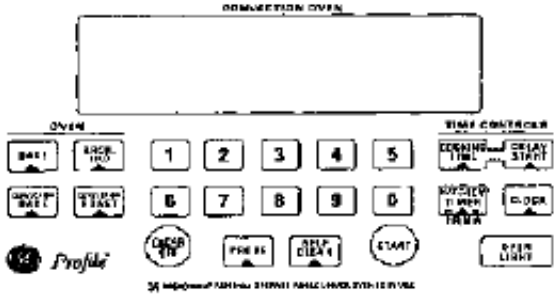
The new series of range controls went into production during the summer of 1996. The controls contain some new features that permits the consumer to program the control to fit their needs or desires. The control systems can be broken into four basic groups as follows:

Group 1 (ERCIII B) - Similar to ERCIIC - self clean or standard oven control.



Group 2 (ERCIII A) - Single oven control with either convection or probe features or both.

Group 3 (ERCIII D) - Lower oven self clean control for double oven microwave built-in. Some models come with probe and convection feature.



Group 4 (ERCIII DD) - Double oven self clean control. Can come with temp probe, convection features or both.

(SG1)

ERC III Series

Control Voltage:

L1A & B to N ——— 120 VAC all the time.

L1A & B to BAKE
L1A & B to BROIL. — 240 Volts when oven is not calling for heat (Bake & Broil relay contacts open.

OV1 to N — 120 Volts when light is OFF.

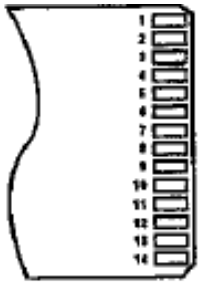
AUX2 to N — 120 Volts when lock motor is locking or unlocking

NOTE: Temperature/mode Selection Necessary for operation of relay contacts. Voltage must be present across terminals L1 to N for control to operate.

Ohmmeter Test:

Set ohmmeter on high scale. Connect leads to ribbon cable as indicated in chart for each function. Depress function pad. Meter shou read less than ∞ Ω if the switch contact is working.

ERC IIIB



FUNCTION	CONDUCTORS
BAKE	12 TO 14
BROIL	11 TO 14
CLEAN	9 TO 14
OVEN LIGHT	9 TO 13
COOKING TIME	11 TO 13
DELAY START TIME	12 TO 13
KITCHEN TIMER	10 TO 14
CLOCK	10 TO 13
CLEAR/OFF	5 TO 4
START	1 TO 2
UP TEMP	6 TO 13
DN TEMP	6 TO 14
UP HOUR	7 TO 13
DN HOUR	7 TO 14
UP MIN	8 TO 13
DN MIN	8 TO 14

ERC IIIA

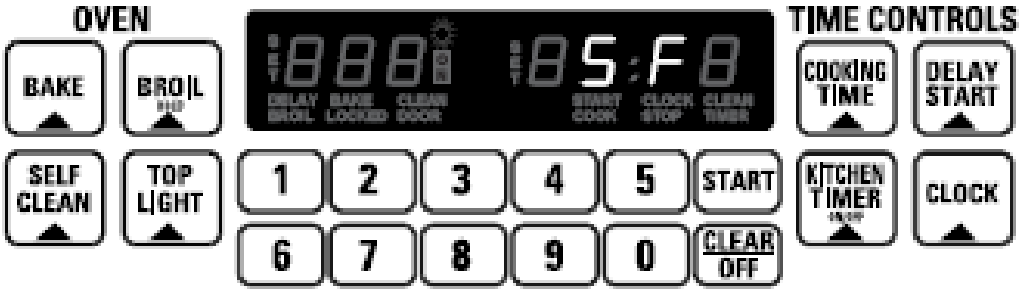
FUNCTION	CONDUCTORS
BAKE	3 TO 4
BROIL	1 TO 4
CLEAN	2 TO 11
OVEN LIGHT	1 TO 11
COOKING TIME	1 TO 10
DELAY START TIME	3 TO 10
KITCHEN TIMER	1 TO 9
CLOCK	3 TO 9
CLEAR/OFF	13 TO 14
START	12 TO 14
CONV. BAKE	2 TO 4
CONV. ROAST	2 TO 10
PROBE	3 TO 11
1	3 TO 6
2	3 TO 5
3	3 TO 8
4	3 TO 7
5	1 TO 6
6	1 TO 5
7	1 TO 8
8	2 TO 6
9	2 TO 5
0	2 TO 8

ERC IIIA Series

ERC III SPECIAL FEATURES

The "SPECIAL FEATURE" modes can only be activated while the display is showing the time of day clock. These special features remain in the ERC's memory until you or the consumer change them. When the display shows your choice press the START pad. The special feature you selected will remain in memory even after a power failure.

ERC III



TO ADJUST THE THERMOSTAT (MODELS WITH NUMBER PADS)

BAKE + BROIL — Press the BAKE and BROIL HI/LO pads at the same time for 2 seconds until the display shows "SF".

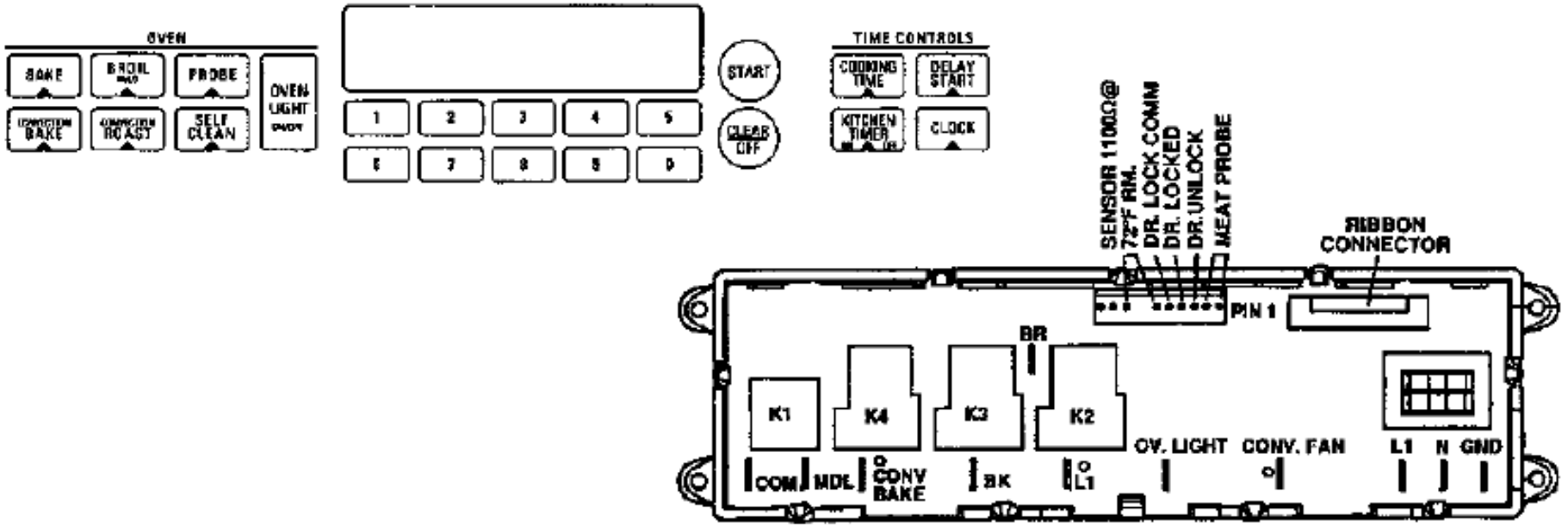
BAKE — Press the BAKE pad. A two digit number shows in the display. Press the BAKE pad once to increase (+) the oven temp. or twice to decrease (-).

1 5 — The oven temp. can be adjusted up to (+) 35°F. hotter or (-) 35°F. cooler. Press the number pads the same way you read them. For example, to change the over temperature 15°F., press 1 and 5.

START — When you have made the adjustment, press the START pad to go back to the time of day display.

NOTE: Adjustments will not affect the broiling or self-cleaning temperatures. **It will be retained in memory after a power failure.**

ERC IIIA Series



ERC IIIA Series

HOW TO DISPLAY THE FAULT CODES IN MEMORY

To read the fault code memory, follow the steps below:

1. Simultaneously press the COOKING TIME, DELAY START and number 9 pads. A history of the last four fault codes will appear in the display. NOTE: If no keypad entry is made within 5 minutes, the ERC test mode will "time out".
2. To terminate the memory fault mode press the CLEAR / OFF key pad

ERC IIIA Series

CODE	TYPE OF FAILURE	CORRECTION MEMBRANE
-FF-	Loss of door motor safety switch	Replace Control
-F5-	Loss of relay drive circuit.	Press Clear/Off and reprogram control. If -F5- code reappears, replace control. Check sensor circuit. Check lock motor circuit. If all above checks OK the F5 code can be a result of momentary loss of power **(DO NOT REPLACE CONTROL AND LOCK MOTOR).**
-F0- -F1- -F7-	Stuck Key Pad May mean relay is turned on.	Determine if problem is with the Key Panel or Control: 1.Push CLEAR\OFF Pad. 2.Disconnect Ribbon Cable from control and wait at least 32 secs. to see if Code re-occurs. • If code reoccurs, problem is in the control (Replace Control). • If code does not reoccur problem is with the Key Panel (Replace Key Panel).

ERC IIIA Series

-F2- Also see fan thermal switches	Indicates that oven is over temperature in one of the following modes with in either a cooking or clean mode of operation. • Control Senses and oven temperature above 615°F. with the door circuit in the unlock mode. • Control senses oven tempera ture above 915°F. with the door circuit in the locked mode.	• Look for welded relay contacts. (Heating element is on in off mode). • Look for open thermal switch in lock motor circuit. Switch is normally closed and will open if area overheats due to fan not operating. Look for cause - Fan thermal switch not closing, fan stalled, etc. • Look for high resistance in the sensor circuit due to high contact resistance (poor terminal crimp, deformed terminals, loose connection inside sensor tube) or intermittent solder joint. • Electrical noise interference in the sensor circuit (Ham radio, cordless phone etc.).
-F3- -F4-	Open or Shorted Sensor (Circuit) Could be a result of contamination on terminals or pinched wire in sensor circuit, cold solder joint on control.	• Disconnect power to range and remove sensor from oven (disconnect at connector block) • Measure Sensor resistance at connector (take care not to damage terminals in block) - Should read 1100Ω at room ambient (approx. 72°F.). • Measure each sensor lead from connector block to ground. If shorted, look for pinched or cut wire in sensor circuit. • Check connector terminals - Look for deformed or corrosion on terminals. Repair or replace. • If all above is OK replace control.

ERC IIIA Series

-F8-	Shorted meat probe - Note: Problem can be with the probe or the receptacle or meat probe circuit.	• Check probe • Look for pinched wire. • Look for condensation or contamination on receptacle.

-FC-	Problem with door lock circuit such as pinched wires between control and door lock switches on motorized lock circuits.	Check wiring and test operation of switches

ERC IIIA Series

ERC ON BOARD DIAGNOSTIC TESTS

This test allows the Technician to energize the bake and broil relays (listen for A click), use the ovens onboard temperature sensing and control system to measure oven temperature (sensor, connector and ERC diagnosis) and lastly it allows you to test keypanel input responses.

HOW TO ENTER AND EXIT THE DIAGNOSTIC MODE

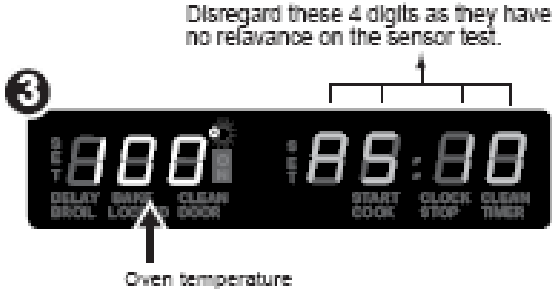
To perform the ERC diagnostic tests, follow the steps below:

1. To initiate the ERC test mode, first remove power to the appliance for approx. 8 seconds and then reapply power.
2. Simultaneously press the COOKING TIME, DELAY START and number 8 pads. The word "tESt" will appear in the ERC display. NOTE: If no keypad entry is made within 5 minutes, the ERC test mode will "time out".
3. To terminate the ERC test mode, press the CLEAR / OFF key pad.

ERC IIIA Series

❶ *ENERGIZE BAKE CIRCUIT* - To perform this test, press BAKE then START and listen for the bake relay to energize. CAUTON: If you hold the start pad in, you are energizing the BAKE circuit. As soon as you release the START pad the relay will deenergize. If the relay does not energize, check the following: reconfirm that you have entered the test mode correctly, check power and wiring connections to the ERC, and lastly suspect a faulty ERC. NOTE: when performing this test, the glowbar will be energized as long as you hold in the start pad.

❷ *ENERGIZE BROIL RELAY*- To perform this test, press BROIL then START and listen for the broil relay to energize. CAUTON: If you hold the start pad in, you are energizing the BROIL circuit. As soon as you release the START pad the relay will deenergize. If the broil relay does not energize, check the following: reconfirm that you have entered the test mode correctly, check power and wiring connections to the ERC, and lastly suspect a faulty ERC. NOTE: when performing this test, the glowbar will be energized as long as you hold in the start pad.



❸ *SENSOR TEST* - To perform this test, press and hold the COOKING TIME pad or DELAY START pad (vaies by model). The oven temperature will show in the display. **NOTE: oven temperatures below 100°F. will show as 100°F.** If the temperature showing in the display is not correct then suspect the following: calibration, sensor, sensor connection, or ERC.

❹ *NUMERIC KEY PADS TEST*- To perform proper numeric key panel input responses, press any numbered key pad and hold it in for approximately 5 seconds; the number you are pressing will show in the ERC display. If it does not, reconfirm that you have entered the test mode correctly, check wiring connections to the ERC and keypanel, and lastly confirm shorted or open key pad by performing the Key Panel test on page 10.

ERC IIIA Series

❺ *LOCK MOTOR CYCLE TEST* - The lock motor cycle test allows you to run the latch assembly through one complete cycle of operation, testing motor operation and front & rear latch switch contacts. To perform this test, push and hold the SELF CLEAN key pad - make sure that the oven door is closed (light switch depressed). While depressing the SELF CLEAN pad the lock motor will run through a complete cycle. Watch the ERC display closely as it will change, based on the location of the motor and the position (open or closed) of the latch switches.

Illustrations A, B, C, and D show the sequence of events that will occur during the complete lock motor cycle, as well as what will be seen in the ERC display. Notice that the numbers shown in the left side of the display represent the position of the lock motor as well at the contact positions (open or closed) of the latch switches.

UNLOCKED POSITION
Rear switch contacts open
Front switch contacts closed

Moving toward LOCKED
Rear switch contacts open
Front switch contacts open

LOCKED POSITION
Rear switch contacts closed
Front switch contacts open

Moving toward UNLOCKED
Rear switch contacts open
Front switch contacts open

Return to UNLOCKED POSITION
Rear switch contacts open
Front contacts closed

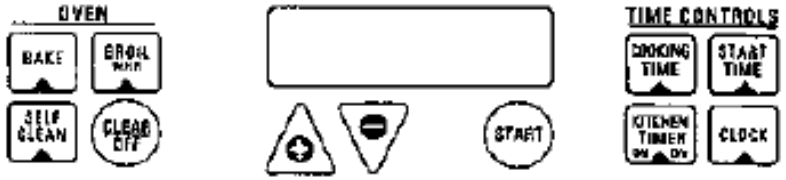
ERC IIIB Series

ERCIII "B" SERIES:

The "B" series of controls can be broken down into 2 basic groups:

1. Tactile type controls - control switch contacts part of the control with a faceplate overlay adhered to the front of the control to identify the function contacts. Two types of controls will exist - Standard Oven and Self Clean.

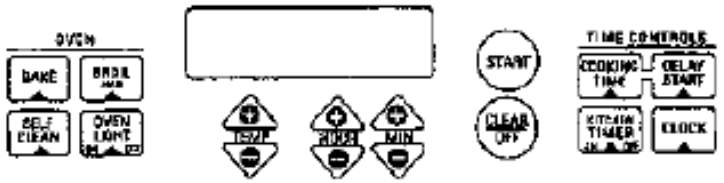
Standard Oven Tactile Control



Self Clean Oven Tactile Control

2. Membrane type controls - control switch contacts are contained in the key panel assembly. This assembly is attached to the control by a ribbon connector. Two types of controls exist for this version - Standard Oven and Self Clean.

Standard Oven Membrane Control



Self Clean Oven Membrane Control

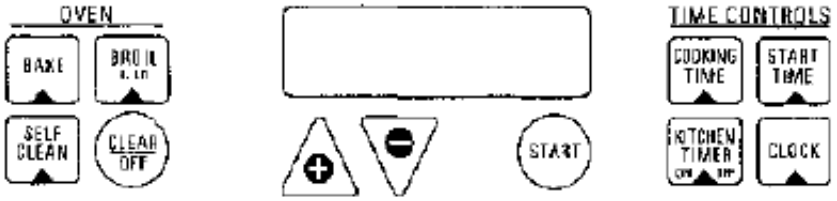
ERC IIIB Series

SPECIAL FUNCTIONS

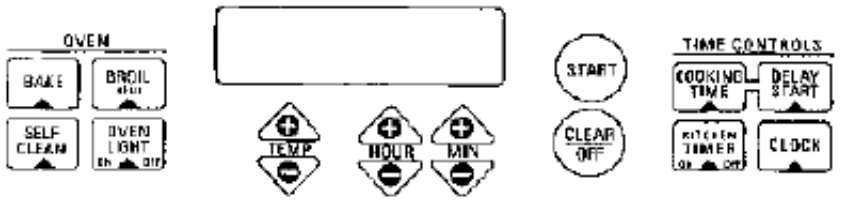
The ERCIII controls all have a consumer accessible area where they can change certain programs functions on the control. To access the Special Function area:

1. Press and hold both BAKE and BROIL HI/LO pads at the same time until "SF" is displayed.

2. Select the area to be changed from the list below (Tone elimination and Oven calibration covered other places in this manual also can be changed by the consumer).



ERCIII "B" Tactile Control



ERCIII "B" MEMBRANE CONTROL

ERC IIIB Series

CODE	TYPE OF FAILURE	CORRECTION MEMBRANE	CORRECTION TACTALE
-FF-	Loss of door motor saftey switch	Replace Control	
-F5-	Loss of relay drive circuit.	Press Clear/Off and reprogram control. If -F5- code reappears, replace control. Check sensor circuit. Check lock motor circuit. If all above checks OK the F5 code can be a result of momentary loss of power **(DO NOT REPLACE CONTROL AND LOCK MOTOR).**	

ERC IIIB Series

-F0- -F1- -F7-	Stuck Key Pad May mean relay is turned on.	Determine if problem is with the Key Panel or Control: 1.Push CLEAR\OFF Pad. 2.Disconnect Ribbon Cable from control and wait at least 32 secs. to see if Code re-occurs. • If code re-occurs , problem is in the control (Replace Control). • If code does not re-occur problem is with the Key Panel (Replace Key Panel).	Make sure Mylar Overlay is on correctly (Not interferring with button operation). OK - Replace control.

-FC-	Problem with door lock circuit such as pinched wires between control and door lock switches on motorized lock circuits.	Check wiring and test operation of switches

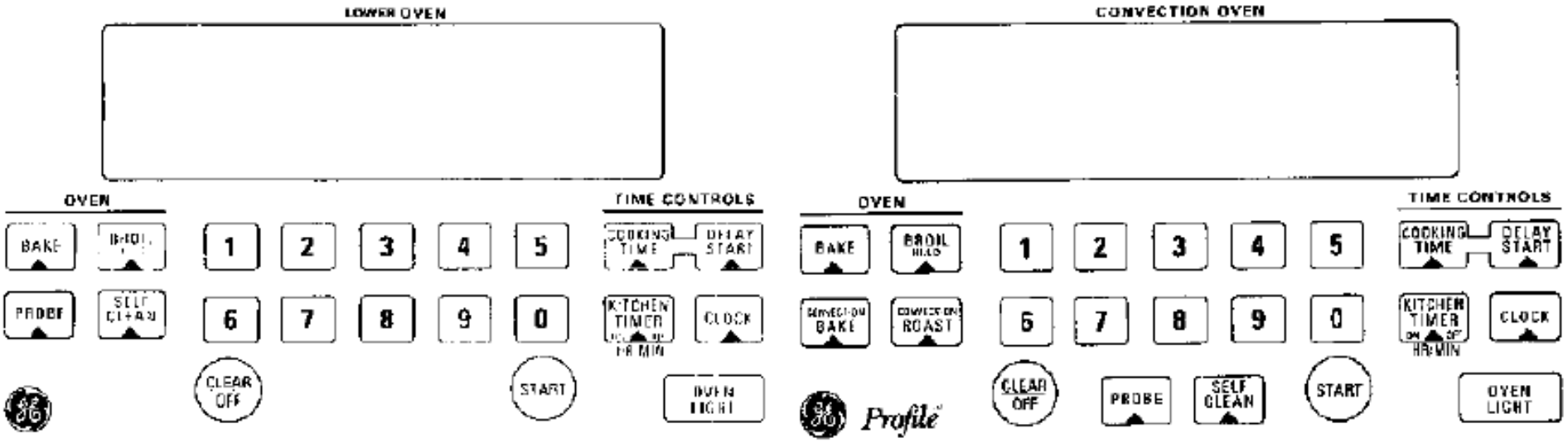
ERC IIIB Series

-F2-	Indicates that oven is over temperature in one of the following modes with in either a cooking or clean mode of operation. • Control Senses and oven temperature above 615°F. with the door circuit in the unlock mode. • Control senses oven temperature above 915°F. with the door circuit in the locked mode.	If actual over temperature condition occurred: • Look for welded relay contact. If no over temperature condition exists: • Look for open thermal switch in lock motor circuit. Switch is normally closed and will open if area over heats due to fan not operating. Look for cause - Fan thermal switch not closing, fan stalled, ect. • Look for high resistance in the sensor circuit due to high contact resistance (poor terminal crimp, deformed terminals, loose connection inside sensor tube) or intermitent solider joint. • Electrical noise interference in the sensor circuit (Ham radio, cordless phone ect.).

-F3- -F4-	Open or Shorted Sensor (Circuit) Could be a result of contamination on terminals or pinched wire in sensor circuit, cold solder joint on control.	• Disconnect power to range and remove sensor from oven (disconnect at connector block) • Measure Sensor resistance at connector (take care not to damage terminals in block) - Should read 1100W at room ambient (approx. 72°F.). • Observe the meter reading while wiggling the leads at the connector and tapping on the sensor tube - if the reading varies more that 10W replace the sensor. • Check leads from sensor to control - Look for pinched wire. • Check connector terminals - Look for deformed or corrosion on terminals. Repair or replace. • If all above is ok replace control.

ERC IIID Series

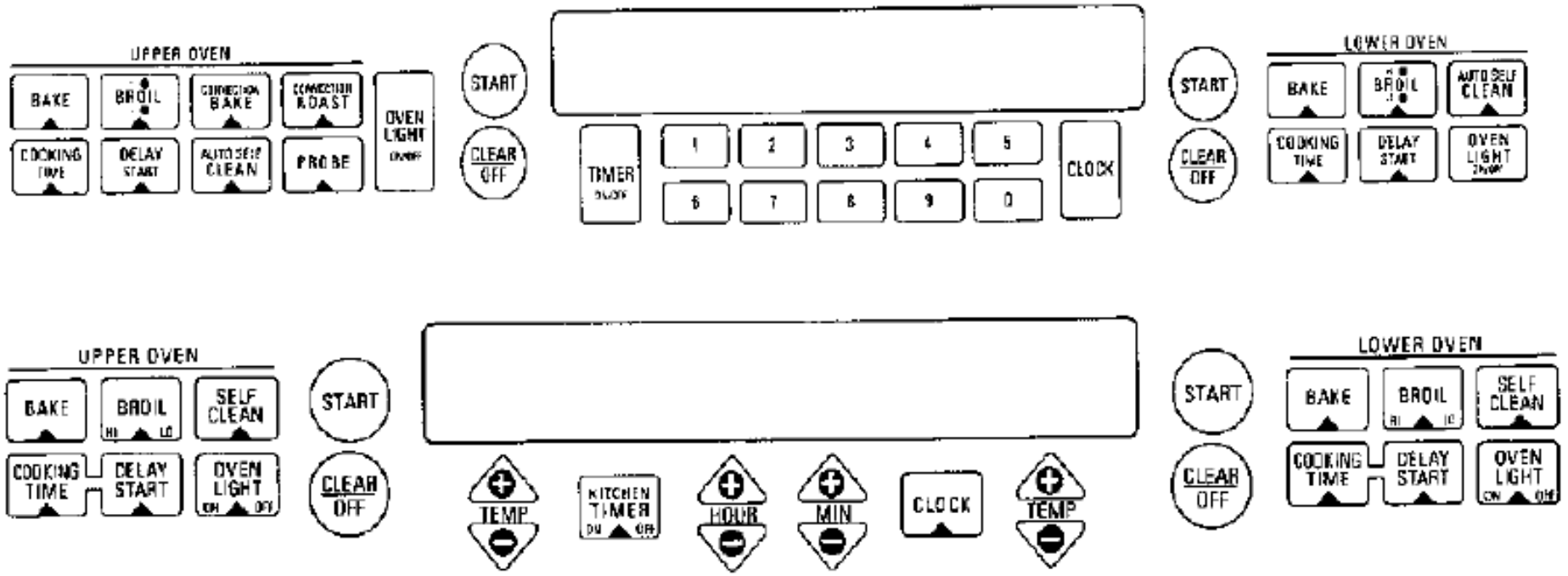
"D" Series Controls



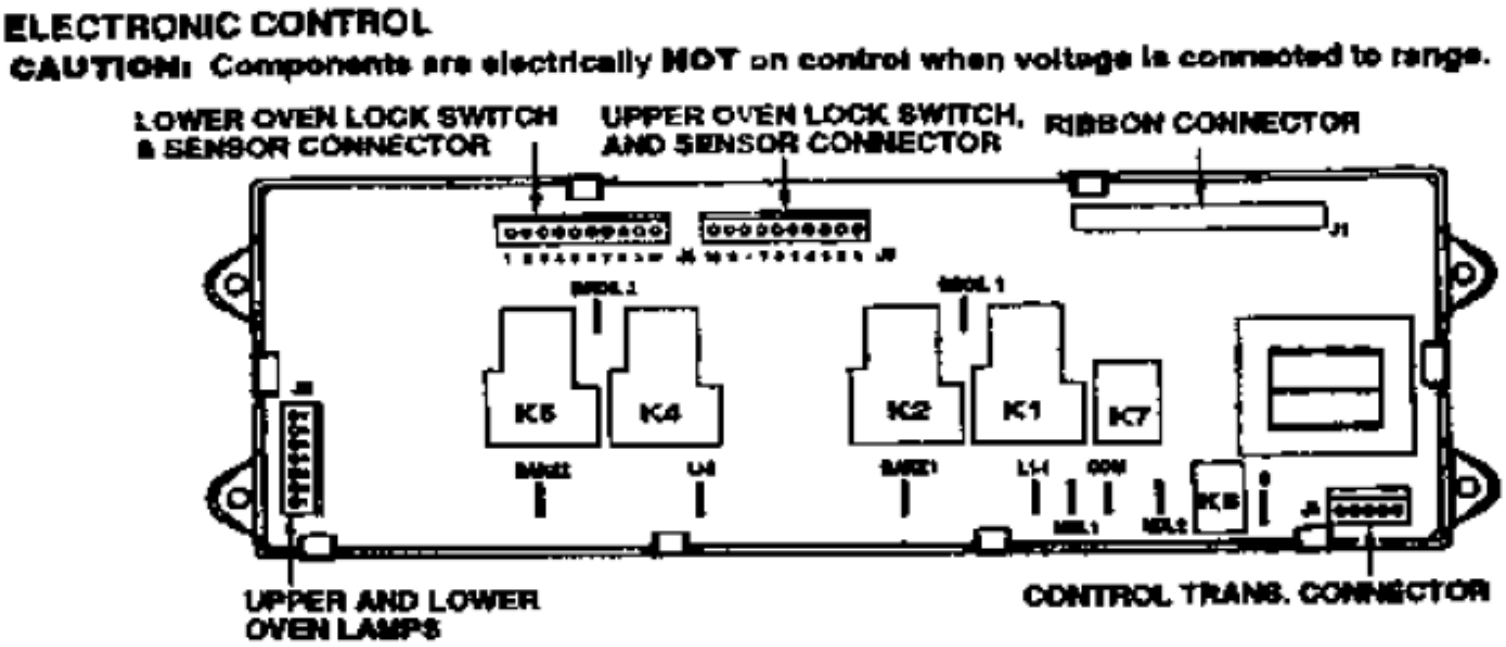
The D & DD seies controls are used on double oven models with lower oven self clean feature. The D control is used on the Microwave models and the DD series controls are used on double oven self clean models.

ERC IIID Series

"DD" SERIES CONTROLS



ERC IIID Series



The operation of the "D" and "DD" series controls are identical to the controls covered earlier in this manual. The programing of the control will be the same as the "A" control for the ones with number pads and the "B" membrane control for the ones with the up down arrow pads. The circuits and control checks will be the same as the "A" series.

1999 Spectra Series

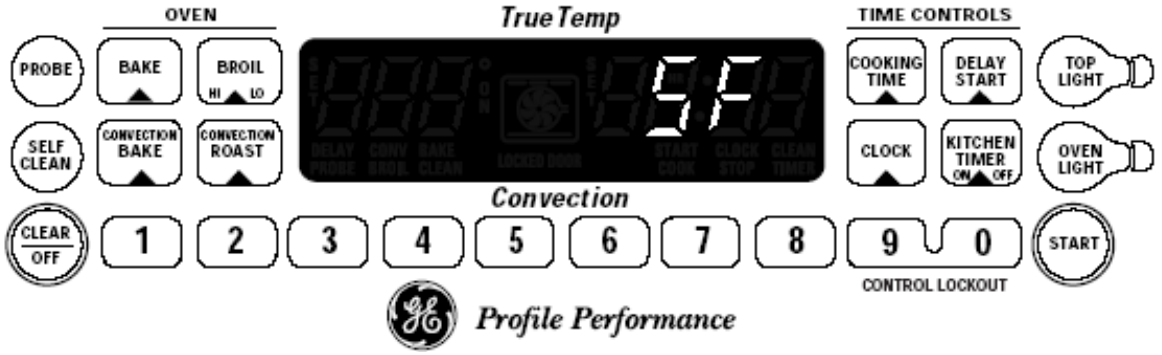
JB960B
JB940B
JBP79B
JBP78B
JBP63B
JBP64B
JBP66B
JBP60B
JBP48B
JBP35B
JBP30B
JBP26B
JBP24B
JBP21B
JBP19B

1999 Spectra Series

ERC V SPECIAL FEATURES

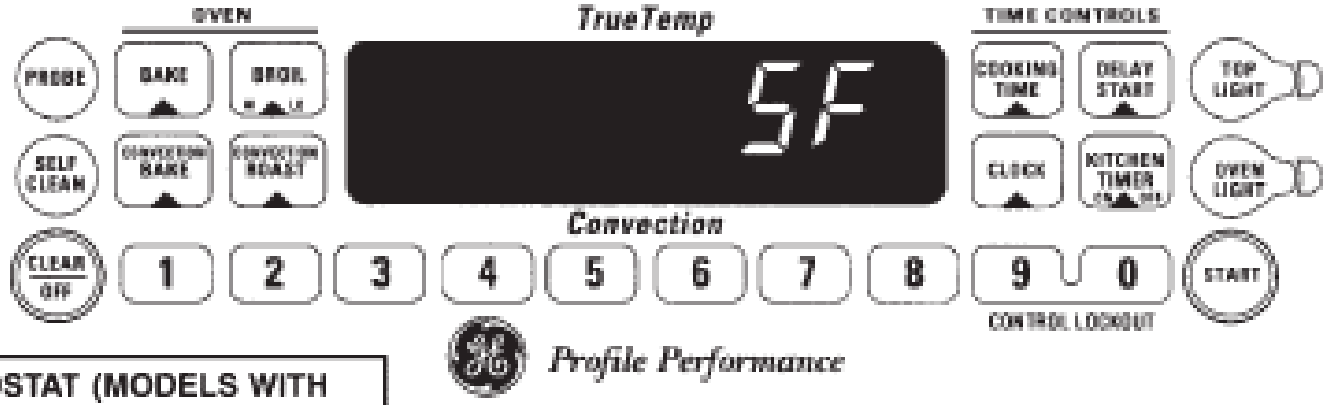
The "SPECIAL FEATURE" modes can only be activated while the display is showing the time of day clock. These special features remain in the ERC's memory until you or the consumer change them. When the display shows your choice press the START pad. The special feature you selected will remain in memory even after a power failure.

ERC V



1999 Spectra Series

ERC V



TO ADJUST THE THERMOSTAT (MODELS WITH NUMBER PADS)

BAKE + BROIL HI/LO — Press the BAKE and BROIL HI/LO pads at the same time for 2 seconds until the display shows "SF".

BAKE — Press the BAKE pad. A two digit number shows in the display. Press the BAKE pad once to increase (+) the oven temp. or twice to decrease (-).

1 + 5 — The oven temp. can be adjusted up to (+) 35˚F. hotter or (-) 35˚F. cooler. Press the number pads the same way you read them. For example, to change the over temperature 15˚F., press 1 and 5.

START — When you have made the adjustment, press the START pad to go back to the time of day display.

NOTE: Adjustments will not affect the broiling or self-cleaning temperatures. **It will be retained in memory after a power failure.**

1999 Spectra Series

12 HOUR SHUT-OFF

With this feature, should you forget and leave the oven on, the control will automatically turn off the oven after 12 hours, during baking functions, or after 3 hours during a broil function. If you wish to turn off this feature, follow the steps below:

Press the BAKE and BROIL HI/LO pads at the same time for 2 seconds until the display shows "SF".

Press the DELAY START or START TIME pad. The display will show "12 Shdn" (12 hour shut-off). Press the DELAY START or START TIME pad again and the display will show "no Shdn" (no shut-off).

Press the START pad to activate the no shut-off and leave the control set in this special features mode.

12 HOUR, 24 HOUR OR CLOCK BLACK-OUT

The ERC control is set to use a 12 hour clock. If the customer prefers to have a 24 hour military time clock or black-out the clock display, follow the steps below.

Press the BAKE and BROIL HI/LO pads at the same time for 2 seconds until the display shows "SF".

Press the CLOCK pad once. The display will show "12 hr."

Press the CLOCK pad again to change to the 24 hour military time clock. The display will show "24 hr." If this is your choice, press START.

Press the CLOCK pad again to black-out the clock display. The display will show "OFF." If this is your choice, press START.

If the clock is in the black-out mode and you want to restore it to the display, repeat steps 1 and 2.

NOTE: If the clock is in the black-out mode you will not be able to use the DELAY START function.

1999 Spectra Series

COOKING/SELF-CLEAN LOCKOUT

The ERC control will allow you to lock out the COOKING and SELF CLEAN pads so that they cannot be activated when touched.

Press the BAKE and BROIL HI/LO pads at the same time for 3 seconds until the display shows "SF".

Press the SELF CLEAN pad. The display will show "Loc OFF." If this is your choice, press START.

Press the SELF CLEAN pad again. The display will show "Loc On." If this is your choice, press START.

When this feature is on and the touch pads are pressed the control will beep and the display will show "LOC."

NOTE: The control lockout mode will not affect the clock, kitchen timer on/off and oven light touch pads

COOK AND HOLD

The cook and hold feature keeps cooked foods warm for up to 3 hours after the cooking function is finished. To activate this feature, follow the steps below:

Press the BAKE and BROIL HI/LO pads at the same time for 2 seconds until the display shows "SF".

Press the COOKING TIME pad. The display will show "HLd OFF." Press the COOKING TIME pad again to activate the feature. The display will show "HLd On."

Press the START pad to activate the cook and hold feature and leave the control set in this special features mode.

1999 Spectra Series

TONES AT THE END OF A TIMED CYCLE

At the end of a timed cycle, 3 short beeps will sound followed by one beep every 6 seconds, until the CLEAR/OFF pad is pressed. This continuous 6 second beep may be canceled.

To cancel the 6 second beep:

Press the BAKE and BROIL HI/LO pads at the same time for 2 seconds until the display shows "SF".

Press the KITCHEN TIMER ON/OFF pad. The display shows "Con bEEP" (continuous beep). Press the KITCHEN TIMER ON/OFF pad again. The display shows "bEEP." This cancels the one beep every 6 seconds.

Press the START pad.

FAHRENHEIT OR CENTIGRADE TEMPERATURE

The ERC control is set to use the Fahrenheit temperature selections, but you may change this to use the Centigrade selections.

Press the BAKE and BROIL HI/LO pads at the same time for 3 seconds until the display shows "SF".

Press the BROIL HI/LO pad. The display will show "F" (Fahrenheit). If this is your choice, press START.

Press the BROIL HI/LO pad again. The display will show "C" (Centigrade). If this is your choice, press START.

SALES MODE

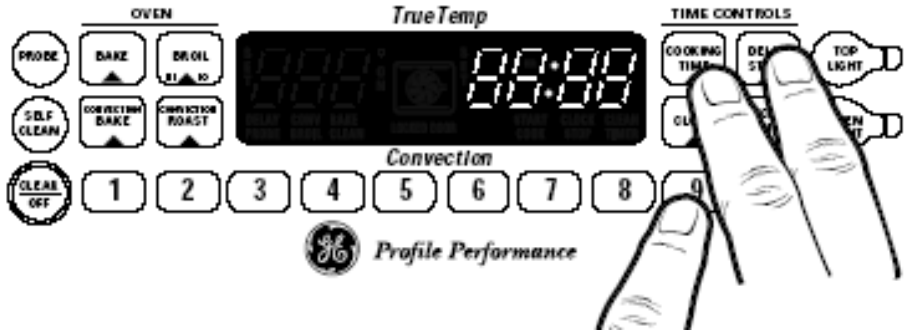
Display continuously scrolls through cooking functions, display icons, and numbers.

To activate this feature: Press the BAKE and BROIL HI/LO pads at the same time for 2 seconds, until the display shows "SF". Press and hold both the CLOCK and KITCHEN TIMER pads until the display starts scrolling.

(SG23)

1999 Spectra Series

ERC FAULT CODE MEMORY TEST



ERC FAULT CODE MEMORY DISPLAY

Have you ever run a service call and been told by the consumer that their range displayed an "F" fault code and when you arrive the fault is gone (cleared by the consumer) and the consumer can not remember what the code was?

Well there is a way to "recall" the last four fault codes from the ERC memory. These codes are stored in short term memory (RAM) and can be recalled by the service Technician; however, **it is important to note that once power is lost to the appliance the memory (RAM) is cleared and "reset" to all eights**. When servicing a range for a fault code problem, always remove power to the unit. This will protect you from electrical hazards and will also reset the fault code memory storage back to all eights.

1999 Spectra Series

HOW TO DISPLAY THE FAULT CODES IN MEMORY

To read the fault code memory, follow the steps below:

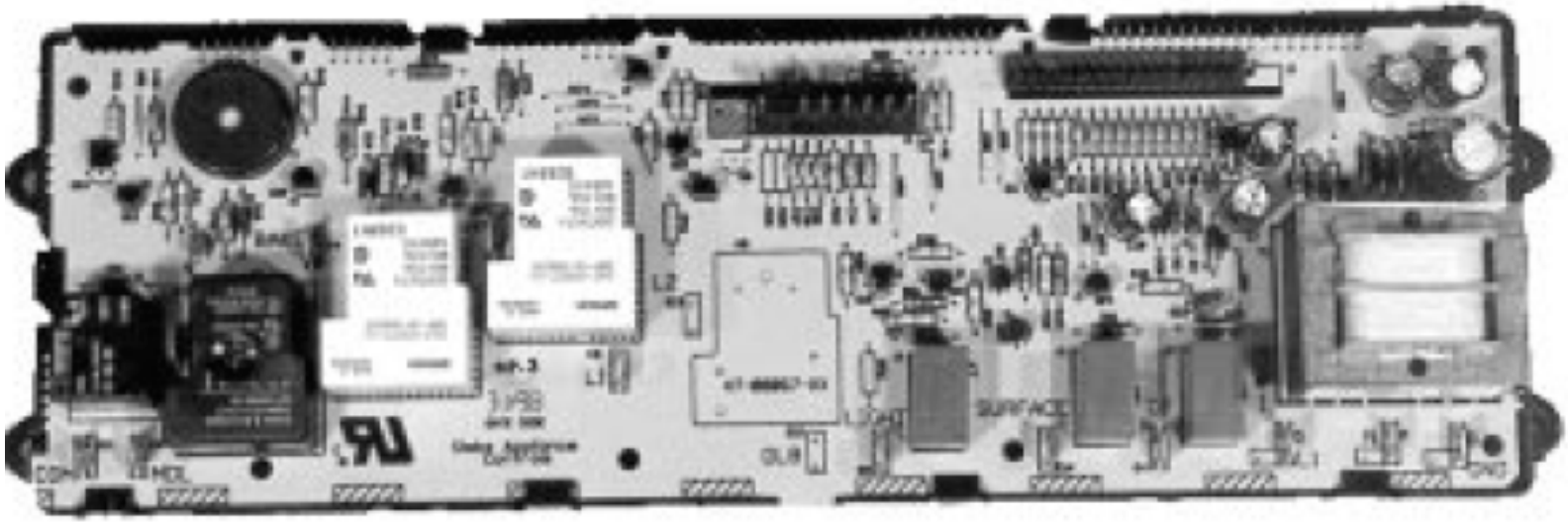
1. Simultaneously press and **hold** the COOKING TIME and DELAY START pads. While holding these two pads press the number 9 pad. A history of the last four fault codes will appear in the display. NOTE: If no keypad entry is made within 5 minutes, the ERC test mode will "time out".
2. To terminate the memory fault mode press the CLEAR / OFF key pad

1999 Spectra Series

FAILURE CODE	MEANING	CORRECTION
-F0- -F1- -F7-	Stuck key pad or transistor failure. May mean relay is turned on.	If code cannot be cancelled, replace control.
-F2- Also see fan thermal switches	Indicates that oven is over temperature in one of the following modes within either a cooking or clean mode of operation. • Control senses oven temperature above 630°F with the door circuit in the unlock mode. • Control senses oven temperature above 930°F with the door in the door locked mode.	• Look for welded relay contacts. (Heating elements on in off mode). • Look for high resistance in the sensor circuit due to high contact resistance (poor terminal crimp, deformed terminals, loose connection inside sensor tube) or intermittent solder joint. • Electrical noise interference in the sensor circuit (Ham radio, cordless phone etc.).
-F3- -F4-	Open sensor (circuit) (over 2700 ohms) Shorted sensor (circuit) (under 950 ohms) Could be result of contamination on terminals, pinched harness lead, or cold solder joint on control.	• Disconnect power to range. • Disconnect sensor connector at control. Measure sensor resistance at control connector (take care not to damage terminals in block) - Should read 1100Ω at room ambient (approx. 72°F).
	• Measure each sensor lead from connector block to ground. If shorted, look for pinched or cut wire in sensor circuit. • Check connector terminals - Look for deformed or corrosion on terminals. Repair or replace. • Check connector at sensor (remove sensor and carefully pull leads with connector into oven) • If all above is ok replace control.	
-FC-	Problem with door lock circuit such as pinched wires between control and door lock switches.	Check wiring and test operation of switches. Perform resistance check.
-FF-	Door motor safety switch transistor failure	Replace control.
-F5-	Loss of relay drive circuit	• Press Clear/Off and reprogram control. If -F5- code reappears, replace control.
	• Check sensor circuit. • Check lock circuit. If all above check OK the F5 code can be a result of a momentary loss of power **(DO NOT REPLACE CONTROL AND LOCK.)** Check lock circuit.	

1999 Spectra Series

NOTE:Connections can be intermittent due to a corrosive buildup between the connection to the terminals, or by being bent by the insertion of a probe, etc.



1999 Spectra Series

ERC ON BOARD DIAGNOSTIC TESTS

This test allows the Technician to energize various bake, broil, and convection circuits. This test will also allow you to energize the oven light and top panel light, and test key panel responses.

How To Enter And Exit The Diagnostic Mode

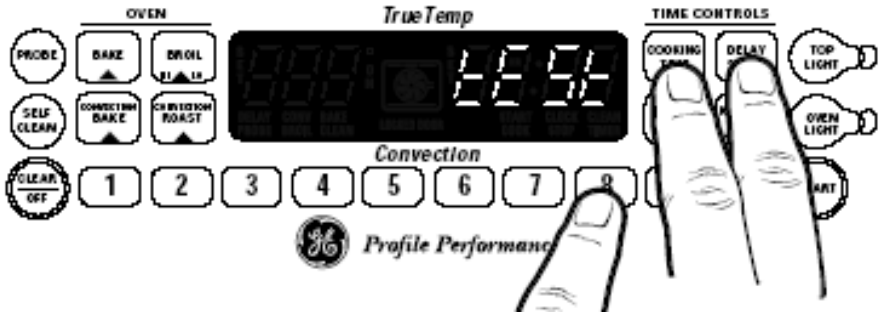
To perform the ERC diagnostic tests, follow the steps below:

1. To initiate the ERC test mode, first remove power to the appliance for approx. 8 seconds and then reapply power.
2. Simultaneously press and **hold** the COOKING TIME and DELAY START pads. While holding these two pads press the number 8 pad. The word "tESt" will appear in the ERC display. NOTE: If no keypad entry is made within 5 minutes, the ERC test mode will "time out".
3. To terminate the ERC test mode, press the CLEAR / OFF key pad.

How To Perform The Tests

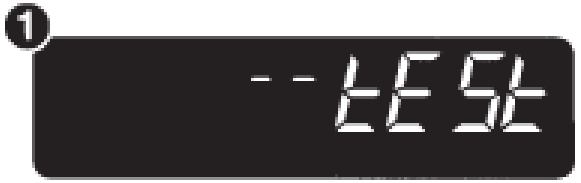
The following tests allow you to quickly verify various ERC and keypad functions. Listed below are the diagnostic tests that can be performed directly from the ERC.

NOTE: If anyone of the keypads is pressed and held too long the ERC may terminate the test mode, beep continuously, or display F7.

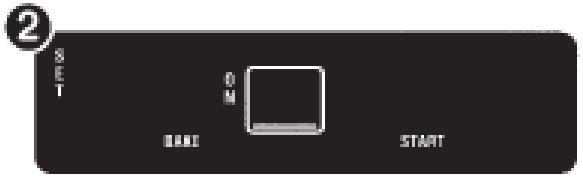


1999 Spectra Series

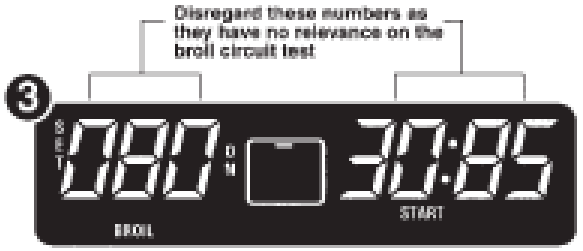
1. ***CONVECTION FAN MOTOR TEST*** - To perform this test, press and hold the CONVECTION ROAST pad (**for the fan to energize the door must be closed**). Quickly open the door an listen for the convection fan motor. As soon as you release the CONVECTON ROAST pad the fan motor will deenergize. If the fan motor did not energize, check the following: reconfirm that you have entered the test mode correctly, check power and wiring connections to the ERC, check for a bad fan motor, door switch or ERC.



2. ***ENERGIZE BAKE CIRCUIT*** - To perform this test, press BAKE then START and listen for the bake relay to energize. **CAUTION:** If you hold the start pad in, you are energizing the bake element. As soon as you release the START pad the relay will deenergize. If the relay does not energize, check the following: reconfirm that you have entered the test mode correctly, check power and wiring connections to the ERC, check for an open bake element and lastly, suspect a faulty ERC.



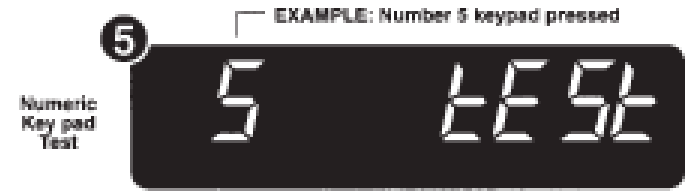
3. ***ENERGIZE BROIL CIRCUIT*** - To perform this test, press BROIL then START and listen for the broil relay to energize. **CAUTION:** if you hold the start pad in, you are energizing the broil element. As soon as you release the START pad the relay will deenergize. If the relay does not energize, check the following: reconfirm that you have entered the test mode corrrectly, check power and wiring connections to the ERC, check for an open broil element, and lastly, suspect a faulty ERC.



(SG23)

4. ***ENERGIZE CONVECTION BAKE CIRCUIT*** - To perform this test press CONVECTION BAKE then START and listen for the convection bake relay to energize. **CAUTION:** If you hold the start pad in, you are energizing the convection element. As soon as you release the START pad the relay will de-energize. If the relay does not energize, check the following: Reconfirm that you have entered the test mode correctly, check power and wiring connections to the ERC, check for an open convection element, and lastly suspect a faulty ERC.

5. ***NUMERIC KEY PADS TEST*** - To perform proper numeric key panel responses, press any numbered key pad and hold it in for approximately 5 seconds; the number you are pressing will show in the ERC display. If it does not, reconfirm that you have entered the test mode correctly, check wiring connections to the ERC and keypad ribbon.



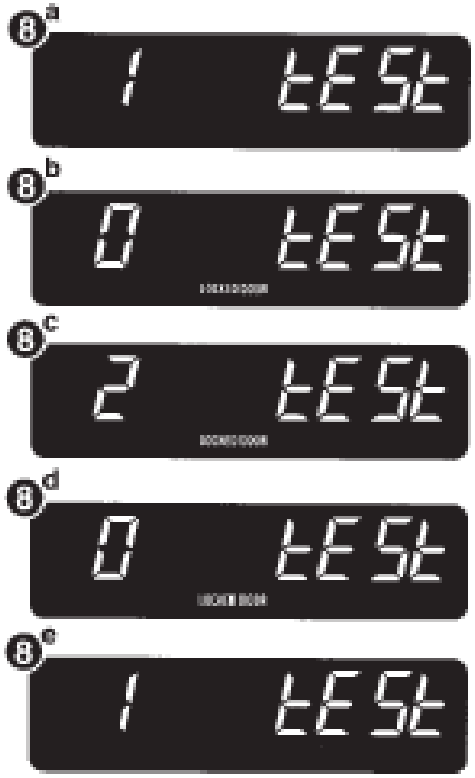
6. ***ENERGIZE OVEN LIGHT CIRCUIT*** - To perform this test press OVEN LIGHT then START and listen for the oven light relay to energize. Look through the front window of the oven door to see the light come on. As soon as you release the OVEN LIGHT pad the oven light relay will de-energize. If the relay does not energize, check the following: reconfirm that you have entered the test mode correctly, check power and wiring connections to the ERC, check for an open light bulb, and lastly, suspect a faulty ERC.

7. ***ENERGIZE TOP PANEL LIGHT CIRCUIT*** - To perform this test, press the TOP LIGHT key pad, and watch the top fluorescent light energize. As soon as you release the TOP LIGHT pad the fluorescent light will deenergize. If the light does not energize, check the following: reconfirm that you have entered the test mode correctly, check power and wiring connections to the ERC, check for a defective bulb, starter or ballast and lastly suspect a faulty ERC.

1999 Spectra Series

8. ***LOCK MOTOR CYCLE TEST*** - This test allows you to run the lock motor through one complete cycle of operation; testing lock motor operation, and front and rear latch switch contacts. To perform this test push and hold the SELF CLEAN key pad - make sure that the oven door is closed (light switch depressed). While depressing the SELF CLEAN pad, the lock motor will run through a complete cycle. Watch the ERC display closely as it will change based on the location of the motor and logic switch contact positions (open or closed).

Illustrations 8a, 8b, 8c, 8d, & 8e show the sequence of events that will occur during the complete lock motor cycle. Notice the numbers shown in the left side of each display represent the position of the lock motor as well as the logic switch contact positions (open or closed). While performing the lock motor cycle test, the words LOCKED DOOR will **flash** in the ERC display during 8b and 8d.



UNLOCKED POSITION
Rear switch contacts open
Front switch contacts closed

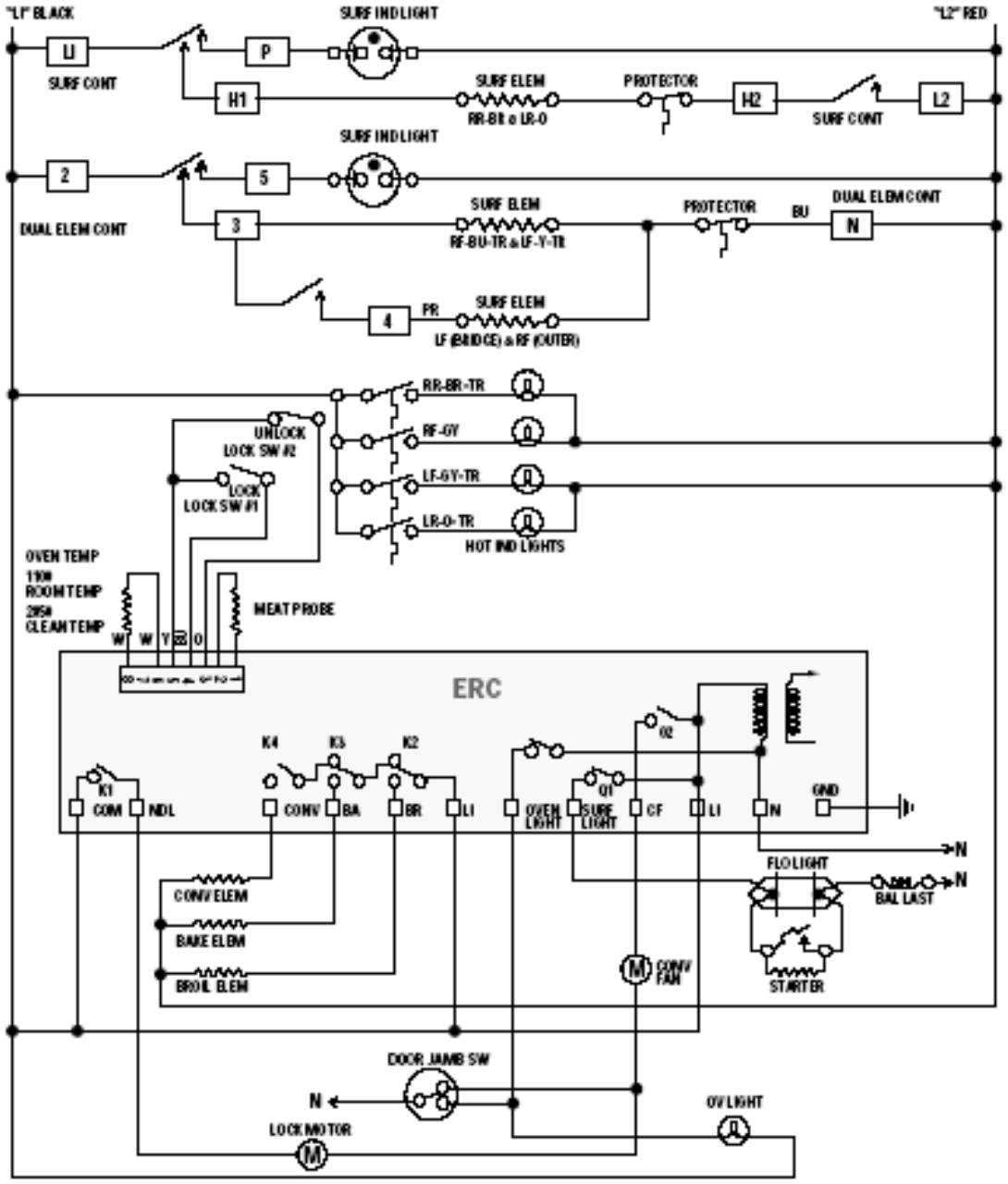
Moving toward LATCHED POSITION
Rear switch contacts open
Front switch contacts open

LATCHED POSITION
Rear switch contacts closed
Front switch contacts open

Moving toward UNLOCKED POSITION
Rear switch contacts open
Front switch contacts open

Return to UNLOCKED POSITION
Rear switch contacts open
Front contacts closed

1999 Spectra Series



RELAY CONTACT MADE	ERC				
	K1	Q2	K2 - BR	K4 - CV	K3 - BA
BAKE			**		**
BROIL			**		
CLEAN	*		***		***
CONV BAKE		*		**	
CONV ROAST		*	**		

2002 – 27” & 30” Wall Ovens

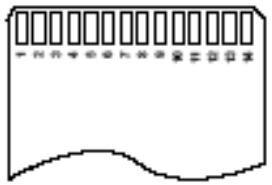
JT912	JCKP15
JT952	JCKP18
JT955	JCKP20
JT965	JKS05
JKP15	JKS06
JKP18	JCKS05
JKP20	JCKS06
JKP27	JCK915
JKP28	JCT915
JKP45	JK955
JKP48	JT955
JKP56	ZEK938
JKP85	ZEK957
JKP86	ZEK958
JTP20	ZET938
JTP28	ZET958
JTP48	
JTP86	

2002 – 27” & 30” Wall Ovens

Models JT912

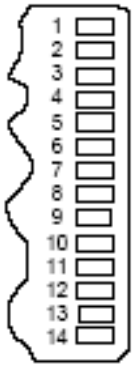
FUNCTION	HP DIGI MEMBRANE PINS
Bake	1 to 8
Broil	2 to 5
Clean	2 to 9
Oven Light	3 to 6
Cooking Time	2 to 8
Delay Start Time	1 to 6
Kitchen Timer	2 to 6
Clock	1 to 5
Clear/Off	2 to 11
Start	2 to 7
Conv. Bake	4 to 8
Conv. Roast	3 to 8
Probe	2 to 10
Proofing	1 to 10
Warm	1 to 9

FUNCTION	HP DIGI MEMBRANE PINS
1	3 to 9
2	4 to 9
3	3 to 11
4	4 to 11
5	4 to 6
6	3 to 7
7	4 to 7
8	3 to 10
9	4 to 10
0	4 to 5
Short	1 to 11
	2 to 12



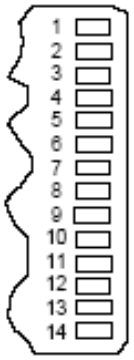
Model JKP28 and JTP28

FUNCTION	CONDUCTORS
BAKE	12 to 14
BROIL	11 to 14
CLEAN	9 to 14
OVEN LIGHT	9 to 13
COOKING TIME	11 to 13
DELAY START TIME	12 to 13
KITCHEN TIMER	10 to 14
CLOCK	10 to 13
CLEAR/OFF	3 to 4
START	1 to 2
UP TEMP	6 to 13
DN TEMP	6 to 14
UP HOUR	7 to 13
DN HOUR	7 to 14
UP MIN	8 to 13
DN MIN	8 to 14



2002 – 27” & 30” Wall Ovens

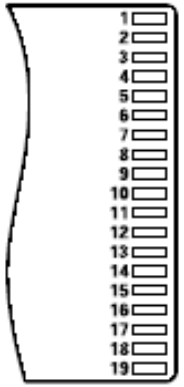
Models JKP20, JCKP20, and JTP20



Function	Conductors
Bake	12 to 14
Broil	11 to 14
Oven Light	9 to 13
Cooking Time	11 to 13
Delay Start Time	12 to 13
Kitchen Timer	10 to 14
Clock	10 to 13
Clear/Off	3 to 4
Clean	9 to 14
Start	1 to 2
Up Temp	6 to 13
Dn Temp	6 to 14

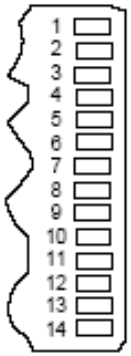
Up Hour	7 to 13
Dn Hour	7 to 14
UP Min	8 to 13
Dn Min	8 to 14

Model JKP48 and JTP48



FUNCTION	DD SLEW MEMBRANE UPPER PINS	DD SLEW MEMBRANE LOWER PINS
Bake	2 to 14	10 to 14
Broil	2 to 13	10 to 13
Clean	3 to 14	11 to 14
Oven Light	3 to 13	11 to 13
Cooking Time	1 to 13	9 to 13
Delay Start Time	1 to 14	9 to 14
Kitchen Timer	4 to 13	----------
Clock	4 to 14	----------
Clear/Off	15 to 19	17 to 19
Start	16 to 19	18 to 19
Up Temp	6 to 14	8 to 14
Dn Temp	5 to 14	8 to 12
Up Hour	6 to 13	----------
Dn Hour	5 to 13	----------
UP Min	6 to 12	----------
Dn Min	5 to 12	----------
Short	7 to 12	

Models JKS06 and JCKS06



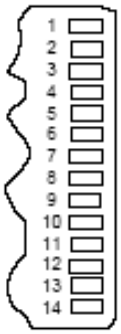
Function	Conductors
Bake	12 to 14
Broil	11 to 14
Oven Light	9 to 13
Cooking Time	11 to 13
Delay Start Time	12 to 13
Kitchen Timer	10 to 14
Clock	10 to 13
Clear/Off	3 to 4
Start	1 to 2
Up Temp	6 to 13
Dn Temp	6 to 14

Up Hour	7 to 13
Dn Hour	7 to 14
UP Min	8 to 13
Dn Min	8 to 14

2002 – 27” & 30” Wall Ovens

Model JKP86

NOTE: Replacement touch pads come as part of the Control panel.



Function	Pins
Bake	11 to 13
Broil	10 to 13
Oven Light	11 to 14
Cooking Time	12 to 10
Delay Start Time	11 to 12
Kitchen Timer	9 to 13
Clock	9 to 12
Clear/Off	3 to 4

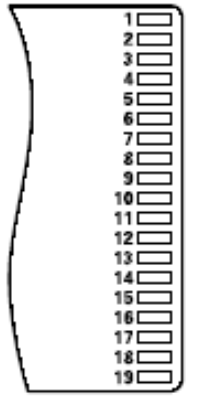
Start	1 to 2
1	14 to 9
2	8 to 14
3	5to 13
4	5 to 12
5	6 to 13
6	6 to 12
7	7 to 14
8	7 to 12
9	7 to 13
0	10 to 14

Model JT952

	UPPER OVEN	LOWER OVEN
FUNCTION	CONDUCTOR	CONDUCTOR
BAKE	5–10	4–8
BROIL	4–10	3–9
CONV. BAKE	6–10	—
CONV. ROAST	2–11	—
COOKING TIME	5–11	3–8
DELAY START TIME	1–10	1–9
CLEAN	3–11	2–8
OVEN LIGHT	1–11	6–9
START	2–10	2–9
CLEAR	2–13	5–14

COMMON FUNCTIONS

Timer	2–12	5	6–13
Clock	4–11	6	4–9
1	3–13	7	5–9
2	4–12	8	6–12
3	5–12	9	3–12
4	4–13	0	5–13
Short	1–13 7–5 2–14	Digit pad type only	



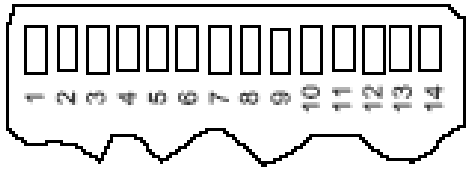
NOTE: Conductors are on either side but not on both.

2002 – 27” & 30” Wall Ovens

Models JT965 and JTP86

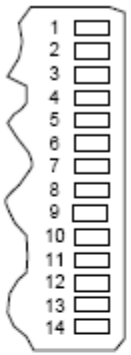
FUNCTION	CONDUCTORS
BAKE	3 to 4
BROIL	1 to 4
CLEAN	2 to 11
OVEN LIGHT	1 to 11
COOKING TIME	1 to 10
DELAY START TIME	3 to 10
KITCHEN TIMER	1 to 9
CLOCK	3 to 9
CLEAR/OFF	13 to 14
START	12 to 14

FUNCTION	CONDUCTORS
PROBE	3 to 11
1	3 to 6
2	3 to 5
3	3 to 8
4	3 to 7
5	1 to 6
6	1 to 5
7	1 to 8
8	2 to 6
9	2 to 5
0	2 to 8



2002 – 27” & 30” Wall Ovens

Models JKP27, JKP15, JCKP15, JKS05 and JCKS05



Function	Pins
Bake	12 to 14
Broil	11 to 14
Oven Light	9 to 13
Cooking Time	11 to 13
Delay Start Time	12 ro 13
Kitchen Timer	10 to 14
Clock	10 to 13
Clear/Off	3 to 4
Clean	9 to 14

NOTE: Replacement touch pads come as part of the Control panel.

Start	1 to 2
Up Temp	6 to 13
Dn Temp	6 to 14
Up Hour	7 to 13
Dn Hour	7 to 14
UP Min	8 to 13
Dn Min	8 to 14

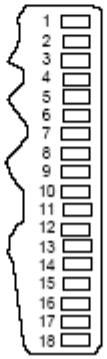
Model JKP85

Function	Pins
Bake	11 to 13
Broil	10 to 13
Oven Light	11 to 14
Cooking Time	12 to 10
Delay Start Time	11 ro 12
Kitchen Timer	9 to 13
Clock	9 to 12
Clear/Off	3 to 4

Start	1 to 2
1	14 to 9
2	8 to 14
3	5to 13
4	5 to 12
5	6 to 13
6	6 to 12
7	7 to 14
8	7 to 12
9	7 to 13
0	10 to 14

Models JKP18 and JCKP18

FUNCTION	PINS	FUNCTION	PINS	FUNCTION	PINS
Bake	3 to 4	Conv. Roast	2 to 10	0	2 to 8
Broil	1 to 4	Probe	3 to 11	Proof	2 to 7
Clean	2 to11	1	3 to 6		
Oven Light	1 to 11	2	3 to 5		
Cooking Time	1 to 10	3	3 to 8		
Delay Start Time	3 to 10	4	3 to 7		
Kitchen Timer	1 to 9	5	1 to 6		
Clock	3 to 9	6	1 to 5		
Clear/Off	13 to 14	7	1 to 8		
Start	12 to 14	8	2 to 6		
Conv. Bake	2 to 4	9	2 to 5		



2002 – 27” & 30” Wall Ovens

Model JKP45

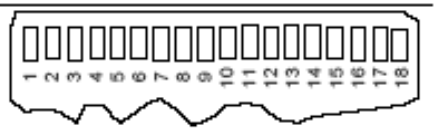
FUNCTION	UPPER OVEN CONDUCTOR	LOWER OVEN CONDUCTOR
Bake	2 — 14	10 — 14
Broil	2 — 13	10 — 13
Cooking Time	1 — 13	9 — 13
Delay Start Time	1 — 14	9 — 14
Clean	3 — 14	11 — 14
Oven Light	3 — 13	11 — 13
Start	16 — 19	18 — 19
Clear	15 — 19	17 — 19
Temp Up	6-14	8-14
Temp Down	5-14	7-14

COMMON FUNCTIONS

Timer	4 — 13
Clock	4 — 14
Hour Up	6 — 14
Hour Dn	5 — 14
Min Up	8 — 14
Min Dn	7 — 14

Models JKP56 and ZEK957

FUNCTION	UPPER OVEN CONDUCTOR	LOWER OVEN CONDUCTOR
Bake	2 — 14	10 — 14
Broil	2 — 13	10 — 13
Conv. Bake	2 — 13	10 – 12
Conv. Roast	1 — 12	9 – 12
Cooking Time	1 — 13	9 — 13
Delay Start Time	1 — 14	9 — 14
Clean	3 — 14	11 — 14
Probe	3 — 12	11 – 12
Oven Light	3 — 13	11 — 13
Start	16 — 19	18 — 19
Clear	15 — 19	17 — 19



COMMON FUNCTIONS

Timer	4 — 13	5	6 — 13
Clock	4 — 14	6	5 — 13
1	6 — 14	7	8 — 13
2	5 — 14	8	6 — 12
3	8 — 14	9	5 — 12
4	7 — 14	0	8 — 12

2002 – 27” & 30” Wall Ovens

Glass Touch Models ONLY

Touch Control

Check the touch control panel for delamination to make sure the touch board is not separating from the glass. Next, check to **make sure the resistance is infinitely high between ALL pins**. Any impedance implies a faulty touch control.

Attention: The new glass touch models maintain a constant exchange of information between the touch control and the main board through a ribbon cable. These signals have an upper and lower value limit for the ERC to interpret them correctly. Any interruption to this connection will break the continuity, and possibly push the parameters outside the limits. This will issue an F0 fault code, and cause the controls to **not** function.
When any service is performed that requires moving, or removing, the touch control or main board, the glass touch parameters must be set.

