30" RADIANT FREE-STANDING CONVECTION RANGE

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. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it 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.

INSTALLATION REQUIREMENTS

Power Supply: This appliance must be supplied with proper voltage and frequency, and connected to an individual grounded branch circuit, protected by a circuit breaker or time delay fuse as noted on rating plate. Wiring must conform to the National Electrical Codes. The rating plate is located on the lower front frame behind the storage drawer.

Overcurrent Protection Ranges

NEC Rating	Maximum Kilowatt Rating	
	208V	240V
40 Amp	12.4	16.0
50 Amp	17.4	22.0

CONTROL PANEL ASSEMBLY

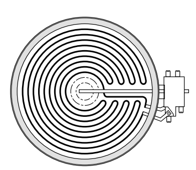
The metal overlay should be removed when the overlay itself is damaged or the keypanel is faulty. All other components, except infinite switches, are accessed from the back of the control panel assembly. The infinite switches can be unscrewed from the front without removing the metal overlay and then removed from the back of the control panel assembly.

Replacing Infinite Control
1. Turn the power off to the unit.
2. Remove knob.
3. Unscrew overlay retainer nut.
4. Remove the two screws holding the threaded overlay mount and infinite switch.
5. Remove the overlay mount.
6. From the rear of the control panel assembly, unplug wires and remove infinite switch.
7. Repeat steps in reverse order to reassemble the unit.

Replacing Overlay
1. Turn the power off to the unit.
2. Remove all knobs.
3. Unscrew all overlay retainer nuts while holding the overlay against the control trim.
4. Move the overlay about 3 inches away from the control panel and unplug the harness from the panel.
5. Repeat steps in reverse order to reassemble the unit.

RADIANT HEATING ELEMENT SYSTEMS

Heating Elements: The radiant heating element consists of a spiral wound resistance wire attached to micro porous insulation with molded ceramic fiber walls in a corrosion protected metal tray.

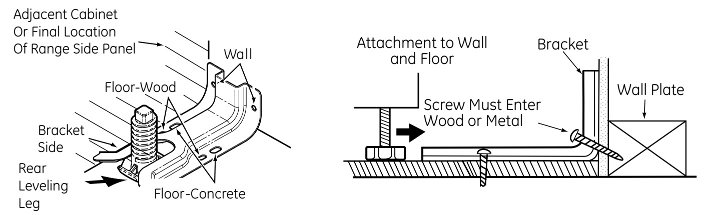


The Heating Elements come in various sizes:
- 6" - 240 Volt 1500 Watts
- 12" - 240 Volt 3000 Watts (Dual 9" & 12")
- BRIDGE - 240 Volt 4400 Watts
- Warmer - 240 Volt 120 Watts

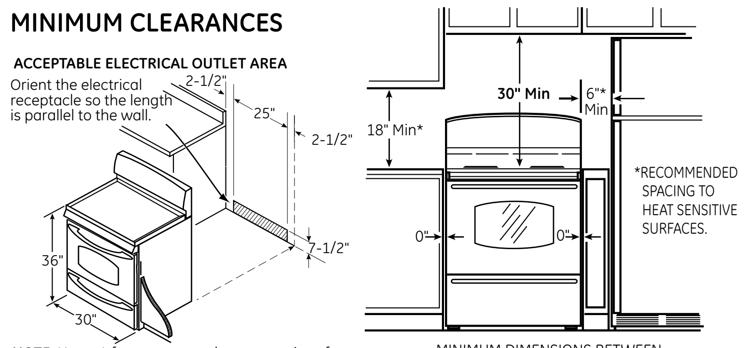
HOT SURFACE INDICATOR LIGHT

The Hot Surface Indicator Lights are now under the cooktop. The Hot Surface Indicator Light will turn on when the surface unit switch is turned on, and remain on as long as the glass temperature exceeds 150°F by an additional set of contacts on the limiter.

NOTE: Installation information for reference only. See Installation Instructions shipped with product for complete details and before attempting to install.
Brackets should be attached to the floor or wall to hold either right or left rear leg leveler. Make sure leg leveler reengages the bracket when range is moved for any reason.

