

30" ELECTRIC CONVECTION WALL OVEN W/ ERC CONTROL AND MOTORIZED DOOR LOCK

IMPORTANT SAFETY NOTICE: This information is intended for use by individuals possessing adequate backgrounds of electrical, electronic and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. Neither the manufacturer nor the seller can be responsible for the interpretation of this information or assume any liability in connection with its use.

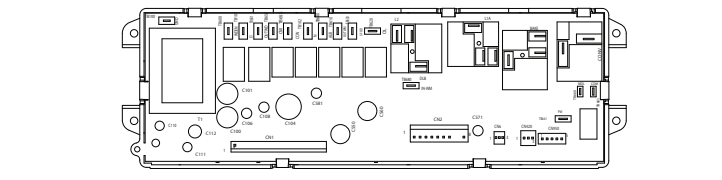
DISCONNECT POWER BEFORE SERVICING
IMPORTANT: RECONNECT ALL GROUNDING DEVICES. All parts of this appliance capable of conducting electrical current are grounded. If grounding wires, screws, straps, clips, nuts or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

GROUNDING SPECIFICATIONS	
Ground Path Resistance	0.10Ω Max.
Insulation Resistance	250KΩ Min.

ALUMINUM WIRE: **CAUTION** – This oven power supply cable is recognized for copper wire only, NOT ALUMINUM WIRE. Refer to Installation Instructions for additional details.

ELECTRONIC OVEN CONTROL

CAUTION: Components are electrically **HOT** on control when voltage is connected to oven.



TERMINALS	VOLTAGE
L1-N	120 VAC ALL THE TIME
COM TO N	120 VAC ALL THE TIME
L1-L2	240 VAC ALL THE TIME
L1-BA, L1-BR, L1-CV	120 VAC oven on, not calling for heat. DLB relay K9 closed.
*OL-L1	120 VOLTS when light is on.
COM TO MDL	120 VOLTS not locking or unlocking, door closed.
**L1-CF	120 VOLTS when oven door is closed, fan off.

NOTE: Temperature/ Mode Selection necessary for operation of Relay contacts. **NOTE:** Voltage must be present across terminals **L1 to N** for control to operate.

- *If oven light is not working, make the following checks:
- Check oven light bulb to verify it works.
 - Light comes on when door is opened. Check for 120VAC from OL terminal to L1. If 120VAC is not present, press the oven door switch in and out several times, leaving the oven door open. Recheck for 120VAC from OL terminal to L1 with the oven door open. If 120VAC is not present, replace the oven door switch.
 - Close oven door. Check for 120VAC from OL terminal to L1. If 120VAC is present but the light does not turn on, the light bulb is bad or there is a loose connection in the wire harness. If 0 VAC, press Oven Light key on key panel and retry. If still 0 VAC, check the key panel. If key panel is OK, replace the control. (If you hear a relay click when the Oven Light key on the control panel is pressed, the key panel is working.)

- **If convection fan not running, make the following checks:
- Check the voltage from terminal CW and CCW to N on control—it should always read 120V in Conv. Bake or Roast modes.
 - If voltage OK, check convection fan motor. It should read approx. 15–20Ω at room temperature. Check to make sure the fan shaft is not rubbing on the liner.
 - Check Door Switch.
 - Check Capacitor.

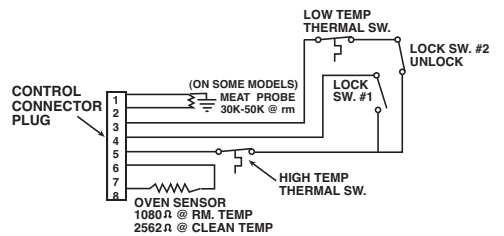
OVEN SENSOR AND DOOR SWITCH OHMMETER TEST
(See “Motorized Door Lock Operation” for door switch function explanation.) Remove power from oven. Make resistance measurement from side of sensor and lock switch connector, with exposed terminals disconnected from control.

CIRCUIT	TERMINALS	OHMS
Oven Sensor	6 to 8	1080Ω @ Rm Temp.*
Door Unlatched	3 to 5	0Ω
	4 to 5	Open
Door Latched	4 to 5	0Ω
	3 to 5	Open

*If abnormal reading is observed, wiggle leads at disconnect block. If any variation, replace.