2002 – 27” & 30” Wall Ovens

Setting Touch Control Parameters

Note: After installing the control, the glass touch parameters **must** be set. **If they are not set, the control will not operate.**

To set these parameters on a new part installation:

1) Reassemble the control panel and return the oven to its normal installation.
2) Reset circuit breaker to apply power to the oven. The control will briefly display all LED segments, briefly display “LOC REF,” then display all segments again for 30 seconds, and finally display “LOC REF” continuously. After this sequence is completed, proceed to step 3.
3) For digital keypads, press the “6” and “8” keys simultaneously.
   For slew keypads, press the “Hour Down” and “Minute Up” keys simultaneously.
4) The control will then display the time of day and operate.
5) If steps 2 through 4 do not occur as described, repeat the process.
6) Check the control for operation, especially the “Clear/Off” and/or “Cancel” keys.

Steps to Follow if the Control IS Replaced			
Step	**Key presses (Digi-pad)**	**Key presses (Slew-pad)**	**Action**
3	6 & 8	Hour Down & Minute Up	Acknowledge LOCK REF

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Note: If for any reason the control panel is opened, or if the new control still does not operate as described above, complete the following steps:

1) Press the “Bake” and “Broil” keys simultaneously.

2) For digital keypads, press the “9” and “0” keys simultaneously for 5 seconds.

   For slew keypads, press the “Hour Down” and “Minute Down” keys simultaneously for 5 seconds.

3) Wait approximately 20 seconds after the time of day is displayed.

4) For digital keypads, press the “1” and “5” keys simultaneously.

   For slew keypads, press the “Temp Up” and “Minute Up” keys simultaneously.

5) The control will briefly go blank,briefly display all LED segments, briefly display “LOC REF,” then display all segments for 30 seconds, and finally display “LOC REF.”

6) For digital keypads, press the “6” and “8” keys simultaneously.

   For slew keypads, press the “Hour Down” and “Minute Up” keys simultaneously.

7) The control will then display the time of day and operate.

8) Check the control for operation, especially the “Clear/Off” and/or “Cancel” keys.

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Steps to Follow if the Control NOT Replaced			
Step	**Key presses (Digi-pad)**	**Key presses (Slew-pad)**	**Action**
1	Bake & Broil	Bake & Broil	Enter SF
2	9 & 0	Hour Down & Minute Down	Reset Control
4	1 & 5	Temp Up & Minute Up	Reset LOCK REF
6	6 & 8	Hour Down & Minute Up	Acknowledge LOCK REF

PROBLEM DESCRIPTION	TROUBLESHOOTING GUIDE	ACTION
BLANK DISPLAY	1. VERIFY WIRING FROM HOUSE TO UNIT IS CORRECT. 2. VERIFY CORRECT VOLTAGE TO UNIT. 3. VERIFY CORRECT VOLTAGE TO CONTROL. 4. INSPECT TRANSFORMER FOR DAMAGE.	REPLACE CONTROL
F0 DISPLAYED	MODEL JT912 1. DISCONNECT, INSPECT & RECONNECT MEMBRANCE TO CONTROL. 2. IF F0 DISPLAYED AGAIN, DISCONNECT RIBBON CABLE & MEASURE RESISTANCE ACROSS PINS 2 & 11, SHOULD BE OPEN.	REPLACE CONTROL PANEL
F0 DISPLAYED	MODEL JT965/JTP86 1. DISCONNECT, INSPECT & RECONNECT MEMBRANCE TO CONTROL. 2. IF F0 DISPLAYED AGAIN, DISCONNECT RIBBON CABLE & MEASURE RESISTANCE ACROSS PINS 13 & 14, SHOULD BE OPEN.	REPLACE CONTROL PANEL
F0 DISPLAYED	MODEL JT952 1. DISCONNECT, INSPECT & RECONNECT MEMBRANCE TO CONTROL. 2. IF F0 DISPLAYED AGAIN, DISCONNECT RIBBON CABLE & MEASURE RESISTANCE ACROSS PINS 5 & 14, SHOULD BE OPEN.	REPLACE CONTROL PANEL
F0 DISPLAYED	MODEL JKP48/JTP48 1. DISCONNECT, INSPECT & RECONNECT MEMBRANCE TO CONTROL. TEST KEYS. 2. IF F0 DISPLAYED AGAIN, DISCONNECT RIBBON CABLE & MEASURE RESISTANCE ACROSS PINS 7 & 12, SHOULD BE OPEN.	REPLACE CONTROL PANEL

PROBLEM DESCRIPTION	TROUBLESHOOTING GUIDE	ACTION
F0/F7 DISPLAYED	MODEL JKP86 1. DISCONNECT, INSPECT & RECONNECT MEMBRANCE TO CONTROL. TEST KEYS. 2. IF F0 DISPLAYED AGAIN, PUSH CLEAR/OFF KEY, DISCONNECT RIBBON CABLE, WAIT 3 MINUTES.	IF CODE RECURS WHEN RIBBON UNPLUGGED REPLACE CONTROL. IF CODE DOES NOT RECUR, REPLACE CONTROL PANEL.
F0 DISPLAYED	MODELS JCK915/JCT915/JK915/JT915/JK955/JT955/ZEK938/ ZET958 1. REINITIATE LOC REF PROCEDURE BY PRESSING BAKE/BROIL SIMULATANEOUSLY. 2. FOR DIGITAL KEYPADS PRESS "9" & "0" KEYS SIMULATANEOUSLY FOR 5 SECONDS. FOR SLEW KEYPADS, PRESS "HOUR DOWN" & "MINUTE DOWN" KEYS SIMULATANEOUSLY FOR 5 SECONDS. 3. FOR DIGITAL KEYPADS PRESS "1" & "5" KEYS SIMULTANEOUSLY. FOR SLEW KEYPADS PRESS "TEMP UP" & "MINUTE UP" KEYS SIMULTANEOUSLY. 4. CONTROL GOES BLANK, THEN ALL LED SEGMENTS ARE DISPLAYED, THEN "LOC REF", THEN ALL LED SEGMENTS AGAIN FOR 30 SECONDS, THEN "LOC REF" 5. FOR DIGITAL KEYPADS PRESS "6" & "8" KEYS SIMULTANEOUSLY. FOR SLEW KEYPADS PRESS "HOUR DOWN" & "MINUTE UP" KEYS SIMULTANEOUSLY. 6. CONTROL WILL DISPLAY TIME OF DAY & OPERATE.	REPLACE CONTROL IF CONTROL DOES NOT FUNCTION AFTER PERFORMING LOC REF PROCEDURE. **NOTE: WHEN REPLACING CONTROLS LOC REF MUST BE ACKNOWLEDGED BY PRESSING "6" & "8" FOR DIGITAL KEYPADS, "HOUR DOWN" & "MINUTE UP" FOR SLEW KEYPADS.**

PROBLEM DESCRIPTION	TROUBLESHOOTING GUIDE	ACTION
F2 DISPLAYED	1. PUT UNIT IN SENSOR MODE BY TURNING POWER OFF THEN ENERGIZE PRESSING "COOK TIME" KEY. SENSOR TEMP WILL APPEAR. IF BAD READING VERIFY SENSOR RESISTANCE. 2. VERIFY COOLING FAN OPERATION. FAN STARTS IMMEDIATELY UPON HITTING START KEY. IF NOT OPERATING VERIFY 120VAC TO FAN LEADS. CHECK FAN RELAY ON CONTROL. 3. VERIFY INSTALLATION TO ENSURE PROPER CLEARANCE ON BOTTOM OF UNIT TO ALLOW PROPER COOLING AIR FLOW. 4. VERIFY THERMAL SWITCH IS OPEN/CLOSED. THERMAL SWITCH IS NORMALLY CLOSED. 5. VERIFY RELAY CONTACT OPERATION. ENSURE THAT RELAYS ARE NOT WELDED SHUT.	IF SENSOR RESISTANCE IS NOT ~ 1080Ω REPLACE SENSOR AND VERIFY SENSOR OPERATION. IF FAULTY FAN REPLACE FAN THEN VERIFY UNIT OPERATION. IF FAULTY THERMAL SWITCH REPLACE SWITCH THEN VERIFY UNIT OPERATION. IF INSTALLATION IS INCORRECT, CORRECT INSTALLATION AND THEN VERIFY UNIT OPERATION. IF CONTROL'S RELAY IS BAD REPLACE CONTROL.
F3 DISPLAYED	1. DISCONNECT POWER. MEASURE SENSOR RESISTANCE. NORMAL RESISTANCE IS ~ 1080Ω. 2. IF SENSOR RESISTANCE IS NORMAL THEN LOOK FOR DAMAGE TO HARNESS TERMINALS OR SENSOR HARNESS WIRING.	IF SENSOR IS BAD REPLACE SENSOR. IF WIRING IS PINCHED/DAMAGED REPLACE WIRING.
F4 DISPLAYED	1. DISCONNECT POWER. MEASURE SENSOR RESISTANCE. NORMAL RESISTANCE IS ~ 1080Ω. 2. IF SENSOR RESISTANCE IS NORMAL THEN LOOK FOR DAMAGE TO HARNESS TERMINALS OR SENSOR HARNESS WIRING.	IF SENSOR IS BAD REPLACE SENSOR. IF WIRING IS PINCHED/DAMAGED REPLACE WIRING.
F5 DISPLAYED	1. SENSOR CIRCUIT SUPERVISOR FAILURE. NO NEED FOR TROUBLESHOOTING.	REPLACE CONTROL
F7 DISPLAYED	FOR ALL MEMBRANE KEYPADS 1. DISCONNECT POWER. 2. DISCONNECT RIBBON FROM CONTROL. REFER TO KEY PANEL TEST IN MINI MANUAL TO MEASURE RESISTANCE ACROSS THE CORRECT PINS. 3. CONFIRM RESISTANCE IS > 1000Ω. IF < 1000Ω, SHORTED KEY.	REPLACE CONTROL PANEL

PROBLEM DESCRIPTION	TROUBLESHOOTING GUIDE	ACTION
F7 DISPLAYED	FOR ALL GLASS TOUCH KEYPADS 1. DISCONNECT POWER. 2. DISCONNECT RIBBON FROM CONTROL. 3. POWER UP UNIT.	IF NO F CODE, REPLACE CONTROL PANEL. IF F CODE, REPLACE CONTROL.
F8 DISPLAYED	FOR ALL MEMBRANE KEYPADS 1. DISCONNECT POWER. 2. CONNECT POWER.	IF F8 REPEATED, REPLACE CONTROL.
F9 DISPLAYED	1. VERIFY COOLING FAN OPERATION. FAN STARTS IMMEDIATELY UPON HITTING START KEY. IF NOT OPERATING VERIFY 120VAC TO FAN LEADS. CHECK FAN RELAY ON CONTROL. 3. VERIFY INSTALLATION TO ENSURE PROPER CLEARANCE ON BOTTOM OF UNIT TO ALLOW PROPER COOLING AIR FLOW. 4. VERIFY THERMAL SWITCH IS OPEN/CLOSED. THERMAL SWITCH IS NORMALLY CLOSED. 5. VERIFY RELAY CONTACT OPERATION. ENSURE THAT RELAYS ARE NOT WELDED SHUT. 6. LOCK MOTOR WILL CONTINUOUSLY CYCLE CLOSED/OPEN.	IF FAULTY FAN REPLACE FAN THEN VERIFY UNIT OPERATION. IF FAULTY THERMAL SWITCH REPLACE SWITCH THEN VERIFY UNIT OPERATION. IF INSTALLATION IS INCORRECT, CORRECT INSTALLATION AND THEN VERIFY UNIT OPERATION. IF CONTROL'S RELAY IS BAD REPLACE CONTROL.
FF DISPLAYED	1. NO TOUBLESHOOTING REQUIRED DUE TO LOSS OF LATCH MOTOR SAFETY CIRCUIT.	REPLACE CONTROL.

Models JKP28, JTP28, JKS06, JCKS06, JKP20, JCKP20, and JTP20

FAILURE CODE	MEANING	CORRECTION
F0	Shorted OFF key	Determine if problem is with Key Panel or Control by disconnecting ribbon cable and measuring flat cable 3 to 4. Should be to probe side with conductor. Should be 125–1750 ohms while pressing OFF key.
F2	Oven temperature inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched	• Welded relay contacts • Airflow to rear of unit • High resistance in oven sensor leads/connectors (especially at sensor in rear)
F3	Open oven sensor (over 3000 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be ~1080 ohms at room temperature with 2 ohms per deg change. • Look for damaged harness terminals if not a bad sensor.
F4	Shorted oven sensor (under 950 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be ~1080 ohms at room temperature with 2 ohms per deg change. • Separate sensor from harness to determine fault.
F5	Sensor Circuit supervisor failure	Replace Control.
F7	Shorted matrix or START key	Determine if problem is with Key Panel or Control by disconnecting flat cable and measuring cable pins using pinout chart. Allow up to 1000 ohms when pressing a key.
F8	EEPROM data shift failure	If repeated, replace control.
F9	Cooling fan stall or other cause of open thermal switches in yellow or blue latch leads	Suspect cooling fan (between ovens) or airflow.

Model JKP85

FAILURE CODE	MEANING	CORRECTION
-F0- -F7-	Stuck key pad May mean relay is turned on.	Determine if problem is with the Key Panel or Control by: 1. Pushing CLEAR/OFF pad,

2. Disconnecting Ribbon Cable from control and waiting at least 3 minutes to see if Code recurs.

- If code recurs, problem is in the control. Replace control.
- If code does not recur problem is with the Key Panel.

-F2-	Indicates that oven is over temperature in one of the following modes within either a cooking or clean mode of operation. • Control senses oven temperature above 615°F with the door circuit in the unlock mode. • Control senses oven temperature above 915°F with the door in the door locked mode.	• Look for welded relay contacts. (Heating elements on in off mode). • Look for high resistance in the sensor circuit due to high contact resistance (poor terminal crimp, deformed terminals, loose connection inside sensor tube) or intermittent solder joint. • Electrical noise interference in the sensor circuit (Ham radio, cordless phone, etc.).
-F3- -F4-	Open or shorted sensor (circuit). Could be a result of contamination on terminals or pinched wire in sensor circuit, cold solder joint on control.	• Disconnect power to range. Disconnect sensor connector from control. • Measure sensor resistance at control connector (take care not to damage terminals. Should read 1100Ω at room ambient (approx. 72°F).

- Measure each sensor lead from connector block to ground. If shorted, look for pinched or cut wire in sensor circuit.
- Check connector terminals - Look for deformed or corrosion on terminals. Repair or replace.
- If all above is ok replace control.

-FF-	Loss of door motor safety circuit.	Replace control.

NOTE: Connections can be intermittent due to a corrosive buildup between the connection to the terminals, or by being bent by the insertion of a probe, etc.

FAILURE CODE	MEANING	CORRECTION
F0	Shorted OFF key	
F2	Oven temperature Inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched	• Welded relay contacts • Cooling fan stalled or blocked • Airflow to rear of unit • High resistance in oven sensor leads/ connectors (especially at sensor in rear)
F3	Open oven sensor (Over 2900 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be ~1080 ohms at room temperature with 2 ohms per degree change. • Look for damaged harness terminals if not a bad sensor.
F4	Shorted oven sensor (under 950 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be ~1080 ohms at room temperature with 2 ohms per degree change. • Separate sensor from harness to determine fault.
F5	Sensor circuit supervisor failure	Replace control.
F7	Shorted matrix or START key	Determine if problem is with Key Panel or Control by disconnecting ribbon cable and power up control. If no F code, problem is with key circuit.
F8	EEPROM data shift failure	If repeated, replace control.
F9	Cooling fan stalls while oven above 650°F—open thermal switch in yellow or blue latch leads.	Cooling fan or airflow to control area.

Models ZEK957, JKP56, JKP45, JCKP18, and JKP18

FAILURE CODE	MEANING	CORRECTION
F0	Shorted OFF key	Determine if problem is with Key Panel or Control by disconnecting ribbon cable and measuring flat cable pins 13-14. Should be open. Should be 100-150 ohms while pressing OFF key.
F2	Overtemperature 1. Inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched 2. Cooling fan stall while oven above 650°F - open thermal switch in yellow leads.	• Welded relay contacts • Cooling fan stalled or blocked • Air flow to rear of unit • High resistance in oven sensor leads/ connectors (especially at sensor in rear)
F3	Open oven sensor (Over 2900 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be ~1080 ohms at room temperature with 2 ohms per deg change. • Look for damaged harness terminals if not a bad sensor.
F4	Shorted oven sensor (under 950 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be ~1080 ohms at room temperature with 2 ohms per deg change. • Separate sensor from harness to determine fault.
F5	Sensor Circuit supervisor Failure	Replace Control.
F7	Shorted matrix or START key	Determine if problem is with Key Panel or Control by disconnecting ribbn cable and power up control. If no F code problem is with key circuit.
F8	EEPROM data shift failure.	If repeated, replace control.
F9	Cooling fan stall while oven above 650°F. open thermal switch in yellow leads	Cooling fan or air flow to control area.

Model JT912

FAILURE CODE	MEANING	CORRECTION
-F0-	Shorted OFF key or open short.	Determine if problem is with Key Panel or Control by disconnecting ribbon cable and measuring flat cable pins 2 - 11. Should be open. Should be <300 Ω while pressing OFF key.
-F2-	Over temperature 1. Inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched, or 2. Cooling fan stalls while oven above 650°F—open thermal switch in yellow leads	• Welded relay contacts • Cooling fan stalled or blocked • Airflow to rear of unit • High resistance in oven sensor leads/ connectors (especially at sensor in rear)
-F3-	Open oven sensor (over 2900 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be -1080 ohms at room temperature with 2 ohms per degree change. • Look for damage harness terminials if not a bad sensor.
-F4-	Shorted oven sensor (under 950 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be -1080 ohms at room temperature with 2 ohms per degree change. • Separate sensor from harness to determine fault.
-F7-	Shorted matrix or START key	Determine if problem is with Key Panel or Control by disconnecting ribbon cable and measuring flat cable using pinout chart. Allow up to 1000 ohms when pressing a key.
-F8-	EEPROM data shift failure	If repeated, replace control.
-F9-	Cooling fan stalls while oven above 650°F—open thermal switch in yellow or blue leads.	Cooling fan or airflow to control area.
-FF-	Loss of latch motor safety circuit	Replace control.

FAILURE CODE	MEANING	CORRECTION
-F0-	Shorted OFF key or open short.	Determine if problem is with Key Panel or Control by disconnecting ribbon cable and measuring flat cable pins 5 - 14. Should be open. Should be <300 Ω while pressing OFF key.
-F2-	Over temperature 1. Inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched, or 2. Cooling fan stalls while oven above 650°F—open thermal switch in yellow leads	• Welded relay contacts • Cooling fan stalled or blocked • Airflow to rear of unit • High resistance in oven sensor leads/ connectors (especially at sensor in rear)
-F3-	Open oven sensor (over 2900 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be -1080 ohms at room temperature with 2 ohms per degree change. • Look for damage harness terminials if not a bad sensor.
-F4-	Shorted oven sensor (under 950 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be -1080 ohms at room temperature with 2 ohms per degree change. • Separate sensor from harness to determine fault.
-F7-	Shorted matrix or START key	Determine if problem is with Key Panel or Control by disconnecting ribbon cable and measuring flat cable using pinout chart. Allow up to 1000 ohms when pressing a key.
-F8-	EEPROM data shift failure	If repeated, replace control.
-F9-	Cooling fan stalls while oven above 650°F—open thermal switch in yellow or blue leads.	Cooling fan or airflow to control area.
-FF-	Loss of latch motor safety circuit	Replace control.

Models JT965 and JTP86

FAILURE CODE	MEANING	CORRECTION
-F0-	Shorted OFF key or open short.	Determine if problem is with Key Panel or Control by disconnecting ribbon cable and measuring flat cable pins 13-14. Should be open. Should be <300 Ω while pressing OFF key.
-F2-	Over temperature 1. Inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched, or 2. Cooling fan stalls while oven above 650°F—open thermal switch in yellow leads	• Welded relay contacts • Cooling fan stalled or blocked • Airflow to rear of unit • High resistance in oven sensor leads/ connectors (especially at sensor in rear)
-F3-	Open oven sensor (over 2900 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be -1080 ohms at room temperature with 2 ohms per degree change. • Look for damage harness terminials if not a bad sensor.
-F4-	Shorted oven sensor (under 950 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be -1080 ohms at room temperature with 2 ohms per degree change. • Separate sensor from harness to determine fault.
-F7-	Shorted matrix or START key	Determine if problem is with Key Panel or Control by disconnecting ribbon cable and measuring flat cable using pinout chart. Allow up to 1000 ohms when pressing a key.
-F8-	EEPROM data shift failure	If repeated, replace control.
-F9-	Cooling fan stalls while oven above 650°F—open thermal switch in yellow or blue leads.	Cooling fan or airflow to control area.
-FF-	Loss of latch motor safety circuit	Replace control.

Model JKP85

FAILURE CODE	MEANING	CORRECTION
-F0- -F7-	Stuck key pad May mean relay is turned on.	Determine if problem is with the Key Panel or Control by: 1. Pushing CLEAR/OFF pad, 2. Disconnecting Ribbon Cable from control and waiting at least 3 minutes to see if Code recurs. • If code recurs, problem is in the control. Replace control. • If code does not recur problem is with the Key Panel.
-F2-	Indicates that oven is over temperature in one of the following modes within either a cooking or clean mode of operation. • Control senses oven temperature above 615°F with the door circuit in the unlock mode. • Control senses oven temperature above 915°F with the door in the door locked mode.	• Look for welded relay contacts. (Heating elements on in off mode). • Look for high resistance in the sensor circuit due to high contact resistance (poor terminal crimp, deformed terminals, loose connection inside sensor tube) or intermittent solder joint. • Electrical noise interference in the sensor circuit (Ham radio, cordless phone, etc.).
-F3- -F4-	Open or shorted sensor (circuit). Could be a result of contamination on terminals or pinched wire in sensor circuit, cold solder joint on control.	• Disconnect power to range. Disconnect sensor connector from control. • Measure sensor resistance at control connector (take care not to damage terminals. Should read 1100Ω at room ambient (approx. 72°F). • Measure each sensor lead from connector block to ground. If shorted, look for pinched or cut wire in sensor circuit. • Check connector terminals - Look for deformed or corrosion on terminals. Repair or replace. • If all above is ok replace control.
-FF-	Loss of door motor safety circuit.	Replace control.

NOTE: Connections can be intermittent due to a corrosive buildup between the connection to the terminals, or by being bent by the insertion of a probe, etc.

Model JKP86

FAILURE CODE	MEANING	CORRECTION
-F0- -F7-	Stuck key pad may mean relay is turned on.	Determine if problem is with the Key Panel or Control by: 1. Pushing CLEAR/OFF pad, 2. Disconnecting Ribbon Cable from control and waiting at least 3 minutes to see if Code recurs. • If code recurs, problem is in the control. Replace control. • If code does not recur, problem is with the Key Panel.
-F2-	Indicates that oven is over temperature in one of the following modes within either a cooking or clean mode of operation. • Control senses oven temperature above 615°F with the door circuit in the unlock mode. • Control senses oven temperature above 915°F with the door in the door locked mode.	• Look for welded relay contacts. (Heating elements on in off mode.) • Look for high resistance in the sensor circuit due to high contact resistance (poor terminal crimp, deformed terminals, loose connection inside sensor tube) or intermittent solder joint. • Electrical noise interference in the sensor circuit (ham radio, cordless phone, etc.).
-F3- -F4-	Open or shorted sensor (circuit). Could be a result of contamination on terminals or pinched wire in sensor circuit, cold solder joint on control.	• Disconnect power to range. Disconnect sensor connector from control. • Measure sensor resistance at control connector (take care not to damage terminals). Should read 1100Ω at room ambient (approx. 72°F). • Measure each sensor lead from connector block to ground. If shorted, look for pinched or cut wire in sensor circuit. • Check connector terminals – Look for deformed or corrosion on terminals. Repair or replace. • If all above is OK, replace control.
-FF-	Loss of door motor safety circuit.	Replace control.

Models JTP48 and JKP48

FAILURE CODE	MEANING	CORRECTION
F0	Shorted OFF key	Determine if problem is with Key Panel or Control by disconnecting ribbon cable and measuring flat cable pins 7–12. Should be to probe side with conductor. Should be 125–1750 ohms while pressing OFF key.
F2	Oven temperature inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched	• Welded relay contacts • Airflow to rear of unit • High resistance in oven sensor leads/ connectors (especially at sensor in rear)
F3	Open oven sensor (over 3000 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be -1080 ohms at room temperature with 2 ohms per degree change. • Look for damaged harness terminials if not a bad sensor.
F4	Shorted oven sensor (under 950 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be ~1080 ohms at room temperature with 2 ohms per degree change. • Separate sensor from harness to determine fault.
F5	Sensor circuit supervisor failure	Replace control.
F7	Shorted matrix or START key	Determine if problem is with Key Panel or Control by disconnecting flat cable and measuring cable pins using pinout chart. Allow up to 1000 ohms when pressing a key.
F8	EEPROM data shift failure	If repeated, replace control.
F9	Cooling fan stalls or other cause of open thermal switches in yellow or blue latch leads	Suspect cooling fan (between ovens) or airflow.

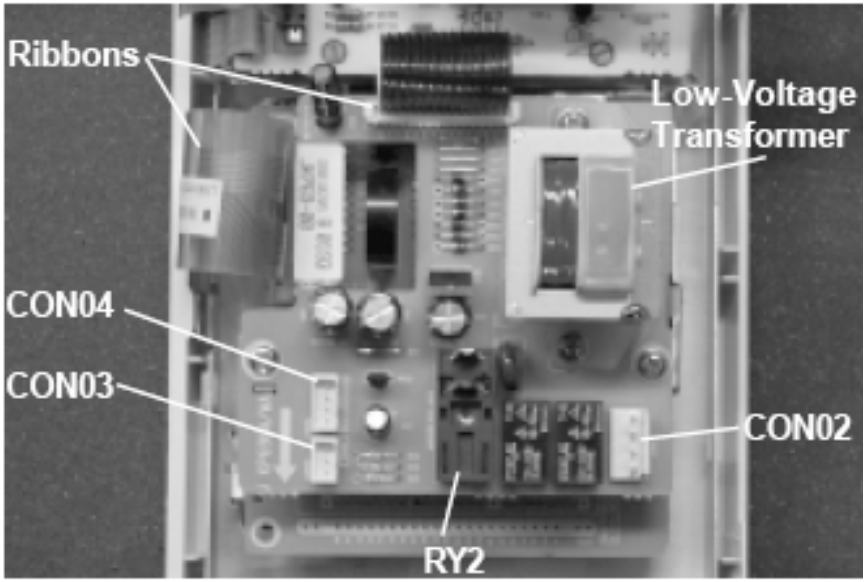
Models ZEK957, JKP56, JKP45, JCKP18, and JKP18

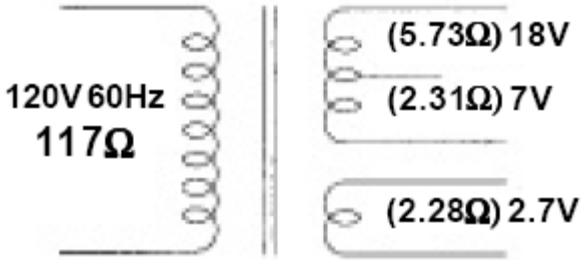
FAILURE CODE	MEANING	CORRECTION
F0	Shorted OFF key	Determine if problem is with Key Panel or Control by disconnecting ribbon cable and measuring flat cable pins 13-14. Should be open. Should be 100-150 ohms while pressing OFF key.
F2	Overtemperature 1. Inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched 2. Cooling fan stall while oven above 650°F-open thermal switch in yellow leads.	• Welded relay contacts • Cooling fan stalled or blocked • Air flow to rear of unit • High resistance in oven sensor leads/ connectors (especially at sensor in rear)
F3	Open oven sensor (Over 2900 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be ~1080 ohms at room temperature with 2 ohms per deg change. • Look for damaged harness terminals if not a bad sensor.
F4	Shorted oven sensor (under 950 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be ~1080 ohms at room temperature with 2 ohms per deg change. • Separate sensor from harness to determine fault.
F5	Sensor Circuit supervisor Failure	Replace Control.
F7	Shorted matrix or START key	Determine if problem is with Key Panel or Control by disconnecting ribbn cable and power up control. If no F code problem is with key circuit.
F8	EEPROM data shift failure.	If repeated, replace control.
F9	Cooling fan stall while oven above 650°F. open thermal switch in yellow leads	Cooling fan or air flow to control area.

Models JKP27, JCKP15, JKP15, JCKS05, and JKS05

FAILURE CODE	MEANING	CORRECTION
F0	Shorted OFF key	Determine if problem is with Key Panel or Control by disconnecting ribbon cable and measuring flat cable pins 13-14. Should be to probe side with conductor. Should be 125-1750 ohms while pressing OFF key.
F2	Over temperature Inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched.	• Welded relay contacts • Cooling fan stalled or blocked • Air flow to rear of unit • High resistance in oven sensor leads/ connectors (especially at sensor in rear)
F3	Open oven sensor (over 3000 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be -1080 ohms at room temperature with 2 ohms per deg change. • Look for damage harness terminials if not a bad sensor.
F4	Shorted oven sensor (under 950 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be ~1080 ohms at room temperature with 2 ohms per deg change. • Seperate sensor from harness to determine fault.
F5	SensorCircuitsupervisolFailure	Replace Control.
F7	Shorted matrix or START key	Determine if problem is with Key Panel or Control by disconnecting flat cable and measuring cable pins using pinout chart. Allow up to 1000 OHMS when pressing a key.
F8	EEPROM data shift failure.	If repeated, replace control.
F9	Cooling fan stall or other cause of open thermal switch in yellow latch leads.	Suspect cooling fan (between ovens) or air flow.

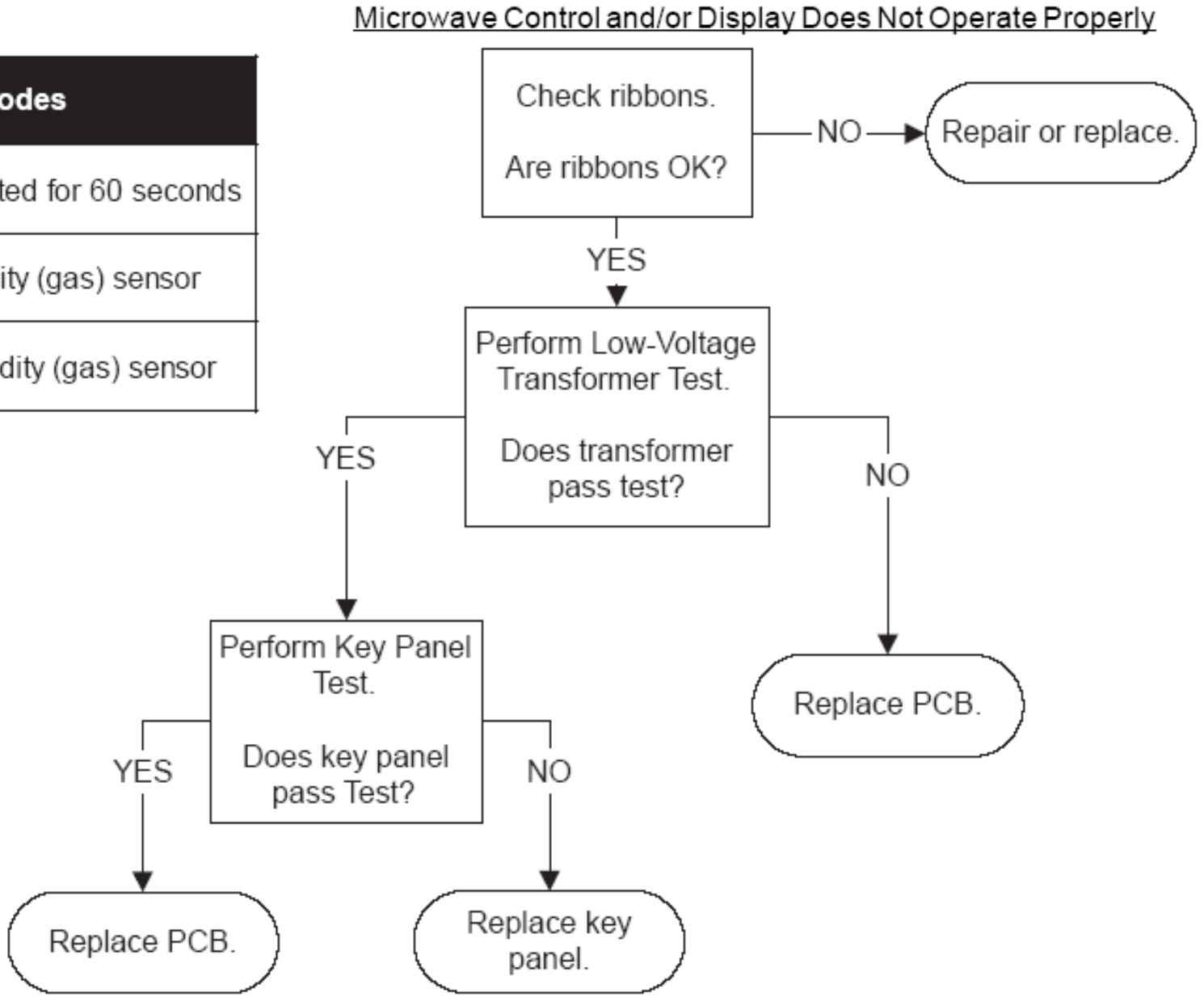
Microwave Power Control Board (PCB)



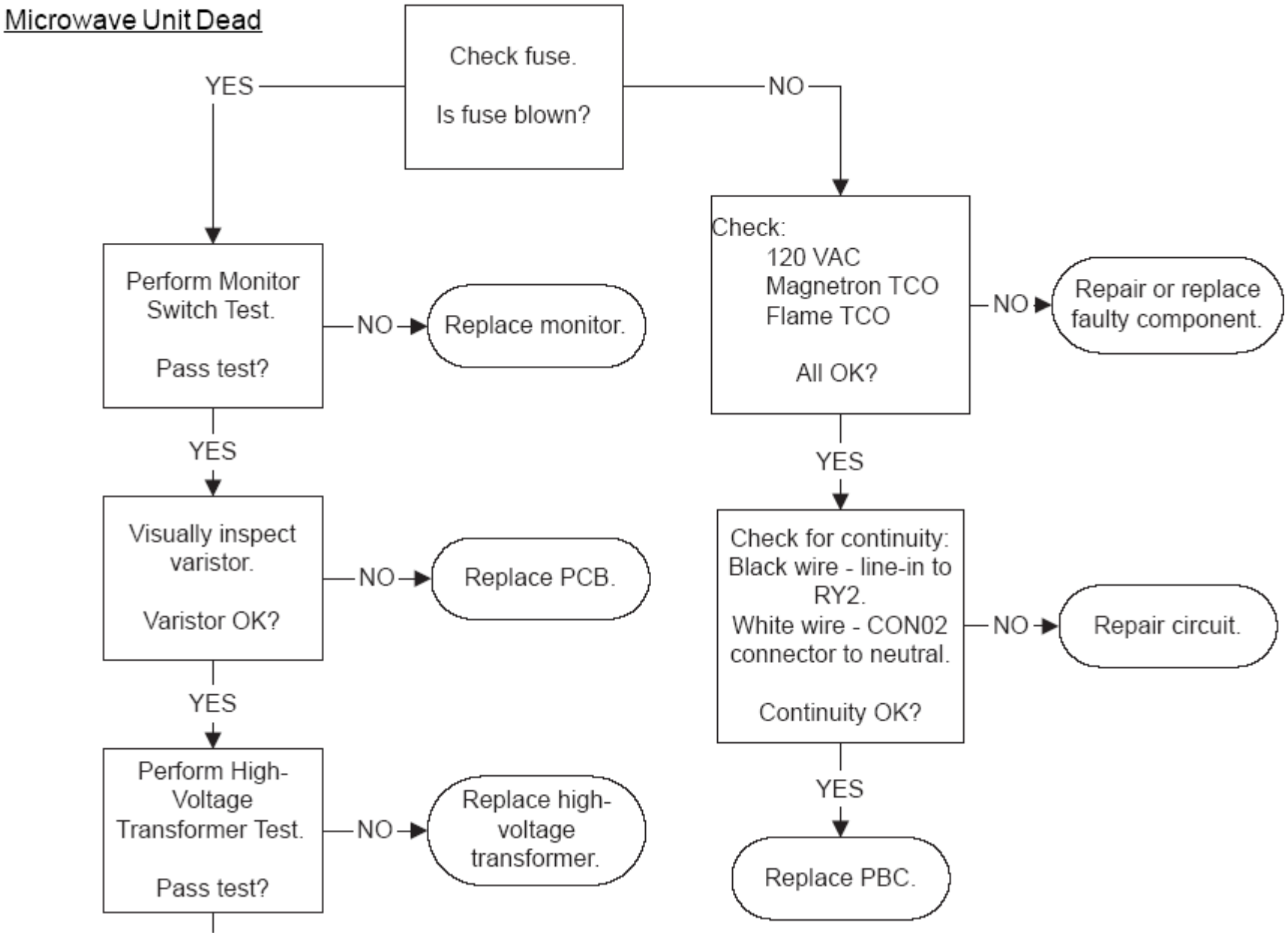


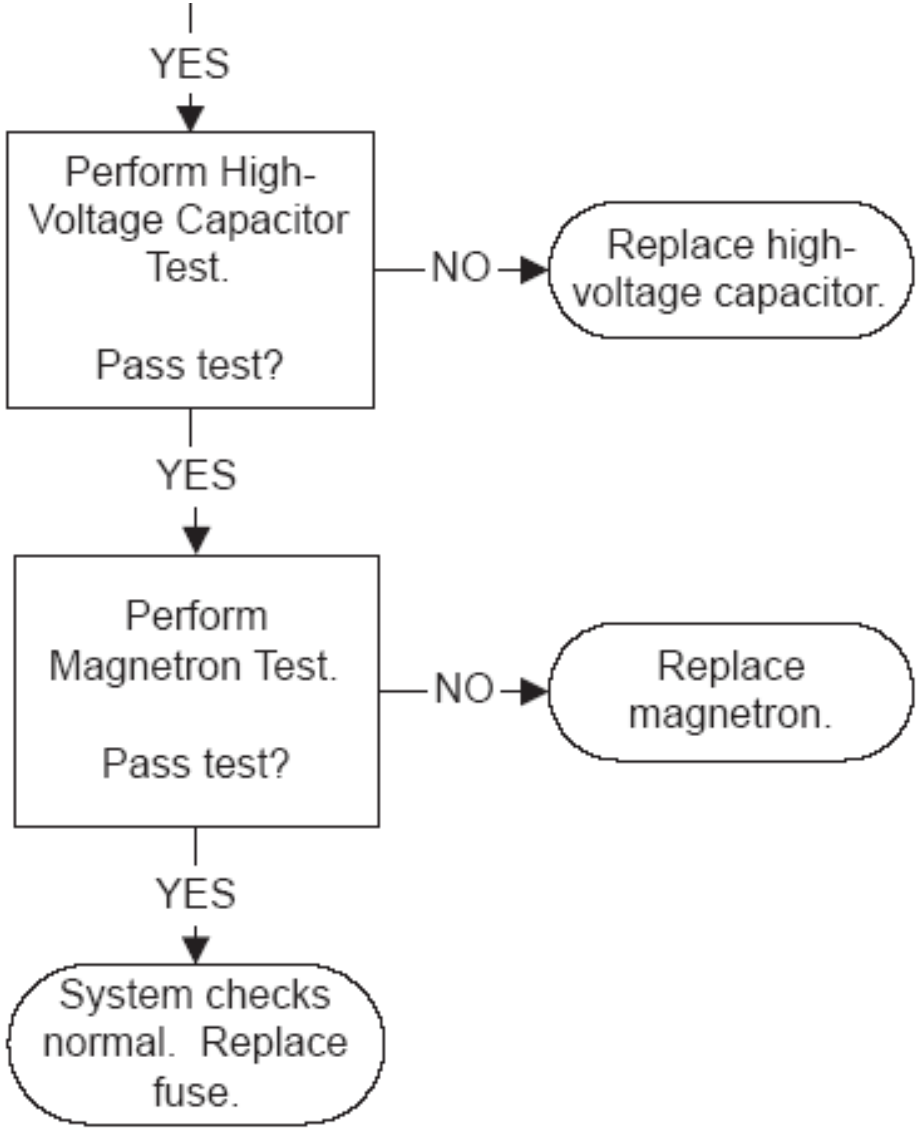
Main PCB Locator Chart			
Connector	Wire Colors	Number of Terminals	Description
CON02	Blue Orange White	3	Mag Fan, Turn Table, Neutral
CON03	Orange	2	Door Sensing Switch
CON04	Red White Black Orange	4	Gas Sensor
RY2	Black Blue	2	Line-in, Fan TCO, High Voltage Transformer, Monitor Switch

Fault Codes	
F3	Key panel shorted for 60 seconds
F4	Open humidity (gas) sensor
F5	Shorted humidity (gas) sensor

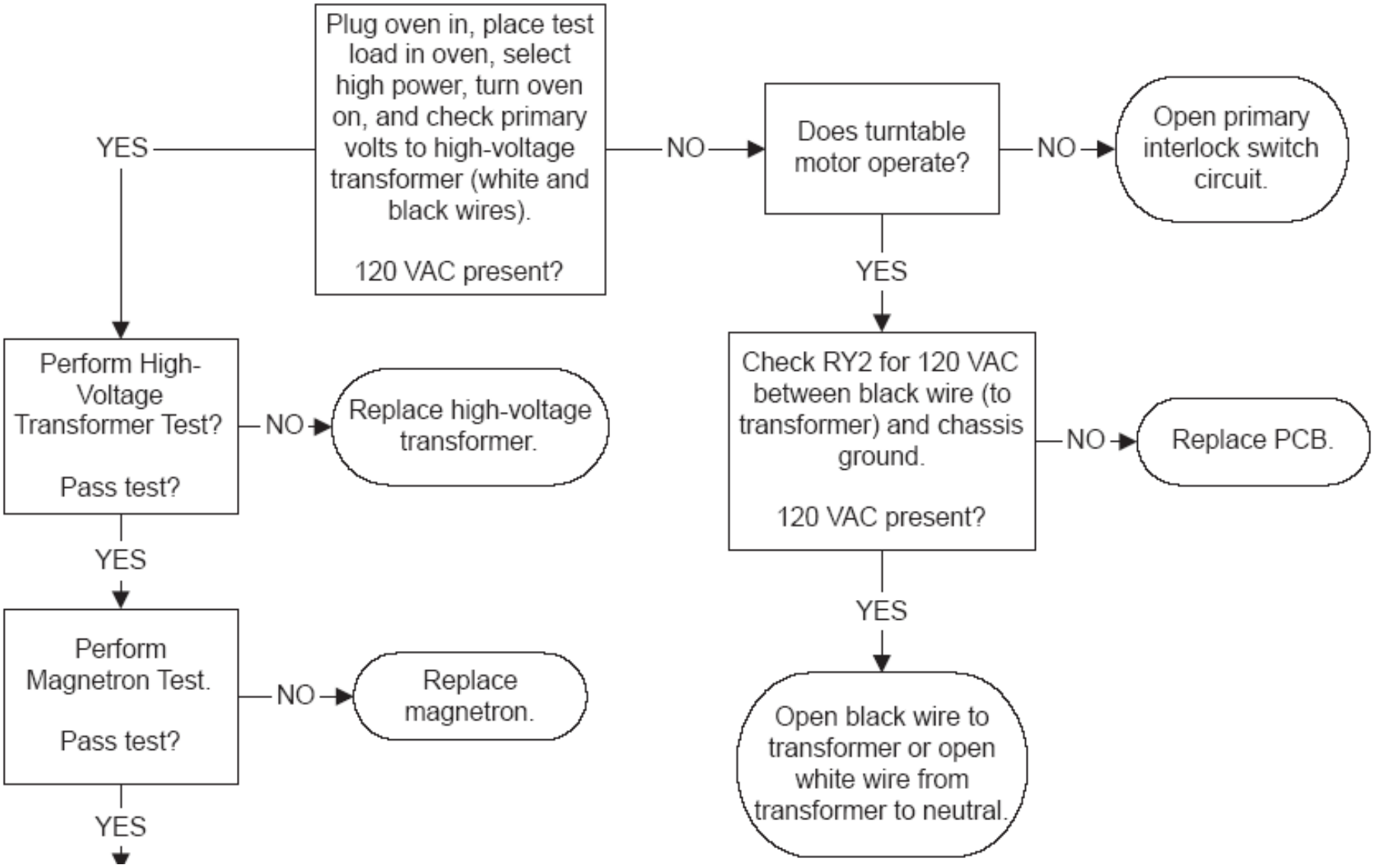


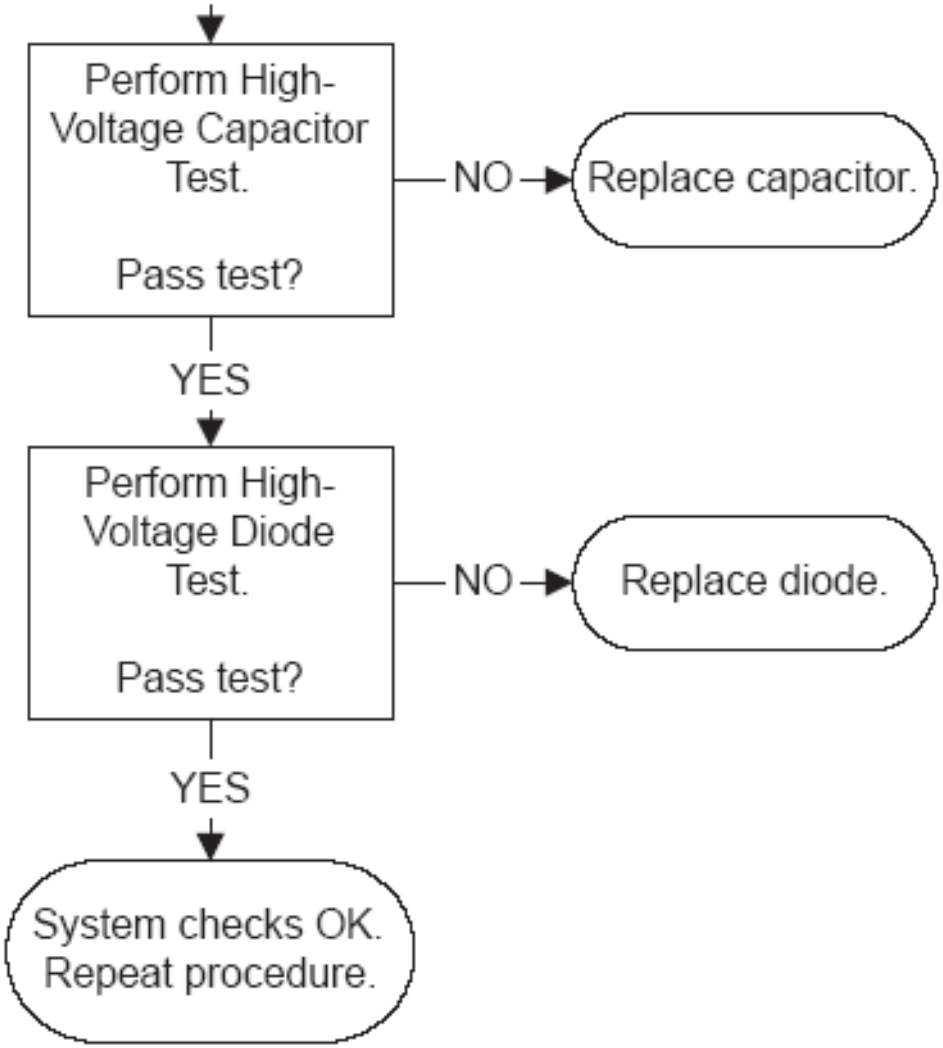
Microwave Unit Dead



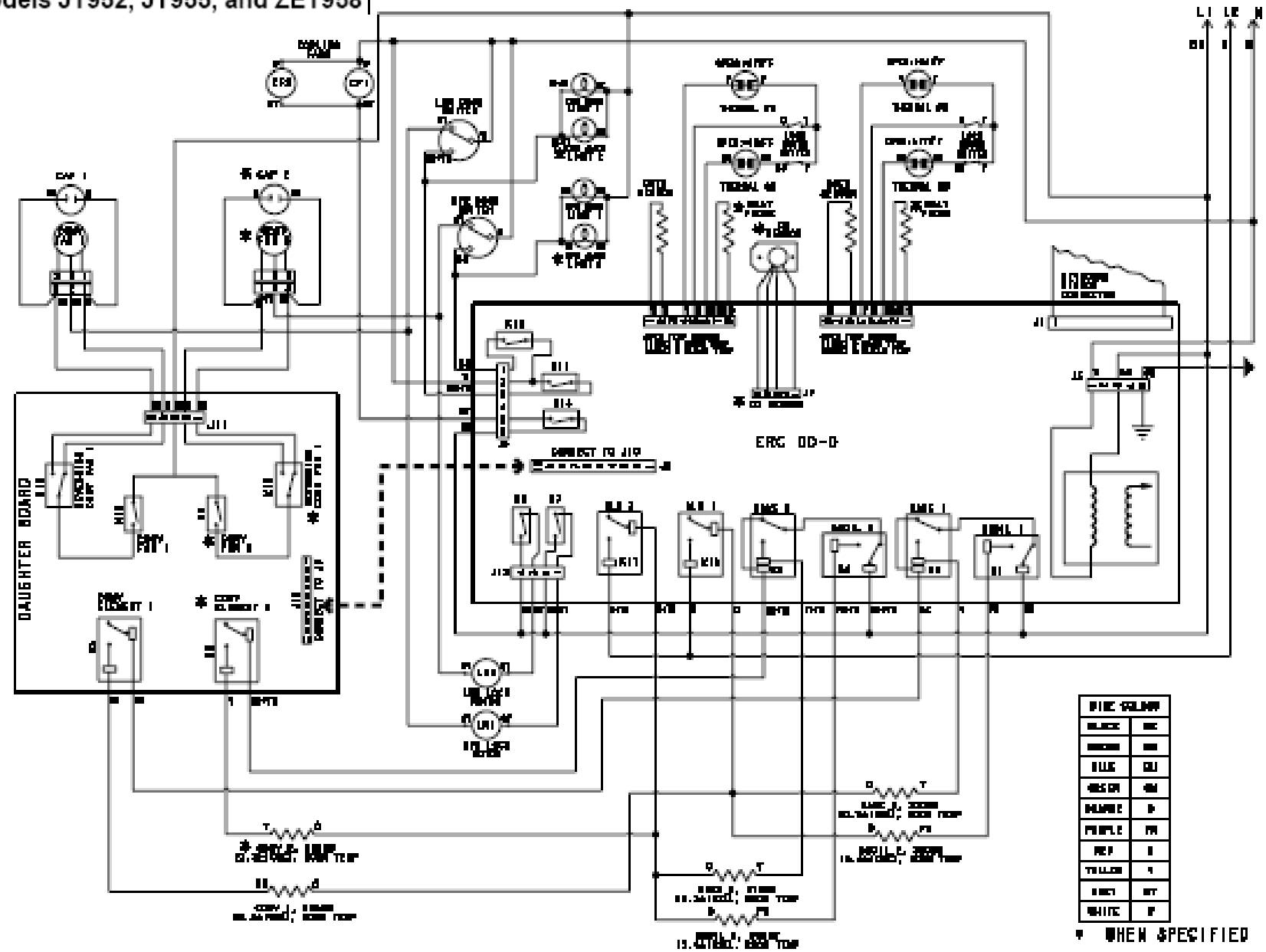


Microwave Oven Runs but Inadequate/No Heating

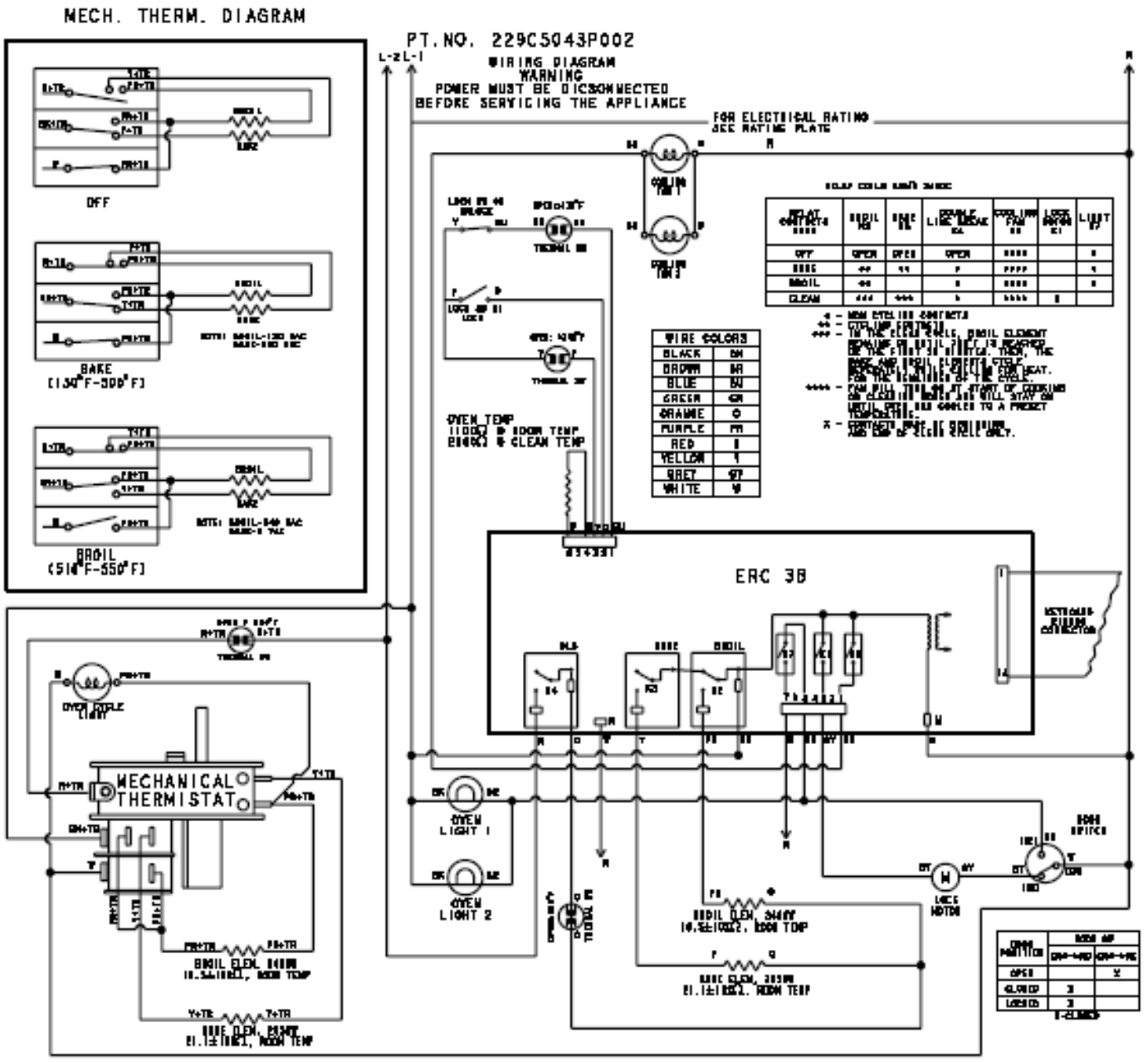




Models JT952, JT955, and ZET958

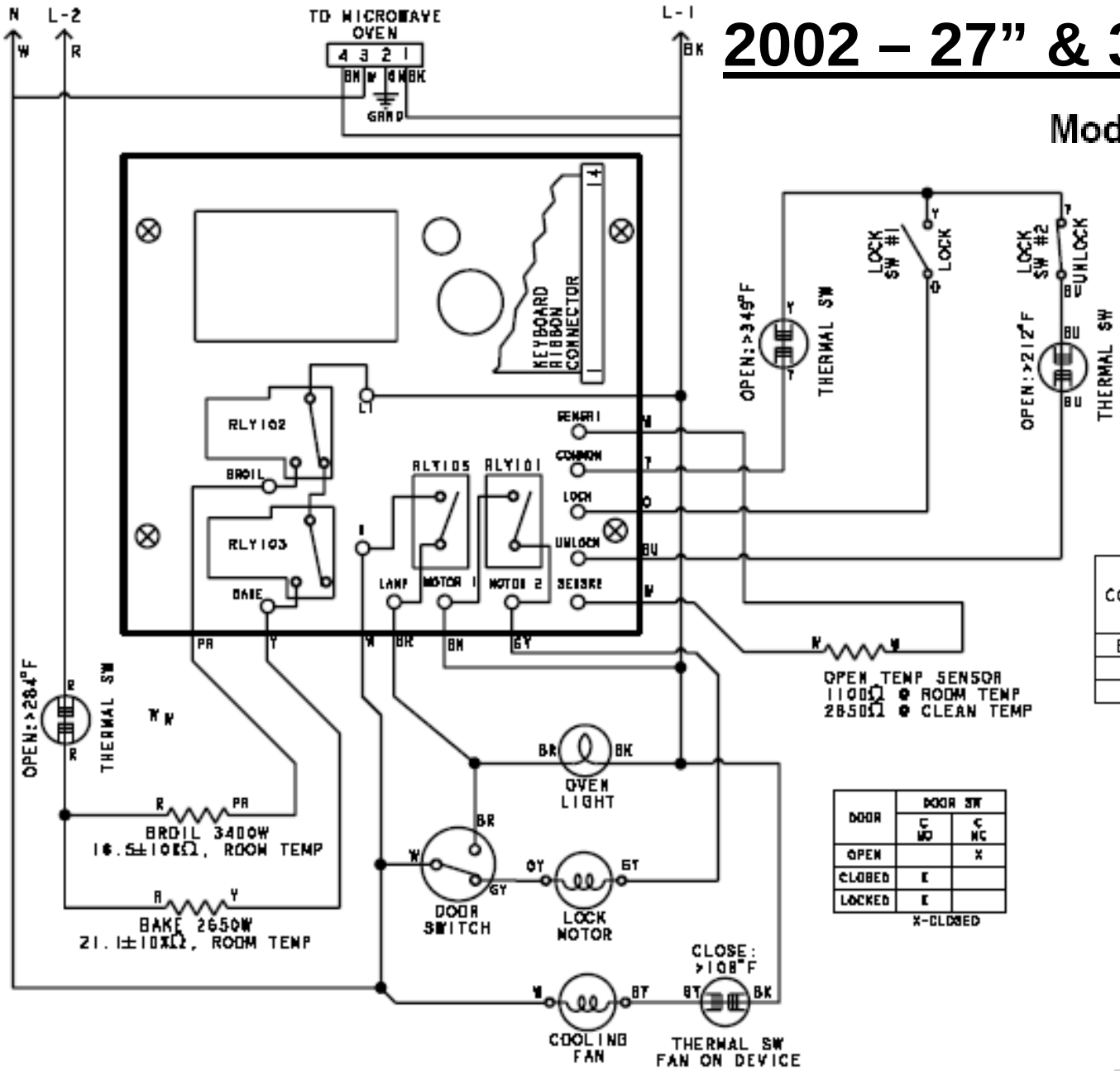


Model JKP28 Schematic



2002 – 27” & 30” Wall Ovens

Model JKP86



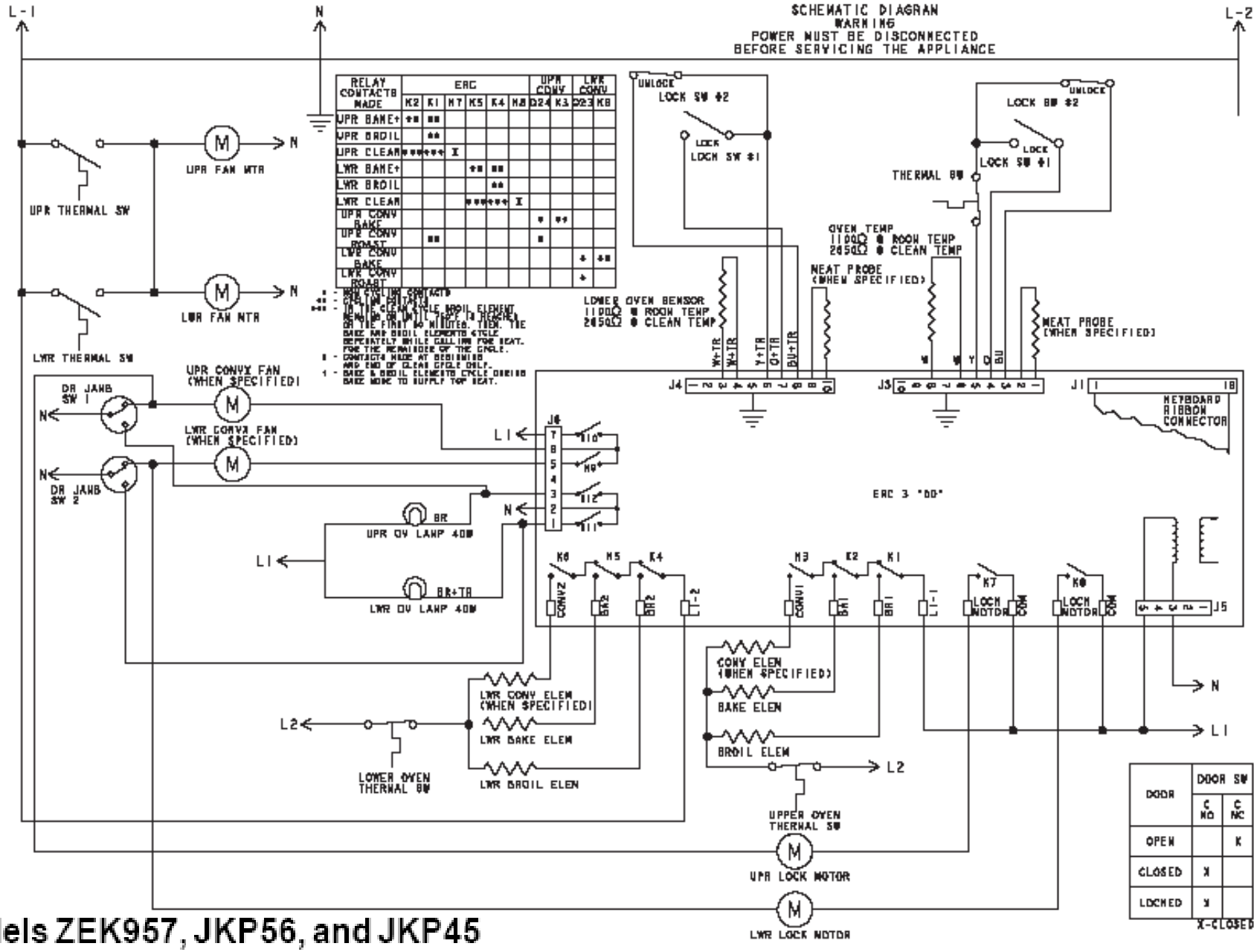
DOOR	DOOR SW C NO	DOOR SW C NC
OPEN		X
CLOSED	X	
LOCKED	X	

X-CLOSED

RELAY COILS 850Ω 24VDC

RELAY CONTACTS MADE	ERC BAKE RLY103	ERC BROIL RLY102	ERC LIGHT RLY105	ERC LOCK MOTOR RLY101	ERC FAN ON DEVICE
BAKE +	**	**	*		****
BROIL		**	*		****
CLEAN	***	***		X	****

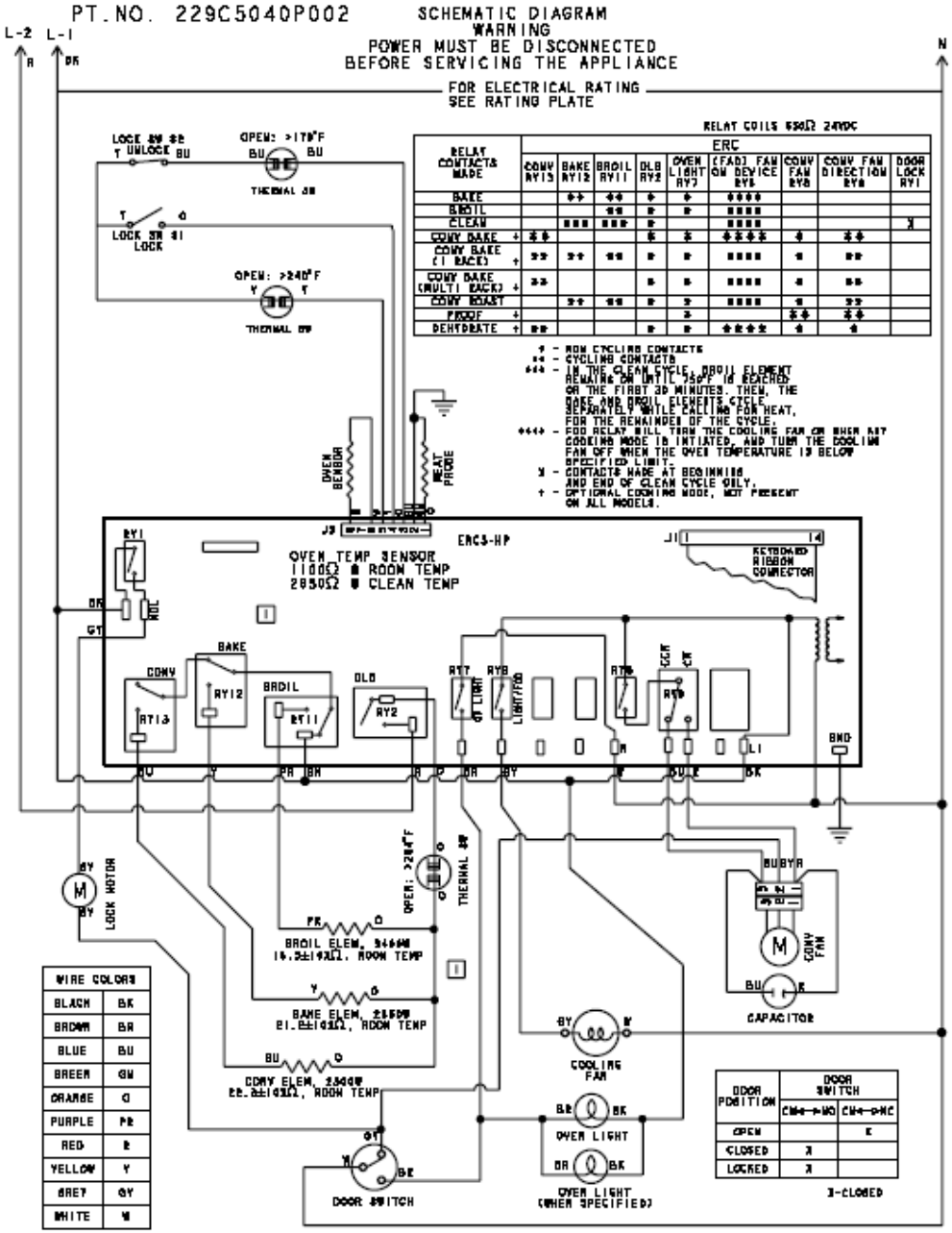
* - NON CYCLING CONTACTS
** - CYCLING CONTACTS
*** - IN THE CLEAN CYCLE, BROIL ELEMENT REMAINS ON UNTIL 750°F IS REACHED OR THE FIRST 30 MINUTES, THEN, THE BAKE ELEMENT CYCLES FOR 60 SECONDS AND THE BROIL ELEMENT CYCLES FOR 15 SECONDS DURING CALL FOR HEAT FOR THE REMAINDER OF THE CYCLE.
**** - FAN ON DEVICE WILL TURN THE COOLING FAN ON WHEN A SPECIFIED AMOUNT OF HEAT IS PRESENT AND TURN OFF WHEN TEMP IS BELOW SPECIFIED LIMIT.
X - CONTACTS MADE AT BEGINNING AND END OF CLEAN CYCLE ONLY.



