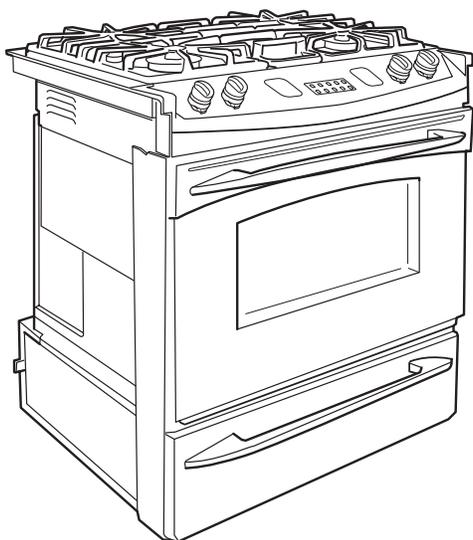




*GE Consumer Products*

## **TECHNICAL SERVICE GUIDE**

**Profile Dual Fuel and  
Profile All Gas  
Slide-In Ranges**



### **MODEL SERIES:**

**J2S968**

**JGS968**

**JGSP48**





### **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**

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or death. If you smell gas:

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in the building.
- Immediately call the gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach the gas supplier, call the fire department.

### **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 Products***

*Technical Service Guide*

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# Introduction



**Dual Fuel Range**



**All Gas Range**

The new 30-in. Slide-In Dual Fuel and All Gas Ranges make an eloquent statement of style, convenience, and kitchen planning flexibility. The SmartSet Electronic Touch Controls are simple to understand and easy to operate. Just read and touch.

The Dual Fuel Range has an electric oven and gas cooktop.

These ranges include many helpful features, such as a specially designed touch-control panel that is uniquely angled for optimal, user-friendly operation.

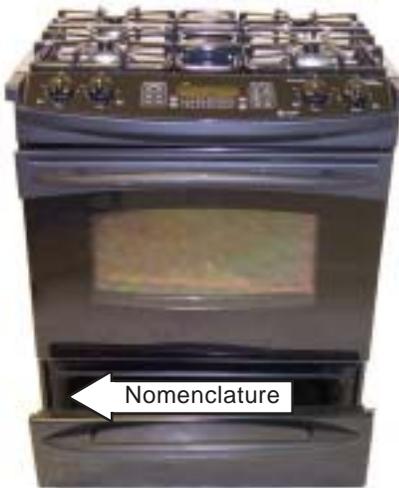
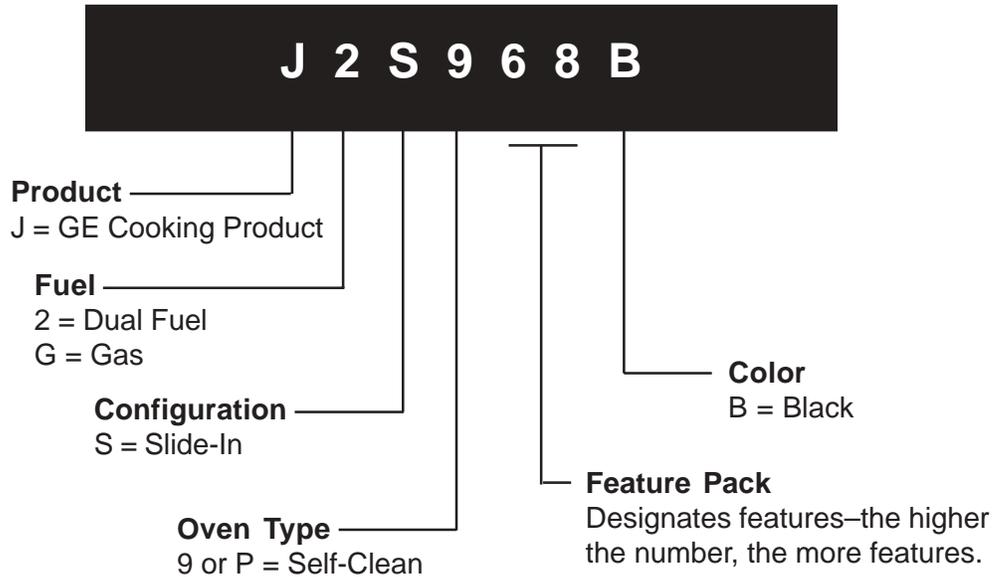
The convection baking and roasting feature provides even cooking and superior baking every time.

New servicing features include front accessibility to all components except the convection oven fan motor and easy replacement access to the oven door locking assembly.

The information on the following pages will help you service these new 30-in. Slide-In Dual Fuel and All Gas Ranges effectively and efficiently.

# Nomenclature

## Model Number



The serial plate of your range is located on the oven frame above the storage drawer.

In addition to the model and serial numbers, this plate tells the power ratings of the electrical supply circuit for dual fuel models and, for all models, the ratings of the burners, the type of fuel, and pressure the cooktop was adjusted for when it left the factory.

## Serial Number

The first two numbers of the serial number identify the month and year of manufacture.

*Example:* **AF**123456S = January, 2003

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

## **GE Dual Fuel Range Warranty.** (For customers in the United States)



All warranty service provided by our Factory Service Centers, or an authorized Customer Care® technician. To schedule service, on-line, 24 hours a day, visit us at [www.GEAppliances.com](http://www.GEAppliances.com), or call 800.GE.CARES (800.432.2737).

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

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

### **GE Will Replace:**

**Any part** of the range which 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.

### **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.
- 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.

*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

### **For Customers in the Canada:**

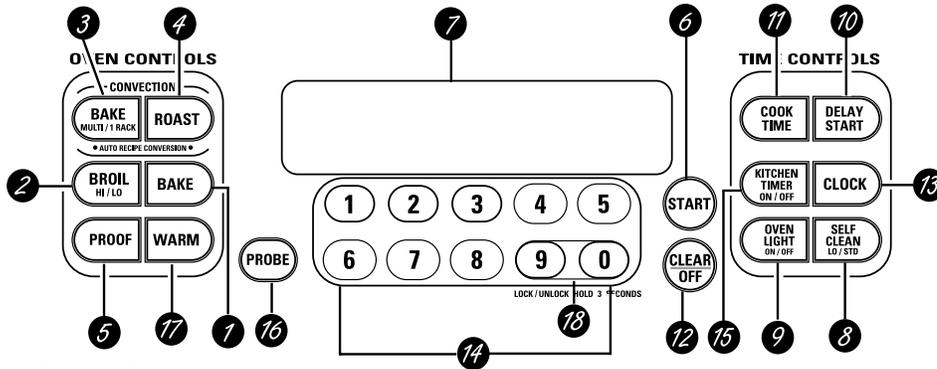
Warrantor: Camco Inc.

All warranty service provided by our Factory Service Centers or an authorized Customer Care® technician. For service, call 1.800.361.3400.

# Control Features

## Using the Oven Controls

(Throughout this manual, features and appearance may vary from your model.)



Features and appearance may vary.



## Oven Control, Clock and Timer Features and Settings

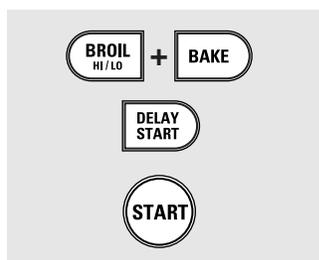
- 1 BAKE Pad**  
Touch to select the bake function.
  - 2 BROIL HI/LO Pad**  
Touch to select the broil function. Touch once for high broil and twice for low broil.
  - 3 CONVECTION BAKE Pad**  
Touch to select baking with the convection function. Touch once for multi-rack convection baking and twice for 1-rack convection baking.
  - 4 CONVECTION ROAST Pad**  
Touch to select roasting with the convection function.
  - 5 PROOF Pad**  
Touch to select a warm environment useful for rising yeast-leavened products.
  - 6 START Pad**  
Must be touched to start any cooking or cleaning function.
  - 7 Display**  
Shows the time of day, oven temperature, whether the oven is in the bake, broil or self-cleaning mode and the times set for the timer or automatic oven operations.
- If “F– and a number or letter” flash in the display and the oven control signals, this indicates a function error code.**  
Touch the **CLEAR/OFF** pad. Allow the oven to cool for one hour. Put the oven back into operation. If the function error code repeats, disconnect the power to the oven and call for service.
- If your oven was set for a timed oven operation and a power outage occurred, the clock and all programmed functions must be reset.**
- The time of day will flash in the display when there has been a power outage.**
- 8 SELF CLEAN LO/STD Pad**  
Touch to select self-cleaning function. See the *Using the self-cleaning oven* section.
  - 9 OVEN LIGHT ON/OFF Pad**  
Touch to turn the oven light on or off.
  - 10 DELAY START Pad**  
Use along with **COOK TIME** or **SELF CLEAN LO/STD** pads to set the oven to start and stop automatically at a time you set.
  - 11 COOK TIME Pad**  
Touch and then touch the number pads to set the amount of time you want your food to cook. The oven will shut off when the cooking time has run out.
  - 12 CLEAR/OFF Pad**  
Touch to cancel **ALL** oven operations except the clock, timer and control lockout.
  - 13 CLOCK Pad**  
Touch before setting the clock.
  - 14 Number Pads**  
Use to set any function requiring numbers such as the time of day on the clock, the timer, the oven temperature, the internal food temperature, the start time and length of operation for timed baking and self-cleaning.
  - 15 KITCHEN TIMER ON/OFF Pad**  
Touch to select the timer feature.
  - 16 PROBE Pad**  
Touch when using the probe to cook food.
  - 17 WARM Pad**  
Touch to keep cooked foods warm. See the *How to Set the Oven for Warming* section.
  - 18 CONTROL LOCKOUT**  
The control lockout is **9** and **0**. Touch and hold the **9** and **0** pads at the same time for 3 seconds.

## Special Oven Control Features

Your new touch pad control has additional features that you may choose to use. The following are the features and how you may activate them.

The special feature modes can only be activated while the display is showing the time of day. They remain in the control's memory until the steps are repeated.

When the display shows your choice, touch the **START** pad. The special features will remain in memory after a power failure, except for the Sabbath feature, which will have to be reset.



### 12-Hour Shutdown

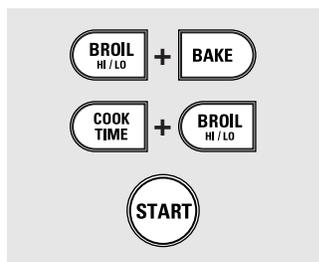
With this feature, should you forget and leave the oven on, the control will automatically turn off the oven after 12 hours during baking functions or after 3 hours during a broil function.

If you wish to turn **OFF** this feature, follow the steps below.

- 1 Touch the **BROIL HI/LO** and **BAKE** pads at the same time for 3 seconds until the display shows **SF**.

- 2 Touch the **DELAY START** pad until **no shdn** (no shut-off) appears in the display.

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



### Fahrenheit or Celsius Temperature Selection

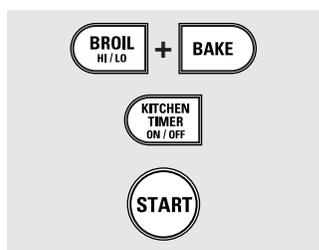
Your oven control is set to use the Fahrenheit temperature selections but you may change this to use the Celsius selections.

- 1 Touch the **BROIL HI/LO** and **BAKE** pads at the same time for 3 seconds until the display shows **SF**.

- 2 Touch the **COOK TIME** and **BROIL HI/LO** pads at the same time. The display will show **F** (Fahrenheit).

- 3 Touch the **COOK TIME** and **BROIL HI/LO** pads again at the same time. The display will show **C** (Celsius).

- 4 Touch the **START** pad.



### Tones at the End of a Timed Cycle

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

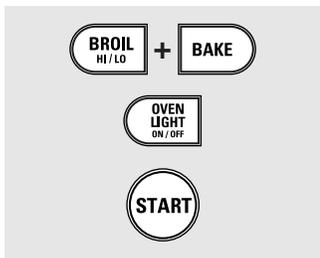
To cancel the 6-second beep:

- 1 Touch the **BROIL HI/LO** and **BAKE** pads at the same time for 3 seconds until the display shows **SF**.

- 2 Touch the **KITCHEN TIMER ON/OFF** pad. The display shows **CON BEEP** (continuous beep). Touch the **KITCHEN TIMER ON/OFF** pad again. The display shows **BEEP**. (This cancels the one beep every 6 seconds.)

- 3 Touch the **START** pad.

## Special Oven Control Features



### Tone Volume

This feature allows you to adjust the tone volumes to a more acceptable volume. There are three possible volume levels.

**1** Touch the **BROIL HI/LO** and **BAKE** pads at the same time for 3 seconds, until the display shows **SF**.

**2** Touch the **OVEN LIGHT ON/OFF** pad. The display will show **2 BEEP**. This is the high volume level.

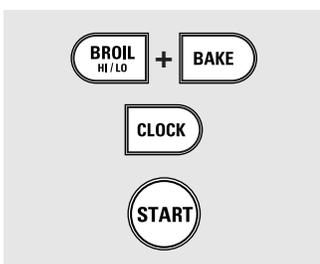
Touch the **OVEN LIGHT ON/OFF** pad again. The display will show **3 BEEP**. This is the loudest volume level.

Touch the **OVEN LIGHT ON/OFF** pad again. The display will show **1 BEEP**. This is the quietest volume level.

For each time the level is changed, a tone will sound to provide an indication of the volume level.

**3** Choose the desired sound level (**1 BEEP, 2 BEEP, 3 BEEP**).

**4** Touch the **START** pad to activate the level shown.



### 12-Hour, 24-Hour or Clock Blackout

Your control is set to use a 12-hour clock.

If you would prefer to have a 24-hour military time clock or black out the clock display, follow the steps below.

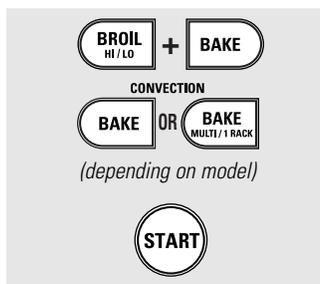
**1** Touch the **BROIL HI/LO** and **BAKE** pads at the same time for 3 seconds until the display shows **SF**.

**2** Touch the **CLOCK** pad once. The display will show **12 hr**. If this is the choice you want, touch the **START** pad.

Touch the **CLOCK** pad again to change to the 24 hour military time clock. The display will show **24 hr**. If this is the choice you want, touch the **START** pad.

Touch the **CLOCK** pad again to black out the clock display. The display will show **OFF**. If this is the choice you want, touch the **START** pad.

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



### Using Auto Recipe™ Conversion

When using convection bake, the Auto Recipe™ Conversion feature will automatically convert entered regular baking temperatures to convection baking temperatures.

The display will show the actual converted (reduced) temperature. For example, if you enter a regular recipe temperature of 350°F and touch the **START** pad, the display will show **CON** and the converted temperature of 325°F.

