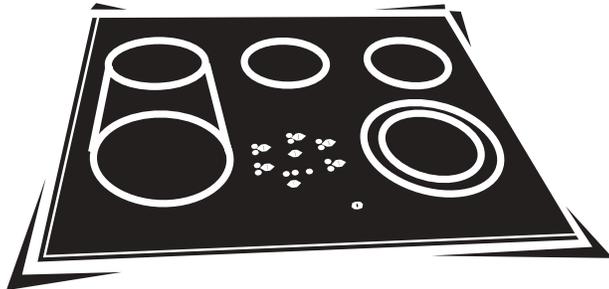




TECHNICAL SERVICE GUIDE

Electronic Touch Control & Electric Manual Control Cooktops



MODEL SERIES:

Electronic: JP938
JP968

Electric: JP340
JP350
JP930
JP960





IMPORTANT SAFETY NOTICE

The information in this service guide 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.

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 and properly fastened.

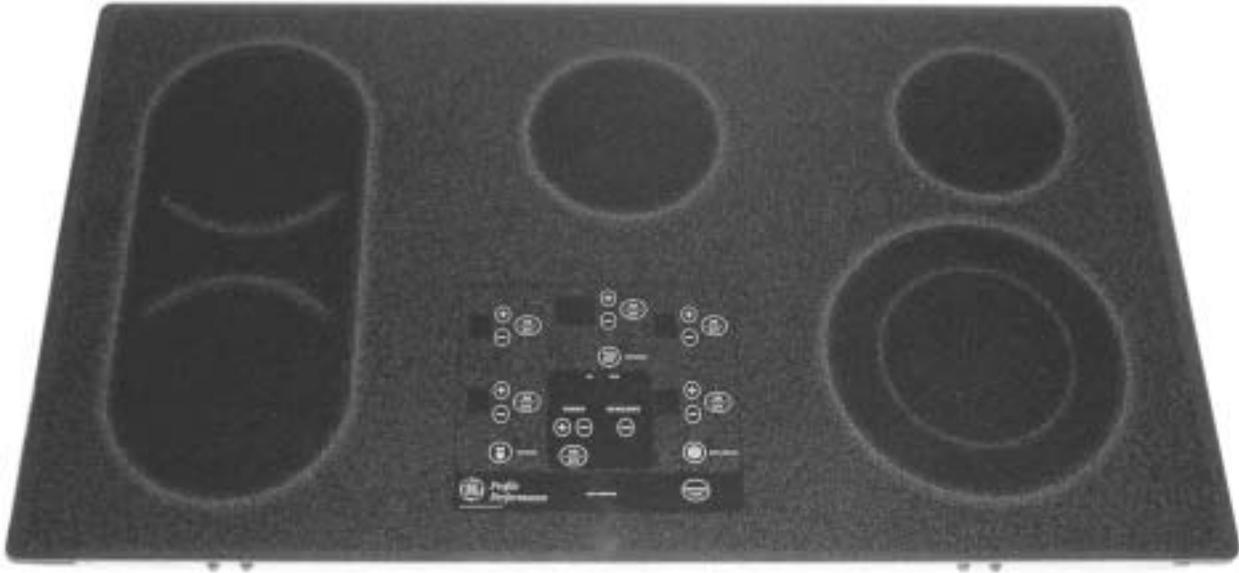
GE Consumer Home Services Training
Technical Service Guide
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Introduction



GEA00790

The new electronic cooktops make an eloquent statement of style, convenience, and kitchen planning flexibility. The electronic touch controls are simple to understand and easy to operate—just read and touch.

These cooktops include many helpful features. The pan detection feature automatically shuts the heating element OFF after 60 seconds of removing a metallic pan from the heater. The pan sizing feature adjusts the heated portion of the dual element to fit the size of a metallic pan. And the new warming feature keeps sauces and gravies warm—or can be used as a normal heating element.

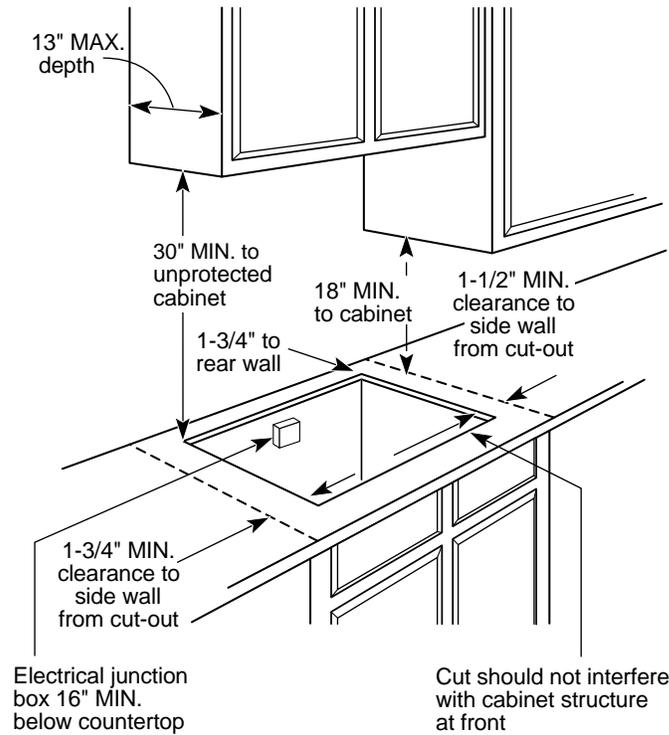
The controls lockout feature protects against power activation to a heating element during times of unintended usage or when cleaning the cooktop. And the convenient kitchen timer can be used with or without operating the heating elements to simplify any kitchen task that requires a count-down timer.

It's easy to see how GE's fresh ideas can make anyone more creative in the kitchen!

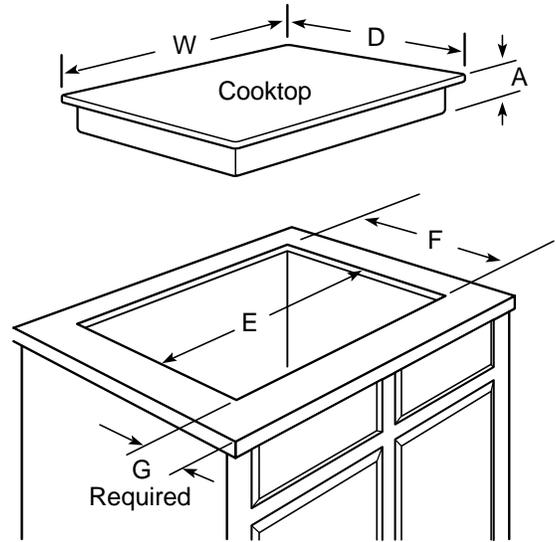
The information on the following pages will help you service these new electronic and electric cooktops effectively and efficiently.

Installation

Counter Installation Dimensions (in inches)



Cooktop Dimensions (in inches)



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Dimensions (in inches)

Model	Overall			Cutout		To Edge of Front Counter (Min.)
	W	D	A	E	F	
JP968WC/CC/BC	36	20-3/8	3-1/4*	33-7/8	19-1/8	2-1/2
JP960TC/CC/BC	36	20-3/8	3-1/4*	33-7/8	19-1/8	2-1/2
JP938WC/CC/BC	29-3/4	20-7/8	3-1/4*	28-1/2	19-5/8	2-1/2
JP930TC/CC/BC	29-3/4	20-7/8	3-1/4*	28-1/2	19-5/8	2-1/2
JP350TC/WC/CC/BC	29-3/4	20-7/8	3-1/4*	28-1/2	19-5/8	2-1/2
JP340WC/BC	29-3/4	20-7/8	3-1/4*	28-1/2	19-5/8	2-1/2

*Depth of unit at conduit connection location (rear) is 6-1/4" on models JP968/938 and 4-5/8" on models JP960/930/350/340.

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Stainless Steel Cooktop Dimensions (in inches)

Model	Overall			Cutout		To Edge of Front Counter (Min.)
	W	D	A	E	F	
JP968SC	36-1/8	21	3-1/4*	33-7/8	19-1/8	2-1/2
JP960SC	36-1/8	21	3-1/4*	33-7/8	19-1/8	2-1/2
JP938SC	29-7/8	21-1/2	3-1/4*	28-1/2	19-5/8	2-1/2
JP930SC	29-7/8	21-1/2	3-1/4*	28-1/2	19-5/8	2-1/2
JP350SC	29-7/8	21-1/2	3-1/4*	28-1/2	19-5/8	2-1/2

*Depth of unit at conduit connection location (rear) is 6-1/4" on models JP968/938 and 4-5/8" on models JP960/930/350.

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36-in. and 30-in. Cooktops

Refer to installation instructions. Installation requires an 18-in. minimum distance from cooktop to adjacent overhead cabinets. Units are furnished with a 48-in. flexible armored cable.

Cooktop installation requires a 5-in. free area between the bottom of the cooktop and any combustible material, such as shelving. This 5-in. area is not required when installing a wall oven underneath the cooktop.

The 36-in. cooktops are approved for use over GE 30-in. single wall ovens **only**. The 30-in.

cooktops are approved for use over select GE 27-in. and GE 30-in. single wall ovens.

Note: If installing with a GE Profile Performance™ or GE Profile™ Telescopic Downdraft System, consult both cooktop and downdraft installation instructions packed with the products before installing. Cooktop electric supply may need to be rerouted to install the downdraft ventilation.

Note: Consult the cabinet and countertop manufacturer's specs for flush-mount installation prior to installing.

Grounding Specifications

Ground Path Resistance 0.10 ohms Max.
Insulation Resistance 250K ohms Min.

Power Supply Requirements

The cooktop **must** be connected to a supply circuit of the proper voltage and frequency as specified on the rating plate. The rating plate is located on the side of the component box. Wire size **must** conform to the National Electrical Code or the prevailing local code.

Overcurrent Protection for Counter-Mounted Cooktops

NEC RATING	MAXIMUM KILOWATT RATING		
	208V	236V	240V
20 Amp	4.2	4.7	4.8
30 Amp	6.2	7.1	7.2
35 Amp	7.3	8.3	8.4
40 Amp	8.3	9.4	9.6
50 Amp	10.4	11.8	12.0

GEA00794

The branch circuit load for **one** counter-mounted cooktop is the rating on the nameplate of the appliance. The branch circuit load

for a counter-mounted cooktop and **not more than two** wall-mounted ovens – all supplied from a single branch circuit and located in the same room – shall be computed by adding the nameplate ratings on the individual appliances and treating this total as **equivalent to one range**.

Wiring

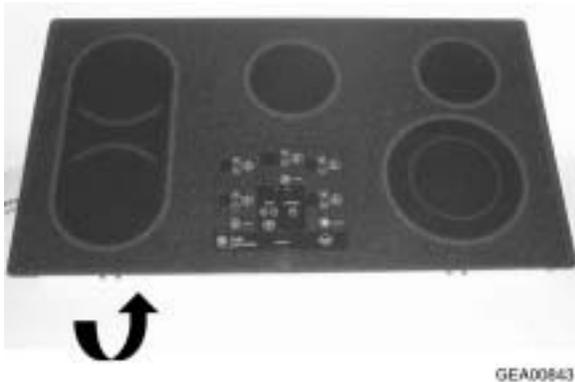
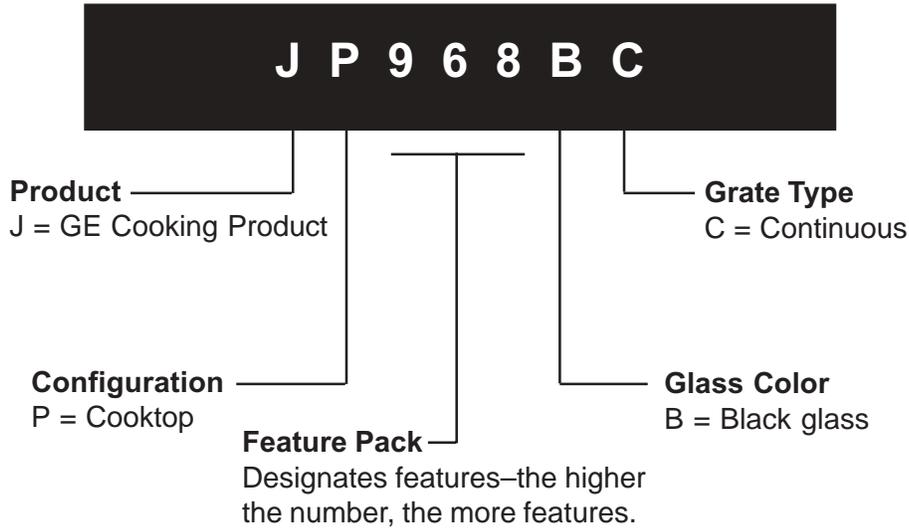
Built-in power leads are U.L. approved for connection to larger gauge household wiring. The insulation of these leads is rated at temperatures much higher than the temperature rating of household wiring. The current carrying capacity of a conductor is governed by the temperature rating of the insulation around the wire rather than the wire gauge alone.

