

# GE JB400 Steam Clean Range

## Range Models:

JB400DP1WW

JB400DP1BB

JB400SPSS



imagination at work

## **IMPORTANT SAFETY NOTICE**

The information in this presentation is intended for use by individuals possessing adequate backgrounds of electrical, electronic, & mechanical experience. Any attempt to repair a major appliance may result in personal injury & 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.

### **WARNING**

To avoid personal injury, disconnect power before servicing this product. If electrical power is required for diagnosis or test purposes, disconnect the power immediately after performing the necessary checks.

### **RECONNECT ALL GROUNDING DEVICES**

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 & properly fastened.

**GE Factory Service Employees are required to use safety glasses with side shields, cut resistant (Dyneema®) gloves & steel toe shoes for all repairs.**



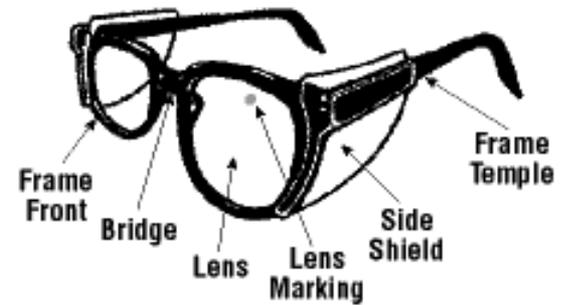
**Dyneema® Cut Resistant Glove**



**Steel Toe Shoes**



**Plano Safety Glasses**



**Prescription Safety Glasses**

**Safety Glasses must be compliant with ANSI Z87.1-2003**

# Warranty

## ***For The Period Of:***

***One Year***  
*From the date of the original purchase*

## ***GE Will Provide:***

***Any part*** of the range which fails due to a defect in materials or workmanship. During this ***limited one-year warranty***, GE will also provide, ***free of charge***, all labor and in-home service to replace the defective part.

## ***What GE Will Not Cover:***

- Service trips to your home to teach you how to use the product.
- Improper installation, delivery or maintenance.
- Failure of the product if it is abused, misused, or used for other than the intended purpose or used commercially.
- Damage to the glass cooktop caused by use of cleaners other than the recommended cleaning creams and pads.
- Damage to the glass cooktop caused by hardened spills of sugary materials or melted plastic that are not cleaned according to the directions in the Owner's Manual.
- Replacement of house fuses or resetting of circuit breakers.
- Damage to the product caused by accident, fire, floods or acts of God.
- Incidental or consequential damage caused by possible defects with this appliance.
- Damage caused after delivery.
- Product not accessible to provide required service.

# Nomenclature

## Model Number

**J B 400 D P 1 WW**

**Brand**  
J = GE

**Configuration**  
B = 30-in. Range

**Feature Pack**  
Designates Features—the higher the number, the more features

**Product Color**  
WW = White

**Indicator for Engineering and Product Service Only**

**Model Year Designator**

**Glass Color**  
Color Match Cook-Top

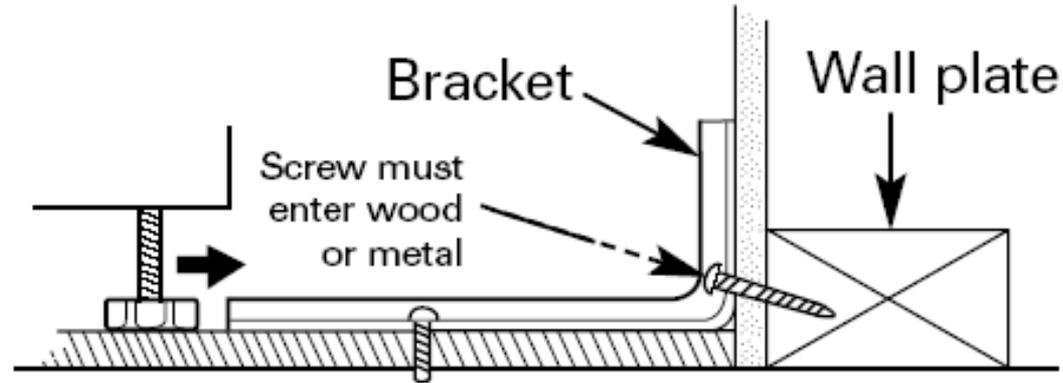
# Model / Serial Number Plate

Model / serial plate is located on the front frame behind the storage drawer.



- Mini-Manual is in an envelope and located inside the left hand panel.

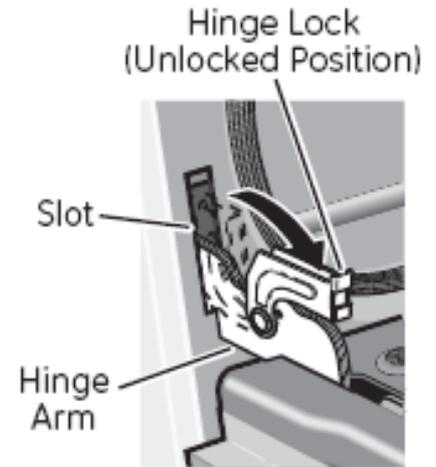
# Anti-Tip Bracket



Typical installation of anti-tip bracket attachment to wall

\* Range must be secured by the Anti-Tip Bracket supplied.

# Oven Door Removal



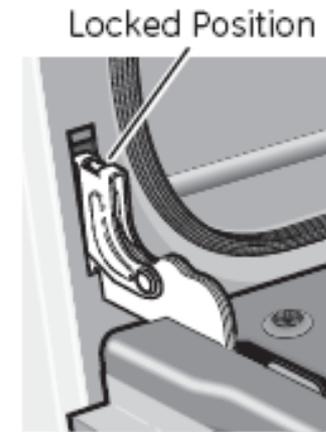
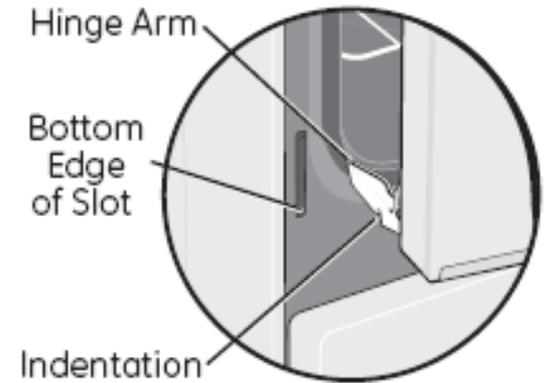
- Fully open the door.
- Push the hinge locks down toward the door frame, to the unlocked position. This may require a flat blade screwdriver.

# Oven Door Removal



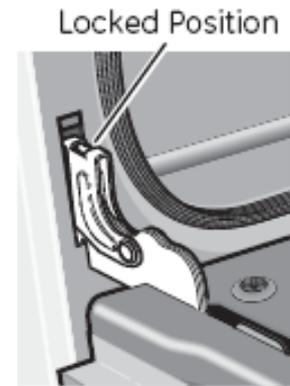
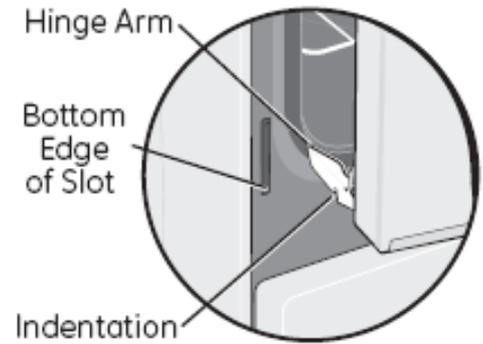
- Close door to the door removal position.
- Firmly grasp both sides of the door at the top.
- Lift door up until the hinge arm is clear of the slot.

# Oven Door Re-Installation



- 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.

# Oven Door Re-Installation



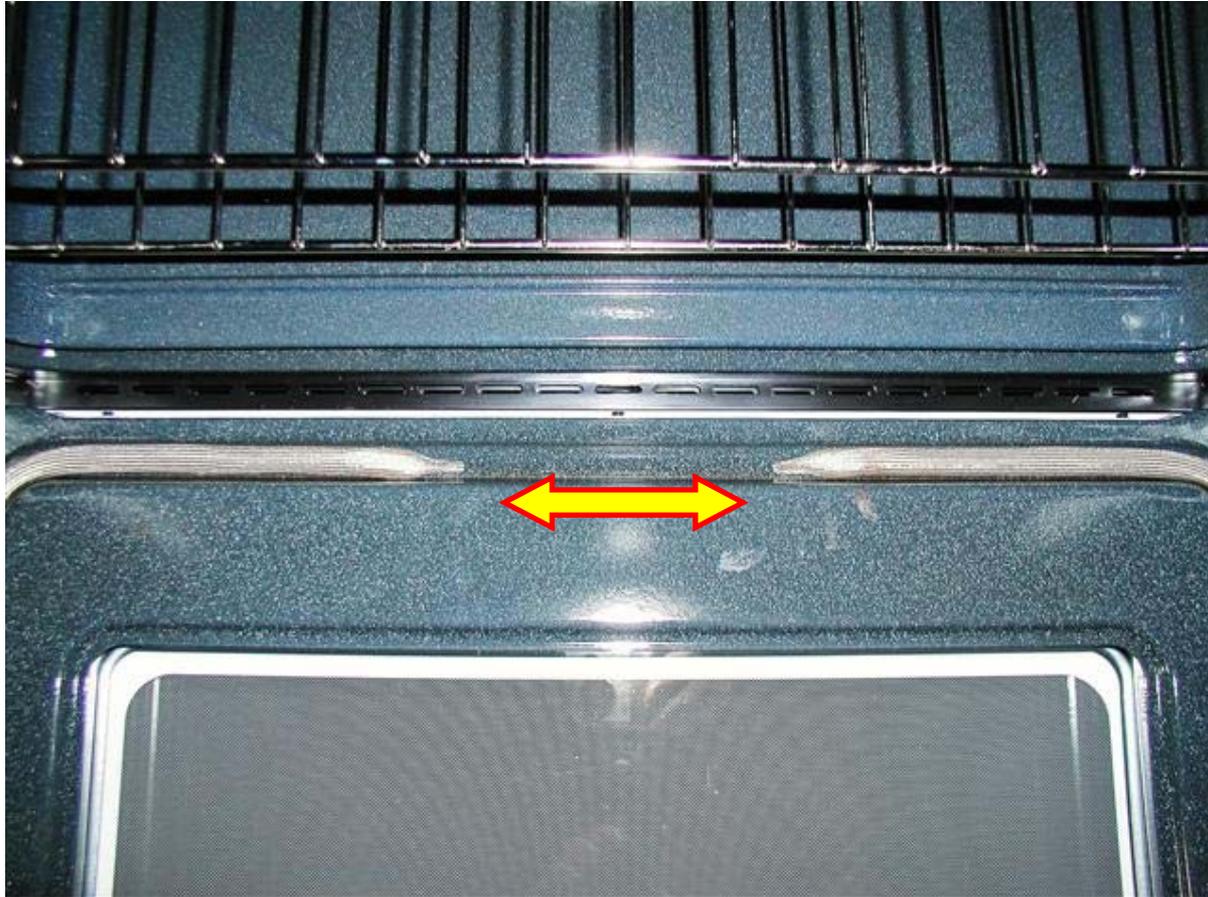
- Fully open the door.
- Push the hinge locks up against the front frame of the oven cavity, to the locked position.
- Close the oven door.