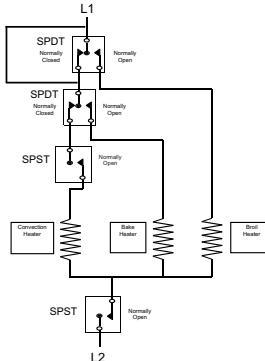
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SENSOR AND LOCK SWITCH CONNECTOR



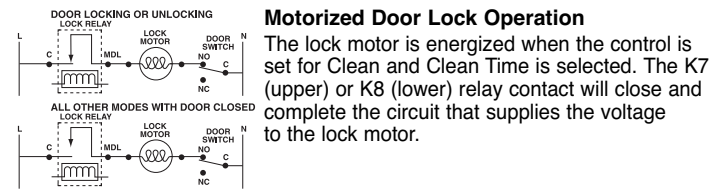
OVEN CIRCUITS

- * **BAKE AND BROIL UNITS CAN BE ON AT THE SAME TIME.**
- **BAKE/TIME BAKE** – Bake and broil units operate simultaneously during Preheat. Broil unit is on approximately 25% of the time during the balance of the Bake operation, with approximately one minute of dead time between units.
 - **CLEAN** – Broil unit only on during first 30 minutes or until oven reaches 750°F. During the balance of the Clean operation, the oven will use the bake and broil units simultaneously and separately, with one second of dead time between units while calling for heat.



MOTORIZED DOOR LOCK

The motorized door lock assembly is located above the oven. The assembly consists of a lock motor cam and switch assembly, lock hook, mounting plate, door switch, spring and plunger.



Motorized Door Lock Operation

The lock motor is energized when the control is set for Clean and Clean Time is selected. The K7 (upper) or K8 (lower) relay contact will close and complete the circuit that supplies the voltage to the lock motor.

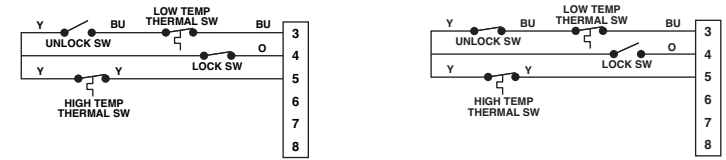
NOTE: To enable proper operation of the door lock, ensure that the door jamb switch is in “common” to “normally OPEN” (door closed) position. This enables power to be delivered when the door lock closes.

NOTE: Display of Control will flash “**LOCK**” if the door switch is in the “**C**” (common) to “**NC**” (normally CLOSED) (door open) position.

- The words “**LOCK DOOR**” will flash on and off in the display while the lock motor is in motion. When the door is locked the words “**LOCKED DOOR**” remain illuminated in the display.

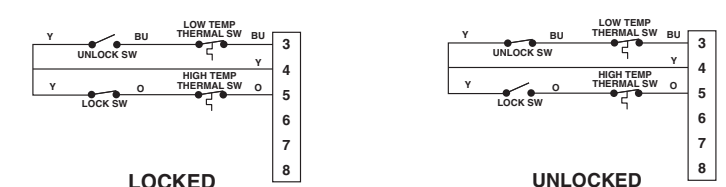
- **CAM** – The cam on the motor performs two functions:
 1. Positions the lock hook in the door to prevent opening during Clean operation.
 2. Operates the lock switches which tell the control if the door is unlocked or locked and ready for Clean operation.

NOTE: When door is either being locked or unlocked, both the lock and unlock switches will be in the open position.



LOCKED

Two configurations exist for the motorized door lock circuit. The alternate configuration is shown below (applies to sensor and lock switch connector diagrams as well.)



UNLOCKED

LOCKED

UNLOCKED

KEY PANEL

The Key Panel (Control Panel) and Electronic Control are separate components and must be tested individually.

Key Panel Test

Press each pad on the Key Panel followed by the **CLEAR/OFF** pad. If the Key Panel is functioning properly, the following should occur:

- **BAKE, BROIL, CONVECTION BAKE, CONVECTION ROAST, CLEAN, TIMER, CLOCK and COOK TIME pads** – Audible tone plus display showing mode of operation selected.
- **CLEAR/OFF** – Audible tone and display shows time of day.
- **PROBE** – Audible tone if probe is plugged in and display will show probe.
- **OVEN LIGHT** – Oven light turns on. Audible tone. Relay click.
- **Number pads** – Can only be used after another function has been selected.