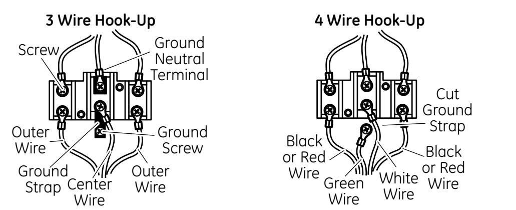


MINIMUM CLEARANCES



NOTE: Use a 4 foot power cord to prevent interference with the storage drawer. Power cords 4.5 or 6 foot long may have to be dressed to allow for proper drawer closing.

MINIMUM DIMENSIONS BETWEEN COOKTOP AND WALLS ABOVE COOKTOP.

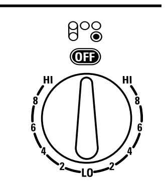


NOTE: Effective January 1, 1996, the National Electrical Code requires that new or rewired construction utilize a 4-conductor connection to an electric range.

TEMPERATURE LIMIT/HOT LIGHT SWITCH

The Temperature Limit/Hot Light Switch performs two functions:
1. Turns on HOT LIGHT when the Surface Unit Switch is turned on. The hot light will remain on until the glass surface above the heating unit has cooled below 150°F (even after surface unit switch has been turned off).
2. Detects when glass temperature above a unit has exceeded its limit of approximately 1031°F and disconnects power to that unit. When glass temperature cools below 1031°F, the unit will turn back on. The temperature limited/hot light switch cannot be calibrated.

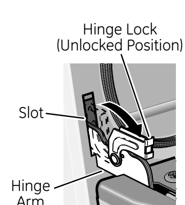
DUAL CIRCUIT CONTROL



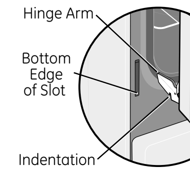
The left front and right front element may have two cooking zones:
- To use the large cooking area or bridge, push to turn the control knob clockwise to desired setting.
- To use the small cooking area, push to turn the control knob counterclockwise to desired setting.

When a cooking zone is activated, coils beneath the zone radiate heat through the glass cooktop to the utensil. The red glow of the coils will be visible through the glass. It will take the cooking zone on the glass surface a few moments to heat up. The coil cycles on and off to maintain selected setting.

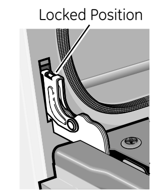
REMOVABLE OVEN DOOR



To Remove:
1. Fully open the door.
2. Push the hinge locks down toward the door frame, to the unlocked position. This may require a flat blade screwdriver.
3. Firmly grasp both sides of the door at the top.
4. Close door to the door removal position.
5. Lift door up until the hinge arm is clear of the slot.



To Replace:
1. Firmly grasp both sides of the door at the top, with the door at the same angle as the removal position, seat the indentation of the hinge arm into the bottom edge of the hinge slot.

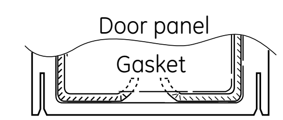


2. Fully open the door.
3. Push the hinge locks up against the front frame of the oven cavity, to the locked position.
4. Close the oven door.

Cooling Air Flow
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.**

To Service Full Glass Door
1. Complete door assembly:
   - Remove three screws from the bottom door frame
   - Remove two screws at the top of the door on the liner
   - The liner assembly and outer glass panel assembly can now be separated.
2. Outer glass panel assembly:
   - Remove four screws from the side posts at the bottom
   - Remove four screws from the side posts at the top near the door vent trim
   - Slide the bottom trim and top vent trim out to free the outer door glass **Note:** On some doors the bottom trim is sealed to the outer door glass and cannot be separated.
3. Liner assembly:
   - Remove three screws on each side of the door liner to remove the door hinge assembly
   - Remove four 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 door panel.

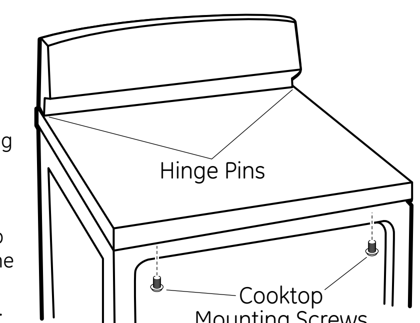


To Service Gasket
A gap must be left in the gasket at bottom of door. The gap is required to provide air flow in the oven for proper baking results.