# Door Gasket



Door gasket attached with spring clips around perimeter of door.

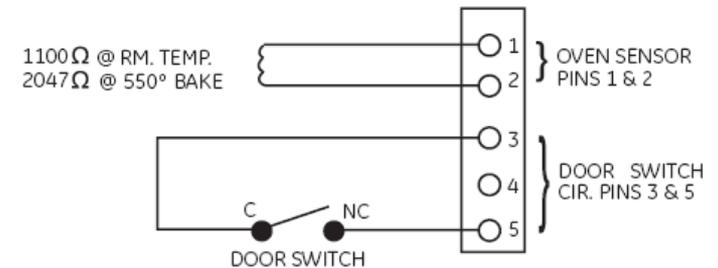
# Door Gasket



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

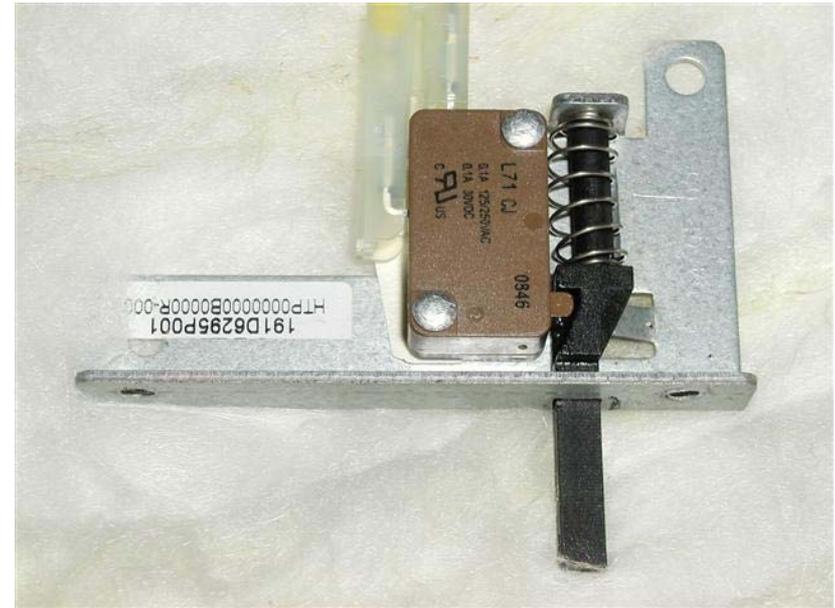


# Door Switch



Door switch is merely a sensor input to the control.  
It allows the control to know the status of the door position, open or closed.  
Has no control over the oven light operation.

# Door Switch Replacement



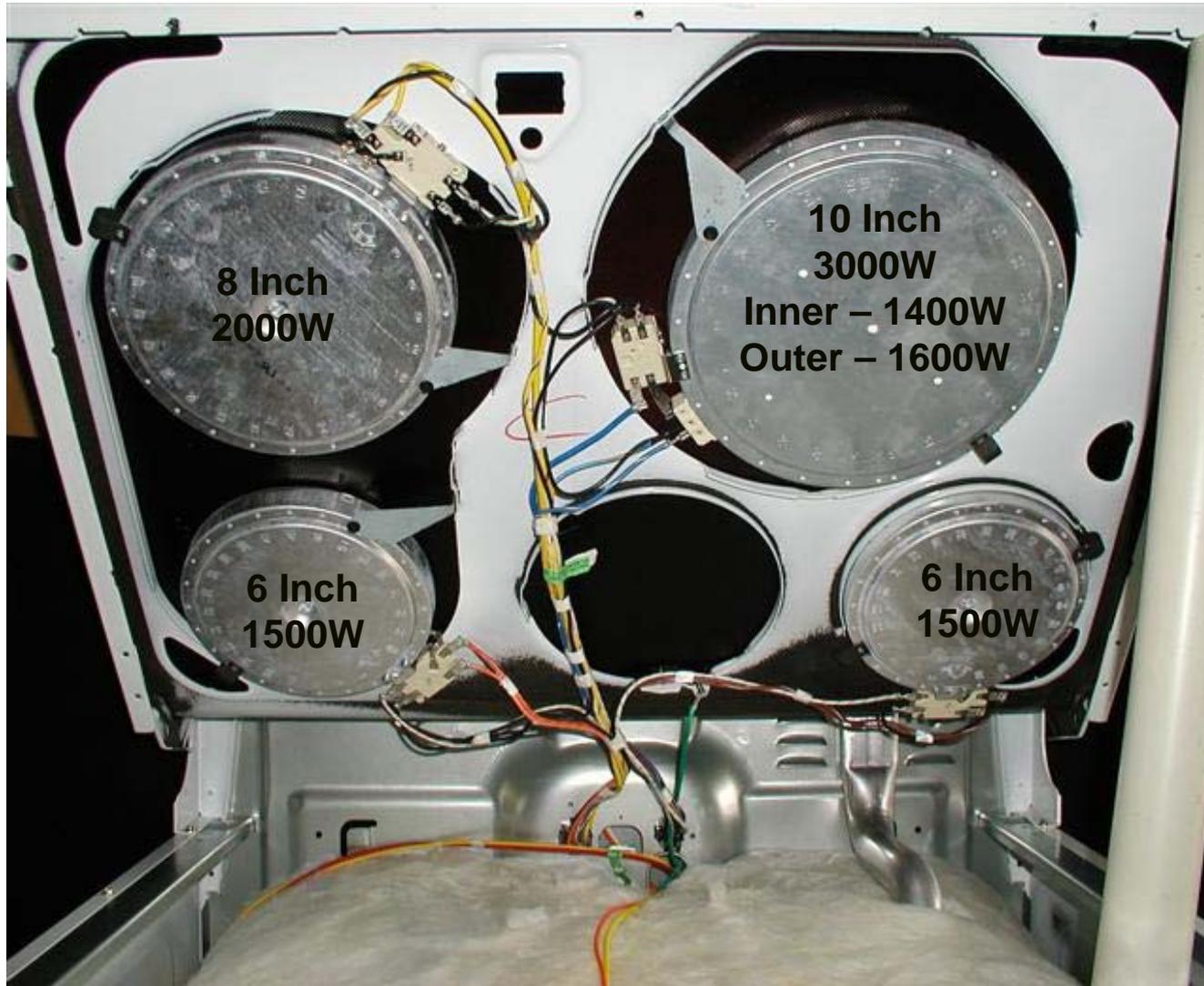
After lifting cooktop, switch assembly can be released by removing two ¼" hex heads securing it to the front frame of the oven.

# Cooktop

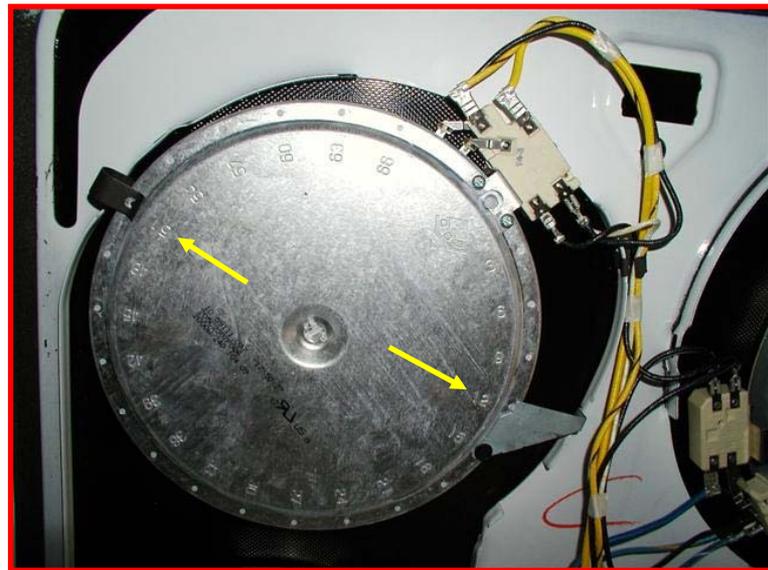


- Open oven door.
- Remove two ¼" hex head screws securing cooktop to front frame.
- Lift cooktop.
- Use prop to support cooktop, if desired.