WARNING: Improper connection of aluminum house wiring to these copper leads can result in a serious problem. Use **only** connectors designed for joining copper to aluminum and follow the manufacturer's recommended procedure closely.

Specifications and Nomenclature

For specifications table, refer to *Cooktop Features and Controls*, page 11.

Model Number



The serial plate of your cooktop is located on the bottom of the burner box. In addition to the model and serial numbers, this plate tells you the power ratings of the supply circuit for the cooktop.

Serial Number

The first two numbers of the serial number identify the month and year of manufacture.
Example: AZ123456S = January, 2000

A - JAN	2005 - H
D - FEB	2004 - G
F - MAR	2003 - F
G - APR	2002 - D
H - MAY	2001 - A
L - JUN	2000 - Z
M - JUL	1999 - V
R - AUG	1998 - T
S - SEP	1997 - S
T - OCT	1996 - R
V - NOV	1995 - M
Z - DEC	1994 - L

The letter designating the year repeats every 12 years.

Example:
 T - 1974
 T - 1986
 T - 1998

Note: The technical sheet is located under the control panel.

Warranty Information



Sales slip or cancelled check is required as proof of original purchase date to obtain service under warranty.

All warranty service is provided by our Factory Service Centers or an authorized Customer Care® technician.

For The Period Of:	GE Will Replace:
One Year From the date of the original purchase	Any part of the cooktop that fails due to a defect in materials or workmanship. During this full one-year warranty , GE will also provide, free of charge , all labor and in-home service to replace the defective part.
Five Years From the date of the original purchase	Glass-Ceramic Cooktop, Ribbon Heating Elements and Rubber Seal , if any of these parts should fail due to a defect in materials or workmanship. During this limited additional four-year warranty , GE will replace the defective part free of charge , you will be responsible for service trips and labor charges.

What GE Will Not Cover:

- Service trips to your home to teach you how to use the product.
- Improper installation.
- 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.
- 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 to personal property caused by possible defects with this appliance.

This warranty is extended to the original purchaser and any succeeding owner for products purchased for home use within the USA. In Alaska, the warranty excludes the cost of shipping or service calls to your home.

Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To know what your legal rights are, consult your local or state consumer affairs office or your state's Attorney General.

Warrantor: General Electric Company, Louisville, KY 40225

Cooktop Features and Controls

Throughout this manual, features and appearances may vary from the customer's model.

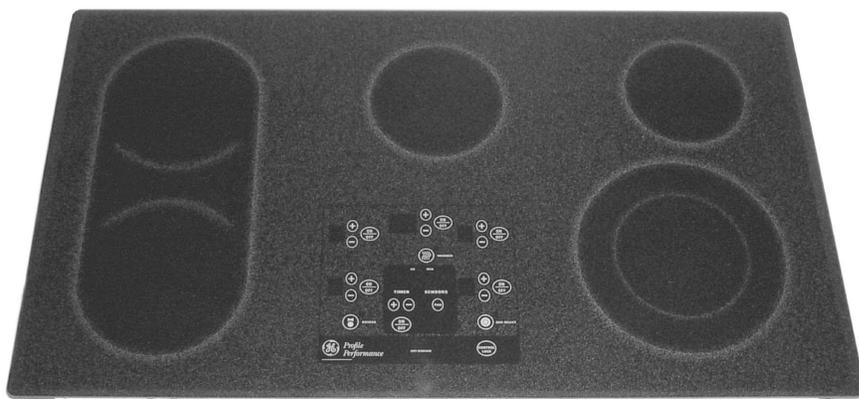
The new Electronic Touch Control and Electric Manual Control Cooktops encompass over 20 models of cooktops. They include 30-in., 4-burner and 36-in., 5-burner radiant glass cooktop configurations.

Feature Index

1. Frameless Glass Cooktop
2. Electronic Touch Controls*
3. Pan Detection*
4. Pan Sizing*
5. Control Lock-out*
6. Kitchen Timer*
7. Ribbon-Type Heating Elements
8. 7-in. Heating/Warming Element*

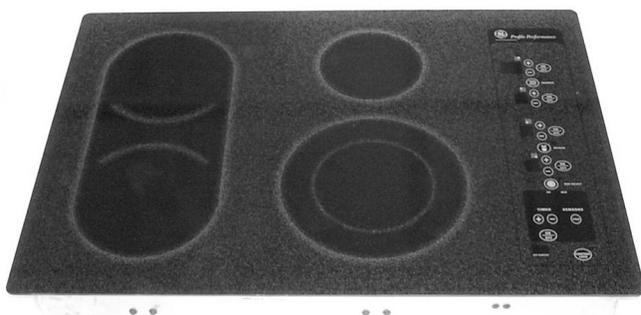
*Some Models, JP938 & JP968

JP968 (36-in.) Electronic Cooktop



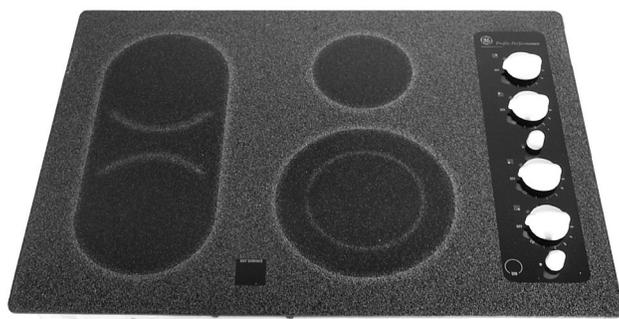
GEA00764

JP938 (30-in.) Electronic Cooktop



GEA00795

JP930 (30-in.) Electric Cooktop



GEA00796

Ceramic Glass Surface

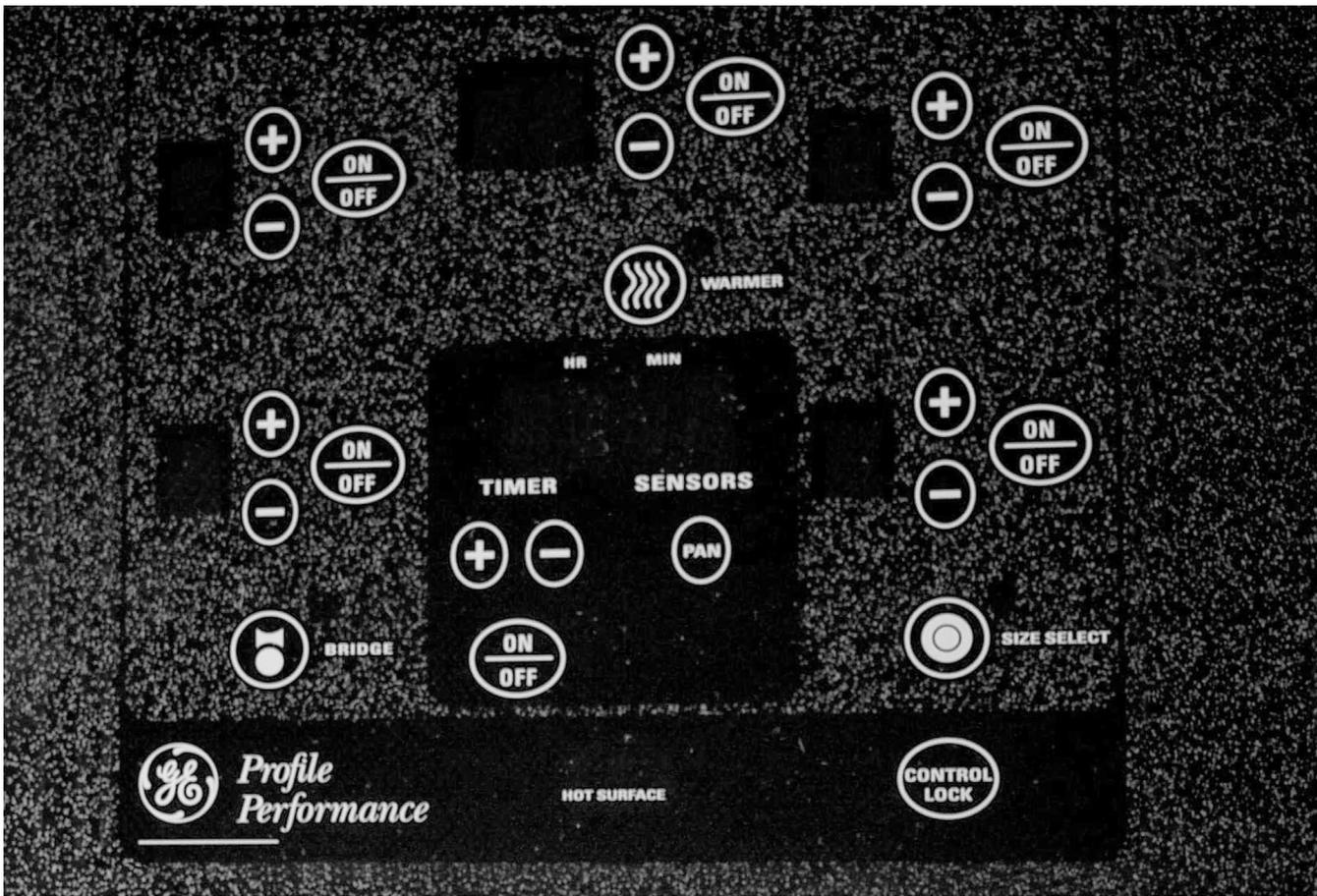
These cooktops feature a ceramic glass cooking surface over an electric radiant surface element. The electronic models feature touch controls on this glass surface that take the place of control knobs.

Appearance Defects

Scratches, marks from cooking utensils, discoloration, stains, spots, etc. can be caused by food soils, cookware, cleaning solutions, or water marks.

Before replacing the cooktop, try using the cooktop cleaning procedure outlined in the Owner's Manual, using the cleaning cream and Scotch Brite® pad shipped with the product.

Note: When servicing the cooktop, care must be taken not to scratch or damage the glass.

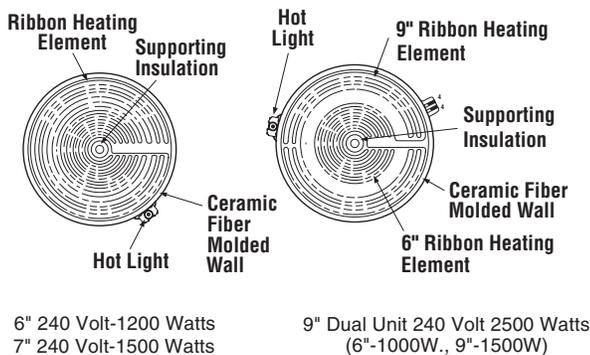


GEA00797

Heating Element Systems

The Haliant Surface Element consists of a ribbon-type resistance wire attached to the support insulation with molded ceramic fiber walls in a corrosion-protected metal dish.

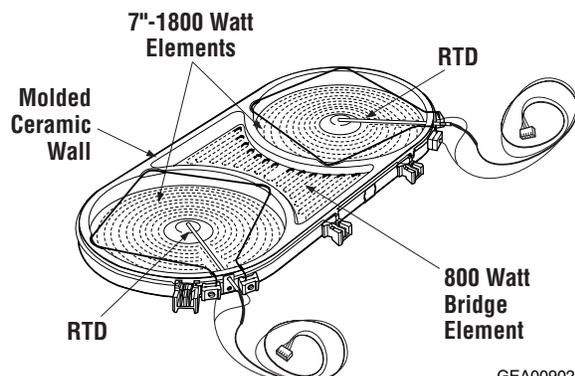
These circular heating elements come in the three sizes listed below.



GEA00798

Bridge Element

The Bridge Element is made up of two 7-in., 1800 watt elements plus an 800 watt element between the two 7-in. elements. The elements consist of a ribbon-type resistance wire attached to support insulation with molded ceramic walls. The digital control on the electronic models (or the infinite heat switches on the electric models) regulates the 7-in. units independently of each other, or in combination when the bridge operating mode (or switch) is selected. The bridge and the left front element are regulated by the same controls.



GEA00902

Electronic Touch Controls (Some Models, JP938 & JP968)

The touch controls provide precise control of the surface elements. You can quickly switch from a steady low heat to full power or any setting in between.



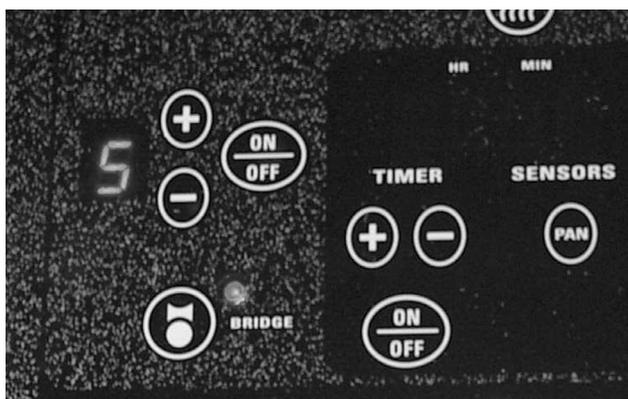
GEA00800

To turn ON a standard surface element, touch the ON/OFF pad, then touch the (+) or (-) pad. The surface element will energize to power setting 5. Use the (+) or (-) pads to choose the desired setting: L (low), 1-9, or H (high). The control will beep each time the pad is touched. To turn the surface element OFF, touch the ON/OFF pad again.