COOKTOP REMOVAL

To Remove
1. Disconnect power.
2. Remove the 2 screws securing front of cooktop to chassis.
3. Prop up the cooktop, and unplug the connectors at the back by squeezing side tabs. Remove screw securing ground wire.
4. Lift the back end of the cooktop up about 2 inches to unhook the hinge pins from the brackets.
5. Reverse the process to reinstall.

CAUTION: Raising the cooktop too high can break the glass.



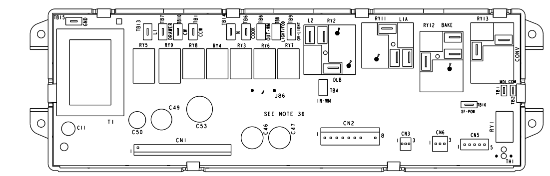
CONTROL PANEL ASSEMBLY REMOVAL

The control panel contains the ERC, infinite heat switches and Touch Board.
To Service:
1. Remove 2 screws (from bottom) securing control panel assembly to the backguard endplates.
2. Remove 2 screws at the top, in the back of the range.
3. Pull bottom of panel out while lifting panel up.
4. Lay panel assembly on cooking surface.

CAUTION: Place protective covering (such as towel) between control panel and cooking surface to avoid damage to control panel.

ERC ACCESS

The Electronic Range Control for oven system consists of the control, key panel, oven sensor, door lock assembly, and convection fan.



Key Panel Test
1. Touch each pad on the Key Panel.
2. If the Key Panel is functioning properly the following should occur:
   - Bake, Broil, Convection Bake, Convection Roast, Clean, Timer, Clock, Stop Time and Cook Time Modes–Audible tone plus display showing mode of operation selected.
   - Clear/Off–Audible tone and display shows time of day.
   - Number pads can only be used after another function has been selected.

CONTROL VOLTAGE–ERC

NOTE: Mode and temperature selection is necessary for operation of relay contacts. This model incorporates Double Line Break meaning there is no voltage on the elements when the control is in standby.

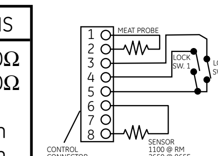
Terminals on ERC (element terms are on tops of large relays)	Voltage, standby (no relays energized)	Voltage, Broil mode active	Voltage, Bake mode active	Voltage, Conv. Bake
L1-N	120VAC (if not, harness may be bad)			
L1-L2	240VAC (if not, harness may be bad)			
L1-BAKE	~0VAC (if not relay may be bad)	240VAC (mode active, bake relay off, DLB relay on)*	~0 VAC when bake element on (if not, relay/ERC may be bad)**	240VAC (mode active, bake relay off, DLB relay on)*
L1-BROIL		~0 VAC when broil element on (if not, relay/ERC may be bad)**	240VAC (mode active, broil relay off, DLB relay on)*	240VAC (mode active, broil relay off, DLB relay on)*
L1-CONV		240VAC (mode active, conv. relay off, DLB relay on)*	240VAC (mode active, conv. relay off, DLB relay on)*	~0 VAC when conv. element on (if not, relay/ ERC may be bad)**
MDL-COM	120VAC (door closed)	-	-	-
L1-CW	120VAC (door closed)	120VAC (door closed)	120VAC (door closed)	~0V when fan is spinning clockwise
L1-CCW	120VAC (door closed)	120VAC (door closed)	120VAC (door closed)	~0V When fan is spinning counter clockwise

*If not, check indicated element and harnessing.
**Relay is on only when calling for heat. 240VAC when not calling for heat, else check indicated element and wiring.

OVEN SENSOR AND DOOR SWITCH OHMMETER TEST

Remove power from oven. Make resistance measurement from side of sensor and lock switch connector with exposed terminals unplugged from ERC.