# Cooktop Elements

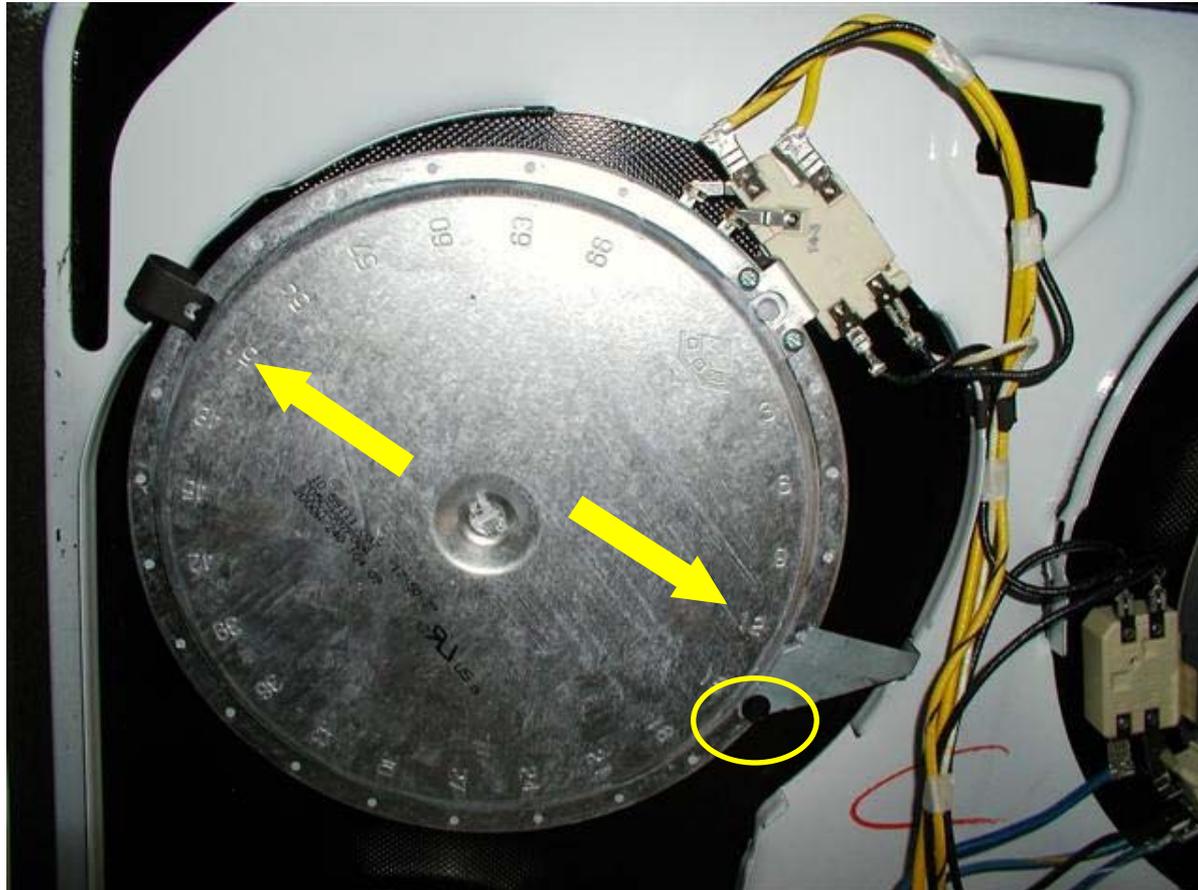


# Cooktop Element Replacement



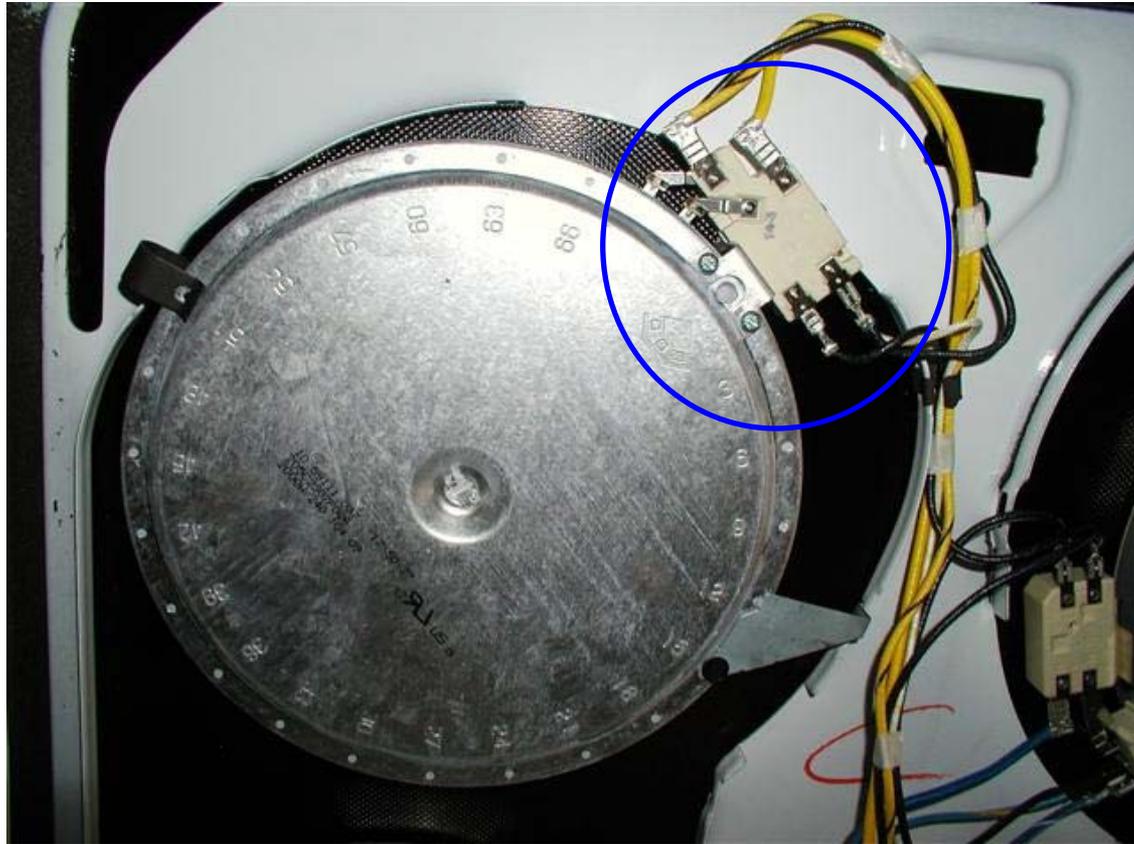
After marking the numbered holes on the burner outer case, lift up on spring clip to disengage it from the burner.

# Cooktop Element Replacement



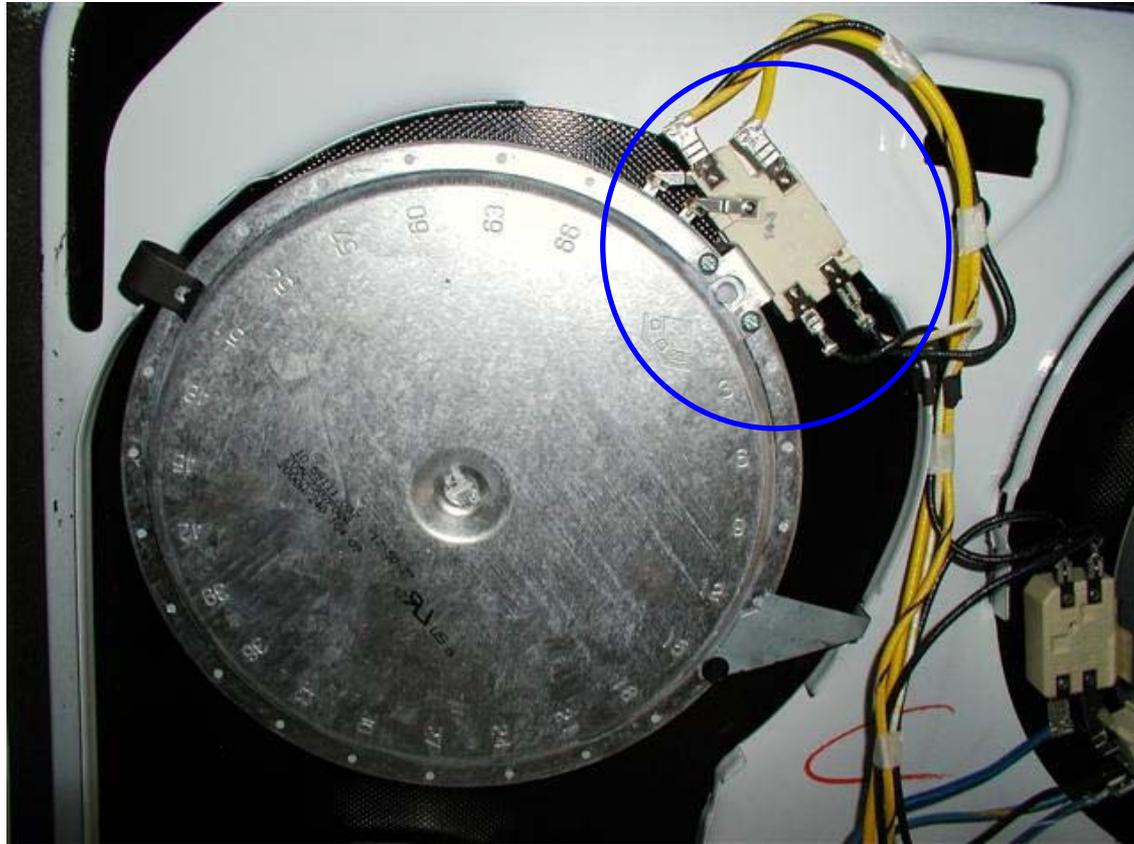
- After removing hex head from “L” bracket, remove bracket.
- Disengage mounting clips from burner case.
- Mark and remove wires from terminals.
- Lift and remove burner from cooktop assembly

# Temperature Limit / Hot Cooktop Light Switch



- The temperature limit/hot cooktop light switch performs two functions:**
1. Turns on the **Hot Cooktop 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 the surface unit switch has been turned off).