Models ZEK957, JKP56, and JKP45

2002 – 27” & 30” Wall Ovens

Models JCK915, JK915, and ZEK938



2002 – 27” & 30” Wall Ovens

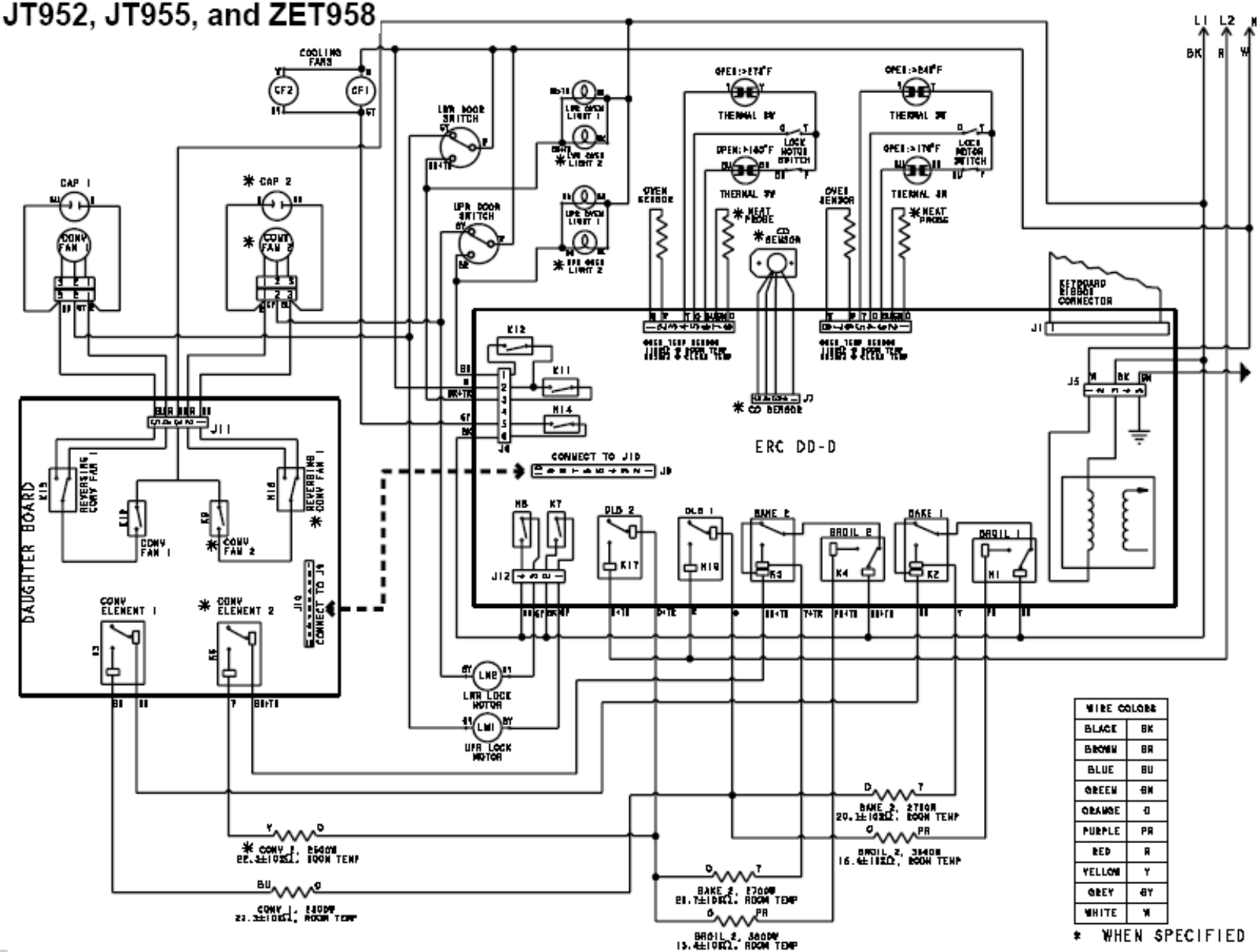
Models JT952, JT955, and ZET958

RELAY CONTACTS MADE	ERC																
	BROIL UPPER K1	BAKE UPPER K2	BROIL LOWER K4	BAKE LOWER K5	DLB UPPER K16	DLB LOWER K17	LWR LOCK MOTOR K7	UPR LOCK MOTOR K8	LOWER LIGHT K12	UPPER LIGHT K11	COOLING FAN K14	CONV UPPER K3	CONV LOWER K9	CONV FAN UPPER K10	CONV FAN UPR DIRECTION K15	CONV FAN LOWER K10	CONV FAN LWR DIRECTION K13
BAKE	**	**	**	**	*	*			*	*	****						
BROIL	**		**		*	*			*	*	****						
CLEAN	***	***	***	***	*	*	X	X			****						
CONV BAKE (1 RACK) +	**	**	**	**	*	*			*	*	****	**	**	*	**	*	**
CONV BAKE (MULTI RACK) +					*	*			*	*	****	**	**	*	**	*	**
CONV ROAST	**	**	**	**	*	*			*	*	****			*	**	*	**
PROOF +									*	*				*	**	*	**
DEHYDRATE +					*	*			*	*	****	**	**	*	*	*	*
WARM / SERVE WARM	**	**	**	**	*	*			*	*	****						

* - NON CYCLING CONTACTS
** - CYCLING CONTACTS
*** - IN THE CLEAN CYCLE, BROIL ELEMENT REMAINS ON UNTIL 750°F IS REACHED OR THE FIRST 30 MINUTES. THEN, THE BAKE AND BROIL ELEMENTS CYCLE SEPARATELY WHILE CALLING FOR HEAT, FOR THE REMAINDER OF THE CYCLE.

**** - FOD RELAY WILL TURN THE COOLING FAN ON WHEN ANY COOKING MODE IS INTIATED, AND TURN THE COOLING FAN OFF WHEN THE OVEN TEMPERATURE IS BELOW SPECIFIED LIMIT.
X - CONTACTS MADE AT BEGINNING AND END OF CLEAN CYCLE ONLY.
\+ - OPTIONAL COOKING MODE. NOT PRESENT ON ALL MODELS.

Models JT952, JT955, and ZET958



2002 – 27” & 30” Wall Ovens

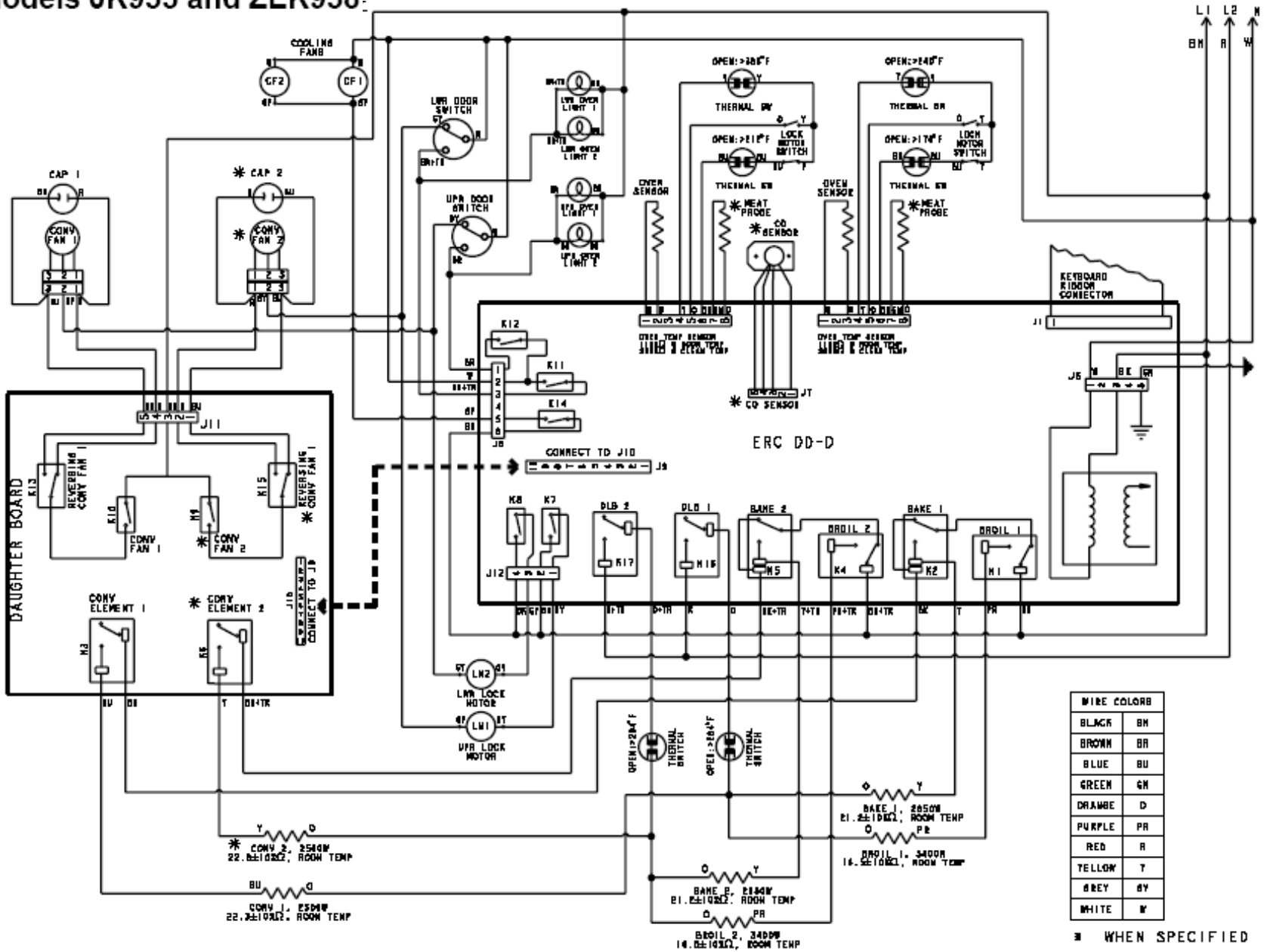
Models JK955 and ZEK958

RELAY CONTACTS MADE	ERC																
	BROIL UPPER K1	BAKE UPPER K2	BROIL LOWER K4	BAKE LOWER K5	DLB UPPER K16	DLB LOWER K17	LWR LOCK MOTOR K7	UPR LOCK MOTOR K8	LOWER LIGHT K12	UPPER LIGHT K11	COOLING FAN K14	CONV UPPER K3	CONV LOWER K6	CONV FAN UPPER K10	CONV FAN UPR DIRECTION K15	CONV FAN LOWER K10	CONV FAN LWR DIRECTION K13
BAKE	**	**	**	**	*	*			*	*	****						
BROIL	**		**		*	*			*	*	****						
CLEAN	***	***	***	***	*	*	X	X			****						
CONV BAKE (1 RACK) +	**	**	**	**	*	*			*	*	****	**	**	*	**	*	**
CONV BAKE (MULTI RACK) +					*	*			*	*	****	**	**	*	**	*	**
CONV ROAST	**	**	**	**	*	*			*	*	****			*	**	*	**
PROOF +									*	*				*	**	*	**
DEHYDRATE +					*	*			*	*	****	**	**	*	*	*	*
WARM / SERVE WARM	**	**	**	**	*	*			*	*	****						

* - NON CYCLING CONTACTS
** - CYCLING CONTACTS
*** - IN THE CLEAN CYCLE, BROIL ELEMENT REMAINS ON UNTIL 750°F IS REACHED OR THE FIRST 30 MINUTES. THEN, THE BAKE AND BROIL ELEMENTS CYCLE SEPARATELY WHILE CALLING FOR HEAT. FOR THE REMAINDER OF THE CYCLE.

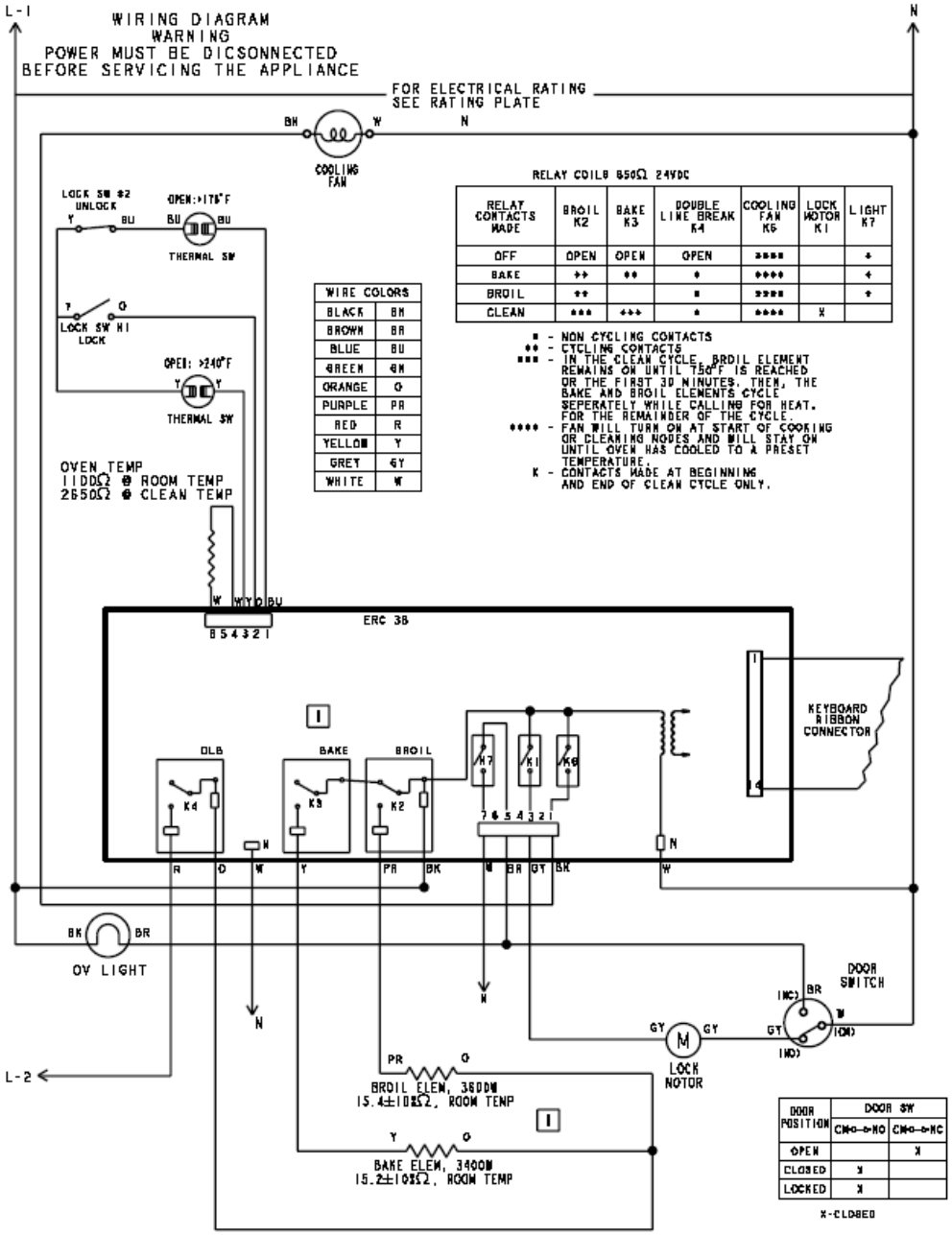
**** - FOD RELAY WILL TURN THE COOLING FAN ON WHEN ANY COOKING MODE IS INTIATED, AND TURN THE COOLING FAN OFF WHEN THE OVEN TEMPERATURE IS BELOW SPECIFIED LIMIT.
X - CONTACTS MADE AT BEGINNING AND END OF CLEAN CYCLE ONLY.
\+ - OPTIONAL COOKING MODE, NOT PRESENT ON ALL MODELS.

Models JK955 and ZEK958



2002 – 27” & 30” Wall Ovens

Model JTP20



RELAY COIL@ 650Ω 24VDC

RELAY CONTACTS MADE	BROIL K2	BAKE K3	DOUBLE LINE BREAK K4	COOLING FAN K5	LOCK MOTOR K1	LIGHT K7
OFF	OPEN	OPEN	OPEN	****		*
BAKE	**	**	*	****		*
BROIL	**		*	****		*
CLEAN	***	***	*	****	X	

* - NON CYCLING CONTACTS
** - CYCLING CONTACTS
*** - IN THE CLEAN CYCLE, BROIL ELEMENT REMAINS ON UNTIL 750°F IS REACHED OR THE FIRST 30 MINUTES, THEN, THE BAKE AND BROIL ELEMENTS CYCLE SEPERATELY WHILE CALLING FOR HEAT. FOR THE REMAINDER OF THE CYCLE.
**** - FAN WILL TURN ON AT START OF COOKING OR CLEANING NODES AND WILL STAY ON UNTIL OVEN HAS COOLED TO A PRESET TEMPERATURE.
X - CONTACTS MADE AT BEGINNING AND END OF CLEAN CYCLE ONLY.

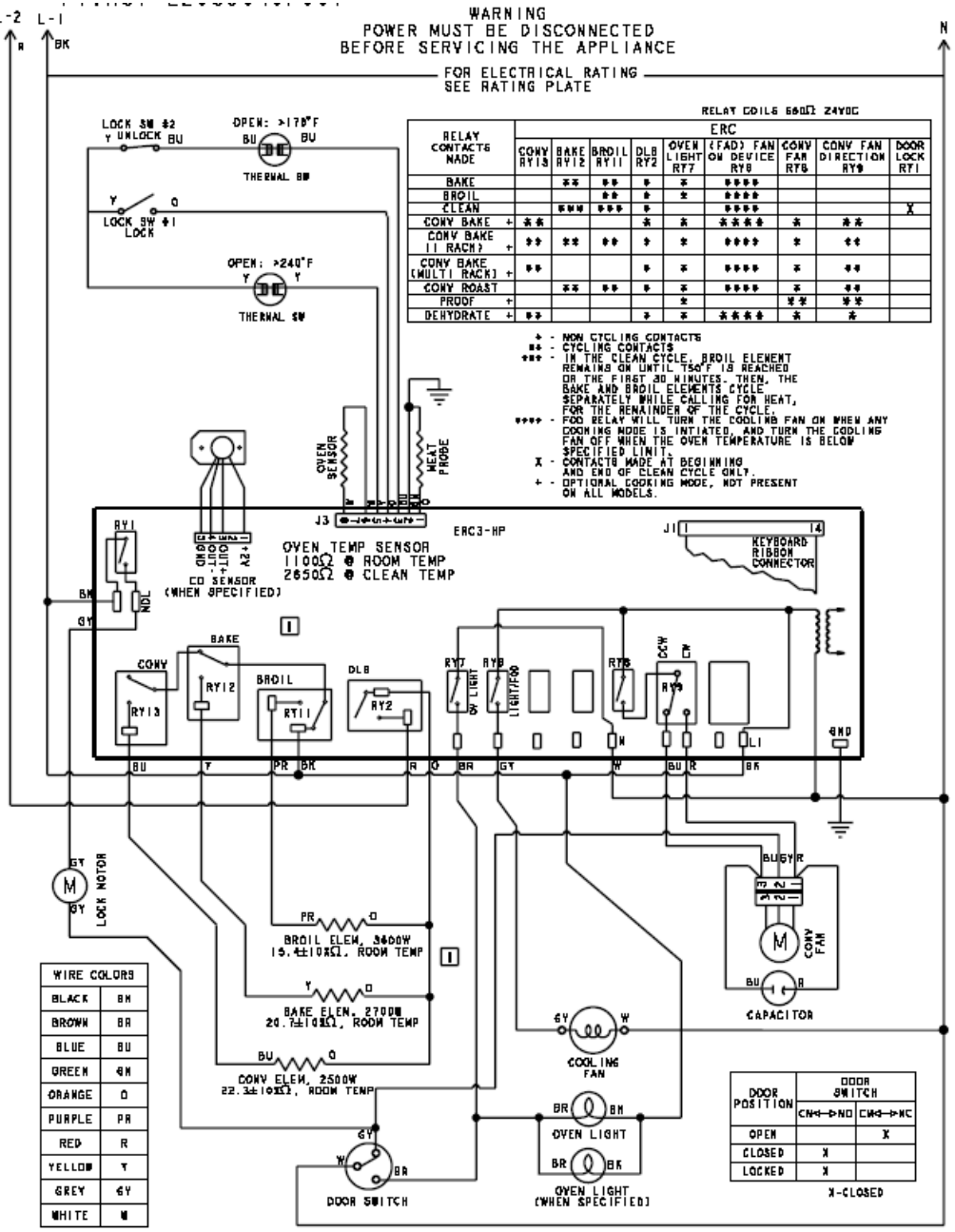
WIRE COLORS	
BLACK	BK
BROWN	BR
BLUE	BU
GREEN	GN
ORANGE	O
PURPLE	PR
RED	R
YELLOW	Y
GREY	GY
WHITE	W

DOOR POSITION	DOOR SW	
	C(NO)-C(NO)	C(NC)-C(NC)
OPEN		X
CLOSED	X	
LOCKED	X	

X-CLOSED

2002 – 27” & 30” Wall Ovens

Models JT912, JTC915, JT915, and ZET938



RELAY COILS 660Ω 24VDC

RELAY CONTACTS MADE	ERC								
	CONV RY13	BAKE RY12	BROIL RY11	DLB RY2	OVEN LIGHT RY7	(FAD) FAN ON DEVICE RY8	CONV FAN RY6	CONV FAN DIRECTION RY9	DOOR LOCK RY1
BAKE		**	**	*	*	****			
BROIL			**	*	*	****			
CLEAN		***	***	*		****			X
CONV BAKE +	**			*	*	****	*	**	
CONV BAKE (1 RACK) +	**	**	**	*	*	****	*	**	
CONV BAKE (MULTI RACK) +	**			*	*	****	*	**	
CONV ROAST		**	**	*	*	****	*	**	
PROOF +					*		**	**	
DEHYDRATE +	**			*	*	****	*	*	

\+ - NON CYCLING CONTACTS
** - CYCLING CONTACTS
*** - IN THE CLEAN CYCLE, BROIL ELEMENT REMAINS ON UNTIL 750°F IS REACHED OR THE FIRST 30 MINUTES. THEN, THE BAKE AND BROIL ELEMENTS CYCLE SEPARATELY WHILE CALLING FOR HEAT, FOR THE REMAINDER OF THE CYCLE.
**** - FOD RELAY WILL TURN THE COOLING FAN ON WHEN ANY COOKING MODE IS INITIATED, AND TURN THE COOLING FAN OFF WHEN THE OVEN TEMPERATURE IS BELOW SPECIFIED LIMIT.
X - CONTACTS MADE AT BEGINNING AND END OF CLEAN CYCLE ONLY.
\+ - OPTIONAL COOKING MODE, NOT PRESENT ON ALL MODELS.

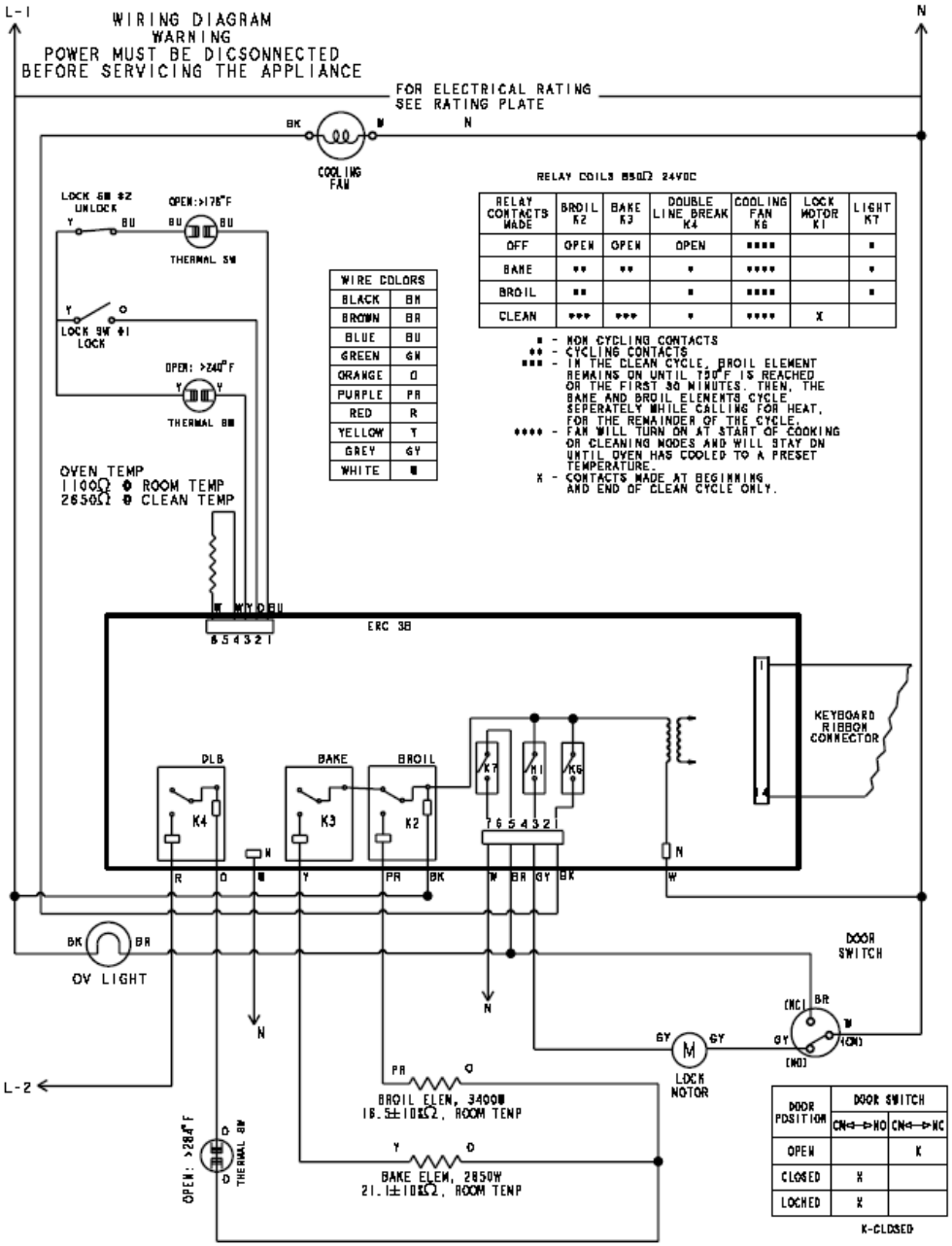
WIRE COLORS	
BLACK	BK
BROWN	BR
BLUE	BU
GREEN	GN
ORANGE	O
PURPLE	PR
RED	R
YELLOW	Y
GREY	GY
WHITE	W

DOOR POSITION	DOOR SWITCH	
	CN4→NO	CN4→NC
OPEN		X
CLOSED	X	
LOCKED	X	

X-CLOSED

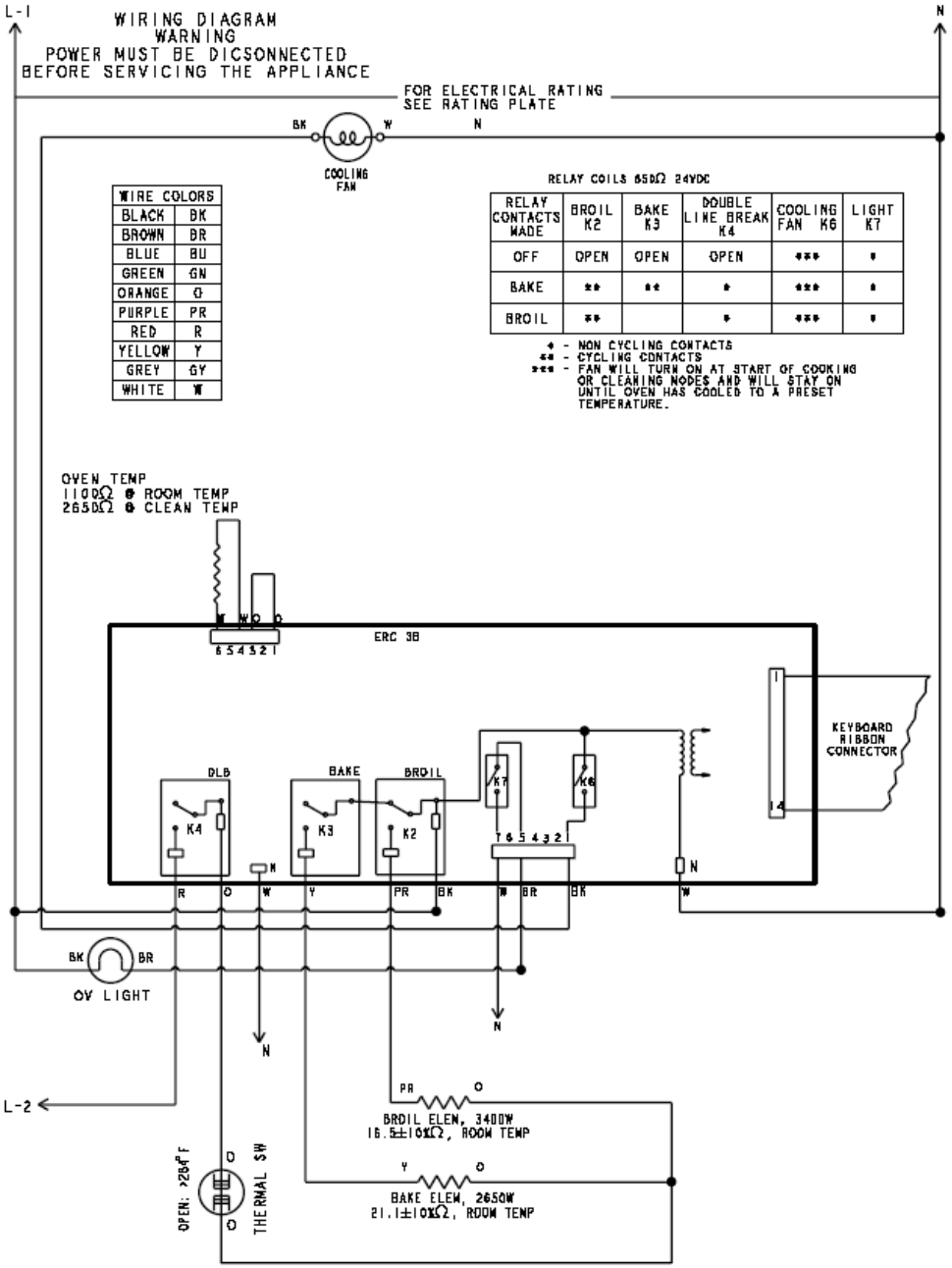
2002 – 27” & 30” Wall Ovens

Models JCKP20, and JKP20

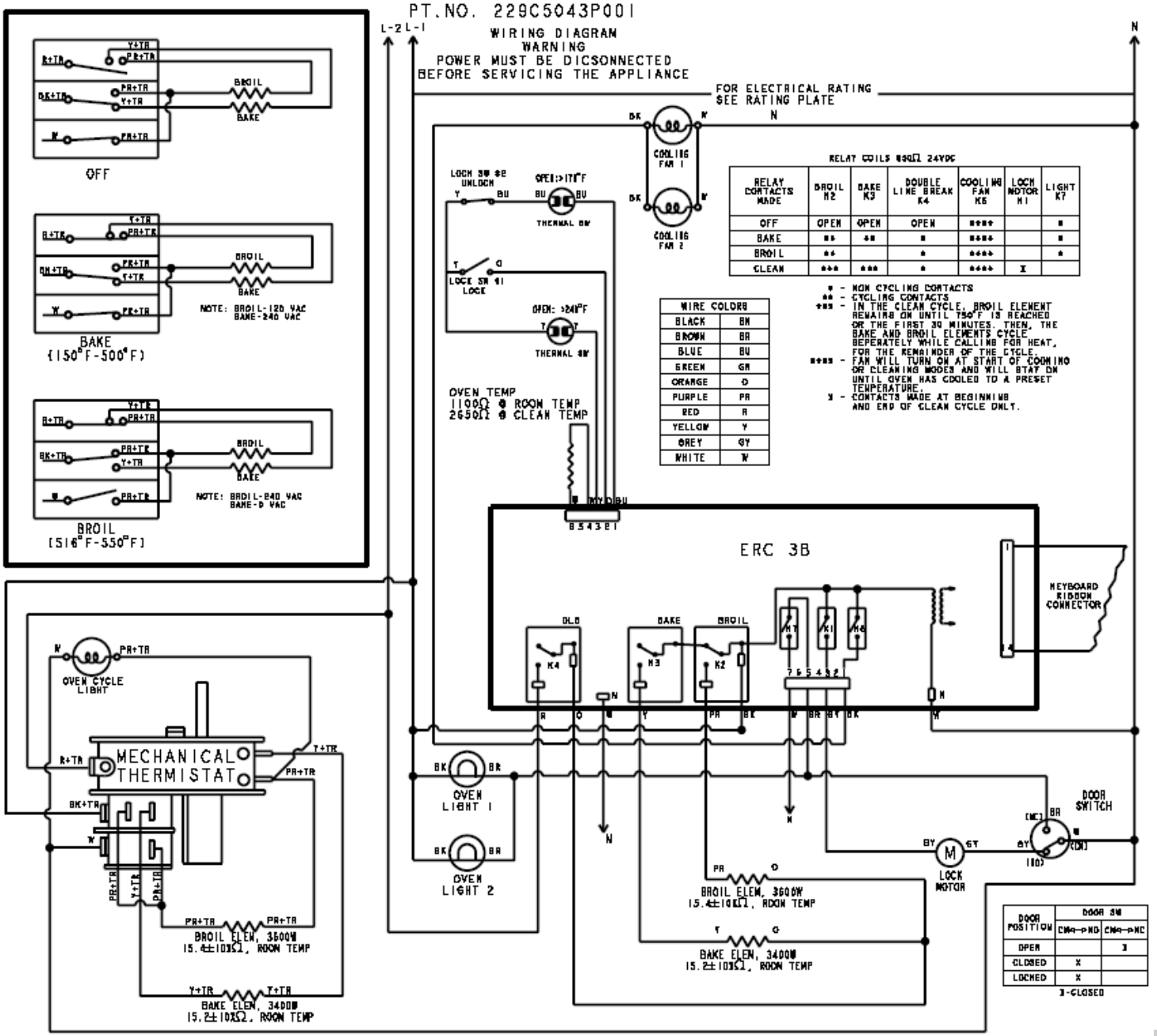


2002 – 27” & 30” Wall Ovens

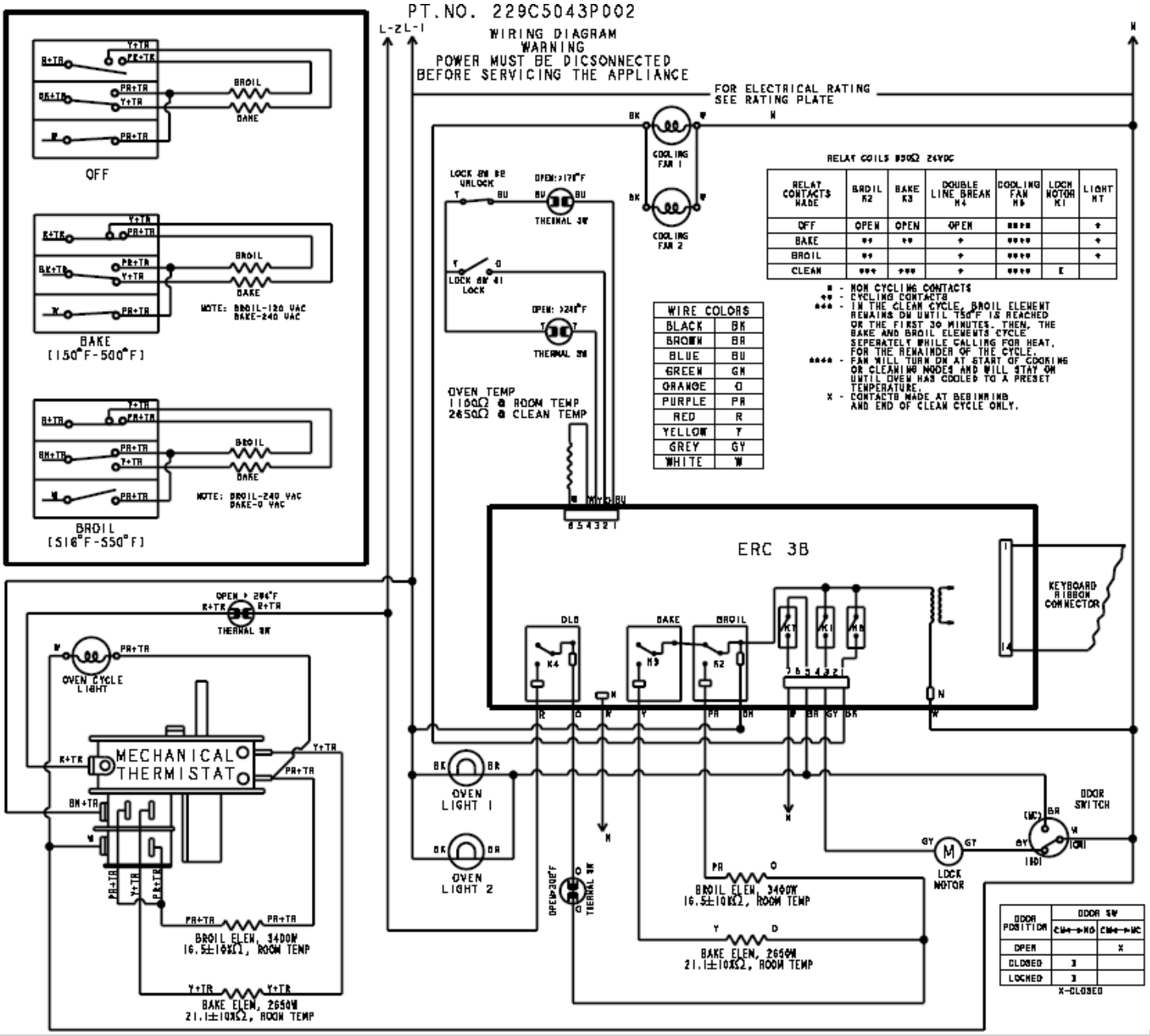
Models JCKS06 and JKS06



Model JTP28



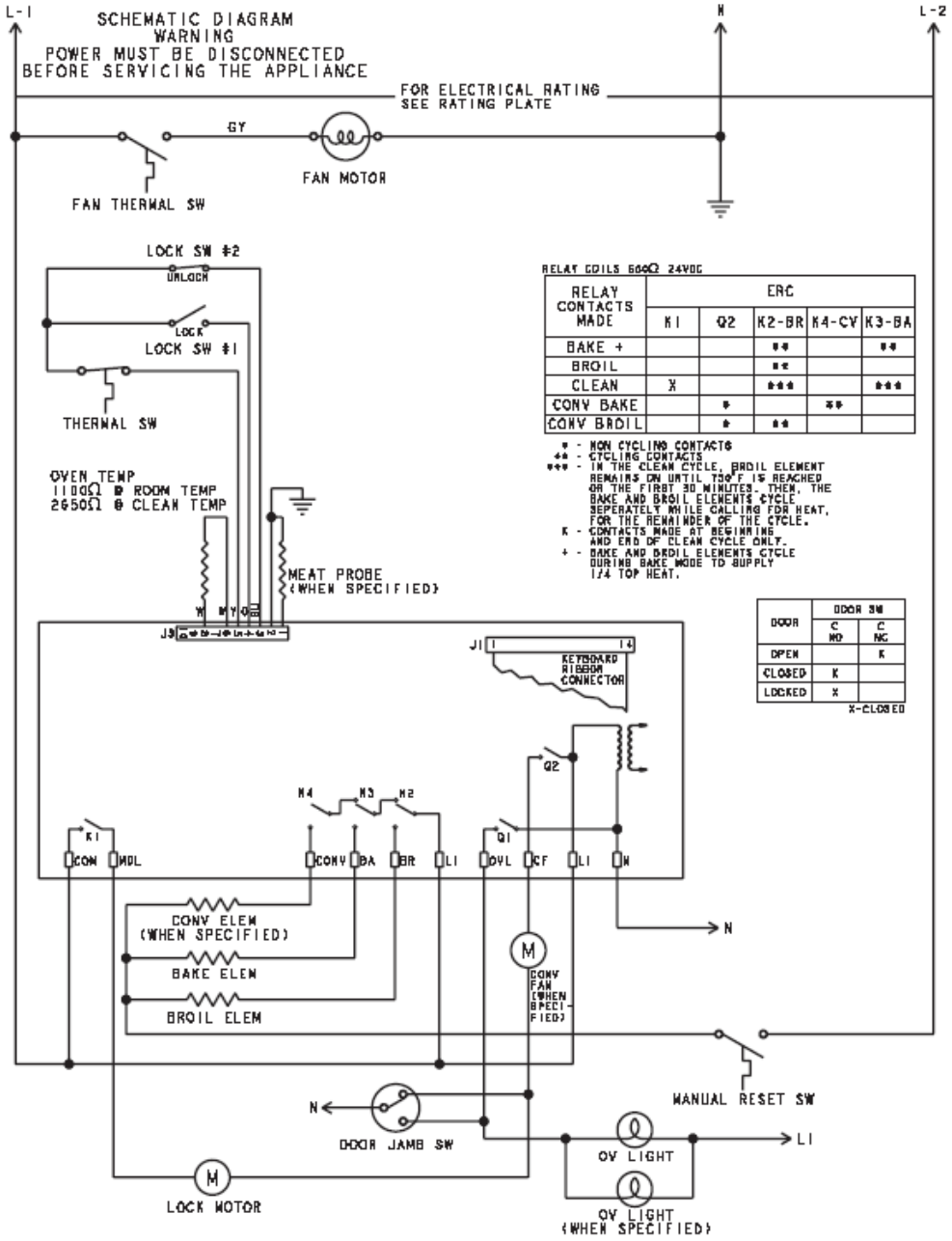
Model JKP28



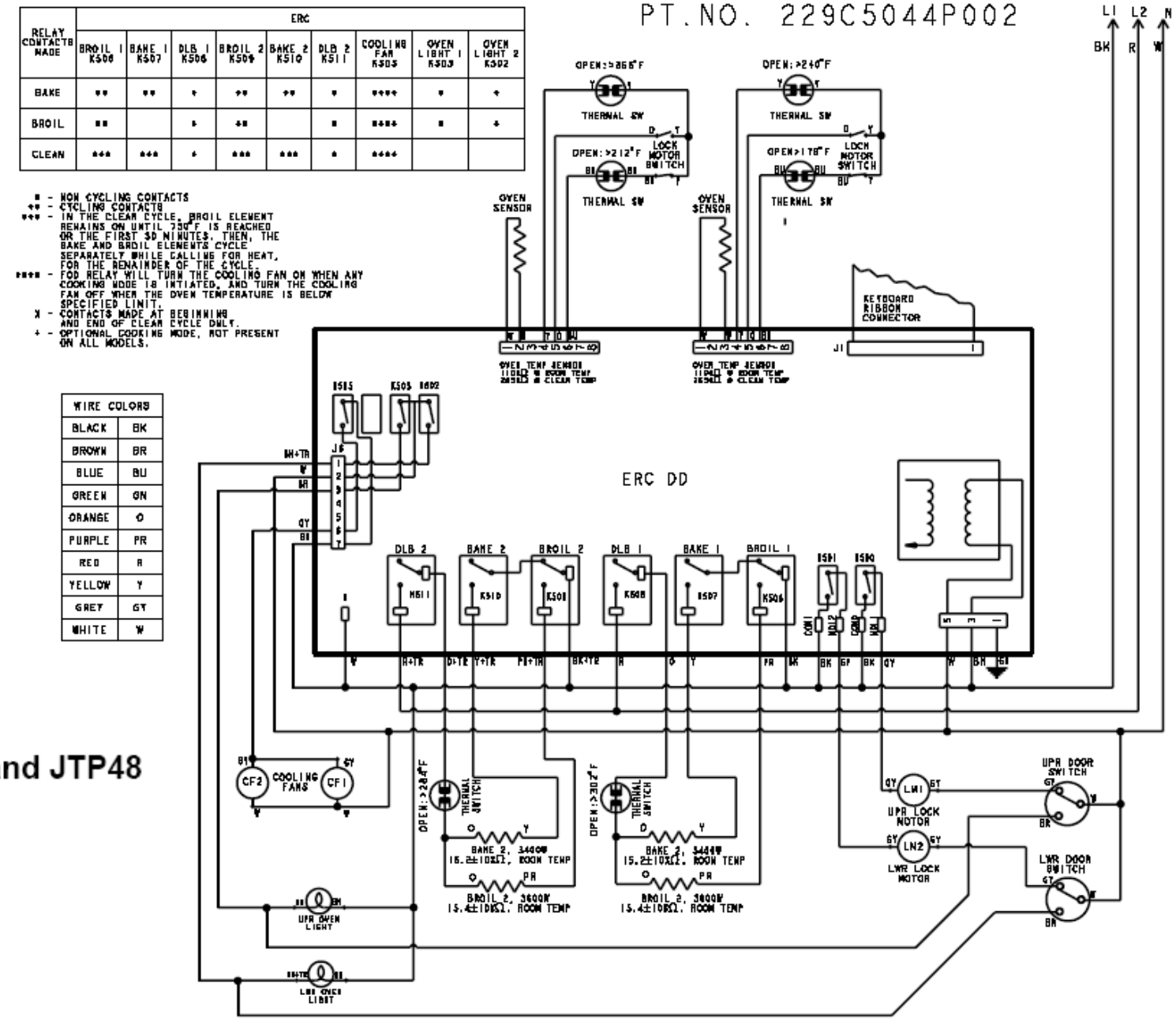
(SG45)

2002 – 27” & 30” Wall Ovens

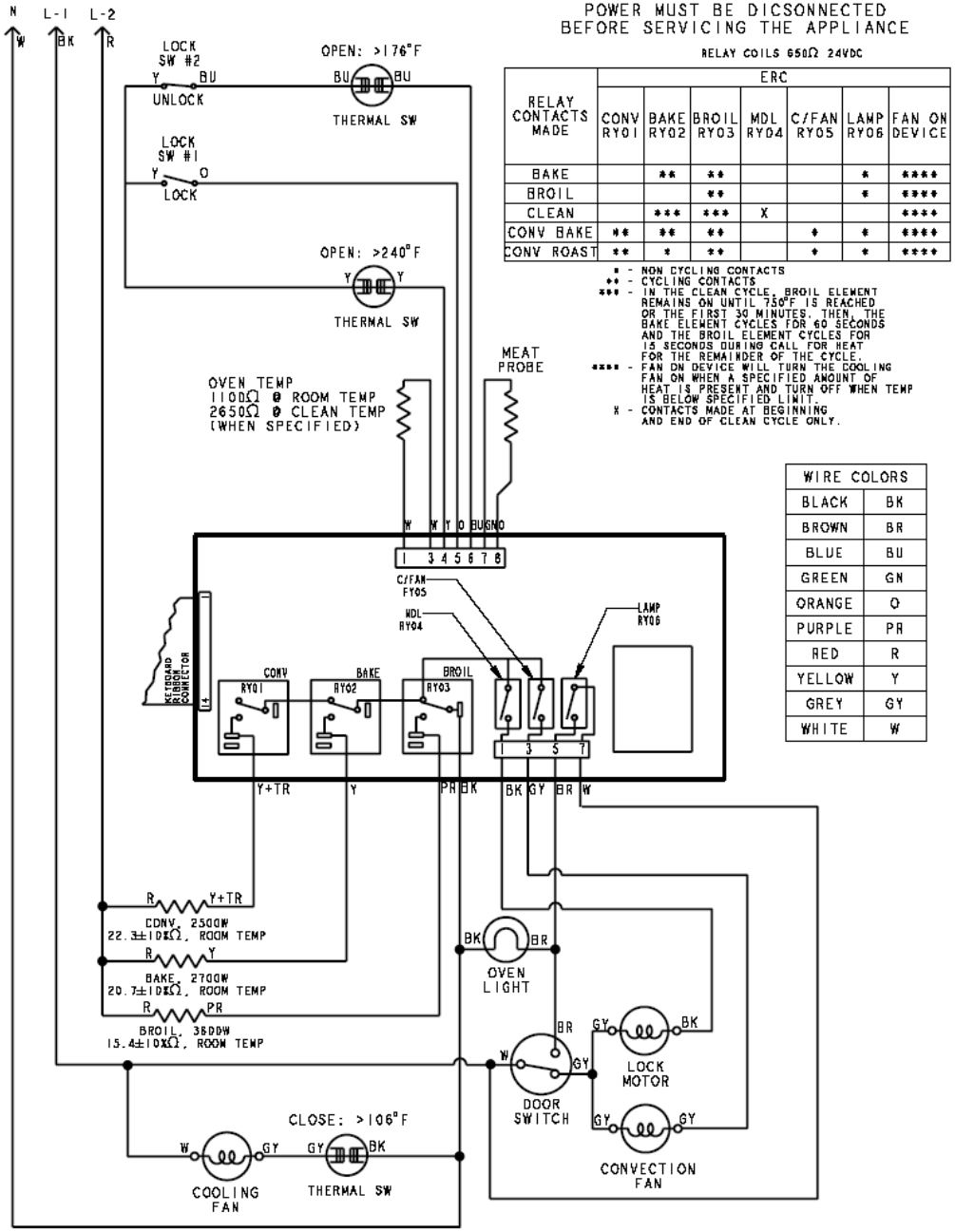
Models ZEK937, JKP18, and JKP15



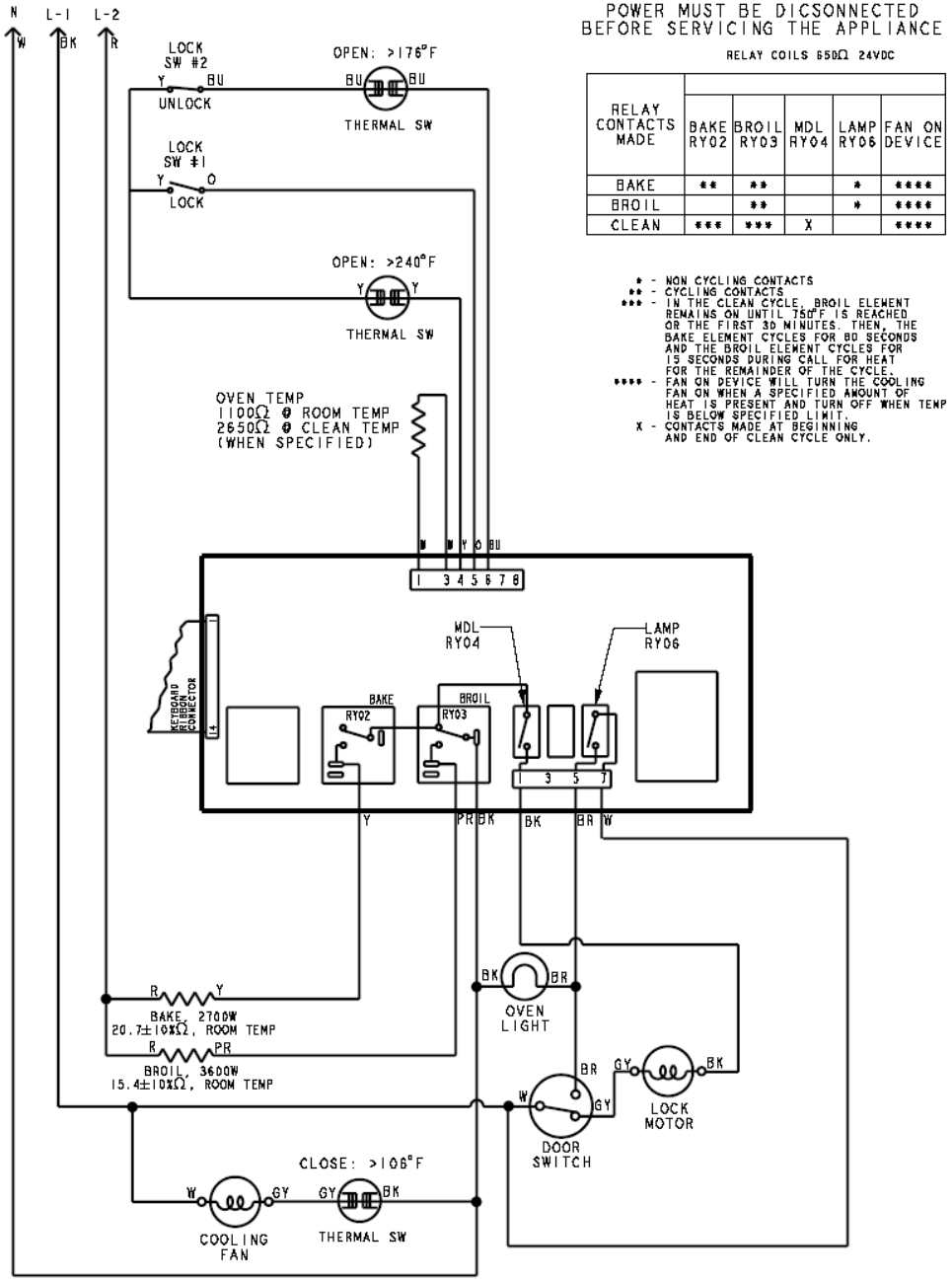
Models JKP48 and JTP48



Model JT965



Model JTP86



POWER MUST BE DICSONNECTED BEFORE SERVICING THE APPLIANCE

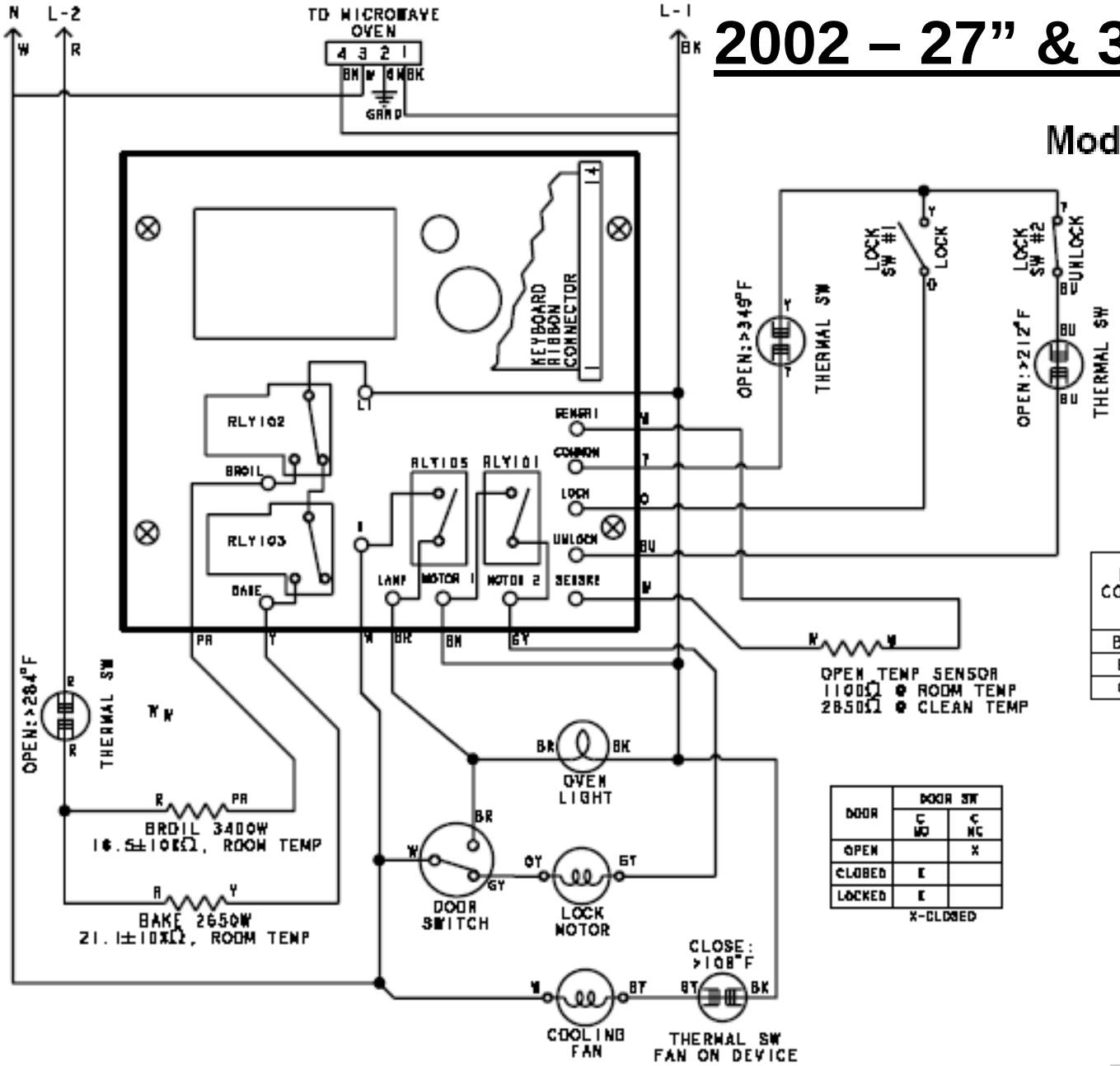
RELAY COILS 650Ω 24VDC

RELAY CONTACTS MADE	BAKE RY02	BROIL RY03	MDL RY04	LAMP RY06	FAN ON DEVICE
BAKE	**	**		*	****
BROIL		**		*	****
CLEAN	***	***	X		****

* - NON CYCLING CONTACTS
** - CYCLING CONTACTS
*** - IN THE CLEAN CYCLE, BROIL ELEMENT REMAINS ON UNTIL 750°F IS REACHED OR THE FIRST 30 MINUTES. THEN, THE BAKE ELEMENT CYCLES FOR 80 SECONDS AND THE BROIL ELEMENT CYCLES FOR 15 SECONDS DURING CALL FOR HEAT FOR THE REMAINDER OF THE CYCLE.
**** - FAN ON DEVICE WILL TURN THE COOLING FAN ON WHEN A SPECIFIED AMOUNT OF HEAT IS PRESENT AND TURN OFF WHEN TEMP IS BELOW SPECIFIED LIMIT.
X - CONTACTS MADE AT BEGINNING AND END OF CLEAN CYCLE ONLY.

2002 – 27” & 30” Wall Ovens

Model JKP86



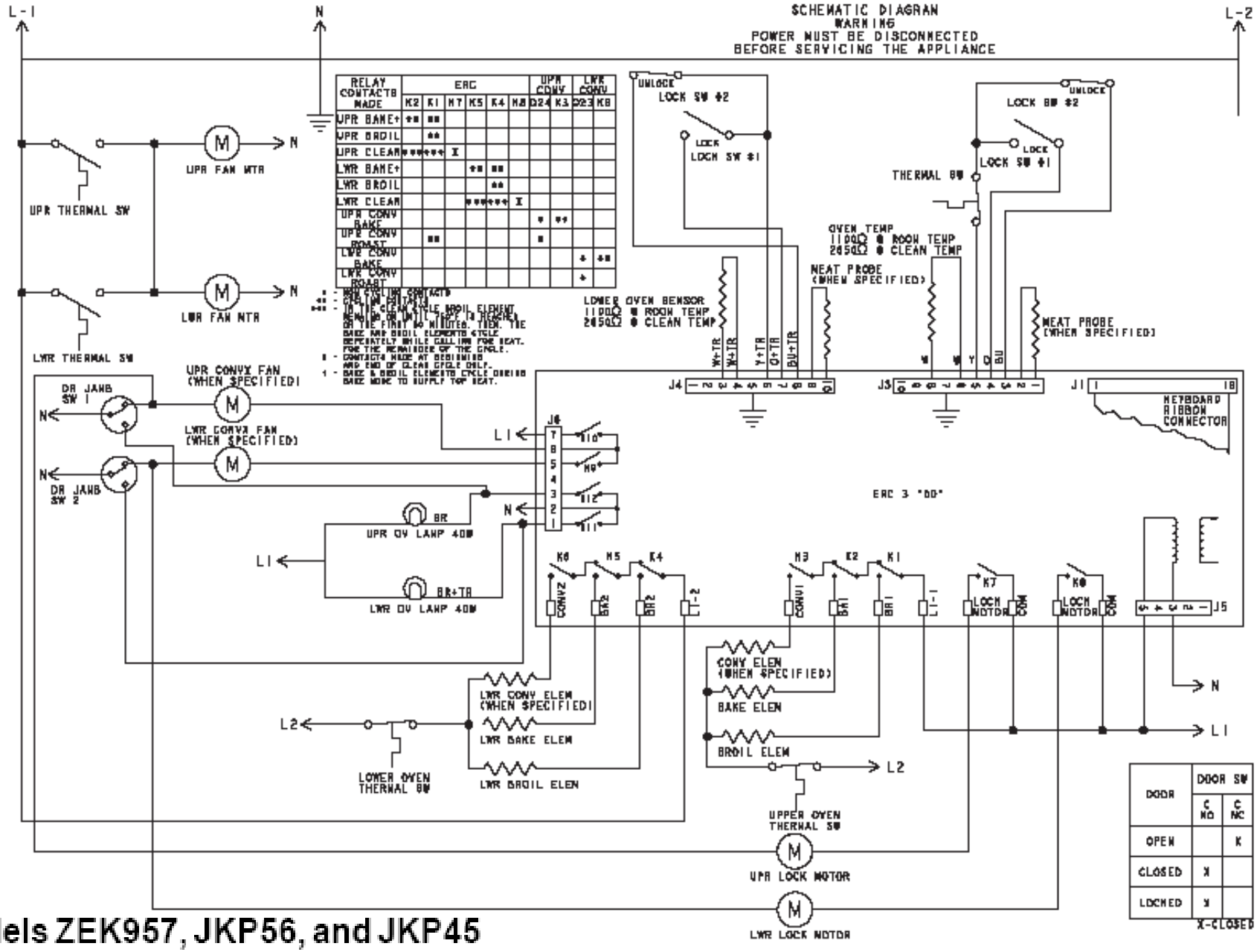
DOOR	DOOR SW C NO	DOOR SW C NC
OPEN		X
CLOSED	X	
LOCKED	X	

X-CLOSED

RELAY COILS 850Ω 24VDC

RELAY CONTACTS MADE	ERC BAKE RLY103	ERC BROIL RLY102	ERC LIGHT RLY105	ERC LOCK MOTOR RLY101	ERC FAN ON DEVICE
BAKE +	**	**	*		****
BROIL		**	*		****
CLEAN	***	***		X	****

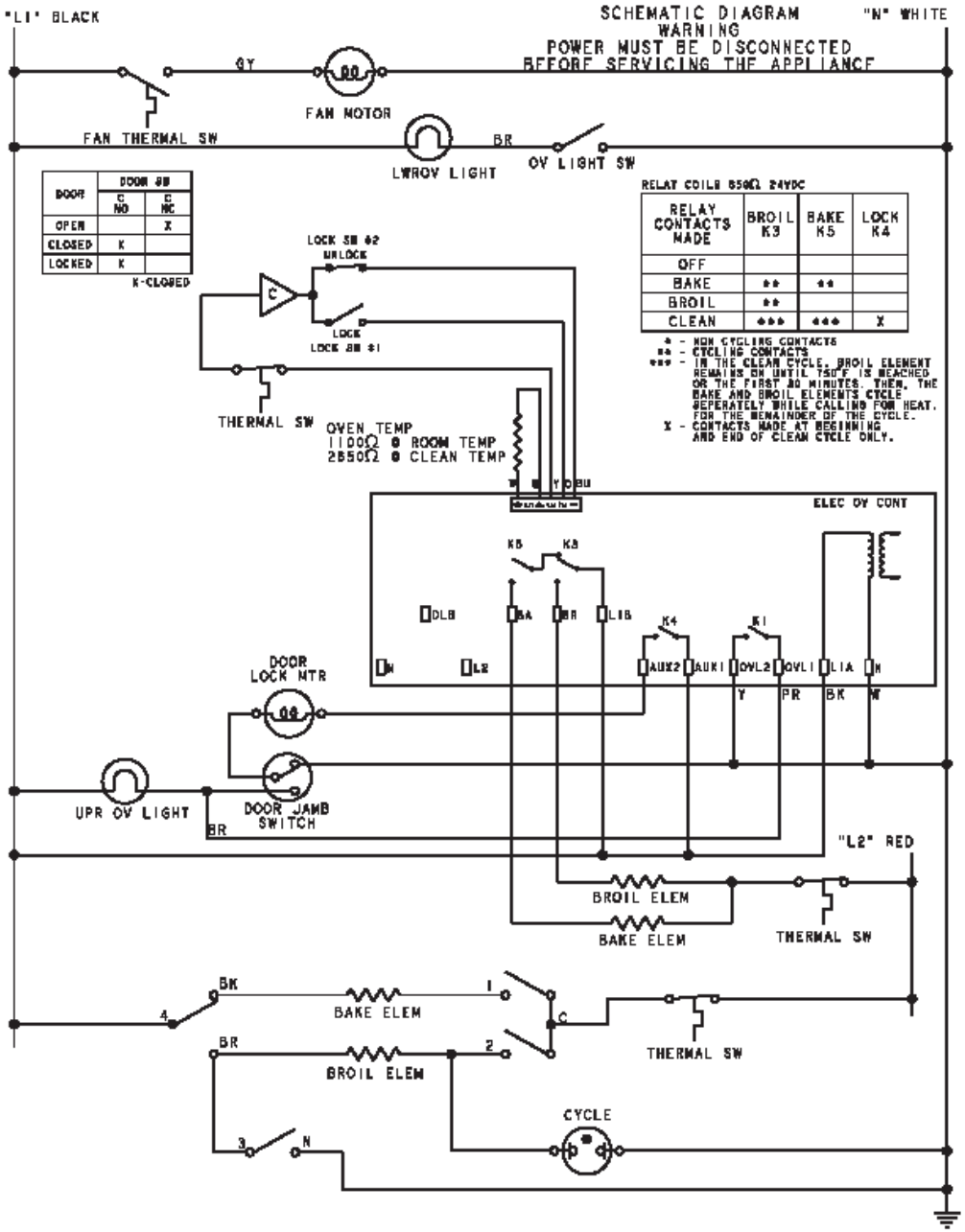
* - NON CYCLING CONTACTS
** - CYCLING CONTACTS
*** - IN THE CLEAN CYCLE, BROIL ELEMENT REMAINS ON UNTIL 750°F IS REACHED OR THE FIRST 30 MINUTES, THEN, THE BAKE ELEMENT CYCLES FOR 60 SECONDS AND THE BROIL ELEMENT CYCLES FOR 15 SECONDS DURING CALL FOR HEAT FOR THE REMAINDER OF THE CYCLE.
**** - FAN ON DEVICE WILL TURN THE COOLING FAN ON WHEN A SPECIFIED AMOUNT OF HEAT IS PRESENT AND TURN OFF WHEN TEMP IS BELOW SPECIFIED LIMIT.
X - CONTACTS MADE AT BEGINNING AND END OF CLEAN CYCLE ONLY.