CIRCUIT	CONDITION	TERMINALS	OHMS
Oven Sensor	Room Temp	6 to 8	1080Ω
	Clean Temp	6 to 8	2650Ω
Unlatch	Unlatched	3 to 5	0Ω
		4 to 5	Open
Latch	Latched	3 to 5	Open
		4 to 5	0Ω



HIDDEN BAKE ASSEMBLY

To Remove

1. Disconnect power.
2. Pull unit out so left side is exposed.
3. Prop up or remove cooktop (see cooktop removal section).
4. Remove outer side panel via visible hex screws and one blind screw inside front of drawer compartment.
5. Remove side insulation retainer via two screws mating with base, and unhooking wire insulation retainers at the top.
6. Disconnect hidden bake ground wire and unplug hidden bake element.
7. Inside the oven cavity, remove screw in lower left corner.
8. Slide hidden bake assembly out from under oven.

To Replace

1. Make sure the bottom insulation is fully covering the bottom of the base module.
2. Slide the hidden bake assembly in from the side, being careful not to displace the insulation.
3. Reattach side insulation retainer and hidden bake ground wire.
4. Reconnect screw at lower left inside oven cavity.
5. Plug hidden bake wire harness into element terminals.
6. Reattach outer side panel and cooktop.
7. Plug in unit, test and slide back into place.

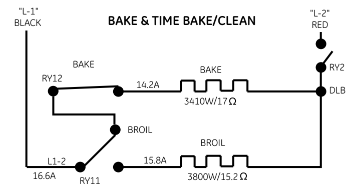
SPECIAL FUNCTIONS

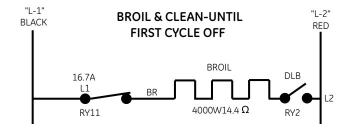
The control has a section that can be entered to change how the control will work. To enter this section: Press and hold the **BAKE and BROIL** pads until **"SF"** appears in display. Select the area to change. When the change has been made, press **START** to return to Time of Day.

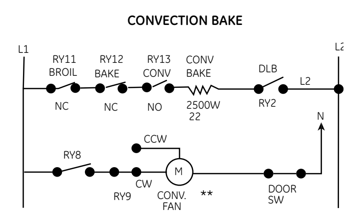
- **End-of-Cycle Tone -** Press **TIMER** pad. Display shows **"Con Beep"** when control is set for continuous **End-of-Cycle Tone** or **"Beep"** when set for non-continuous.
- **°F and °C -** Press **BROIL** and **COOK TIME** pads at the same time. Display will show either **°F or °C**. Press the **BROIL** 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 **LIGHT** pad. Display shows the current volume level and beeps. Press the **OVEN LIGHT** pad again to change and hear the new level. 1 BEEP is quietest, 2 BEEP is mid-volume, 3 BEEP is loudest.
- **Convection bake -** to turn on or off convection conversion.
- **12-Hour Shutdown** comes set to shut down after 12 hours of continuous operation; 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". NOTE: Sabbath is between No Shdn and 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."**
- **Beep volume -** press oven light key repeatedly.

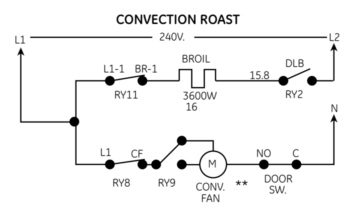
The control has other features which are also activated by specific key press combinations:

- **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. Press START to exit.
- **Oven Lockout -** Press Oven Lockout key. Display will show **"Set Loc On"**. Press Start to lock the keypads. No keys are active when locked, and the display shows **"Loc On"** when a key is pressed. To unlock the keys, press Lockout key, followed by Start.









NOTE:

- **BAKE/TIME BAKE**–Bake, broil and convection elements cycle during preheat with one element on at a time. The convection fan also operates while preheating and will turn off once the set temperature is reached. Once bake preheat temperature is reached, the bake and broil elements cycle for the balance of the bake operation with one element on at a time.
- **CLEAN**–Broil unit only on during 1st 30 minutes or until sensor reaches 750°F. During balance of clean oven will cycle between bake and broil units.

NOTE: RY references on control may be different than shown.