# Temperature Limit / Hot Cooktop Light Switch

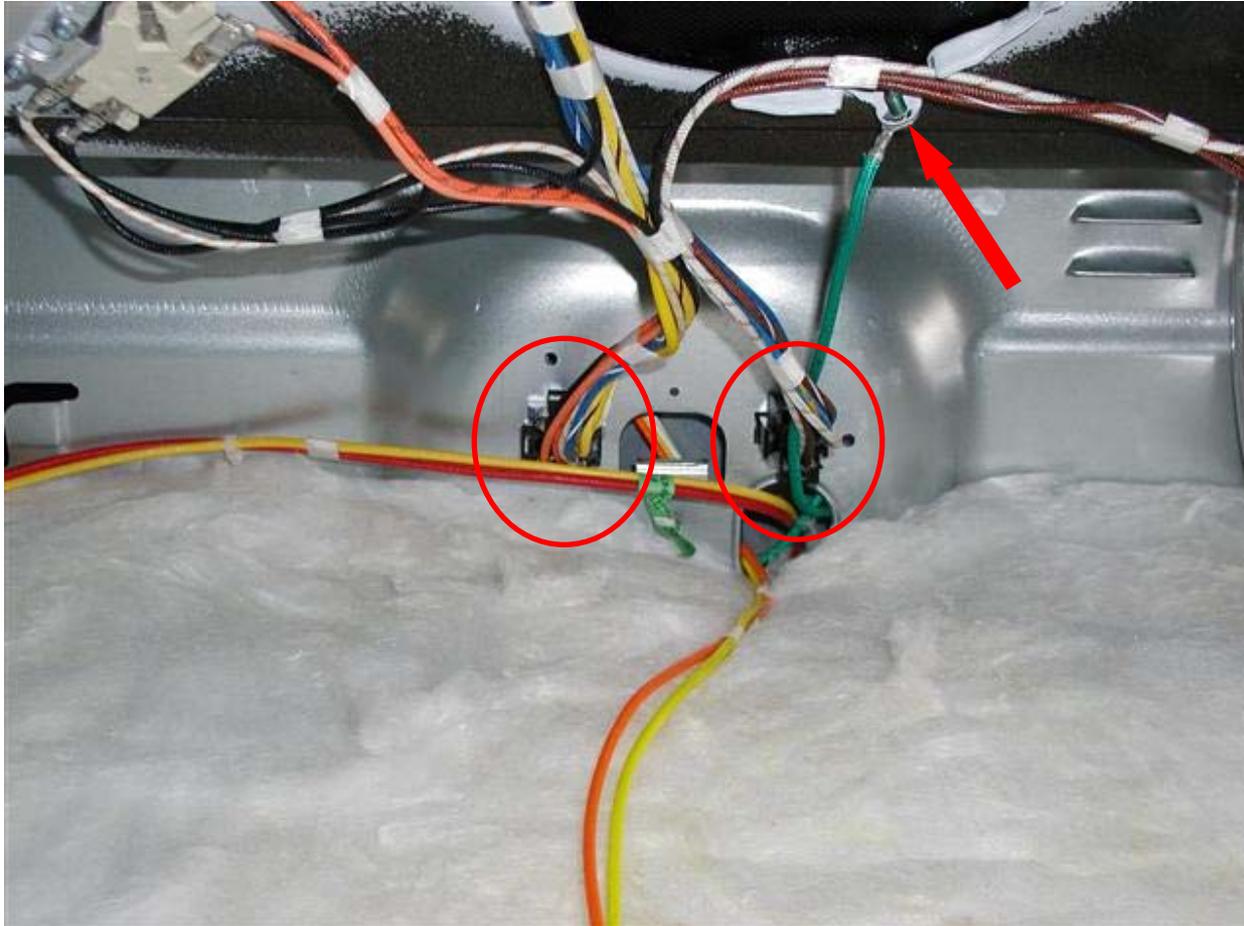


**The temperature limit/hot cooktop light switch performs two functions:**

2. Detects when glass temperature above a unit has exceeded it's limit of approximately 1031°F and disconnects power to that unit. When the glass temperature cools below 1031°F, the unit will turn back on.

\* The temperature limit/hot light switch cannot be calibrated.

# Cooktop Removal



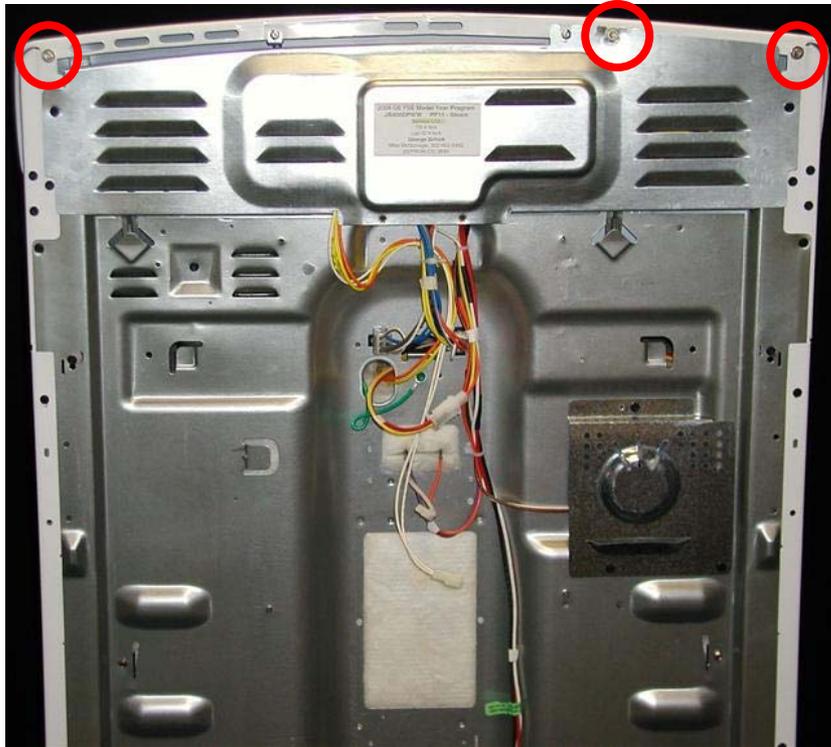
- Begin by disconnecting two power plugs at rear of cooktop area.
- Next, remove ground wire screw at bottom of cooktop.

# Cooktop Removal



- Return cooktop to normally closed position.
- Lift rear of cooktop @ two inches.
- Pull cooktop towards front of range to disengage hinge slots on cooktop from hinge pins on frame.

# Control Panel Removal



The control panel contains the ERC & the infinite heat switches.

To Service:

1. Remove 3 ¼" hex heads at the top, in the back of the range.
2. Remove 2 Phillips screws under the control panel in the front of the range.

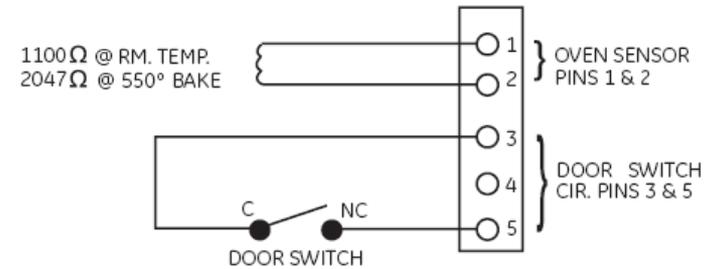
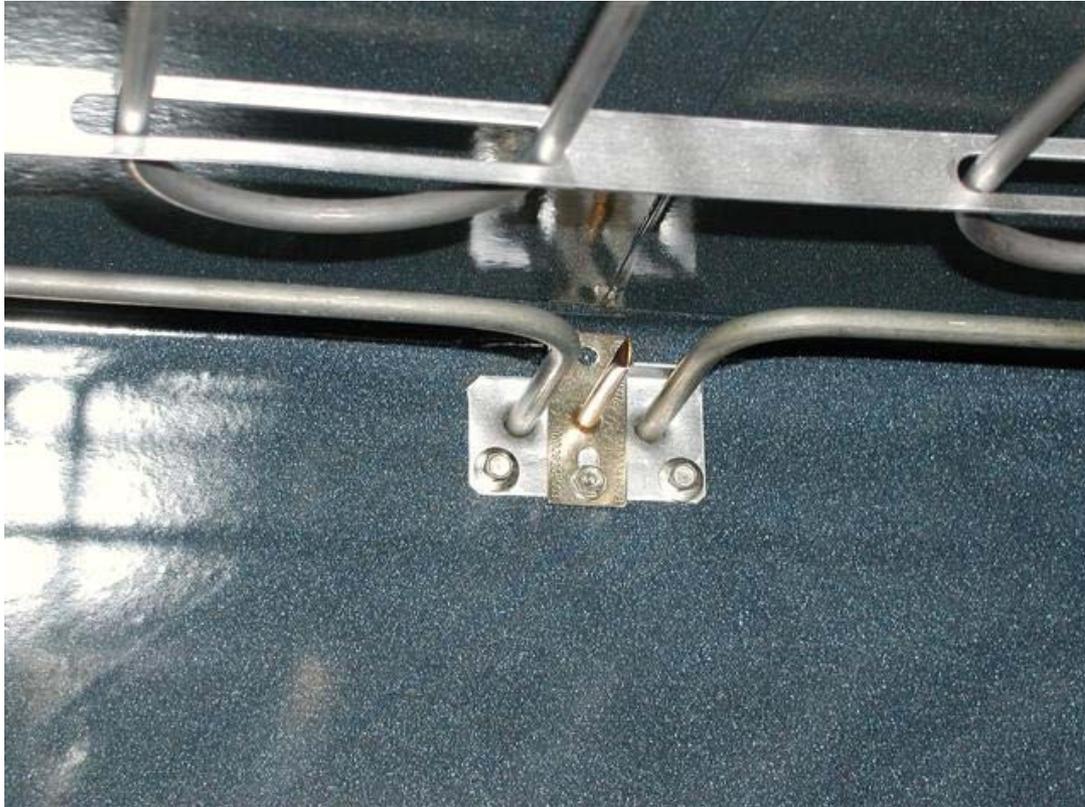
# Control Panel Removal