Models ZEK957, JKP56, and JKP45

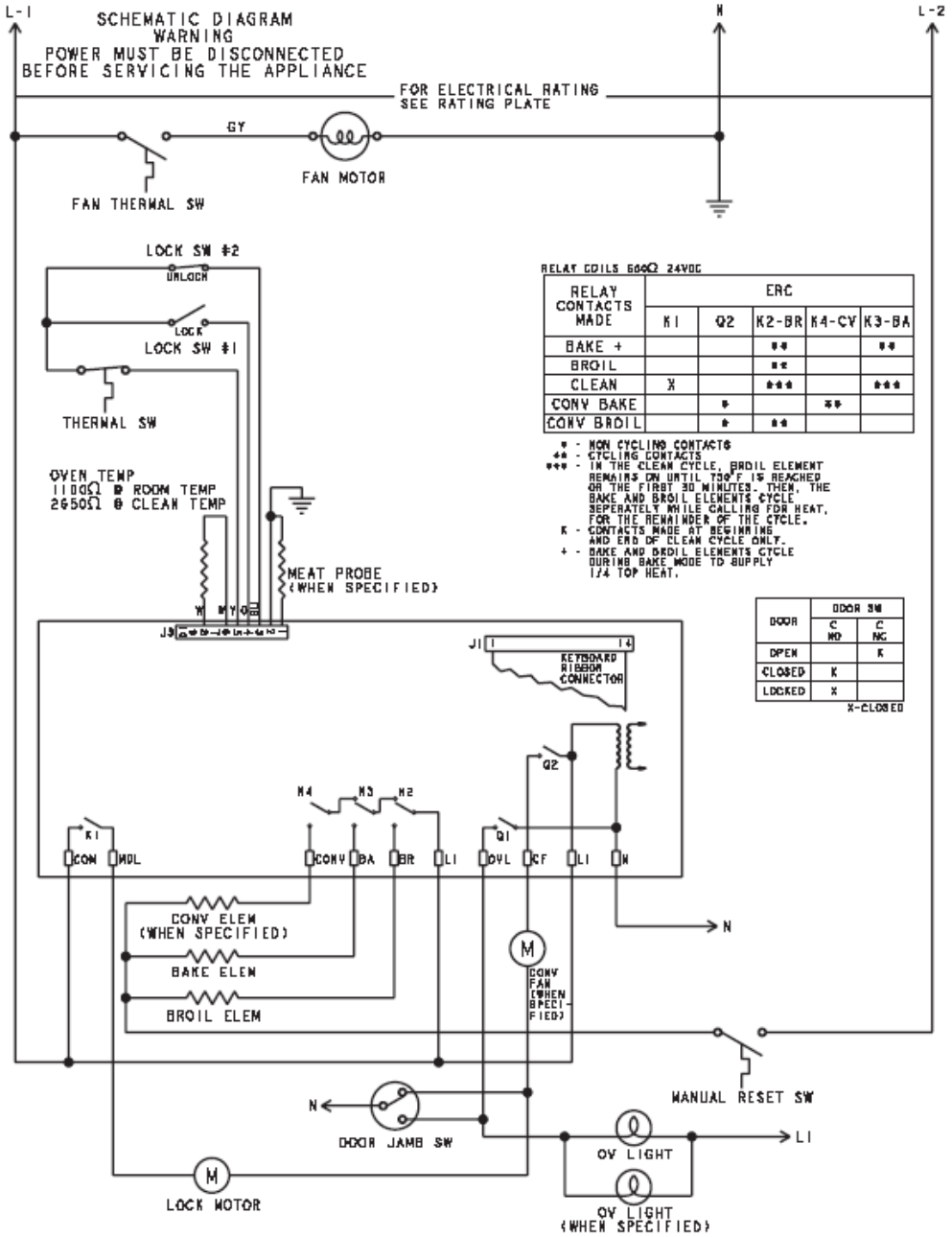
2002 – 27” & 30” Wall Ovens

Model JKP27



2002 – 27” & 30” Wall Ovens

Models ZEK937, JKP18, and JKP15



RELAY COILS 600Ω 24VDC

RELAY CONTACTS MADE	ERC				
	K1	Q2	K2-BR	K4-CV	K3-BA
BAKE +			**		**
BROIL			**		
CLEAN	X		***		***
CONV BAKE		*		**	
CONV BROIL		*	**		

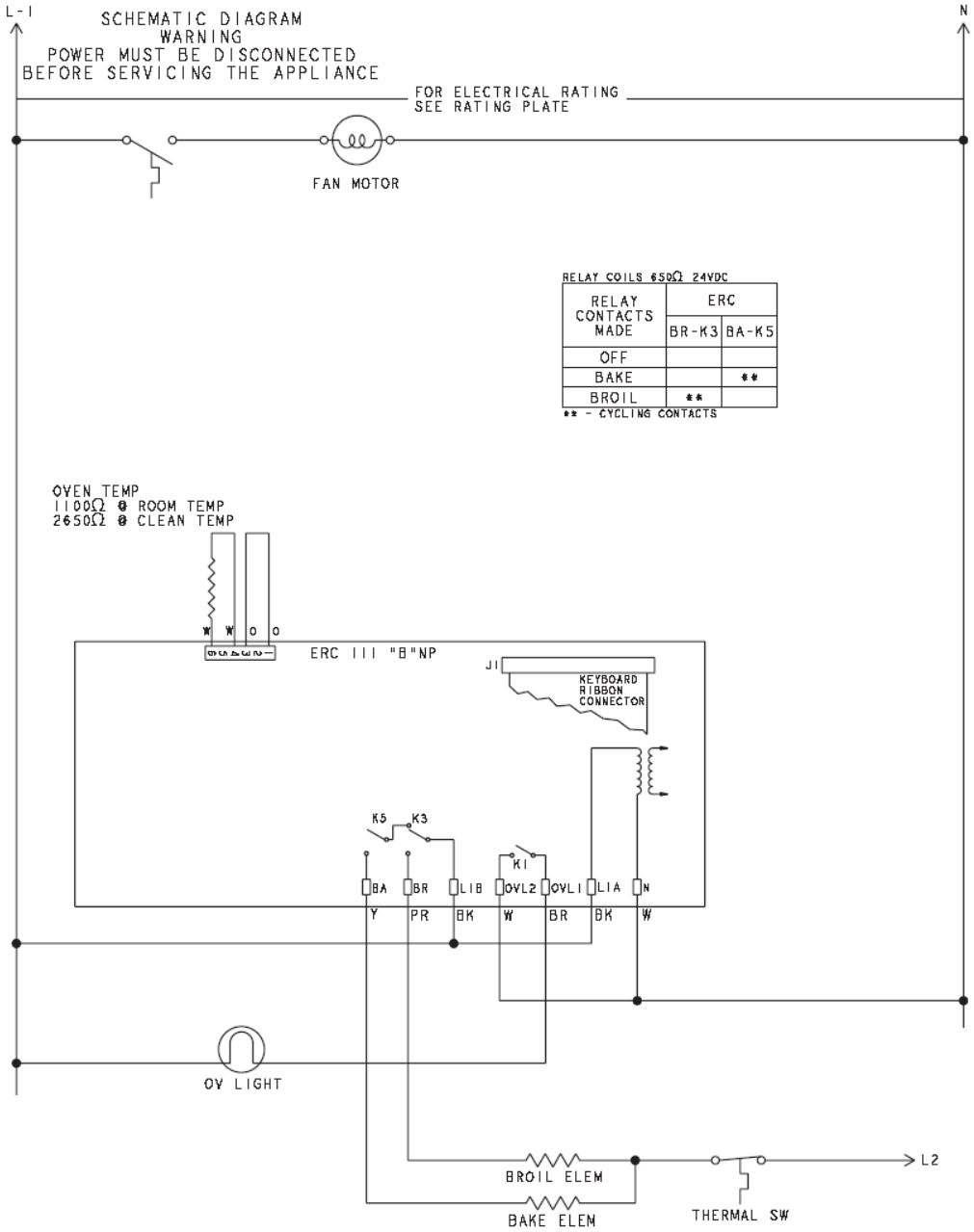
* - NON CYCLING CONTACTS
** - CYCLING CONTACTS
*** - IN THE CLEAN CYCLE, BROIL ELEMENT REMAINS ON UNTIL 730°F IS REACHED OR THE FIRST 30 MINUTES. THEN, THE BAKE AND BROIL ELEMENTS CYCLE SEPERATELY WHILE CALLING FOR HEAT, FOR THE REMAINDER OF THE CYCLE.
K - CONTACTS MADE AT BEGINNING AND END OF CLEAN CYCLE ONLY.
+ - BAKE AND BROIL ELEMENTS CYCLE DURING BAKE MODE TO SUPPLY 1/4 TOP HEAT.

DOOR	DOOR SW	
	C NO	C NC
OPEN		X
CLOSED	X	
LOCKED	X	

X-CLOSED

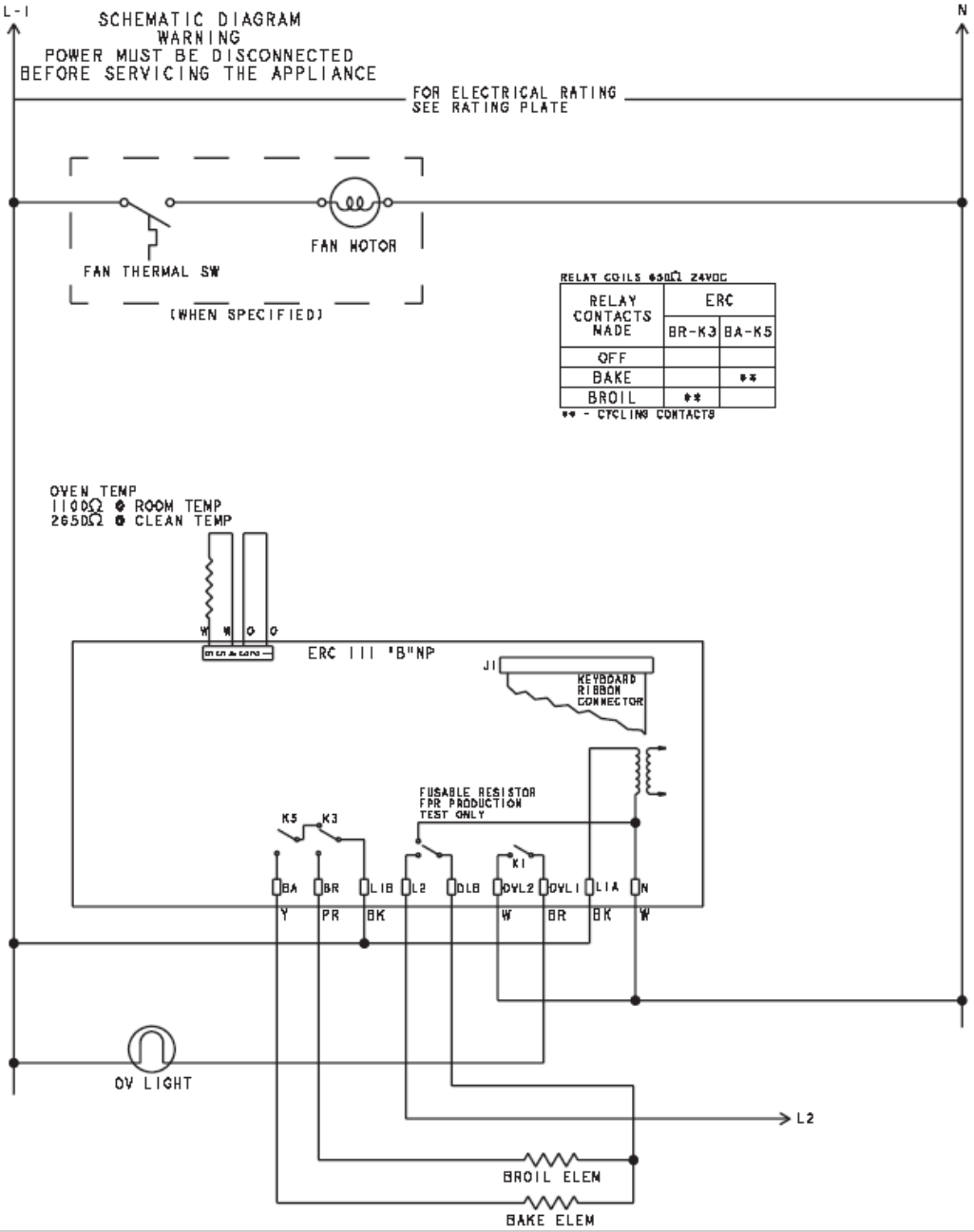
2002 – 27” & 30” Wall Ovens

Model JKS05



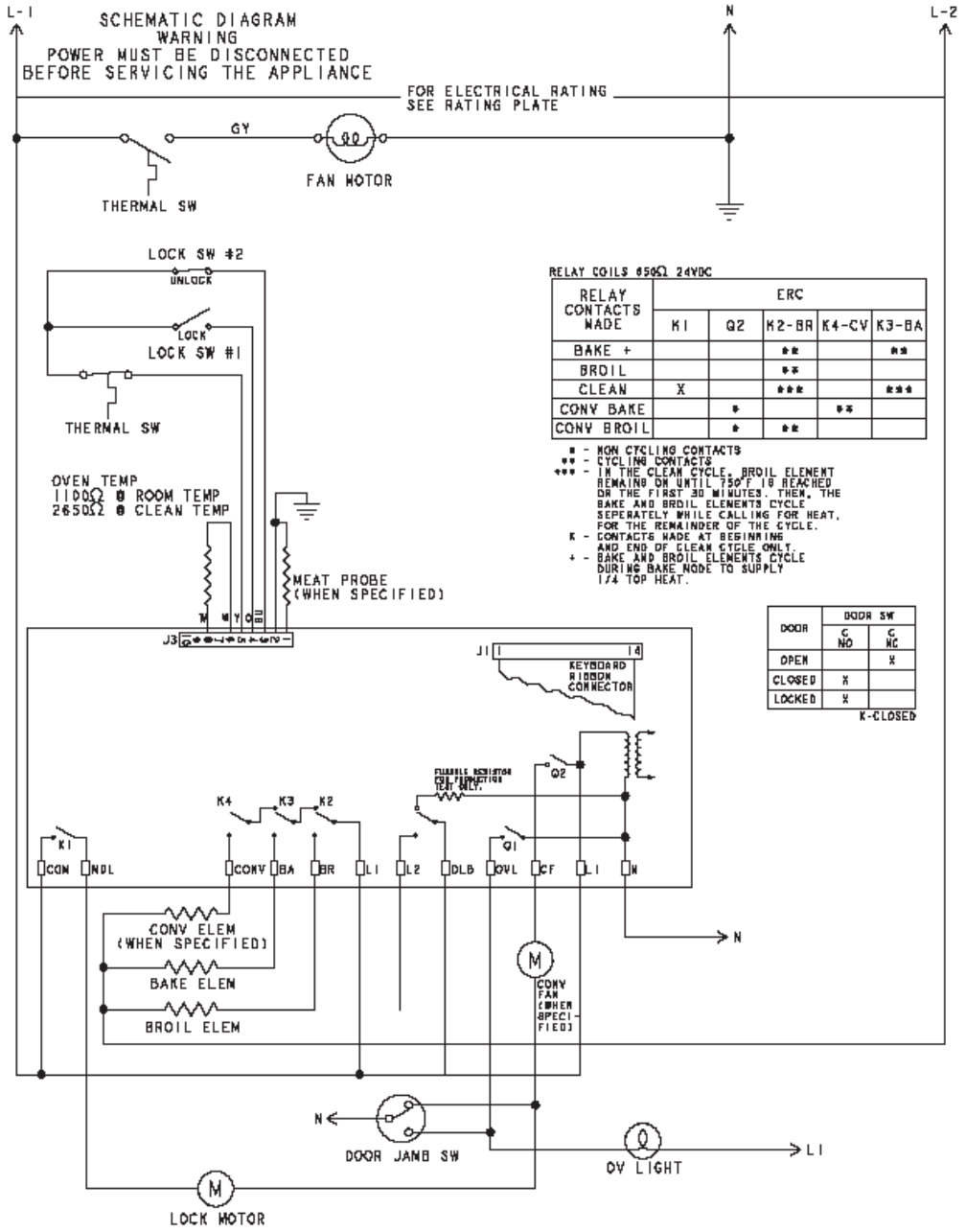
2002 – 27” & 30” Wall Ovens

Model JCKS05



2002 – 27” & 30” Wall Ovens

Models JCKP18 and JCKP15



RELAY COILS 650Ω 24VDC

RELAY CONTACTS MADE	ERC				
	K1	Q2	K2-BR	K4-CV	K3-BA
BAKE +			**		**
BROIL			**		
CLEAN	X		***		***
CONV BAKE		*		**	
CONV BROIL		*	**		

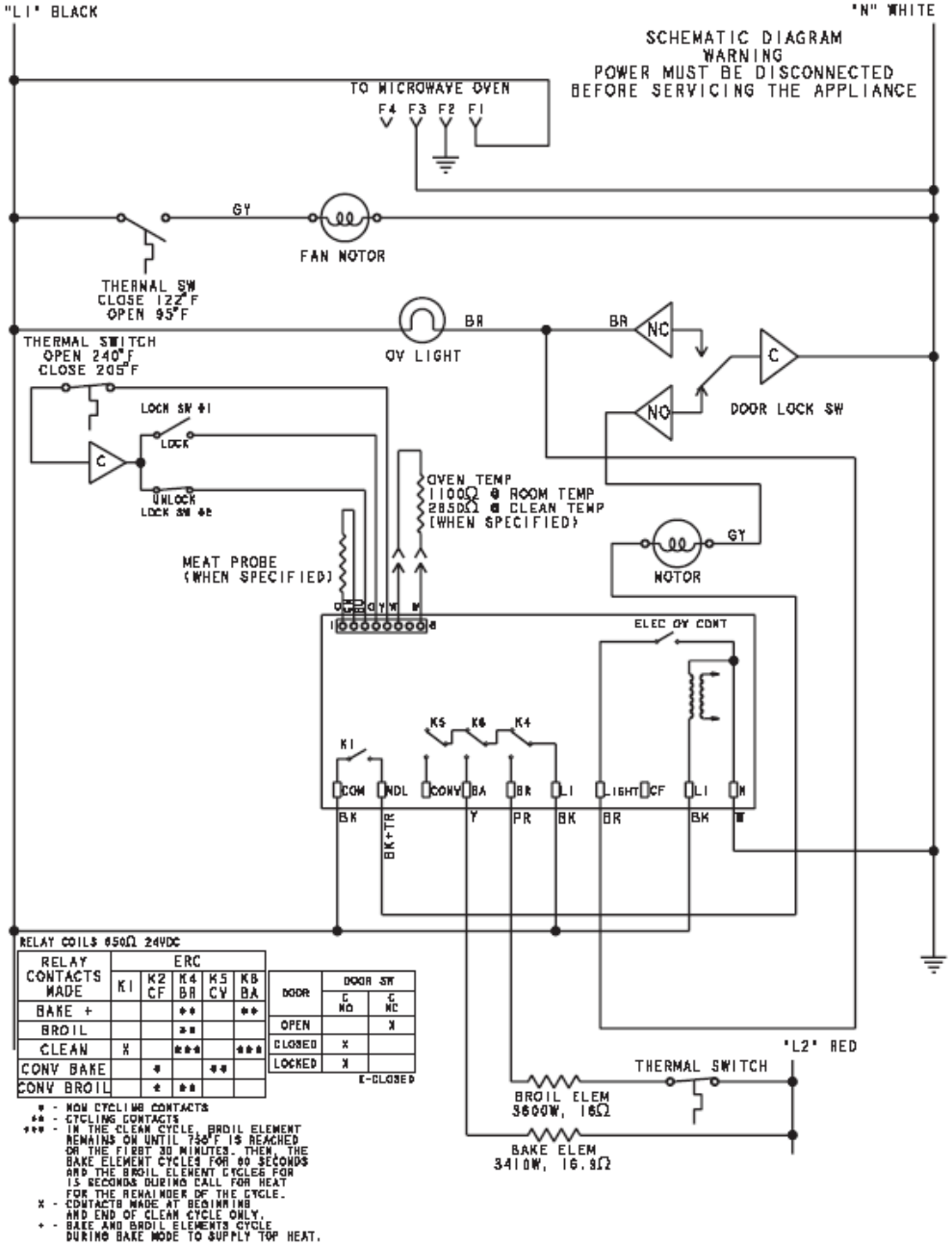
* - NON CYCLING CONTACTS
** - CYCLING CONTACTS
*** - IN THE CLEAN CYCLE, BROIL ELEMENT REMAINS ON UNTIL 750°F IS REACHED OR THE FIRST 30 MINUTES. THEN, THE BAKE AND BROIL ELEMENTS CYCLE SEPERATELY WHILE CALLING FOR HEAT, FOR THE REMAINDER OF THE CYCLE.
K - CONTACTS MADE AT BEGINNING AND END OF CLEAN CYCLE ONLY.
+ - BAKE AND BROIL ELEMENTS CYCLE DURING BAKE MODE TO SUPPLY 1/4 TOP HEAT.

DOOR	DOOR SW	
	C NO	C NC
OPEN		X
CLOSED	X	
LOCKED	X	

K-CLOSED

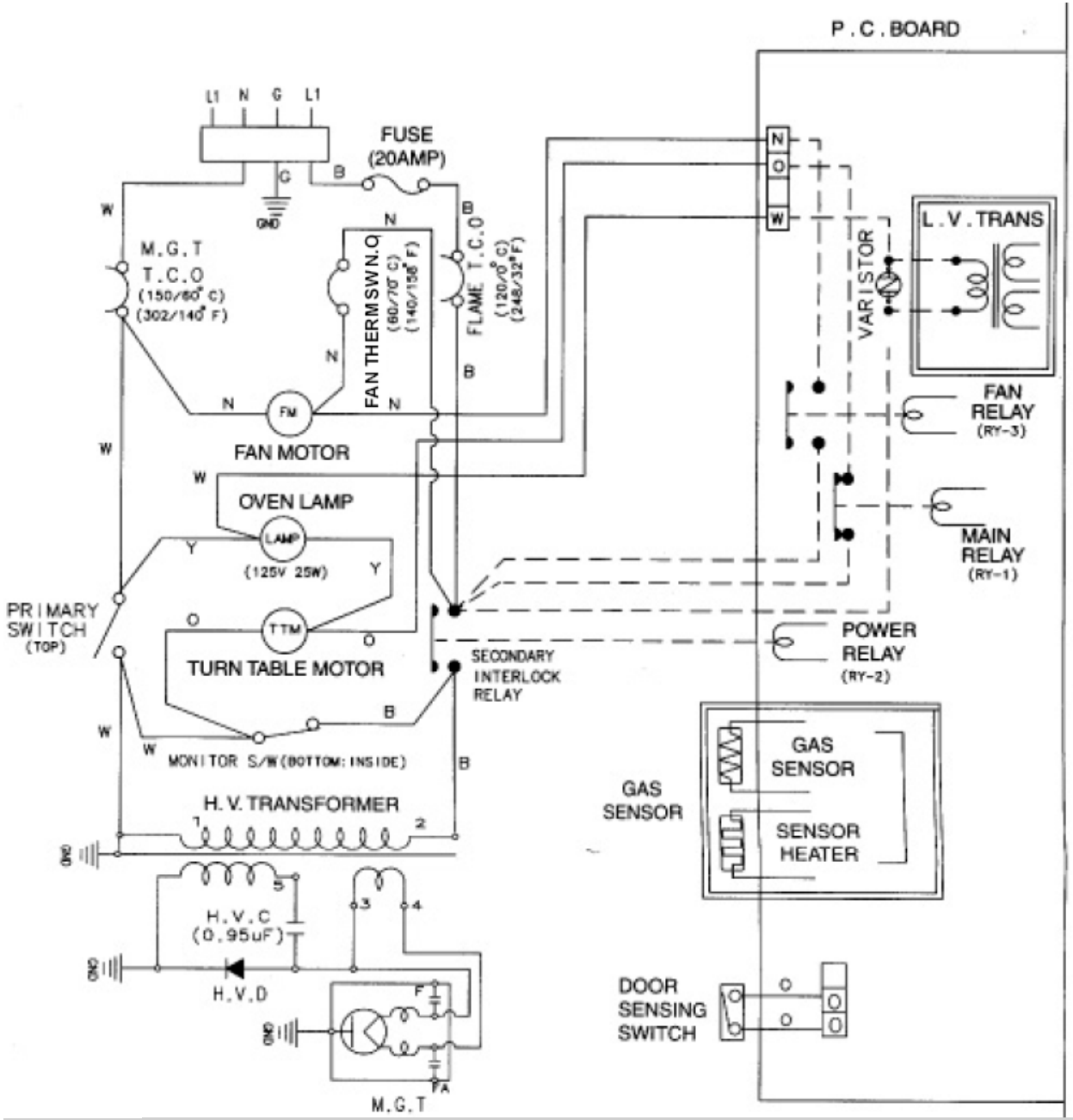
2002 – 27” & 30” Wall Ovens

Model JKP85



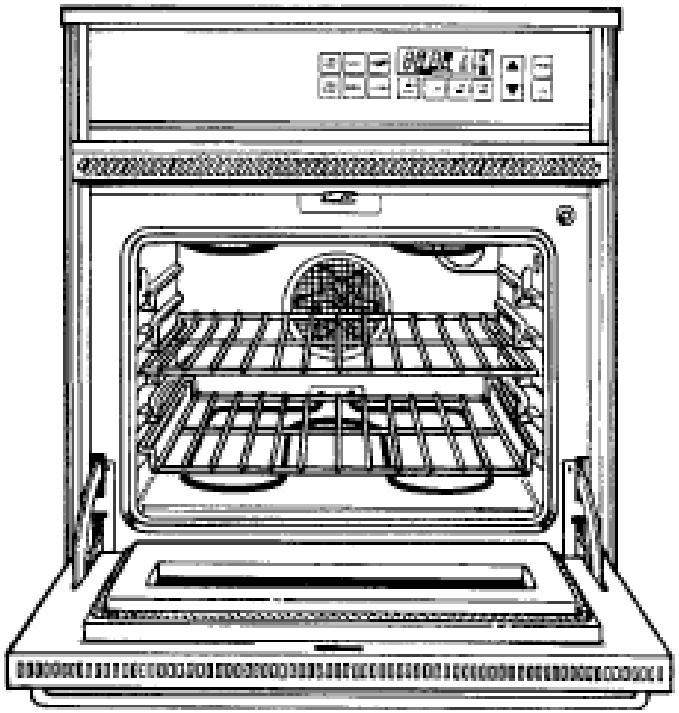
2002 – 27” & 30” Wall Ovens

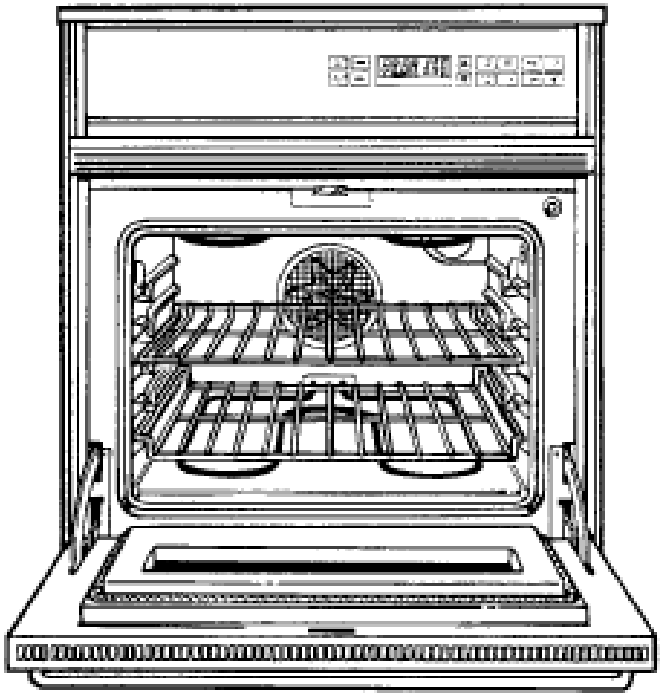
Microwave



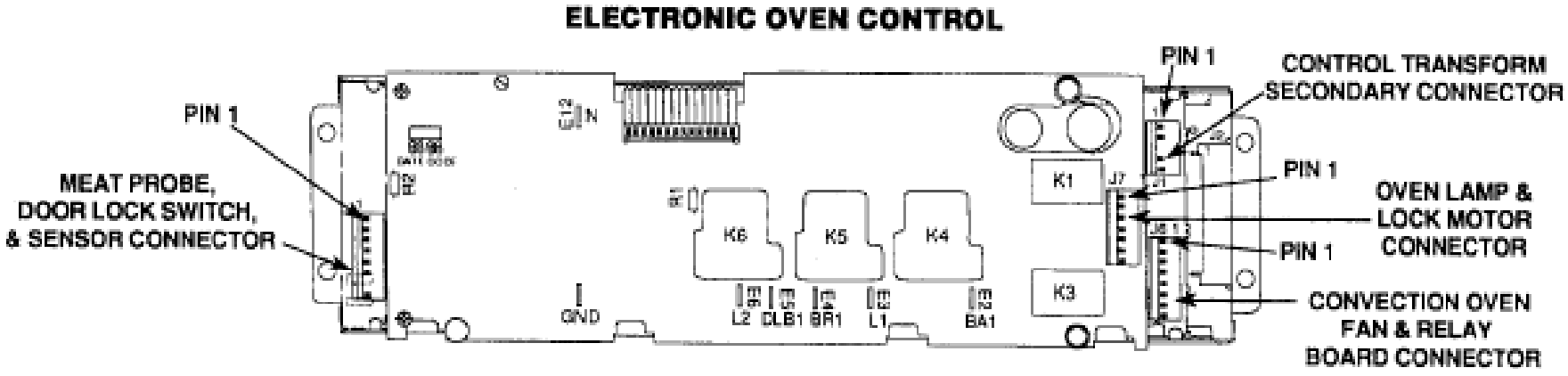
SYM	COLOR
B	BLACK
W	WHITE
N	BLUE
R	RED
G	GREEN
O	ORANGE
Y	YELLOW
BR	BROWN
P	PINK

JKP16G/17W/54G/55W
ZEK736G/737W/756G/757W

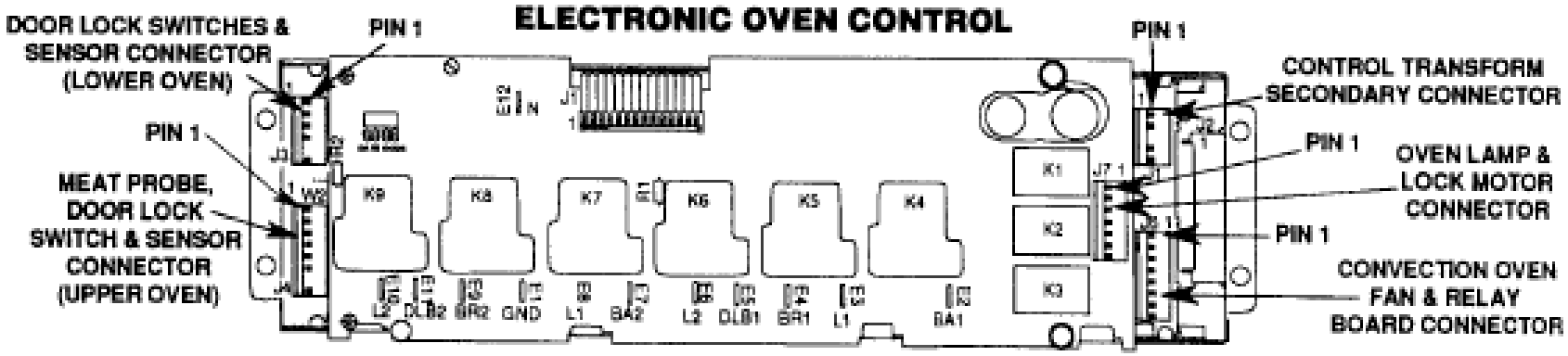




JKP16G/17W/54G/55W - ZEK736G/737W/756G/757W



SINGLE OVEN CONTROL



DOUBLE OVEN CONTROL

JKP16G/17W/54G/55W - ZEK736G/737W/756G/757W

RELAY CONTACT VOLTAGE TEST
SINGLE & UPPER OVEN

RELAY	TERMINALS	VOLTAGE MODE
* K6 LINE BREAK RELAY	L1 to DLB1	240VAC SEE STRIP CIRCUITS
K4 OVEN BAKE	BA1 to DLB1	
K5 OVEN BROIL	BR1 to DLB1	
K3 OVEN LAMP	CONNECTOR J7 PIN 7 to E12 (N)	OVEN LIGHT IS ON ANYTIME RELAY CONTACTS CLOSED OR OVEN DOOR OPEN
K1 LOCK MOTOR	CONNECTOR J7 PIN 1 to N	120VAC LOCKING OR UNLOCKING

*** NOTE:** If 0 or 120V is read, "Press CLEAR/OFF", check L2 to N. If 120V is not present check 20 AMP CIRCUIT BREAKER (See page 11).

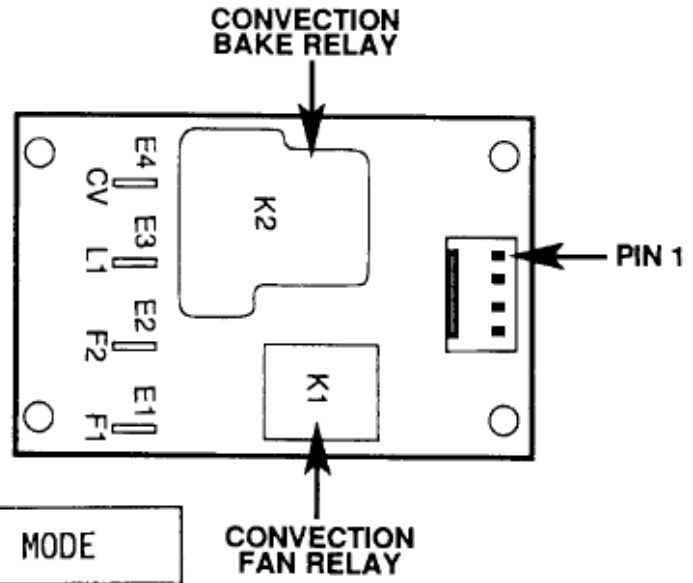
JKP16G/17W/54G/55W - ZEK736G/737W/756G/757W

LOWER OVEN

RELAY	TERMINALS	VOLTAGE	MODE
** K9 LINE BREAK RELAY	L1 to DLB2	240VAC	SEE STRIP CIRCUITS
K7 OVEN BAKE	BA2 to DLB2		
K8 OVEN BROIL	BR2 to DLB2		
K2 LOCK MOTOR	CONNECTOR J7 PIN 3 to N	120VAC	LOCKING OR UNLOCKING

** NOTE: If 0 or 120V is read, "Press CLEAR/OFF", check L2 to N. If 120V is not present check Thermal Switch located on vent box between ovens. If OK Check 20 AMP CIRCUIT BREAKER (Only models with lower oven convection). See Page 11.

4 Pin connectors from control to relay board must be aligned so that Pin 1 on the Single or Upper Oven Relay Board connects with Pin 1 on the J6 connector on the control. Pin 1 on the Lower Oven Relay Board must connect with Pin 5 of the J6 connector on the control. **IF ANY OF THE CONNECTORS ARE MISALIGNED OR WIRING REVERSED IT WILL DESTROY THE CONTROL.**



CONVECTION FAN & RELAY BOARD CHECKS:

RELAY BOARD VOLTAGE CHECKS:

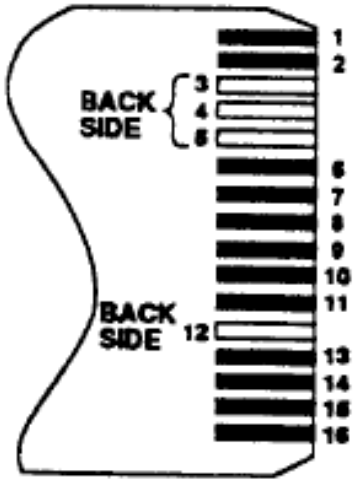
RELAY	TERMINALS	VOLTAGE	MODE
Convection Bake Relay	L1 to N	120V	Constant
	CV to N	120V	Convection Bake
Convection Fan Relay	F1 to N	120V	Constant
	F2 to N	120V	Convection Bake & Roast

RELAY BOARD RESISTANCE CHECKS:

RELAY	TERMINALS	OHMS
Convection Bake Relay	PIN 1 to 2	660Ω
Convection Fan Relay	PIN 3 to 4	1430Ω

JKP16G/17W/54G/55W - ZEK736G/737W/756G/757W

Ohm Meter Test:
Set Ohm Meter on scale that will read approximately 5000 Ω. Connect leads to ribbon cable as indicated in chart for each function. Depress function pad. Meter should read less than ∞ Ω if switch contact is working.



SINGLE & UPPER OVEN			
FUNCTION	CONDUCTORS	FUNCTION	CONDUCTORS
BAKE	3 to 8	TIMER	3 to 9
BROIL	4 to 8	CLOCK	4 to 9
CLEAN	5 to 8	STOP TIME	5 to 9
CLEAR/OFF	1 to 12	COOK TIME	6 to 9
CONV. BAKE	6 to 8	OVEN LIGHT	5 to 10
CONV. ROAST	7 to 8	INCREASE PAD	16 to 15
PROBE	3 to 10	DECREASE PAD	16 to 14
LOWER OVEN			
BROIL	4 to 11	BAKE	3 to 11
CLEAN	5 to 11	CLEAR/OFF	1 to 13
CONV. BAKE	6 to 11	CONV. ROAST	7 to 11

JKP16G/17W/54G/55W - ZEK736G/737W/756G/757W

FAILURE CODE	MEANING	CORRECTION
-F0- -F8- -FF-	Failed Component on Electronic Control Board	Determine mode of operation when initial Failure Code occurred. Repeat mode of operation. If failure re-occurs replace control.
-F1- -F7-	Double Line Break Relay is "ON" in a non-cooking /clean mode or failed component on Control.	Keys Pads are separate from Control (Part of Control Panel). Determine if problem is with the Key Panel or Control by: 1. Pushing CLEAR/OFF pad 2. Disconnecting Ribbon Cable from control and wait at least 32 seconds to see if Code Re-occurs. • If code re-occurs problem is in the Control. • If code does not re-occur problem is with the Key Panel.

JKP16G/17W/54G/55W - ZEK736G/737W/756G/757W

-F2-

Oven Over Temp.

- Door Unlocked - Oven exceeded 600°F.
- Door Locked - Oven exceeded 925°F.

REMEMBER Control measures resistance of sensor circuit, and not actual oven temperature.

DURING CLEAN

Actual over Temperature condition occurs:

- Look for welded relay contacts on the bake or broil relays.

Over Temperature did not occur:

- Look for a high resistance connection or other cause in the sensor circuit. (Intermittent Sensor or Sensor Circuit)

- Open thermal switch on rear wall of control compartment. Switch is normally closed and will open if area overheats due to inoperative cooling fan. Check fan operation.
- Both Lock switch 1 & 2 Closed at the same time.

JKP16G/17W/54G/55W - ZEK736G/737W/756G/757W

-F3-	Open Sensor Circuit	Measure Sensor Circuit Resistance at sensor / Lock Switch Connector J3 or J4 (should read approx. 1100Ω at room temperature). Measure each lead to chassis ground (Should read ∞Ω).
-F4-	Shorted Sensor Circuit	

If Open / Shorted Circuit look for:

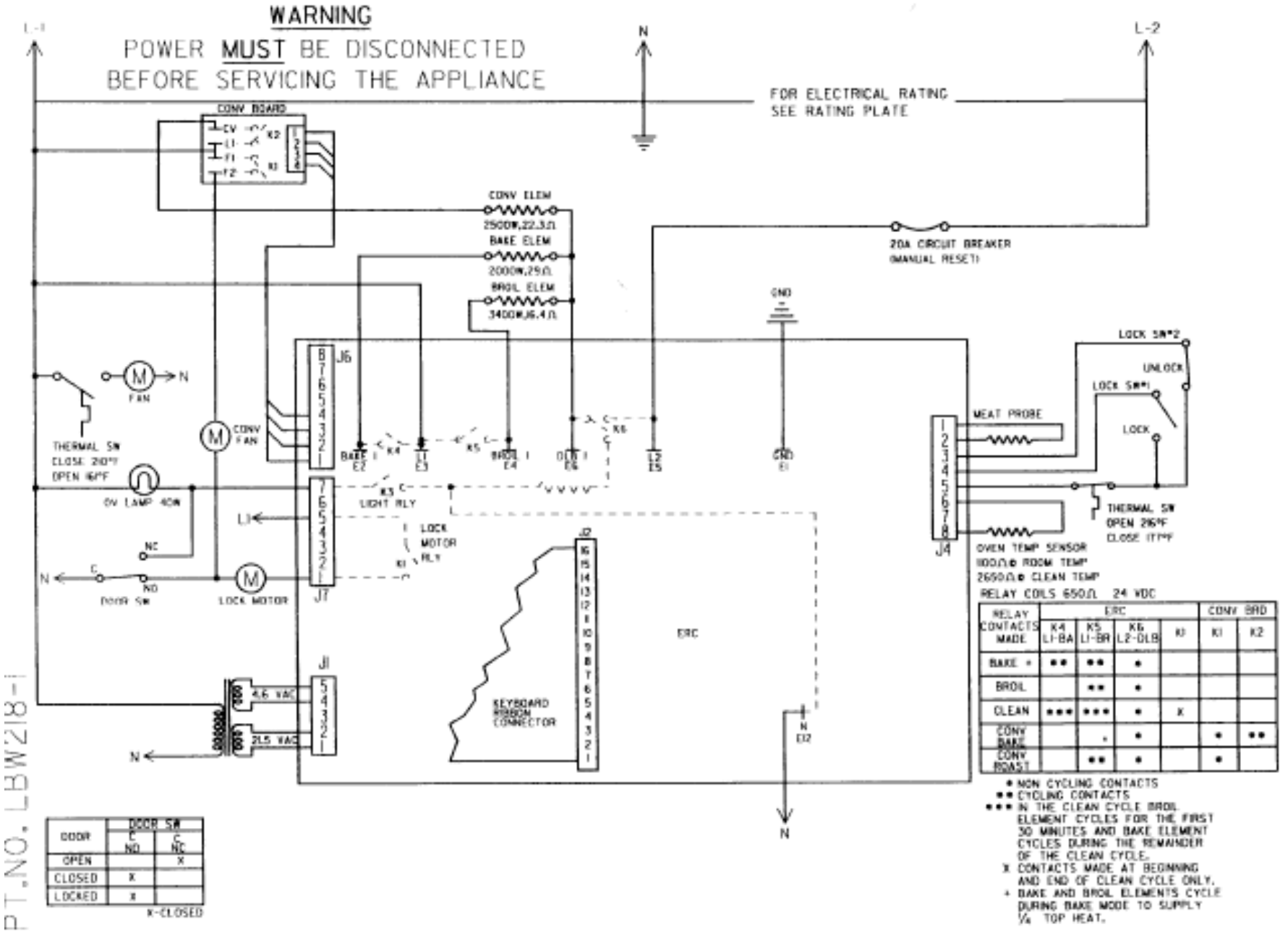
- **Open / Shorted Sensor** - measure directly across sensor (pull sensor wires into oven to access sensor in line connector). Remove sensor from circuit at in-line connector.
- **Cut or pinched sensor harness wire.**
- **Loss of terminal contact** at Control.
- **One or both sensor leads shorted** to ground.

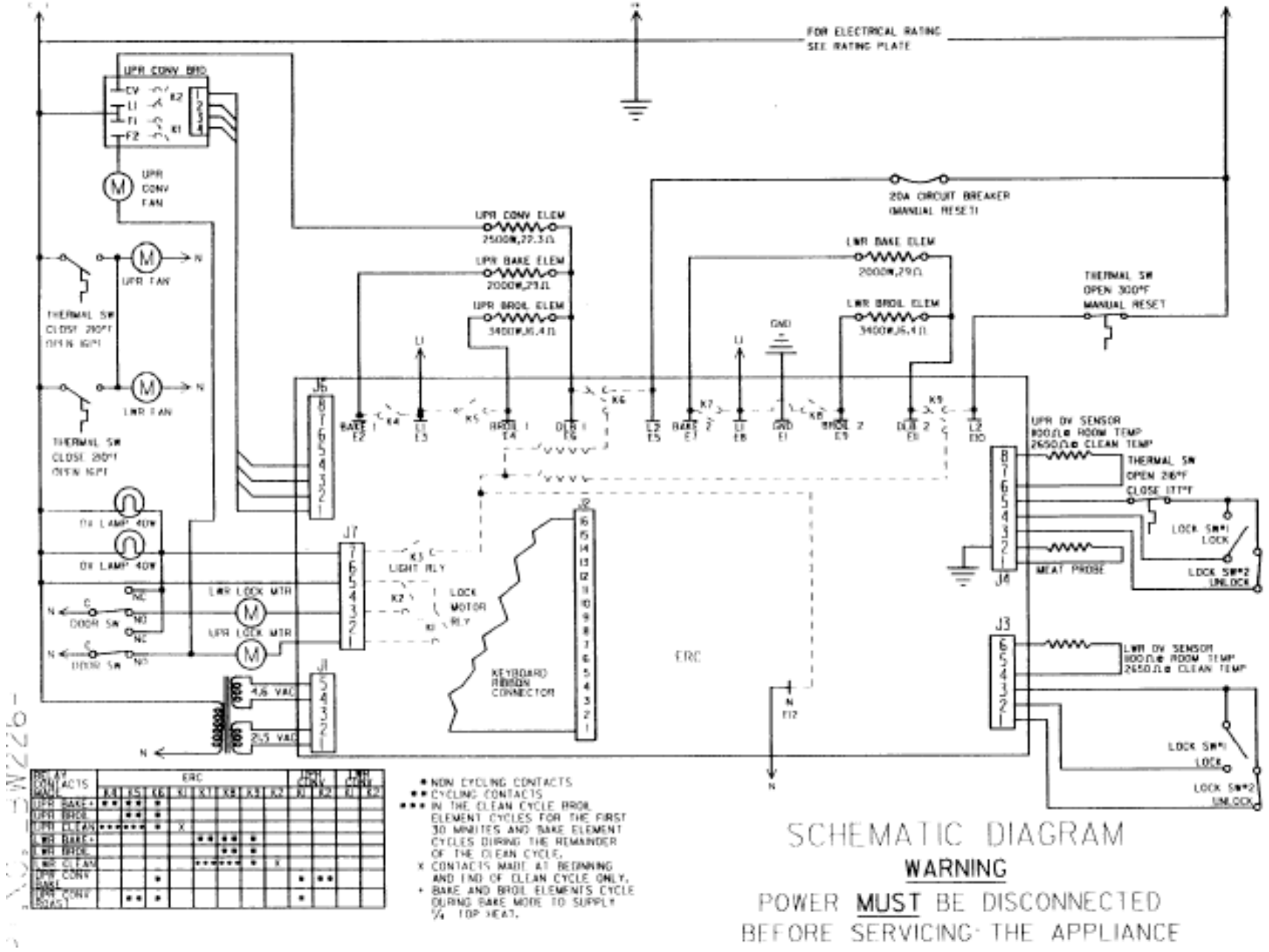
If Circuit Appears to be Normal (Approx. 1100Ω):

- Re-install sensor disconnect plug to Control and measure sensor resistance at solder joints on back of Control circuit board. If circuit is open problem is in the connector block. Remove terminals from block and reform to restore contact pressure.

JKP16G/17W/54G/55W - ZEK736G/737W/756G/757W

-F9-	Both Lock Switch 1 & 2 are closed at the same time.	Check wiring to both door lock and unlock switches. Check for stuck lock switch.
door	Oven Door switch is in the "C" to "NC" position or Lock Motor does not turn.	Oven Door is either open, or the door switch is indicating that the door is open. • Check door switch operation: - Model has a plunger switch located on front frame. Door Motor Not Turning - Check: • Lock Motor and Lock Relay • Lock Motor Circuit and Lock Switch Circuits Oven Door switch is in the "C" to "NC" position.
-Fd-	Shorted Meat Probe	Make the following checks: • Make sure J4 Plug is plugged in the correct direction and connected to the Control. • Check wiring and probe receptacle for short.





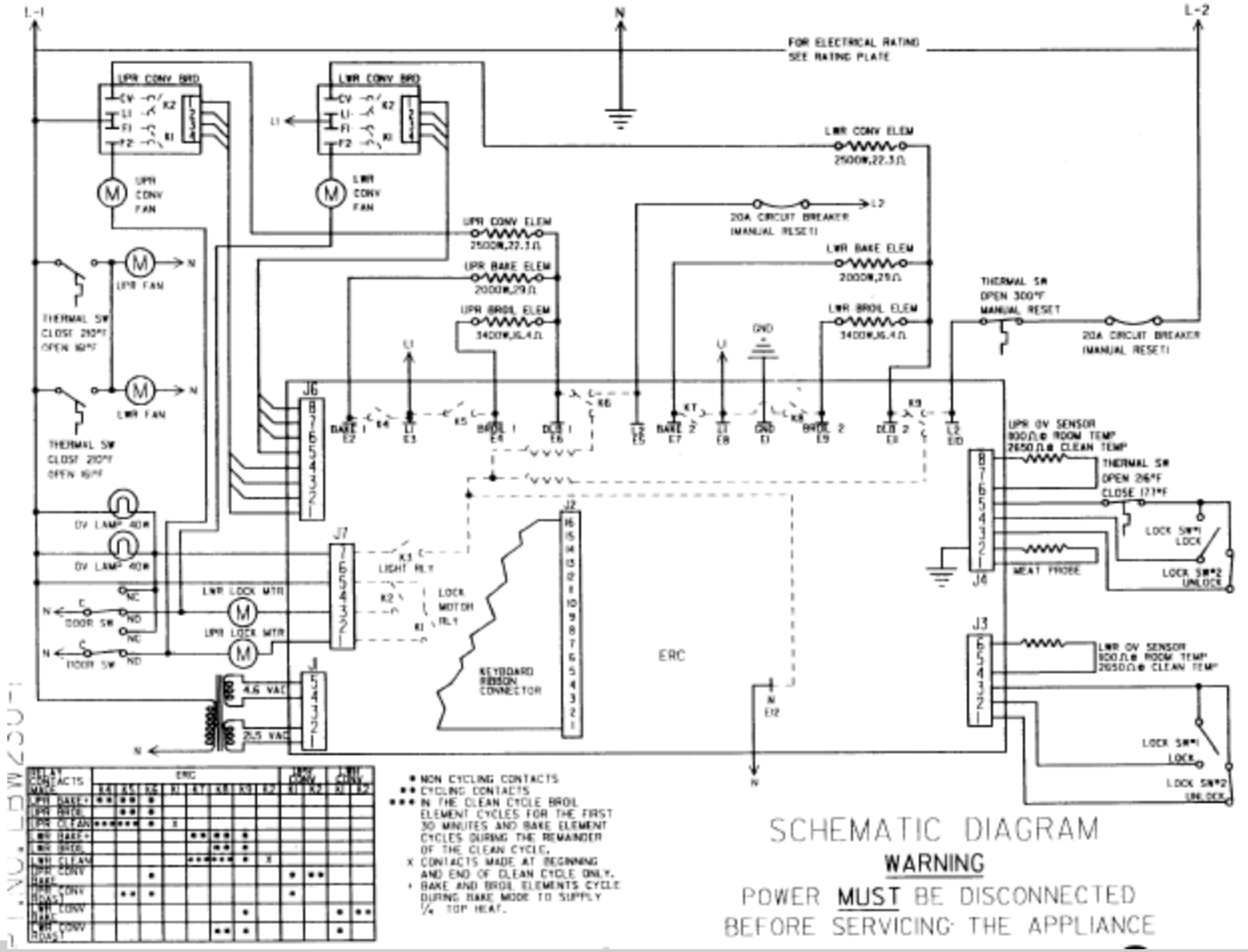
RELAY CONTACTS	ERC								UPR CONV	LWR CONV
	K4	K5	K6	K1	K1	K8	K9	K2	K1 K2	K1 K2
UPR BAKE	**	***	*							
UPR BROIL		**	*							
UPR CLEAN	***	***	*	X						
LWR BAKE					**	**	*			
LWR BROIL						**	*			
LWR CLEAN					***	***	*	X		
UPR CONV BAKE			*						* **	
UPR CONV ROAST		**	*						*	

* NON CYCLING CONTACTS
** CYCLING CONTACTS
*** IN THE CLEAN CYCLE PROG. ELEMENT CYCLES FOR THE FIRST 30 MINUTES AND BAKE ELEMENT CYCLES DURING THE REMAINDER OF THE CLEAN CYCLE.
X CONTACTS MAKE AT BEGINNING AND END OF CLEAN CYCLE ONLY.
• BAKE AND BROIL ELEMENTS CYCLE DURING BAKE MODE TO SUPPLY ¼ TOP HEAT.

SCHEMATIC DIAGRAM

WARNING

POWER **MUST** BE DISCONNECTED
BEFORE SERVICING THE APPLIANCE



RELAY CONTACTS MADE	ERC									UPR CONV	LWR CONV	
	K4	K5	K6	K1	K7	K8	K3	K2		K1	K2	K1	K2
UPR BAKE+	**	**	*										
UPR BROIL		**	*										
UPR CLEAN	***	****	*	X									
LWR BAKE+					**	**	*						
LWR BROIL						**	*						
LWR CLEAN					***	****	*	X					
UPR CONV BAKE			*							*	**		
UPR CONV ROAST		**	*							*			
LWR CONV BAKE							*					*	**
LWR CONV ROAST						**	*					*	

* NON CYCLING CONTACTS
** CYCLING CONTACTS
*** IN THE CLEAN CYCLE BROIL ELEMENT CYCLES FOR THE FIRST 30 MINUTES AND BAKE ELEMENT CYCLES DURING THE REMAINDER OF THE CLEAN CYCLE.
X CONTACTS MADE AT BEGINNING AND END OF CLEAN CYCLE ONLY.
+ BAKE AND BROIL ELEMENTS CYCLE DURING BAKE MODE TO SUPPLY ¼ TOP HEAT.

SCHEMATIC DIAGRAM

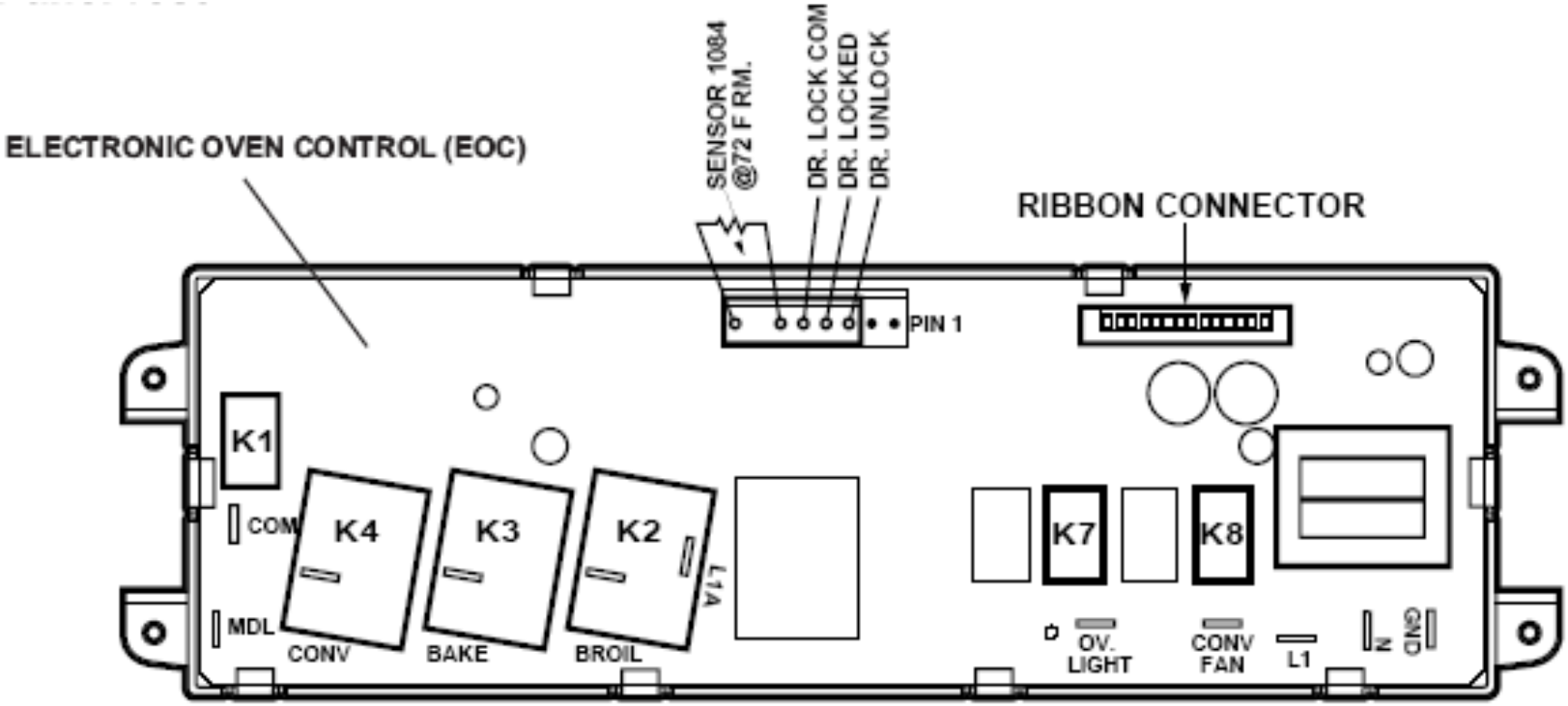
WARNING

POWER MUST BE DISCONNECTED BEFORE SERVICING THE APPLIANCE

Drop/Slide-In Series

JD966
JDP46

JS966
JSP56
JSP46

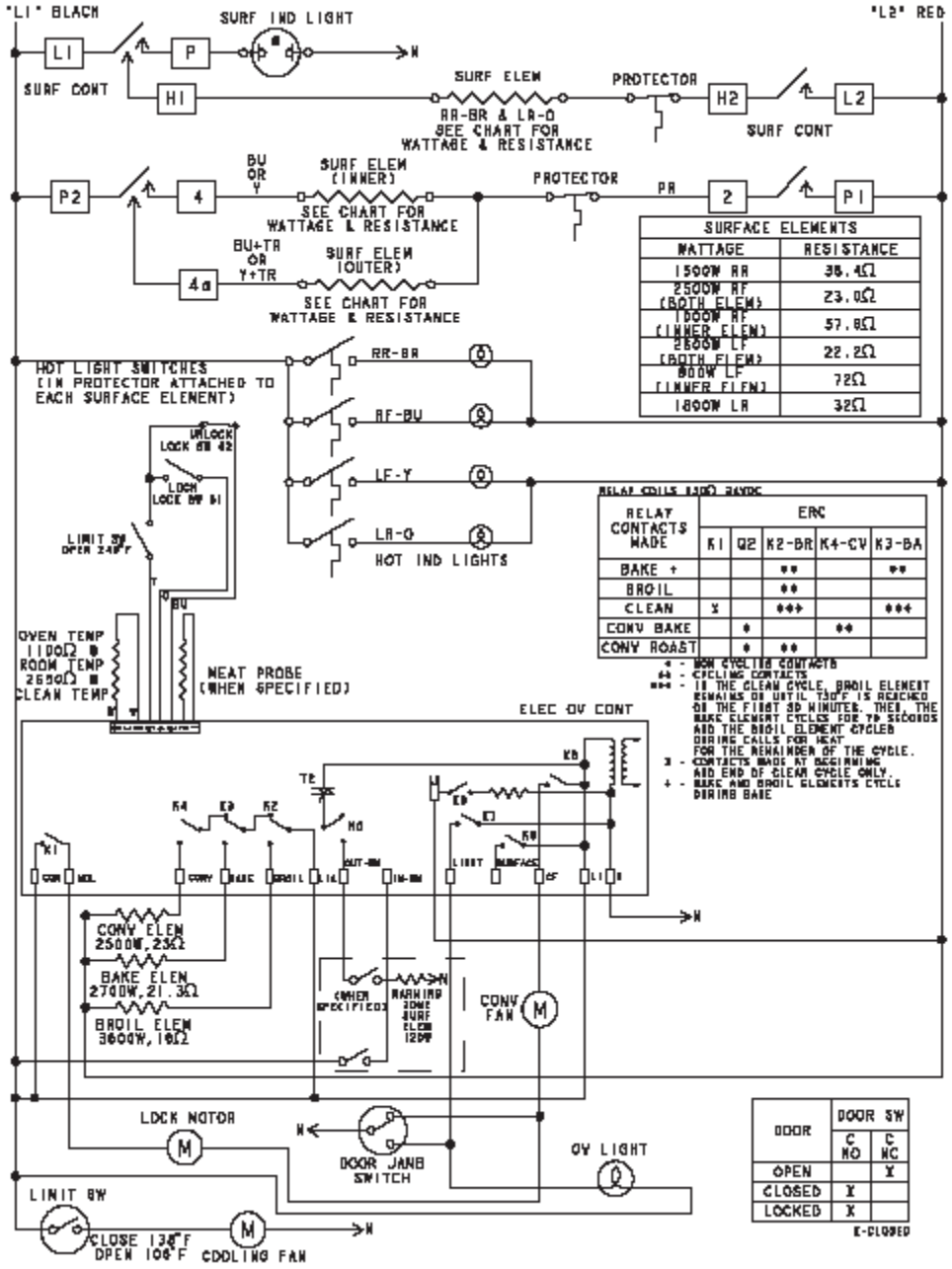


Terminals	Voltage
L1-N	120 VAC all the time.
COM to N	120 VAC all the time.
L1-BA L1-BR L1-CONV	240 VAC when oven is **not** calling for heat (Bake, Conv., & Broil relay contacts open).
Light-L1	120 VAC when light is ON.
COM to MDL	120 VAC **not** locking or unlocking, door closed.
L1 to CF	120 VAC when oven door is closed and Conv. Bake, Conv. Roast **not** operating.

Circuit	Terminals	Ohms
Oven Sensor	6 to 8	1100 @ Rm Temp. 2650 @ 865°F
Door Unlatched	1 to 3 2 to 3	0 Ohms Open
Door Latched	1 to 3 2 to 3	Open 0 Ohms

Failure Code	Meaning	Correction
-F0-	Shorted OFF key	Determine if problem is with key panel or electronic oven control (EOC) by disconnecting ribbon cable and measuring flat cable pins 13 to 14. Should be open. Should be 100-150 ohms while pressing OFF key.
-F2-	Over temperature 1. Inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched, or 2. Cooling fan stalled, or 3. Open door lock thermostat (yellow leads) only when temperature above 600°F.	• Welded relay contacts - replace relay. • Cooling fan stalled or blocked - clear or replace. • Airflow to rear of unit. • High resistance in oven sensor leads/connectors.
-F3-	Open oven sensor	• Disconnect power. Disconnect sensor harness from EOC. Measure sensor resistance (white leads) to be 1100 ohms at room temperature with 2 ohms per degree change. • Look for damaged harness terminals if not a bad sensor.
-F4-	Shorted oven sensor	• Disconnect power. Disconnect sensor harness from EOC. Measure sensor resistance (white leads) to be 1100 ohms at room temperature with 2 ohms per degree change. • Separate sensor from harness terminals if not a bad sensor.
-F7-	Shorted START key	Determine if problem is with key panel or EOC.
-F8-	EEPROM data shift failure	If repeated, replace EOC.
-F9-	Cooling fan stalls while oven above 650°F - open door lock thermostat in yellow leads	Cooling fan or air flow to EOC area.
-FF-	Loss of latch motor safety circuit	Replace EOC.

F codes can be recalled by pressing together: TIMER, CLOCK, and 9 (or MIN DOWN). While displayed, pressing 8 and 6 (or MIN UP and HR DOWN) together will clear them. A fault must exist continuously for 5 minutes before an F code is recorded (F2, F8 are sooner).



SURFACE ELEMENTS	
WATTAGE	RESISTANCE
1500W RR	38.4Ω
2500W RF (BOTH ELEM)	23.0Ω
1000W RF (INNER ELEM)	57.8Ω
2500W LF (BOTH ELEM)	22.2Ω
800W LF (INNER ELEM)	72Ω
1800W LR	32Ω

RELAY COILS 240Ω 24VDC

RELAY CONTACTS MADE	ERC				
	K1	K2	K2-BR	K4-CV	K3-BA
BAKE †			**		**
BROIL			**		
CLEAN	X		***		***
CONV BAKE		*		**	
CONV ROAST		*	**		

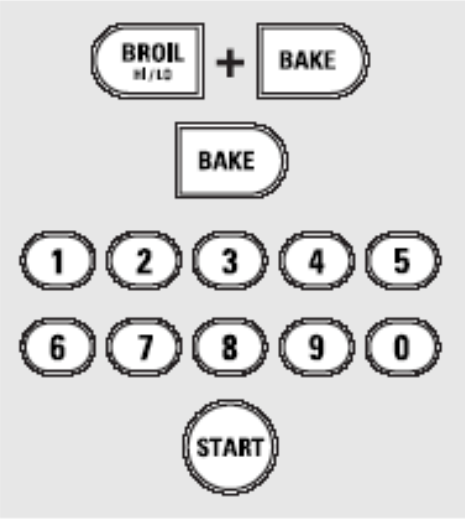
* - BOW CYCLING CONTACTS
** - CYCLING CONTACTS
*** - IN THE CLEAN CYCLE, BROIL ELEMENT REMAINS ON UNTIL 730°F IS REACHED OR THE FIRST 30 MINUTES. THEN, THE BAKE ELEMENT CYCLES FOR 70 SECONDS AND THE BROIL ELEMENT CYCLES DURING CALLS FOR HEAT FOR THE REMAINDER OF THE CYCLE.
X - CONTACTS MADE AT BEGINNING AND END OF CLEAN CYCLE ONLY.
† - BAKE AND BROIL ELEMENTS CYCLE DURING BAKE

DOOR	DOOR SW	
	C NO	C NC
OPEN		X
CLOSED	X	
LOCKED	X	

E-CLOSED

JB905/968/988 Series

JB905/968/988 Series

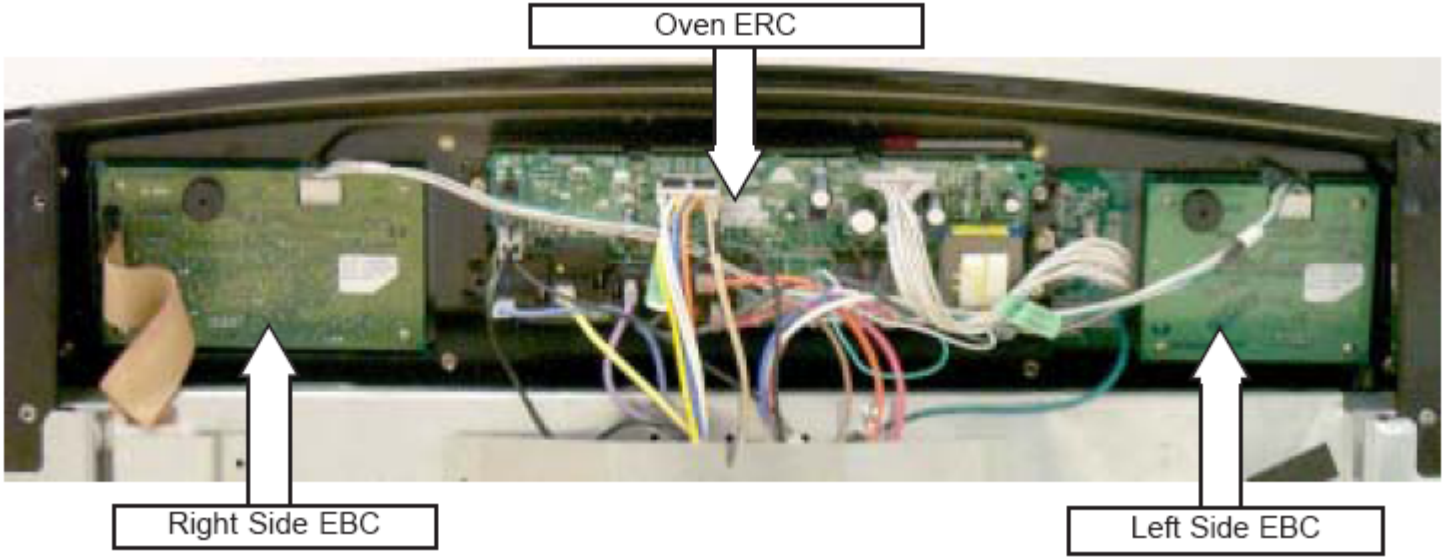


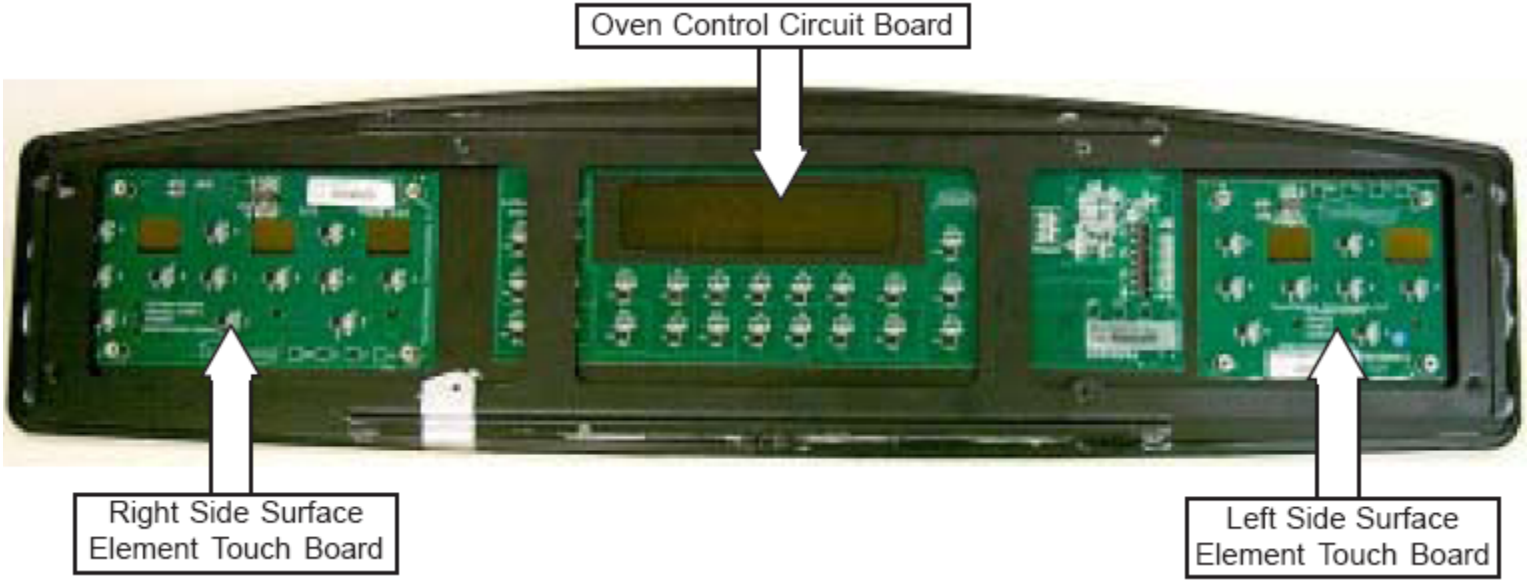
To Adjust the Thermostat

1. Touch the ***BROIL HI/LO*** and ***BAKE*** pads at the same time for 3 seconds until the display shows ***SF***.
2. Touch the ***BAKE*** pad. A two digit number shows in the display.