CONVECTION FAN

Symptom	Possibility	Correction
Fan motor buzzes	Open capacitor	Harness, terminals or bad capacitor.
No fan operation	Open winding as indicated by ohm check red to black and blue to black. (approx. 60 ohms each)	Replace motor.
Fan loud	Loose shaft nut	Tighten shaft nut. Do not bend blade.
Fan loud	Convect cover screws loose or cavity screws	Tighten. Use larger screw if stripped.
No fan operation	Check voltage CCW to N when fan is counter-clockwise - should read 120VAC in Convection Bake. Also, CW to N when clockwise as indicated By ERC display.	• If no voltages, replace ERC. • If voltages OK check harness or winding resistance.
NO fan operation	Shaft or blade rubbing on oven liner.	Loosen screws/readjust position/tighten.
No fan operation	Jamb switch NC to C is open.	Replace jamb switch or check harness.

ERC FAILURE CODES

The oven may stop operating but not give an F code on the display immediately. F codes are stored in non volatile eeprom memory until 2 of the same faults occur consecutively. F codes can be recalled by pressing together TIMER, CLOCK and 9 keys. While F codes are displayed, pressing 8 and 6 together will clear them.

FAILURE CODE	MEANING	CORRECTION
F0	Open OFF key Supervisor jumper (there are 2)	• Open wire or terminal within keypad harness • Bad solder on crystal mounted keypad board.
F2	Over temperature Inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched	• Welded relay contacts • High resistance in oven sensor leads/connectors (especially at sensor in rear)
F3	Open oven sensor (over 2950 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 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 key	Determine if problem is with Key Panel or Control by disconnecting keypad cable and power up control. If no, F7 code problem is with key circuit.
F8	EEPROM data shift failure	If repeated, replace control.
FC	Loss of latch motor safety circuit	Replace control.

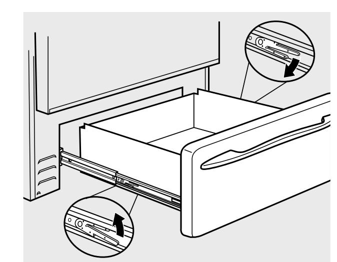
WARMING DRAWER REMOVAL

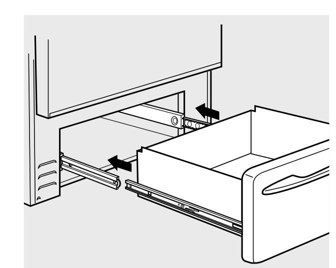
To Remove the Drawer:

1. Pull the drawer out until it stops.
2. Press the left rail release up and press the right rail release down, while pulling the drawer forward and free.

To Replace the Drawer:

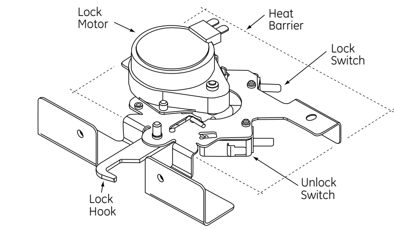
1. Place the left drawer rail around the inner left rail guide and slide it in slightly to hook it.
2. Place the right drawer rail around the inner right rail guide and slide it in slightly to hook it.
3. Slide the drawer all the way in.



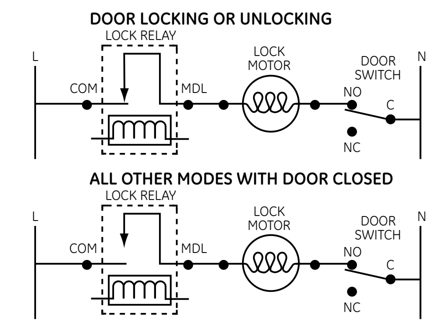


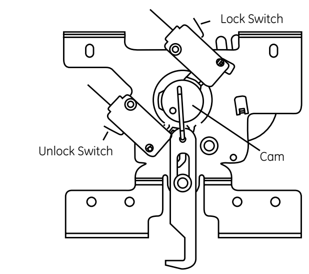
MOTORIZED DOOR LOCK

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



Motorized Door Lock Operation:





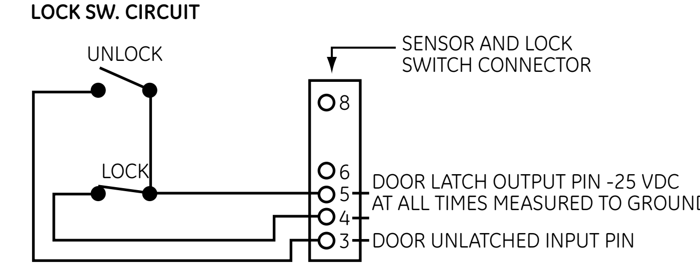
The lock motor is energized when the control is set for Clean and Clean Time selected. The K1 relay contact will close and complete the circuit that supplies the voltage to the lock motor.