3. Pull bottom of panel out while lifting panel up.
4. Lay panel on cooking surface.

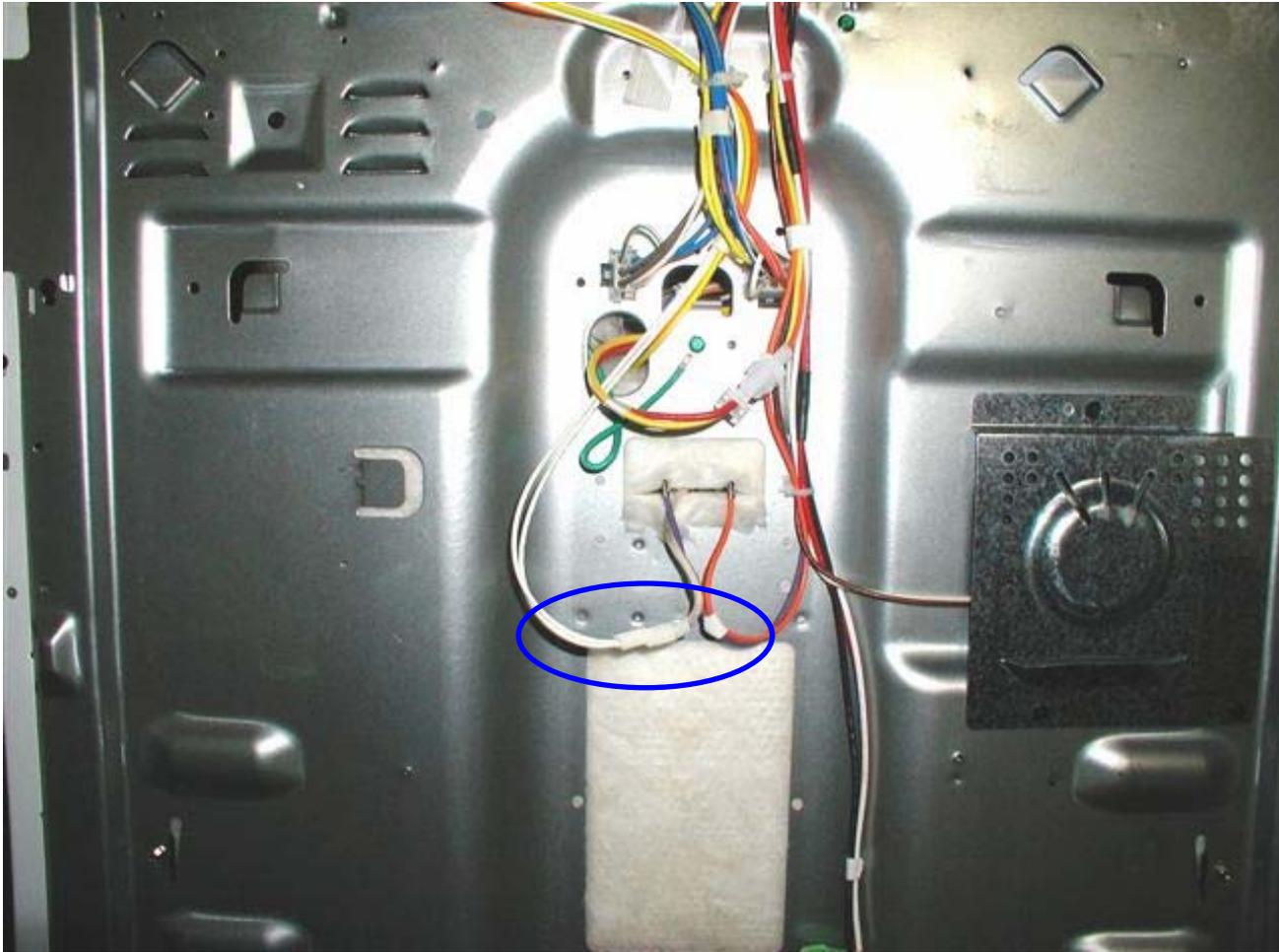
**CAUTION:** Place a protective covering (such as a towel) between the control panel and the cooking surface to avoid damage to either.

# Oven Sensor



- Oven sensor should read @ 1100 $\Omega$  at room temperature.
- Resistance can be read at the ERC plug (white wires) pins 1 & 2 or it can be read at the sensor disconnect plug behind the range.

# Oven Sensor



Oven sensor disconnect plug.

# T09 Control - ERC



The T09 Control System consists of the control, the key panel and the oven sensor. (Control & key panel are a single component).

# Display On / Off Feature



**Note:** the clock display will go blank if the UP and DOWN arrows are pressed at the same time for 1 sec or less.

If the customer complains that there is no time of day clock on the range, have them press the UP and DOWN arrows to have the clock re-appear

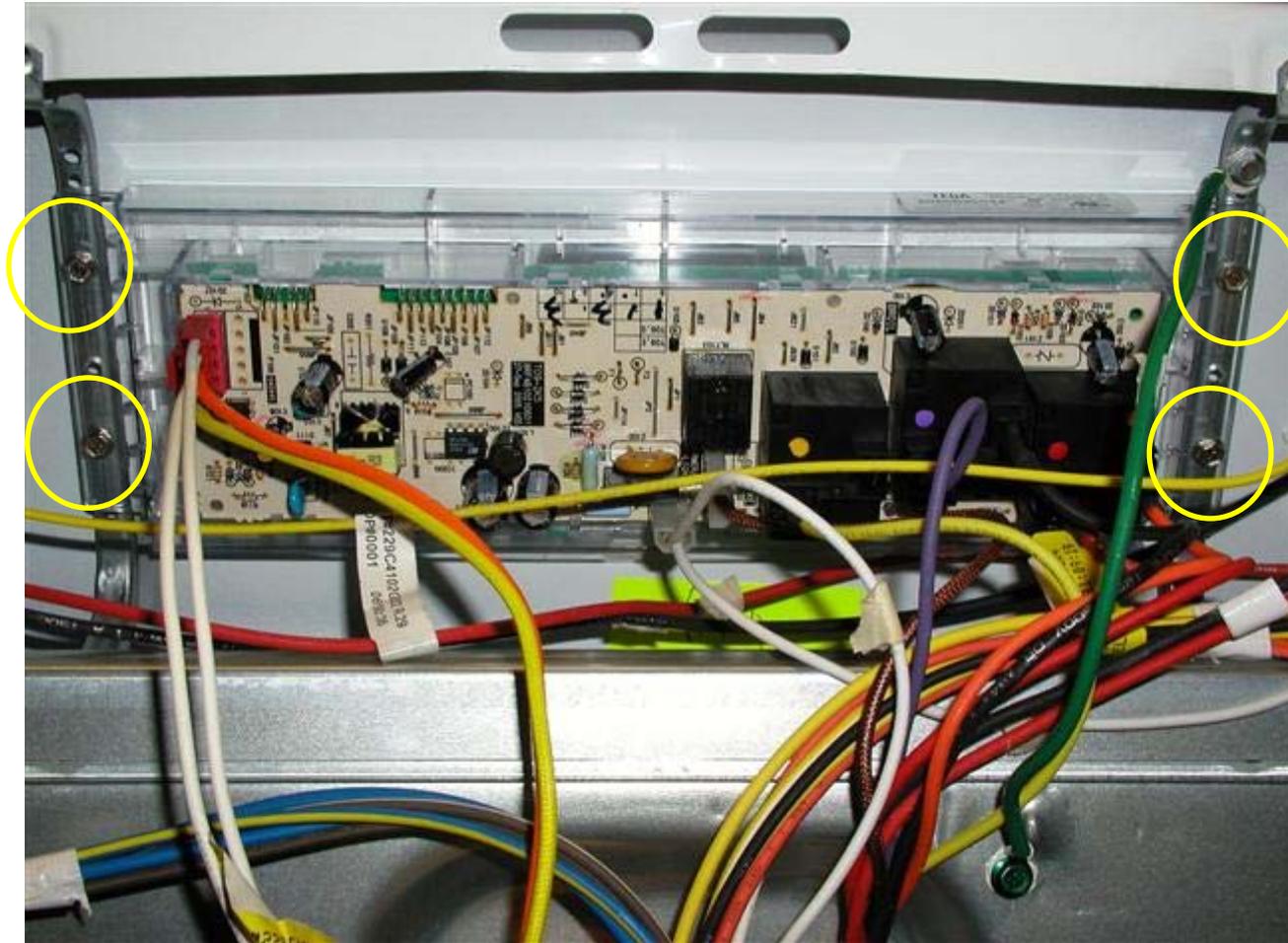
# Special Functions



Hold **Bake** and **Broil** keys simultaneously for 2 seconds until display shows SF (Special Function). Select the area to change. When change has been made, press start key to return to time of day.

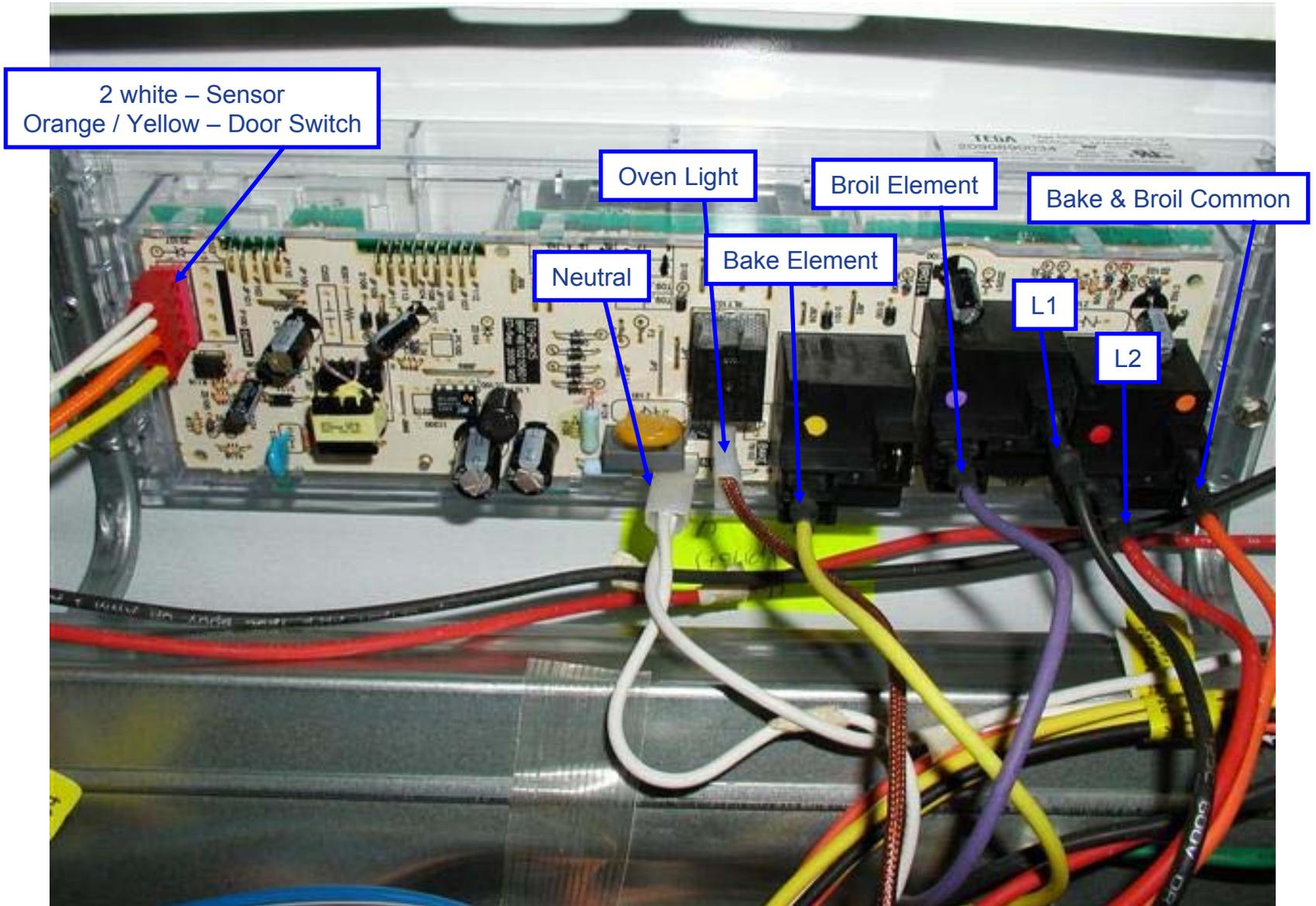
- **Adjust oven temperature:** Press **Bake** key, Display shows 'OO'. Use Up/Down keys to change the oven temperature. Oven temperature can be adjusted to a range of +/-35 degrees in steps of 1 degree.
- **SAb/ON/OFF:** Press **Clock** key when display showing 'SF'. The display changes for every clock key press to **ON/OFF/SAb**. **ON** stands for 12 Hr shutdown, **OFF** stands for no Shutdown, **SAb** stands for SABBATH special feature.