   Touch ***BAKE*** again to alternate between increasing and decreasing the oven temperature.
3. The oven temperature can be adjusted up to (+) 35°F hotter or (-) 35°F cooler. Touch the number pads the same way you read them. For example, to change the oven temperature 15°F, touch ***1*** and ***5***.
4. When you have made the adjustment, touch the ***START*** pad to go back to the time of day display. Use your oven as you would normally.

JB905/968/988 Series





JB905/968/988 Series

To get Fault Codes to appear, press TIMER & CLOCK (or 9) key.
To erase Fault Codes, press 8 & HR DOWN (or 6) key.

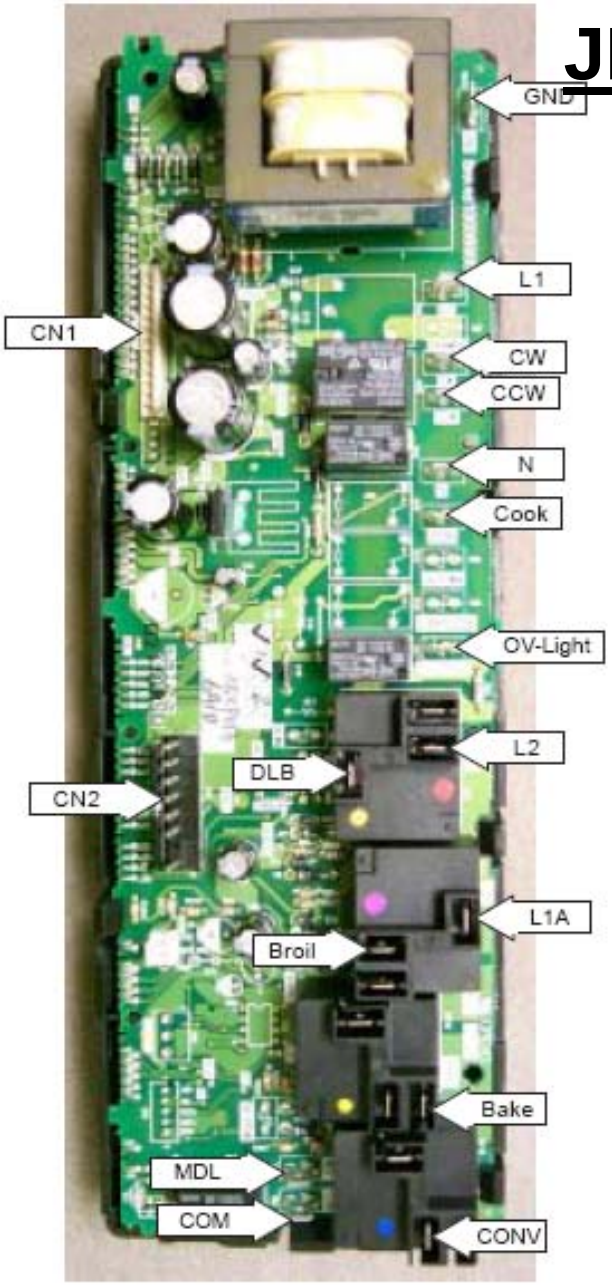
FAILURE CODE	MEANING	CORRECTION
F0	Shorted OFF key or an open wire within the touch panel wire harness.	Check continuity of wire harness that links the touch panel to the ERC. If there is continuity disconnect power and then the wire harness. Reconnect power and if the F0 code is not displayed the problem is with the key circuit.
F2	Oven temperature inside the oven (as measured by the oven sensor) is over 650ºF unlatched, or 915ºF latched.	Welded relay contacts, high resistance in oven sensor leads (especially at the sensor in rear). Replace sensor. If problem persists replace the oven ERC.
F3	Open oven sensor (over 2950 ohms).	Disconnect power and the sensor from the oven ERC. Measure sensor resistance to be 1080 ohms at room temperature with 2 ohms per degree change. Check continuity and look for damaged harness terminals. If continuity and harness terminals are ok replace the sensor. If problem persists replace the oven ERC.
F4	Shorted oven sensor (under 950 ohms).	Disconnect power and the sensor from the oven ERC. Measure sensor resistance to be 1080 ohms at room temperature with 2 ohms per degree change. Check continuity and look for damaged harness terminals. If continuity and harness terminals are ok replace the sensor. If problem persists replace the oven ERC.
F7	Shorted key.	Check continuity of wire harness that links the touch panel to the ERC. If there is continuity disconnect power and then the wire harness. Reconnect power and if the F7 code is not displayed the problem is with the key circuit.
F8	EEPROM data shift failure.	Disconnect power. Reconnect power and if problem is repeated replace the oven ERC.
FF	Loss of motorized door lock.	Replace motorized door lock.

Terminals on ERC (Element terms are on tops of large relays.)	Voltage, standby (No relays energized.	Voltage, Broil (Mode Active)	Voltage, Bake (Mode Active)	Voltage, Convection Bake (On convection bake models.)
L1 - N	120 VAC (If not, harness may be bad.)			
L1 - L2	240 VAC (If not, harness may be bad.)			
L1 – BAKE	~0 VAC (If not, relay may be bad.)	240 VAC (Mode active, bake relay OFF, DLB relay ON.)*	-0 VAC (When bake element ON. If not, relay/ERC may be bad.)**	240 VAC (Mode active, bake relay OFF, DLB relay ON.)*
L1 - BROIL		~0 VAC (When broil element ON. If not, relay/ERC may be bad.)**	240 VAC (mode active, broil relay OFF, DLB relay ON)*	240 VAC (Mode active, broil relay OFF, DLB relay ON.)*
L1 - CONV (On convection models.)		240 VAC (Mode active, convection relay OFF, DLB relay ON.)*	240 VAC (Mode active, convection relay OFF, DLB relay ON.)*	~0 VAC (When convection element ON. If not, relay/ERC may be bad.)**
MDL - COM	120 VAC (door closed)	–	–	–
L1 - CW (On convection models.)	120 VAC (Door closed.)	120 VAC (Door closed.)	120 VAC (Door closed.)	~0 VAC (When convection fan is spinning clockwise.)
L1 - CCW (On convection models.)	120 VAC (Door closed.)	120 VAC (Door closed.)	120 VAC (Door closed.)	~0 VAC (When convection fan is spinning counter clockwise.)

* If not, check indicated element and harnessing.

** Relay is on only when calling for heat (240 VAC when not calling for heat).

JB905/968/988 Series



Note: Jumpers that are hard-wired to the circuit board are not listed.

BAKE (BA on Wiring Diagram)

Y-1	Bake Element

BROIL (BR on Wiring Diagram)

V-1	Broil Element

CW

RW-1	Fan Motor

CCW

N-2	Fan Motor

CN1

Pin 1 to Pin 14	Oven Touch Pad

CN2

Pin 1 C-2	Meat Probe Jack
Pin 2 C-1	Meat Probe Jack
Pin 3 Y-1	Lock Motor Switch
Pin 4 N-3	Lock Motor Switch
Pin 5 O-7	Lock Motor Switch
Pin 6 W-6	Oven Temp Sensor
Pin 7 -	Not Used
Pin 8 W-5	Oven Temp Sensor

COM

B-7	Input - Common

CONV

N-4	Convection Heating Element

COOK

W-4	Left Touch Pad

DLB

O-1	Bake Element - Common
	Broil Element - Common

GND

GN-2	Ground

L1

B-7	Input - Common

L1A

O-1	Input - Common

L2

R-4	220 Volt - Input

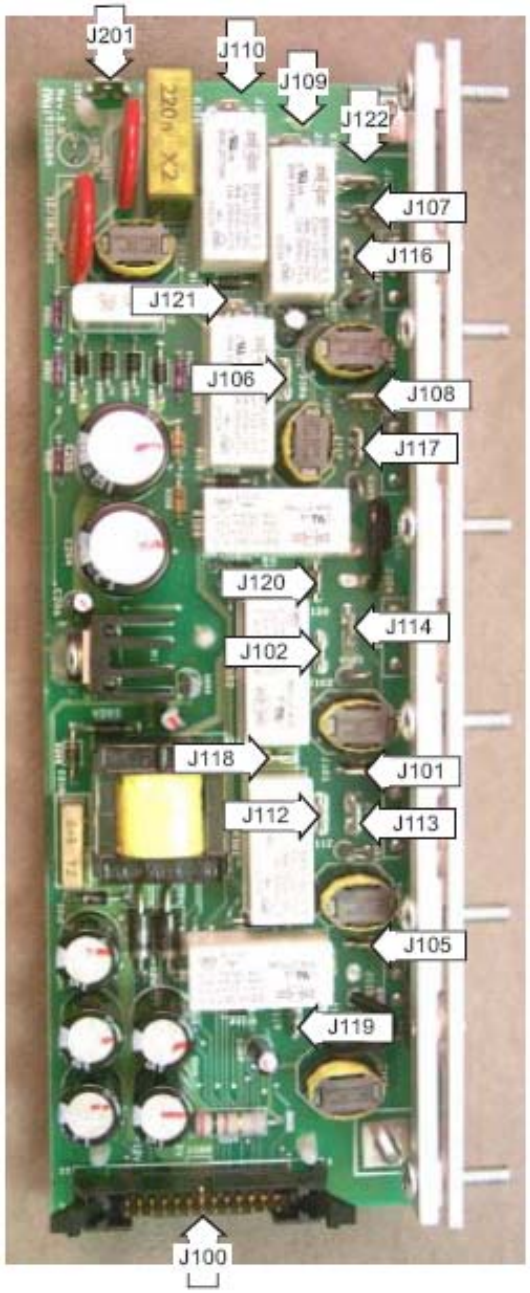
N

W-4	220 Volt - Input

OV-LIGHT (LIGHT on Wiring Diagram)

R-4	220 Volt - Input

JB905/968/988 Series



Note: Jumpers that are hard-wired to the circuit board are not listed.

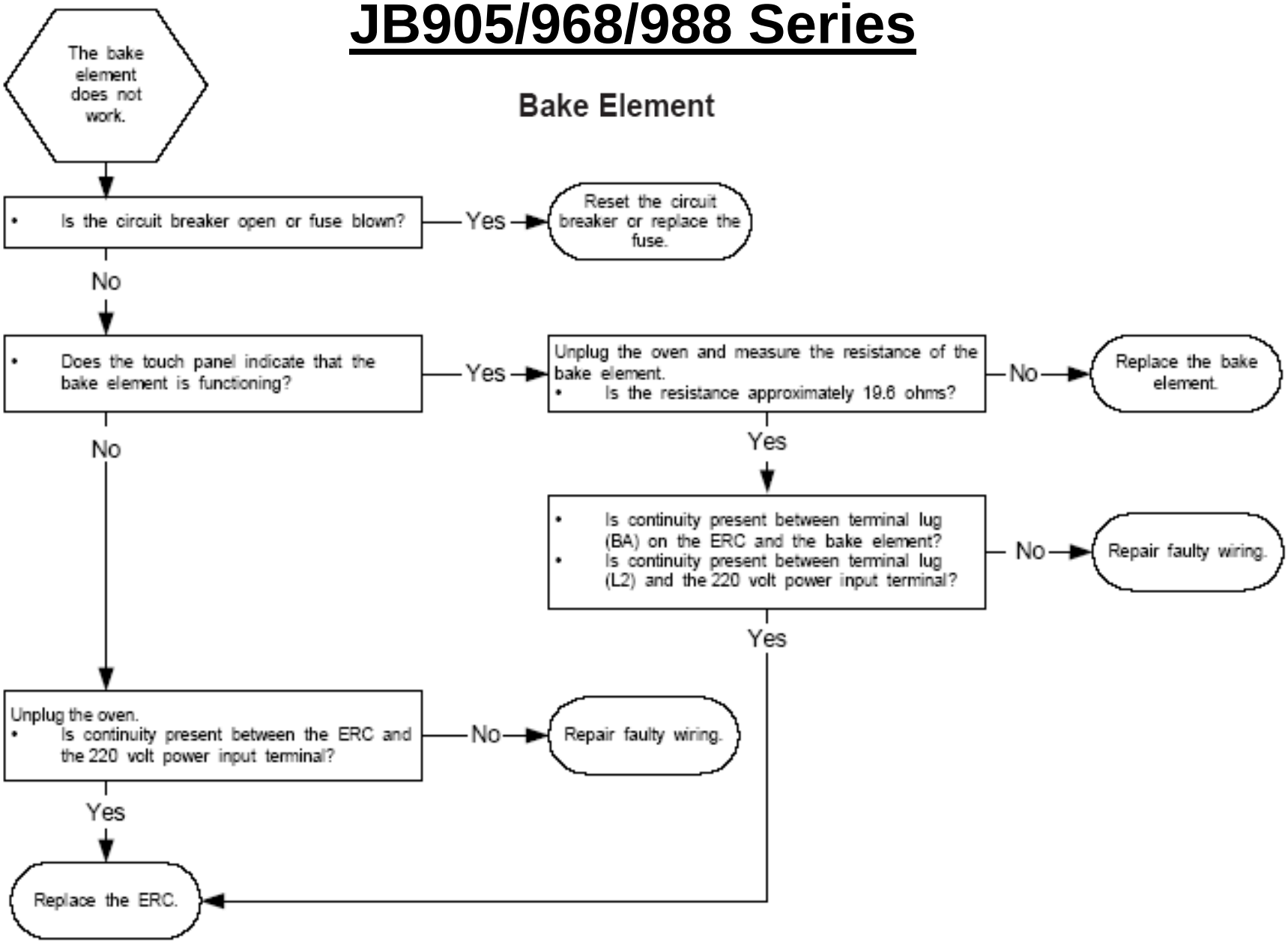
J100	
X-1	Ribbon Cable to Right Side Circuit Board
J101	
GY	Jumper Wire to J110
J102	
V-2	Right Front Burner
J105	
YB-1	Left Front Burner
J106	
NW-1	Right Front Circuit Board
J107	
R-1A	Right Front Burner
J108	
B	Jumper Wire to J109
J109	
B	Jumper Wire to J108
J110	
GY	Jumper Wire to J101
J112	
NB-1	Right Front Burner
J113	
SB-1	Center Rear Burner
J114	
OB-1	Left Rear Burner
J116	
R-8	220 Volt - Input
J117	
CW-1	Right Rear Burner
J118	
B-10	Input - Common
J119	
B-13	Input - Common
J120	
B-11	Input - Common
J121	
B-12	Input - Common
J122	
B-14	Input - Common
J118	
G-1	Case Ground

JB905/968/988 Series

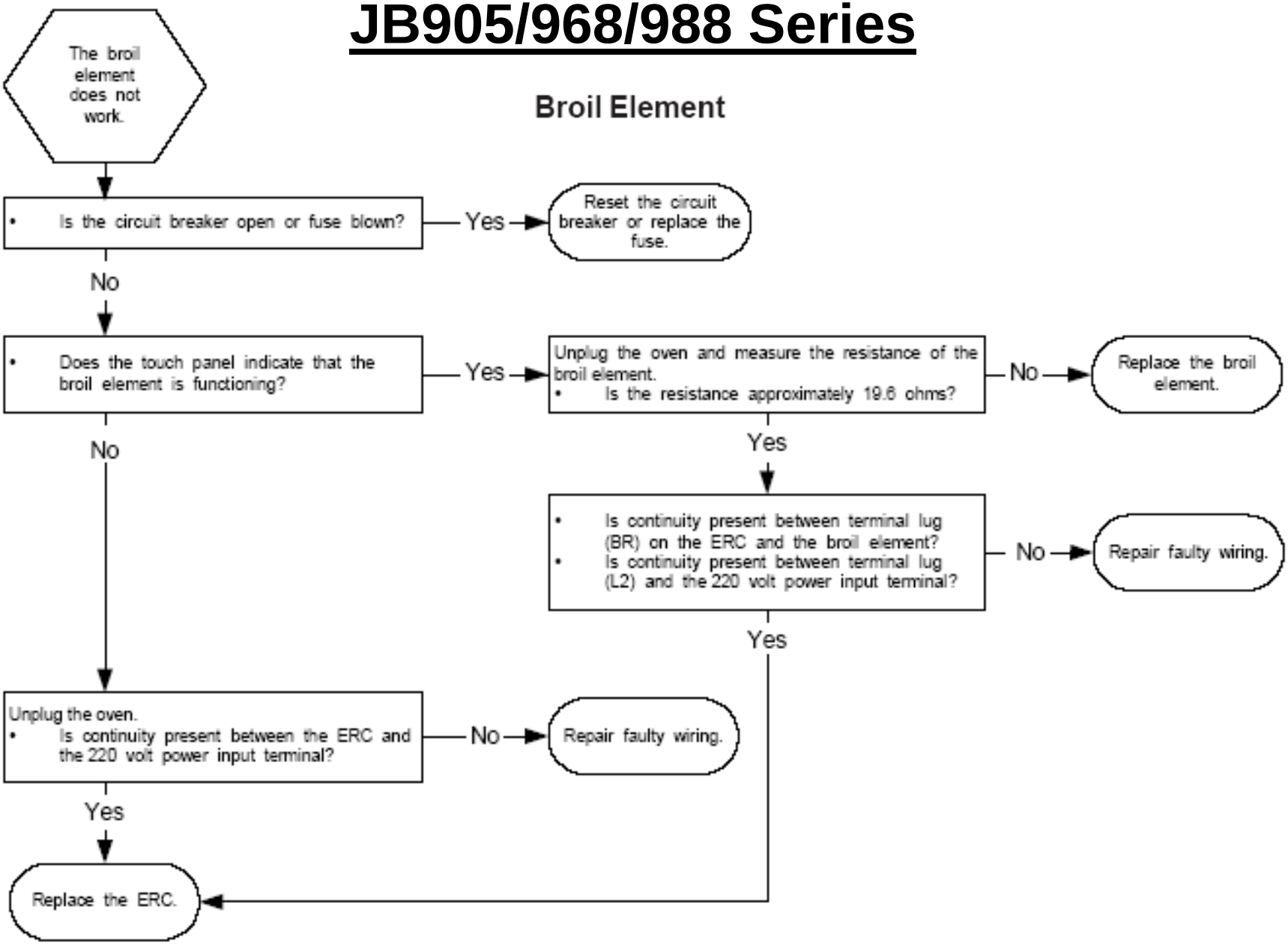
Troubleshooting Chart

	Bake element does not function	Broil element does not function	Convection element does not function	Oven switch does not function	Convection fan motor does not function	Left front burner does not function	Left rear burner does not function	Lock motor does not function	Meat probe does not function	Middle rear burner does not function	Right front burner does not function	Right rear burner does not function
Bake Element	●											
Broil Element		●										
Convection Element			●									
Cooktop Power Circuit Board						●	●			●	●	●
Fan Motor Capacitor					●							
Left Front Burner						●						
Left Rear Burner							●					
Left Side Circuit Board						●	●					
Lock Motor				●				●				
Meat Probe									●			
Middle Rear Burner										●		
Oven Control Circuit Board	●	●	●	●	●			●	●			
Right Front Burner											●	
Right Rear Burner												●
Right Side Circuit Board						●	●			●	●	●
	Page 36	Page 36	Page 37	Page 38	Page 37	Page 39	Page 40	Page 45	Page 44	Page 41	Page 42	Page 43

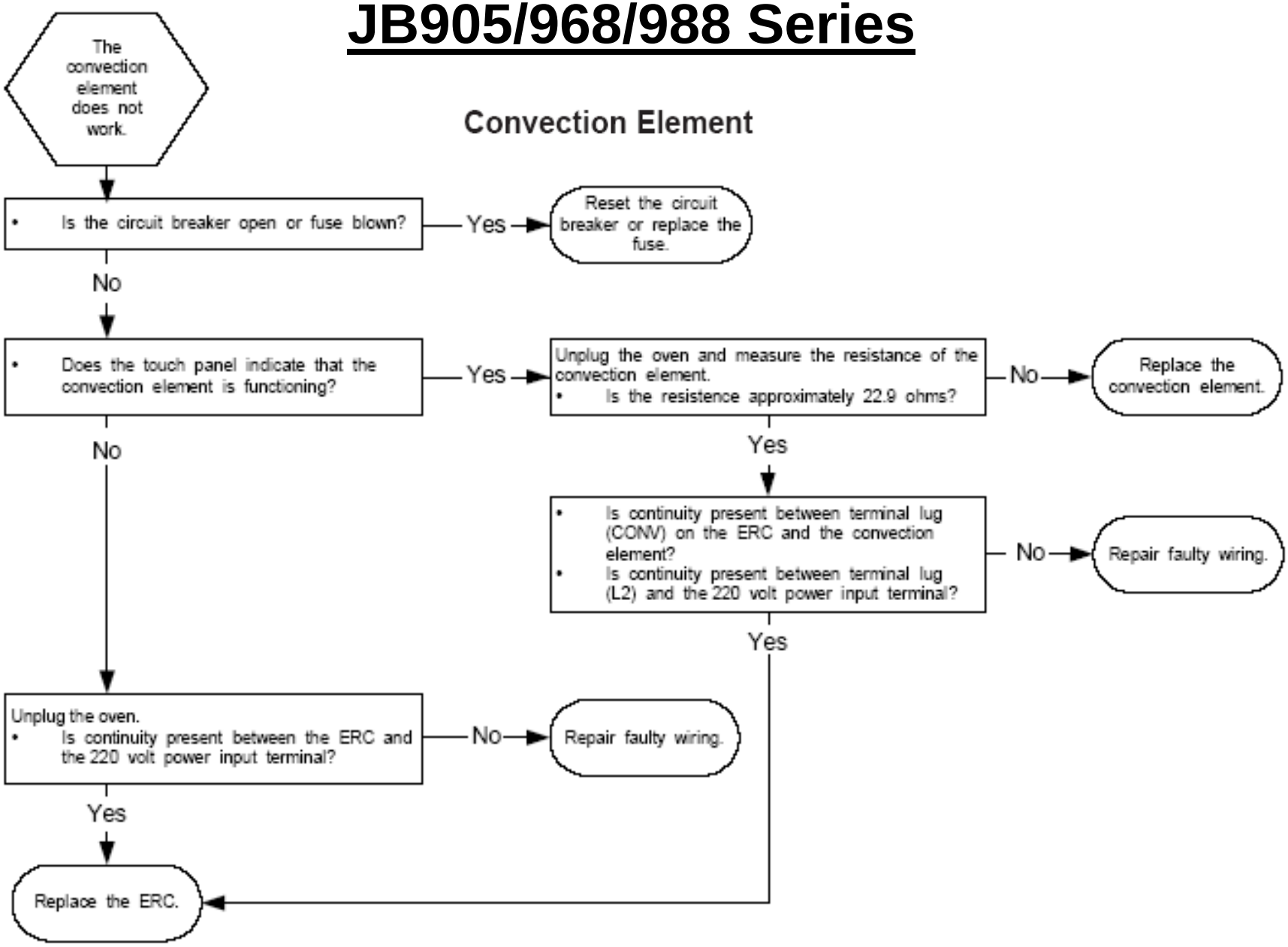
JB905/968/988 Series



JB905/968/988 Series

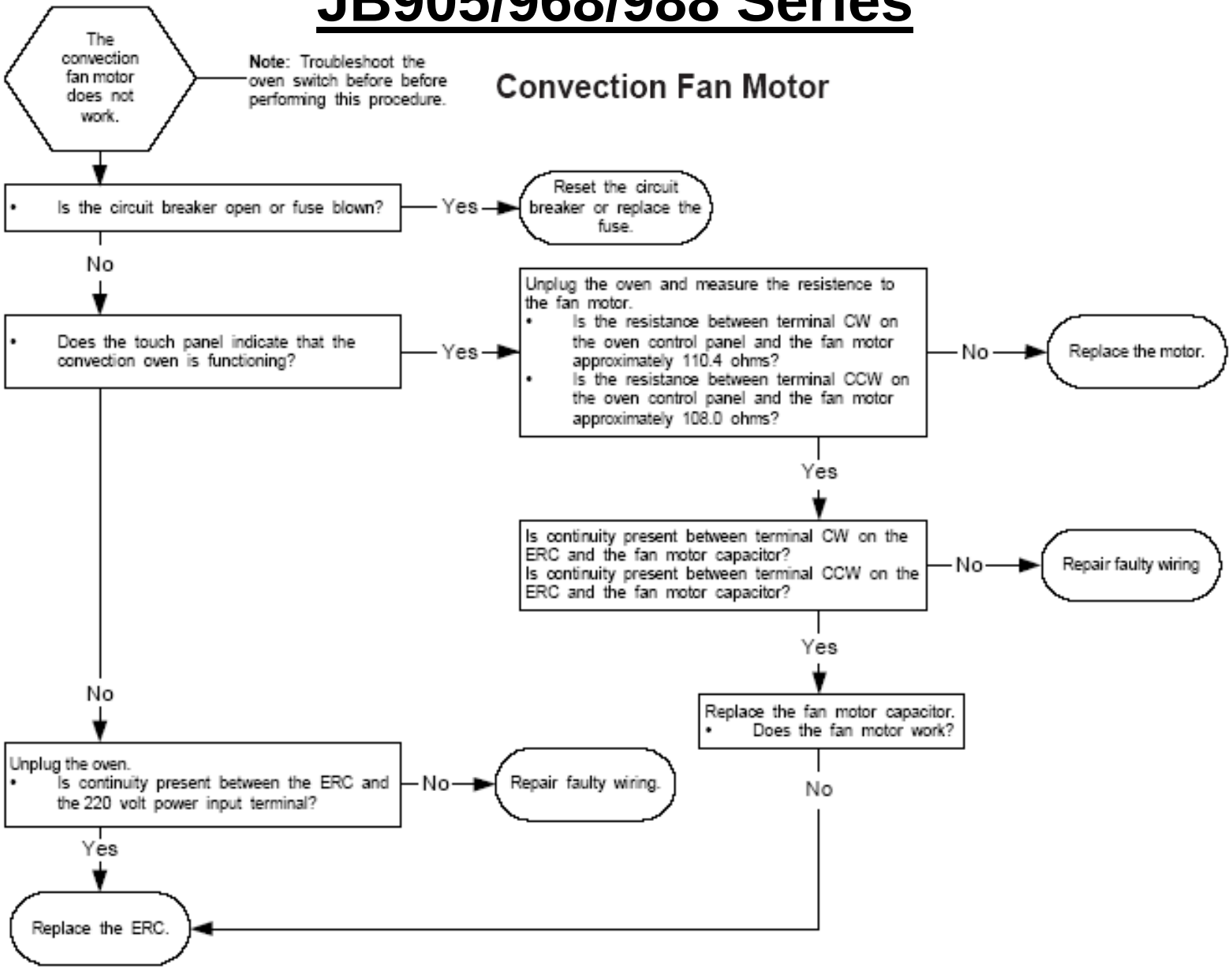


JB905/968/988 Series



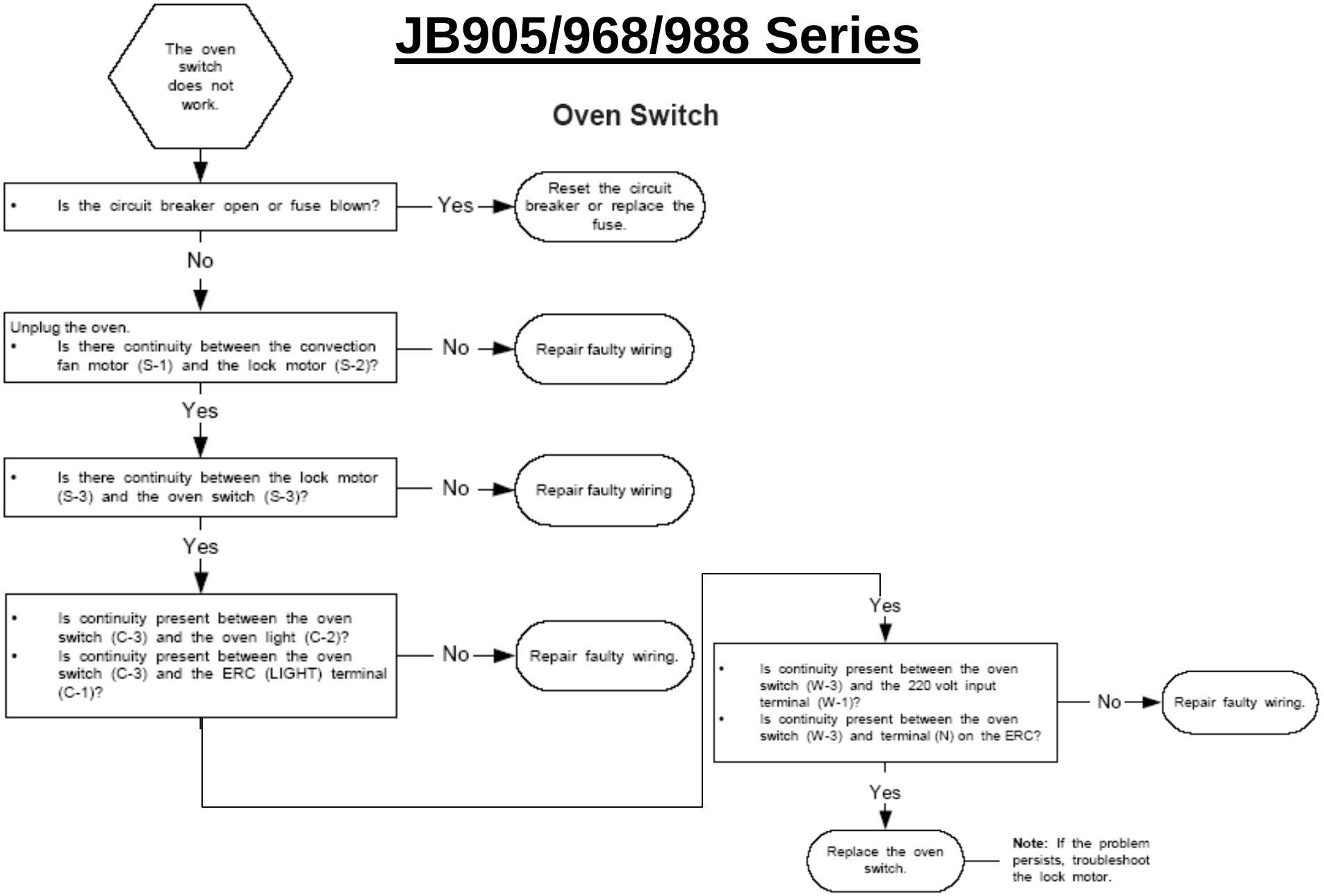
JB905/968/988 Series

Convection Fan Motor



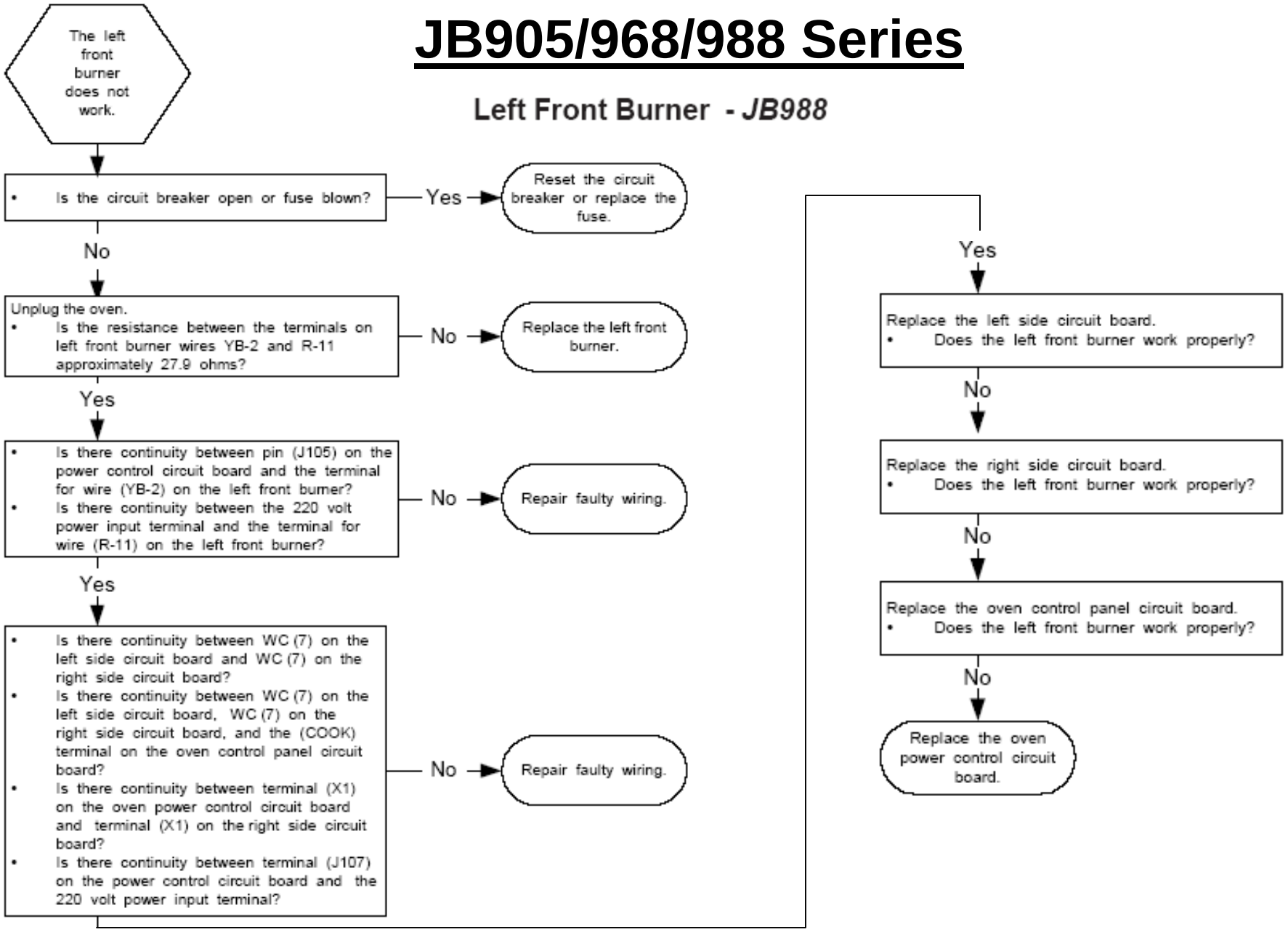
JB905/968/988 Series

Oven Switch



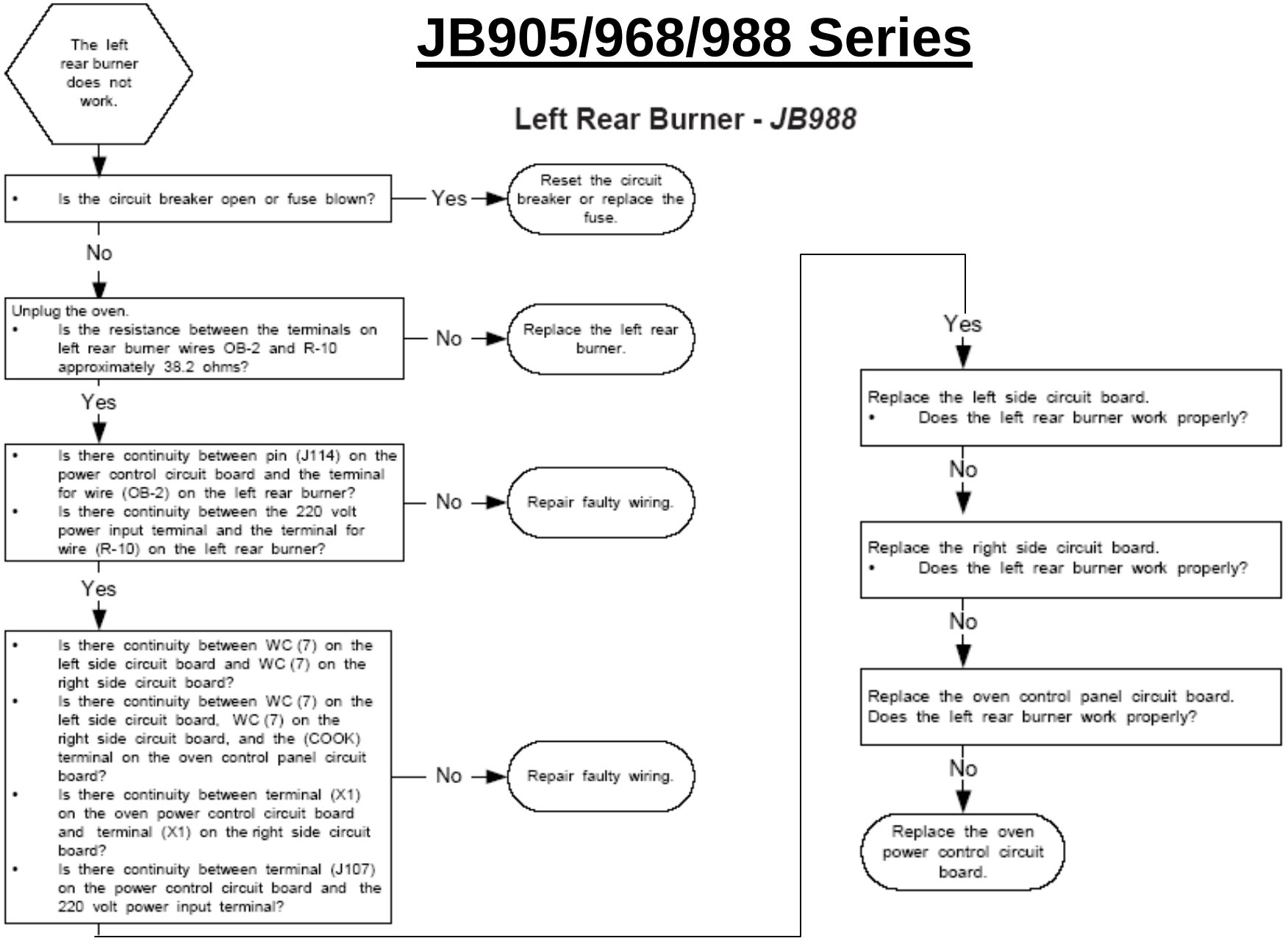
JB905/968/988 Series

Left Front Burner - *JB988*



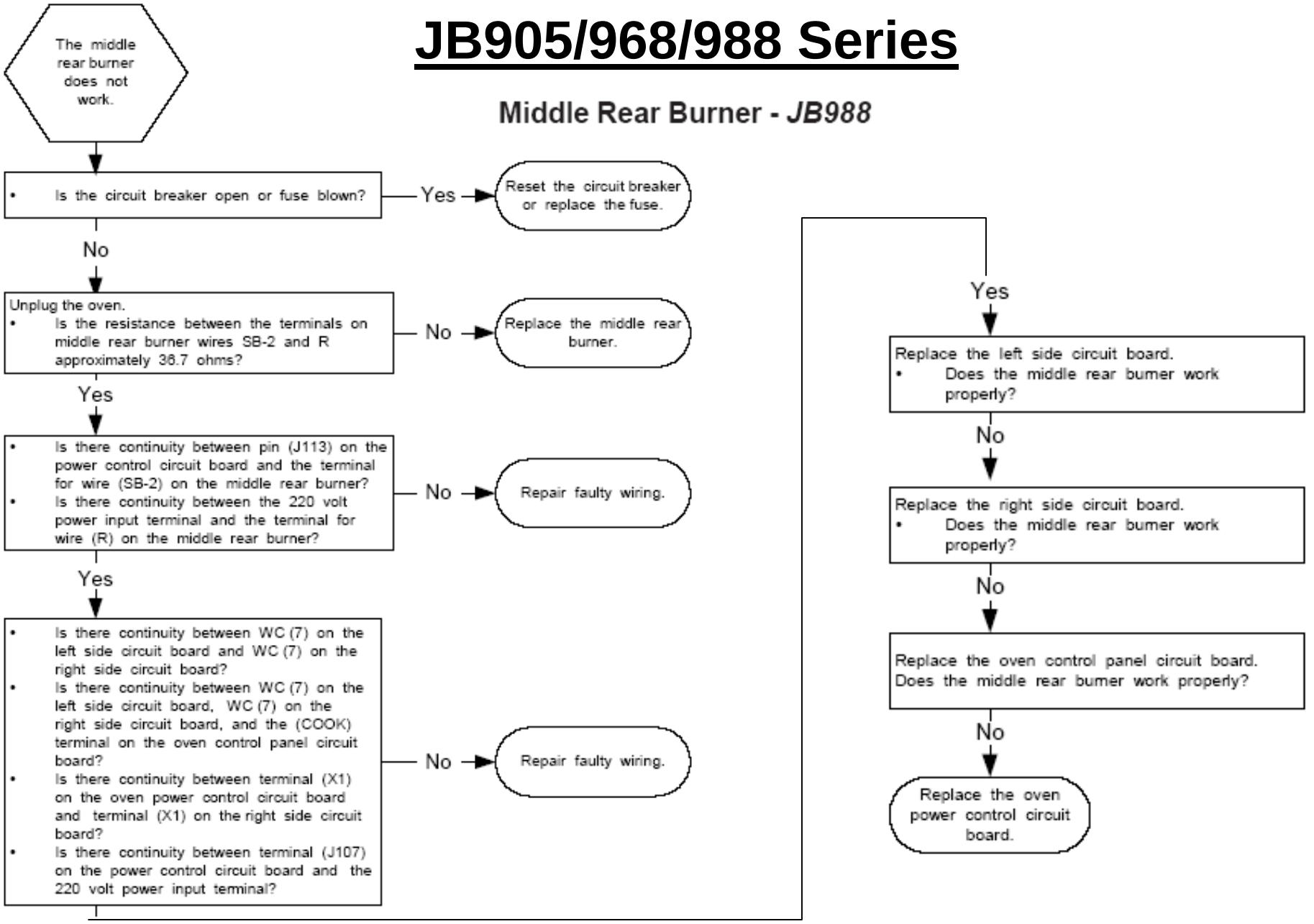
JB905/968/988 Series

Left Rear Burner - *JB988*



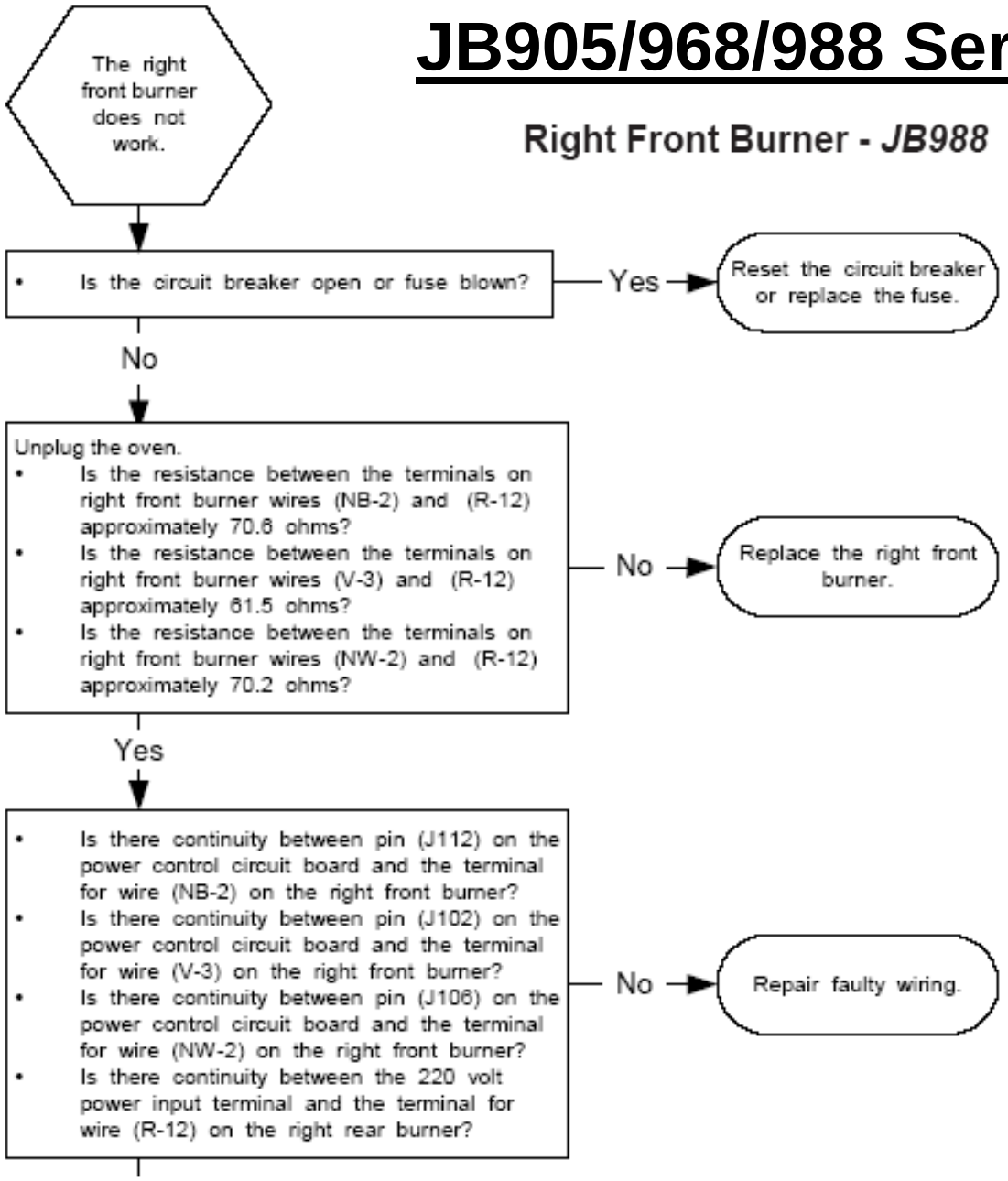
JB905/968/988 Series

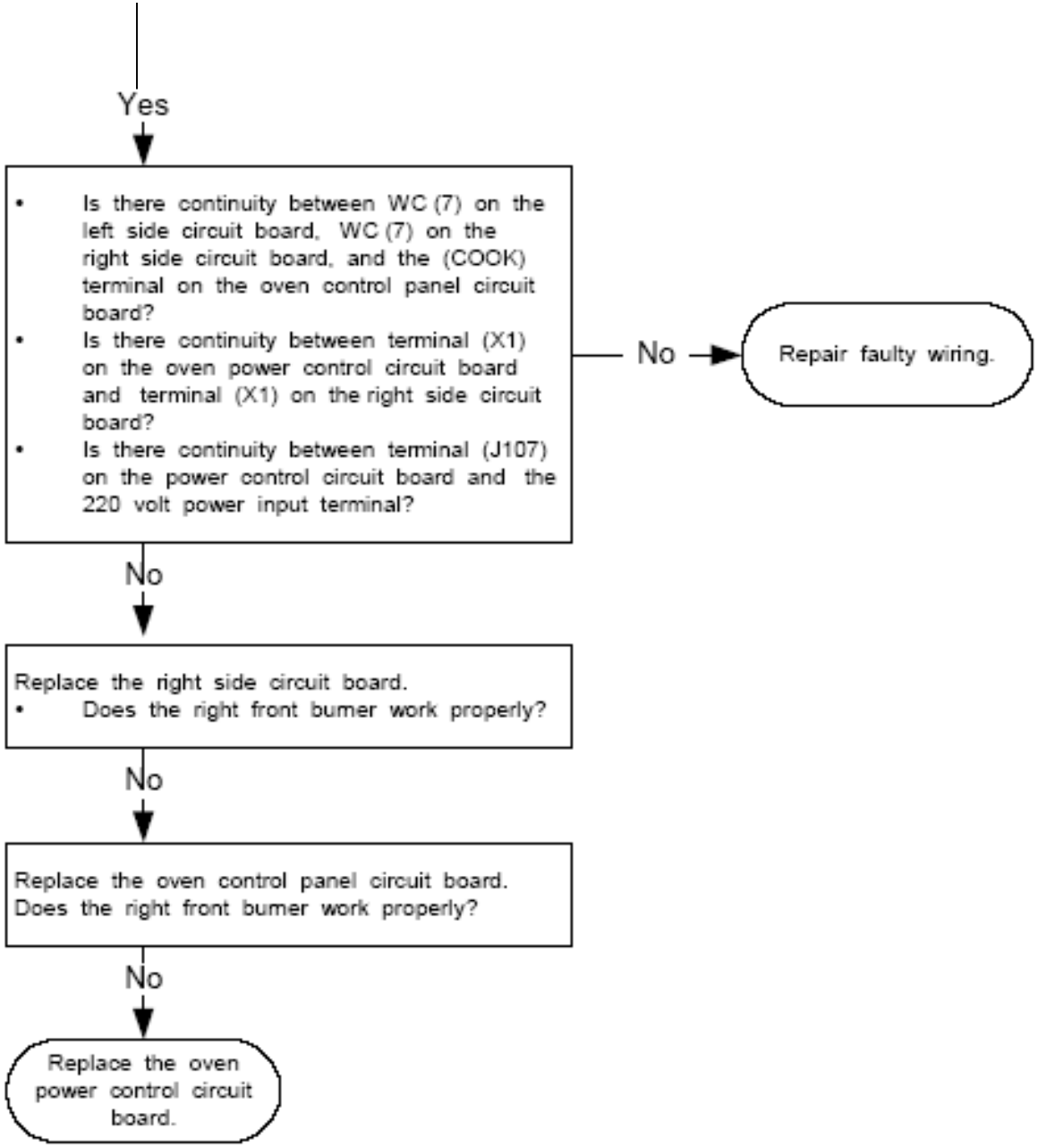
Middle Rear Burner - *JB988*



JB905/968/988 Series

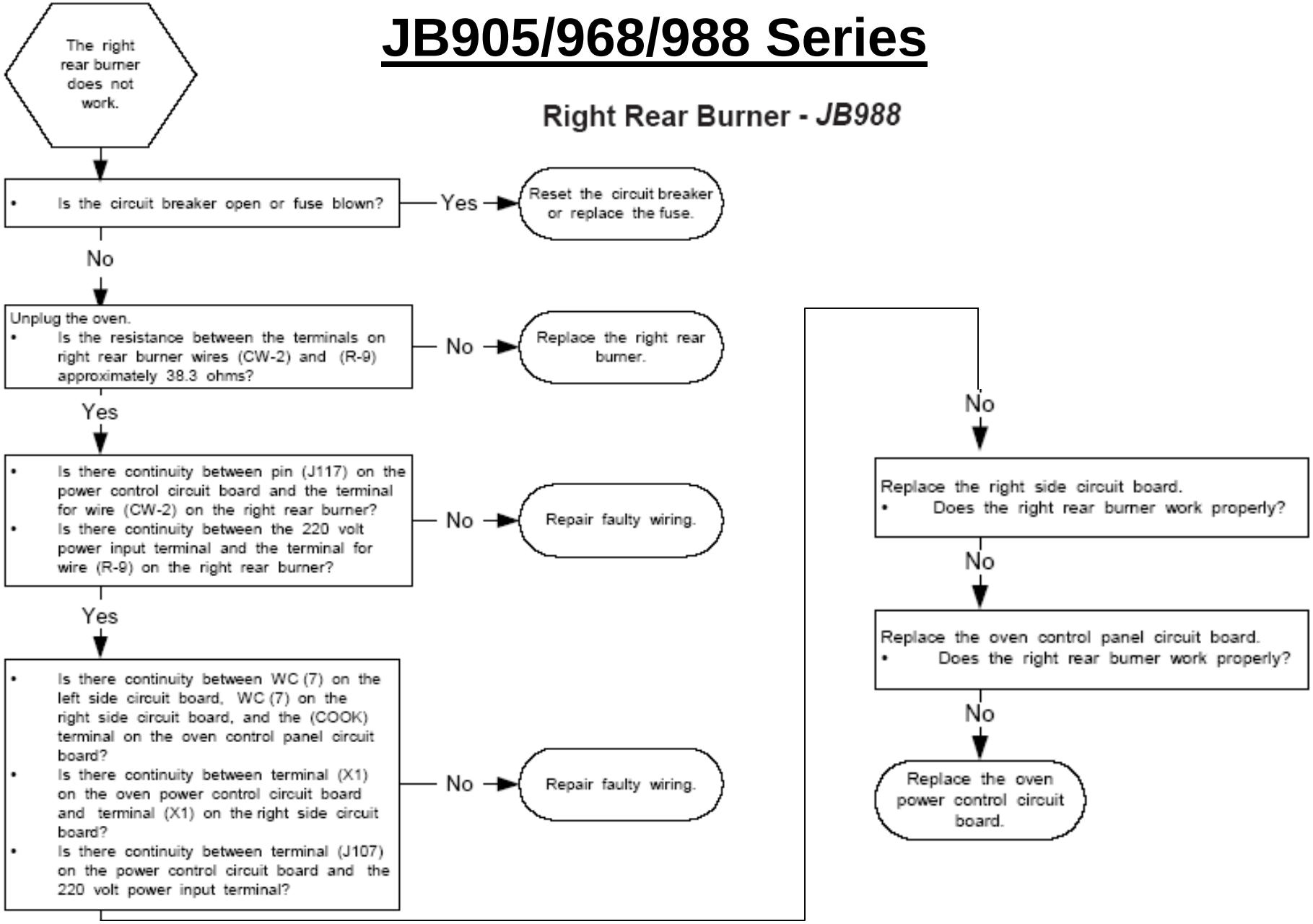
Right Front Burner - *JB988*



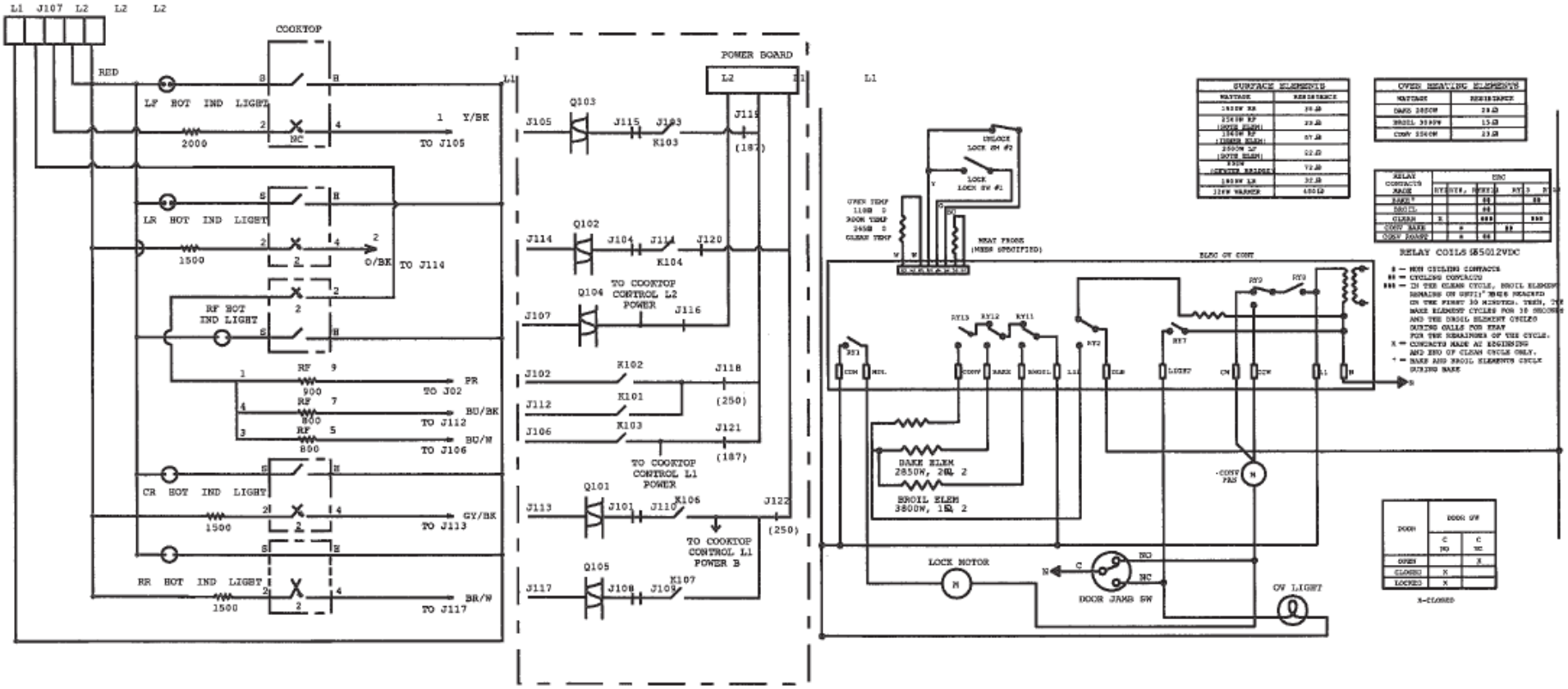


JB905/968/988 Series

Right Rear Burner - *JB988*



JB905/968/988 Series



J2S968/JGS968/JGSP48

Dual Fuel

All Gas

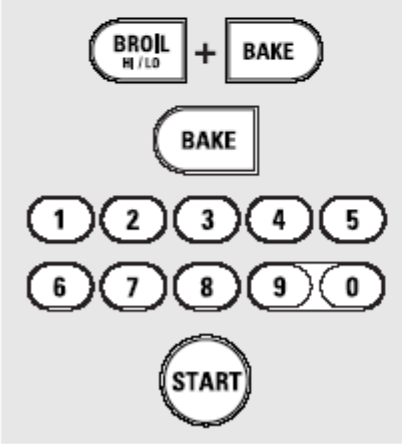
J2S968/JGS968/JGSP48

Adjusting the Oven Thermostat

You may find that your new oven cooks differently than the one it replaced. Use your new oven for a few weeks to become more familiar with it. If you still think your new oven is too hot or too cold, you can adjust the thermostat yourself.

Do not use thermometers, such as those found in grocery stores, to check the temperature setting of your oven. These thermometers may vary 20–40 degrees.

***NOTE:** This adjustment will only affect baking and roasting temperatures; it will not affect broiling, convection or self-cleaning temperatures. The adjustment will be retained in memory after a power failure.*



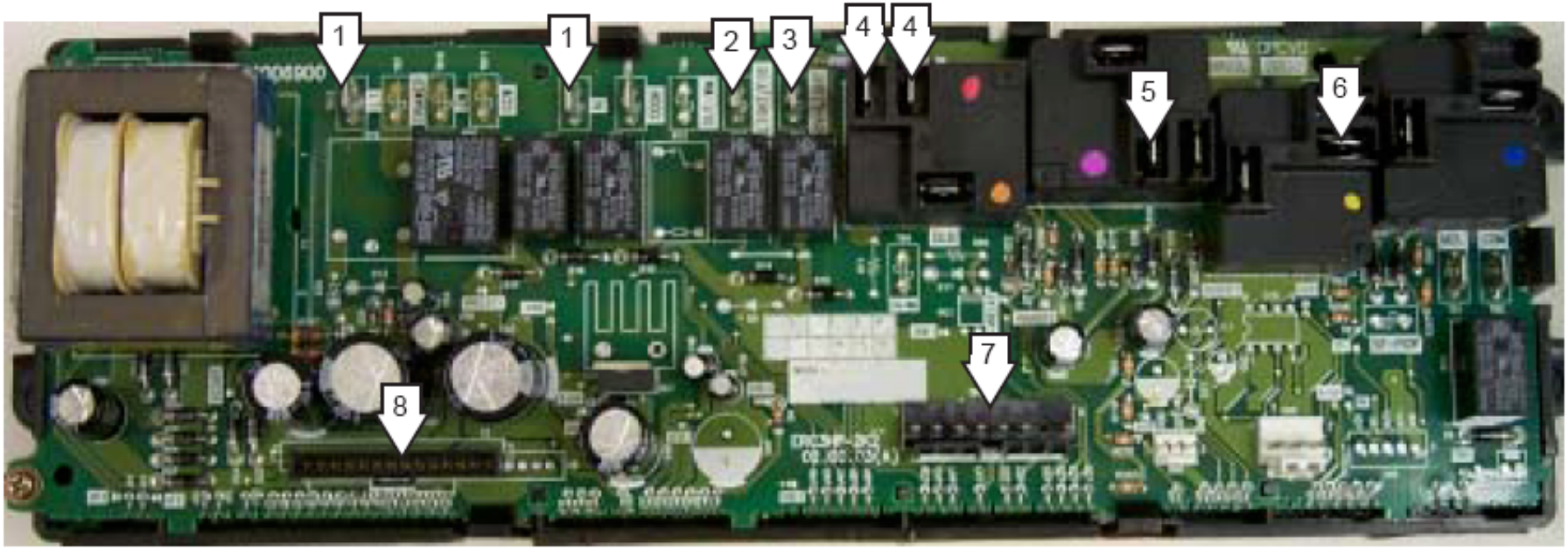
To Adjust the Thermostat

1. Touch the ***BROIL HI/LO*** and ***BAKE*** pads at the same time for 3 seconds until the display shows ***SF.***
2. Touch the ***BAKE*** pad. A two digit number shows in the display.

   Touch ***BAKE*** again to alternate between increasing and decreasing the oven temperature.
3. The oven temperature can be adjusted up to (+) 35°F hotter or (-) 35°F cooler. Touch the number pads the same way you read them. For example, to change the oven temperature 15°F, touch ***1*** and ***5.***
4. When you have made the adjustment, touch the ***START*** pad to go back to the time of day display. Use your oven as you would normally.

J2S968/JGS968/JGSP48

All Gas Range with Convection Fan



1 - 120-VAC Power In

2 - Cooling Fan

3 - Oven Light

4 - Convection Fan

5 - Broil Burner Glow-bar Igniter

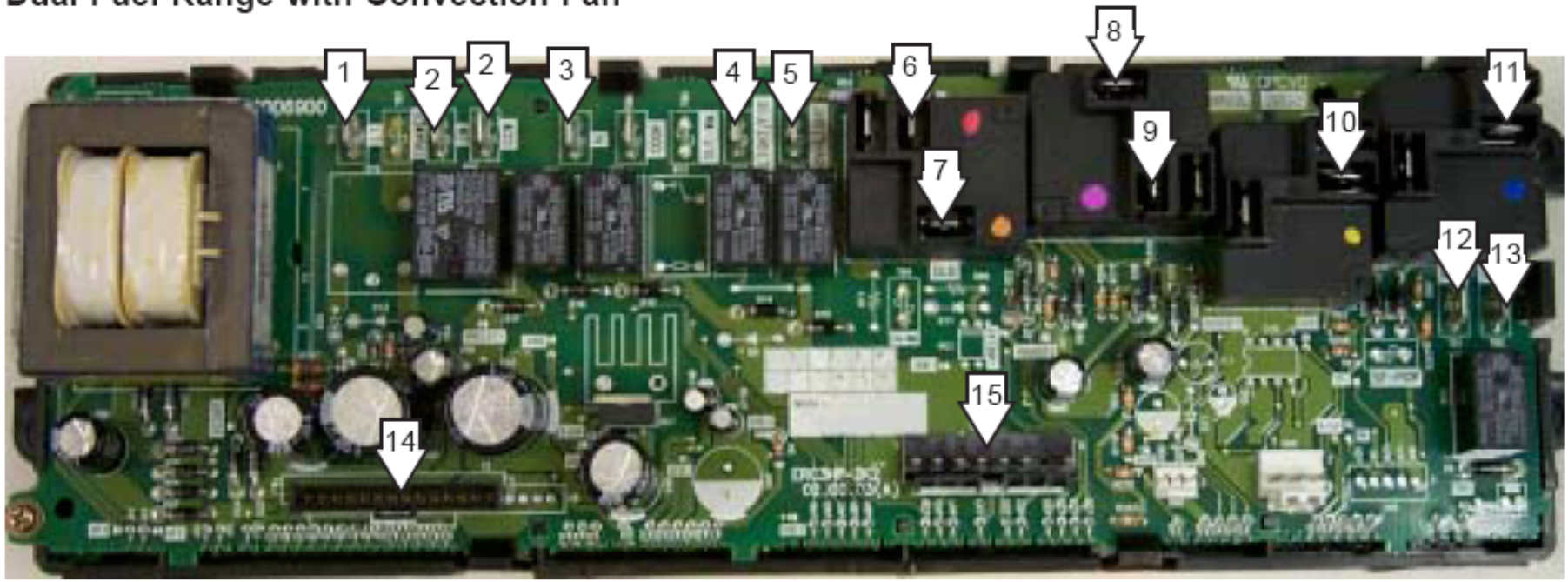
6 - Bake Burner Glow-bar Igniter

7 - Meat Probe, Oven Sensor, Door Lock/Unlock Switches

8 - Keypanel Ribbon

J2S968/JGS968/JGSP48

Dual Fuel Range with Convection Fan



1 - 120 VAC Power In

2 - Convection Fan

3 - Power In (White)

4 - Cooling Fan

5 - Oven Light

6 - Power In (Red)

7 - Bake, Broil, and Convection Element

8 - Power In (Black)

9 - Broil Element

10 - Bake Element

11 - Convection Element

12 - Door Lock Motor

13 - 120VAC Power In

14 - Keypanel Ribbon

15 - Meat Probe, Oven Sensor, Door Lock/Unlock Switches

To get Fault Codes to appear, press TIMER, CLOCK, & MIN DOWN (or 9) key.
To erase Fault Codes, press MIN UP (or 8) & HR DOWN (or 6) key.

FAILURE CODE	MEANING	CORRECTION
-F0-	Shorted OFF key	Determine if problem is with key panel or control by disconnecting ribbon cable and measuring flat cable pins 13 to 14. Should be open. Should be 100–150 ohms while pressing OFF key.
-F2-	Over temperature 1. Inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched or 2. Cooling fan stalls while oven above 650°F—open thermal switch in yellow leads	• Welded relay contacts • Cooling fan stalled or blocked • Airflow to rear of unit • High resistance in oven sensor leads/connectors (especially at sensor in rear)
-F3-	Open oven sensor (under 950 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be ~1080 ohms at room temperature with 2 ohms per degree change. • Look for damaged harness terminals if not a bad sensor.
-F4-	Shorted oven sensor (over 2900 ohms)	• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be ~1080 ohms at room temperature with 2 ohms per degree change. • Separate sensor from harness to determine fault.
-F7-	Shorted matrix or START key	Determine if problem is with key panel or control by disconnecting ribbon cable and measuring flat cable using pinout chart. Allow up to 1000 ohms when pressing a key.
-F8-	EEPROM data shift failure	If repeated, replace control.
-F9-	Cooling fan stalls while above 650°F; open thermal switch in yellow leads	Cooling fan or airflow to control area.
-FF-	Loss of latch motor safety circuit	Replace control.

J2S968/JGS968/JGSP48

Relay Contacts Operation Test and Control Voltage Check

All Gas Range

TERMINALS	VOLTAGE
L1- TO N	120 VAC ALL THE TIME
BAKE TO N	120 VAC when in BAKE mode
BROIL TO N	120 VAC when in BROIL mode
SWITCH CONTACTS	
DOOR MOTOR TO N	120 VAC locking or unlocking

Note: Temperature/Mode selection necessary for operation of relay contacts.