Note: Display of Control will flash "LOCK DOOR" if the door switch is in the "C" to "NC" position. (Door open)

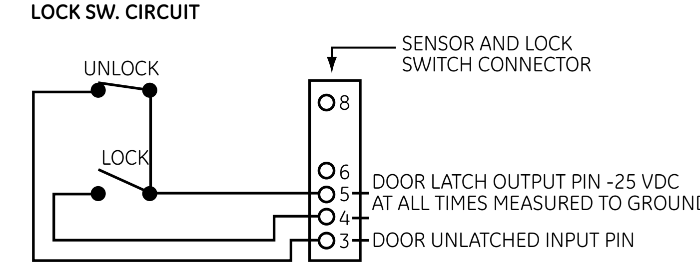
- The word "LOCKED DOOR" will flash on and off in the display while the lock motor is in motion. When the door is locked the word "LOCKED DOOR" remains illuminated in the display.
- CAM – The cam on the motor performs two functions:

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 lock switches will be in the open position.



LOCKED



UNLOCKED

SCHEMATIC DIAGRAM

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

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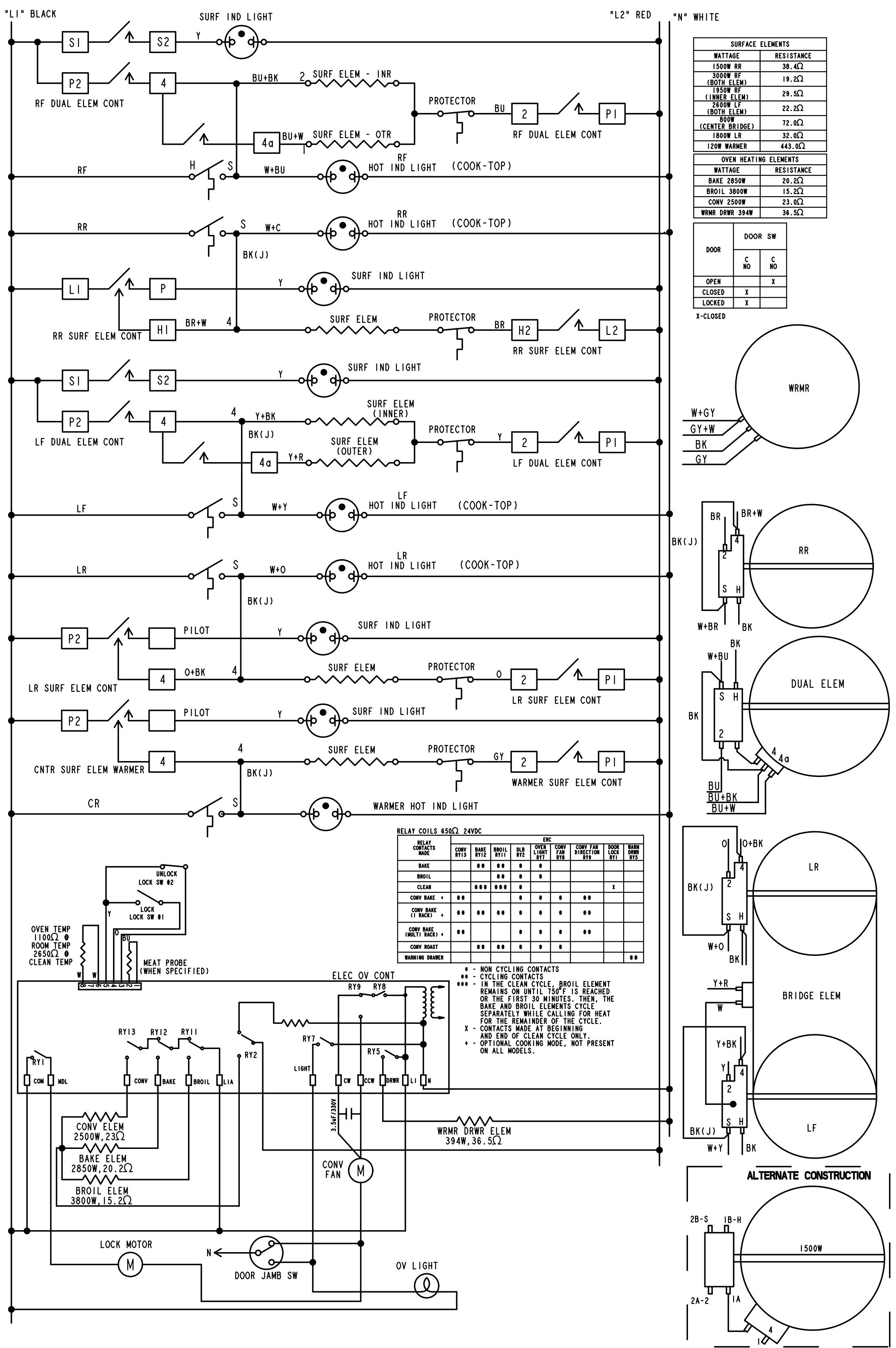