**NOTE:** This feature only converts cooking temperatures, not cooking times.

#### To turn off this feature:

**1** Touch the **BROIL HI/LO** and **BAKE** pads at the same time for 3 seconds until the display shows **SF**.

**2** Touch the **CONVECTION BAKE** or **CONVECTION BAKE MULTI/1 RACK** pad (depending on model). The display will show **CON ON**. Touch the **CONVECTION BAKE** or **CONVECTION BAKE MULTI/1 RACK** pad again. The display will show **CON OFF**.

**3** Touch the **START** pad.

To turn on this feature, repeat steps 1–3 above but touch the **START** pad when **CON ON** is in the display.

## Using the Clock and Timer



*Make sure the clock is set to the correct time of day.*

### To Set the Clock

The clock must be set to the correct time of day for the automatic oven timing functions to work properly. The time of day cannot be changed during a timed baking or self-cleaning cycle.

- 1 Touch the **CLOCK** pad.
- 2 Touch the number pads.
- 3 Touch the **START** pad.



*The timer is a minute timer only. The timer does not control oven operations. The maximum setting on the timer is 9 hours and 59 minutes.*

### To Set the Timer

- 1 Touch the **KITCHEN TIMER ON/OFF** pad.
- 2 Touch the number pads until the amount of time you want shows in the display. For example, to set 2 hours and 45 minutes, touch **2, 4** and **5** in that order. If you make a mistake touch the **KITCHEN TIMER ON/OFF** pad and begin again.
- 3 Touch the **START** pad.

*After touching the **START** pad, **SET** disappears; this tells you the time is counting down, although the display does not change until one minute has passed. Seconds will not be shown in the display until the last minute is counting down.*

- 4 When the timer reaches **:00**, the control will beep 3 times followed by one beep every 6 seconds until the **KITCHEN TIMER ON/OFF** pad is touched.

*The 6-second tone can be canceled by following the steps in the Special features of your oven control section under Tones at the End of a Timed Cycle.*

### To Reset the Timer

If the display is still showing the time remaining, you may change it by touching the **KITCHEN TIMER ON/OFF** pad, then touch the number pads until the time you want appears in the display.

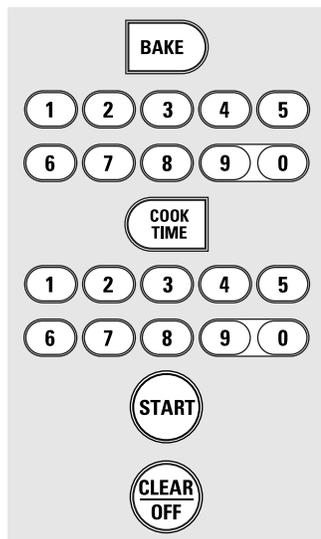
If the remaining time is not in the display (clock, delay start or cooking time are in the display), recall the remaining time by touching the **KITCHEN TIMER ON/OFF** pad and then touching the number pads to enter the new time you want.

### To Cancel the Timer

Touch the **KITCHEN TIMER ON/OFF** pad twice.

## Using the Timed Baking and Roasting Features

**NOTE:** Foods that spoil easily—such as milk, eggs, fish, stuffings, poultry and pork—should not be allowed to sit for more than 1 hour before or after cooking. Room temperature promotes the growth of harmful bacteria. Be sure that the oven light is off because heat from the bulb will speed harmful bacteria growth.



### How to Set an Immediate Start and Automatic Stop

The oven will turn on immediately and cook for a selected length of time. At the end of the cooking time the oven will turn off automatically.

- 1 Touch the **BAKE** pad.
- 2 Using the number pads, enter the desired temperature.
- 3 Touch the **COOK TIME** pad.

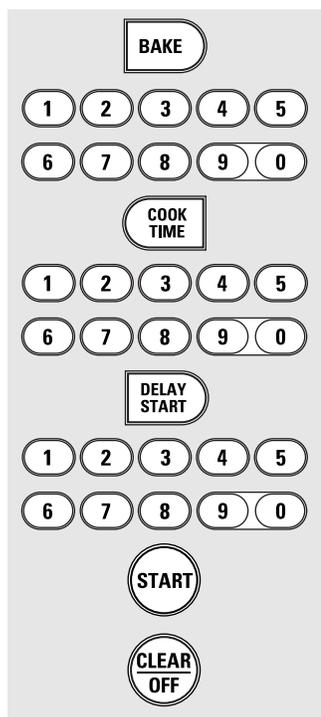
**NOTE:** If your recipe requires preheating, you may need to add additional time to the length of the cooking time.

- 4 Using the number pads, enter the desired baking time. The oven temperature and the cooking time that you entered will be displayed.
- 5 Touch the **START** pad.

The display will show the changing temperature (starting at 100°F) and the cooking time. The display starts changing once the temperature reaches 100°F.

The oven will continue to cook for the programmed amount of time, then shut off automatically, unless the WARM or the Cook and Hold feature was set. Depending on your model, see the *How to Set the Oven for Warming* section or the *Special features of your oven control* section.

Touch the **CLEAR/OFF** pad to clear the display.



### How to Set a Delayed Start and Automatic Stop

You can set the oven control to delay-start the oven, cook for a specific length of time and then turn off automatically.

Make sure the clock shows the correct time of day.

- 1 Touch the **BAKE** pad.
- 2 Using the number pads, enter the desired temperature.
- 3 Touch the **COOK TIME** pad.

**NOTE:** If your recipe requires preheating, you may need to add additional time to the length of the cooking time.

- 4 Using the number pads, enter the desired baking time.
- 5 Touch the **DELAY START** pad.
- 6 Using the number pads, enter the time of day you want the oven to turn on and start cooking.
- 7 Touch the **START** pad.

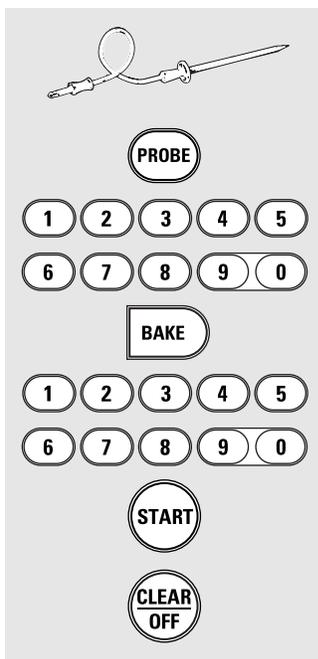
**NOTE:** An attention tone will sound if you are using timed baking and do not touch the **START** pad after entering the baking temperature.

If you would like to check the times you have set, touch the **DELAY START** pad to check the start time you have set or touch the **COOK TIME** pad to check the length of cooking time you have set.

When the oven turns on at the time of day you have set, the display will show the changing temperature (starting at 100°F) and the cooking time. The display starts changing once the temperature reaches 100°F.

The oven will continue to cook for the programmed amount of time, then shut off automatically, unless the WARM or the Cook and Hold feature was set. Depending on your model, see the *How to Set the Oven for Warming* section or the *Special features of your oven control* section.

Touch the **CLEAR/OFF** pad to clear the display.



### How to Set the Oven For Roasting When Using the Probe (on some models)

- 1 Insert the probe into the food.
- 2 Plug the probe into the outlet in the oven. Make sure it's pushed all the way in. Close the oven door. Make sure the probe cable is not touching the broil element.
- 3 Touch the **PROBE** pad.
- 4 Touch the number pads to set the desired internal food or meat temperature. The maximum internal temperature for the food that you can set is 200°F.
- 5 Touch the **BAKE** pad.
- 6 Touch the number pads to set the desired oven temperature.
- 7 Touch the **START** pad.

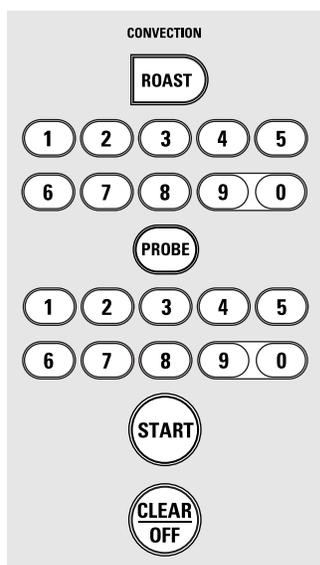
The display will flash if the probe is inserted into the outlet and you have not set a probe temperature and touched the **START** pad.

After the internal temperature of the food reaches 100°F, the changing internal temperature will be shown in the display.

- 8 When the internal temperature of the food reaches the number you have set, the probe and the oven turn off and the oven control signals. To stop the signal, touch the **CLEAR/OFF** pad. Use hot pads to remove the probe from the food. Do not use tongs to pull on it—they might damage it.

To change the oven temperature during the Roast cycle, touch the **BAKE** pad and then the number pads to set the new temperature.

- If the probe is removed from the food before the final temperature is reached, a tone will sound and the display will flash until the probe is removed from the oven.
- You can use the timer even though you cannot use timed oven operations while using the probe.



To change the oven temperature during the Convection Roast cycle, touch the **CONVECTION ROAST** pad and then touch the number pads to set the new desired temperature.

### How to Set the Oven for Convection Roasting when Using the Probe

The display will flash **PROBE** and the oven control will signal if the probe is inserted into the outlet, and you have not set a probe temperature and pressed the **START** pad.

- 1 Place the oven rack in the position that centers the food between the top and bottom of the oven. Insert the probe into the meat.
- 2 Plug the probe into the outlet in the oven. Make sure it is pushed all the way in. Close the oven door.
- 3 Touch the **CONVECTION ROAST** pad.
- 4 Touch the number pads to set the desired oven temperature.
- 5 Touch the **PROBE** pad.
- 6 Touch the number pads to set the desired internal meat temperature.
- 7 Touch the **START** pad.

When the oven starts to heat, the word **LO** will be in the display.

After the internal temperature of the meat reaches 100°F, the changing internal temperature will be shown in the display.

- 8 When the internal temperature of the meat reaches the number you have set, the probe and the oven turn off and the oven control signals. To stop the signal, touch the **CLEAR/OFF** pad. Use hot pads to remove the probe from the food. Do not use tongs to pull on it—they might damage it.

**CAUTION:** To prevent possible burns, do not unplug the probe from the oven outlet until the oven has cooled. Do not store the probe in the oven.

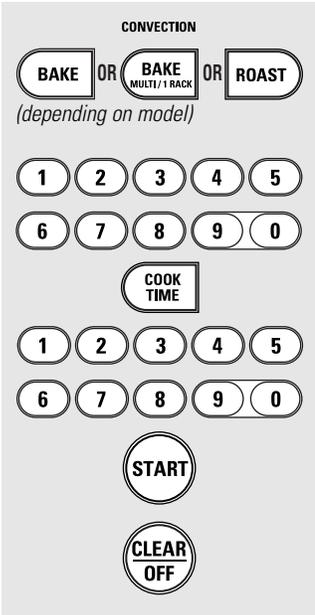
**NOTE:**

- If the probe is removed from the food before the final temperature is reached, a tone will sound and the display will flash until the probe is removed from the oven.
- You will hear a fan while cooking with this feature. The fan will stop when the door is opened, but the heat will not turn off.
- You can use the kitchen timer even though you cannot use timed oven operations.

## Using the Timed Features for Convection Cooking

You will hear a fan while cooking with these features. The fan will stop when the door is opened, but the heat will not turn off.

**NOTE:** Foods that spoil easily—such as milk, eggs, fish, stuffings, poultry and pork—should not be allowed to sit for more than 1 hour before or after cooking. Room temperature promotes the growth of harmful bacteria. Be sure that the oven light is off because heat from the bulb will speed harmful bacteria growth.



### How to Set an Immediate Start and Automatic Stop

The oven will turn on immediately and cook for a selected length of time. At the end of the cooking time, the oven will turn off automatically.

Make sure the clock shows the correct time of day.

- 1 Touch the **CONVECTION BAKE MULTI/1 RACK** pad once (**CONVECTION BAKE MULTI** mode) for multi-rack convection baking. This mode is used for cooking food items on more than one rack (i.e., 2, 3 or more racks) at the same time in convection bake. See *Multi-Rack Baking* section for more information. Touch the **CONVECTION BAKE MULTI/1 RACK** pad twice (**CONVECTION BAKE 1 RACK** mode) for one rack convection baking. This mode is used for cooking food items on only one rack in convection bake.

**NOTE:** On some models, there is only a **CONVECTION BAKE** pad which works for both one-rack and multi-rack convection baking.

Touch the **CONVECTION ROAST** pad for convection roasting.

- 2 Touch the number pads to set the desired oven temperature.
- 3 Touch the **COOK TIME** pad.

**NOTE:** If your recipe requires preheating, you may need to add additional time to the length of the cooking time.

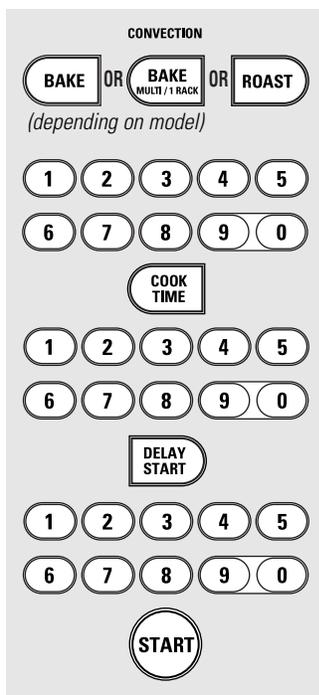
- 4 Touch the number pads to set the desired length of cooking time. The minimum cooking time you can set is 1 minute. The oven temperature that you set and the cooking time that you entered will be in the display.

- 5 Touch the **START** pad.

The display will show the changing temperature (starting at 100°F) and the cooking time. The display starts changing once the temperature reaches 100°F.

The oven will continue to cook for the programmed amount of time, then shut off automatically, unless the **WARM** or the **Cook and Hold** feature was set. Depending on your model, see the *How to Set the Oven for Warming* section or the *Special features of your oven control* section.

- 6 Touch the **CLEAR/OFF** pad to clear the display if necessary. Remove the food from the oven. Remember, even though the oven turns off automatically, food left in the oven will continue cooking after the oven turns off.



### How to Set a Delayed Start and Automatic Stop

You can set the oven control to delay-start the oven, cook for a specific length of time and then turn off automatically.

Make sure the clock shows the correct time of day.

- 1 Touch the **CONVECTION BAKE MULTI/1 RACK** pad once (**CONVECTION BAKE MULTI** mode) for multi-rack convection baking. This mode is used for cooking food items on more than one rack (i.e., 2, 3 or more racks) at the same time in convection bake. See *Multi-Rack Baking* section for more information.

Touch the **CONVECTION BAKE MULTI/1 RACK** pad twice (**CONVECTION BAKE 1 RACK** mode) for one rack convection baking. This mode is used for cooking food items on only one rack in convection bake.

**NOTE:** On some models, there is only a **CONVECTION BAKE** pad which works for both one-rack and multi-rack convection baking.

Touch the **CONVECTION ROAST** pad for convection roasting.