# T09 Control – ERC Removal



- To remove ERC from backslash, remove 4 ¼” hex heads securing ERC to backslash frame.
- Remove ERC from frame.

# T09 Control - ERC



# Key Panel Test



**Depress each pad on the key panel individually. If the key panel is functioning properly, the following should occur:**

- Bake, Broil, Steam Clean, Kitchen Timer, Cooking Time – Audible tone and display showing mode of operation selected.
- Start/On, Clear/Off – Audible tone and display shows time of day.
- Increase/Decrease pads – No audible tone. Can only be used after another function has been selected. Pressing both keys at the same time turns display on/off.
- Oven Light – Audible tone and the oven light toggles on and off.
- Clock – Audible tone and display change.

# 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
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)*	~0VAC when bake element on (if not, relay/ERC may be bad)**
L1-BROIL		~0VAC when broil element on (if not, relay/ERC may be bad)**	240VAC (mode active, broil relay off, DLB relay on)*

\*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.

# Fault Codes



<b><i>Function</i></b>	<b><i>Key (s)</i></b>	<b><i>Conditions &amp; Response</i></b>
Code retrieval to display	Kitchen Timer + Up + Down	Fault codes displayed
Clear codes	Kitchen Timer + Clock	Fault codes cleared
Exit mode	Clear/Off	Return to normal operation

# Fault Codes

## T09 FAULT CODES

FAILURE CODE	MEANING	CORRECTION
F2	OVEN TEMPERATURE (Temperature exceeded ~620°F)	<p>1. <b>If no overtemperature condition occurred</b>—check all contacts and connections in sensor circuit. Eliminate excessive resistance in sensor circuit due to increased contact/connector resistance.</p> <p>2. <b>If overtemperature condition occurred</b>—look for welded relay contacts on bake, broil, or double-line-break relays. If relay contact welding is confirmed—REPLACE CONTROL.</p>
F3	OPEN OVEN SENSOR Sensor resistance >2900 ohms	Disconnect sensor/latch connector from the control. Measure sensor circuit resistance at sensor/lock switch connector (should be ~1100 ohms at room temperature). Ensure each sensor lead to chassis ground resistance is infinitely high.
F4	SHORTED OVEN SENSOR Sensor resistance <950 ohms	<p><b>If open or short circuit is detected:</b></p> <ol style="list-style-type: none"> <li>1. Look for cut or pinched sensor harness wire.</li> <li>2. Look for sensor leads shorted to chassis ground.</li> <li>3. Look for loss of terminal contact in the harness and at the control.</li> <li>4. Check sensor resistance directly at sensor harness connector (away from the control). If reading is abnormal—REPLACE OVEN SENSOR.</li> </ol> <p><b>If sensor circuit appears to be normal:</b></p> <ol style="list-style-type: none"> <li>1. Reinstall sensor/lock switch connector on the control and measure sensor resistance at solder joints on the back of the control circuit board. If abnormal resistance reading is observed—RESTORE CONTACT PRESSURE OR SENSOR/LOCK SWITCH CONNECTOR.</li> </ol> <p><b>If corrective actions above do not eliminate the problem</b>—REPLACE CONTROL.</p>
F7	SHORTED MATRIX KEY	Power down then power up the range. If the fault condition reappears within 10 minutes—REPLACE CONTROL.
F8	EEPROM ERROR	Power down then power up the range. If the fault condition reappears within 5 minutes – REPLACE CONTROL.

# Steam Clean Operation



## The Steam Clean feature operates in the following manner:

1. Control checks for the oven temperature to be less than 120°F using the sensor circuit. If the temperature is >120°F, the control displays "Hot" and does not allow the cycle to begin.
2. Control checks that the door switch is closed. If the door switch is open, the control displays "dor" and does not allow the cycle to begin.
3. Bake element turns on full power for 3 minutes.
4. Bake element turns off and the oven cools for 27 minutes. Total cycle time is 30 minutes.
4. After 30 minutes, the Steam Clean LED flashes and beeper beeps until Clear/Off is pressed.

# Steam Clean Procedure



## To begin the steam cycle:

1. Remove racks and accessories from the oven cavity. Do not place cookware or other items in the oven during the Steam Clean cycle.
2. Pour 1 cup (8 oz.) of room temperature water onto the recessed area of the oven bottom. Do not add cleaning solutions or chemicals of any kind to the water.
3. Close the door.

# Steam Clean Procedure



4. Press the **Steam Clean** pad; then press **Start/On**.
5. A 30-minute cycle will begin to count down on the display.
6. When the Steam Clean cycle is complete, the oven control will beep and the **Steam Clean** light will blink. Press the **Clear/Off** pad.

# Steam Clean Procedure

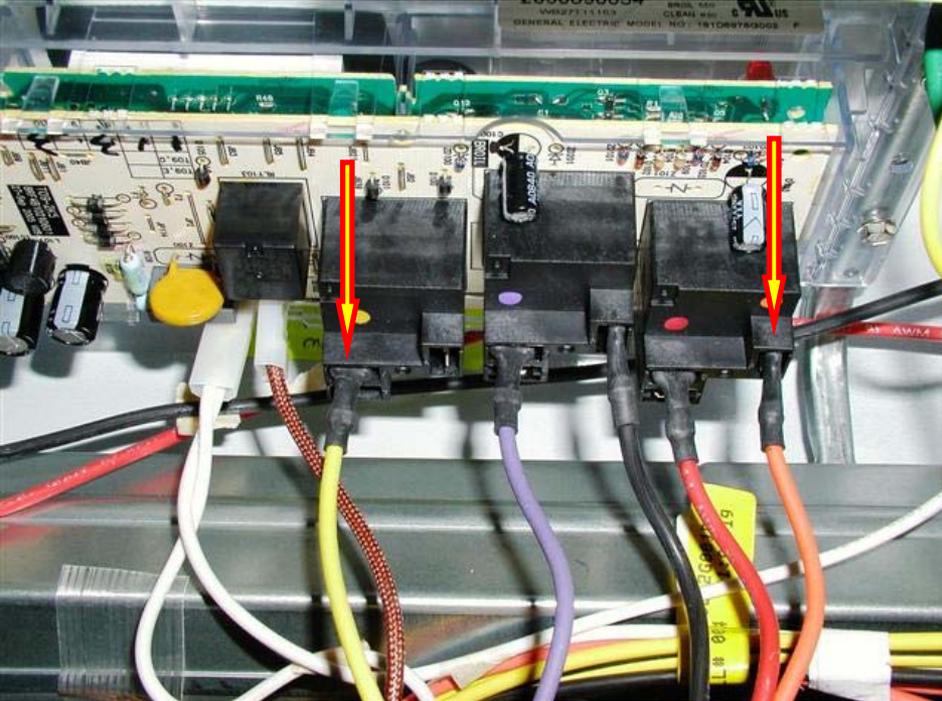


7. The oven bottom and remaining water will still be very warm at the end of the cycle. This is normal.
8. Remove soils using a scrub brush or nylon scouring pad. A soap filled steel wool pad may be used only on the porcelain oven interior. **The use of abrasive pads will scratch the door glass.** Do not wipe soil or water onto the door gasket.
9. **Remove any remaining water with a dry cloth or sponge.**
10. Leave the door open to air dry.

# Steam Clean Procedure – IMPORTANT NOTES

- If a steam clean cycle is initiated without water, press the **Clear/Off** pad to end the cycle. Wait for the range to cool to room temperature before pouring water into the recessed area and initiating another steam cycle.
- Do not open the door during the Steam Clean cycle. An error beep will sound upon opening the door.
- If a steam cycle is interrupted by opening the door, oven needs to be allowed to cool to room temperature and another steam cycle initiated.
- Press **Clear/Off** pad at any time to end the cycle.
- If mineral deposits remain in the oven bottom after cleaning, use a cloth or sponge soaked in vinegar to remove them.
- Some water may drip from the bottom of the oven door. If this happens, wipe it up at the end of the cycle.
- The door gasket may be wet when the Steam Clean cycle finishes. This is normal. do not clean the gasket.
- If soil still remains after cleaning the oven, see the “*Care and Cleaning of the Range*” section of the Owner’s Manual for additional options.

# Hidden Bake Element



- If a problem is suspected with the hidden bake element, check for proper resistance at the rear of the ERC or at the yellow / orange wire disconnect plug before range disassembly.
- Resistance between orange and yellow wires to element should be @ 20Ω.

# Hidden Bake Element



- If element requires replacement, range left side panel needs to be removed.
- Begin by removing the hidden screw at bottom front after removing storage drawer.