Check the control panel for delamination to make sure that the touch board is not separating from the glass.

ERC FAILURE CODES

The oven may stop operating but not give an F code on the display immediately. F codes are stored in nonvolatile EEPROM memory until the same fault occurs twice consecutively. After that, the F code will be displayed. F codes can be recalled by pressing together **TIMER, CLOCK** and **9**. While F codes are displayed, pressing **8** and **6** together will clear them. A fault must exist continuously for 5 minutes before an F code is recorded (F2 and F8 are 1 minute or less).

FAILURE CODE	MEANING	CORRECTION
F0	Shorted OFF key	Perform glass touch board key panel test, making sure to test EVERY pin combination for possible shorts. If there are no shorts, the problem is probably with the control.
F2	Over temperature Inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched	<ul style="list-style-type: none">• 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 2900 ohms)	<ul style="list-style-type: none">• 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)	<ul style="list-style-type: none">• 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 or other cause of open thermal switches in yellow, blue or orange leads	Suspect stalled cooling fan or airflow to control area.

THERMAL SWITCHES

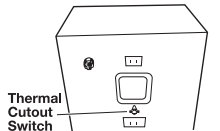
The thermal switches are located on the floor of the component compartment in front of the fan motor. The lower temperature thermal switch is wired in series with the unlock motor switch. This limit switch opens at 205°F (96°C) and closes when the temperature cools below 177°F (81°C). This switch is active only in nonself-clean operations (unlock switch closed, lock switch open).

The higher temperature thermal switch is wired in series with the common of the lock/unlock switch. This limit switch opens at 240°F (116°C) and closes when the temperature cools below 190°F (88z°C). This switch is active only in self-clean operations (lock switch closed, unlock switch open).

If the thermal switch opens in any mode of operation, the control will go to -F9- failure code. When this condition exists, check the fan operation (look for obstructions), inspect oven installation (make sure grille areas are not blocked), oven insulation and lock circuit.

THERMAL CUTOUT SWITCH

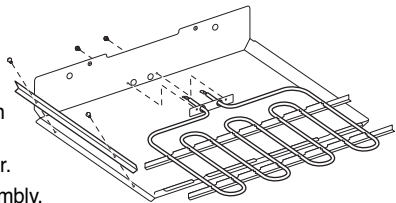
A self-resetting, disc-type thermal cutout switch is mounted to the rear of the oven. The switch will open the L2 leg of the power to the heating elements in the event of an over-temperature condition. The switch will open when the panel it is mounted to reaches approximately 284°F and will close as the panel cools to approximately 254°F. There is no indication to the customer when the switch opens or closes.



HIDDEN BAKE

To Service: Access from rear and side.

1. Remove power.
2. Remove lower wire cover.
3. Unplug element.
4. Remove screws holding element in hidden bake assembly.
5. Remove left side insulation retainer.
6. Remove side of hidden bake assembly.
7. Remove element.



OVEN CALIBRATION

Testing has shown that this oven has the best cooking performance at a control setting of 350°F when the **AVERAGE** center oven temperature is between 330°F and 390°F (depending on model). Customers may change the average center oven temperature by +/- 35°F to satisfy their own cooking needs. This affects **BAKE** only. Convection modes, **BROIL** and **SELF-CLEAN** are not affected.

To change:

- Press and hold **BAKE** and **BROIL** pads until “**SF**” appears in display.
- Press **BAKE** pad to enter oven calibration mode. “**00**” or a number between + and -35°F will be displayed.
- Press **TEMP UP** or **DOWN** or **Number** pads (depending on model) increase or decrease pads to change average oven temperature. (Use **BAKE** pad to switch between + or - settings, if using number pads).
- Press **START** to return to Time of Day.

SPECIAL FUNCTIONS

The control has a section that can be entered to change how the control will work. To enter this section, press and hold the **BAKE** and **BROIL** pads for 3 (three) seconds and “**SF**” appears in the display. Select the area to change. When the change has been made, press **START** to return to the Time of Day.