- 2 Touch the number pads to set the desired oven temperature.
- 3 Touch the **COOK TIME** pad.

**NOTE:** If your recipe requires preheating, you may need to add additional time to the length of the cooking time.

- 4 Touch the number pads to set the desired cooking time.
- 5 Touch the **DELAY START** pad.
- 6 Touch the number pads to set the time of day you want the oven to turn on and start cooking.

If you would like to check the times you have set, touch the **DELAY START** pad to check the start time you have set, or touch the **COOK TIME** pad to check the length of cooking time you have set.

- 7 Touch the **START** pad.

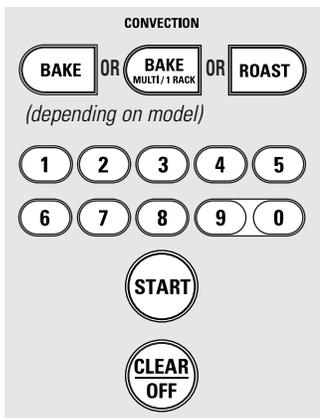
**NOTE:** An attention tone will sound if you are using timed baking or roasting and do not touch the **START** pad after entering the baking or roasting temperature.

When the oven turns on at the time of day you have set, the display will show the changing temperature (starting at 100°F) and the cooking time. The display starts changing once the temperature reaches 100°F.

The oven will continue to cook for the programmed amount of time, then shut off automatically, unless the WARM or the Cook and Hold feature was set. Depending on your model, see the *How to Set the Oven for Warming* section or the *Special features of your oven control* section.

- 8 Touch the **CLEAR/OFF** pad to clear the display if necessary. Remove the food from the oven. Remember, even though the oven shuts off automatically, food left in the oven will continue cooking after the oven turns off.

## Using the Convection Oven



### How to Set the Oven for Convection Baking or Roasting

**1** Touch the **CONVECTION BAKE MULTI/1 RACK** pad once (**CONVECTION BAKE MULTI** mode) for multi-rack convection baking. This mode is used for cooking food items on more than one rack (i.e., 2, 3 or more racks) at the same time in convection bake.

Touch the **CONVECTION BAKE MULTI/1 RACK** pad twice (**CONVECTION BAKE 1 RACK** mode) for one rack convection baking. This mode is used for cooking food items on only one rack in convection bake.

**NOTE:** On some models, there is only a **CONVECTION BAKE** pad which works for both one-rack and multi-rack convection baking.

Touch the **CONVECTION ROAST** pad for convection roasting.

**2** Touch the number pads to set the desired oven temperature.

**3** Touch the **START** pad.

To change the oven temperature, touch the **CONVECTION BAKE MULTI/1 RACK**, **CONVECTION BAKE** (depending on model) or **CONVECTION ROAST** pad and then the number pads to set the new temperature.

When the oven starts to heat, the changing temperature, starting at 100°F, will be displayed. When oven reaches the temperature you set, 3 beeps will sound.

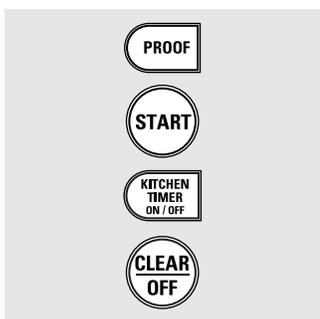
**4** Touch **CLEAR/OFF** pad when finished.

■ You will hear a fan while cooking with convection. The fan will stop when the door is opened, but the heat will not turn off.

■ You may hear the oven clicking during baking. This is normal.

## Using the Proofing and Warming Features

The proofing feature maintains a warm environment useful for rising yeast-leavened products.



### How to Set the Oven For Proofing (on some models)

**1** Place the covered dough in a dish in the oven on shelf B or C.

**NOTE:** For best results, cover the dough with a cloth or with greased plastic wrap (the plastic may need to be anchored underneath the container so the oven fan will not blow it off).

**2** Touch the **PROOF** pad and then the **START** pad.

The display will read **PrF** (proof).

The oven interior light turns on and remains on during proofing.

The proofing feature automatically provides the optimum temperature for the proofing process, and therefore does not have a temperature adjustment.

**3** Set the **KITCHEN TIMER ON/OFF** for the minimum proof time.

**4** When proofing is finished, touch the **CLEAR/OFF** pad.

■ To avoid lowering the oven temperature and lengthening proofing time, do not open the oven door unnecessarily.

■ Check bread products early to avoid over-proofing.

#### **NOTE:**

■ Do not use the proofing mode for warming food or keeping food hot. The proofing oven temperature is not hot enough to hold foods at safe temperatures. Use the **WARM** or the Cook and Hold feature (depending on model) to keep food warm.

■ Proofing will not operate when oven is above 125°F. "HOT" will show in the display.

**WARM**

**START**

### **How to Set the Oven For Warming** (on some models)

The **WARM** feature keeps cooked foods hot.

This feature is not designed to reheat cold food.

To use the **WARM** feature, touch the **WARM** pad and then the **START** pad.

To use the **WARM** feature after Timed Baking or Roasting, follow these steps:

- 1 Touch the mode of cooking that you want to use (**BAKE, CONVECTION BAKE MULTI, CONVECTION BAKE 1 RACK** or **CONVECTION ROAST**).
- 2 Touch the number pads to set the oven temperature.
- 3 Touch the **COOK TIME** pad.
- 4 Touch the number pads to set the desired length of cooking time.
- 5 Touch the **WARM** pad.
- 6 Touch the **START** pad.

#### **To Crisp Stale Items**

- Place food in low-sided dishes or pans.
- For best results, place the food items in a single layer. Do not stack.
- Leave them uncovered.

- Check crispness after 20–30 minutes. Add time as needed.

#### **IMPORTANT NOTES:**

- Food should be kept hot in its cooking container or transferred to a heat-safe serving dish.
- For moist foods, cover them with an oven-safe lid or aluminum foil.
- Fried or crisp foods do not need to be covered, but can become too dry if warmed for too long.
- Repeated opening of the door allows the hot air to escape and the food to cool.
- Allow extra time for the temperature inside the oven to stabilize after adding items.
- With large loads it may be necessary to cover some of the cooked food items.
- Remove serving spoons, etc., before placing containers in the oven.
- Do not use plastic containers, lids or plastic wrap.

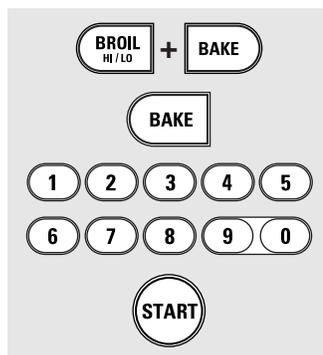
**CAUTION:** Plastic containers, lids or plastic wrap will melt if placed in the oven. Melted plastic may not be removable and is not covered under your warranty.

## Adjusting the Oven Thermostat

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

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

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

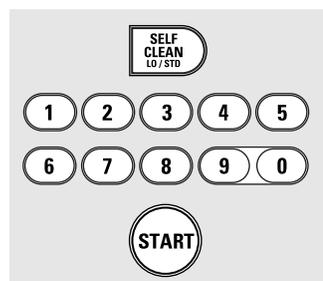


### To Adjust the Thermostat

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

## Using the Self-Cleaning Oven

The oven door must be closed and all controls set correctly for the cycle to work properly.



### How to Set the Oven for Cleaning

- 1 Touch the **SELF CLEAN LO/STD** pad once for a 4-hour clean time or twice for a 3-hour clean time.  
A 3-hour self-clean time is recommended for use when cleaning small, contained spills. A self-clean time of 4 hours or longer is recommended for a dirtier oven.
- 2 If a time other than 3 hours or 4 hours is needed, use the number pads and enter the desired clean time.

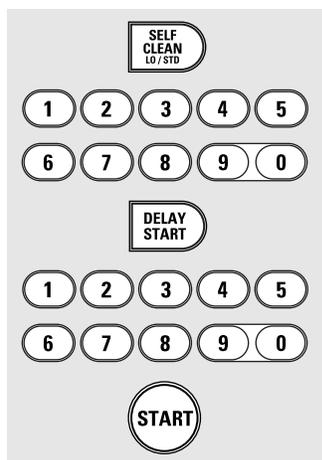
You can change the clean time to any time between 3 hours and 5 hours, depending on how dirty your oven is.

- 3 Touch the **START** pad.

The door locks automatically. The display will show the clean time remaining. It will not be possible to open the oven door until the temperature drops below the lock temperature and the **LOCKED** light goes off.

When the **LOCKED** light goes off, you will be able to open the door.

- The word **LOCKED** will flash and the oven control will signal if you set the clean cycle and forget to close the oven door.
- To stop a clean cycle, touch the **CLEAR/OFF** pad. When the **LOCKED** light goes off indicating the oven has cooled below the locking temperature, you will be able to open the door.



### How to Delay the Start of Cleaning

- 1 Touch the **SELF CLEAN LO/STD** pad once for a 4-hour clean time or twice for a 3-hour clean time. A 3-hour self-clean time is recommended for use when cleaning small, contained spills. A self-clean time of 4 hours or longer is recommended for a dirtier oven.
- 2 If a time other than 3 hours or 4 hours is needed, use the number pads and enter the desired clean time.

You can change the clean time to any time between 3 hours and 5 hours, depending on how dirty your oven is.

- 3 Touch the **DELAY START** pad.
- 4 Using the number pads, enter the time of day you want the clean cycle to start.
- 5 Touch the **START** pad.

The door locks automatically. The display will show the start time. It will not be possible to open the oven door until the temperature drops below the lock temperature and the **LOCKED** light goes off.

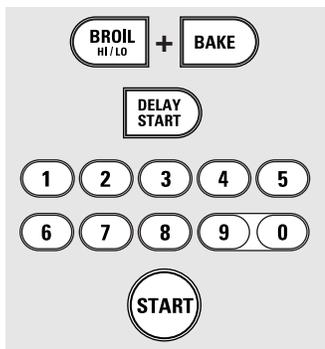
When the **LOCKED** light goes off, you will be able to open the door.

## Using the Sabbath Feature

*(Designed for use on the Jewish Sabbath and Holidays.) (On some models)*

The Sabbath feature can be used for baking/roasting only. It cannot be used for convection, broiling, self-cleaning or Delay Start cooking.

**NOTE:** The oven light comes on automatically (on some models) when the door is opened and goes off when the door is closed. The bulb may be removed. See the Oven Light Replacement section. On models with a light switch on the control panel, the oven light may be turned on and left on.



When the display shows  $\supset$  the oven is set in Sabbath. When the display shows  $\supset <$  the oven is baking/roasting.

### How to Set for Regular Baking/Roasting

Make sure the clock shows the correct time of day and the oven is off.

- 1 Touch and hold **both** the **BROIL HI/LO** and **BAKE** pads, **at the same time**, until the display shows **SF**.

**NOTE:** If bake or broil appears in the display, the **BROIL HI/LO** and **BAKE** pads were not touched at the same time. Touch the **CLEAR/OFF** pad and begin again.

- 2 Tap the **DELAY START** pad until **Sab bAtH** appears in the display.
- 3 Touch the **START** pad and  $\supset <$  will appear in the display.
- 4 Touch the **BAKE** pad. No signal will be given.

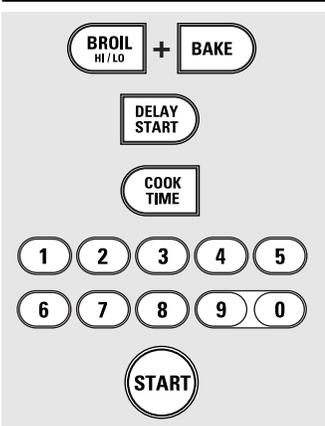
- 5 Using the number pads, enter the desired temperature between 170°F and 550°F. No signal or temperature will be given.

- 6 Touch the **START** pad.

- 7 After a random delay period of approximately 30 seconds to 1 minute,  $\supset <$  will appear in the display indicating that the oven is baking/roasting. If  $\supset <$  doesn't appear in the display, start again at Step 4.

To adjust the oven temperature, touch the **BAKE** pad, enter the new temperature using the number pads and touch the **START** pad.

**NOTE:** The **CLEAR/OFF** and **COOK TIME** pads will function during the Sabbath feature.



When the display shows  $\supset$  the oven is set in Sabbath. When the display shows  $\supset <$  the oven is baking/roasting.

### How to Set for Timed Baking/Roasting – Immediate Start and Automatic Stop

Make sure the clock shows the correct time of day and the oven is off.

- 1 Touch and hold **both** the **BROIL HI/LO** and **BAKE** pads, **at the same time**, until the display shows **SF**.

**NOTE:** If bake or broil appears in the display, the **BROIL HI/LO** and **BAKE** pads were not touched at the same time. Touch the **CLEAR/OFF** pad and begin again.

- 2 Tap the **DELAY START** pad until **Sab bAtH** appears in the display.
- 3 Touch the **START** pad and  $\supset <$  will appear in the display.
- 4 Touch the **COOK TIME** pad.
- 5 Touch the number pads to set the desired length of cooking time between 1 minute and 9 hours and 99 minutes. The cooking time that you entered will be displayed.

- 6 Touch the **START** pad.

- 7 Touch the **BAKE** pad. No signal will be given.

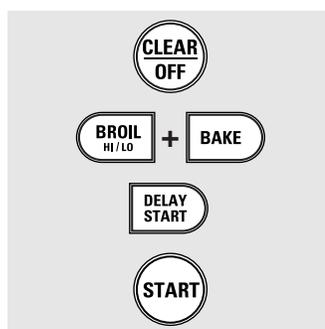
- 8 Using the number pads, enter the desired temperature. No signal or temperature will be given.

- 9 Touch the **START** pad.

- 10 After a random delay period of approximately 30 seconds to 1 minute,  $\supset <$  will appear in the display indicating that the oven is baking/roasting. If  $\supset <$  doesn't appear in the display, start again at Step 7.

To adjust the oven temperature, touch the **BAKE** pad, enter the new temperature using the number pads and touch the **START** pad.

When cooking is finished, the display will change from  $\supset <$  to  $\supset$  and **0:00** will appear, indicating that the oven has turned **OFF** but is still set in Sabbath. Remove the cooked food.



### How to Exit the Sabbath Feature

- 1 Touch the **CLEAR/OFF** pad.
- 2 If the oven is cooking, wait for a random delay period of approximately 30 seconds to 1 minute, until only  $\supset$  is in the display.
- 3 Touch and hold **both** the **BROIL HI/LO** and **BAKE** pads, **at the same time**, until the display shows **SF**.
- 4 Tap the **DELAY START** pad until **12 shdn** or **no shdn** appears in the display.