GEA00801

To turn ON a 9-in. dual surface element, touch the ON/OFF pad, then touch the (+) or (-) pad. The small surface element will energize to power setting 5. Touch the SIZE SELECT pad to energize both large and small surface elements. Use the (+) or (-) pads to choose the desired setting. To turn the large surface element OFF, touch the SIZE SELECT pad again. To turn both the large and small surface elements OFF, touch the ON/OFF pad.



GEA00802

To turn ON the bridge element, set the left front surface element to the desired setting. Touch the BRIDGE pad. The bridge element will energize to the same level as the left front surface element ...or, touch the ON/OFF pad for the left front surface element, then touch the BRIDGE pad. The left front and bridge elements will both energize to power setting 5. Using the (+) or (-) pads will control the setting for both elements. To turn the bridge element OFF, touch the BRIDGE pad again. Touching the ON/OFF pad will turn OFF both the left front and the bridge elements.



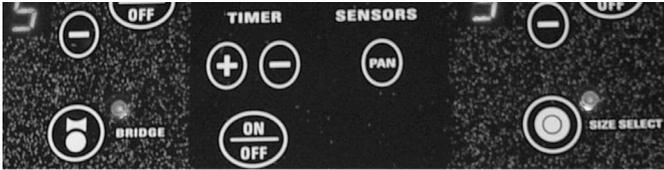
GEA00844

To turn ON the warmer surface element, touch the ON/OFF pad, then touch the WARMER pad. If the surface element is already in use, touch the WARMER pad. The surface element will energize to the warmer power setting W1. Use the (+) or (-) pads to choose the desired warmer setting: W1, W2, or W3.

To turn OFF the warmer power setting, touch the WARMER pad again. The surface element will remain ON in power setting L (low). To turn OFF the surface element, touch the ON/OFF pad again.

Indicator Lights

Lights will come ON next to the bridge, warmer, dual unit, or control lockout pads when touched, to indicate the surface element or feature is energized. The light will go OFF when the surface element or feature is turned OFF.



GEA00845

HOT SURFACE Indicator Lights

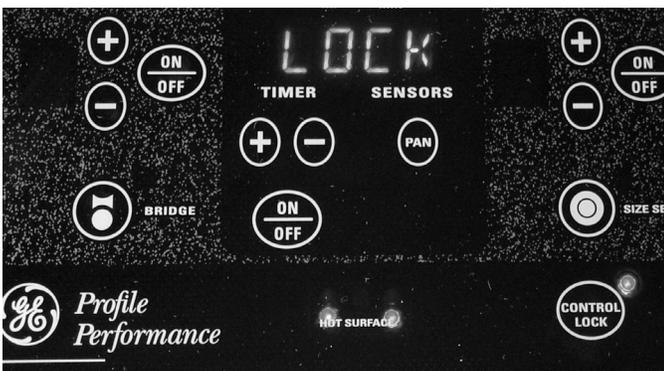
The HOT SURFACE indicator lights will glow when any surface unit is turned ON and will remain on until the surface has cooled to approximately 150°F.



GEA00846

Controls Lockout

Note: For your convenience, the entire cooktop can be locked at any time.



GEA00803

To lock the cooktop, touch and hold the CONTROL LOCK pad for 3 seconds. A 2-beep signal will sound, the word LOCK will appear in the timer display, and the CONTROL LOCK light will turn ON indicating the cooktop is locked. If the cooktop is locked while the surface elements or timer are in use, they will automatically turn OFF.

To unlock the cooktop, touch and hold the CON-

TROL LOCK pad again for 3 seconds. A 2-beep signal will sound and the light will go out, indicating the cooktop is unlocked.

Locking the cooktop will prevent surface elements from accidentally being energized by children or pets. You may lock the cooktop when not in use or before cleaning.

Kitchen Timer

Operate the timer using the pad below the timer display. Touch the ON/OFF pad, then touch the (+) or (-) pad to choose the desired time setting. If the (+) or (-) pad is held for several seconds,



GEA00804

the timer will increase or decrease at a faster rate. After choosing your desired time, the timer will automatically start to count down from the hours/minutes you have selected. When the timer reaches 1 minute, the control will beep once and the timer will display the remaining time in seconds until 00:00. The control will then beep twice every 5 seconds until the timer is turned OFF.

Pan Detection

Note: For this feature to function properly, the metallic pan **must** be at least 4 in. in diameter and centered on the surface element. This feature will **not** work with glass cookware and **must** be turned OFF when glass cookware is used.



GEA00805

The pan detection feature works in the following

Built-In CleanDesign Cooktops

	GE Profile Performance Series™				GE Profile™	GE
	Ribbon				Ribbon	Ribbon
	<u>JP968SC</u> <u>JP968WC</u> <u>JP968CC</u> <u>JP968BC</u>	<u>JP960SC</u> <u>JP960TC</u> <u>JP960CC</u> <u>JP960BC</u>	<u>JP938SC</u> <u>JP938WC</u> <u>JP938CC</u> <u>JP938BC</u>	<u>JP930SC</u> <u>JP930TC</u> <u>JP930CC</u> <u>JP930BC</u>	<u>JP350SC</u> <u>JP350TC</u> <u>JP350WC</u> <u>JP350CC</u> <u>JP350BC</u>	<u>JP340WC</u> <u>JP340BC</u>
Features						
Glass-ceramic surface	<u>Patterned Black</u> <u>Patterned White</u> <u>Patterned Bisque</u> <u>Patterned Black</u>	<u>Patterned Black</u> <u>True White</u> <u>Patterned White</u> <u>Patterned Bisque</u> <u>Patterned Black</u>	<u>Patterned White</u> <u>Patterned Black</u>			
Number of elements	5 Ribbon	5 Ribbon	4 Ribbon	4 Ribbon	4 Ribbon	4 Ribbon
Dual 6"/9" heating elements	1 Ribbon (2500W)	1 Ribbon (2500W)	1 Ribbon (2500W)	2 Ribbon (2500W)	2Ribbon (2500W)	
8" heating elements					2 Ribbon (2000W)	2 Ribbon (2000W)
7" heating element	1 Ribbon w/Warmer (1500W)	1 Ribbon (1500W)				
7" heating elements	2 Ribbon (1800W)	2 Ribbon (1800W)	2 Ribbon (1800W)	2 Ribbon (1800W)		
Bridge element	1 Ribbon (800W)	1 Ribbon (800W)	1 Ribbon (800W)	1 Ribbon (800W)		
Total wattage	4400W	4400W	4400W	4400W		
6" heating elements	1 Ribbon (1200W)	1 Ribbon (1200W)	1 Ribbon w/Warmer (1200W)	1 Ribbon (1200W)	2 Ribbon (1200W)	2 Ribbon (1200W)
Hot surface indicator lights	5	5	4	4	4	1
Electronic touch controls	□	□				
Pan presence sensor	□	□				
Pan size sensor	□	□				
Appearance						
Color appearance*	<u>SS</u> <u>WW</u> <u>CC</u> <u>BB</u>	<u>SS</u> <u>WW</u> <u>CC</u> <u>BB</u>	<u>SS</u> <u>WW</u> <u>CC</u> <u>BB</u>	<u>SS</u> <u>WW</u> <u>CC</u> <u>BB</u>	<u>SS</u> <u>WW</u> <u>WW</u> <u>CC</u> <u>BB</u>	<u>WW</u> <u>BB</u>
Frameless						
Weights & Dimensions						
Cooktop width (in inches)	36	36	30	30	30	30
Approx. shipping weight (lbs.)	45	44	38	38	38	35
Power/Ratings						
KW rating @ 240V	9.6	9.6	8.1	8.1	7.7	6.4
208V	7.2	7.2	6.1	6.1	5.8	4.8
Amps @ 240V	40	40	40	40	40	30
208V	40	40	40	30	30	30

*SS = Stainless Steel, WW = White on white, CC = Bisque, BB = Black on black.

GEA00806

manner: after energizing one of the heating elements, a pan must be placed on the surface element within 60 seconds. If a pan is **not** placed on the surface element within 60 seconds, the surface element will turn OFF. If a pan is removed from the surface element, the user has 60 seconds to replace it before the surface element is automatically turned OFF. The power level display will flash when the control on the surface element detects the absence of a pan.

To activate or deactivate the pan detection feature for **all** surface elements, touch the PAN pad. A signal will sound and a light next to the PAN pad will indicate whether the feature is active. If the light is ON, then the pan detection feature is ON. When the pan detection feature is OFF, the pan sizing feature is **also** OFF.

Pan Size Sensor

Note: This feature is only for the dual unit surface elements and functions only when the pan detection feature is turned ON.

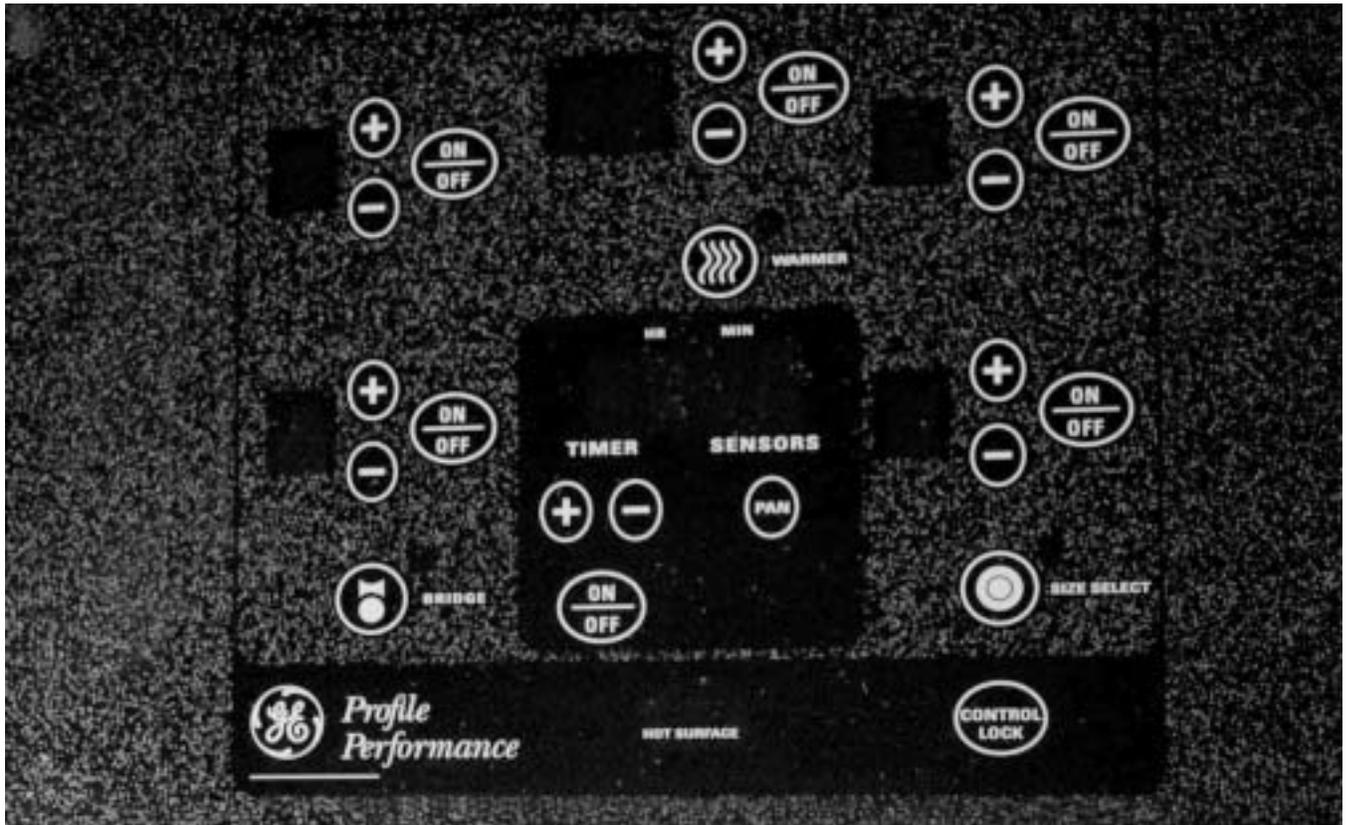
When a small pan is placed on the surface element, the small surface element will activate. When a large pan is placed on the surface element, the small **and** large surface elements will activate. This feature may be overridden for a single cooking session while leaving the pan detection feature ON.

To activate or deactivate this feature **and** the pan detection feature, touch the PAN pad. The light next to the PAN pad will go out, indicating that **both** pan detection features are turned OFF.