SURFACE ELEMENTS	
WATTAGE	RESISTANCE
1500W RR	38.4Ω
3000W RF (BOTH ELEM)	19.2Ω
1950W RF (INNER ELEM)	29.5Ω
2600W LF (BOTH ELEM)	22.2Ω
800W (CENTER BRIDGE)	72.0Ω
1800W LR	32.0Ω
120W WARMER	443.0Ω

OVEN HEATING ELEMENTS	
WATTAGE	RESISTANCE
BAKE 2850W	20.2Ω
BROIL 3800W	15.2Ω
CONV 2500W	23.0Ω
WRMR DRWR 394W	36.5Ω

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

X-CLOSED

RELAY COILS 650Ω 24VDC

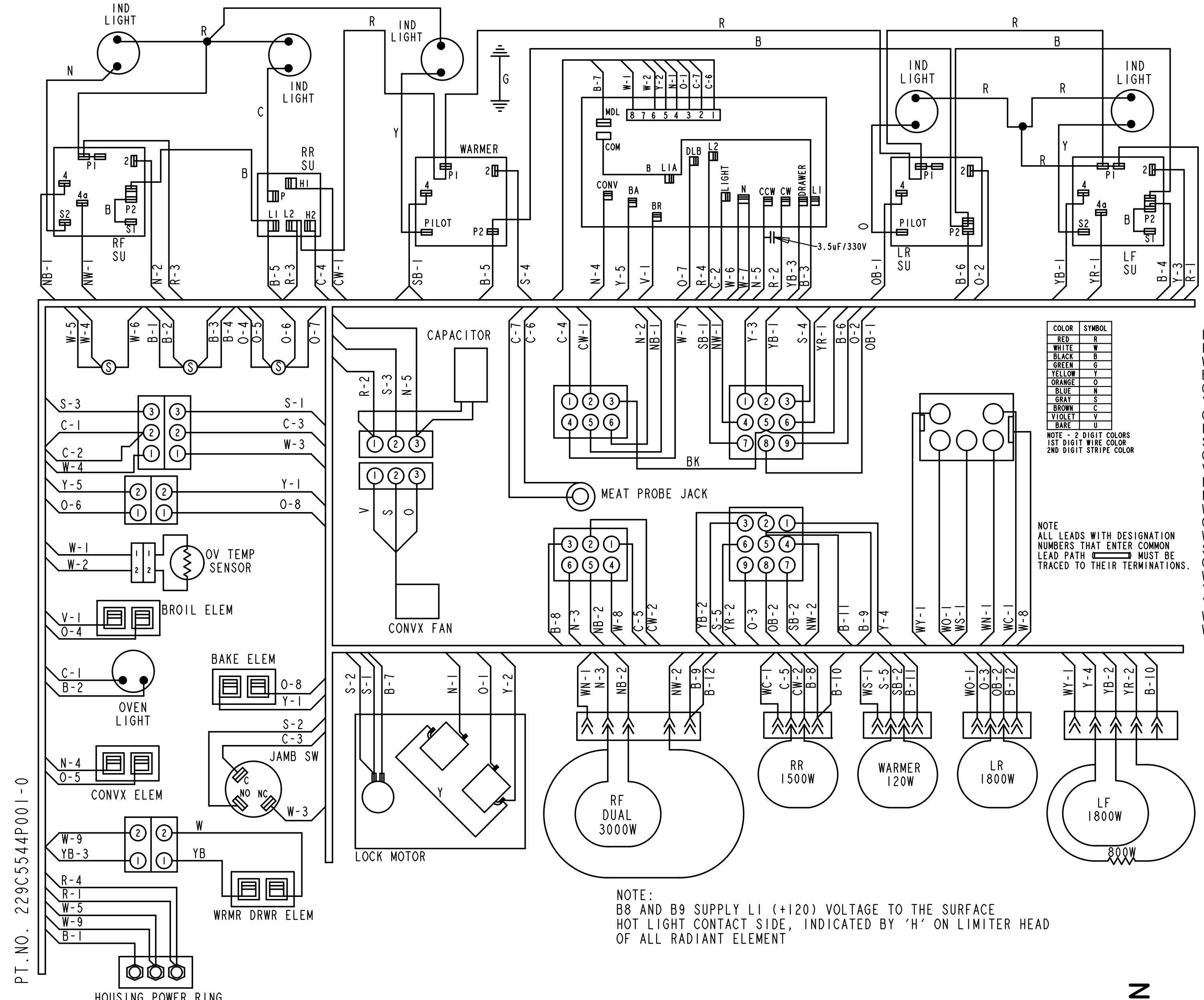
RELAY CONTACTS MADE	ERC CONV RY13	BAKE RY12	BROIL RY11	DLB RY2	OVEN LIGHT RY7	CONV FAN RY8	CONV FAN DIRECTION RY9	DOOR LOCK RY1	WARM DRWR RY5
BAKE		**	**	*	*				
BROIL			**	*	*				
CLEAN		***	***	*				X	
CONV BAKE +	**			*	*	*	**		
CONV BAKE (1 RACK) +	**	**	**	*	*	*	**		
CONV BAKE (MULTI RACK) +	**			*	*	*	**		
CONV ROAST		**	**	*	*	*			
WARMING DRAWER									**

* - 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.