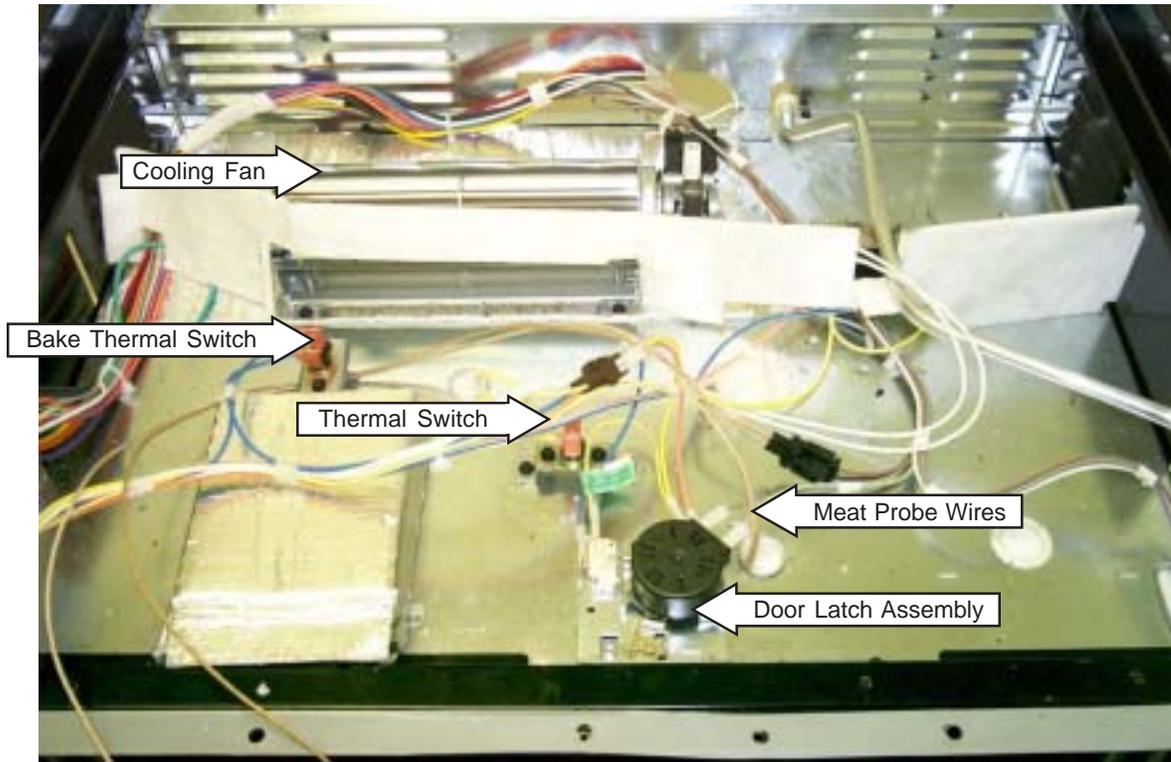
- 5 Choose **12 shdn**, indicating that the oven will automatically turn off after 12 hours or **no shdn**, indicating that the oven will not automatically turn off after 12 hours.

- 6 Touch the **START** pad when the option that you want is in the display (**12 shdn** or **no shdn**).

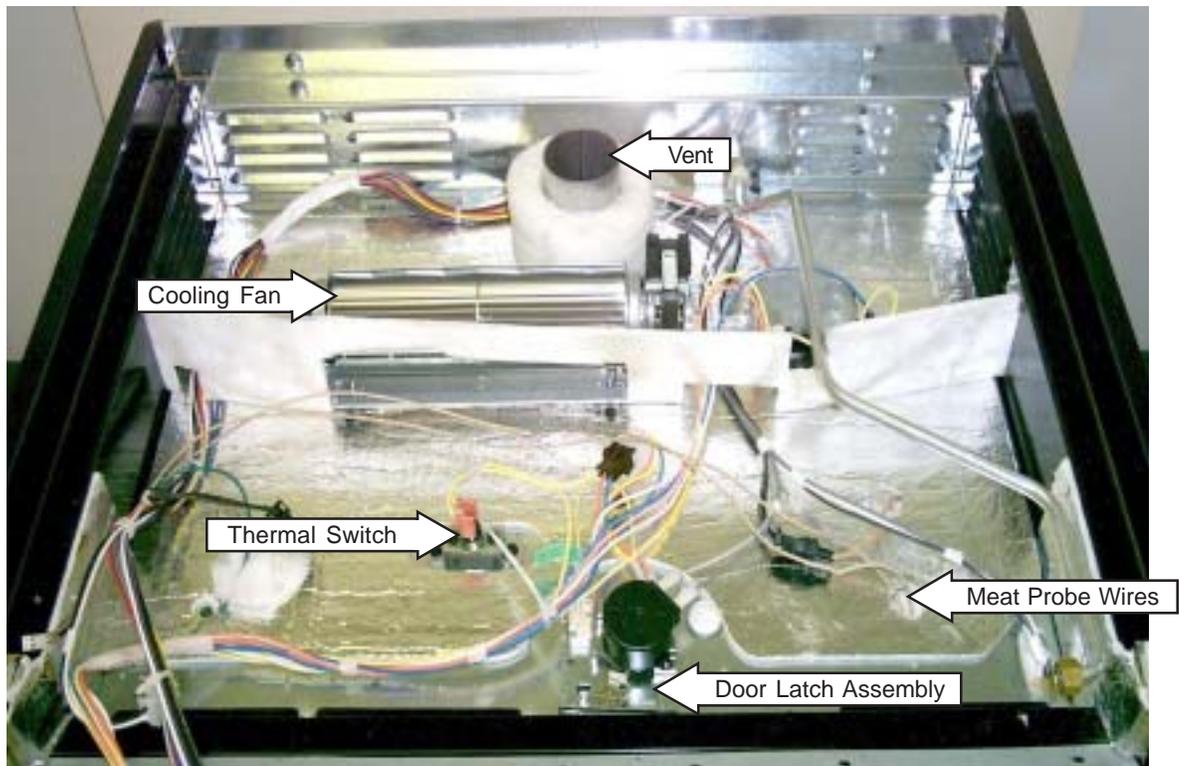
**NOTE:** If a power outage occurred while the oven was in Sabbath, the oven will automatically turn off and stay off even when the power returns. The oven control must be reset.

# Component Locator Views

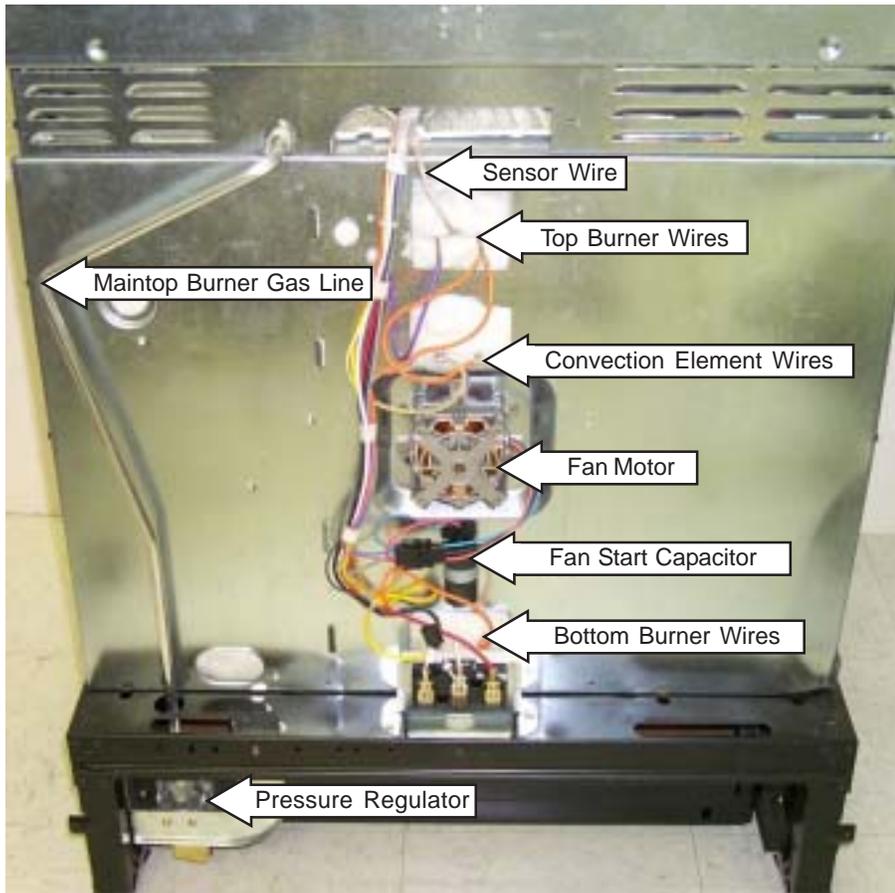
## Dual Fuel Range Top Locator View



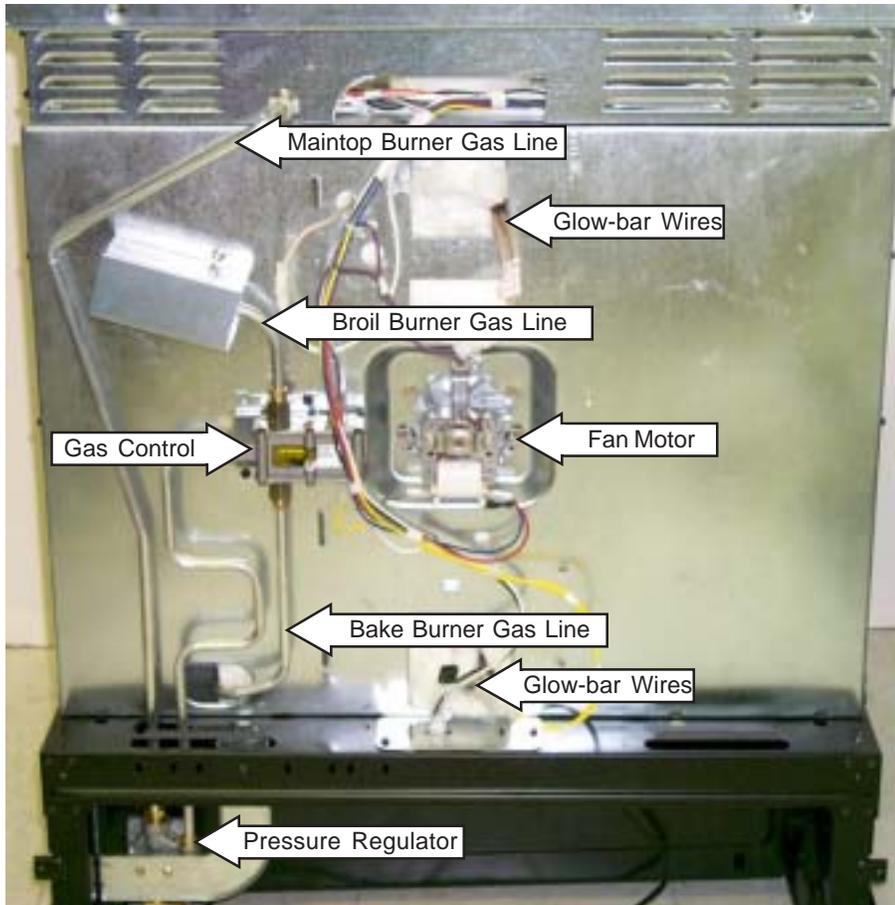
## All Gas Range Top Locator View



**Rear View  
(Dual Fuel)**



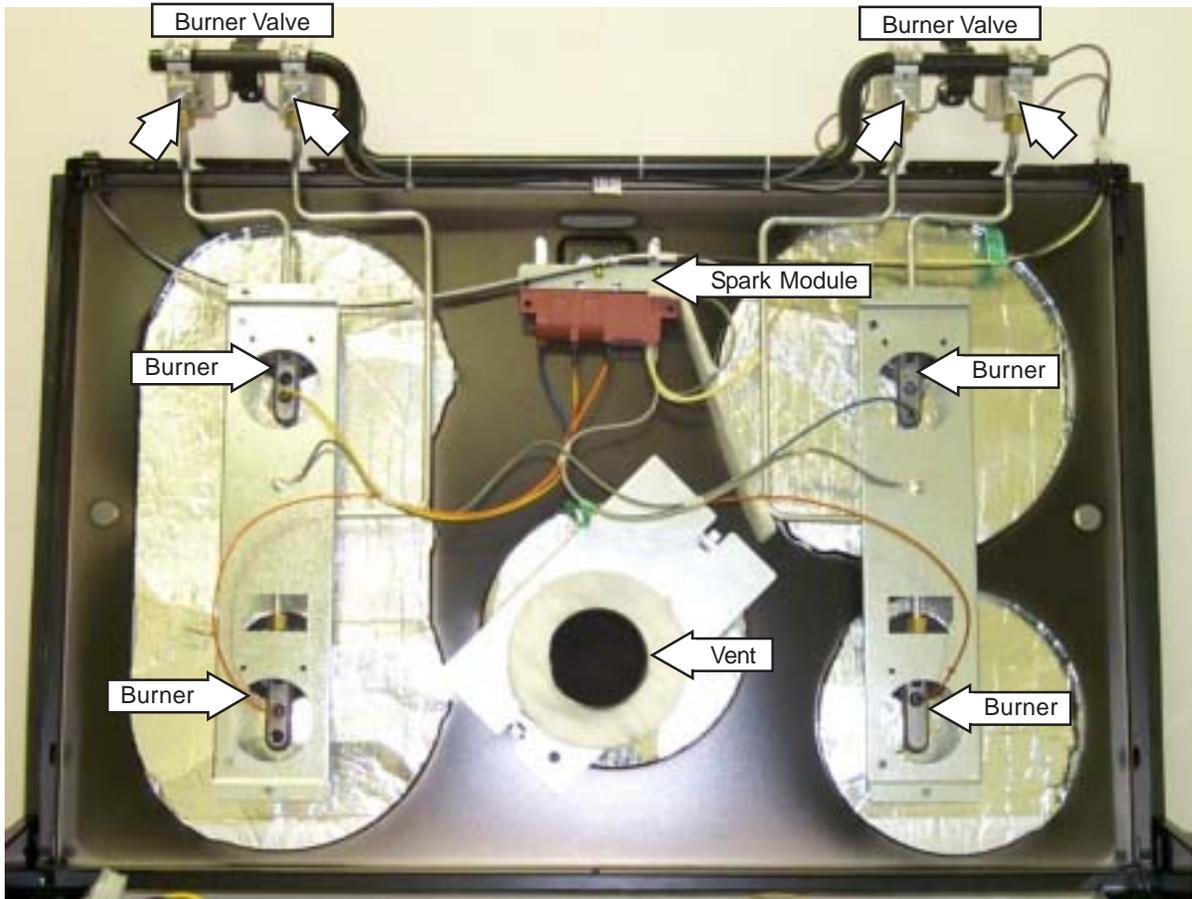
**Rear View  
(All Gas)**



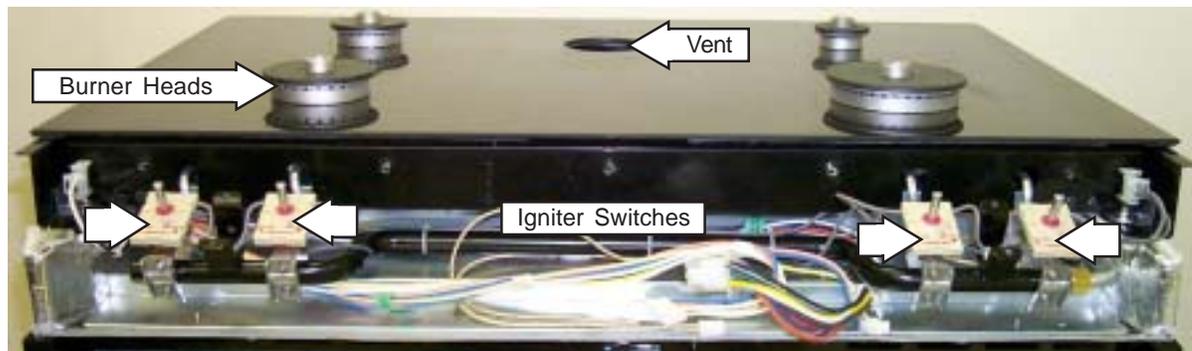
## Maintop Burner Assembly

**Note:** The Dual Fuel and All Gas Ranges have identical maintop burner assemblies except for the vent. The All Gas Range has a vent opening in the glass cooktop, the Dual Fuel Range does not.