Diagnostics

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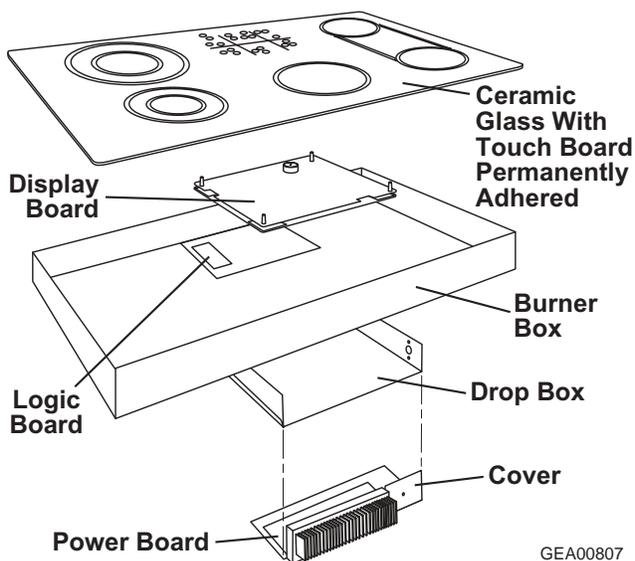


Digital Control System

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The control system consists of four circuit boards: the touch board (which is permanently adhered to the ceramic glass panel) that senses the user input, the display board that contains the panel displays, the logic board that contains the micro-processor, and the power board that does the power switching and control of the heating units.

- If the **touch board** is damaged, the entire glass assembly **must** be replaced.
- If the **display board** is damaged, it can be replaced by removing the glass top and disconnecting the display board from the touch board.
- If the **logic board** is damaged, it can be replaced by removing the glass top and removing the logic board from the area under the keypad.
- If the **power board** is damaged, it can be accessed by removing the drop box cover that is under the cooktop.



GEA00807

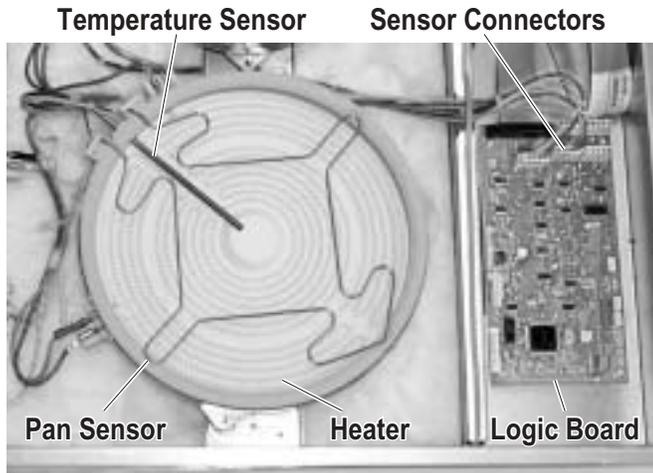
Note: No individual components on the boards are replaceable.

Triac Voltage Control

A triac-fired control replaces the usual rheostat temperature control for each surface element. The control receives feedback from the temperature sensor to allow for precise control of the heating element power.

Pan Detection

The pan detection system includes a pan sensor, an inductive sensor interface chip (ISIC) permanently mounted on the logic board, and a signal wiring harness connecting the sensor with the ISIC.



GEA00766

The pan sensor determines the presence or absence of a pan through a change in the magnetic field. When a metal pan is near the sensor, the resonant frequency of the pan increases. This information is passed to the ISIC, which determines a pan to be present. When the frequency drops to a specified level, the ISIC determines the pan to **not** be present and turns the surface element OFF after 1 minute.

Pan Size Feature

When the pan detection feature is active, the pan size feature is also active. The pan size feature is designed to automatically recognize the size of a pan placed on the dual heater and energize one or both cooking zones to match the size of the pan. The pan size feature is overridden when the DUAL key is pressed.

Technician Mode

To enter the Technician Mode, lock the cooktop by holding the CONTROL LOCK key for 3 seconds.



GEA00767

The control will beep 2 times and the word *LOCK* will be displayed in the timer display. Press the timer ON/OFF key and simultaneously press the + keys of the LF and LR surface elements. The timer display will flash *TECH MODE* when the cooktop is in Technician Mode.



GEA00813

To exit the Technician Mode, simultaneously press the timer ON/OFF key and the (+) keys of the LF and LR surface elements, or unlock the cooktop by holding down the CONTROL LOCK key for 3 seconds. The control will beep 2 times and the CONTROL LOCK LED will turn OFF.

Fault Codes (F-codes)

When a fault code (F-code) occurs, an alarm will sound for 1 minute, the F-code will flash in the timer display, and *F* will flash in the display in the



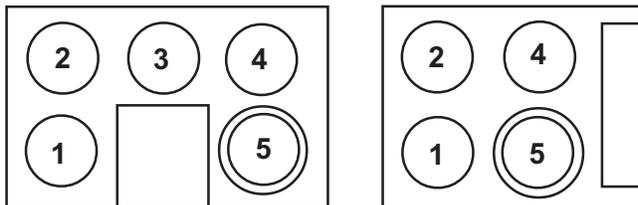
GEA00836

window of the failed surface element until acknowledged by touching the CONTROL LOCK key. The displays are then cleared. If the fault still exists, or if it recurs when the user tries to activate a surface element, the F-code will redisplay.

Only the severest F-codes are immediately displayed. Less severe F-codes are recorded, then displayed based on the number of repeated occurrences.

The Technician Mode allows the last 9 F-codes to be recalled from the register and displayed on the timer display. The most recent F-code is displayed first (as #1). Pressing the TIMER (+) and TIMER (-) keys will scroll up and down the last 9 recorded F-codes.

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.



To clear the F-code register, enter Technician Mode. While the timer display flashes *TECH MODE*, simultaneously press the BRIDGE and WARMER keys. The timer display will display *DONE* and the F-codes will be permanently deleted from the register.

Note: A complete fault codes table can be found at the end of this section.

Line-In Voltage Check

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

Temperature Check (in Celsius)

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

Frequency Check (in Hertz)

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.



Calibration of the Inductive Pan Sensors

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: The procedure for calibration of the inductive sensors can be found in the ***Mechanical Disassembly*** section.

Fault Code Behavior Table

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.

Mechanical Disassembly

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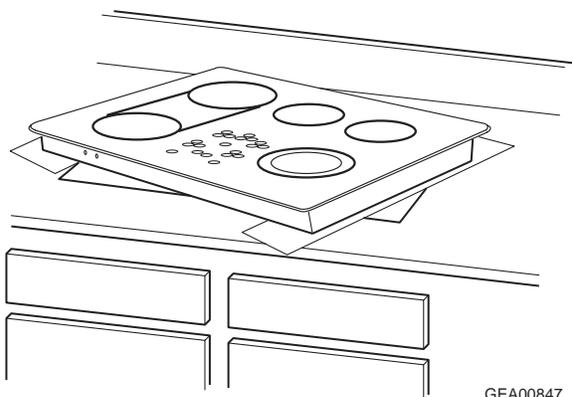
NONELECTRONIC MODELS

WARNING: Before servicing the cooktop, power **must** be removed from the cooktop by pulling the plug out of the outlet or turning the power off at the circuit breaker.

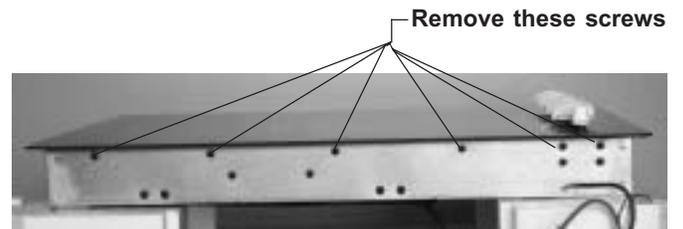
Glass and Cooktop Removal from Countertop

1. Remove all cooktop hold-down retainers from below the edge of the countertop.
2. Protect the counter with two strips of wood or cardboard as shown below.
3. Reach up from inside the cabinet and push upward on the bottom of the burner box enough to shim with protective wood or cardboard under one end. Repeat for the other end.

Caution: Screws on the bottom of the burner box can scratch the countertop surface. Use care to protect the countertop appearance.



4. Using the shims to get a handhold under the left and right sides of the glass, carefully raise the cooktop up about 4 in., rotate slightly left or right (to the best working advantage), and set down as shown. Lift each end slightly and adjust the wood or cardboard to prevent scratching the countertop.
5. Remove all knobs from the cooktop.



6. Remove all screws from along the top edge on all 4 sides of the burner box. Remove the cooktop glass and place it top side down on a protected surface.

Broken Glass Replacement

1. Remove the glass and cooktop from the countertop (see the previous procedure).
2. Remove the rubber grommets from the broken glass.
3. With a drop of liquid soap on your fingertip, wet the rims of all holes in the new glass and gently twist (do **not** force) the grommets through the holes.

ON Light Replacement

1. Remove the glass and cooktop from the countertop (see procedure).



2. Compress the ON light wings, as shown, and pull down to remove from the bracket.
3. Remove the wires from the ON light.

Switch Replacement

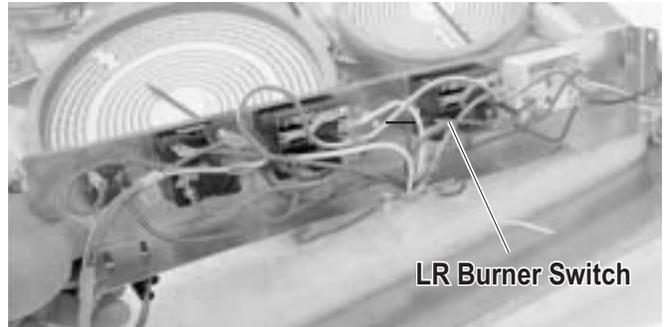
1. Remove the glass and cooktop from the countertop (see procedure).



2. Remove 4 screws from the switch mounting bracket (2 from each end).
3. Remove 2 screws and the switch from the mounting bracket.
4. Tag and remove the wires from the switch.

HOT SURFACE Light Replacement

1. Remove the glass and cooktop from the countertop (see procedure).



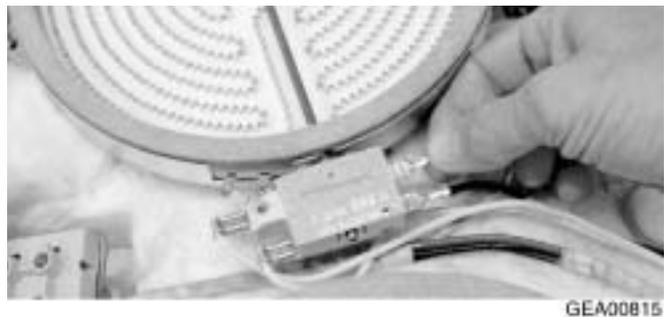
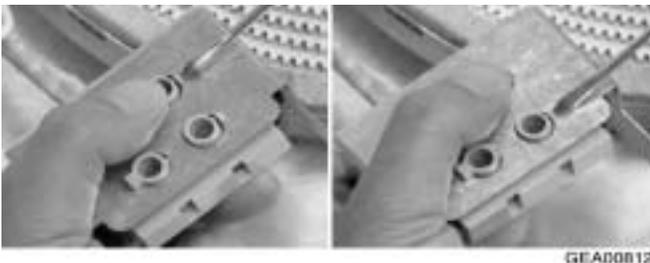
4. Remove 4 screws from the switch mounting bracket (2 from each end) and remove the red wire from the switch for the left rear burner.
5. Note the location and color of the wires in the wire harness, disconnect them from the burners, and remove.

Note: When installing the new HOT SURFACE light, be sure to feed the harness under the brace below the right-hand burners.

2. Remove 2 screws from the burner box and remove the HOT SURFACE light mounting bracket.

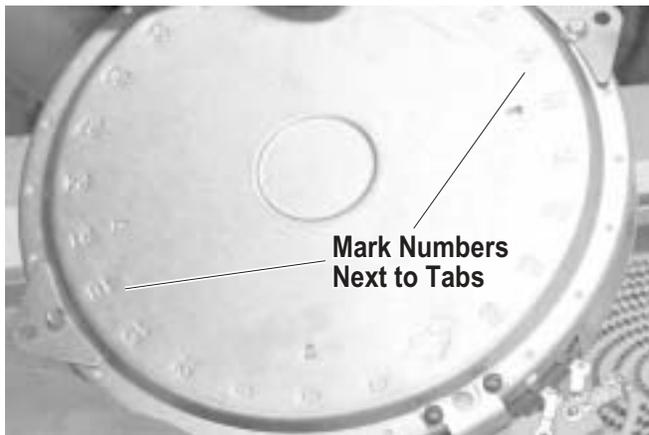
Burner Replacement

1. Remove the glass and cooktop from the countertop (see procedure).



3. With a small screwdriver, push in on the first light tab while pushing down on the light. Push in on the second light tab, while still pushing the light down, to release the light.