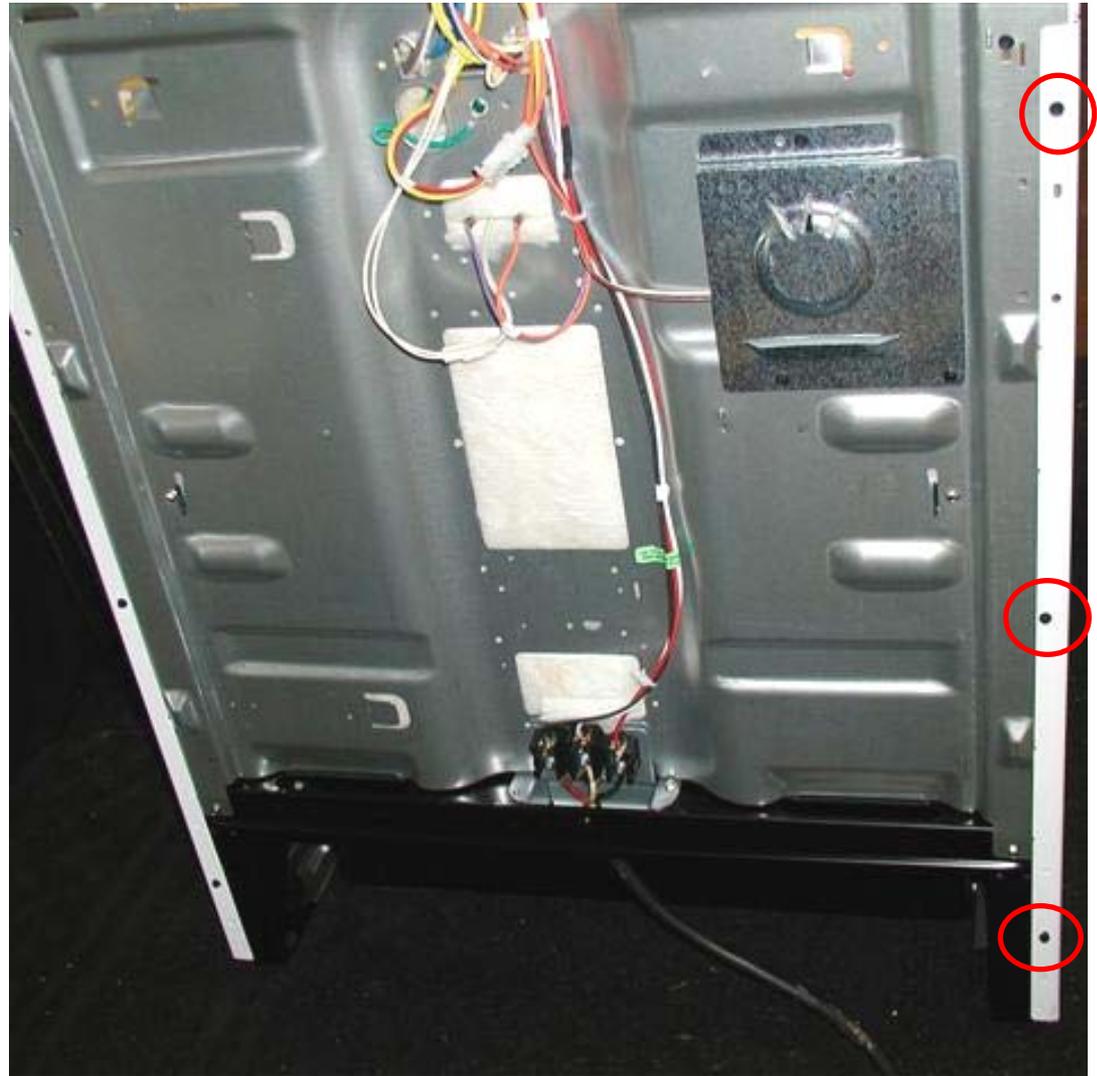
# Hidden Bake Element

After lifting or removing cooktop, remove two ¼" hex heads and a single Phillips screw from the top of the side panel.



# Hidden Bake Element

Next, remove 3 ¼" hex heads from rear of left side panel.

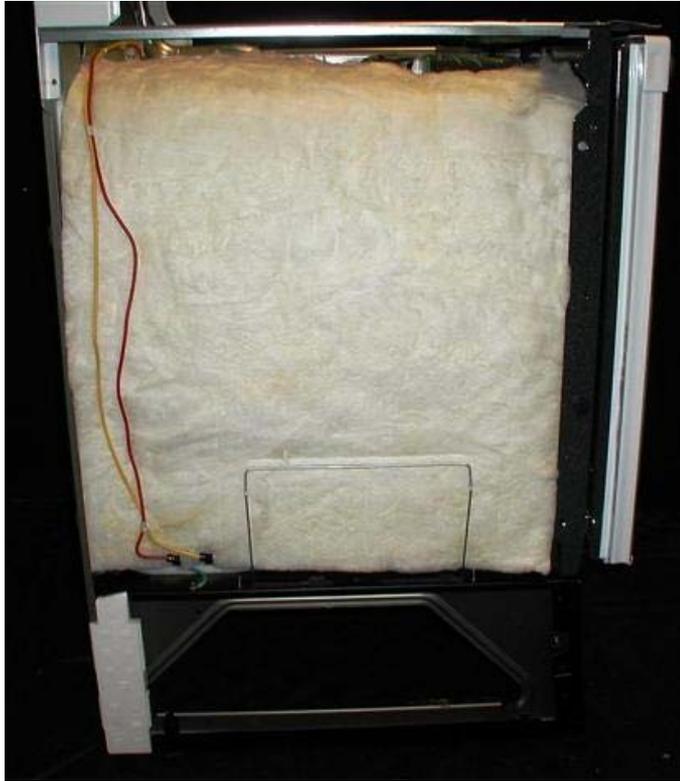


# Hidden Bake Element



Finally, grasp panel and lift @ an inch to release tabs on the side of the frame from openings in the side panel.

# Hidden Bake Element



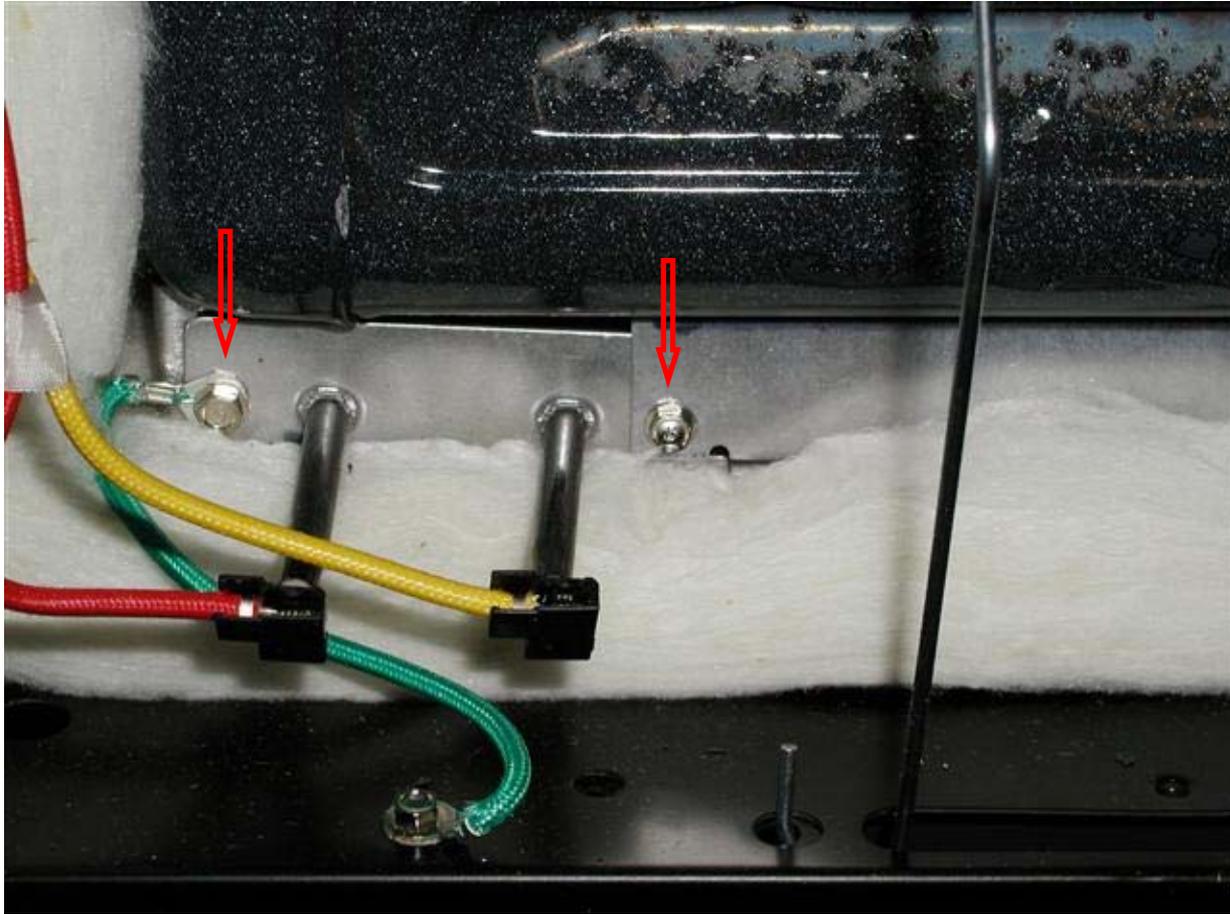
Carefully, lift insulation blanket and temporarily tuck it under upper frame to clear work area.

# Hidden Bake Element



Push down on insulation retainer to clear it from the bake element compartment opening.

# Hidden Bake Element



- Remove orange and yellow leads from bake element terminals.
- Remove two ¼" hex heads securing element compartment cover to frame.

# Hidden Bake Element



Fold out or completely remove compartment cover to access hidden bake element.

# Hidden Bake Element



Slide out element from compartment to remove.

# Hidden Bake Element



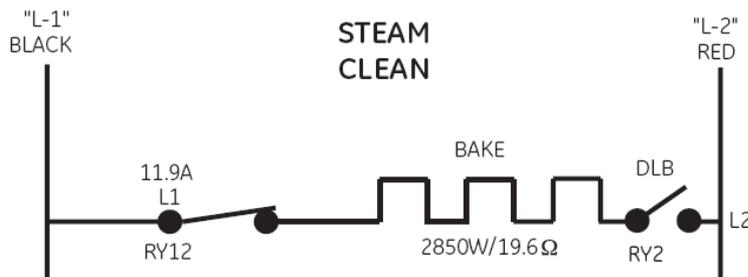
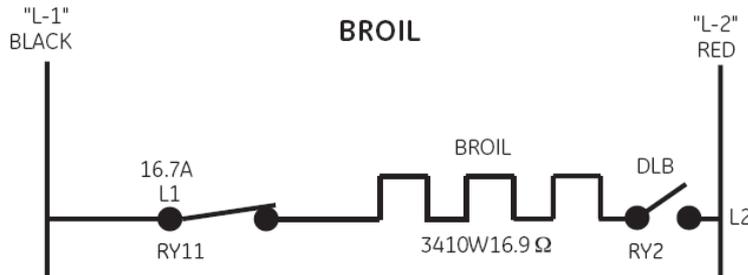
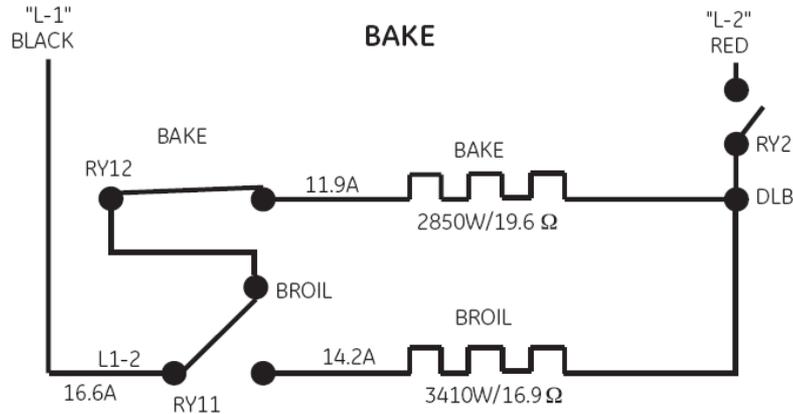
Upon re-insertion of bake element, tabs on assembly must align with slots or openings on the far side of the compartment.