### Bottom View



### Top/Front View



# Range Components

## Door Assemblies

The doors can be separated into two assemblies: (1) Outer assembly which consists of handle, vent trim, outer glass, bottom trim, and frame; (2) Inner assembly which consists of inner panel, gasket, glass panels, and insulation. The assemblies are held together by 2 screws on each side, along with 4 screws across the bottom.

**Caution:** Care must be taken when mounting door handle not to overtighten handle screws. Overtightening screws can damage handle. Hand-tighten screws (do not use electric driver). Make sure handle fits snugly to door panel.

**Self-Clean Door Gasket** - The door gasket is attached to the inner door panel by a chain of spring clips.

1. Locate spring clip at center of gasket and insert in hole on inner door panel near top.
2. Install gasket by bending at 90° beside clip and rocking into hole.
3. Tuck loose ends into slot at the bottom of inner panel.

## Stainless Steel Door (On some models)

The stainless steel door has an additional third pane of glass and an additional piece of insulation inside the inner door assembly, at the bottom of the window pack. It is the same piece of insulation that is used across the top of the window pack.

There is also a piece of 1/8-in. thick foil faced insulation across the top of the door, just behind the handle. It gets sandwiched under the inboard pair of screws that mount the door handle to hold it in place.

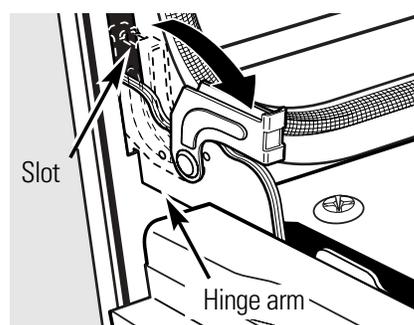
Finally, there are two strips of adhesive backed foil tape, approximately 4-in. wide and 12-in. long, along each side of the window. These are applied vertically (one on each side) to the glass and frame assembly, before the handle is attached.

## Oven Door

**WARNING:** Before servicing the range, power and/or gas must be removed from the range. Make sure the oven is completely cool.

### To remove the door:

1. Fully open the door.



*Hinge lock (unlocked position)*

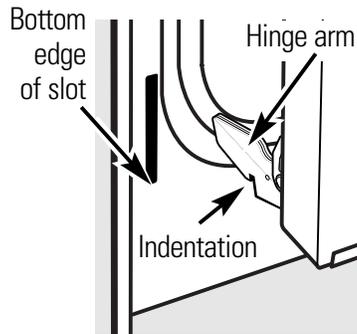
2. Pull the hinge locks down toward the door frame, to the unlocked position. This may require a flat-blade screwdriver to start the hinge locks moving.
3. Firmly grasp both sides of the door at the top.
4. Close the door to the door removal position, which is halfway between the broil stop position and fully closed.

**Caution:** Do not lift the door by the handle.

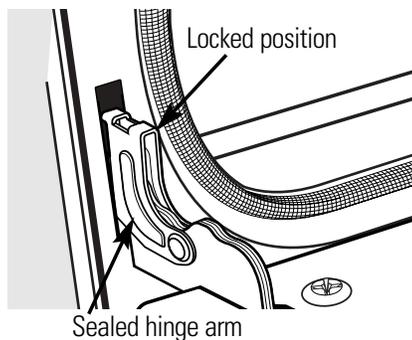
5. Lift the door up and out until the hinge arm is clear of the slot.

### To replace the door:

1. Firmly grasp both sides of the door at the top.
2. 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. The notch in the hinge arm must be fully seated into the bottom of the slot.



3. Fully open the door. If the door cannot be fully opened, the hinge is not properly seated.
4. Push the hinge locks up against the front frame of the oven cavity, to the locked position.



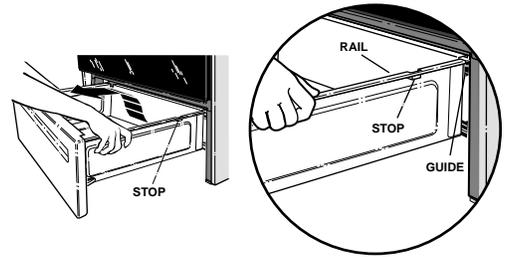
5. Close the oven door and check for proper alignment, rubbing, etc.

### Storage Drawer

#### To remove and replace the storage drawer:

1. Pull the drawer out until it stops.
2. Lift the front of the drawer until the stops clear the guides.
3. Remove the drawer.

4. To replace the storage drawer, place the drawer rail on the guides.
5. Push the drawer in until it stops.
6. Lift the front of the drawer and push in until the stops clear the guides.
7. Lower the front of the drawer and push in until it closes.



### Range Removal

**WARNING:** Shut off the gas to the range before range removal.

#### To remove the range:

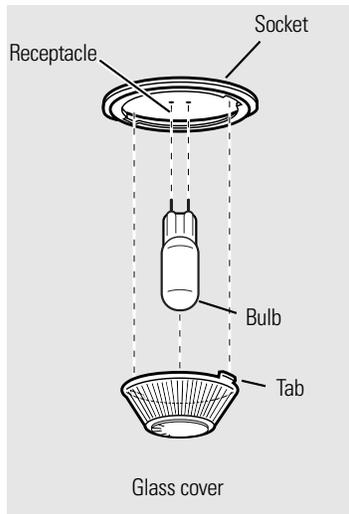
1. Remove the oven door (see procedure).
2. Remove the storage drawer.
3. Unplug the range through the storage drawer opening.
4. Disconnect the gas line.

**Caution:** Take the necessary precautions to protect the floor from damage that could be caused by moving the range.

5. Carefully pull the range out until the rear leveling leg has cleared the Anti-tip Bracket.
6. Using a  $\frac{7}{16}$ -in. wrench, screw the back leveling legs out to raise the rear of the range above the counter.
7. Using a  $\frac{7}{16}$ -in. wrench, screw the front leveling legs out to raise the front of the range above the counter.
8. Carefully pull the range out while lifting up until the back of the range is accessible.

**Note:** Make sure the anti-tip bracket is installed correctly when pushing the range back into place.

## Oven Light Bulbs



**Caution:** Before replacing your oven light bulb, disconnect the electrical power to the oven at the main fuse or circuit breaker panel.

**Note:** The glass cover should be removed only when cold. Be sure to let the light cover and bulb cool completely. Do not touch a hot bulb with bare hands or a damp cloth.

Replace with a new 130V halogen bulb, not to exceed 50 watts.

If oven light is not working, make the following checks:

- Check oven light bulb.
- Light should come on when door is opened - check voltage across light socket terminals. It should read 120 VAC. If 0 volts, check jamb switch and wiring.

### To remove and replace the oven light bulb:

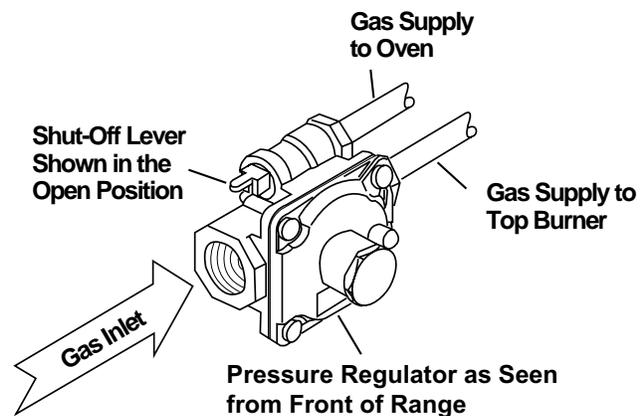
1. Turn the glass cover counterclockwise  $\frac{1}{4}$  turn until the tabs of the glass cover clear the grooves of the socket.
2. Using gloves or a dry cloth, remove the bulb by pulling it straight out.
3. Using gloves or a dry cloth, remove the new bulb from its packaging. **Do not touch the bulb with bare fingers.** Push the bulb straight into the receptacle all the way. Place the tabs of the glass cover into the grooves of the socket. Turn the glass cover clockwise  $\frac{1}{4}$  turn to engage.

4. For improved lighting inside the oven, clean the glass cover frequently using a wet cloth. This should be done when the oven is completely cool.
5. Reconnect electrical power to the oven.

## Oven Gas Shut-off Valve (All Gas)

The gas shut-off valve is located on the side of the pressure regulator which is mounted on a bracket behind the storage drawer. Access to the shut-off lever is obtained by removing the storage drawer and reaching through the opening.

**Note:** The oven shut-off valve shuts off the gas to the oven only and has no effect on the top burners.



# Oven Components

## Oven Burner Ignition System (All Gas)

The oven bake and broil burners are ignited by a glow-bar ignition system. The igniter is a *Norton* style rectangular glow-bar. The bake and broil ignition circuits consist of the electronic control, an igniter and an oven safety valve (gas valve). The three components are wired in series for each cooking function.

The most important points to know about the ignition system are:

- THE IGNITER RESISTANCE DECREASES AS THE IGNITER SURFACE TEMPERATURE INCREASES.
- THE SAFETY VALVE OPERATES BY CURRENT, NOT VOLTAGE.

From a cold start, the igniter needs 30 to 60 seconds, with a minimum of 116 volts applied, to reduce its electrical resistance enough to provide a minimum of 2.9 amps of current flow in the series circuit. This is the required current flow needed for the safety valve to open and supply gas to the burner.

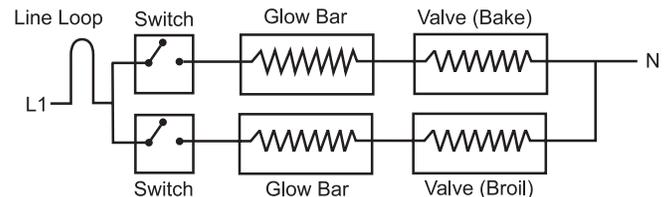
The glow-bar should provide a steady current flow of between 3.4 to 3.6 amps in the circuit. At that point the igniter temperature is between 1800°F to 2500°F (982°C to 1371°C). The igniter will remain energized at all times during burner operation. If the igniter glows red but does not draw at least 2.9 amps, the fault is usually with the igniter, not the valve.

Always check the oven shut-off valve on the pressure regulator for a *Not On* condition.

## Glow-bar Igniter (All Gas)

**WARNING:** The rectangular *Norton* glow-bar igniter is NOT INTERCHANGEABLE with the cylindrical *Carborundum* glow-bar igniter. The two types of glow-bar igniters operate at different amperage and use different gas valves.

Check the glow-bar circuit with a clamp-on ammeter. If igniter glows red but circuit does not draw at least 2.9 amps, the fault is likely with the igniter, not the valve.



**Note:** If igniter glows, but ignition does not occur, be sure the oven shut-off valve on the pressure regulator is in the open position.

Slow ignition can be caused by one or more of the following conditions:

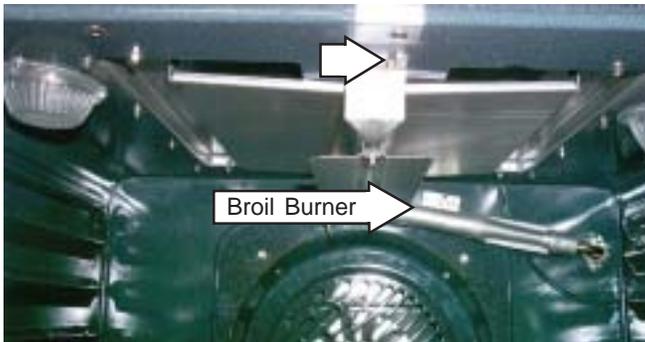
1. Blockage of primary air intake: Hole beneath the bake orifice hood must be open and free of insulation.
2. Blockage of secondary air intake holes: Examine oven burner box (galvanized box surrounding oven burner) and inspect the single row of secondary air holes beneath the bake burner for signs of blockage. Also, be sure items in the storage drawer do not push against the ceiling of the drawer area. If pushed hard enough, the ceiling will flex upward, closing off the secondary air holes.
3. Improper alignment of orifice hood and burner: Orifice must be pointing straight into burner venturi.
4. Improper air/gas adjustment.
5. Blockage of burner crossover slots: Crossover slots must be open and free of burrs.
6. Improper installation: Failure to seal all openings in the wall behind and floor below range may permit substantial drafts which can affect ignition.
7. The gas control valve should draw 5 amps when operating. Check by measuring the amperage in L1 to the oven control.

## Broil Burner Glow-bar Igniter

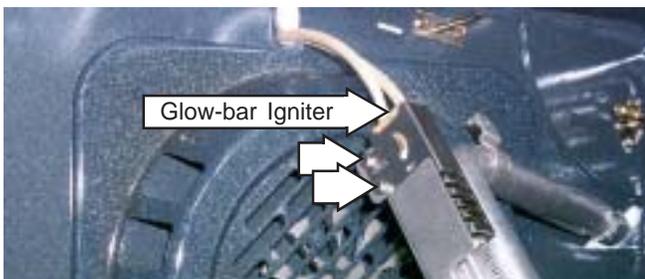
The broil burner glow-bar igniter has an approximate resistance value of 141  $\Omega$ .