2. Note the position of the wires to the burner. Remove the wires.



3. Lift the burner off the springs and mark the numbers on the bottom of the burner next to the tabs.
4. Remove the tabs and install them on the new burner in the same numbered position.

Note: When installing the new burner, make sure the 2 springs are on the 2 posts.

ELECTRONIC MODELS

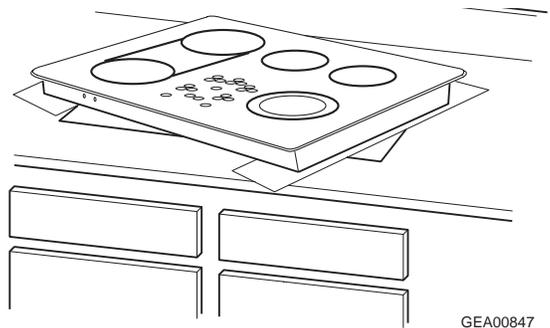
WARNING: Before servicing the cooktop, power **must** be removed from the cooktop by pulling the plug out of the outlet or turning the power off at the circuit breaker.

Glass and Cooktop Removal from Countertop

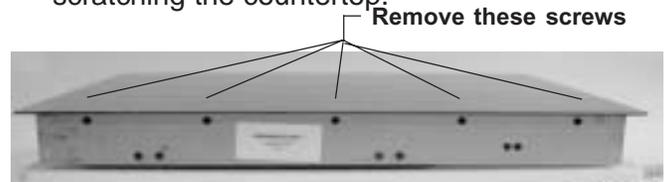
Note: The ceramic glass and touch board shall be supplied as a complete assembly.

1. Remove all cooktop hold-down retainers from below the edge of the countertop.
2. Protect the counter with two strips of wood or cardboard as shown below.
3. Reach up from inside the cabinet and push upward on the bottom of the burner box enough to shim with protective wood or cardboard under one end. Repeat for the other end.

Caution: Screws on the bottom of the burner box can scratch the countertop surface. Use care to protect the countertop appearance.



4. Using the shims to get a handhold under the left and right sides of the glass, carefully raise the cooktop up about 4 in., rotate slightly left or right (to the best working advantage), and set down as shown. Lift each end slightly and adjust the wood or cardboard to prevent scratching the countertop.



5. Remove all screws from along the top edge on all 4 sides of the burner box and **slowly** lift the front of the glass off the burner box.



6. With the glass tilted at an angle, disconnect the wire harness that extends from the logic board to the user interface by pulling upward on the connector. Do not pull on the wires.
7. Remove the glass from the top of the burner box and place top side down on a protected surface.

Touch Board and Cooktop Glass Replacement

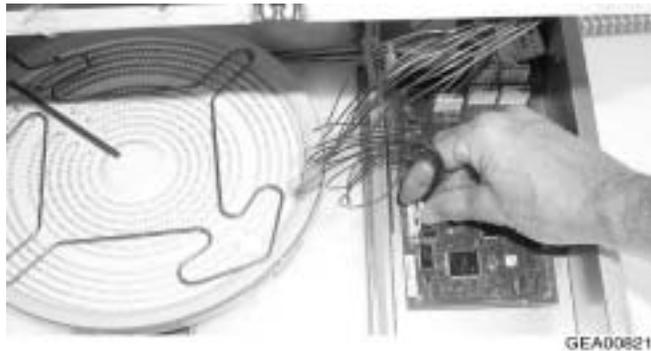
Note: The ceramic glass and touch board shall be supplied as a complete assembly. Remove and replace the cooktop ceramic glass (see previous procedure).

Display Board Replacement

1. Remove the display board from the damaged piece of cooktop glass.



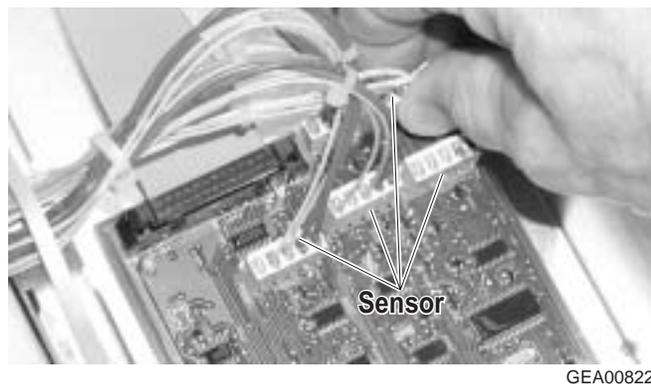
2. Place the display board on the new cooktop glass, making sure to connect the 8-pin ribbon cable to the touch board and the wire harness to the display board.



3. Prop the glass on the back of the cooktop. Using one hand to lower the glass, use the other hand to connect the wire harness from the display board to the 10-pin header on the logic board.
4. Lower the glass onto the burner box, being sure not to pinch any wires between the frame and the burner box.
5. Apply power to the cooktop. Once the cooktop appears to be in working order, remove power from the cooktop and insert all the screws to secure the glass to the burner box.

Logic Board Replacement

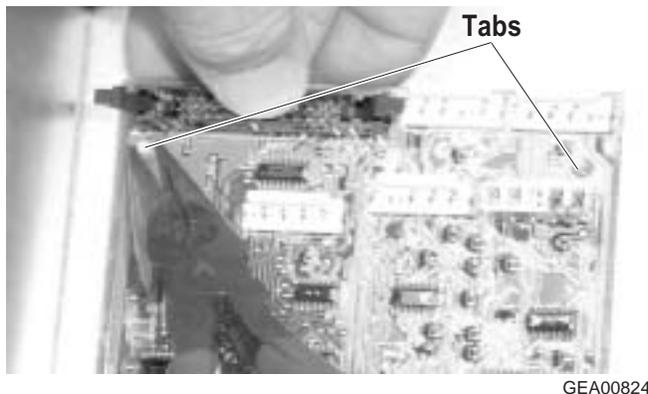
1. Remove the glass and cooktop from the countertop (see procedure).



2. Disconnect the sensor connectors from the logic board by pulling upward on the connectors. Do **not** disconnect the connectors by pulling on the sensor wires.



3. Disconnect the 26-pin ribbon cable from the logic board by pressing down on the latching tabs of the header.



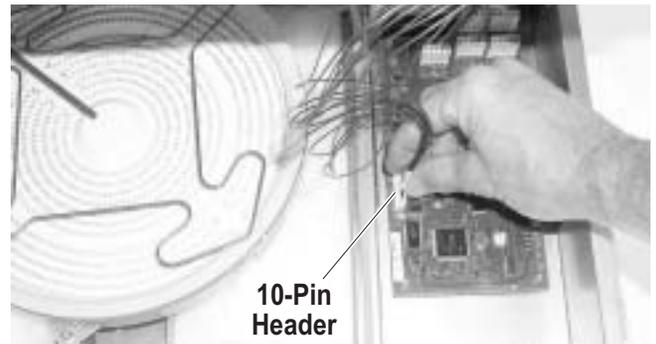
4. Remove the logic board by using needle nose pliers to press in on the tabs of the logic board standoffs, and lifting the board. Do **not** remove the logic board standoffs. Repeat this procedure for all 5 board standoffs.

Caution: To avoid delivering an electric shock to the new logic board, place your hand on the burner box for **at least 2** seconds before reaching for the new logic board.

5. Remove the new logic board from the antistatic bag and place it on top of the standoffs.

Note: 30-in. cooktops do **not** have a connector placed on J503 (for the CR heater of a 36" unit), and the connectors are keyed to prevent a misconnection.

6. Reconnect the 26-pin wire harness and the sensor connectors to their original positions.
7. Examine the inside of the cooktop (heaters, sensors, wires, and thermal wall) for anything that does not look normal.



8. Prop the glass onto the back of the cooktop. Using one hand to lower the glass, use the other hand to connect the wire harness from the user interface to the 10-pin header on the logic board.
9. Lower the glass onto the burner box, being sure not to pinch any wires between the frame and the burner box.
10. Apply power to the cooktop. An F161 is acceptable if a surface element is turned on with the pan detection feature active. This indicates the need to calibrate the inductive sensors.
11. Once the cooktop appears to be in working order, remove power from the cooktop and insert all the screws to secure the glass to the burner box.

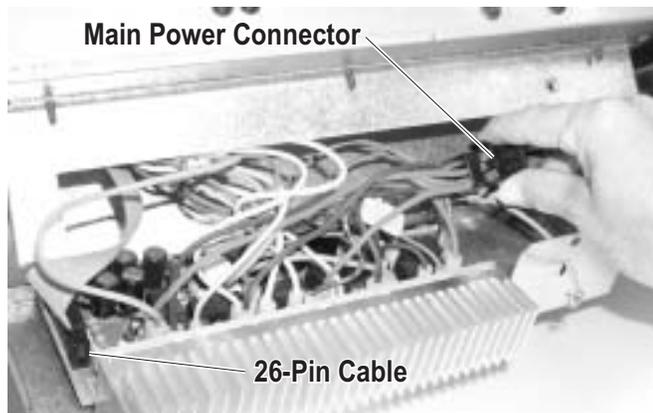
Note: After the cooktop has been placed back into the consumer's counter and power has been applied, the cooktop **must** be calibrated. Proceed to the ***Calibration Instructions for the Inductive Sensors***.

Power Board Replacement

1. Remove the glass and cooktop from the countertop (see procedure).
2. Turn the cooktop 180 degrees and prop the cooktop up to access the drop box. Be careful not to damage the counter.

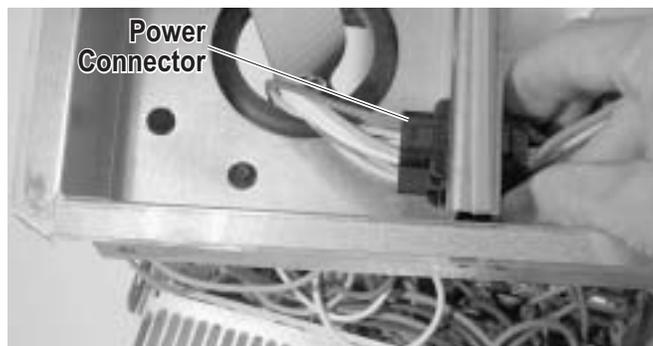


- Remove 5 screws and the ground screw from the drop box cover and lower the cover.



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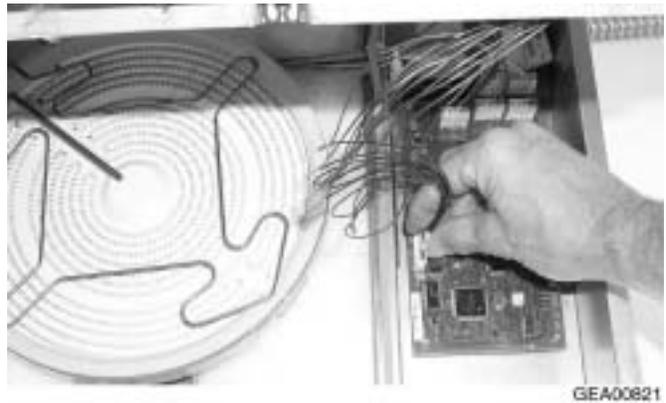
- Disconnect the main power connector in the drop box.
- Disconnect the 26-pin ribbon cable from the power board by pressing down on the latching tabs of the header.



- Disconnect the power connector in the burner box.

Caution: To avoid delivering an electric shock to the new power board, place your hand on the burner box for **at least 2 seconds** before reaching for the new power board.

- Remove the new power board from the anti-static bag and reconnect the 26-pin wire harness, the main power connector, and the burner box power connector to their original positions.
- Examine the inside of the cooktop (heaters, sensors, wires, and thermal wall) for anything that does not look normal.



GEA00821

- Prop the glass onto the back of the cooktop. Using one hand to lower the glass, use the other hand to connect the wire harness from the user interface to the 10-pin header on the logic board.
- Lower the glass onto the burner box, being sure not to pinch any wires between the frame and the burner box.
- Apply power to the cooktop. Once the cooktop appears to be in working order, remove power from the cooktop and insert all the screws to secure the frame to the burner box.

Calibration Instructions for the Inductive Sensors

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 **everything** from the top of the glass.
- Lock the control by pressing the control LOCK key for 3 seconds. The control LOCK LED will turn ON.
- Enter tech mode by pressing the TIMER ON/OFF, LF (+), and LR (+) keys at the same time. The TIMER window will flash the words **TECH MODE**.
- Begin the calibration procedure by pressing the TIMER ON/OFF, LF (+), and RF (+) keys at the same time. The TIMER window will flash **CAL** and the LF surface element power window will flash the U symbol.

5. When the TIMER window displays *DISC* and the U symbol stops flashing in the LF surface element power window, **center** the aluminum disk on the LF surface element.
6. Press the PAN and LF (+) keys at the same time. The electronic control will perform the calibration on the LF sensor and then proceed to the next surface element. The TIMER window will flash *CAL* and the U symbol will flash in the LR surface element power window.
7. Repeat steps 5 and 6 for the LR, CR (if present), RR, and RF surface elements.
8. 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 be displayed in the surface element power window of any sensor that fails the process. Acknowledge this message and exit the calibration procedure by pressing the PAN and RF (+) keys at the same time.