X - CONTACTS MADE AT BEGINNING AND END OF CLEAN CYCLE ONLY.
\+ - OPTIONAL COOKING MODE, NOT PRESENT ON ALL MODELS.

WIRING DIAGRAM

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

WIRING DIAGRAM
WARNING
POWER MUST BE DISCONNECTED
BEFORE SERVICING THE APPLIANCE



COLOR	SYMBOL
RED	R
WHITE	W
BLACK	B
GREEN	G
YELLOW	Y
ORANGE	O
BLUE	N
GRAY	S
BROWN	C
VIOLET	V
BARE	U

NOTE - 2 DIGIT COLORS
1ST DIGIT WIRE COLOR
2ND DIGIT STRIPE COLOR

NOTE
ALL LEADS WITH DESIGNATION NUMBERS THAT ENTER COMMON LEAD PATH MUST BE TRACED TO THEIR TERMINATIONS.

LAST WIRE NUMBER USED:
R-4
W-9
B-12
G-0
Y-5
O-8
N-5
S-5
C-7
V-1
NB-2
NW-2
WN-1
CW-2
WS-1
SB-2
OB-2
WY-1
YB-3
YR-2
WC-1
WO-1

NOTE:
B8 AND B9 SUPPLY L1 (+120) VOLTAGE TO THE SURFACE HOT LIGHT CONTACT SIDE, INDICATED BY 'H' ON LIMITER HEAD OF ALL RADIANT ELEMENT

MODEL NUMBER
JB910

IMPORTANT
SERVICE INFORMATION
DO NOT DISCARD

N.D. 06E-1789

Pub. No. 31-14485