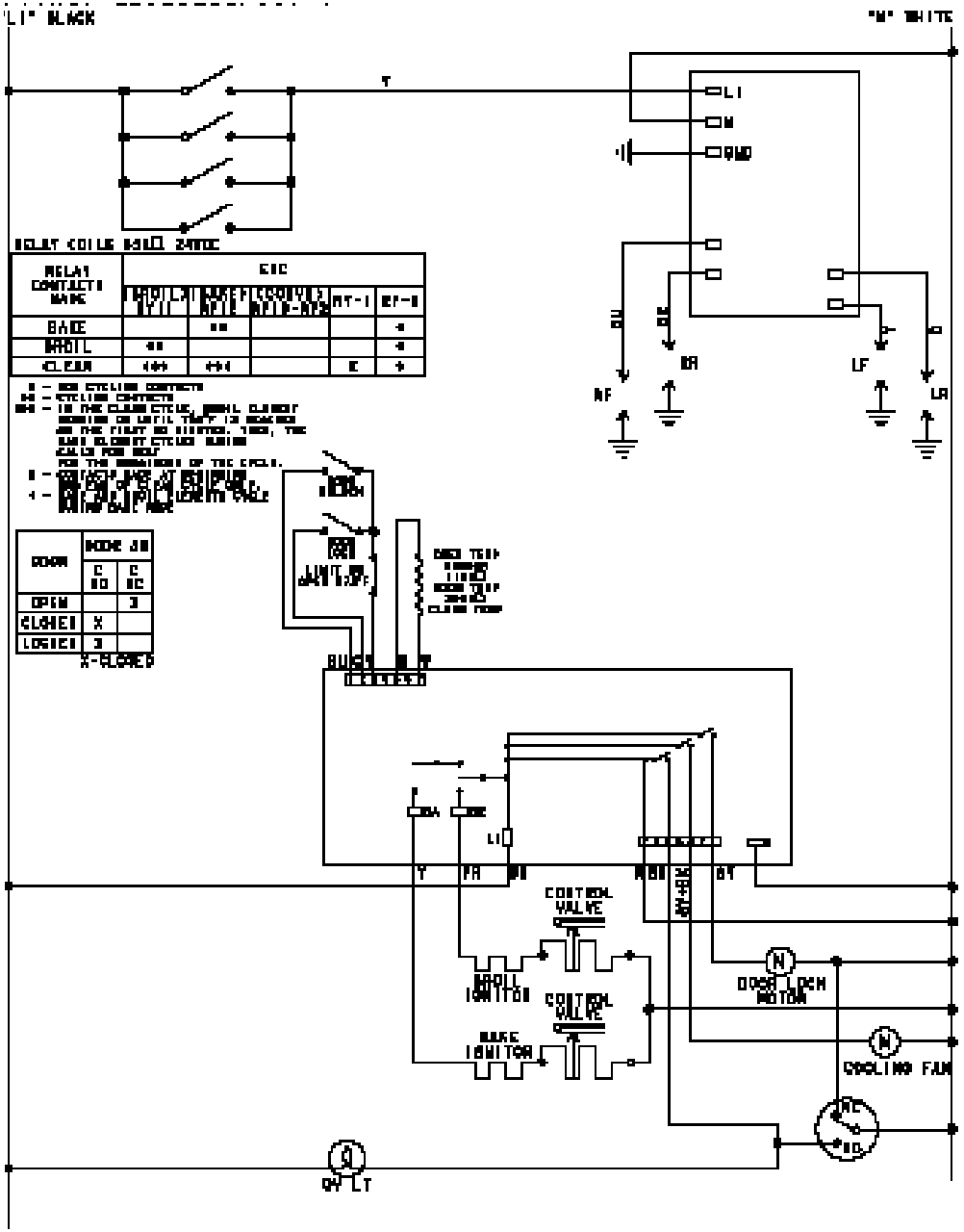
Note: Voltage must be present across terminals L1 to N for control to operate. Transformer primary is 150 Ω to 200 Ω measured L1 to (N) with power removed.

Dual Fuel Range

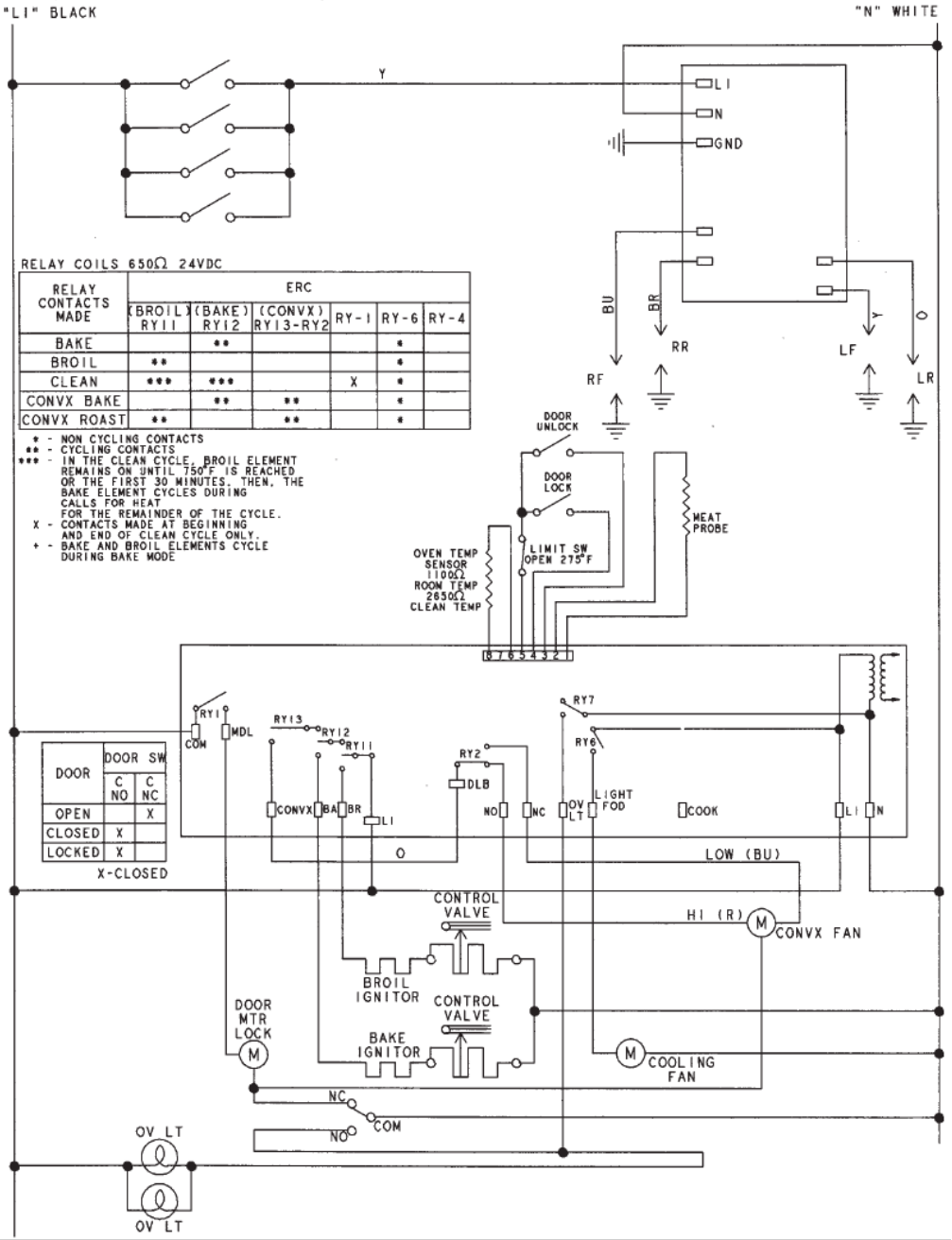
TERMINALS	VOLTAGE
L1-N	120 VAC ALL THE TIME.
COM to N	120 VAC ALL THE TIME.
L1-BA-DLD	240 VOLTS when oven is not calling for heat (BAKE, CONV. and BROIL relay contacts open).
*Light-L1	120 VOLTS when light is on.
COM to MDL	120 VOLTS not locking or unlocking, door closed.
L1 to CF	120 VOLTS when oven door is closed and CONV. BAKE and Conv. Roast not operating.

CIRCUIT	TERMINALS	OHMS
Oven sensor Temp.	6 to 8	1100Ω @ Rm 2650Ω @ 865°F
Door Unlatched	3 to 5 4 to 5	0Ω open
Door Latched	4 to 5 3 to 5	0Ω open

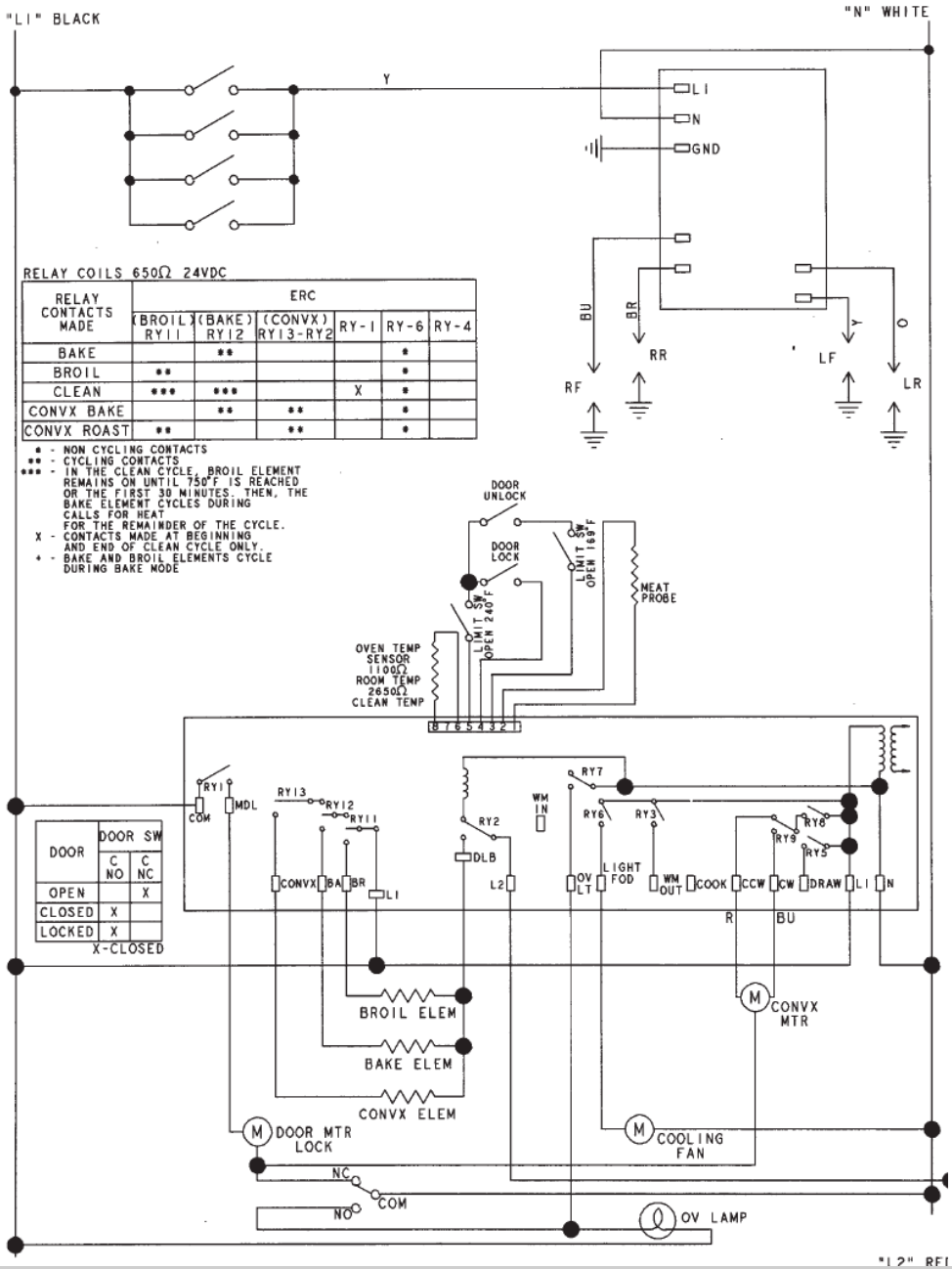
All Gas Range Without Convection Fan JGSP48



All Gas Range Schematic with Convection Fan JGS968

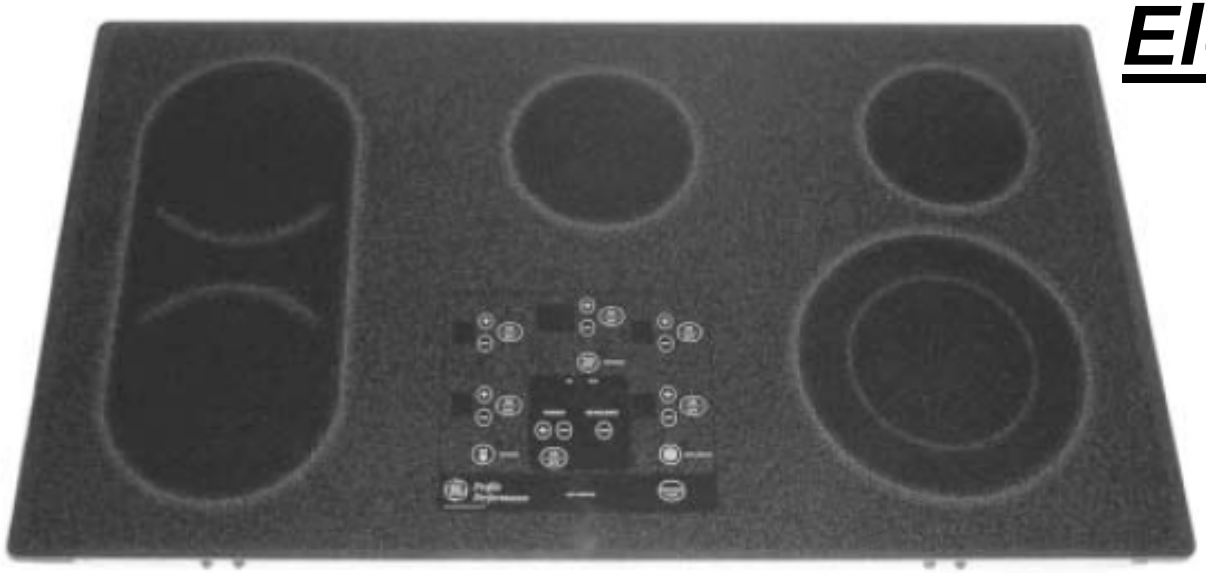


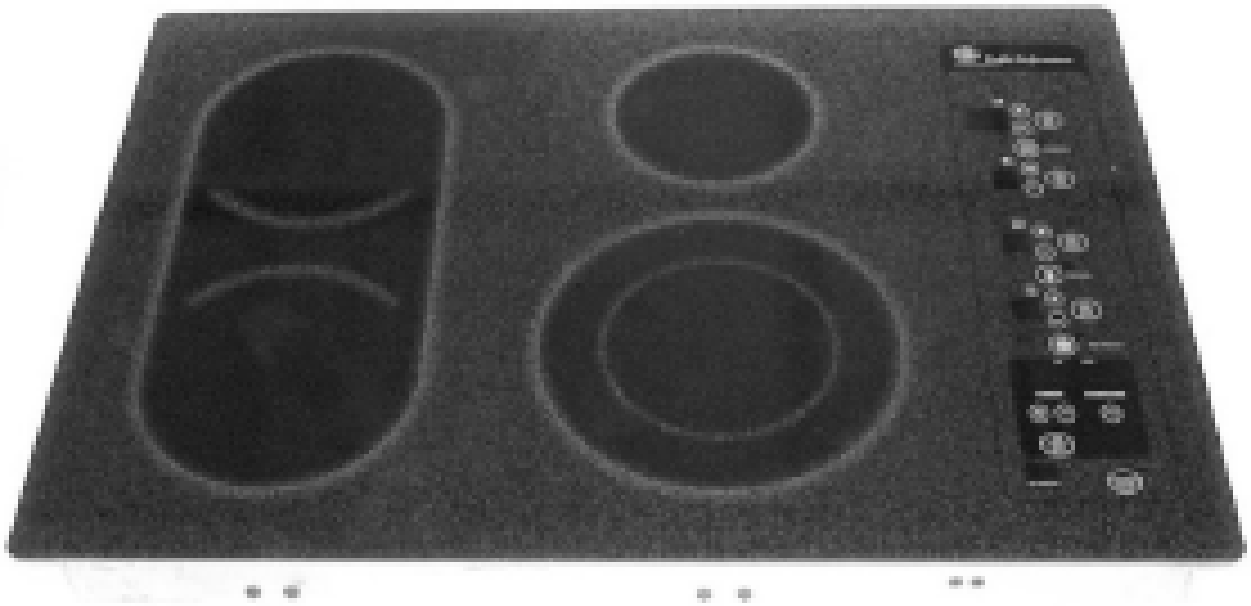
Dual Fuel Range Schematic J2S968

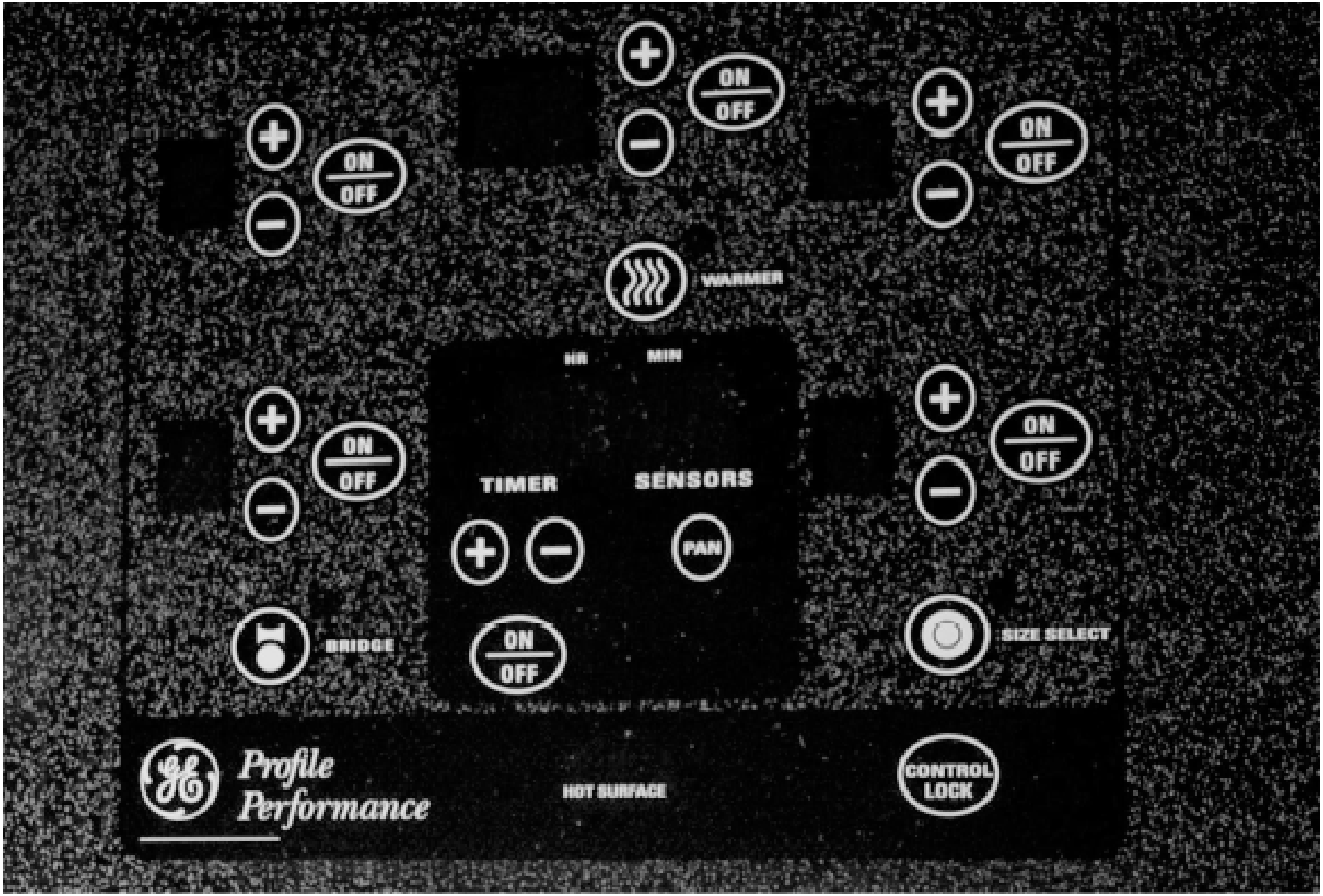


Electronic Control Cooktop

JP938
JP968







GEA00767

GEA00813

- To enter “Technician Mode”, lock cooktop by holding “CONTROL LOCK” key for 3 seconds.
- Control will beep 2 times & “LOCK” appears in the timer display.
- Press Timer “ON/OFF” key & simultaneously press the “+” keys of the LF & LR surface elements.
- Timer display will flash “TECH MODE”.
- To exit “Technician Mode”, press Timer “ON/OFF” key & simultaneously press the “+” keys of the LF & LR surface elements; or unlock cooktop.

- **The “Technician Mode” allows the last 9 fault codes to be recalled & displayed in the Timer window.**
- **The most recent fault code will appear first.**
- **By pressing the Timer “+” & “-” keys allows you to scroll through the fault codes.**
- **To clear the fault codes, enter “Technician Mode”, while display flashes “TECH MODE” simultaneously press the “BRIDGE” & “WARMER” keys.**
- **The Timer window will display “DONE” when error codes are erased.**

Code	Meaning	Visual Alarm	Corrective Action Perform each step below in the specified order. After performing each step, recycle power to the cooktop, waiting at least 10 seconds before reapplying power. Test the cooktop before advancing to the next step.
102	Main Display communication failure	Display code in timer display and F in all power level displays	(1) Check 10-wire harness running from the display board to the main board. Recycle power to the cooktop. (2) If fault persists, replace main board and recalibrate inductive sensors. (3) If fault persists, replace display board.
103	Main board CPU failure	Display code in timer display and F in all power level displays	(1) Recycle power to the cooktop. (2) If fault persists, replace main board and recalibrate inductive sensors.
104	Main board MUX failure	Flash code in timer display and F in all power level displays	Same as 103
105	Zero-cross failure	Flash code in timer display and F in all power level displays	(1) Recycle power to the cooktop. (2) If fault persists, test line voltage supplied to cooktop at the wall outlet. Voltage should read from 175VAC-265VAC. If it does not, there is a problem with the power being supplied to the cooktop. (3) If fault persists, replace power board. (4) If fault persists, replace main board and recalibrate inductive sensors.
106 OR 107	EEPROM failure	None – HIDDEN TO USER	(1) Recycle power to the cooktop. (2) Replace main board and recalibrate inductive sensors.
108	Line monitor failure	Flash code in timer display and F in all power level displays	Same as 105
1X2	Heater over temperature	Flash code in timer display and F in appropriate power level display	(1) Check all heater, sensor, and wire harness connectors. Make sure they are tight and secure. Check heater ribbon for possible damage. (2) Measure resistance across the heater ribbon at the heater terminals. Resistance should read from 20-80 Ohms. If it does not, replace the heater and recalibrate the inductive sensors. (3) If fault persists, remove sensor connector from the board and measure RTD resistance. Should read from 1030-1150 Ohms (46°F -102°F). If it does not, replace the heater and recalibrate inductive sensors. (4) If fault persists, replace power board. (5) If fault persists, replace main board and recalibrate inductive sensors.
1X3	Open temperature sensor (RTD)	Flash code in timer display and F in appropriate power level display	(1) Check all heater, sensor, and wire harness connectors. Make sure they are tight and secure. Check heater ribbon for possible damage. (2) Remove sensor connector from the board and measure RTD resistance. Should read from 1030-1150 Ohms (46°F -102°F). If it does not, replace the heater and recalibrate inductive sensors. (3) If fault persists, replace main board and recalibrate inductive sensors.
1X4	Shorted temperature sensor (RTD)	Flash code in timer display and F in appropriate power level display	Same as 1X3
1X6	Heater not heating	Flash code in timer display and F in appropriate power level display	(1) Check all heater, sensor, and wire harness connectors. Make sure they are tight and secure. Check heater ribbon for possible damage. (2) If fault persists, replace power board. (3) If fault persists, replace main board and recalibrate inductive sensors.
1X7	Inductive sensor frequency fault	Flash code in timer display and flash Pan LED	(1) Check all heater, sensor, and wire harness connectors. Make sure they are tight and secure. Check heater ribbon for possible damage. (2) Remove sensor connector from the board and measure resistance across the inductive sensor. Should read from 0.001-2.00 Ohms. If it does not, replace the heater and recalibrate inductive sensors. (3) If fault persists, replace main board and recalibrate inductive sensors.
160	Pan detect communication failure	Flash code in timer display and flash Pan LED	(1) Replace main board and recalibrate inductive sensors.
161	Pan detect invalid data	Flash code in timer display and flash Pan LED	(1) Replace main board and recalibrate inductive sensors.
170	Open matrix key	Flash code in timer display and F in all power level displays	(1) Recycle power to the cooktop. (2) If fault persists, replace ceramic glass maintop assembly. (3) If fault persists, replace display board.
171	Shorted matrix key	Flash code in timer display and F in all power level displays	Same as 170
172	Ghost key	Flash code in timer display and F in all power level displays	Same as 170
173	Display board CPU failure	Flash code in timer display and F in all power level displays	(1) Recycle power to the cooktop. (2) If fault persists, replace display board.
174	Display board 8V supply failure	Flash code in timer display and F in all power level displays	Same as 173
TEMP LTD	Temperature limited heater	Flash TEMP "LTD" in timer display and F in appropriate power level display	No action is needed. The particular heater will be disabled for 1/2 hour to allow for cool-down time.

To check the line-in voltage, press the timer ON/OFF key while in Technician Mode. Line-in voltage will appear in the timer display.

GEA00837

To check the temperature of a specific surface element, press that element's ON/OFF key while in Technician Mode. *C* will display in the window of the specific surface element and the temperature will appear in the timer display.

GEA00856

To check the frequency of a specific pan sensor, press the (-) key of that element while in Technician Mode. *H* will display in the window of the specific surface element. The frequency will appear in the timer display.

GEA00858

Calibration of the inductive sensors is performed to permanently store the pan detection thresholds in a new logic board that has never been calibrated. Calibration is also performed to update the pan detection thresholds due to a physical change in the pan detection circuit, wiring, or sensor.

Calibration of the inductive sensors is necessary and **must** be performed when any of the radiant surface elements (with an inductive sensor) are replaced or when the logic board is replaced.

Note: Calibration of the inductive sensors **must** begin with the LF surface element and proceed in a **clockwise** direction around the cooktop. All of the sensors **must** be calibrated to complete the calibration procedure.

- Calibration of the inductive sensors **must** begin **within 15 minutes** of applying power to the cooktop.

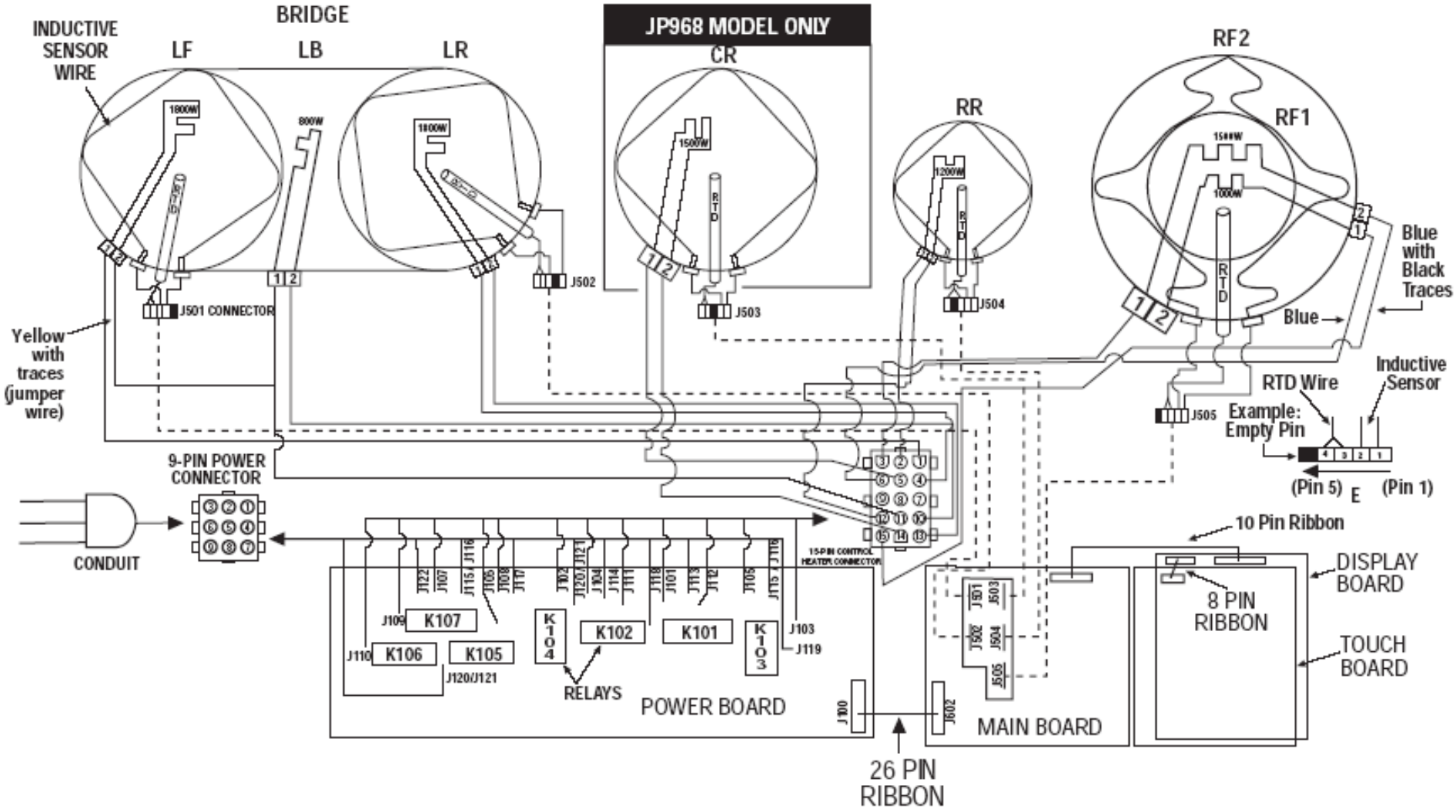
- **Clear <u>everything</u> from the top of the glass.**
- **Lock the control by pressing the "LOCK" key for 3 seconds.**
- **The "LOCK LED" will come turn on.**
- **Enter the tech mode by pressing the Timer "ON/OFF" key, LF & LR "+" keys at the same time – timer will flash "TECH MODE".**
- **Begin the calibration procedure by pressing the Timer "ON/OFF" key, LF & RF "+" keys at the same time – timer will flash "CAL" & the LF surface element power window will flash the "U" symbol.**

- **When the timer window displays “DISC” & the “U” symbol stops flashing in the LF surface element power window, center the aluminum disc on the LF surface element.**
- **Press the “PAN” & the LF “+” keys at the same time – the control will perform the calibration on the LF sensor & move to the next surface element - the timer window will display “CAL” & the “U” symbol will flash in the LR surface element power window.**
- **Repeat these 2 steps for the LR, CR (if present), RR, & RF surface elements.**
- **After the RF surface element has been calibrated, the timer window will display a “PASS” or “FAIL” message for the entire calibration procedure.**
- **An “F” will display in the surface element power window of any sensor that fails.**
- **Exit the calibration procedure by pressing the “PAN” & RF “+” keys at the same time.**

Note: If the calibration proceedure is interupted for any reason, exit the calibration proceedure by pressing the PAN and RF (+) keys at the same time.

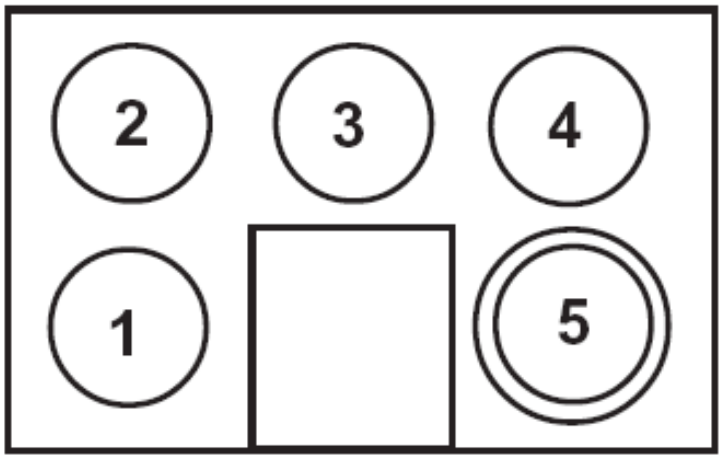
Note: Failure of the calibration procedure may occur for several reasons. If the calibration procedure fails, follow these steps:

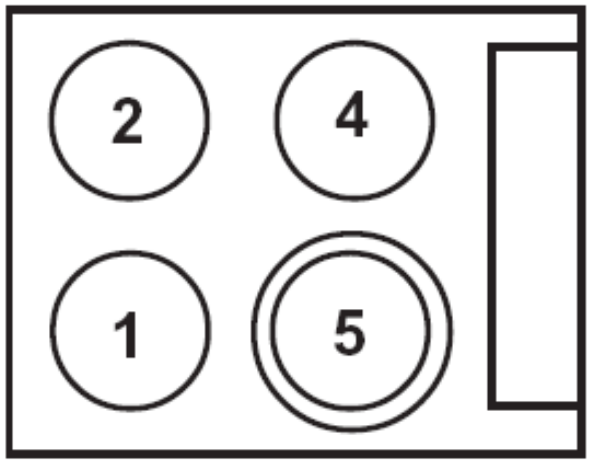
- Try calibrating the cooktop again, beginning with step 1 from above.
- Identify the sensor(s) that fails the calibration procedure.
- If multiple sensors fail the calibration procedure, replace the logic board.
- If only one sensor fails the calibration procedure, replace the corresponding surface element.



Sensor Locations

The cooktop has multiple sensors, one for each surface element. Some F-codes include a sensor number associated with a surface element. The illustration below shows the sensor/surface element number for both cooktop configurations.



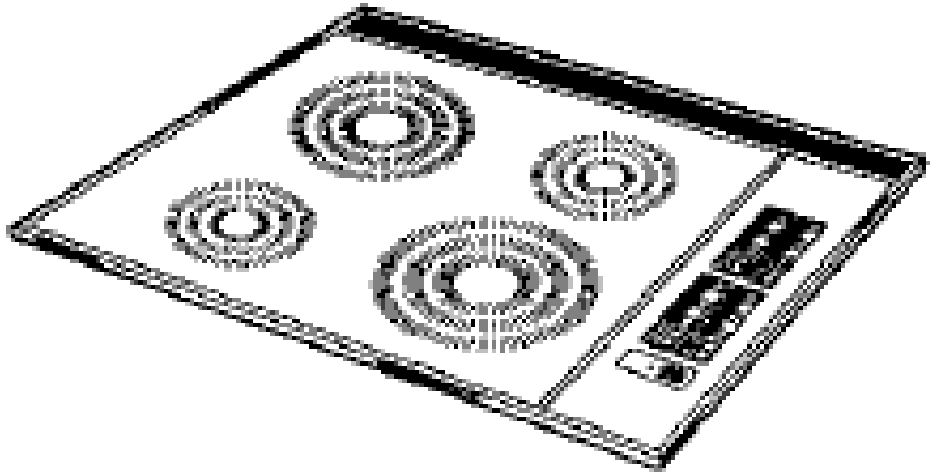


COLOR	POWER BOARD REFERENCE NUMBER	9-PIN POWER CONNECTOR (PIN #)		15-PIN CONTROL/ HEATER CONNECTOR (PIN #)	BURNER TERMINAL #
YELLOW	J101			1	LF1
YELLOW	J102			11	LF2
ORANGE	J103			13	LR2
ORANGE	J104			4	LR1
GRAY	J105			5	CR1
BROWN	J106			12	RR2
BROWN	J107			2	RR1
VIOLET	J108			3	RF21
BLUE/BLK	J109			15	RF22
BLUE	J110			6	RF12
GRAY	J111			14	CR2
YEL/BLK	J112			10	LB2
	J113	L1	1		
	J114	L1	3		
	J115	L1	2		
	J116	L1	2		
	J117	L1	4		
	J118	L2	7		
	J119	L2	6		
	J120	L2	9		
	J121	L2	9		
	J122	a	8		

JP392/393/692/693R

INDUCTION COOKTOP

GE Profile Line



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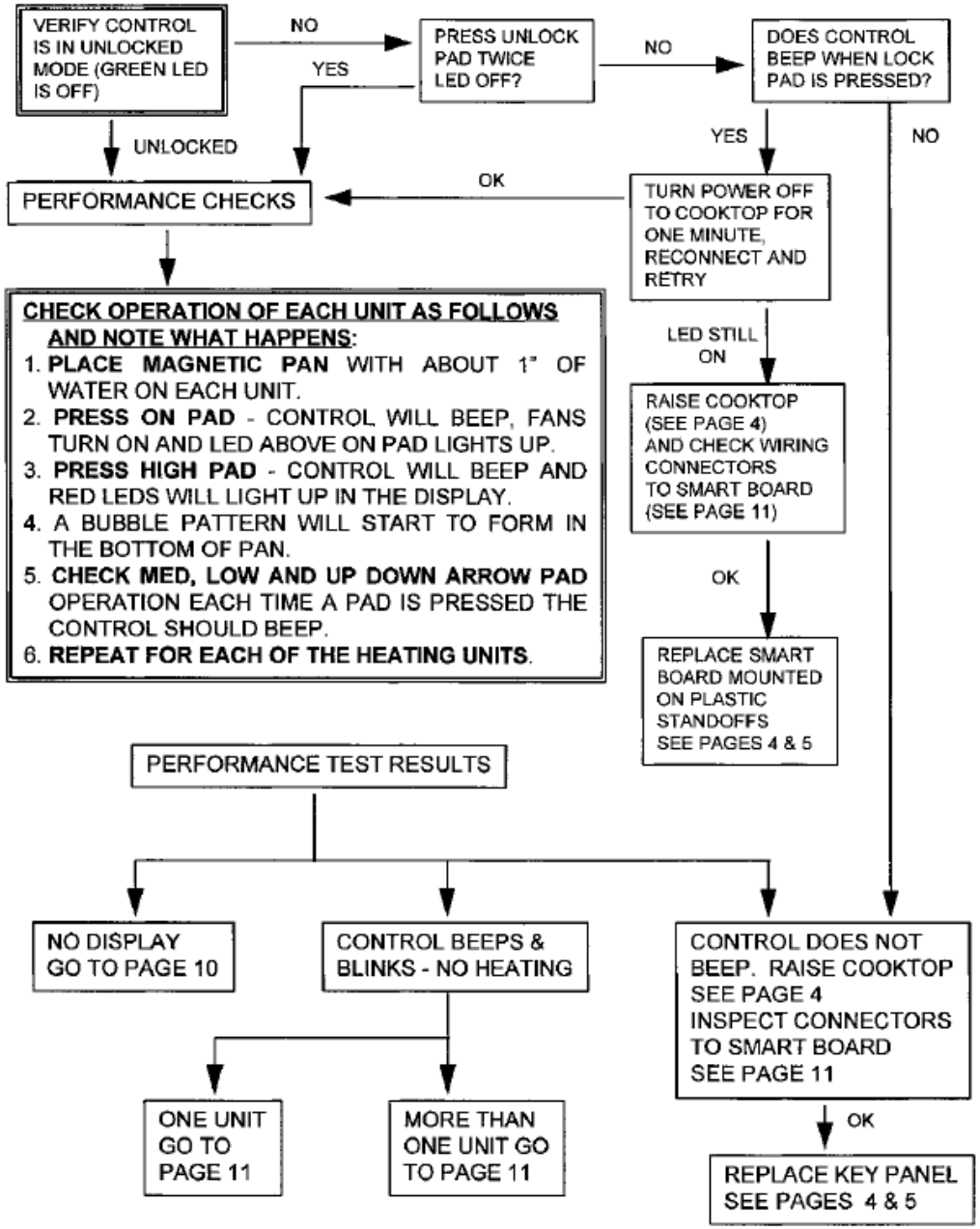

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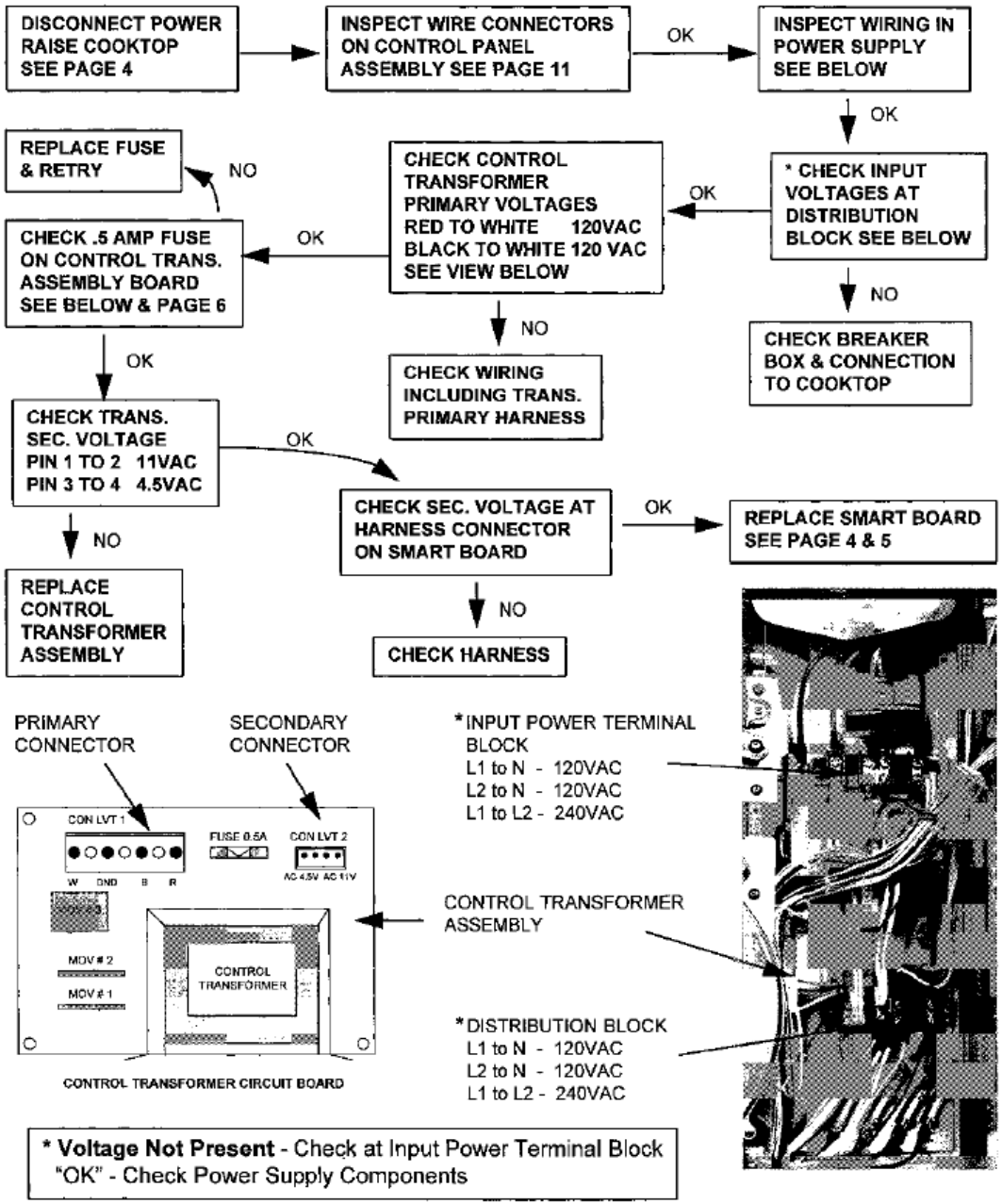
NO DISPLAY



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ONE UNIT NOT WORKING
INSPECT SMART BOARD CONNECTORS SEE BELOW

OK →

MAKE VISUAL INSPECTION OF POWER MODULE THAT IS NOT WORKING. SEE PAGES 20 & 21 LOOK FOR CONNECTORS OFF.

OK → GO TO PAGE 12

MORE THAN ONE UNIT NOT WORKING

↓

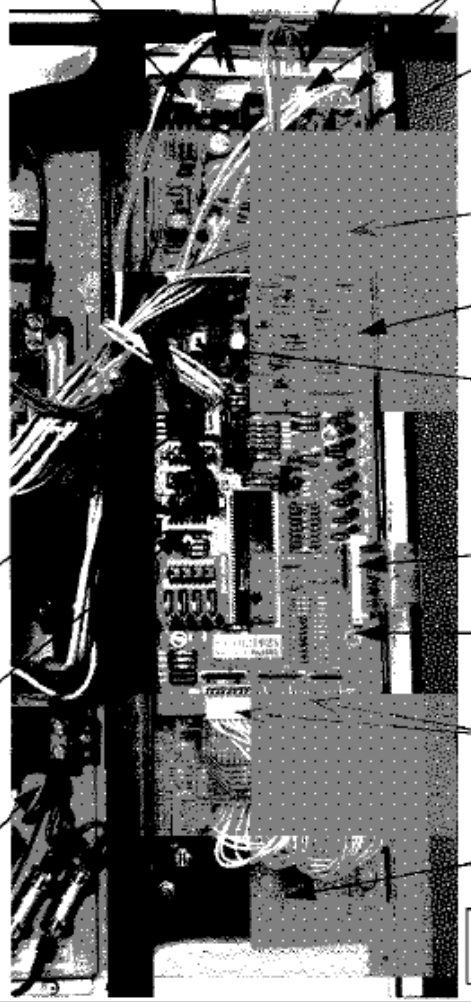
INSPECT SMART BOARD WIRING & CONNECTORS SEE ILLUSTRATION

↓ OK

MAKE VISUAL INSPECTION OF POWER MODULE THAT IS NOT WORKING. SEE PAGES 20 & 21 LOOK FOR CONNECTORS OFF.

↓ OK

REPLACE CONTROL SMART BOARD SEE PAGES 4 & 5



JP392/393/692/693R

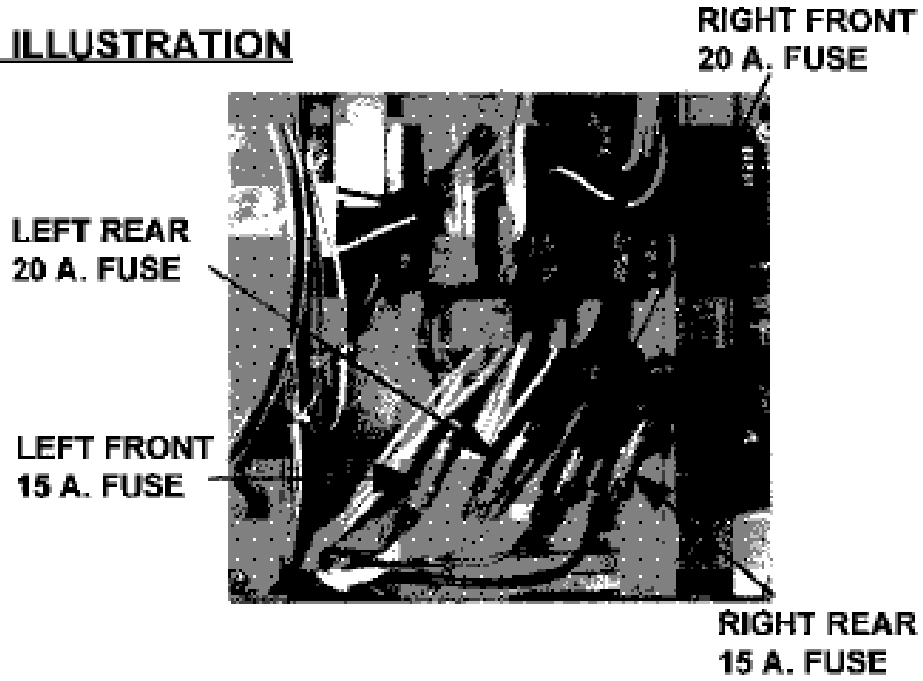
CHECK FUSE TO UNIT NOT WORKING SEE ILLUSTRATION

MAKE THE FOLLOWING CHECKS:

1. Identify the fuse to the unit not working. Each unit fuse is clearly identified including part no. & *Amperage on case bottom.
2. Check fuse with ohm meter. If fuse is blown, replace & retry unit.

* **NOTE:** USE ONLY THE TYPE FUSE IDENTIFIED FOR THAT UNIT.

3. Fuse is not open or blows when replaced proceed to module checks. (PAGE 13)



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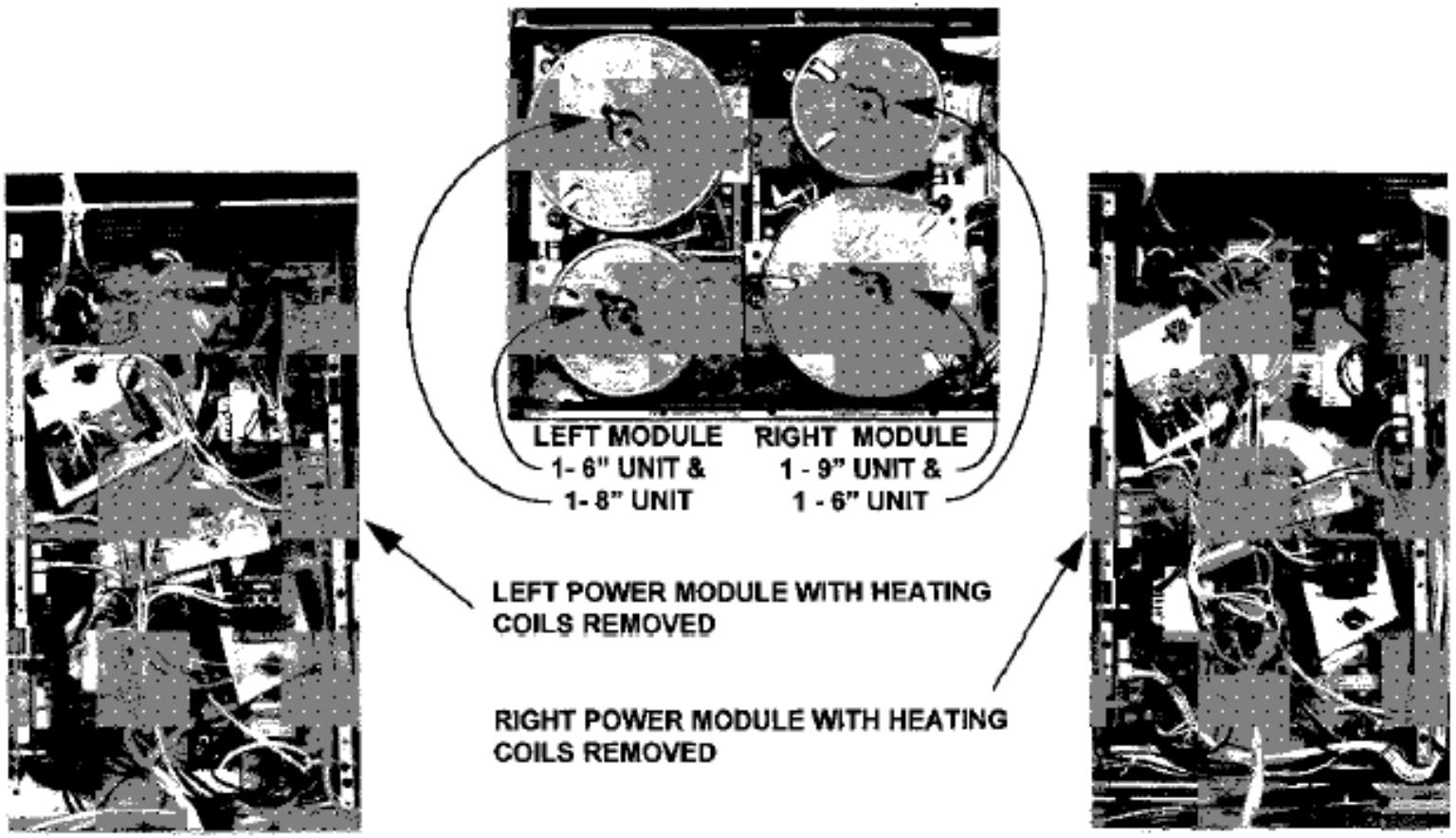
MODULE CHECKS:

FRONT OF INPUT POWER COMPARTMENT

The Modules in the cooktop are referred to as either a Right Module or Left Module. The Diagnostic procedure is the same for both modules. The main difference is coil size and component location. When replacing parts only use the parts specified for that particular unit (or section of module) being serviced. Both the Left & Right Module can be removed as a complete assembly by removing 4 screws securing it to the case bottom and disconnecting the wires to the control, fuses and distribution block.



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MODULE CHECKS CONTINUED: HEATING COILS

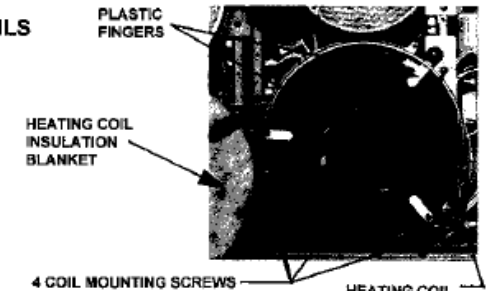
INSPECT HEATING COIL OF UNIT NOT WORKING.
A.) DOES UNIT HAVE BURNT SMELL, B.) REMOVE INSULATION BLANKET FROM TOP OF COIL,
C.) DOES UNIT HAVE DARK SPOTS ON THE COIL,
D.) INSPECT PLASTIC FINGERS ON TOP OF COIL FOR DISTORTION OR SIGNS OF MELTING.

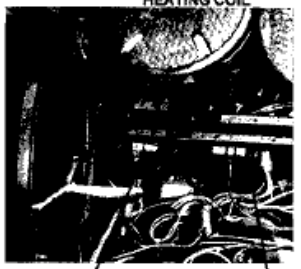
YES

REPLACE MODULE. USUALLY INDICATES SEVERAL FAILURES RETURN REPLACED MODULE FOR REPAIRS

NO

REMOVE COIL:
1. REMOVE 4 SCREWS MOUNTING COIL TO MODULE FRAME.
2. CAREFULLY DISCONNECT THERMISTOR PLUG & THERMAL FUSE PLUG FROM INVERTOR PC BOARD. SEE ILLUSTRATION
3. LAY UNIT TO SIDE (NOTE - COIL WIRES STILL CONNECTED TO CAPS ON MODULE BASE.



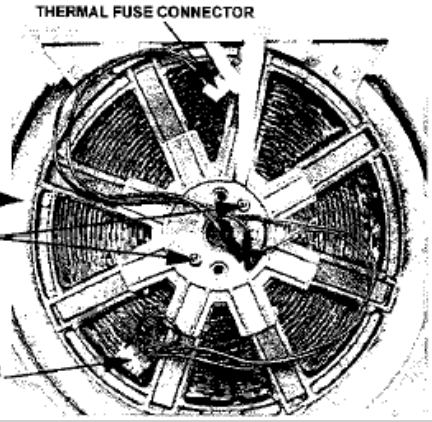


CHECK THERMAL FUSE & THERMISTOR:
THERMAL FUSE (BLUE LEADS) WITH OHM METER CHECK AT CONNECTOR. - OPEN REPLACE.
THERMISTOR (RED LEADS) SET OHM METER ON HIGH SCALE & CHECK AT CONNECTOR. - OPEN OR SHORTED REPLACE.

INSPECT HEATING COIL CAPACITORS
LOOK FOR SWOLLEN OR CRACKED CAPACITOR CASES.

TO REPLACE THERMAL FUSE OR THERMISTOR:
REMOVE TWO SCREWS FROM CENTER BACK SIDE OF COIL. PLASTIC DISC FROM FRONT SIDE WILL SLIDE OUT WITH BOTH THE THERMAL FUSE & THERMISTOR. REINSTALL IN REVERSE ORDER MAKING SURE EACH COMPONENT IS INSTALLED THE SAME WAY IT WAS REMOVED.

NOTE: WHEN REPLACING CAPACITOR, ONLY REPLACE WITH ONE CALLED OUT ON PARTS CATALOG PAGES. CAPACITORS HAVE DIFFERENT RATINGS.
PROCEED TO NEXT PAGE.



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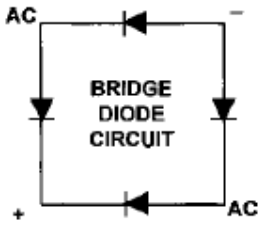
BRIDGE DIODE CHECKS:

1. LOCATE THE FUSE IN THE POWER SUPPLY AREA TO THE UNIT NOT WORKING. AND REMOVE THE FUSE.
2. SET OHMMETER ON HIGH SCALE AND PLACE ONE PROBE ON FUSE HOLDER SIDE WITH THE RED OR BLACK WIRE GOING TO THE MODULE. PLACE THE OTHER PROBE ON THE NEUTRAL (WHITE) LEAD ON THE DISTRIBUTION BLOCK.
3. OBSERVE METER READING. REVERSE PROBES AND OBSERVE METER READING

METER READING SHOULD SHOW HIGH RESISTANCE IN BOTH DIRECTIONS

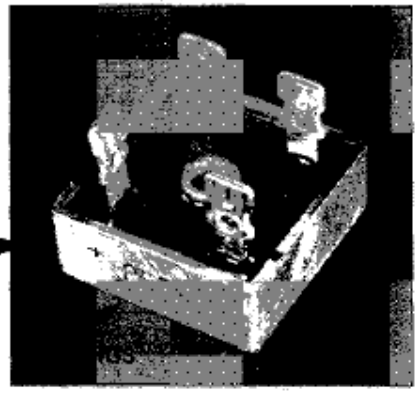
IF A LOW RESISTANCE OR SHORT READING IS OBTAINED, MAKE CHECK AT BRIDGE DIODE LOCATED ON MODULE CASE BOTTOM.



METER CHECKS AT BRIDGE DIODE:
Mark wires and remove from diode.

- Place the negative ohm meter lead on the PLUS terminal of the Bridge Diode and the other lead on the AC terminal. Observe reading.
- Place the positive ohm meter lead on the NEGATIVE terminal and the other lead on the AC terminal. Observe reading.
- If Shorted Replace.
- If "OK" check GTR.

GO TO PAGE 15



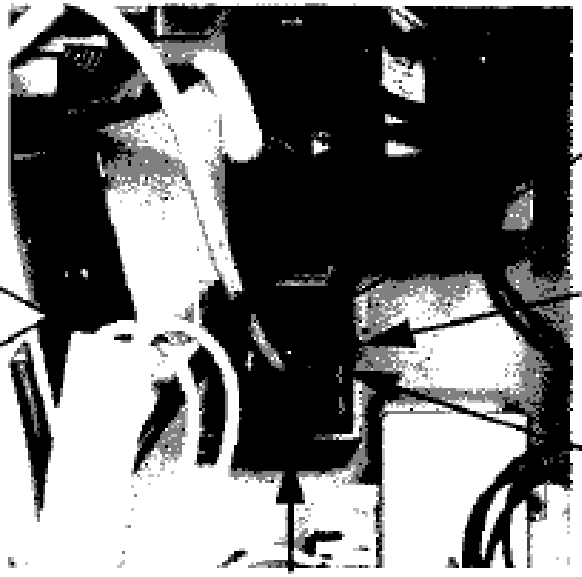
NOTE: Replace all Bridge Diodes Marked CM2504 & CM3504 on models with Serial Nos. Starting with HH, LH, MH, RH, or SH manufactured in mid 1993.

JP392/393/692/693R

MODULE CHECKS CONTINUED:

BRIDGE DIODE REPLACEMENT:

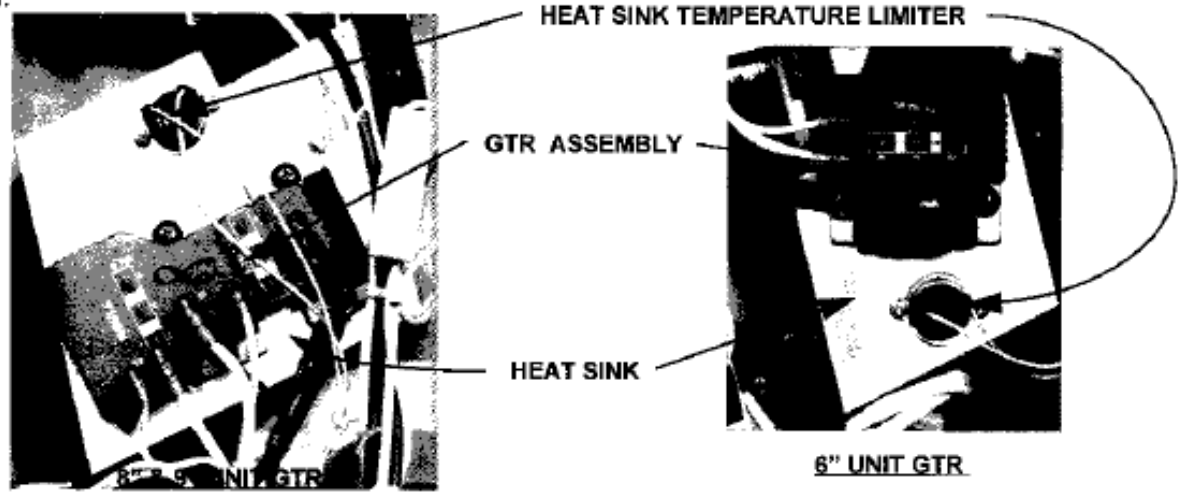
1. MARK AND REMOVE WIRES TO DIODE. MARK ON MODULE + TERMINAL LOCATION
2. REMOVE MOUNTING SCREW IN CENTER OF BRIDGE DIODE AND LIFT OUT.
3. ADD A THIN EVEN LAYER OF THERMAL HEAT SINK COMPOUND TO BOTTOM OF DIODE, MAKING SURE TO COVER ENTIRE SURFACE.
4. POSITION NEW DIODE (PLUS & MINUS) SAME AS OLD DIODE AND REINSTALL SCREW. MAKE SURE BOTTOM OF DIODE IS MAKING GOOD CONTACT WITH MOUNTING SURFACE.
5. REWIRE



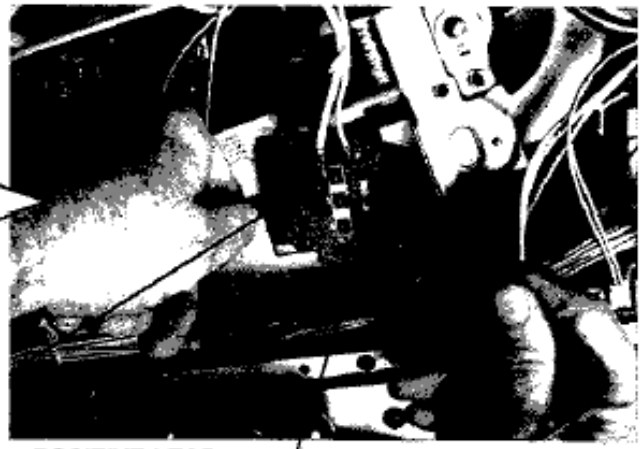
BRIDGE AND MODULE CASE BOTTOM MUST MAKE GOOD CONTACT

JP392/393/692/693R

GTR (Giant Transistor):
The GTR'S will be furnished as and assembly. The 6" unit GTR will consist of one GTR soldered to a circuit board. The 8" & 9" units each contain two GTR'S soldered to a circuit board. See Pages 19 & 20 for GTR location for each unit. The GTR'S are not in the same location on the Left and Right Modules. The procedure for checking the GTR'S is the same for all except as noted.



GTR CHECKS:
1. CONNECT POSITIVE LEAD FROM OHMMETER TO "C" ON GTR CIRCUIT BOARD AND NEGATIVE LEAD TO "E". **GOOD GTR** SHOULD READ HIGH RESISTANCE OR OPEN.
2. TO REPLACE GTR ASSEMBLY GO TO PAGE NO. 16

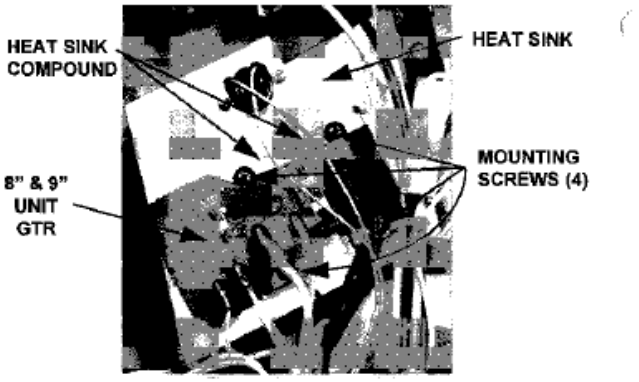


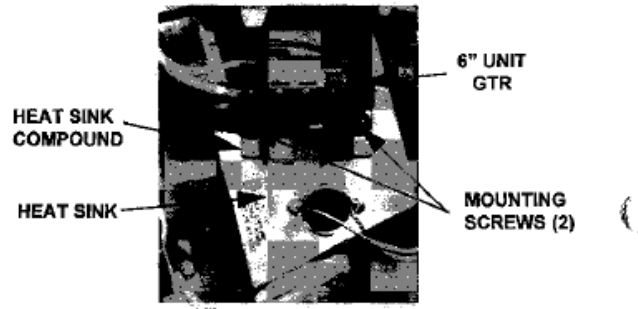
INDCKTP1 (8/95)

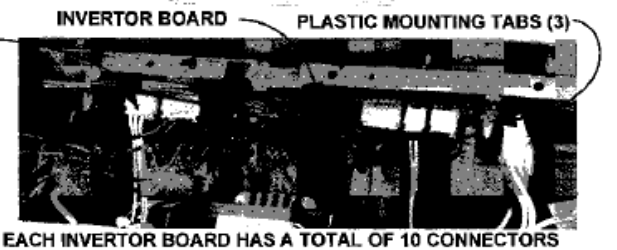
JP392/393/692/693R

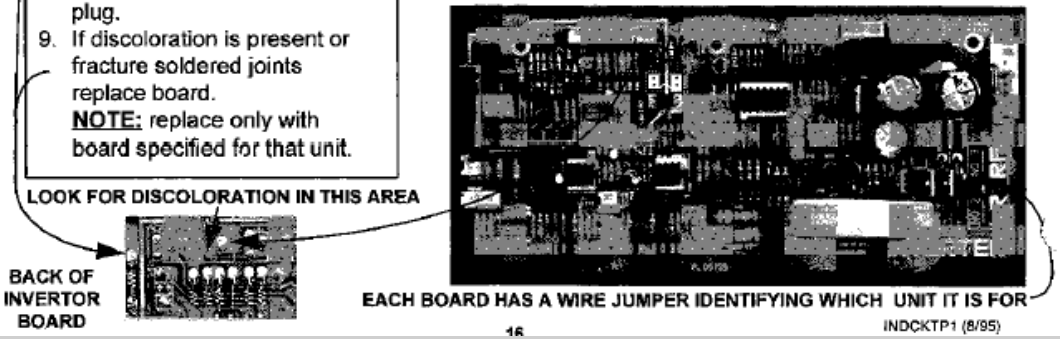
TO REPLACE GTR:

1. Mark wires and disconnect from circuit board.
2. Remove mounting screws and lift bad GTR Assembly off.
   (2 screws on 6" unit GTR'S & 4 screws on 8" & 9" unit GTR'S.)
3. Place a thin even layer of Heat Sink Compound on bottom of GTR.
4. Firmly press the GTR down on the heat sink (Do not press on circuit board).
5. Replace screws again make sure the GTR is making good contact with the Heat Sink.
   NOTE: A GTR not properly mounted to the Heat Sink will fail again.
6. Reconnect wires to GTR Circuit Board (Take care not to damage board).
7. Check wire connectors to Invertor Board, make sure all connections are tight and fully seated.
8. Release the three plastic mounting tabs across the top of the Invertor Board and carefully lean forward and inspect the back of the board in the area around thermistor plug.
9. If discoloration is present or fracture soldered joints replace board.
   NOTE: replace only with board specified for that unit.