- **End-of-Cycle Tone** – Press **TIMER** pad. Display shows “**Con Beep**” when control is set for continuous **End-of-Cycle Tone** or “**Beep**” when set for noncontinuous.
- **°F and °C** – Press the **BROIL** and **COOK TIME** pads at the same time. Display will show either “°F” or “°C.” Press the **BROIL** and **COOK TIME** pads again to change.
- **12-hour, 24-hour or blank out Time of Day Clock** – Press **CLOCK** pad. Display will show “**12 hr**,” “**24 hr**,” “**OFF**” for blank clock. Press again to change.
- **Multi-Level Buzzer Volume** – Press the **OVEN LIGHT** pad. Display shows the current volume level and beeps. Press the **OVEN LIGHT** pad again to change and hear the new level. Level 1 is quietest, level 2 is mid-volume, level 3 is loudest.
- **12-Hour Shutdown** comes set to shut down after 12 hours of continuous operations; this can be eliminated—press **DELAY START** pad. Display will show “**No Shdn**.” To turn back on, press **DELAY START** pad again and display will show “**12 Shdn**.”
- **Sabbath Mode** – This feature disables all but Bake and Timed Bake, overrides 12-Hour Shutdown, disables beeps and puts symbols in the display during bake. Press the **DELAY START** pad to activate. Display will show “**SabbAtH**.” To deactivate, press the **DELAY START** pad. Display will show “**no Shdn**” or “**12 Shdn**.”

The control has other features which are also activated by specific key press combinations:

- **Sales Mode** (special feature for sales floor demonstration) – Press the **CLOCK** and **TIMER** pads at the same time. Display will start to cycle through the different modes of operation.
- **Control Lockout** – Press the **9** and **0** pads for 3 (three) seconds. Display will show “**Loc On**.” To unlock the oven, press the **9** and **0** pads for 3 (three) seconds. Display will show “**Loc Off**.” No keys are active while the control is locked, and the display will show “**Loc On**” if a pad is pressed while the control is locked.

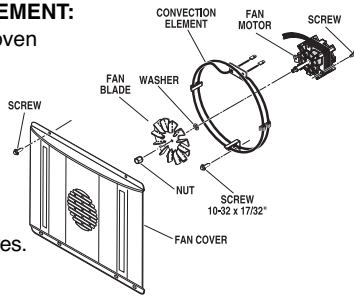
The Convection Bake Element and Fan Assembly are located on the back wall of the oven liner behind the panel with the screen in the center.

1. Disconnect power to range; remove oven door and oven racks.

- TO REMOVE CONVECTION
BAKE ELEMENT:**

TO SERVICE FAN:

Fan blade and convection fan motor can be replaced from inside oven.



The door is very heavy. Be careful when removing and lifting the door. Do not lift the door by the handle. To Remove:

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To Replace:
1. Firmly grasp both sides of the door at the top.

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- Diagram illustrating the components of a hinge arm:
- Bottom Edge of Slot
 - Hinge Arm
 - Indentation



Hinge Arm

Push hinge locks up to lock

Air enters the door assembly through large slots in the bottom and flows upward between the inner and outer assemblies, exhausting through slots in the top of the door. **DO NOT INSULATE THIS AIR CHANNEL.**

1. Complete door assembly

- Remove screws from the bottom door trim.
- Remove screws at the top of the door.
- The liner assembly can be separated from the rest of the door.

- ## 2. Outer glass panel assembly

- Remove the screws that hold the handle to the glass.
NOTE: The other parts cannot be separated.