# Oven Light



Oven lighting consists of a single 40w, incandescent bulb with a clear glass cover held in place with a spring wire.

# Strip Circuits

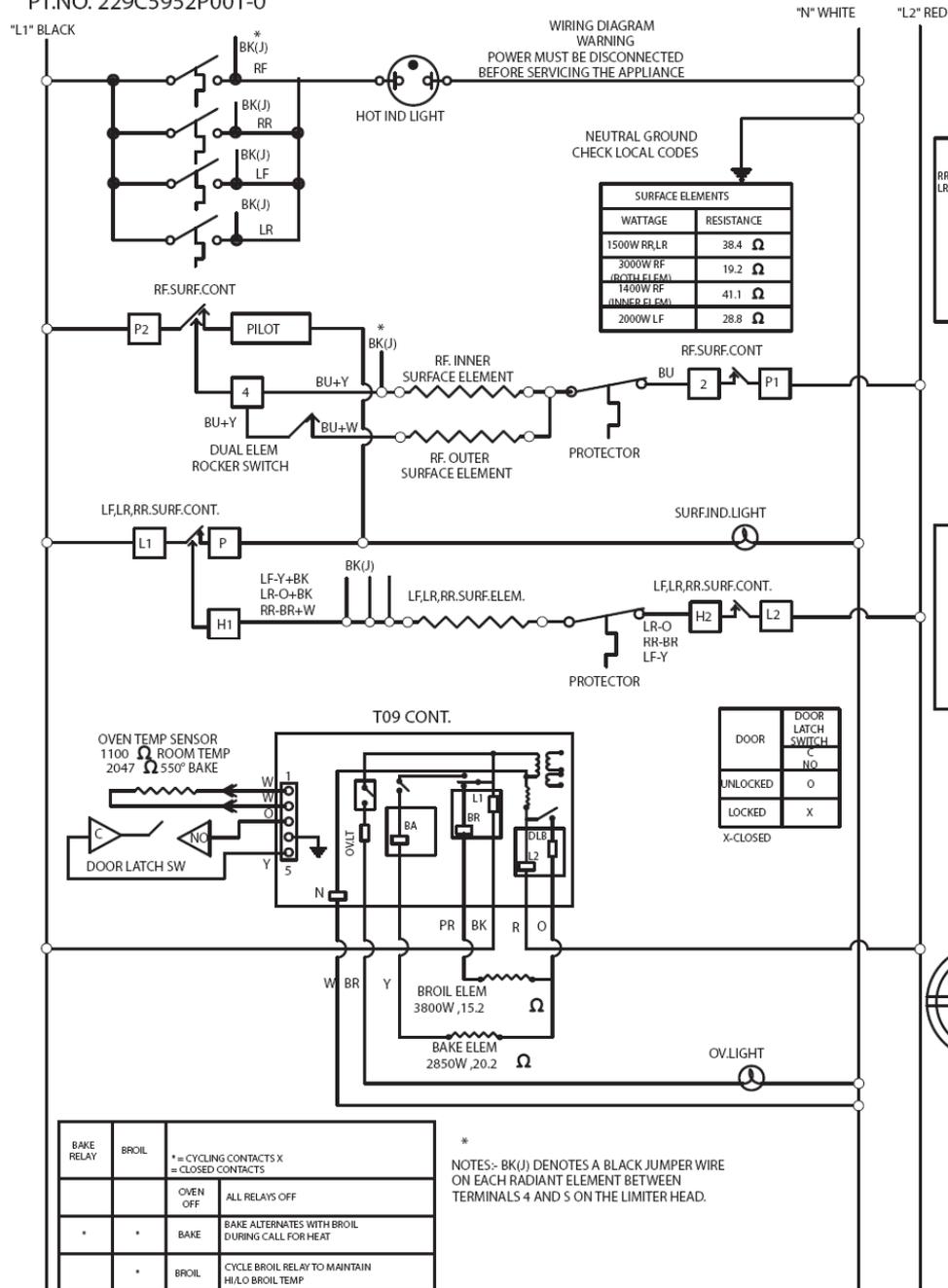


## NOTE:

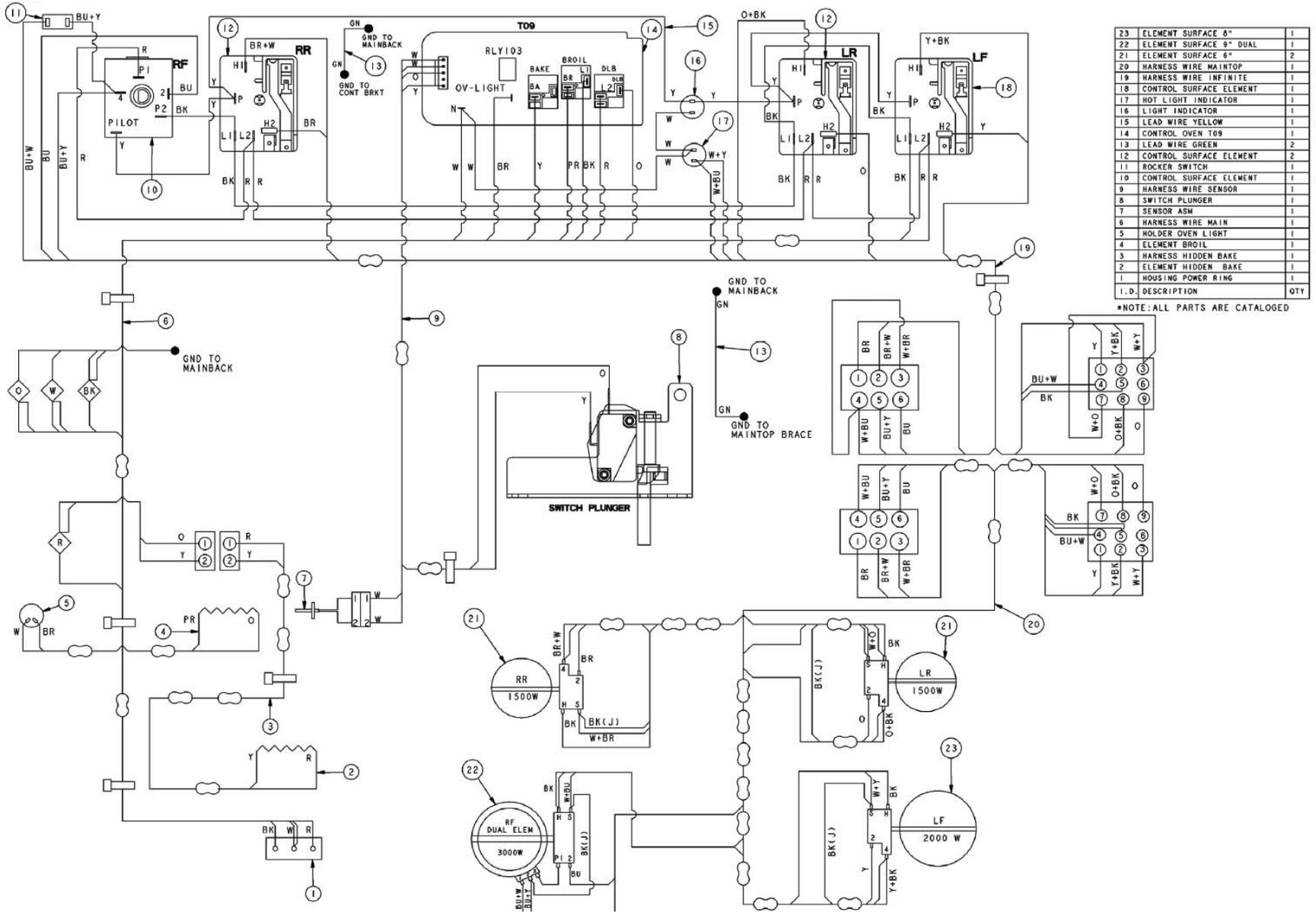
- BAKE/TIME BAKE – Bake and broil units cycle during preheat and balance of operation, one unit is on at a time.
- BROIL – Broil unit cycles during operation to maintain HI or LO temperature set point
- STEAM CLEAN – Bake unit turns on continuously for 3 minutes at the start of the cycle. The bake element turns off after 3 minutes and no additional heat is generated for the balance of the cycle.

# Schematic

PT.NO. 229C5952P001-0



# Wiring Diagram



23	ELEMENT SURFACE 8"	1
22	ELEMENT SURFACE 9" DUAL	1
21	ELEMENT SURFACE 6"	2
20	HARNES WIRE MAINTOP	2
19	HARNES WIRE INFINITE	1
18	CONTROL SURFACE ELEMENT	1
17	HOT LIGHT INDICATOR	1
16	LIGHT INDICATOR	1
15	LEAD WIRE YELLOW	1
14	CONTROL OVEN T09	1
13	LEAD WIRE GREEN	2
12	CONTROL SURFACE ELEMENT	2
11	ROCKER SWITCH	1
10	CONTROL SURFACE ELEMENT	1
9	HARNES WIRE SENSOR	1
8	SWITCH PLUNGER	1
7	SENSOR ASM	1
6	HARNES WIRE MAIN	1
5	HOLDER OVEN LIGHT	1
4	ELEMENT BROIL	1
3	HARNES HIDDEN BAKE	1
2	ELEMENT HIDDEN BAKE	1
1	HOUSING POWER RING	1
I.D.	DESCRIPTION	QTY

\*NOTE: ALL PARTS ARE CATALOGED

**END OF  
PRESENTATION**