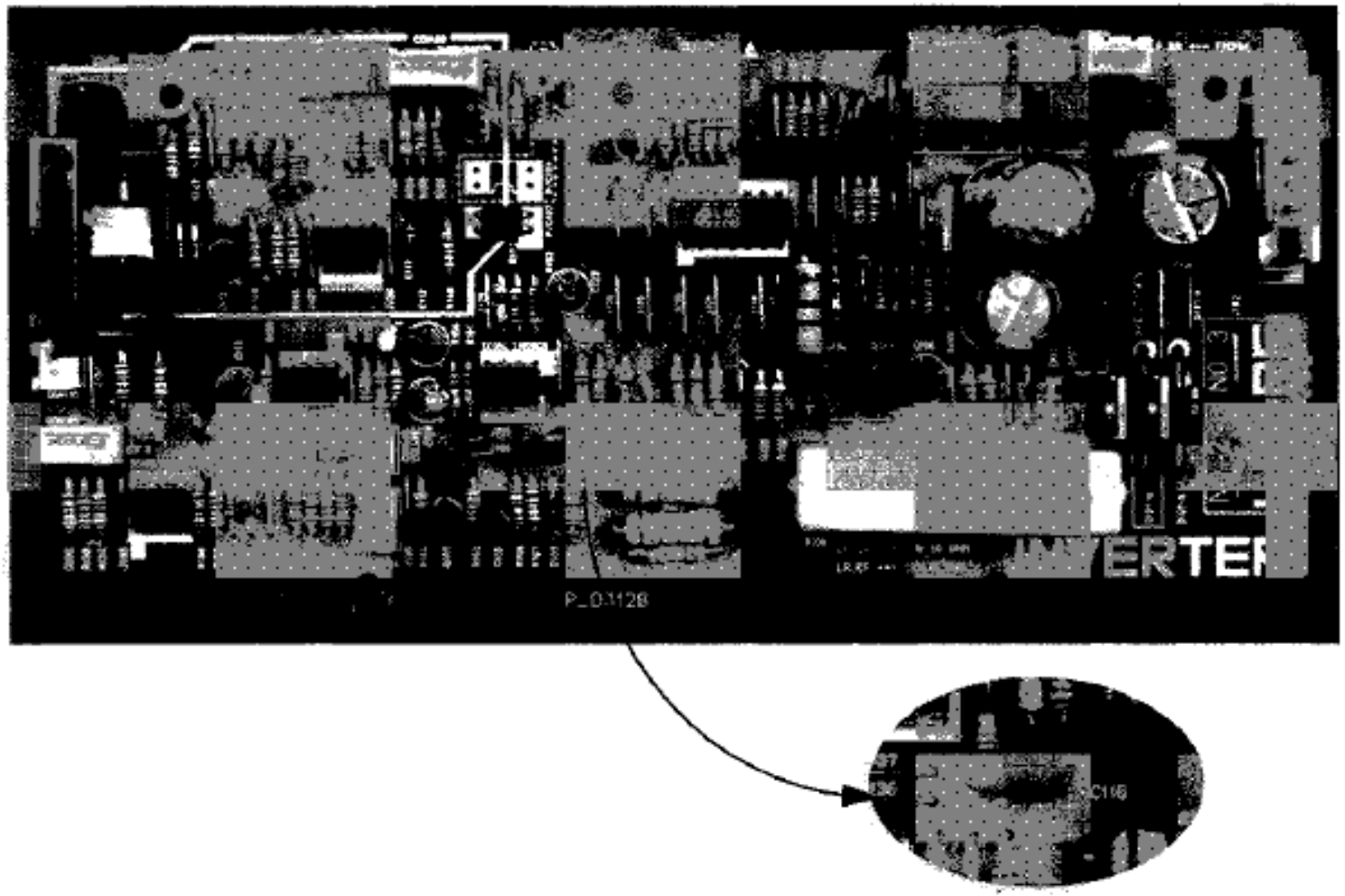


16

INDCKTP1 (8/95)

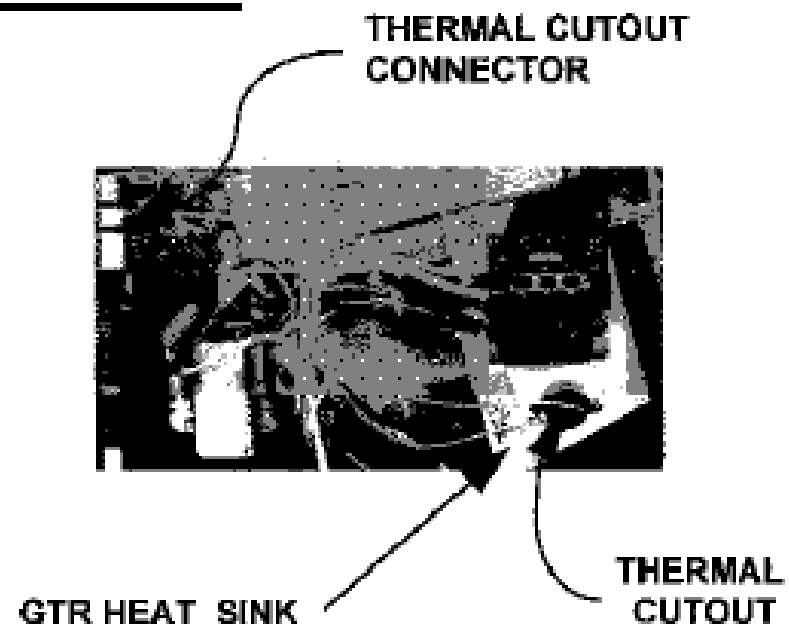
JP392/393/692/693R

CHECK INVERTOR BOARD "C116" CAPACITOR:
Set ohmmeter on high scale and check capacitor on invertor board located near center bottom. See Illustration. If open or shorted replace invertor board.

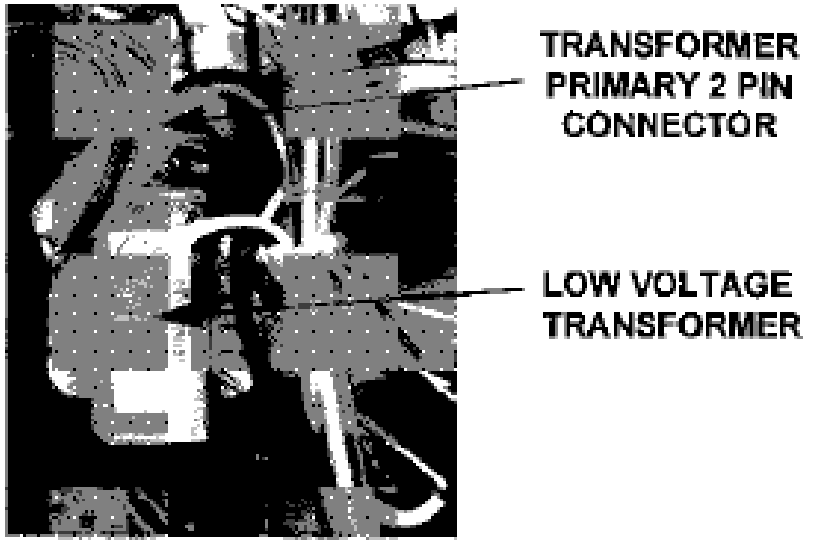


JP392/393/692/693R

GTR HEAT SINK THERMAL CUTOUT:
Each GTR Heat Sink has a thermal cutout mounted to it.
Check the cutout with ohmmeter, should show shorted. If open replace.
Check connector at Invertor Board to make sure that it is plugged in.



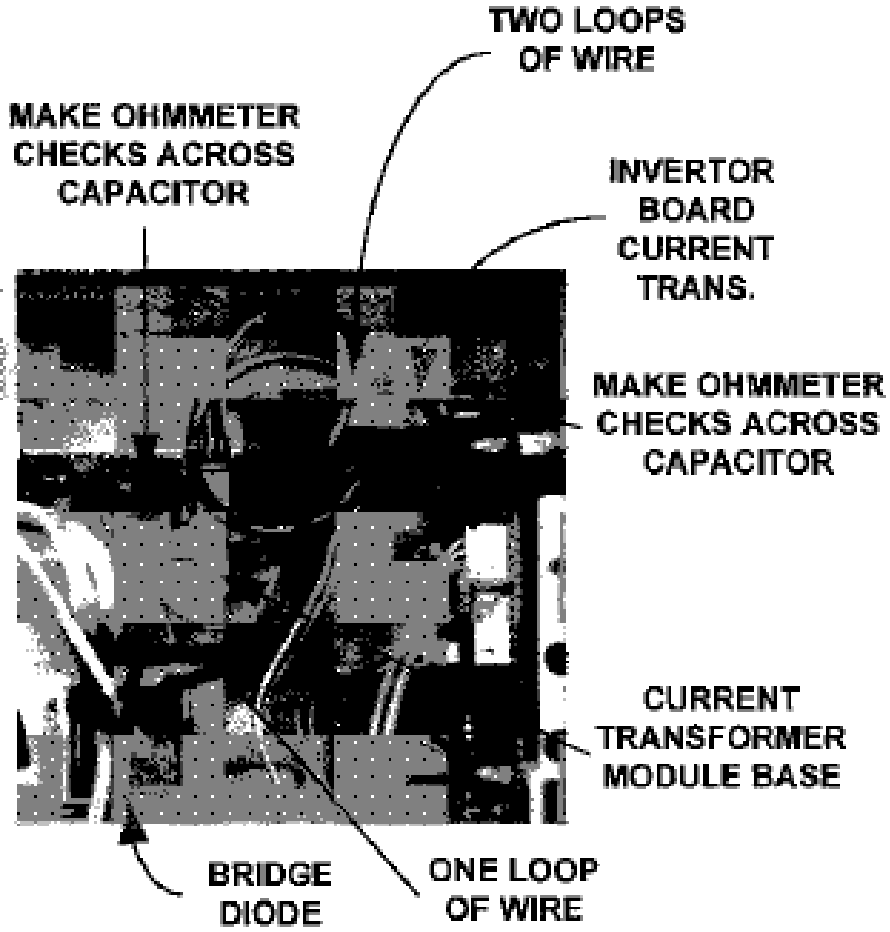
POWER MODULE LOW VOLTAGE TRANSFORMER:
EACH HEATING COIL HAS A LOW VOLTAGE TRANSFORMER AS PART OF ITS POWER SUPPLY. THEY ARE MOUNT TO THE MODULE BASE.
TO CHECK TRANSFORMER PRIMARY:
DISCONNECT TWO PIN CONNECTOR AND CHECK WITH OHMMETER. TRANSFORMER FOR 8" & 9" UNITS SHOULD READ APPROX. 25Ω AND 6" UNIT SHOULD READ APPROX. 40Ω.



JP392/393/692/693R

POWER MODULE CURRENT TRANSFORMERS:
EACH HEATING COIL POWER SUPPLY HAS TWO CURRENT TRANSFORMERS. ONE IS LOCATED ON THE INVERTOR BOARD AND THE OTHER ON A SMALL PCB MOUNTED TO THE MODULE CASE BOTTOM.
TO CHECK THE CURRENT TRANSFORMERS:

1A. INVERTOR BOARD CURRENT TRANSFORMER - WITH OHMMETER CHECK COIL ACROSS CAPACITOR JUST ABOVE TRANSFORMER, SHOULD READ APPROX. 400 TO 450Ω. IF READING IS ABOVE 1000Ω REPLACE INVERTOR BOARD.
1B. CHECK WIRE LOOP - SHOULD HAVE TWO TURNS OF BLACK OR RED WIRE FROM BRIDGE DIODE.
2A. CURRENT TRANSFORMER LOCATED ON MODULE BASE - CHECK WITH OHMMETER ACROSS CAPACITOR ON PCB - SHOULD READ APPROX. 400 TO 450Ω. IF READING IS ABOVE 4000Ω REPLACE.
2B. SHOULD HAVE ONE LOOP OF WIRE COMING FROM INVERTOR BOARD CURRENT TRANSFORMER.



JP392/393/692/693R

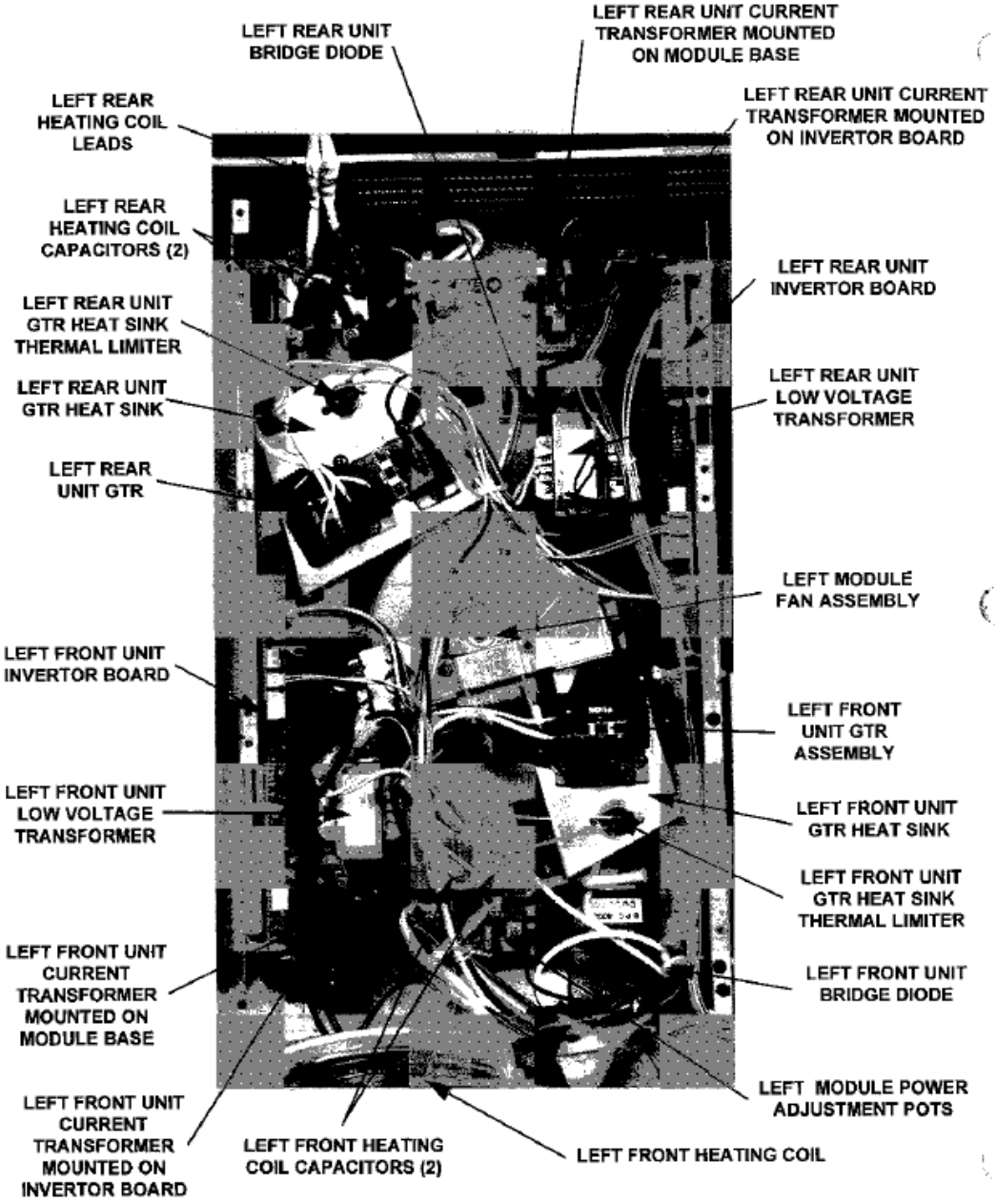
POWER LEVEL ADJUSTMENT POTS WIRE CONNECTORS

CHECK TO MAKE SURE WIRE CONNECTORS ARE PROPERLY SEATED ON BOARD BEHIND POTS.

DO NOT ADJUST POTS.

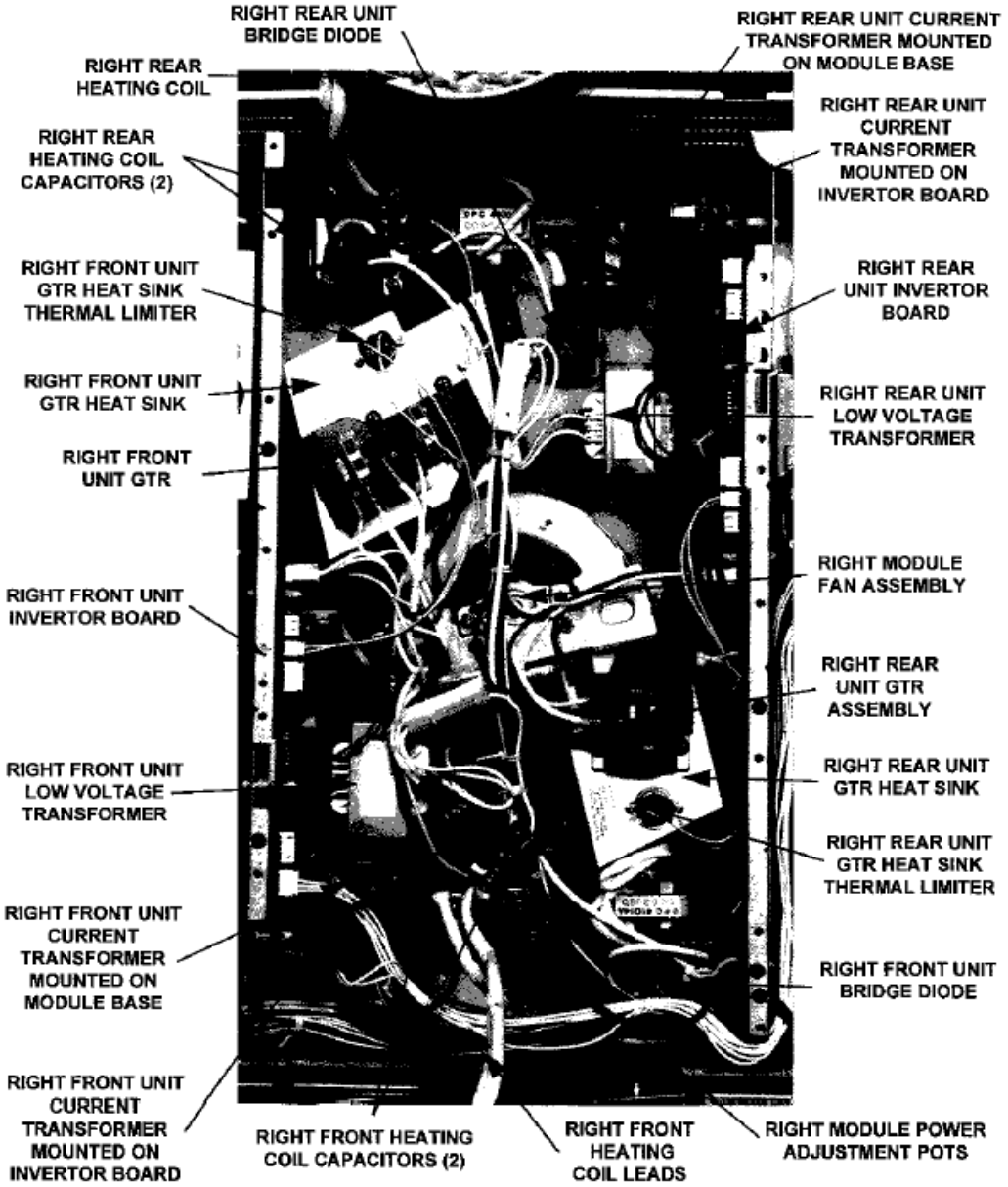
ADJUSTMENT POTS WIRE CONNECTORS

JP392/393/692/693R



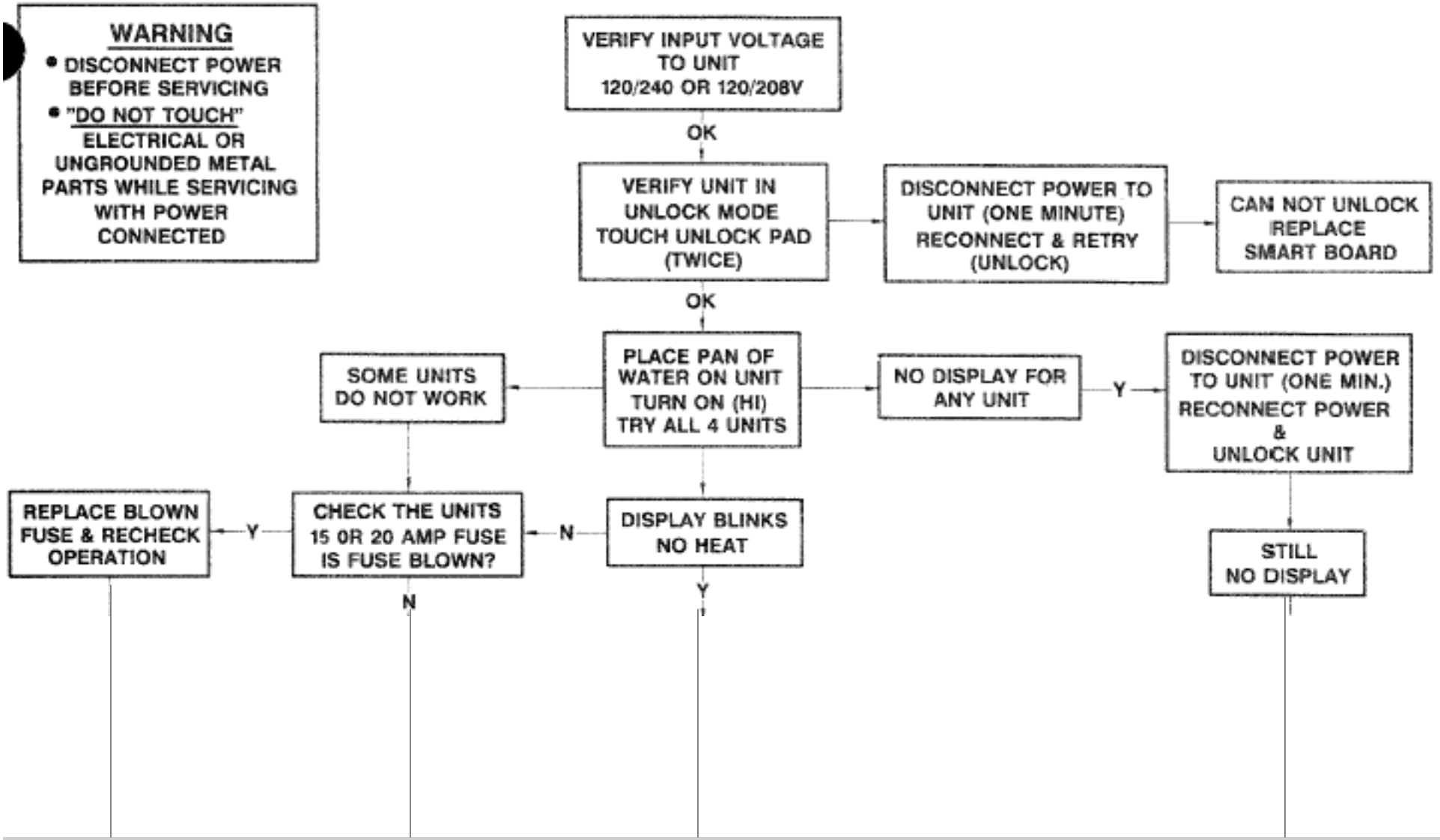
LEFT POWER MODULE

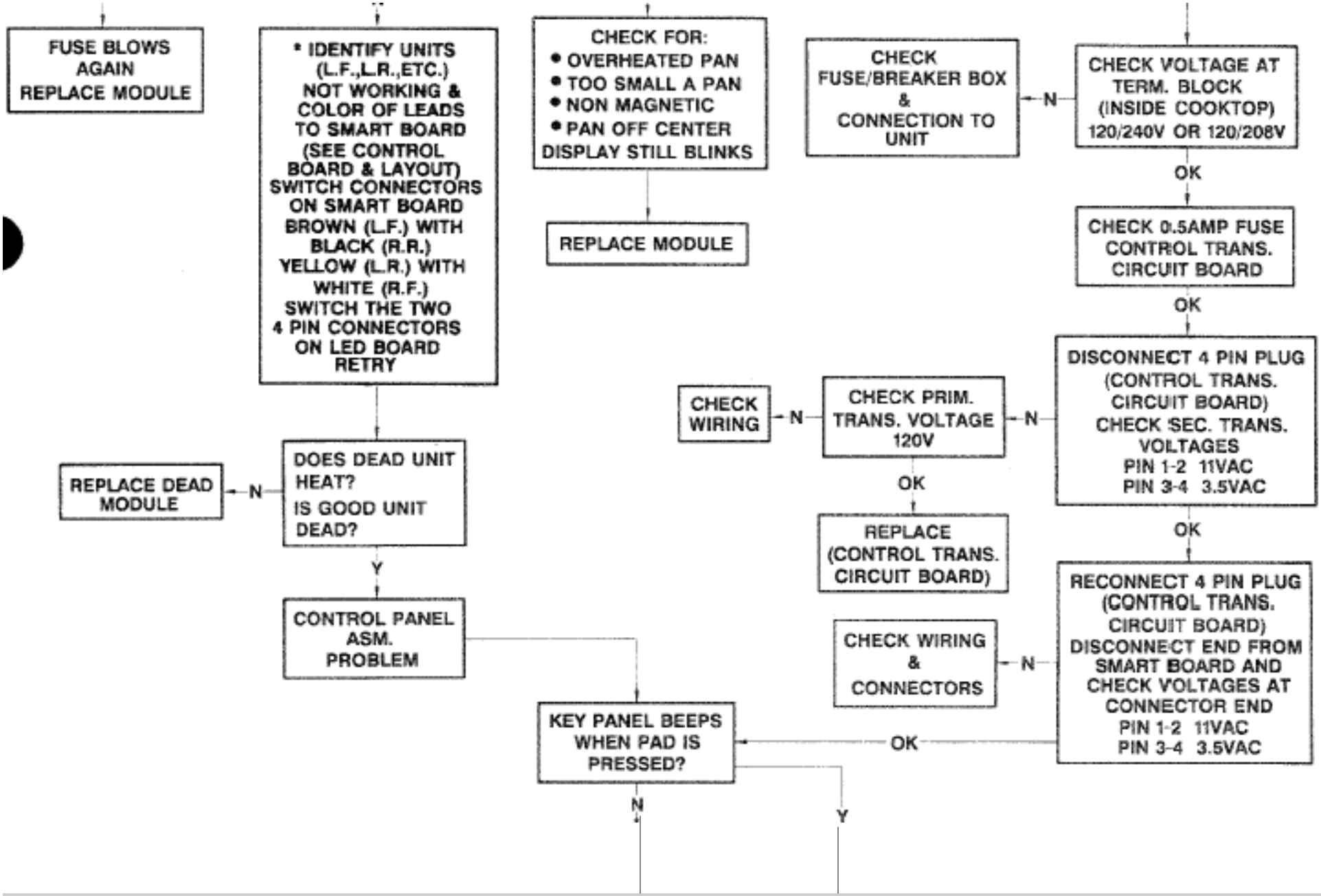
JP392/393/692/693R

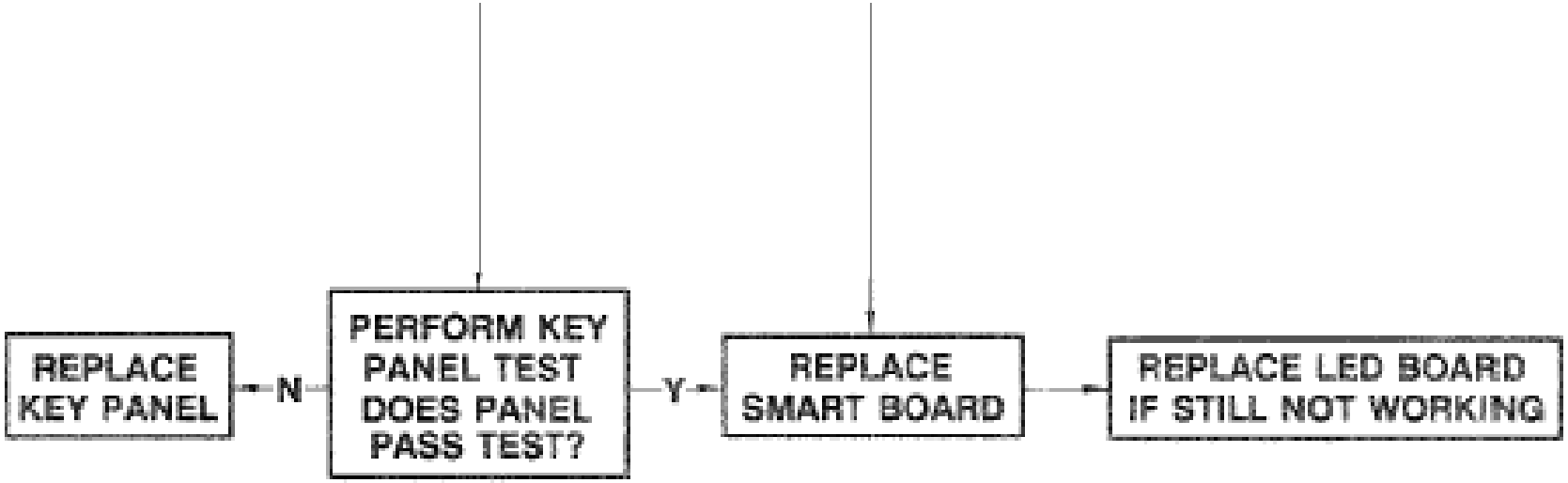


RIGHT POWER MODULE

JP392/393/692/693R



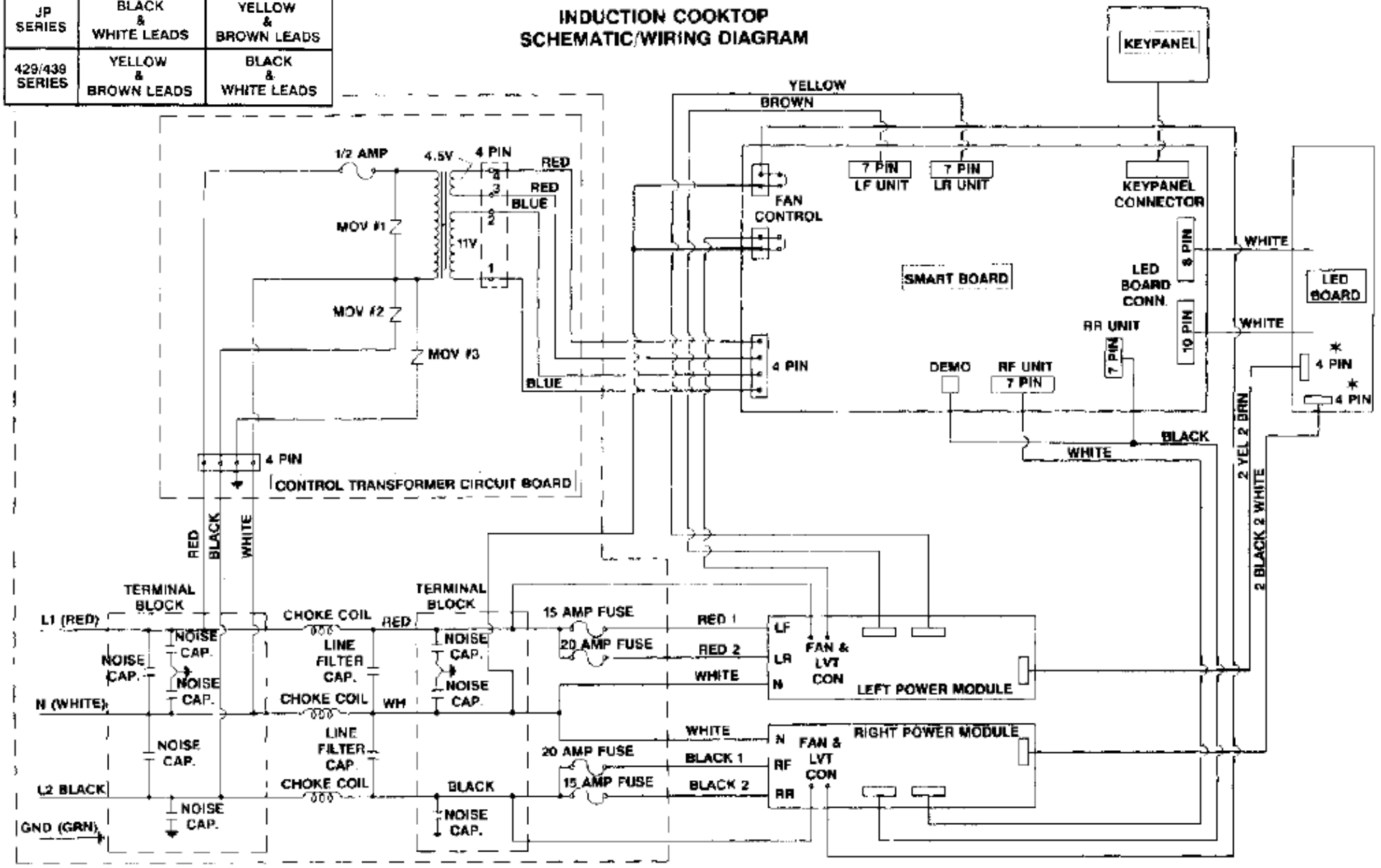




*NOTE: WHEN CONNECTORS ON SMART BOARD & LED BOARD ARE SWITCHED, CONTROL WILL OPERATE OPPOSITE DIAGONAL UNIT.
(EXAMPLE)
RIGHT FRONT KEY PADS WILL CONTROL LEFT REAR UNIT.

MODEL SERIES	LED 4 PIN CONNECTOR BLOCKS	
	CONNECTOR 1	CONNECTOR 2
JP SERIES	BLACK & WHITE LEADS	YELLOW & BROWN LEADS
429/439 SERIES	YELLOW & BROWN LEADS	BLACK & WHITE LEADS

INDUCTION COOKTOP SCHEMATIC/WIRING DIAGRAM



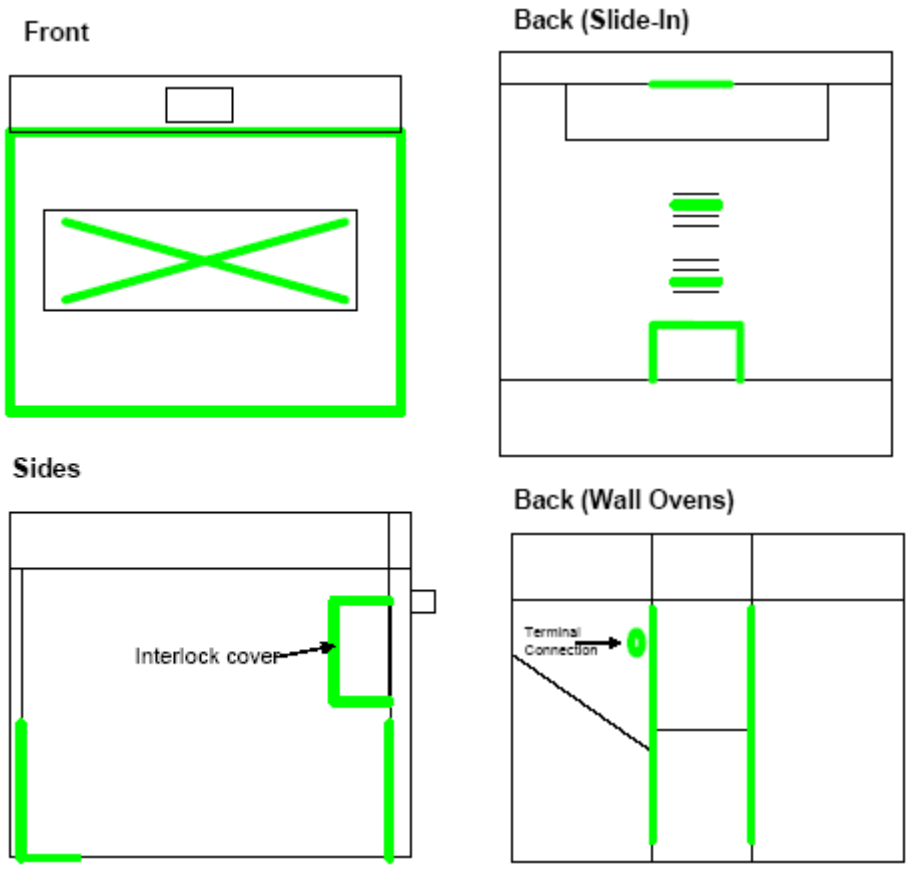
2004 Trivection Technology Cooking

JS998
JT930
JT980
ZET3038
ZET3058

Microwave Leakage Test

1. Place 275 mL of water in a 600-mL beaker.
2. Place beaker in center of oven shelf.
3. Set meter to 2450-Hz scale.
4. Enter the service mode (see ***Service Mode***), press the keypad next to COOKING LOADS, then press the keypad next to MW (microwave).
5. Time for 5 minute test.
6. Hold probe perpendicular to surface being tested and scan surface at rate of one inch/sec.
7. Test the following areas:
   - Entire perimeter of door and control panel.
   - Viewing surface of door window.
   - Exhaust vents.

Microwave Scan Pattern (Scan Highlighted Areas)



Note: Maximum leakage is not to exceed 4 mW/cm^2.

Trivection

Performance Testing

Standard test load will be 1 liter (1000-mL) of water with an initial temperature 59° ~ 75°F in a 1000-mL beaker (PN WB64X73).

1. Record initial water temperature.
2. Place beaker in center of middle oven shelf.
3. Enter the service mode (see ***Service Mode***), press COOKING LOADS, then press the keypad next to MW.
4. Time for 2 minutes, then open door.
5. Record end water temperature.
6. The minimum difference between the initial and ending temperatures should be **12°F** at **240 VAC**.

Note: Standard Microlite™ test blocks (sometimes called sparkle blocks) are not applicable.

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Note: Standard Microlite™ test blocks (sometimes called sparkle blocks) are not applicable.

Trivection Voltage Checks

- **To turn off all loads that are energized in “Cooking Loads”, press CLEAR/OFF key or exit the “Cooking Loads” menu.**
- **If load is not turned off, additional loads can be turned on at the same time.**
- **If ACV measures OK, then check the load (element, fan, lock, motor, HVT, etc.) &/or wiring to the load & repair/replace as required.**
- **If there is no ACV supplied to the load through the power relays per wiring schematic, then check the DC power supply voltages from the MPB (J3 connector) to the MLB (J5 connector) according to the following table.**

Trivection DC Power Supply Voltage Chart

MPB	MLB	Signal Name	Min	Max
J3-1	J5-1	+12Vdc	11.00Vdc	12.75Vdc
J3-2	J5-2	12Vdc, 5Vdc Ground	—	—
J3-3	J5-3	+5Vdc	4.7Vdc	5.3Vdc
J3-4	J5-4	12Vdc, 5Vdc Ground	—	—
J3-5	J5-5	-14Vdc	-14.75Vdc	-12.75Vdc
J3-6	J5-6	Not Connected	—	
J3-7	J5-7	L1 thru 2M ohm/.47 uF cap on MPB	240VAC line monitor	
J3-8	J5-8	L1 thru 2M ohm/.47 uF cap on MPB	120VAC line monitor	
J3-9	J5-9	Not Connected	—	
J3-10	J5-10	NT thru 2M ohm/.47 uF cap on MPB	120VAC line monitor	
J3-11	J5-11	Not Connected	—	
J3-12	J5-12	L2 thru 2M ohm/.47 uF cap on MPB	240VAC line monitor	

Trivection Voltage Checks

- **If voltages do not measure according the the table above, replace MPB.**
- **If voltages measure OK, then measure DCV according to the relay control table (see pages 35, 36, & 37).**
- **If the MLB J3 pins do not provide correct DCV, then replace MLB.**
- **If the display is blank, the oven light does not operate when the door is opened, & the keypanel does not respond, first check DC power supply voltages. Next, check DCV at MLB J2 (pins 2, 4, 6, & 8). They should be +12VDC. If not, replace text display &/or time/temp display.**
- **If DC power supply voltages are OK, the display is blank, & the keyboard is not responding, replace MLB. If just the display is blank, replace the display. If only the keyboard is not responding, check glass touch display. If OK, replace MLB.**
- **If oven light does not turn on when door is opened, check oven light relay per relay troubleshooting table. If relay voltages are OK, check door sense switch (page 24).**

Service Mode

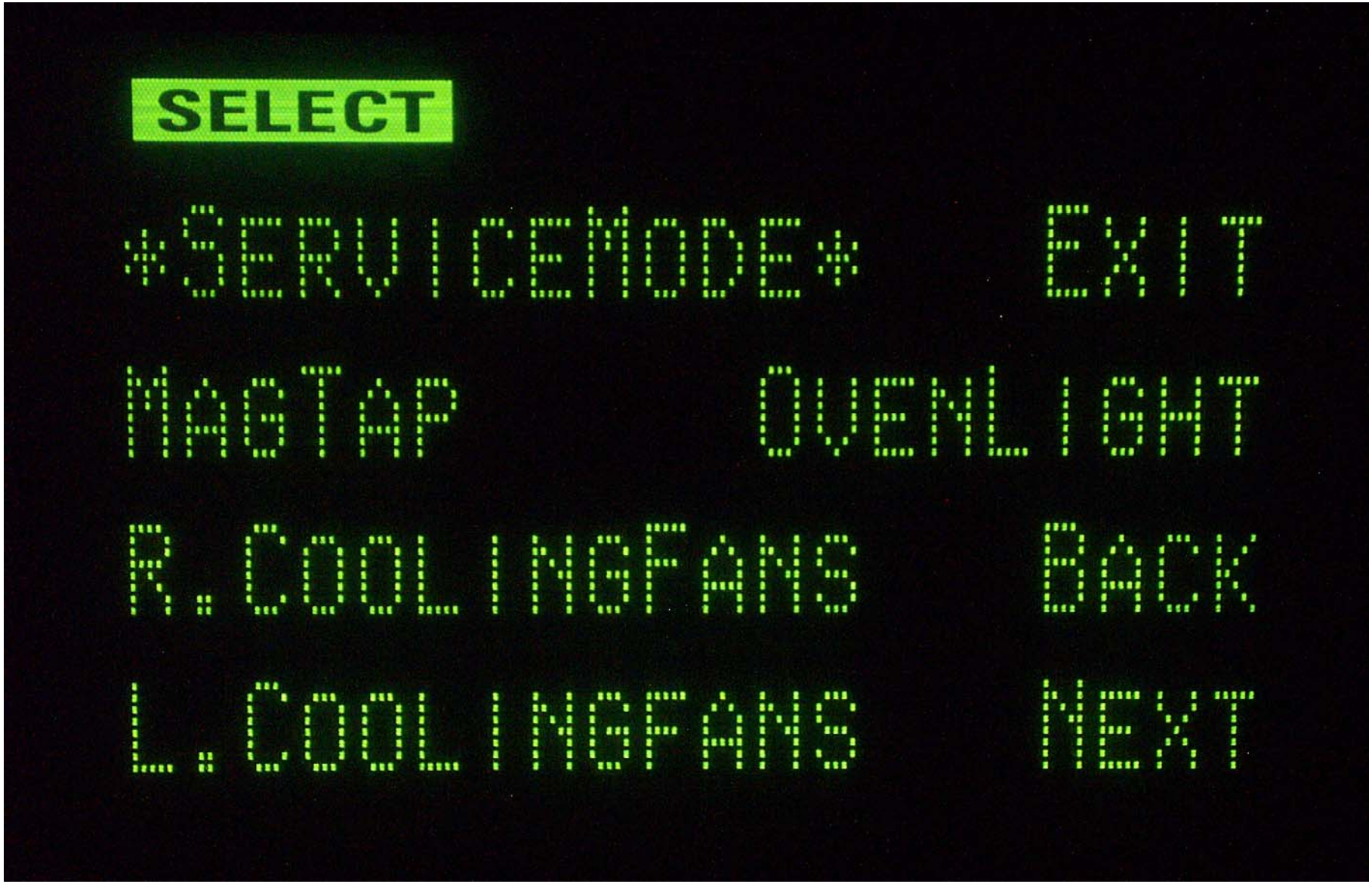
- Disconnect main power to the oven for at least 15 seconds.
- Reconnect power & enter 0803 on the keypanel within 5 minutes after the control initializes.
- The SPECIAL MODES screen is displayed.
- Press the SERVICE pad on the screen.
- The SERVICE MODE screen is displayed.
- Press the NEXT & BACK pads to scroll through the test list, choose a test by pressing the appropriate pad.

Service Mode Screen

Service Mode Test Screen 1

- COOKING LOADS: verifies proper operation of cooking elements & convection fan (NOTE: there is a 5 second delay).
- DOOR LATCH: verifies proper operation of door lock motor & switches – press the LOCK pad, a red lock icon flashes during lock process, then becomes solid when door is locked - press UNLOCK pad, the red lock icon flashes during unlock process, then turns off when door is unlocked.
- DOOR POSITION: verifies proper operation of door sense switch – open & close door, the Time/Temp display indicates the door is open or closed.
- RTD: displays oven sensor temp in red on Time/Temp display.
- VENT FAN: verifies proper operation of vent fan – press ON & OFF pads to cycle the fan, the Time/Temp display indicates the fan is on or off.

Service Mode Next Screen



Service Mode Test Screen 2

- MAG TAP: forces the control to use either 208 or 240ACV tap on the HVT – DO NOT use this service feature at this time, allow the control to select the transformer voltage.
- R COOLING FAN: verifies proper operation of the right cooling fan – press ON & OFF pads to cycle the fan, the Time/Temp display indicates the fan is on or off.
- L COOLING FAN: verifies proper operation of the mag cooling fan, HVT fan, & mag stirrer fan (WO) or the left cooling fan (SI) - press ON & OFF pads to cycle the fan/s, the Time/Temp display indicates the fan/s are on or off.
- OVEN LIGHT: verifies proper operation of oven light – press ON & OFF pads to cycle the light, the Time/Temp display indicates the light is on or off.

Service Mode Test Screen 3

- OFFSET: to adjust the oven calibration offset in bake – press INCREASE or DECREASE pads to change cook temp in 1º increments up to +/- 35º – press CONFIRM pad to set
- DISPLAY: verifies operation of display segments – press ON & OFF pads to cycle the display test – press CLEAR/OFF pad to return display to normal.
- KEYS: verifies proper operation of keypanel – press the number pads on the keypanel to test, each number appears in the Time/Temp display as the corresponding pad is pressed.
- LINE VOLTAGE: displays line voltage L1-L2 in the upper temp display.
- F CODES: displays up to the last 7 ERC failure code (NOTE: always check failure codes, then clear them).

Service Mode Test Screen 4

- COOKTOP STAT (SI): indicates the on/off status of radiant surface elements, the ON indicator will occur when respective infinite switch “hot light” is lit.
- CO SENSOR (Kenmore only): turns the CO sensor & heater on & off.
- Press EXIT pad to return to the HOME screen.

FAILURE CODES

Failure Code	Meaning	Corrections
F0	Keyboard error	Perform a key panel test, making sure to test EVERY pin combination for possible shorts. If there are no shorts or signs of delamination, the problem is probably with the control. Enter SERVICE MODE, then NEXT, then NEXT then DISPLAY (ON/OFF). Press Clear/Off key to reset. If working properly, enter BACK, then KEYS and test key functions.
F2	Temperature Runaway—oven temperature is above 630 F unlocked or 930 F locked	• Check for welded element relay contacts. • Check airflow to rear of unit.
F3	Open sensor/RTD	• Disconnect power to unit and then disconnect oven sensor harness from control. Make sure sensor resistance (white leads) are –1080 at room temperature with 2 / change. (Pins 1 and 2 of the 12 position connector for upper wall oven, and pins 11 and 12 for lower wall oven found on the MLB J7 harness).
F4	Shorted sensor/RTD	• Verify resistance. See F3 diagnosis. • Measure each sensor lead from connector block to ground. If shorted, look for pinched or cut wire in sensor circuit. • Check connector terminals. Look for deformity or corrosion on terminals. Repair or replace if necessary. • If all above is OK, then replace the main logic board.

F5	Control Sensor Circuit—Supervisor Error	• Check sensor circuit for intermittent high resistance. See F3 diagnosis. • Press Clear/Off and reprogram control. If code reappears, replace control. **DO NOT REPLACE LOCK MOTOR.** This tests: a) Redundant measurement circuits on Main board do not match closely enough. b) Door latch motor (and microwave and convection fan) is not disabled by temperature measurement circuits at the proper temperature. • Replace the main logic board
F8	EEPROM data error	If repeated, replace the main logic board.
F9	Lower oven Bake or Clean FAD detected	• Suspect stalled cooling fan or restricted/blocked airflow to lower oven cooling fan. • Check lower door latch lock and unlock switches.
FC	Door Latch Error	• Problem with door lock circuit such as pinched wires between control and door lock switches on motorized lock circuits. • Check wiring and test operation of switches. • Error occurs when both lock and unlock switches are closed at the same time.
Fd	Display Error	• Check main reconfigurable display connections. • Replace main reconfigurable display. • Replace main logic board if error does not clear.

Note: When trying to enter temperatures lower than 170 F or greater than 550 F in any mode, or lower than 90 F or greater than 120 F in DEHYDRATE mode (some models only), display will momentarily show "Err" and then the default minimum or maximum temperature will be entered.

Trivection

POWER MONITOR ERROR CODES		
During Power-Up (occurs only during power-up)		
Normal Power– No message	L1-L2 >150VAC	L1-N >90VAC AND <150VAC
SUPPLY OPEN NEUTRAL	L1-L2 NA	L1-N <90VAC
SUPPLY MISWIRED	L1-L2 <90VAC	L1-N >90VAC AND <150VAC
	L1-L2 NA	L1-N >150VAC
SENSE 120V ENTERING SALES MODE	L1-L2 >90VAC and <150VAC	L1-N >90VAC AND <150VAC
After Power-Up (can occur anytime during operation)		
Normal Power– No message	L1-L2 NA	L1-N >90VAC AND <150VAC
SUPPLY OPEN NEUTRAL	L1-L2 NA	L1-N <90VAC
SUPPLY MISWIRED	L1-L2 NA	L1-N >150VAC
LOW POWER	L1-L2 <150VAC	L1-N NA
Note: Low Power supersedes Supply Open Neutral		

Trivection Troubleshooting Chart

Trivection Oven

	Oven Dead - Keyboard and displays do not work	Oven Dead - Keyboard works - Displays do not work	Oven Dead - Displays work - Keyboard does not work	Bake element does not work	Bake 2 element does not work	Broiler does not work	Convection element does not work	Convection fan does not work	Halogen lamps do not work	Latch motor does not work	Left cooling fan does not work	Right cooling fan does not work	No Microwave Power	Stirrer does not work	Vent fan does not work
Main Power Board	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Main Logic Board	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Mag TCO	●														
FAD Left TCO	●														
FAD Right TCO	●														
Glass Touch Signal Board	●	●	●												
Glass Touch Assembly	●	●	●												
Text Display Board	●	●	●												
Time/Temp Display	●	●	●												
LH or RH Sail Switch	●														
R1 and R2 Relays	●														
Bake Element				●											
Bake 2 Element					●										
Broil Element						●									
Convection Element							●								
Convection Fan								●							
Halogen Lamps									●						
Motor Latch										●					
Left Cooling Fan											●				
Right Cooling Fan												●			
Magnetron													●		
HV Transformer													●		
RT Interlock Switch													●		
LT Interlock Switch													●		
Interlock Monitor Switch													●		
Fuse													●		
Mag Stirrer														●	
Vent Fan															●
	Page 42	Page 44	Page 45	Page 46	Page 48	Page 50	Page 51	Page 52	Page 53	Page 54	Page 55	Page 56	Page 57	Page 58	Page 59

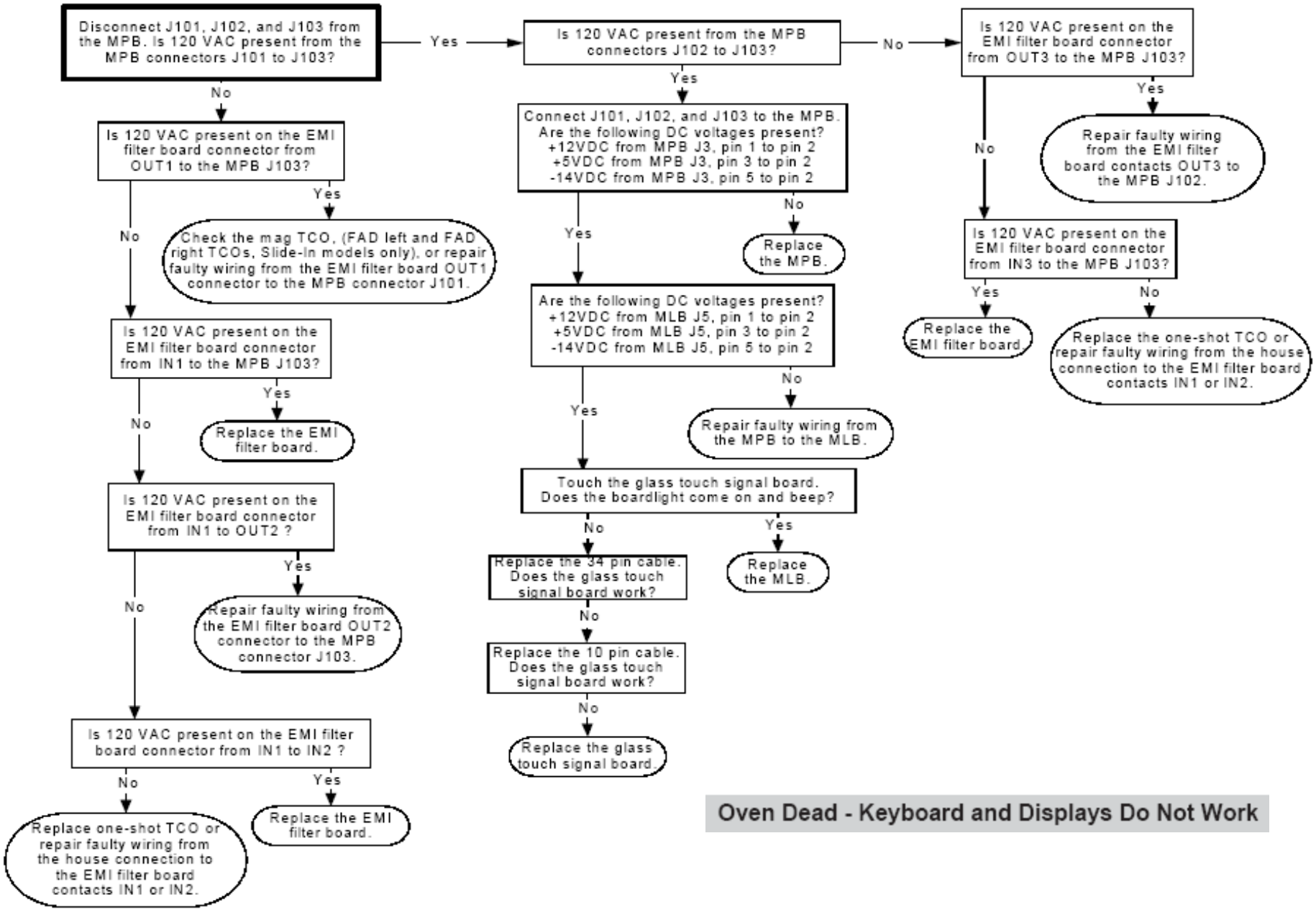
Trivection Troubleshooting Chart

Lower Oven DWO

	Lower broiler element does not work	Lower bake element does not work	Lower convection element does not work	Lower oven light does not work	Lower door latch does not work	Lower convection fan does not work	Lower cooling fan does not work
Main Logic Board	●	●	●	●	●	●	●
Lower Oven Logic Board	●	●	●	●	●	●	●
Lower Broil Element	●						
Lower Bake Element		●					
Lower Convection Element			●				
Lower Halogen Lamps				●			
Plunger Switch				●	●	●	
Lower Motor Latch					●		
Lower Convection Fan						●	
Lower Cooling Fan							●
	Page 60	Page 61	Page 62	Page 64	Page 65	Page 66	Page 67

Cooktop Slide-in

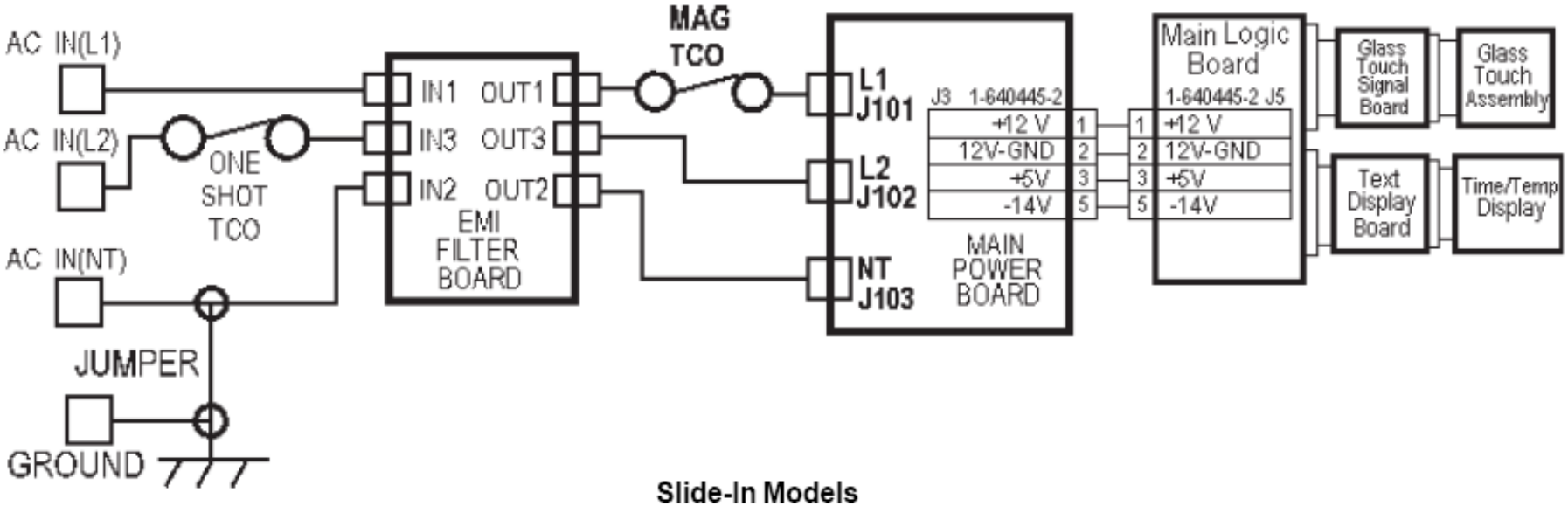
	LF, LR, or RR element does not work	RF elements, one or both does not work
Surface Control	●	
LF Surface Control	●	
LF Surface Element	●	
LR Surface Control	●	
LR Surface Element	●	
RF Surface Control		●
RR Surface Control	●	
RR Surface Element	●	
RF Inner Surface Element		●
RF Outer Surface Element		●
	Page 68	Page 69



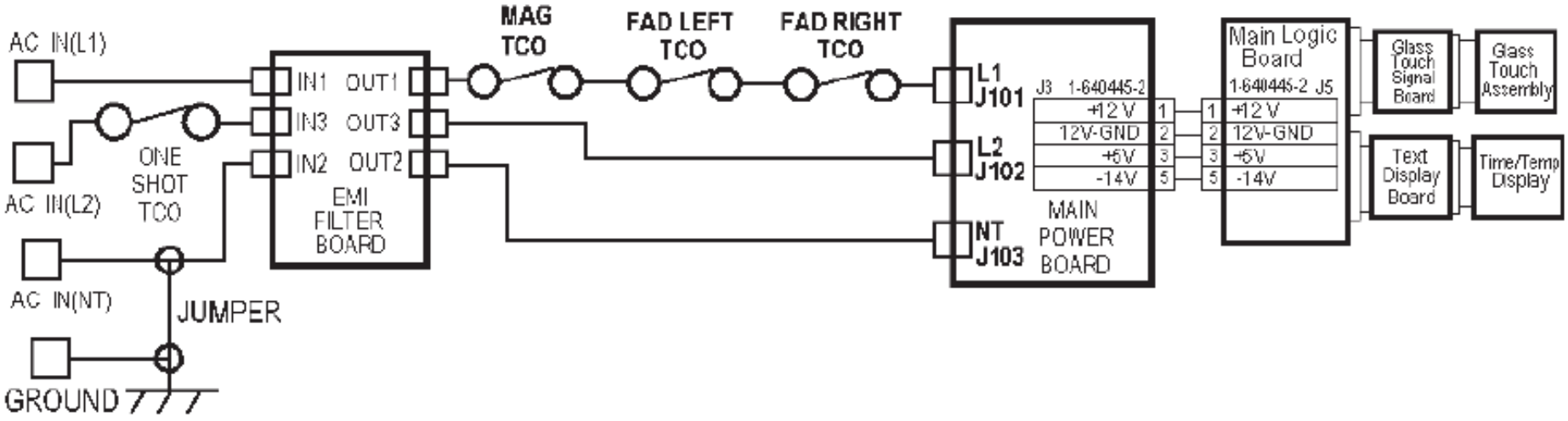
Oven Dead - Keyboard and Displays Do Not Work

Oven Dead - Keyboard and Displays Do Not Work

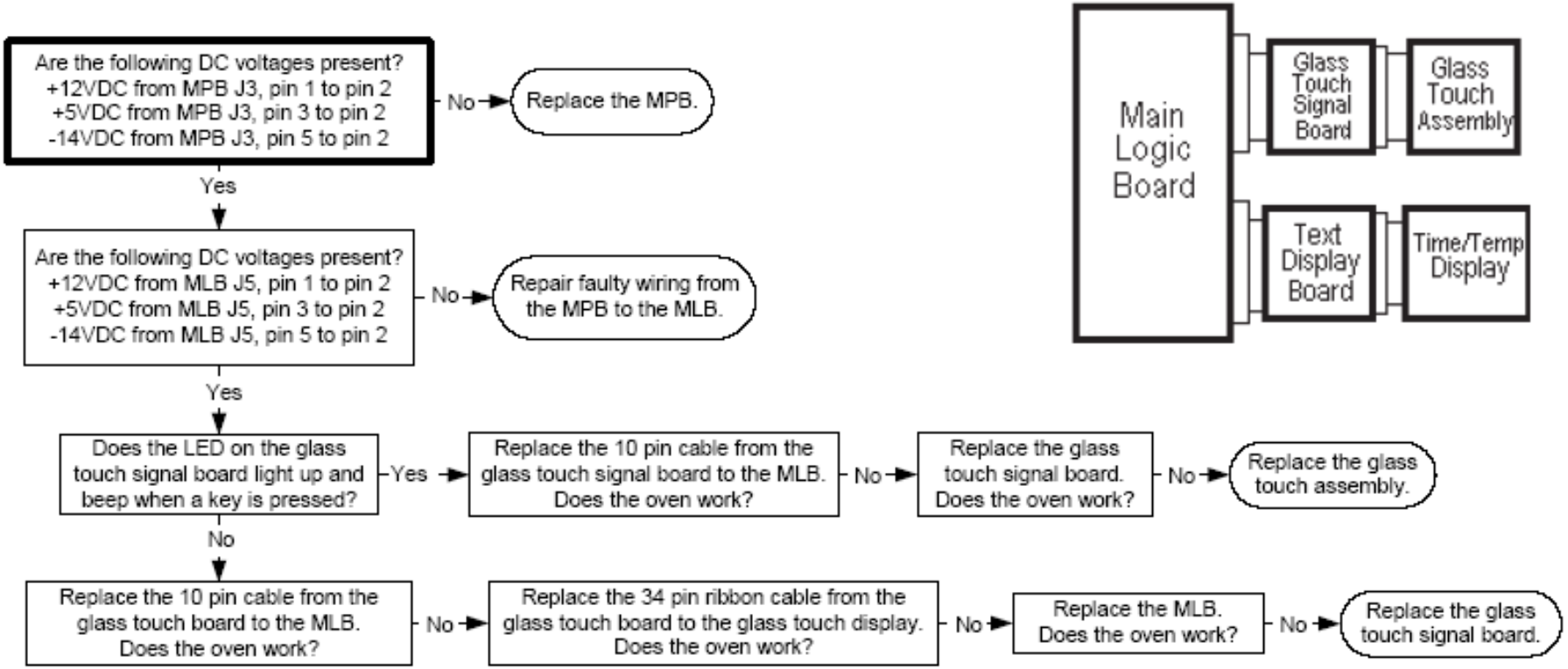
Single Wall Oven and Double Wall Oven Models