- ### 3. Liner assembly

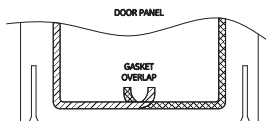
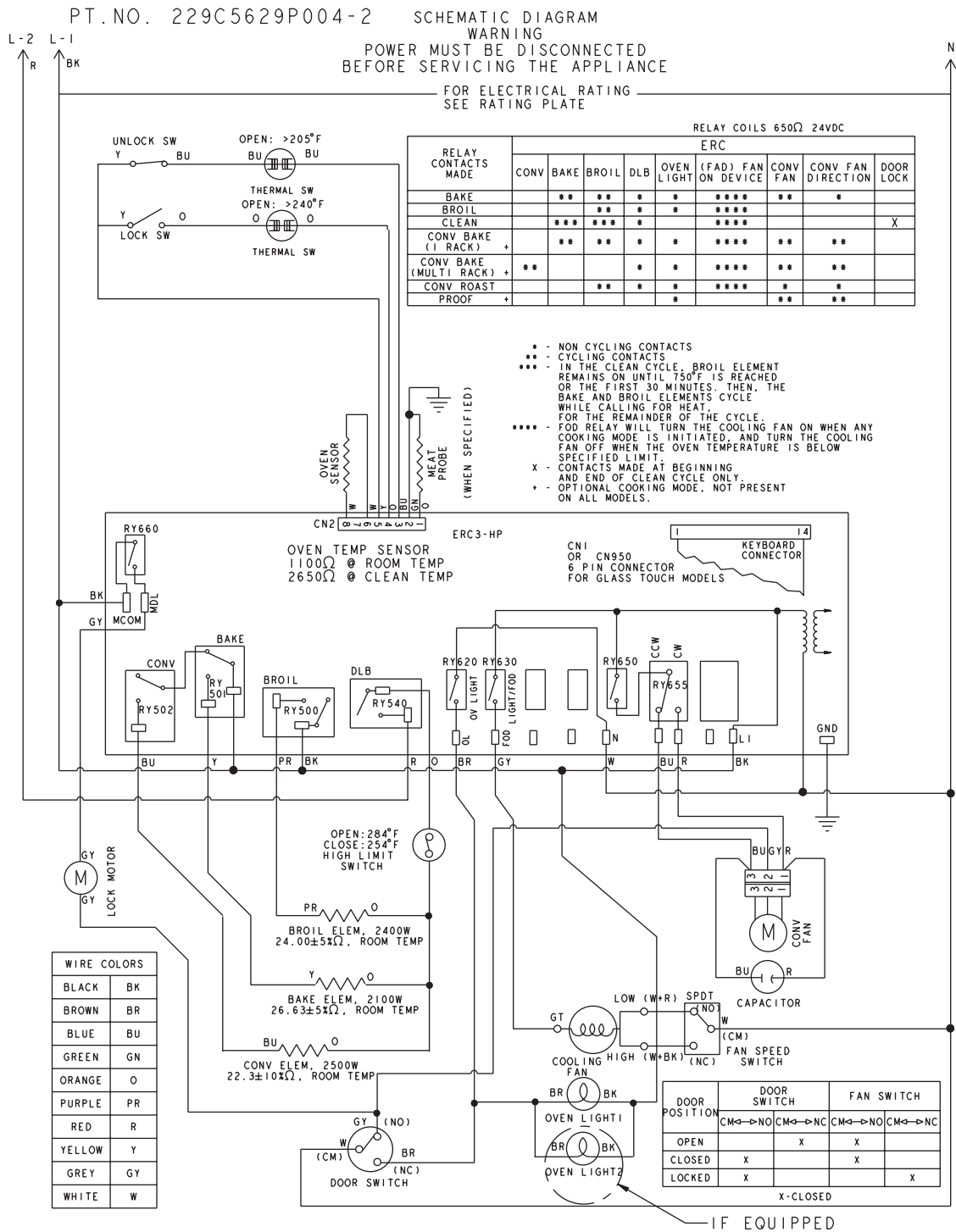
- Remove screws on each side of the door liner to remove the door hinge assembly.
- Remove screws from the insulation retainer.
- Remove insulation retainer and then the insulation.
- The window pack and window gasket are now accessible on units with a window door.