### To remove the broil burner glow-bar igniter:

1. Remove the oven door (see *Oven Door*).
2. Remove the screw that holds the burner in place. Lower the burner.

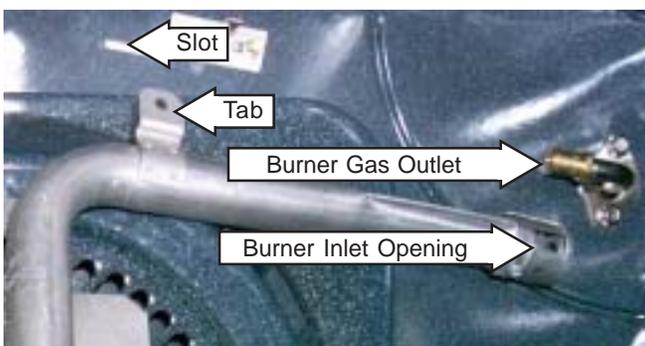


3. Remove the 2 hex-head screws that hold the glow-bar igniter to the burner.

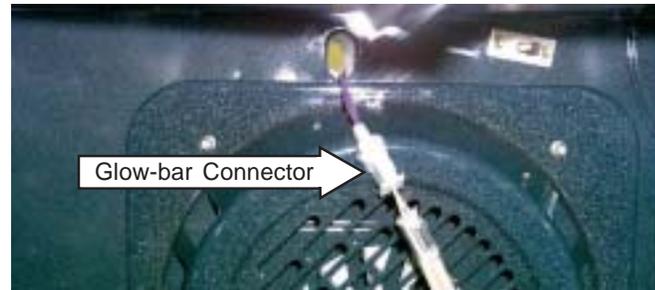


4. Remove the burner.

**Note:** When reinstalling the burner, be sure the tab on the burner is inserted into the slot on the rear wall of the oven. Make sure the burner inlet opening is over the gas outlet.



5. Gently pull the glow-bar connector through the oven wall. Disconnect the glow-bar igniter wires.



6. Remove the glow-bar igniter from the oven.

**IMPORTANT:** When reinstalling the glow-bar, the connector end must be positioned **OUTSIDE** the range insulation. Do not allow the connector next to or inside the insulation. Allow the stiff over sleeve to position the connector away from the insulation.

Insulation should be allowed to close in around the igniter lead wires thus protecting the connector from any heat loss at the insulation opening.

## Bake Burner Glow-bar Igniter

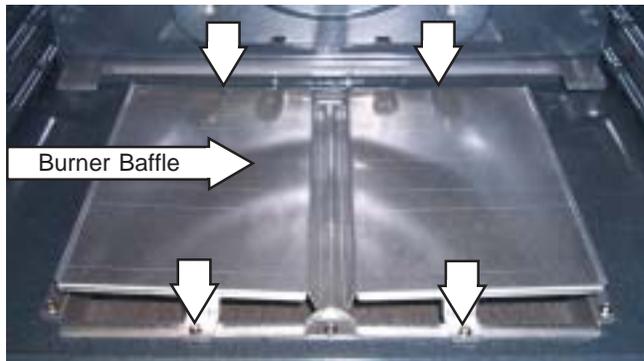
The bake burner glow-bar igniter has an approximate resistance value of 178  $\Omega$ .

### To remove the bake burner glow-bar igniter:

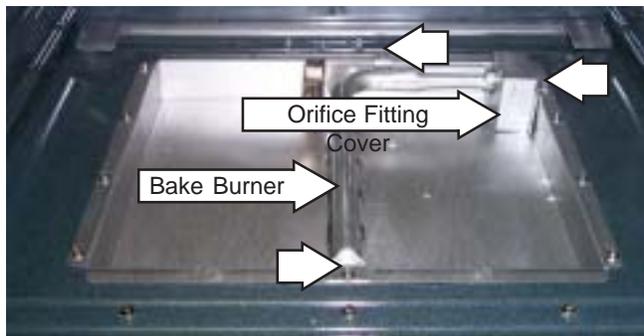
1. Remove the oven door (see *Oven Door*).
2. Remove the bottom pan by sliding it forward until it can be removed from the oven.



3. Remove the 4 screws that hold the burner baffle in place.



4. Remove the 2 screws that hold the burner in place.
5. Remove the screw that holds the orifice fitting cover in place. Remove the fitting cover.

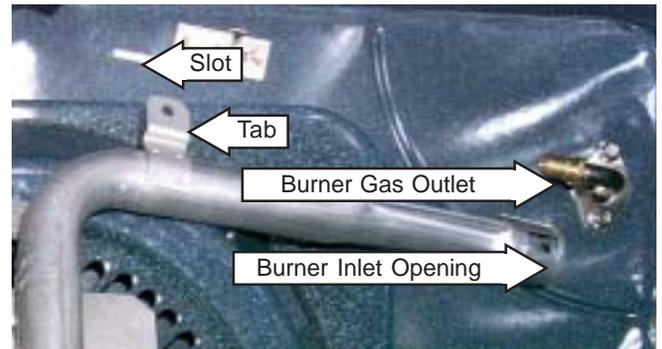


6. Remove the 2 hex-head screws that hold the glow-bar igniter to the bake burner.



7. Remove the bake burner.

**Note:** When reinstalling the broil burner, make sure the burner inlet opening is over the gas outlet.



8. Gently pull the glow-bar connector through the oven wall. Disconnect the glow-bar igniter wires.



6. Remove the glow-bar igniter from the oven.

**IMPORTANT:** When reinstalling the glow-bar, the connector end must be positioned **OUTSIDE** the range insulation. Do not allow the connector next to or inside the insulation. Allow the stiff over sleeve to position the connector away from the insulation.

Insulation should be allowed to close in around the igniter lead wires thus protecting the connector from any heat loss at the insulation opening.

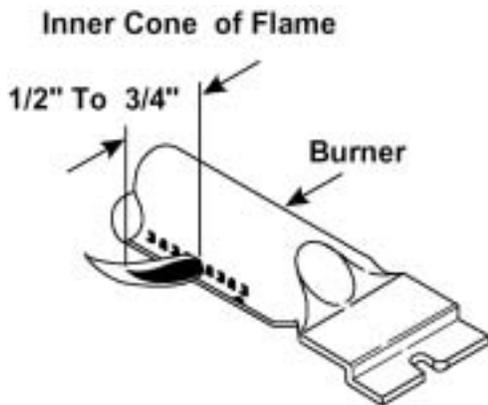
## Bake and Broil Burner Flame Adjustments

**Note:** A small amount of odor is normal and will be present when the range is first turned on. If there is a strong odor, the bake and broil burner assemblies should be inspected.

**Caution:** Adjustments require disassembly of the burner section. To prevent handling hot parts, oven should be cool.

### Bake and Broil Burner Test

1. Remove the oven door (see *Oven Door*).
2. Remove the bottom pan and burner baffle (see *Bake Burner Glow-bar Igniter*).
3. Reinstall the oven door.
4. Close the oven door, set the control for **BAKE**, and observe the bake burner flame.
5. Observe the flames for a period of at least 2 minutes. The flame should not lift or blow off the burner during any period of operation. It should be blue with approximately a  $\frac{1}{2}$ -in. to  $\frac{3}{4}$ -in. (12-mm to 19-mm) inner cone.



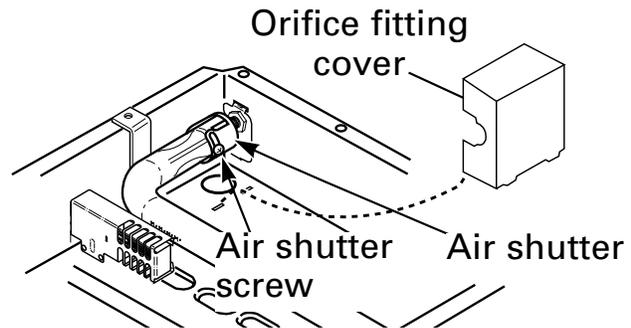
6. Set the control for **BROIL** and repeat step 5.

**Note:** The door should remain closed during this test.

To correct any flame problems, perform the following procedures:

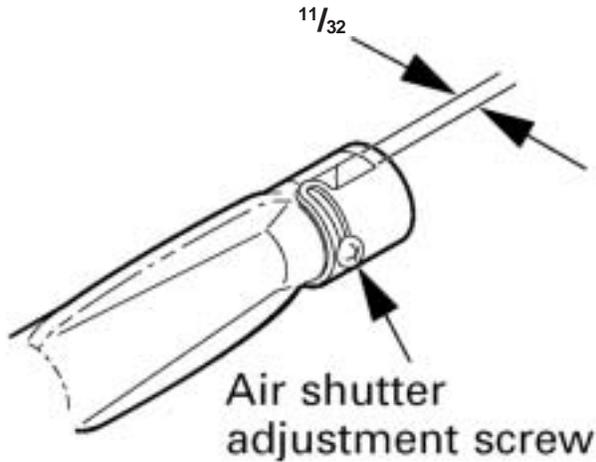
### Bake Burner

1. Remove the oven door (see *Oven Door*).
2. Remove the screw that holds the orifice fitting cover in place. Remove the fitting cover.



3. Closely examine the angle of the orifice. The orifice must point straight into the burner.
  - a. The angle can be corrected by using a small adjustment wrench clamped loosely over the orifice to bend the orifice and its mounting assembly as needed.
4. Inspect the primary air opening. The opening must be clear and free of insulation all the way down to the metal shield below (0.314-in. opening).
5. Use a screwdriver to loosen the air shutter screw.

6. Adjust the air shutter to  $1\frac{1}{32}$  in.
  - a. If the flames were yellow during the test, open the air shutter an additional  $\frac{1}{32}$  in. (.79 mm).
  - b. If the flames blow away or fluttered from the burner during the test, reduce the air shutter an additional  $\frac{1}{32}$  in. (.79 mm).



7. Retighten the air shutter screw and replace the orifice fitting cover.
 

**Note:** The cover must be as airtight as possible. Bend the cover to close off gaps between the sides and the top of the cover.
8. Install the oven door. Before installing the burner baffle and bottom pan, set the control for **BAKE** and observe the bake burner flame for any flame problems.

**Note:** Examine the burner baffle for signs of warpage. If warped, baffle will have to be replaced.

9. Install burner baffle and bottom pan. With customer present, test oven from a cold start to be sure any odor problems have been corrected.

## Broil Burner

The broil burner is accessible and located in the top rear of the oven.

1. Remove the oven door (see *Oven Door*).
2. Remove the broil burner (see *Broil Burner Glow-bar Igniter*).
3. Closely examine the angle of the orifice. The orifice must point straight into the burner.
  - a. The angle can be corrected by using a small adjustment wrench clamped loosely over the orifice to bend the orifice and its mounting assembly as needed.
4. Inspect the primary air opening. The opening must be clear and free of insulation all the way down to the metal shield below (0.314 in. opening).
5. Use a screwdriver to loosen the air shutter screw.
6. Adjust the air shutter to  $1\frac{1}{32}$  in.
  - a. If the flames were yellow during the test, open the air shutter a little more.
  - b. If the flames blow away or fluttered from the burner during the test, close the air shutter a little more.
7. Retighten the air shutter screw.
8. Install the oven door. Set the control for **Broil** and observe the broil burner flame for any flame problems.
9. With customer present, test oven from a cold start to be sure any odor problems have been corrected.

## LP and Natural Gas Information

**LP Gas Installations:** If flames lift off the burner and appear unstable, reduce the air shutter openings an additional  $\frac{1}{32}$  in. (.79 mm), cool the oven, and perform the *Bake and Broil Burner Test*. If flames are too large but appear stable, check to be sure the oven was properly converted.

**Natural Gas Installations:** If flames are too large but appear stable, tighten the orifice hood to reduce the gas flow to the burner.

## Bake Element (Dual Fuel)

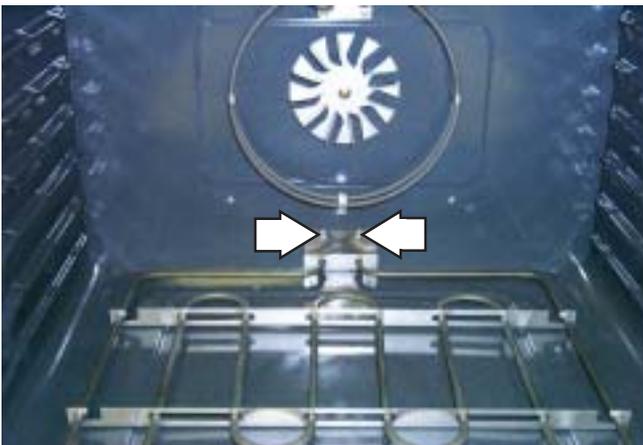
The bake element has an approximate resistance value of 22  $\Omega$ .

### To remove the bake element:

1. Remove the oven door (see *Oven Door*).
2. Remove 4 hex-head screws that secure the convection fan guard to the rear wall of the oven and remove the guard (see *Convection Fan Guard*).
3. Remove the element cover by sliding it forward until it can be removed from the oven.



4. Remove the 2 hex-head screws that hold the element to the rear oven wall.



5. Gently pull the bake element forward to access the wiring connections.
6. Disconnect and remove the element.

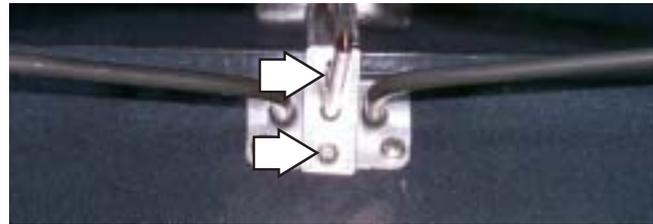
**Note:** When reconnecting the element, make sure the connectors are securely attached to the element.

## Broil Element (Dual Fuel)

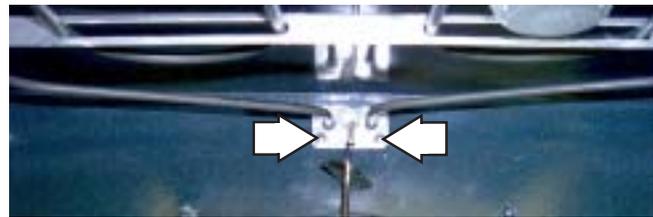
The broil element has an approximate resistance value of 16  $\Omega$ .

### To remove the broil element:

1. Remove the oven door (see *Oven Door*).
2. Remove the 2 screws that hold the sensor to the rear wall of the oven. Pull the sensor out slightly.



3. Remove the 2 hex-head screws that hold the element to the rear oven wall.



4. Remove the 2 hex-head screws that hold the element mounting bracket to the top of the oven.



5. Carefully pull the broil element forward to access the wiring connections.
6. Disconnect and remove the element.

**Note:** When reconnecting the element, make sure the connectors are securely attached to the element.

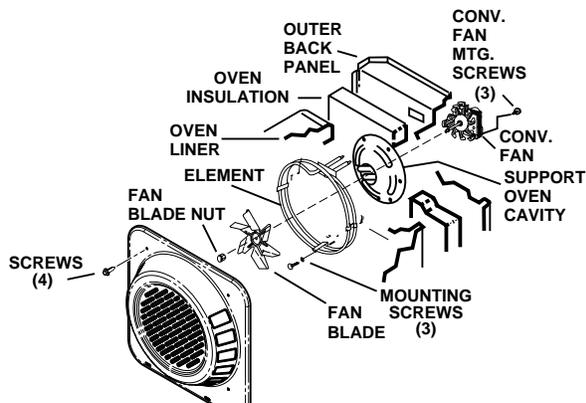
## Convection Fan Assemblies

The convection fan assembly consists of the fan guard, element (Dual Fuel Range), fan blade, and motor. It is located on the back wall of the oven.