Note: If the calibration procedure is interrupted for any reason, exit the calibration procedure 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.

Surface Element Replacement

Note: The surface element, pan sensor, and temperature sensor are **only** replaceable as an assembly, which includes the sensor wire harness and connector.

1. Remove the glass and cooktop from the countertop (see the procedure).

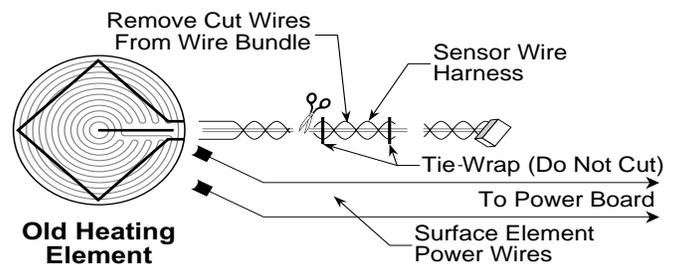


GEA00828

2. Disconnect the appropriate sensor connector from the logic board by pulling **upward** on the connector. (Do **not** disconnect the connector by pulling on the sensor wires.) Trace the sensor wires back to the appropriate surface element, making note of where and how the wires are routed.

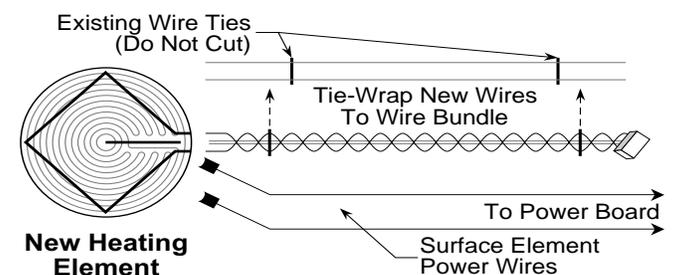
Caution: Do **not** cut the wire ties from the wire harness. Care **must** be taken to ensure that **only** the sensor wires to the surface element being replaced are cut.

Caution: Routing of the wires is **extremely critical**. Care **must** be taken to ensure the wires are routed exactly the way they were originally.



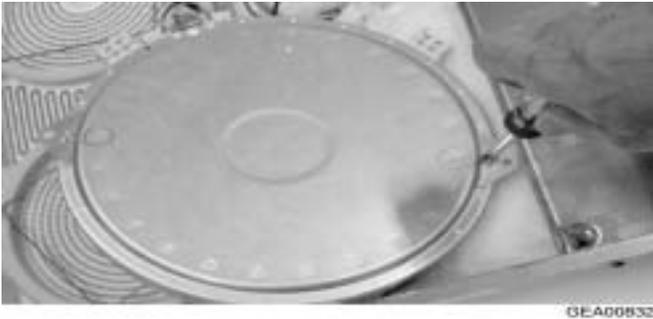
3. Using diagonal cutters, snip **both** the temperature sensor and the pan sensor wires and remove them from the wire harness leading from the logic board to the surface element.

Note: When installing the new surface element, tie-wrap temperature sensor and pan sensor wires to the existing wire harness. Do **not** cut existing wire harness. Do **not** cut existing tie wraps.





4. Remove the electrical connectors from the heater.
5. Lift the heater off the springs and mark the numbers on the bottom of the heater next to the tabs.



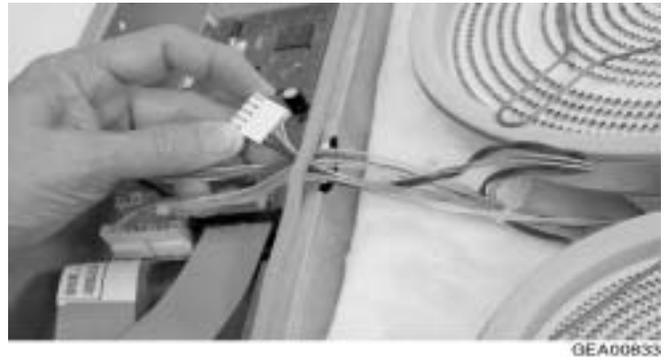
6. Remove the tabs and install them on the new surface element in the same numbered position.

Note: When installing the new surface element, make sure a spring is beneath every mounting bracket.

7. Place the new surface element on the mounting posts.
8. Position the sensor harness in the same manner as the original harness was oriented, being sure to keep **all** wires away from **all** surface elements.



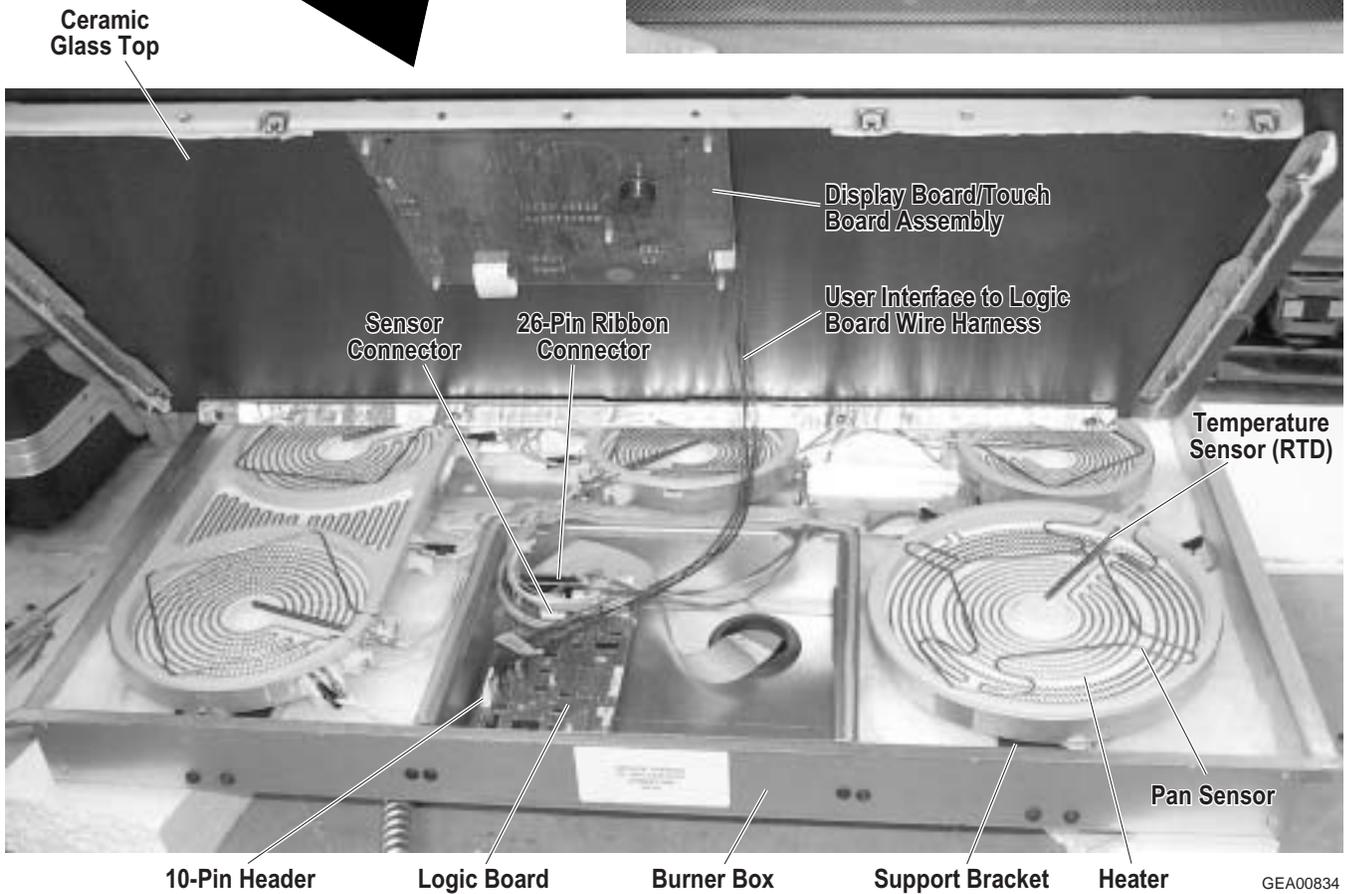
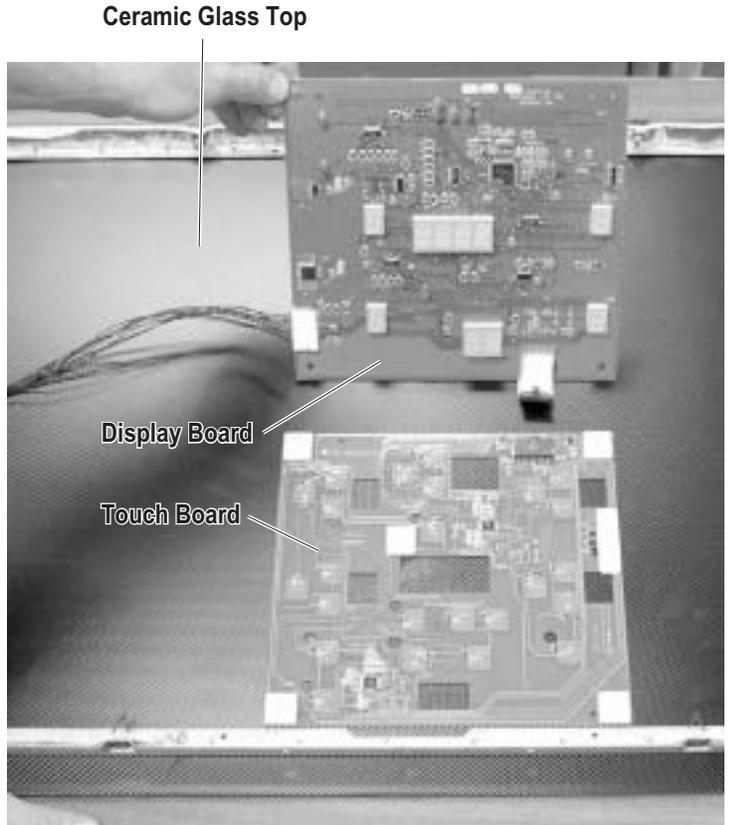
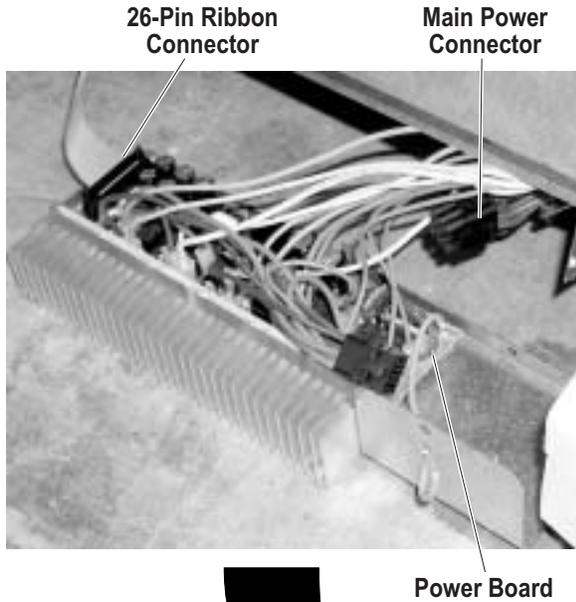
9. Using a nut driver, remove the necessary screws from the outside of the burner box and lift the surface element support bracket to route the sensor wires beneath the bracket.



10. Run the connector through the gap between the insulating strip and the thermal wall, making a slit in the insulating strip if necessary.
11. Place the connector on the appropriate header on the logic board.
12. Beginning at the end of the wire harness closest to the surface element, secure the sensor wires to the existing wire harness with wire ties. Trim the excess material from the wire ties and make sure the new wire harness is in the same position as the original.