Door Gasket

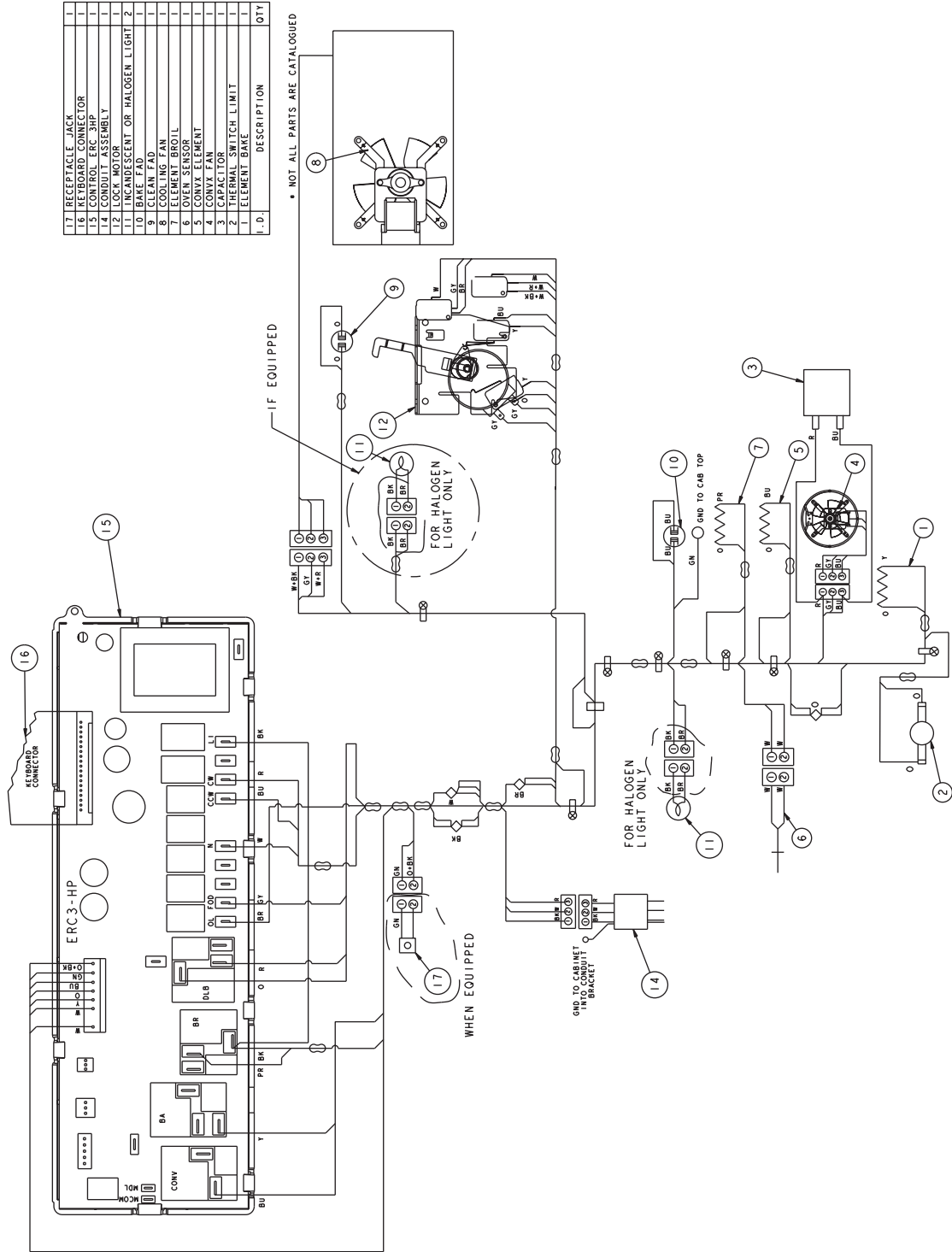
The door gasket is clipped into the liner of the oven door.

To Service Gasket

Gasket at bottom of door must overlap.
The overlap is required to provide seal of door
and proper baking results.



	D	DESCRIPTION	QTY
17	RECEPTACLE JACK		
16	KEYBOARD CONNECTOR		
15	CONTROL ERC SHP		
14	CONDUIT ASSEMBLY		
13	LOCK MOTOR		
12	INCANDESCENT OR HALOGEN LIGHT		
11	BASE PAD		
10	COOLING FAN		
9	COOLING FAN		
8	COOLING FAN		
7	ELEMENT BROIL		
6	OVEN SENSOR		
5	CONVEX ELEMENT		
4	CONVEX FAN		
3	CAPACITOR		
2	THERMAL SWITCH LIMIT		
1	ELEMENT BAKE		



MODEL NUMBERS

JTP70

PT916

ZET938

**IMPORTANT
SERVICE INFORMATION
DO NOT DISCARD**

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