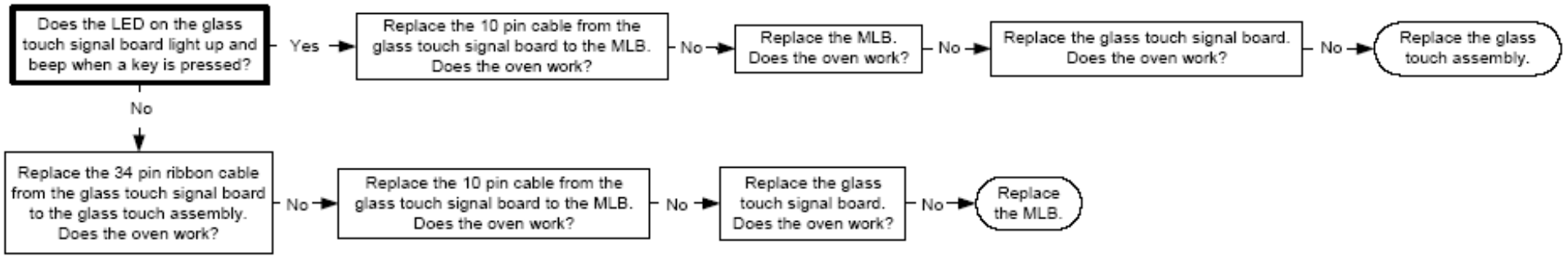
Slide-In Models

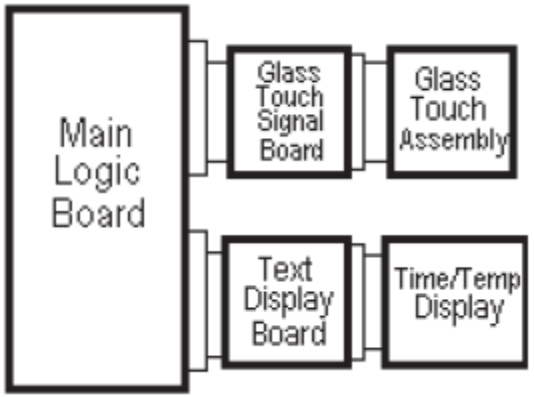


Oven Dead - Keyboard Works - Displays Do Not Work

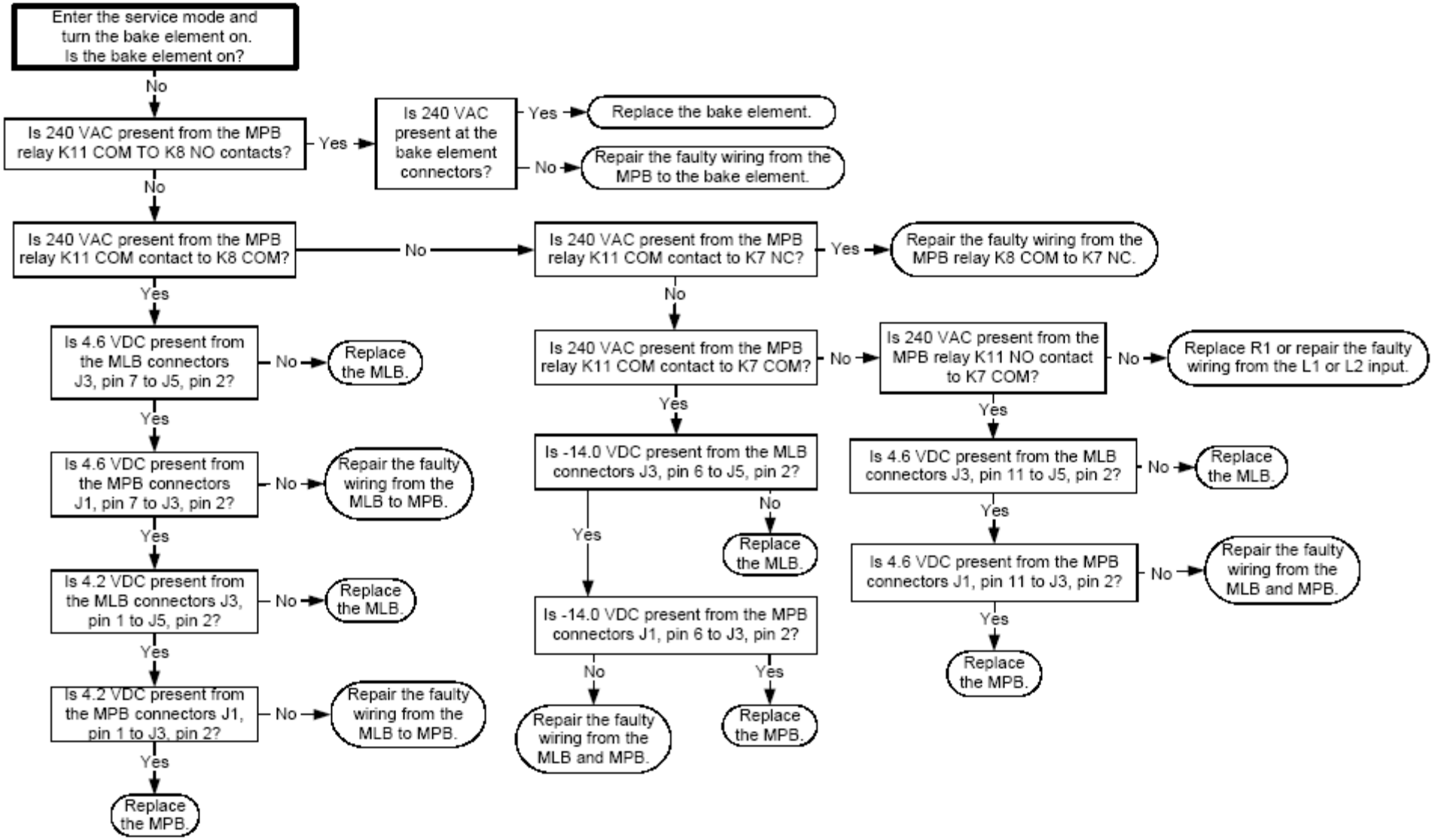


Oven Dead - Displays Work - Keyboard Does Not Work

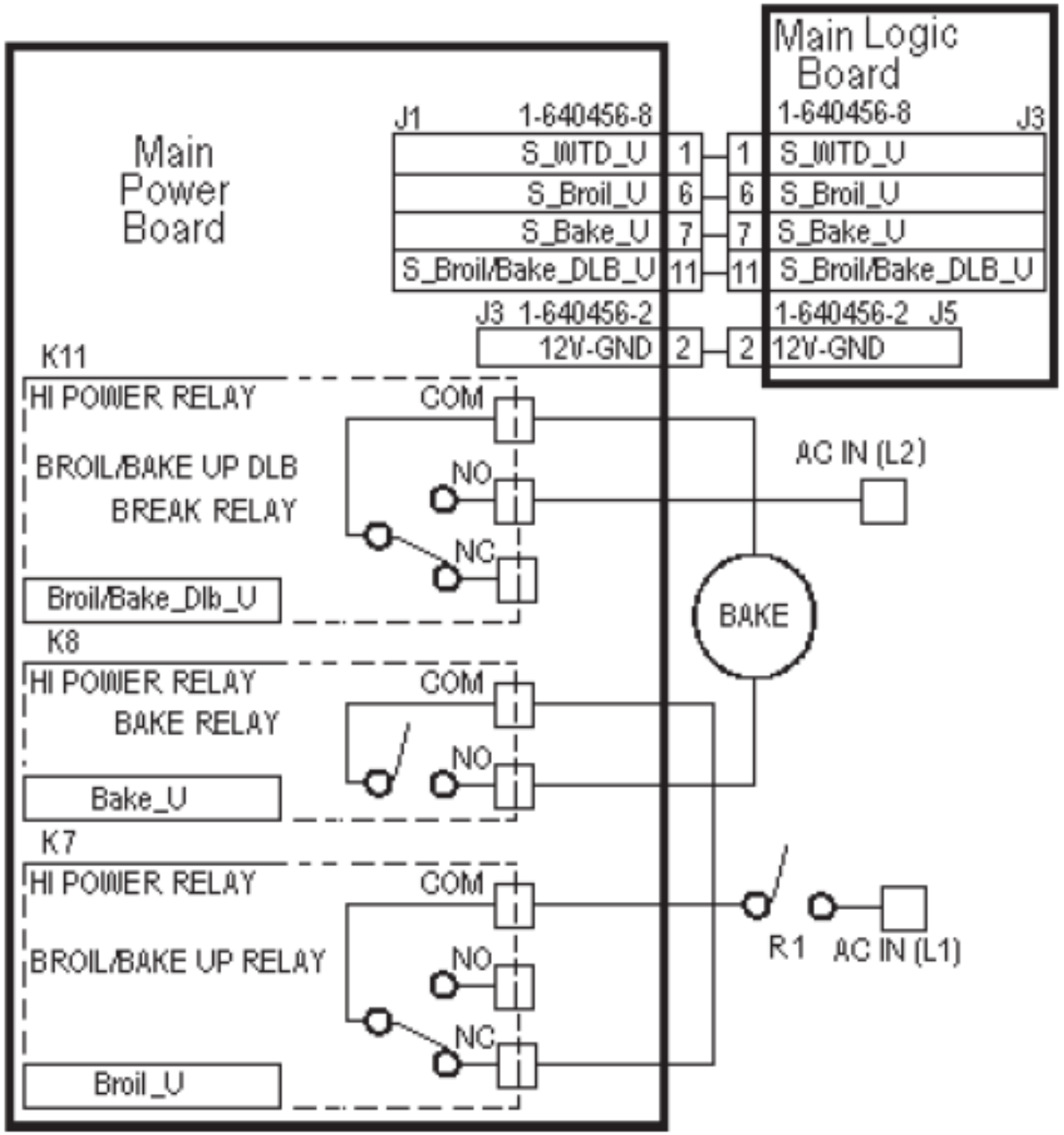




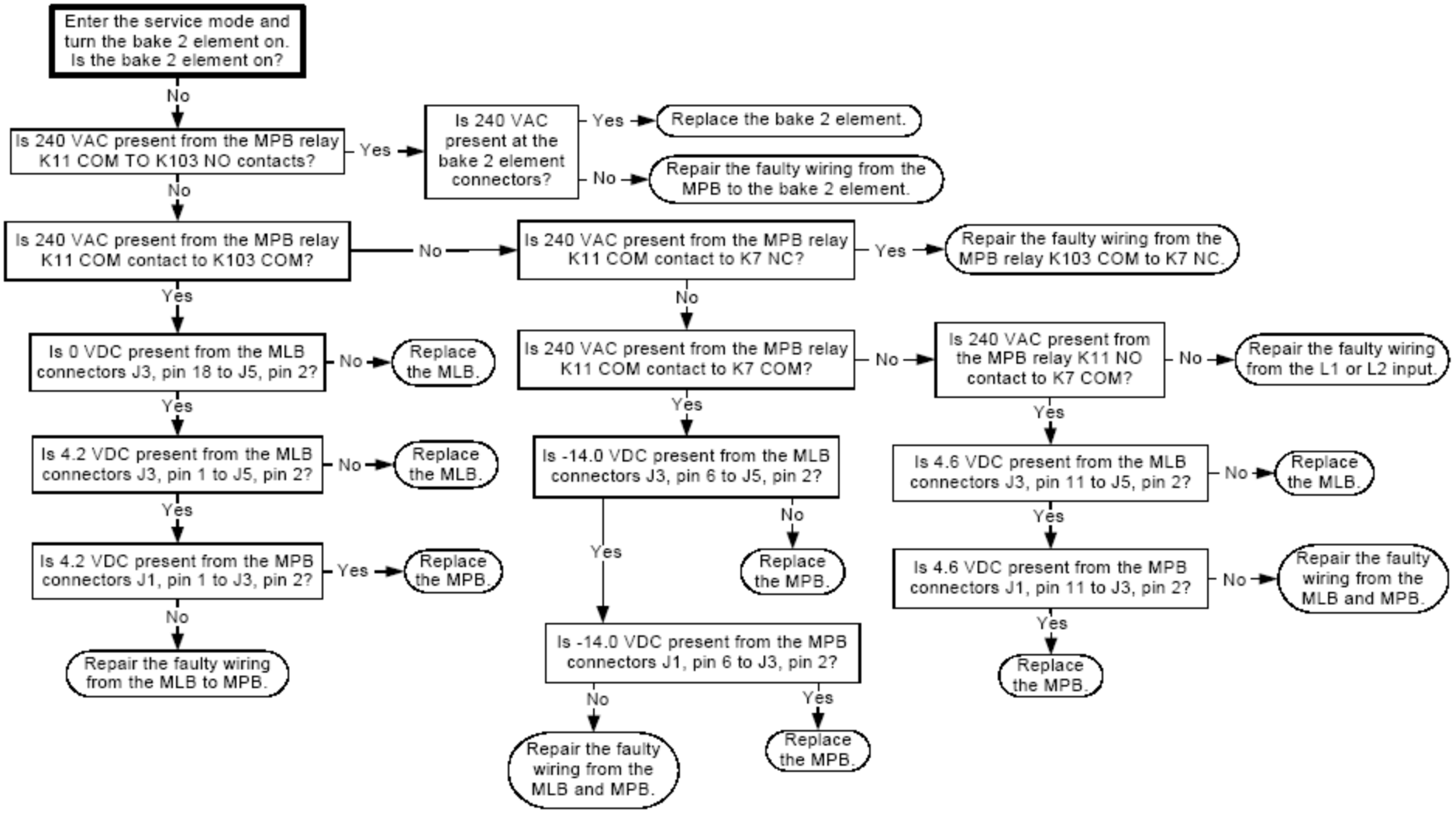
Bake Element Does Not Work



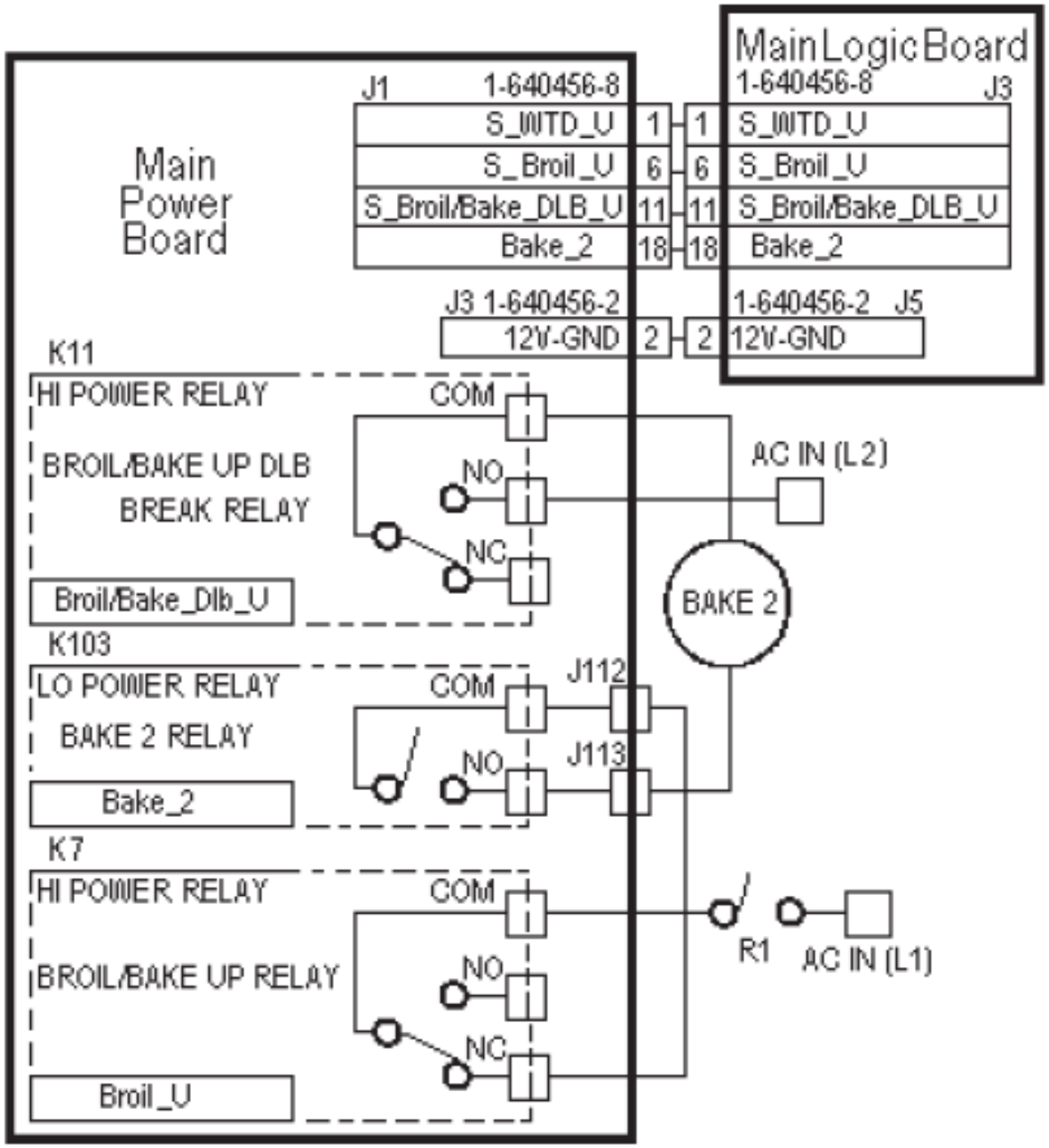
Bake Element Does Not Work



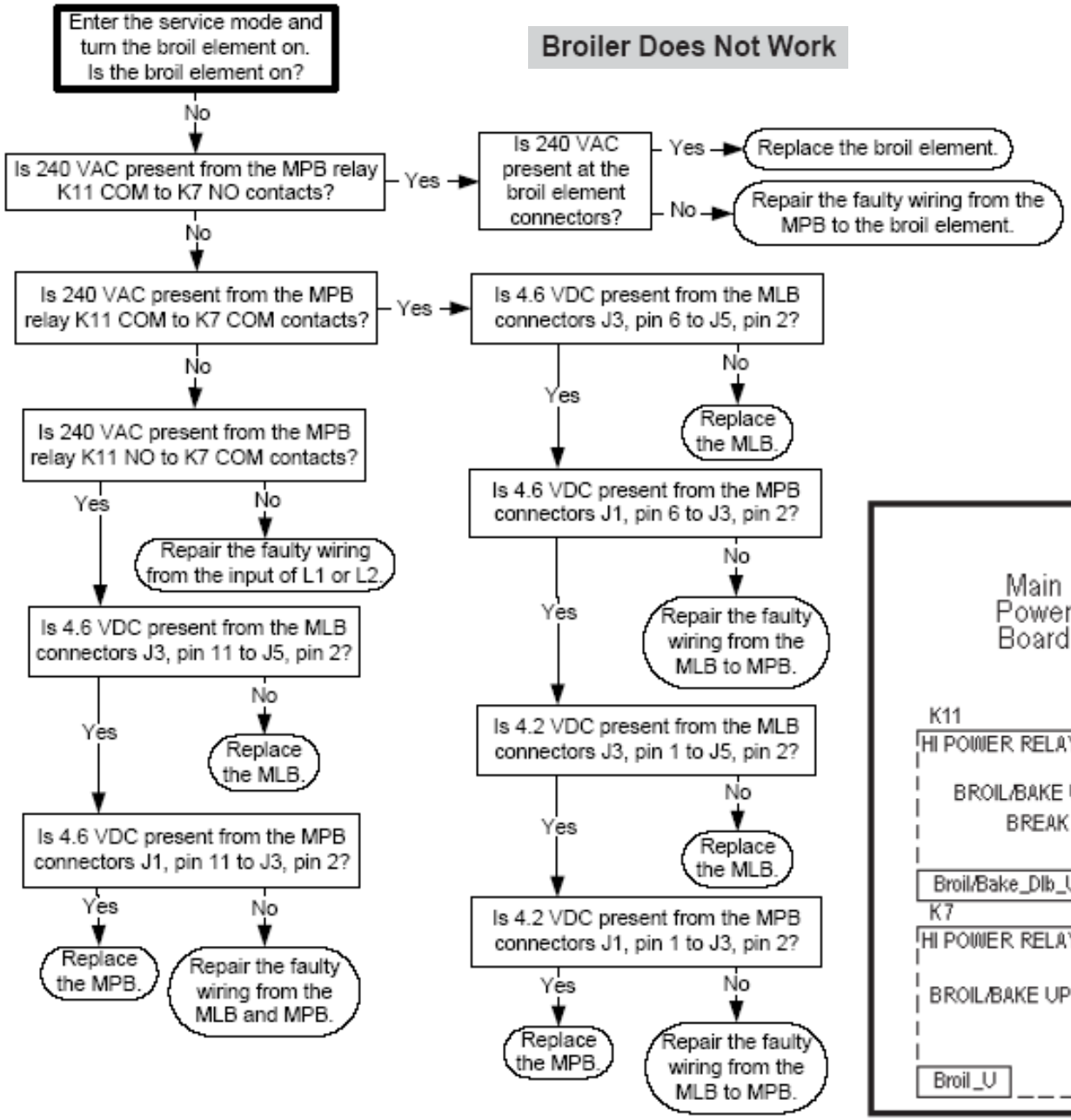
Bake 2 Element Does Not Work

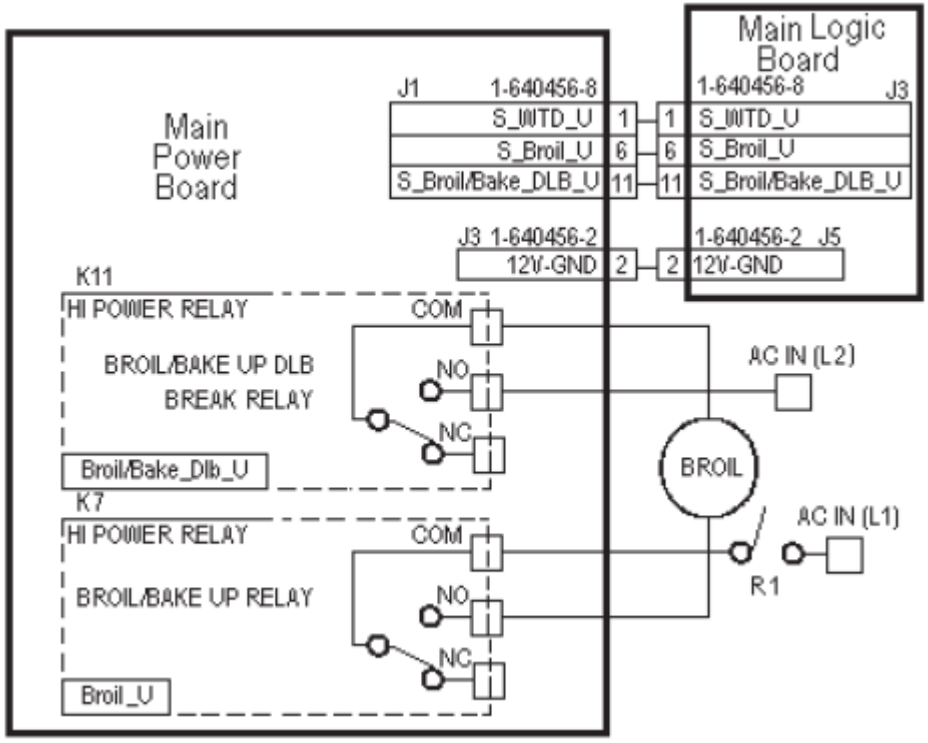


Bake 2 Element Does Not Work

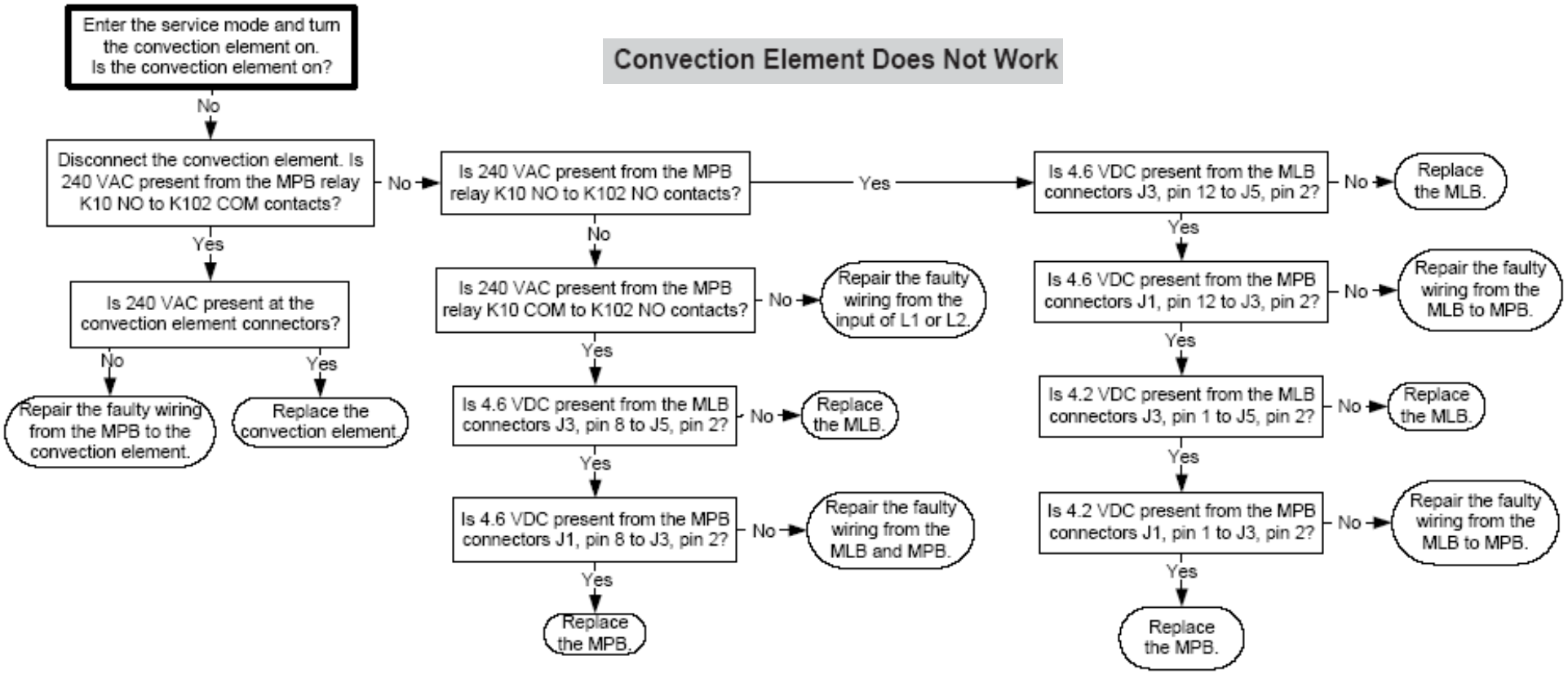


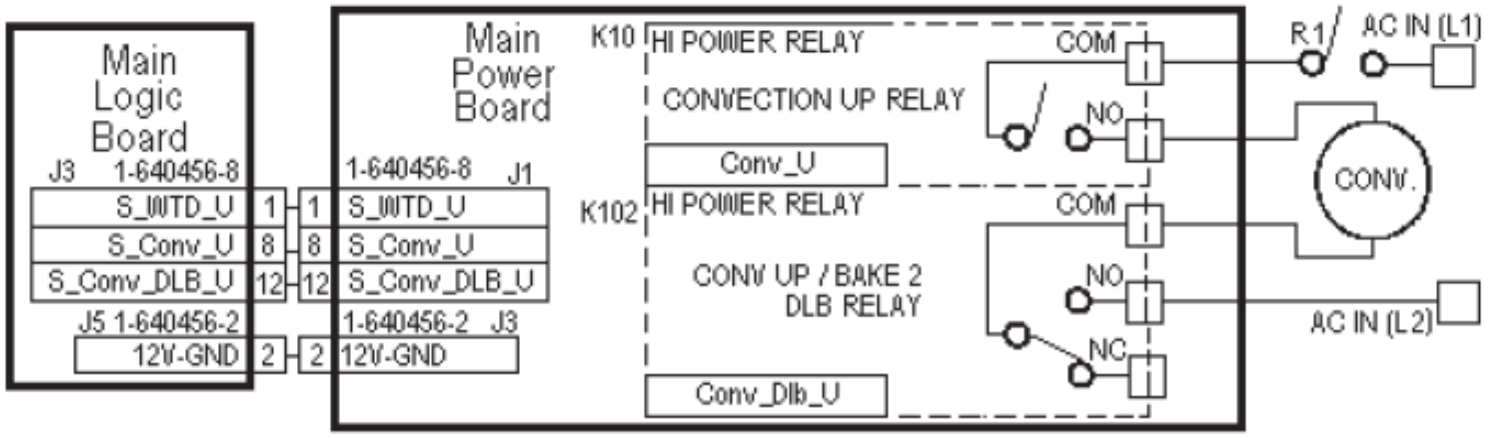
Broiler Does Not Work





Convection Element Does Not Work





Convection Fan Does Not Work

Enter the service mode and turn the convection fan on. Is the convection fan on?

No

Disconnect the convection fan. Is 120 VAC present from the MPB relay K105 NC or NO contact to AC IN (NT)?

No → Is 120 VAC present from the MPB relay K105 COM contact to AC IN (NT)?

No → Is 120 VAC present from the MPB relay K4 NO contact to AC IN (NT)?

Yes → Repair the faulty wiring from MPB relay K105 to K4.

No

Is 120 VAC present from the MPB relay K4 COM contact to AC IN (NT)?

No → Replace the EMI filter board or repair the faulty wire.

Yes

Is 0 VDC present from the MPB connectors J3, pin 15 to J5, pin 2?

No → Replace the MLB.

Yes

Is 0 VDC present from the MPB connectors J1, pin 15 to J3, pin 2?

No → Repair the faulty wiring from the MLB to the MPB.

Yes

Replace the MPB.

Yes

Is 0 or 12 VDC present from the MLB connectors J3, pin 16 to J5, pin 2?

No → Replace the MLB.

Yes

Is 0 or 12 VDC present from the MLB connectors J1, pin 16 to J3, pin 2?

No → Repair the faulty wiring from the MLB to the MPB.

Yes

Replace the MPB.

Yes

Is 120 VAC present from the convection fan positive connectors to AC IN (NT)?

No → Repair the faulty wire from MPB relay K105 NO or NC contact to the convection fan.

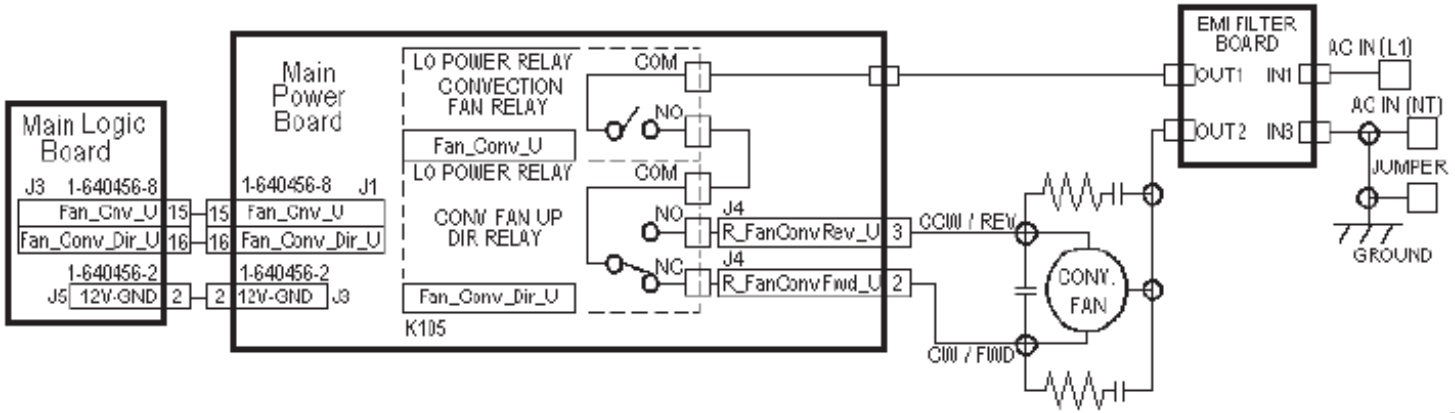
Yes

Is 120 VAC present from the convection fan positive and negative connectors?

Yes → Replace the convection fan.

No

Replace the EMI filter board or repair the faulty ground wire.



Latch Motor Does Not Work

Enter the service mode and set the latch to lock. Does the latch lock?

Yes

Disconnect the connector on the motor latch. Is 120 VAC present from the MPB relay K2 NO contact to AC IN (NT)?

No → Is 120 VAC present from the MPB relay K2 COM contact to AC IN (NT)?

No → Is 120 VAC present from the EMI filter board OUT1 contact to AC IN (NT)?

No → Is 120 VAC present from the EMI filter board IN1 contact to AC IN (NT)?

No → Repair the faulty wiring from L1 input to the EMI filter board.

Yes → Replace the EMI filter board.

Yes → Repair the faulty wiring from the MPB relay K2 COM contact to the EMI filter board.

Yes → Is 0 VDC present from the MLB connectors J3, pin 14 to J5, pin 2?

Yes → Replace the MPB.

No → Replace the MLB.

Yes

Is 120 VAC present from the MPB relay K2 NO contact to the EMI filter board IN2 contact?

No → Repair the faulty wiring from NT input to the EMI filter board.

Yes

Is 120 VAC present from the MPB relay K2 NO contact to the EMI filter board OUT2 contact?

No → Replace the EMI filter board.

Yes

Is 120 VAC present from the MPB relay K2 NO contact to the motor latch ?

No → Repair the faulty wiring from the EMI filter board to the motor latch.

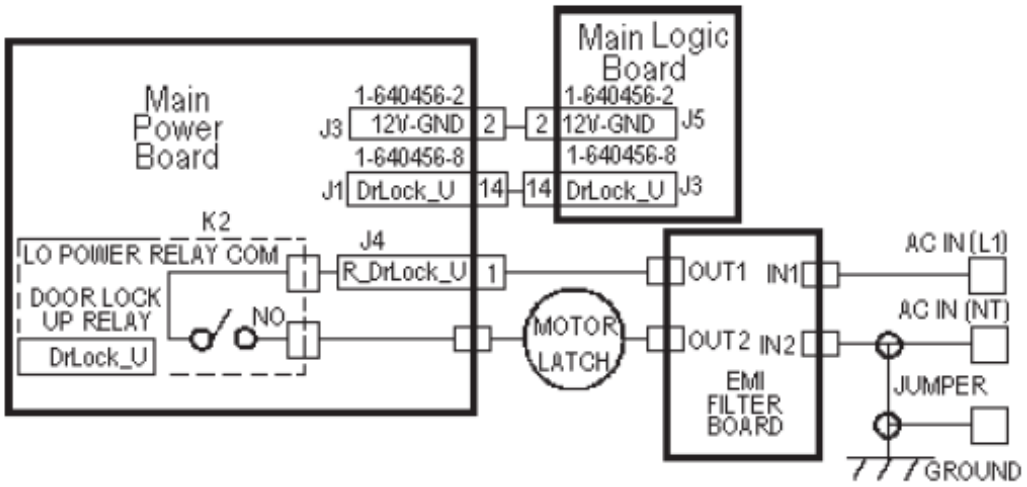
Yes

Is 120 VAC present from the positive contact to the negative contact of the motor latch?

No → Repair the faulty wiring from the MLB relay K2 NO contact to the motor latch.

Yes

Replace the motor latch.



Left Cooling Fan Does Not Work

Enter the service mode.
Does the left cooling fan come on?

No

Disconnect the connector on the left cooling fan. Is 120 VAC present from the MPB relay K5 NO contact to AC IN (NT)?

No → Is 120 VAC present from the MPB relay K5 COM contact to AC IN (NT)?

No → Is 120 VAC present from the EMI filter board OUT3 contact to AC IN (NT)?

No → Is 120 VAC present from the EMI filter board IN3 contact to AC IN (NT)?

No → Replace the one shot TCO or repair the faulty wiring from L2 input to the EMI filter board.

Yes → Is 120 VAC present from the MPB relay K5 NO contact to the EMI filter board IN2 contact?

No → Repair the faulty wiring from NT input to the EMI filter board.

Yes → Is 120 VAC present from the MPB relay K5 NO contact to the EMI filter board OUT2 contact?

No → Replace the EMI filter board.

Yes → Is 120 VAC present from the MPB relay K5 NO contact to the left cooling fan?

No → Repair the faulty wiring from the EMI filter board to the left cooling fan.

Yes → Is 120 VAC present from the positive contact to the negative contact of the left cooling fan?

Yes → Replace the left cooling fan.

No → Repair the faulty wiring from the MLB relay K5 NO contact to the left cooling fan.

Yes → Is 0 VDC present from the MLB connectors J3, pin 9 to J5, pin 2?

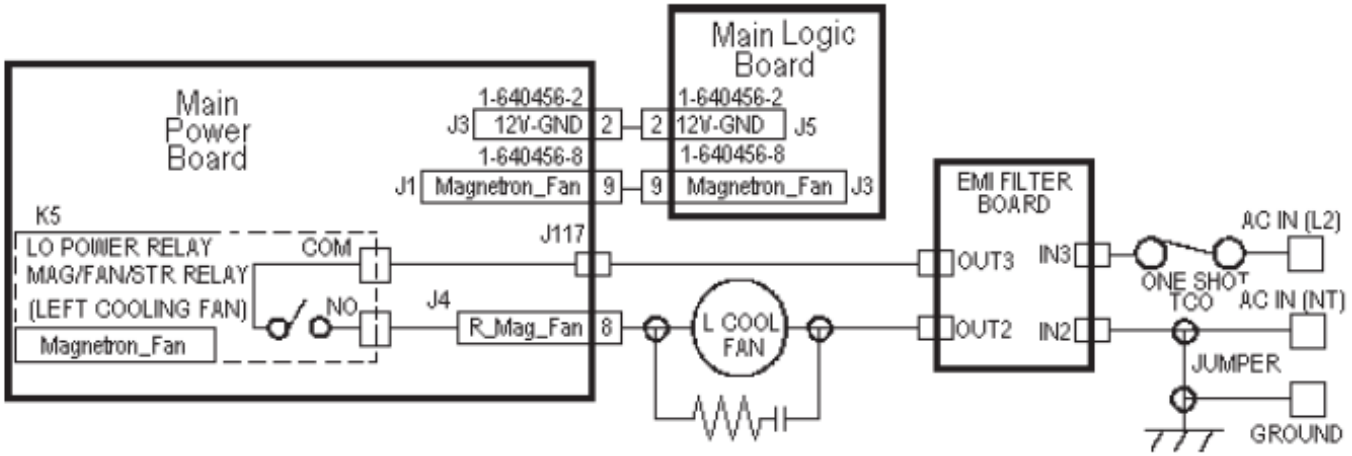
Yes → Replace the MPB.

No → Replace the MLB.

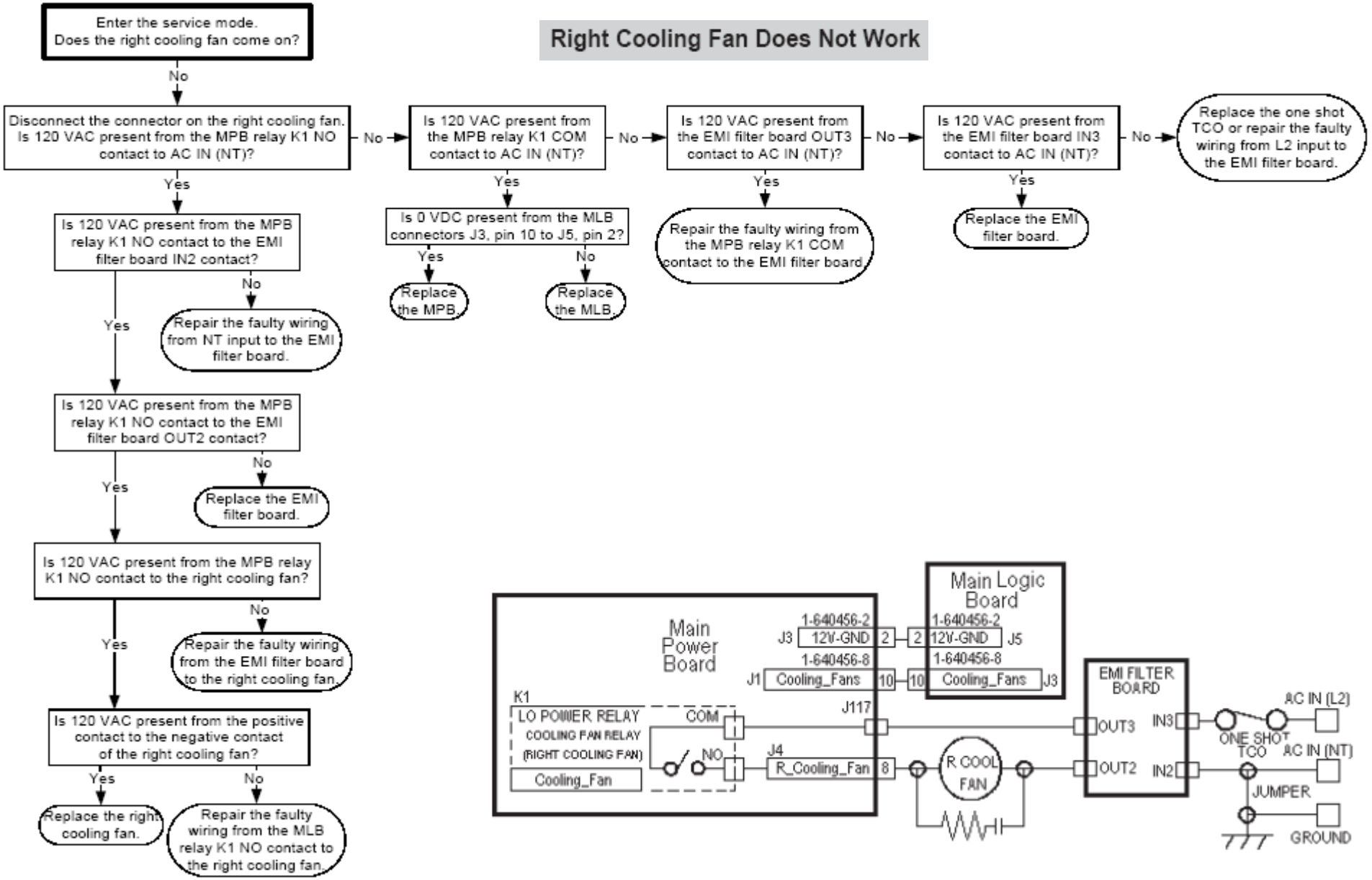
Yes → Repair the faulty wiring from the MPB relay K5 COM contact to the EMI filter board.

Yes → Replace the EMI filter board.

NOTE:
The left, rear fan on the Slide-In model is identified as left cooling fan. The single and double wall oven identify this fan as the HVT fan.



Right Cooling Fan Does Not Work



No Microwave Power

Check for 240V at transformer. Disconnect transformer 3-pin connector. Power up microwave in service mode. Check voltage between pins 1 and 3 (black and purple) on harness side. **Note:** If voltage is less than 210, voltage will be between pins 1 and 2 (black and yellow).
Is there 240V at the transformer?

No → Check microwave fuse.

Check microwave fuse. → Check door sense switch (see page 24).

Check door sense switch (see page 24). → Ohm out right interlock, left interlock, and monitor switches (see page 24).

Ohm out right interlock, left interlock, and monitor switches (see page 24). → Check relay board (SWO board). Disconnect right interlock connector. Check voltage from pin 1 of harness side of connector (black wire) to J105 on board (yellow wire).

Check relay board (SWO board). Disconnect right interlock connector. Check voltage from pin 1 of harness side of connector (black wire) to J105 on board (yellow wire). → Check harness for bad connection. Correct and retest.

Yes

Check mag connector. Check grounds. Verify ground from magnetron to transformer mounting screw.

Check capacitor and wiring.

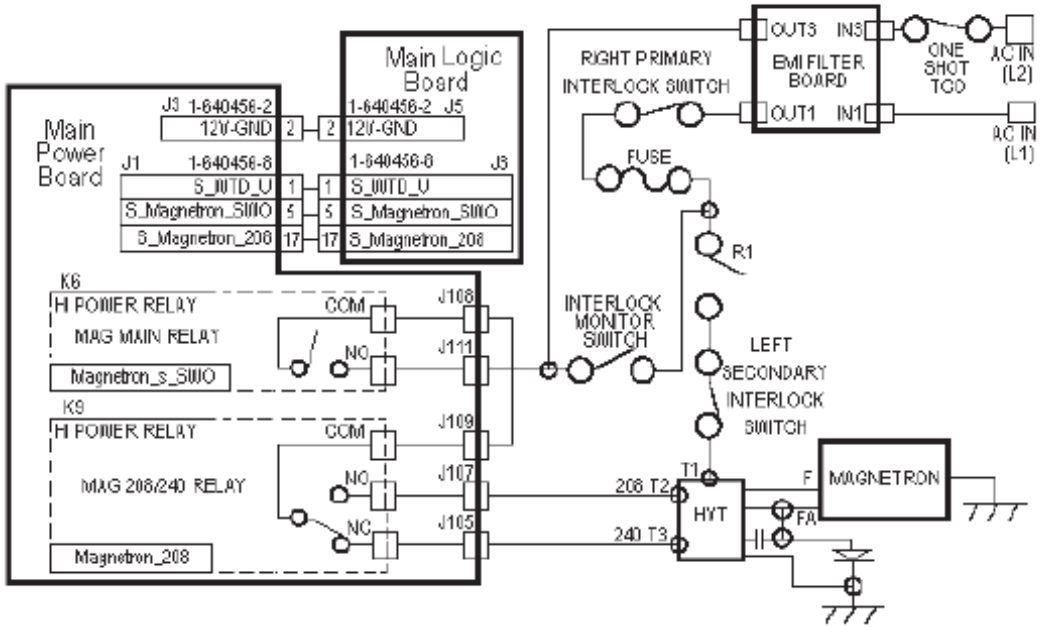
Measure diode resistance in both directions (must read open in at least one direction).

Measure transformer primary resistance (1.1 +/- 0.2 ohms between pins 1 and 3 of the connector).

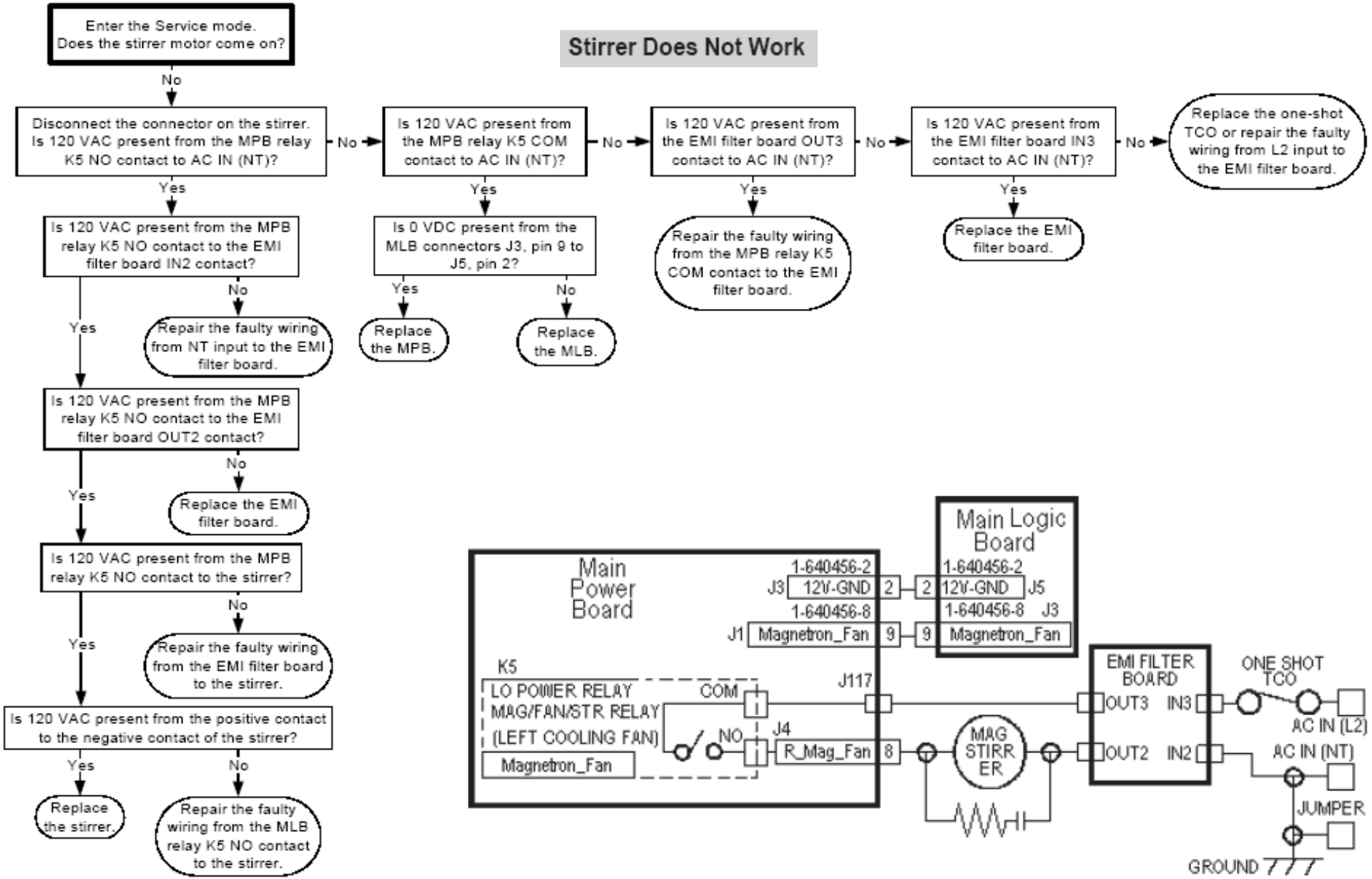
Measure transformer secondary resistance (90 +/- 4 ohms between ground and single wire capacitor). Note if HVT warm resistance will be higher.

Replace the magnetron and retest (see note).

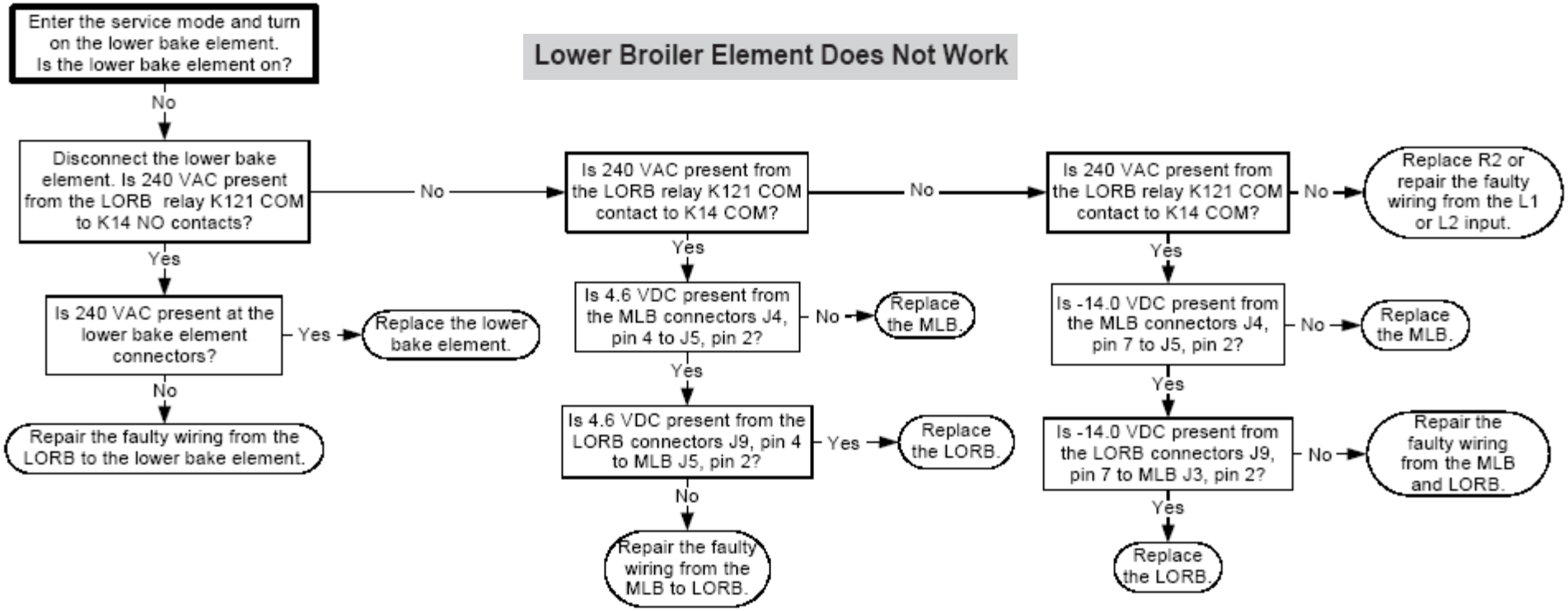
Note: Insure magnetron fan and stirrer motor are operating properly. Failure of either of these can lead to failure of high-voltage component(s).

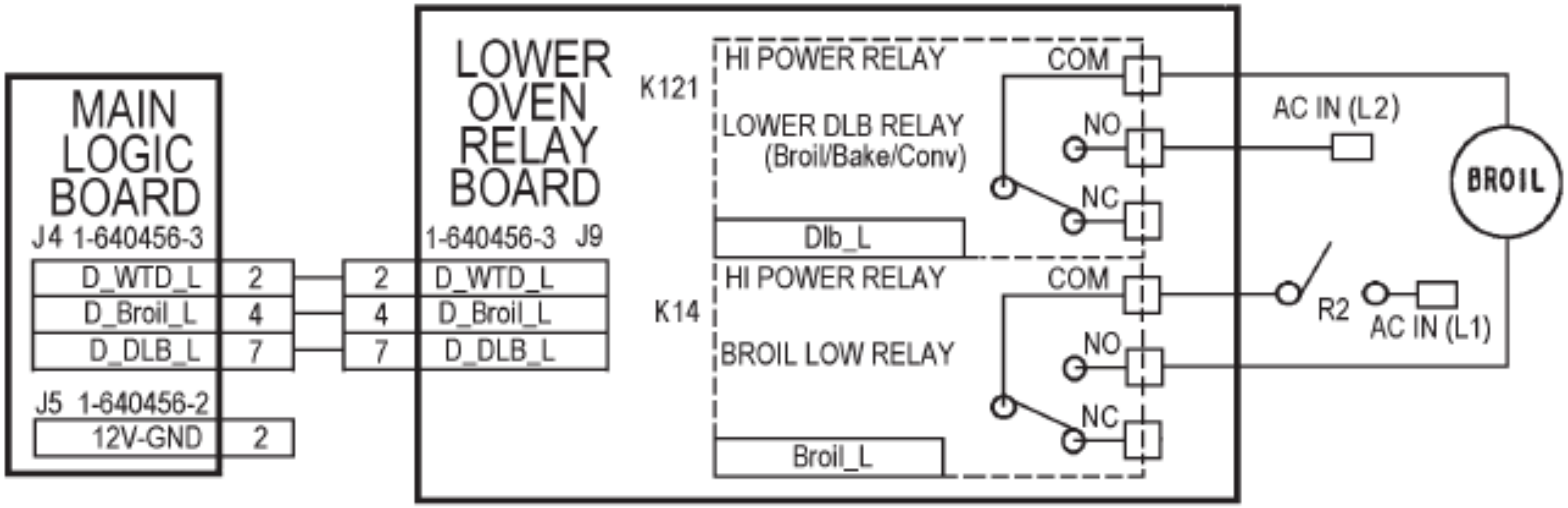


Stirrer Does Not Work

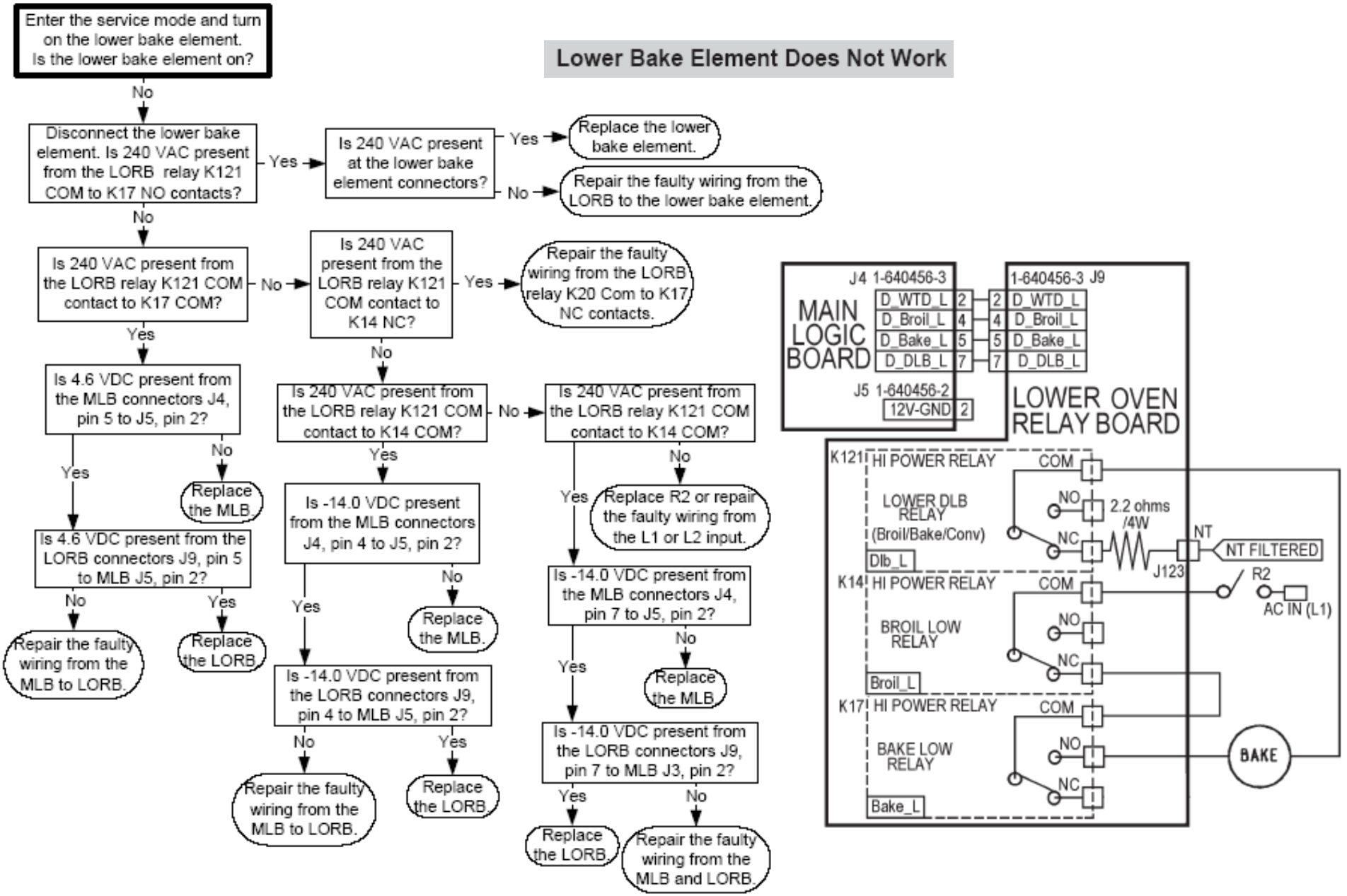


Lower Broiler Element Does Not Work

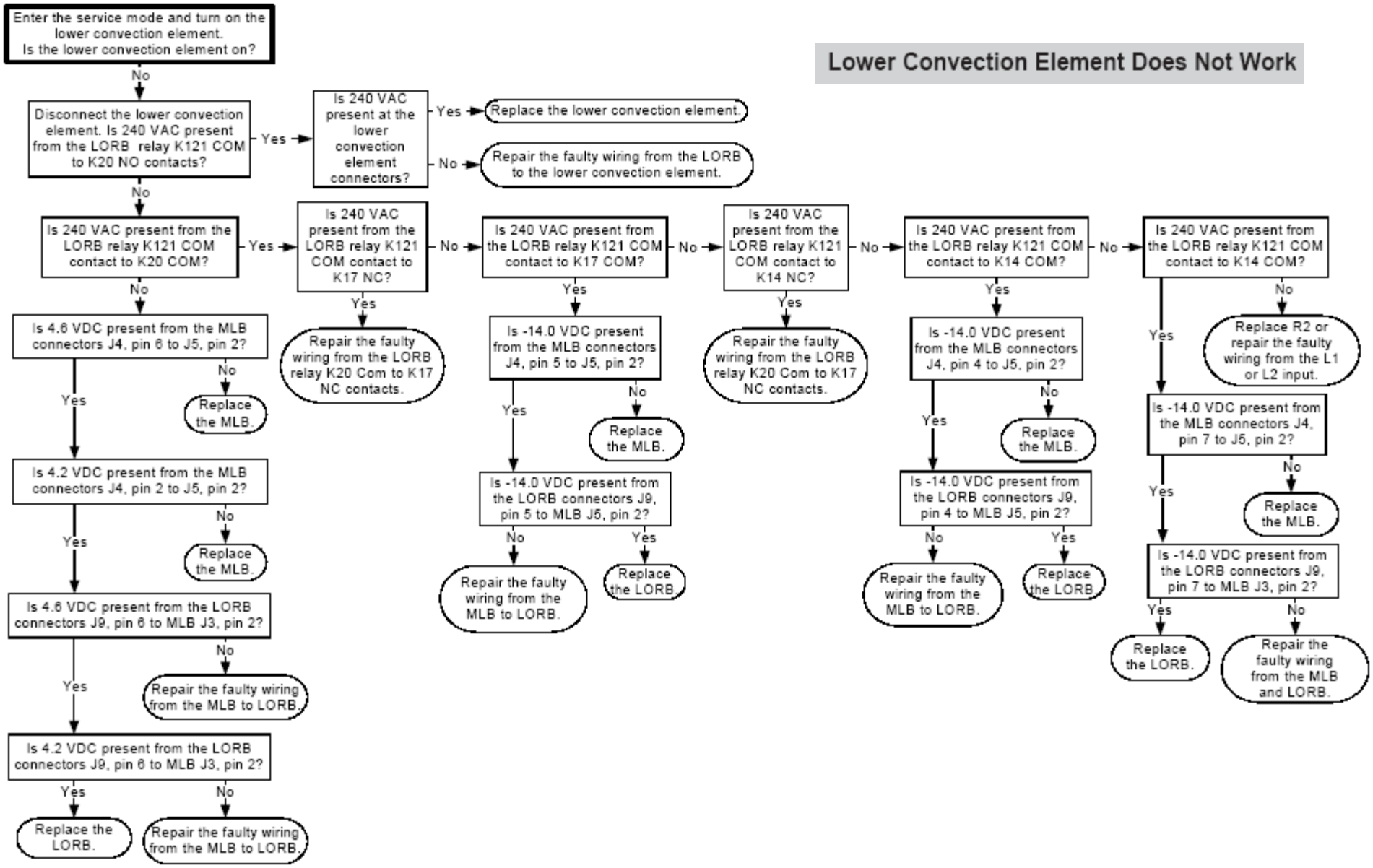




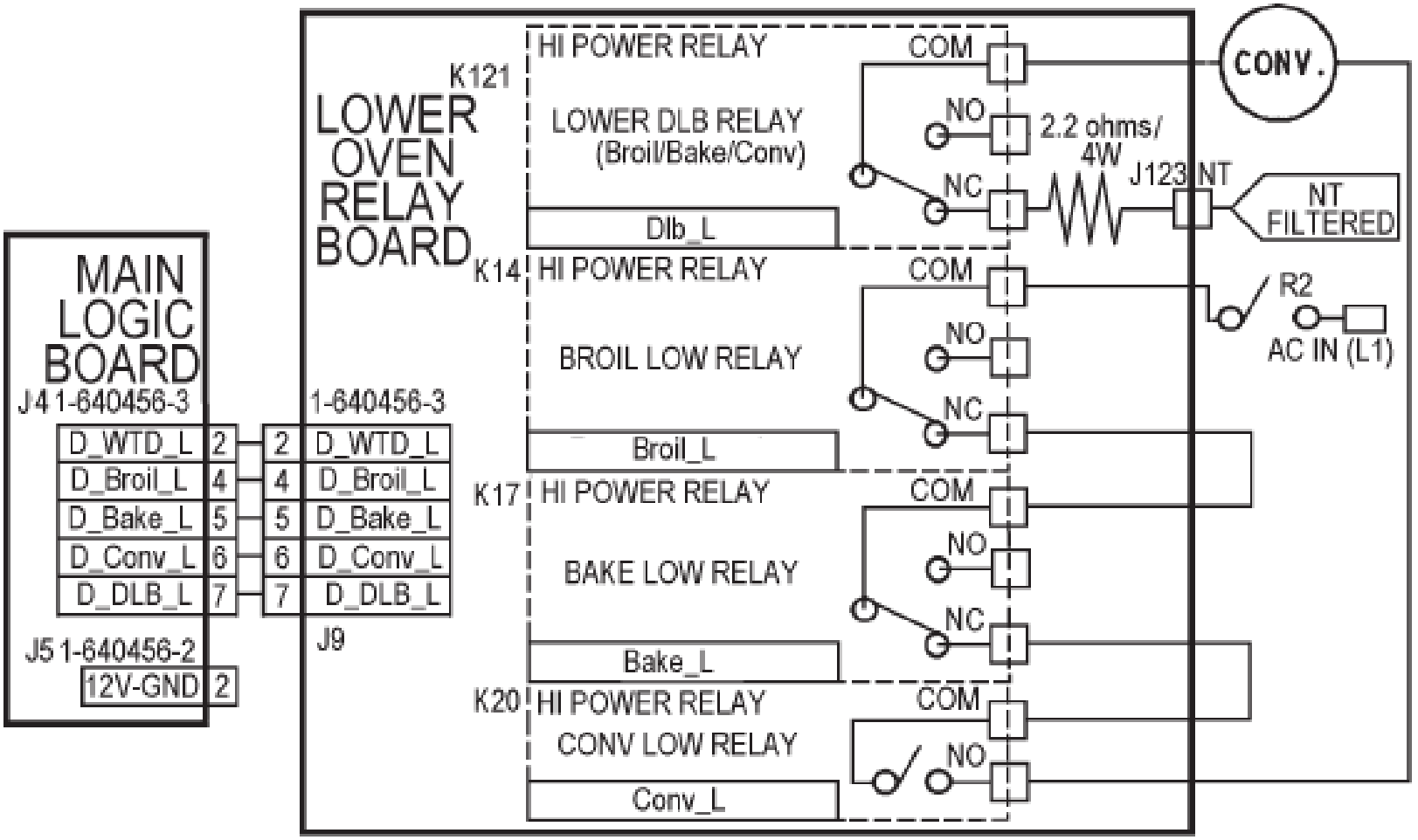
Lower Bake Element Does Not Work



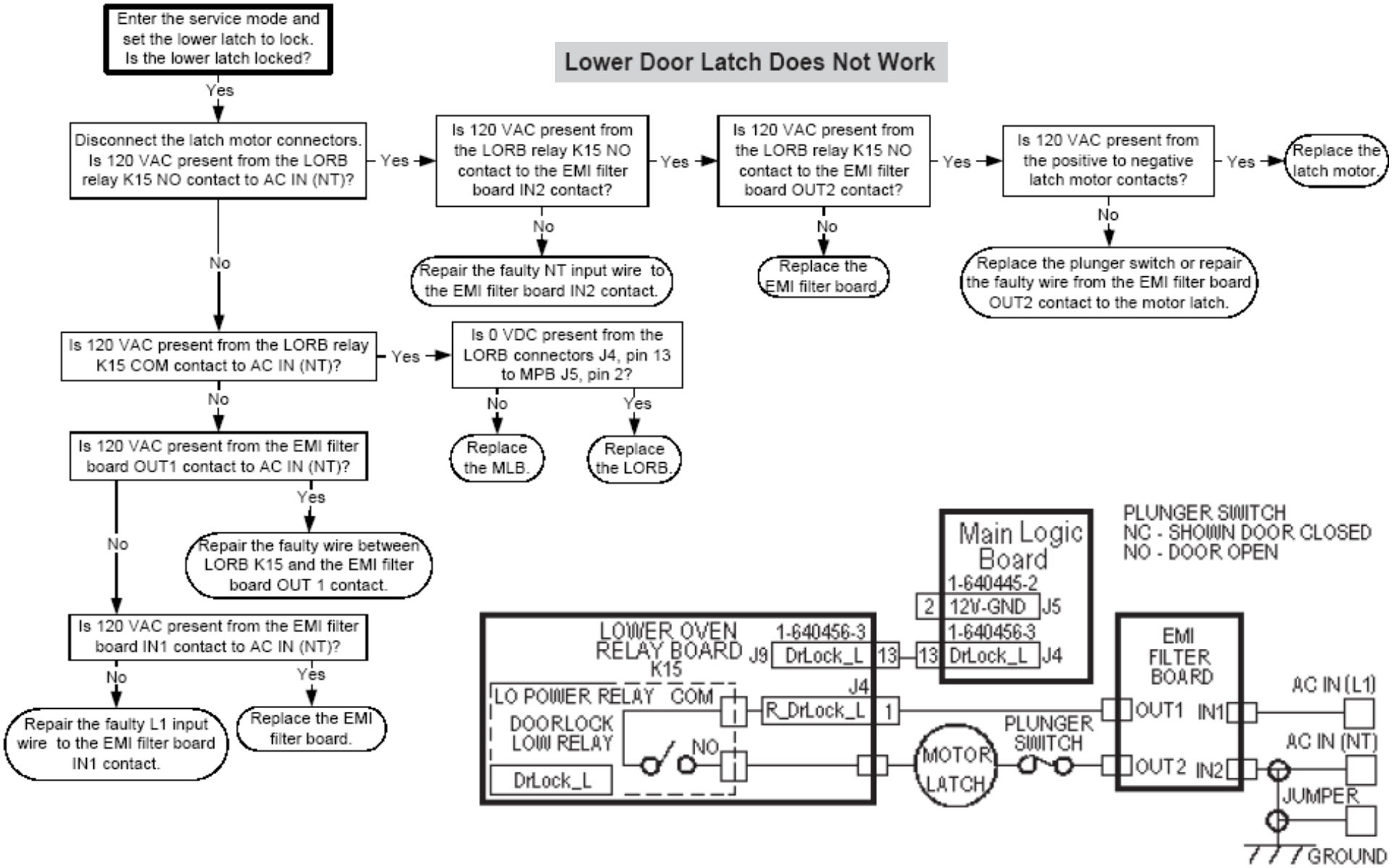
Lower Convection Element Does Not Work



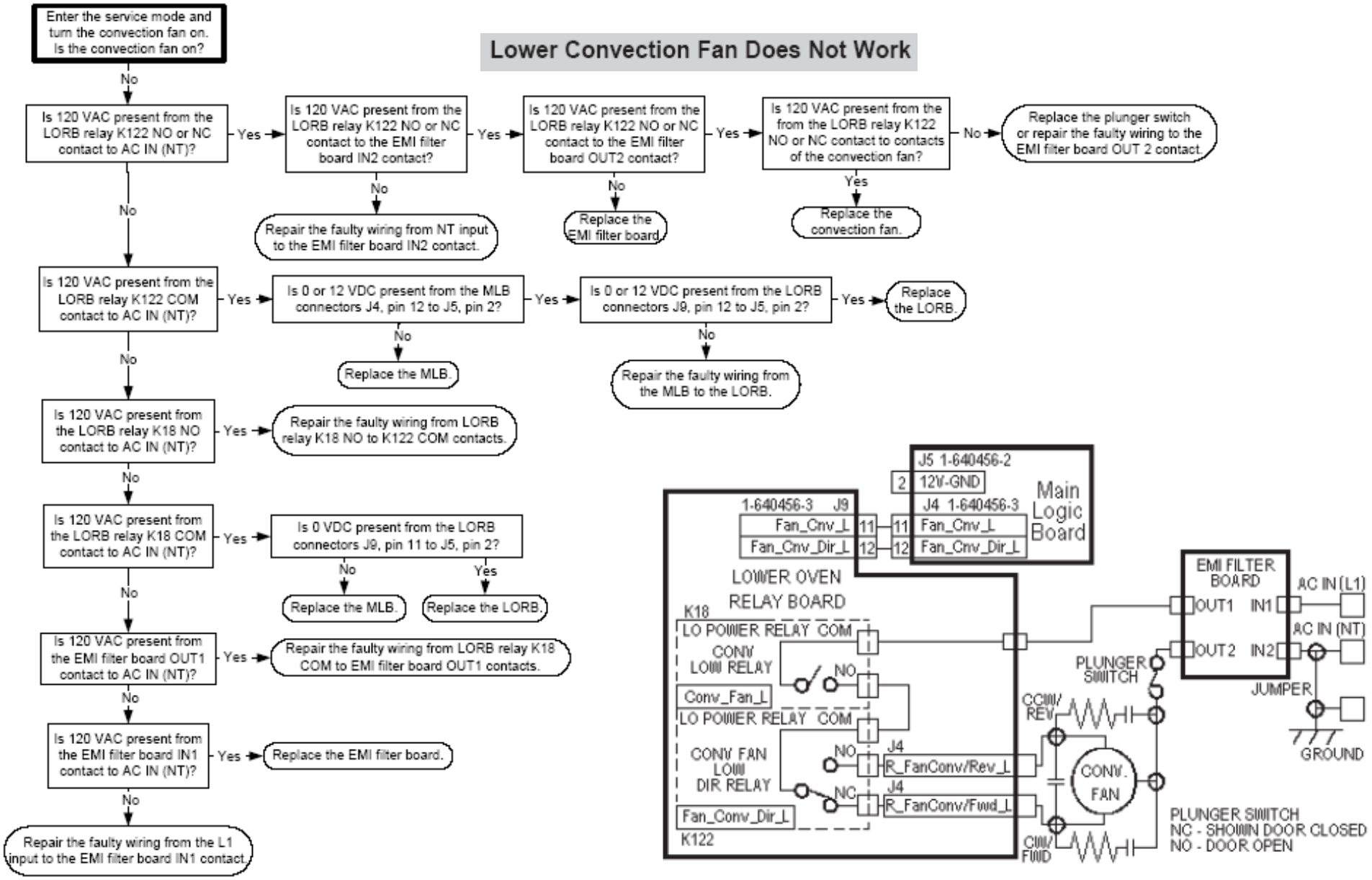
Lower Convection Element Does Not Work



Lower Door Latch Does Not Work



Lower Convection Fan Does Not Work



Lower Cooling Fan Does Not Work