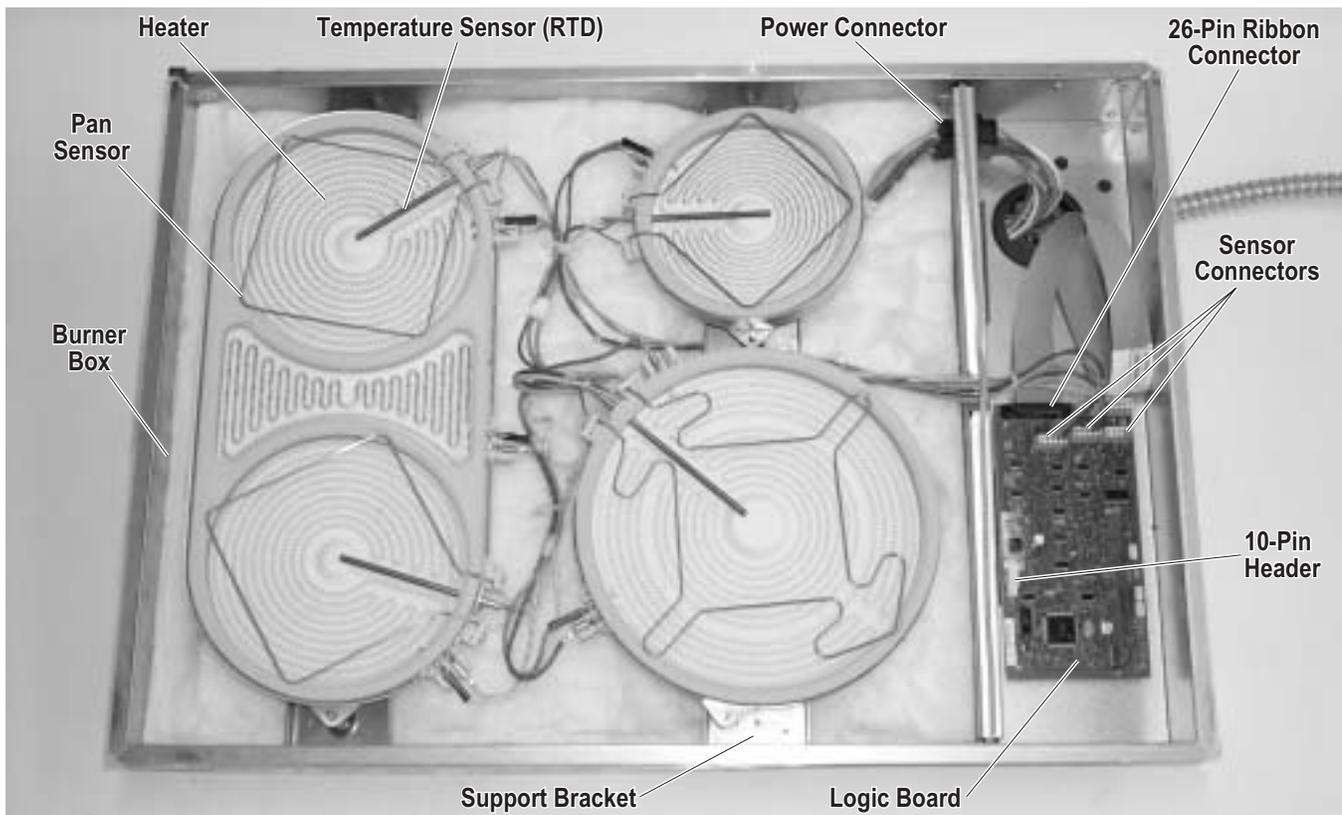
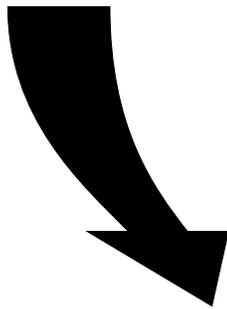
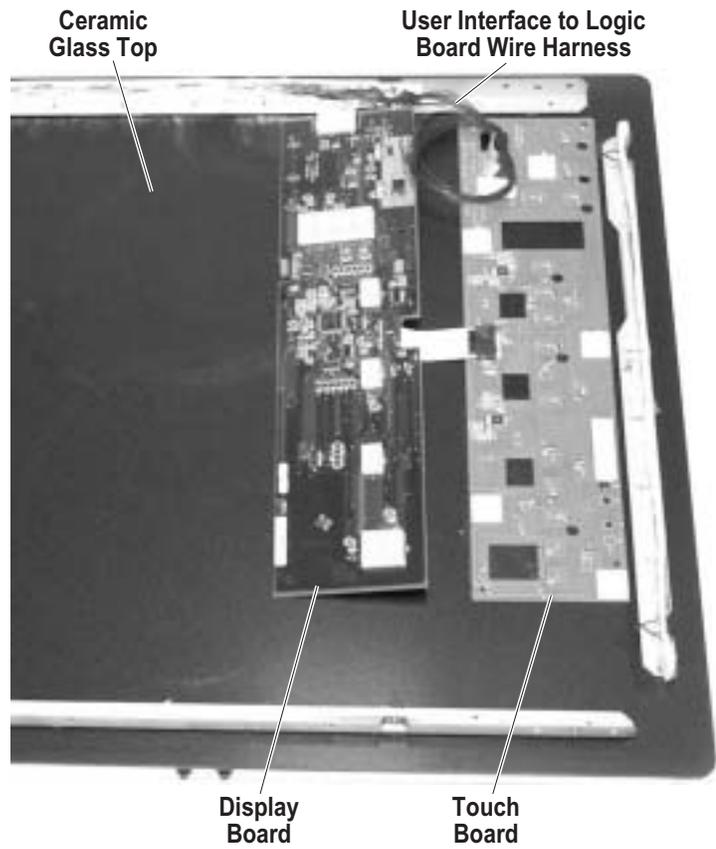
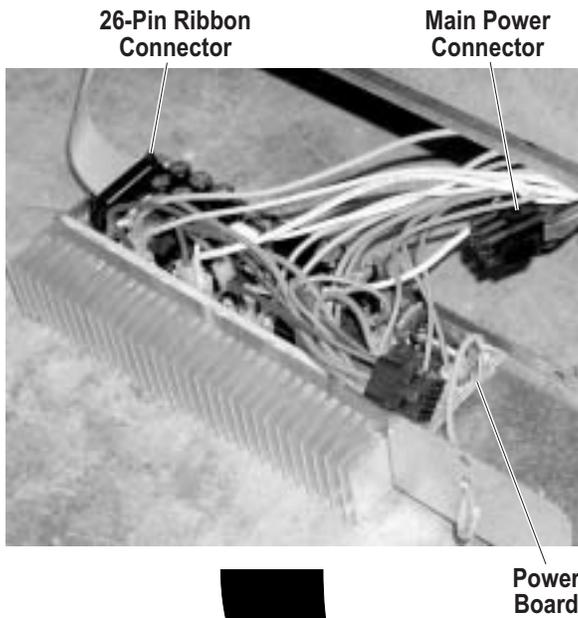
Component and Connector Locator Views

JP968 (36-in.) Electronic Cooktop



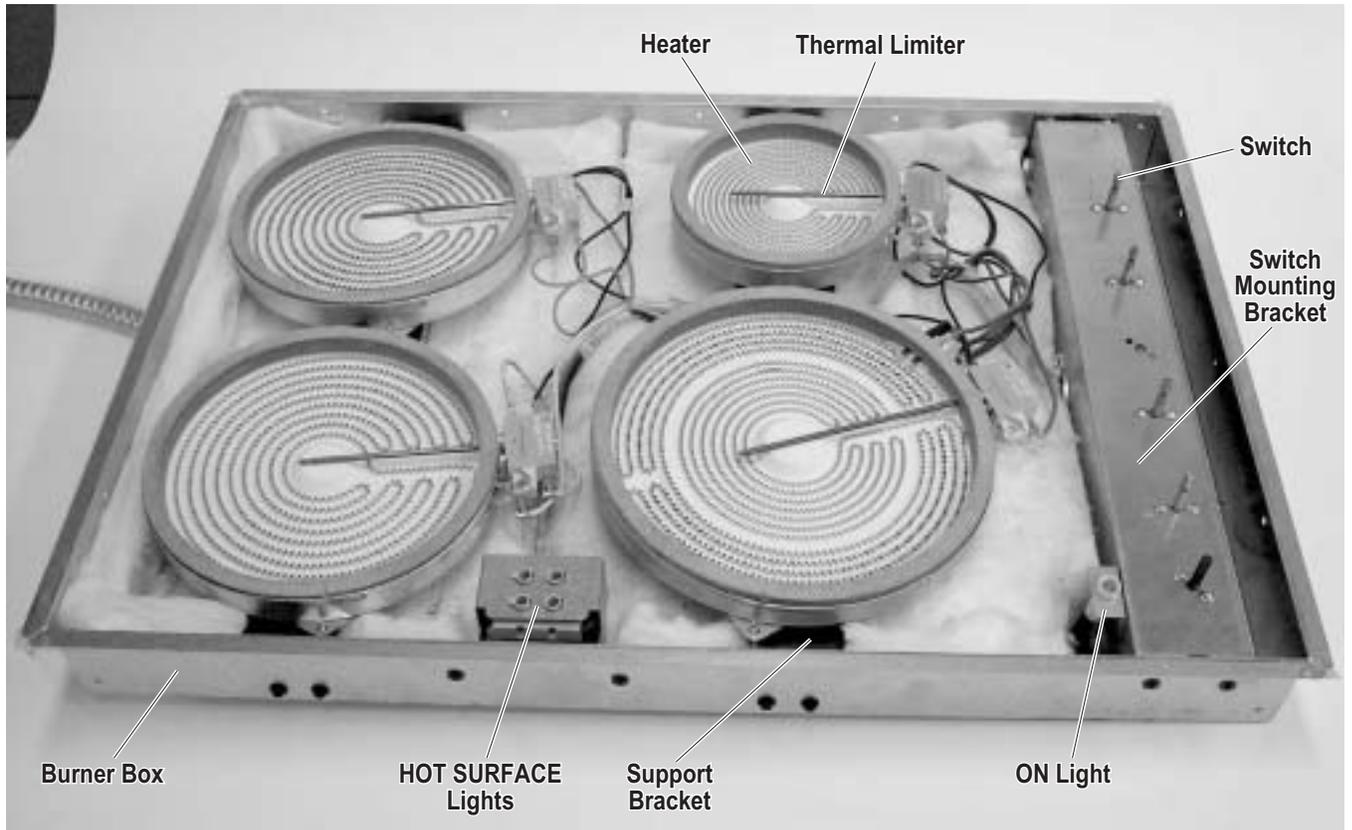
GEA00834

JP938 (30-in.) Electronic Cooktop

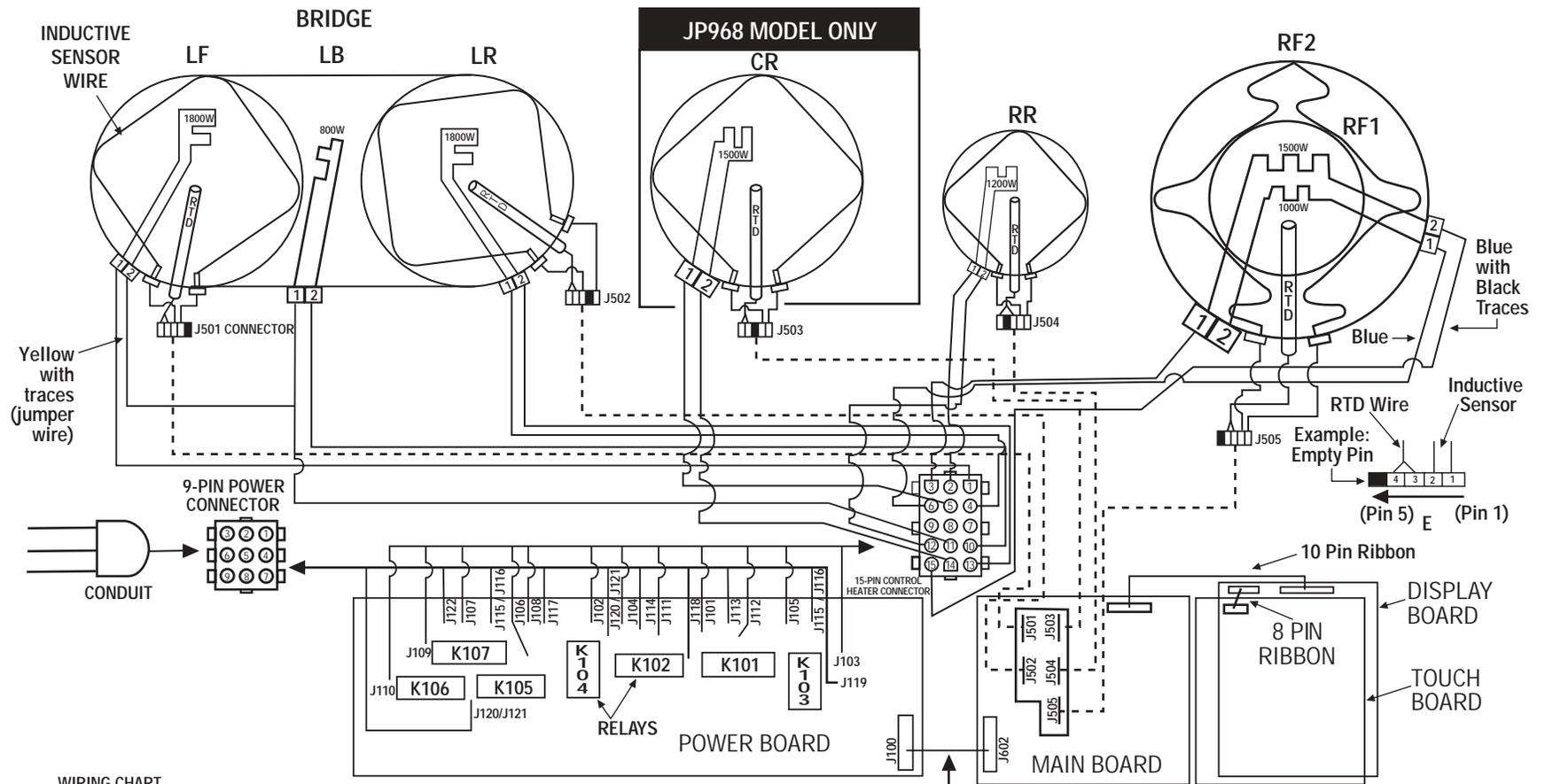


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JP350 (30-in.) Electric Cooktop