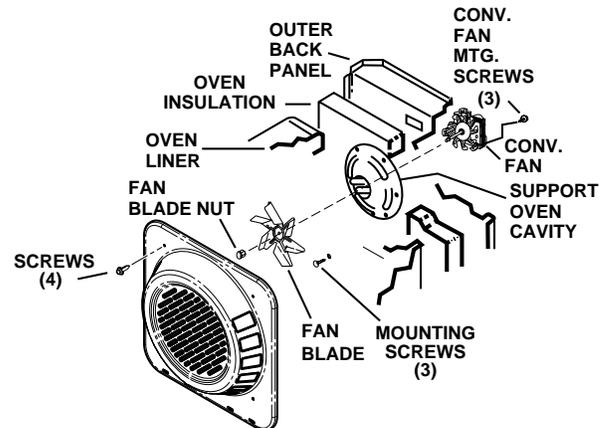
Refer to the schematic in the back of this manual for circuitry for your specific model.

**Note:** The JGSP48 All Gas Range models do not have convection fans.

### Dual Fuel Range Convection Fan Assembly



### All Gas Range Convection Fan Assembly



## Fan Cycle Information

All times are in seconds.

### Convection Fan Operation - All times are in seconds

#### Dual Fuel

	CW Rotation	Pause/Off	CCW Rotation	Pause/Off	
Convection Bake Single rack	180	10	180	10	Repeat
Convection Bake Multi rack	20	30	40	30	Repeat
Convection Roast	0	0	Continuously	0	

#### All Gas

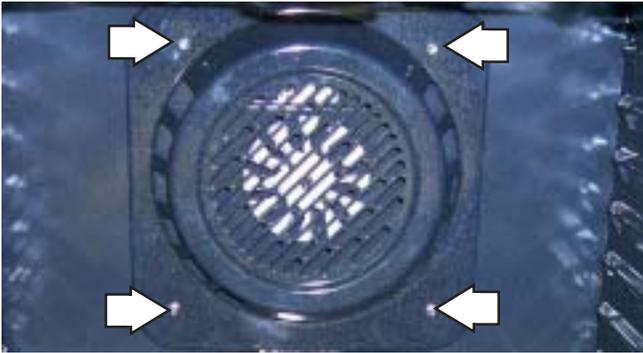
The convection fan will **not** come on while there is a call for heat from the thermostat (gas burner on). Fan will only start to operate **10 seconds after** the burners turn off. The fan will only run in one direction with the following parameters:

	High Speed	Low Speed	Pause/Off	
Convection Bake	3	7	50	Repeat
Convection Roast	Continuously	0	0	

## Convection Fan Guard

### To remove the convection fan guard:

1. Remove the oven door (see *Oven Door*).
2. Remove 4 hex-head screws that secure the convection fan guard to the rear wall of the oven. Remove the convection fan guard.

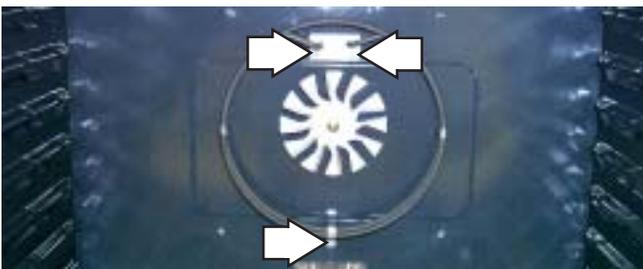


## Convection Element (Dual Fuel)

The convection element has an approximate resistance value of 20  $\Omega$ .

### To remove the convection element:

1. Remove the fan guard (see *Convection Fan Guard*).
2. Remove the 3 hex-head screws that hold the element to the rear oven wall.



3. Gently pull the convection element forward to access the wiring connections.
4. Disconnect the wires and remove the element.

**Note:** When reconnecting the element, make sure the connectors are securely attached to the element.

## Convection Fan Motor

To remove the fan motor the range must be removed from its installation.

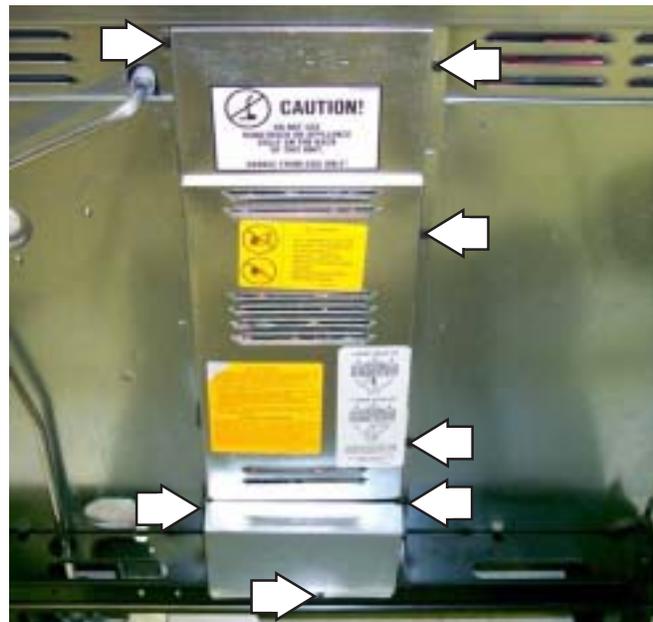
### To remove the convection fan motor:

1. Remove the range from its installation (see *Range Removal*).
2. Remove the fan guard (see *Convection Fan Guard*).
3. Using a 1/2-in. wrench, remove the nut from the convection fan blade by holding the blade securely and turning the nut clockwise.

**Note:** Convection fan blade nut has left-handed threads. Fan blade can be replaced from inside oven.

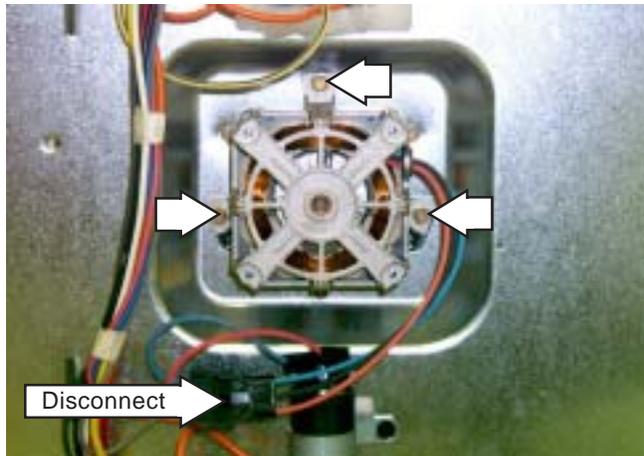


4. Remove the fan blade and washer from the fan motor shaft.
5. Remove the hex-head screws that secure the service cover to the rear of the range and remove the cover.



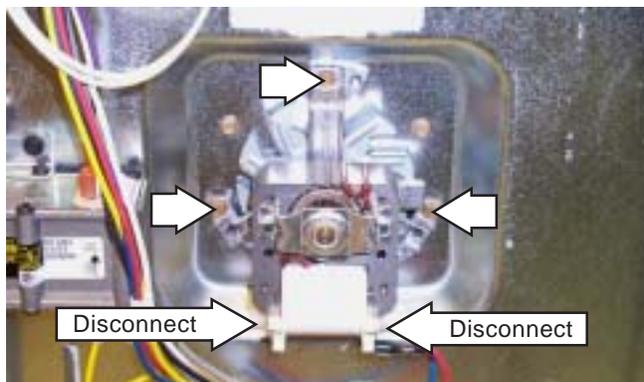
6. Disconnect the wiring harness connector from the motor.
7. Remove the 3 mounting hex-head screws and the motor.

Dual Fuel Range Fan Motor



The dual fuel convection fan motor has an approximate resistance value of 58  $\Omega$ .

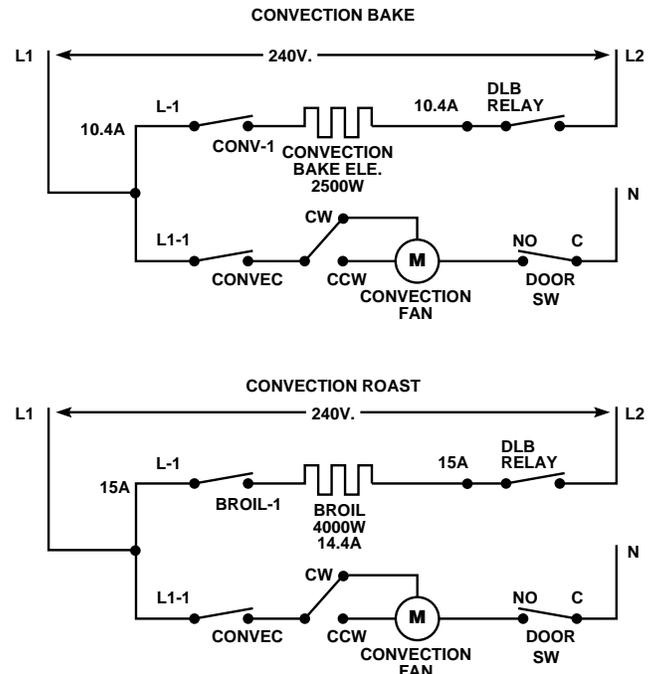
All Gas Range Fan Motor



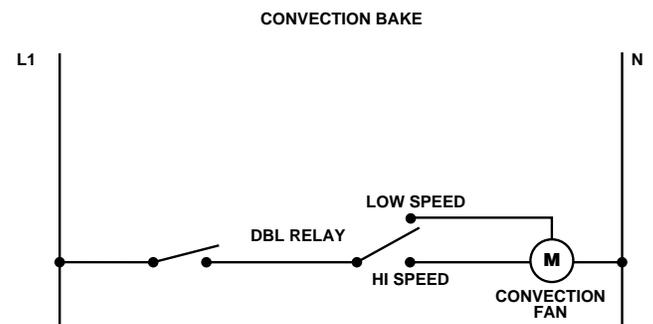
The all gas convection fan motor has an approximate resistance value of 19  $\Omega$  - 25  $\Omega$ .

**Note:** Make sure the anti-tip bracket is installed correctly when pushing the range back into place.

## Dual Fuel Range Convection Fan Circuit



## All Gas Range Convection Fan Circuit



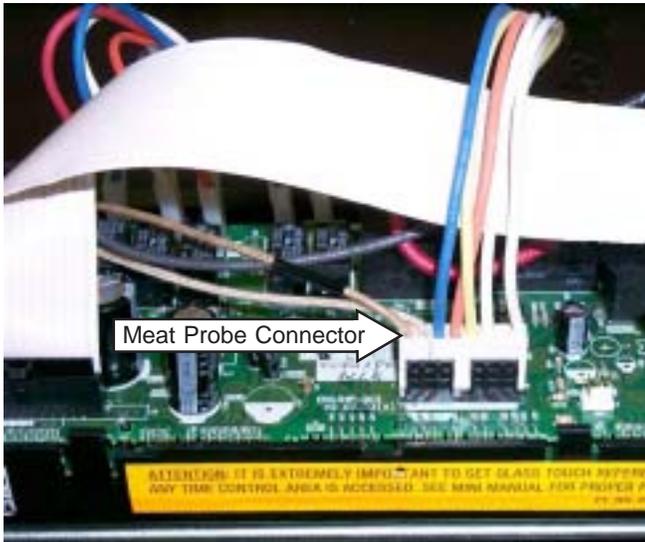
If convection fan is not working, make the following checks:

- Check the voltage from terminal (CF) to (N) on control—it should read 120V in Convection Bake or Roast mode. If not, replace the control.
- If voltage is OK, check the convection fan motor. It reads approximately 15  $\Omega$  to 20  $\Omega$  at room temperature. Check to make sure the fan shaft is not rubbing on the oven liner.

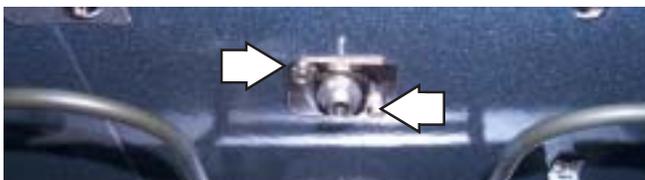
## Meat Probe Outlet

The meat probe outlet is located toward the front of the oven next to the bake element on the Dual Fuel Range and the right corner of the All Gas Range.

1. Place the control panel in the service position (see *Keypanel and ERC*).
2. Disconnect the meat probe connector wires from the circuit board.



3. Open the oven door and remove the 2 hex-head screws that secure the probe outlet to the top of the oven.



4. Lower the outlet, pull the wiring through the access hole, then remove.

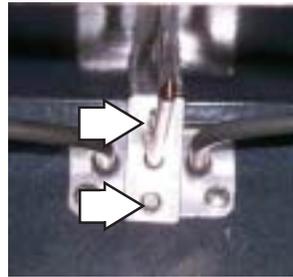
## Oven Temperature Sensor

The oven sensor has a resistance of 1100  $\Omega$  at room temperature and 2650  $\Omega$  at clean temperature.

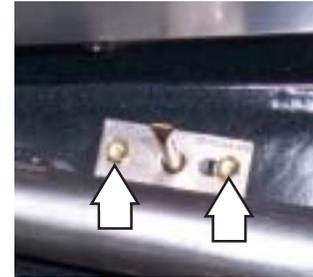
### To remove the temperature sensor:

1. Remove the screws that hold the sensor to the rear wall of the oven.

Dual Fuel



All Gas



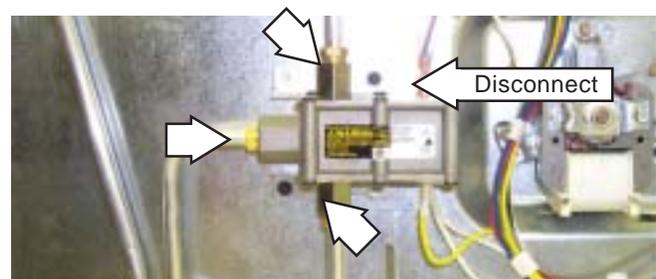
2. Gently pull the sensor out to access the wiring connector.
3. Disconnect and remove the sensor.

## Control Valve (All Gas)

The control valve is not front serviceable. The amperage should be between 3.4 to 3.6 amps at 116  $\pm$  1 volt.

To replace the control valve:

1. Shut off the gas to the range.
2. Shut off power to the range.
3. Remove the range from its installation (see *Range Removal*).
5. Remove the hex-head screws that secure the service cover to the rear of the range and remove the cover.
6. Remove the gas line connections and disconnect the wiring.
7. Remove the hex-head screws that hold the control valve in place. Remove the control valve.