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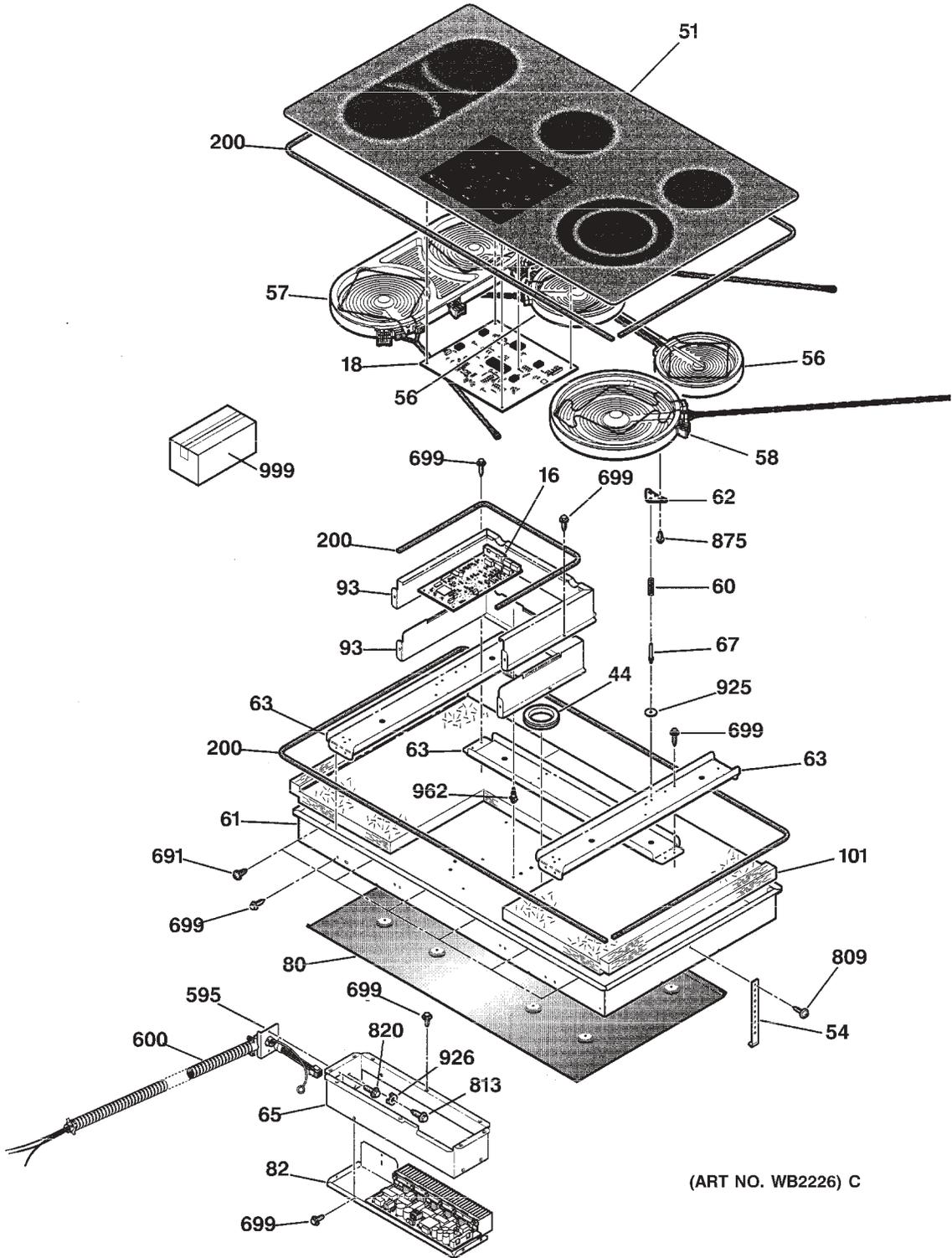


WIRING CHART

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	

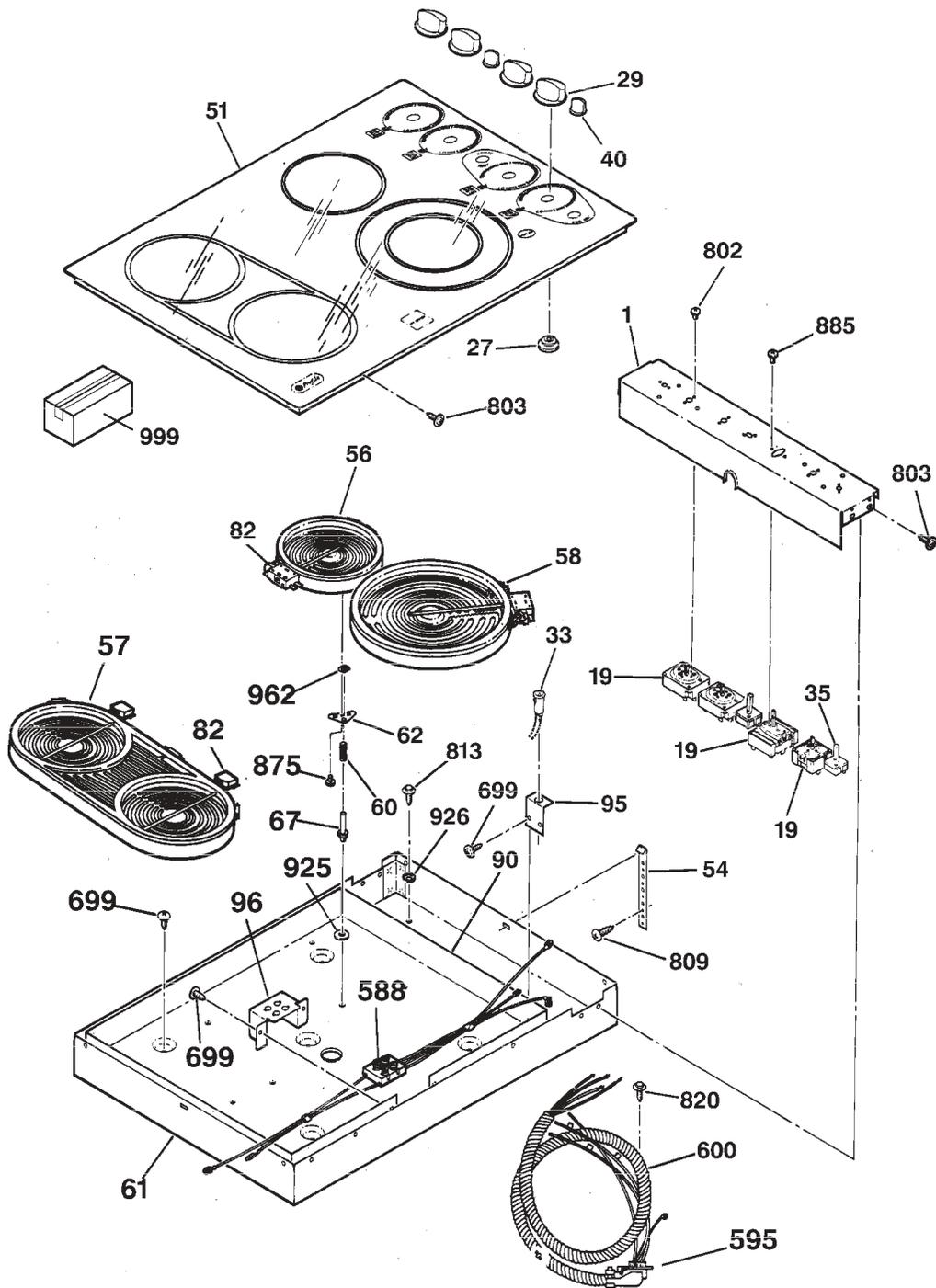
Caution: Label all wires prior to disconnection when servicing the controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

Parts List



(ART NO. WB2226) C

Ref No.	Part No.	Description	Qty.
16	WB27T10293	Logic Board	1
18	WB27T10294	Display Board	1
44	WB02T10092	Burner Box Grommet	1
51	WB62T10088	Glass Maintop Asm 36"	1
54	WB02K5328	Hold Down Bracket	1
56	WB30T10066	Element Radiant Asm	1
56	WB30T10067	Element Radiant Asm	1
57	WB30T10065	Element Radiant Asm	1
58	WB30T10062	Element Radiant Asm	1
60	WB09K5014	Radiant Spring	8
61	WB64T10021	Burner Box Bottom	1
62	WB02K5318	Radiant Heater Bracket	8
63	WB02T10090	Element Support Bracket	2
63	WB02T10091	Element Support Bracket	1
65	WB34T10034	Drop Box Top	1
67	WB02X9502	Radiant Heater Stud	8
80	WB34T10033	Burner Box Bottom Shield	1
82	WB23T10014	Power Board Asm	1
93	WB34T10031	Thermal Barrier- Inner	1
93	WB34T10032	Thermal Barrier- Outer	1
101	WB35T10047	Burner Box Bottom Insulation	1
200	WB06T10007	Tape	1
200	WB06K5042	Foam Tape	2
595	WB02X9867	Harness Plate	1
600	WB1BT10160	Conduit Wire Harness	1
691	WB01K5162	Screw-Black	20
699	WB01K5150	Screw ST10-16X.437 Hex zn	31
809	WB01X1137	Screw	2
813	WB01X1261	Screw	2



(ART NO. WB2096) C

Ref No.	Part No.	Description	Qty.
820	WB01X1424	Screw	2
875	WH02X0930	Screw 8-18 AB HXW 3/8	8
925	WB01K5117	Washer .250IDX.8120D	8
926	WB01X1260	Ground Washer	1
962	WB02T10093	Standoff PCB	10
999	49-80021	Use & Care Manual	1
999	WB18T10162	Power Control Harness	1
999	WB18T10163	Heater Control Harness	1
999	WB18T10164	Logic Control Harness	1
999	WB18T10166	Logic Display Harness	1
999	WB18T10165	Main Wire Harness	1
999	WB64X0093	Glass Cleaner	1
999	31-10429	Instruction Install	1
999	WB50T10040	AASM Kit Flush (JXFMBB)	1
999	31-10034	PM Sheet Mini Manual	1
999	WB06K5036	Razor Blade Scraper	1

Quiz

Electronic Cooktop Quiz

1. When will calibration of the pan detect feature be necessary;
 - A. When the power control module is replaced
 - B. When the glass top and touch control is replaced
 - C. When the heating element or logic board is replaced
 - D. When the main control or power control module is replaced

2. How is the temperature sensor replaced?
 - A. By cutting existing sensor and splicing in new sensor
 - B. By replacing both the sensor and pan detector component
 - C. By replacing logic board and sensor
 - D. By replacing heating element assembly

3. What do you replace if the words TEMP LTD are displayed in the timer window?
 - A. Nothing , just wait 30 minutes for re-activation
 - B. The logic board
 - C. The heating element
 - D. Both the logic board and the sensor

4. How is the power control board accessed?
 - A. By removing the drop box cover
 - B. By removing glass cover then the logic board
 - C. By removing the control board
 - D. By removing the logic board and control board

5. What type of pans work with the pan detect feature
 - A. Steel pans only
 - B. Any flat pan
 - C. All flat metal pans
 - D. Any flat pan that's not copper clad

Quiz

6. What is the smallest size pan that can be used on the element when using "Pan" detection?
 - A- 2" diameter
 - B- 6" diameter
 - C- 4" diameter
 - D- None of the above

7. Glass cookware can be used on the surface elements as long as
 - A. Glass cookware can be used.
 - B. "Pan" detection is turned off.
 - C. Only on the dual surface element
 - D. For boiling water only

8. On the dual burner what determines which size element is turned on?
 - A- Switch
 - B- Pan size & "Pan Size" pad
 - C- Type of material in pan
 - D- None of the above

9. What pads do you press to get into the "Tech Mode" ?
 - A- "Pan" & RF +
 - B- Timer ON/OFF pad and LF+ and RF+
 - C- Lock Pad for 3 seconds, then Timer ON/OFF pad , LF+ and LR+ at same time
 - D- Unplug cooktop and then re-apply power and touch Timer ON/OFF, RF+, RR+ at same time.

10. If you need to restart the calibration procedure after being interrupted what pads will take you back to the Tech Mode?
 - A- Pan and RF+
 - B- Pan and Timer ON/OFF pad
 - C- LF+ and RF+
 - D- None of the above