**Note:** Make sure the anti-tip bracket is installed correctly when pushing the range back into place.

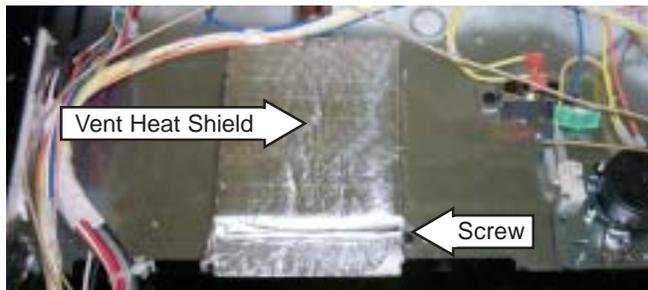
## Oven Vent (Dual Fuel)

The oven is vented above the left side of the door. It is normal for steam to come out of this vent and the area around the vent to become hot during oven use. It is important to keep the vent unblocked to ensure proper air circulation.

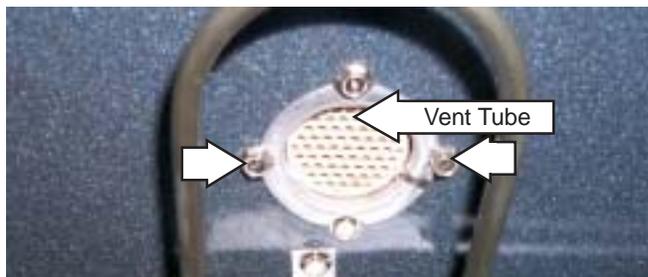
The bake thermal switch on the vent tube protects the electronics from damage should a high temperature condition occur. It opens at 240°F (115°C) and closes when temperatures cool below 190°F (88°C). (See *Thermal Switches* for more information).

### To remove the oven vent assembly:

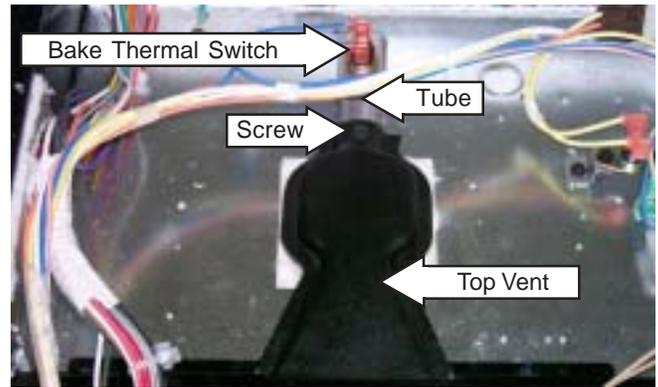
1. Remove the maintop burner assembly (see *Maintop Burner Assembly*).
2. Remove the upper heat shield (see *Upper and Lower Heat Shield*).
3. Remove the hex-head screw that holds the oven-vent heat shield in place.



4. Inside the oven, remove the 2 hex-head screws that hold the vent tube in place. Remove the vent tube.



5. Remove the hex-head screw that connects the top vent to the tube that the bake thermal switch is mounted on.



6. Inside the oven, the top vent is held in place by 2 remaining hex-head screws that were next to the vent tube. Remove the 2 remaining hex-head screws. Remove the top vent .



## Oven Vent (All Gas)

The oven is vented through the glass cooktop. It is normal for steam to come out of this vent and the area around the vent to become hot during oven use. It is important to keep the vent unblocked to ensure proper air circulation.

### To remove the oven vent:

1. Remove the center iron burner grate.
2. Unscrew the oven vent and remove.

**Caution:** The graphite gasket on the oven vent that seals the burner compartment is very fragile. When replacing the oven vent, care must be given to avoid damaging or breaking the gasket. Replace the graphite gasket if it is damaged.



# Control Panel Assembly

**WARNING:** Components are electrically HOT when voltage is connected to range.

The Control Panel Assembly consists of the electronic oven control (ERC) and keypanel.

## Keypanel and ERC

The keypanel and ERC are separate components but must be tested together.

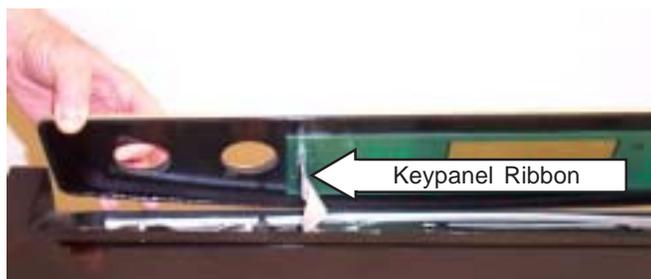
### Key panel Test

Press each pad on the key panel followed by the start pad. If the key panel is functioning properly, the following should occur:

- **BAKE, BROIL, CLEAN, TIMER, CLOCK, STOP TIME, COOK TIME, PROOF, PROBE, and RANGE LOCKOUT Modes** - Audible tone plus display showing mode of operation selected.
- **CLEAR/OFF** - Audible tone and display shows time of day.
- **PROBE** - Audible tone and response if meat probe is plugged in.
- **Numerical Pads** - Audible tone. Can only be used after another function has been selected.

### To remove the keypanel and ERC:

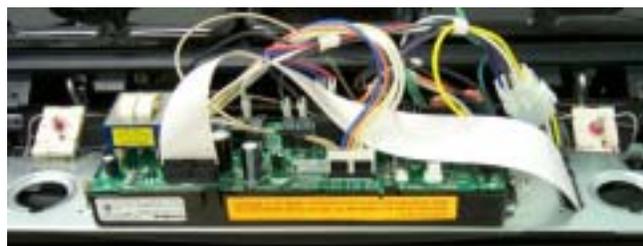
1. Remove the 4 control knobs.
2. Remove the panel retainer nuts.
3. Lift the keypanel enough to access the keypanel ribbon that connects the keypanel to the ERC.
4. Remove the keypanel ribbon from the keypanel by pulling on the connector (do not pull on the ribbon). Remove the keypanel.



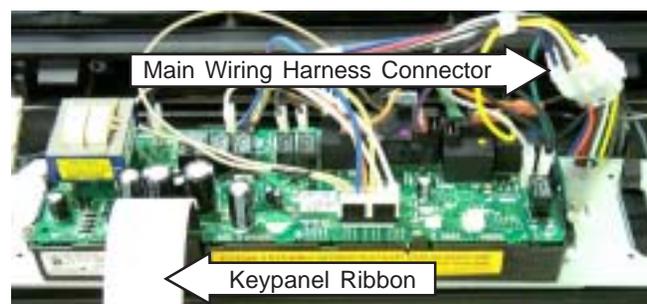
5. Remove the 8 hex-head screws that secure the ERC panel.



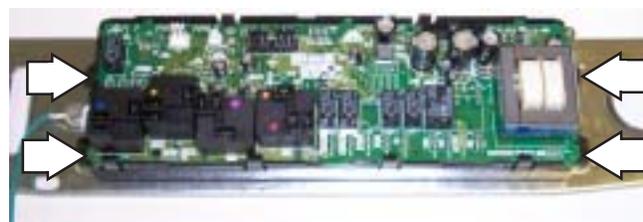
6. Tilt the panel down to the service position to access the ERC.



7. Disconnect the main wiring harness connector. Note the placement of the remaining wiring connectors on the ERC board. Disconnect the remaining wiring connectors and keypanel ribbon.

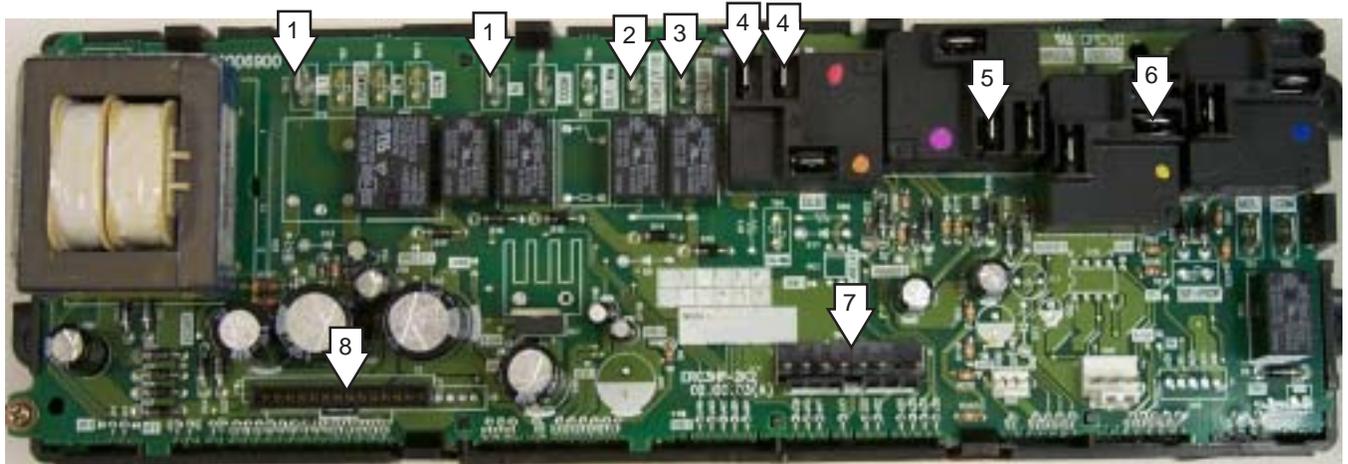


8. Remove the 4 screws that hold the ERC in place. Remove the ERC.



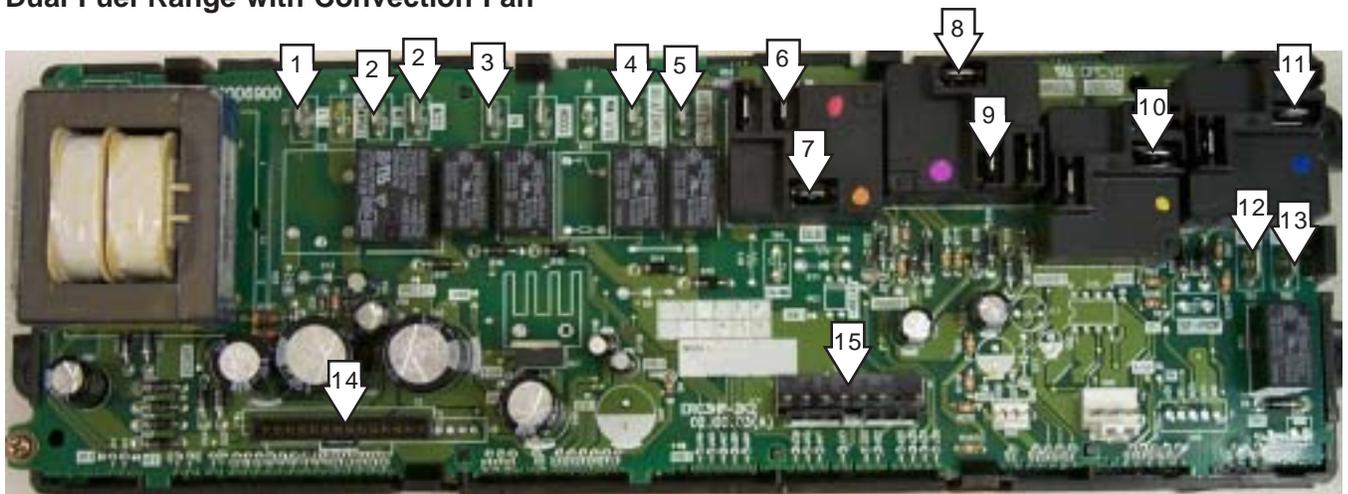
## Electronic Oven Control (ERC) Pin Locator

### All Gas Range with Convection Fan



- |                      |  |
|----------------------|--|
| 1 - 120-VAC Power In | 5 - Broil Burner Glow-bar Igniter                      |
| 2 - Cooling Fan      | 6 - Bake Burner Glow-bar Igniter                       |
| 3 - Oven Light       | 7 - Meat Probe, Oven Sensor, Door Lock/Unlock Switches |
| 4 - Convection Fan   | 8 - Keypanel Ribbon                                    |

### Dual Fuel Range with Convection Fan



- |                      |   |   |
|----------------------|---|---|
| 1 - 120 VAC Power In | 7 - Bake, Broil, and Convection Element | 12 - Door Lock Motor                                    |
| 2 - Convection Fan   | 8 - Power In (Black)                    | 13 - 120VAC Power In                                    |
| 3 - Power In (White) | 9 - Broil Element                       | 14 - Keypanel Ribbon                                    |
| 4 - Cooling Fan      | 10 - Bake Element                       | 15 - Meat Probe, Oven Sensor, Door Lock/Unlock Switches |
| 5 - Oven Light       | 11 - Convection Element                 |   |
| 6 - Power In (Red)   |   |   |

# Range Top Components

The range top components consist of the following: Maintop burner assembly (glass cooktop, burners, burner caps and heads, igniter and switches, spark module), cooling fan, thermal switches, door lock motor assembly, heat shields, and seals.

## Surface Burner Adjustments

Standard adjustments to the air shutter and gas metering orifices are not possible on sealed burners.

If burner flames appear to be abnormal, check the following:

- Check gas pressure available to the burners. The required operating pressure is 4 in. W.C.P. Natural Gas or 10 in. W.C.P. LP (Propane) Gas. The pressure reading can be taken at the broil, bake or top burner orifices.
- Check for drafts entering the burner box from behind the range. Strong drafts beneath the maintop can extinguish the burner and/or cause erratic burner flames.
- Check for blockage or partial blockage of the orifice. Inspect the orifice to be sure it has been drilled on center and is free of debris or burrs.
- Check the burner alignment (see *Maintop Burner Alignment*)
- If the flames blow and lift off the burner and the cause of the problem cannot be found, installing an orifice with smaller diameter openings may solve the problem. In high altitude installations, above 6000 ft. (1829 m), the orifices will usually have to be down-sized.

### SMALLER ORIFICES ARE AVAILABLE AS LISTED BELOW:

Smaller Orifices for Natural Gas:			Smaller Orifices for LP Gas:		
Burner	Size	Part Number	Burner	Size	Part Number
RF	No. 53	WB28T10014	RF	No. 64	WB28K10087
RR	No. 56	WB28K10085	RR	No. 70	WB28K10085
LF	No. 53	WB28T10014	LF	No. 64	WB28K10087
LR	No. 54	WB28T10017	LR	No. 66	WB28T10017

## Burner Output Rating Chart

BURNER OUTPUT RATING:			
NATURAL GAS 4" W.C.P.			
BURNER	BTU RATE	KW	ORIF. SIZ
RF	11,000	—	No. 52
RR	6,000	—	No. 56
LF	11,000	—	No. 52
LR	9,100	—	No. 54
BAKE	15,000	—	—
BROIL	12,000	—	—

BURNER OUTPUT RATING:			
L.P. (PROPANE) GAS 10" W.C.P.			
BURNER	BTU RATE	KW	ORIF. SIZE
RF	11,000	—	No. 63
RR	6,000	—	No. 69
LF	11,000	—	No. 63
LR	8,000	—	No. 65
BAKE	15,000	—	—
BROIL	12,000	—	—

## Maintop Burner Alignment

For proper operation of the burner, alignment of the orifice holder, orifice, and air/gas mixer tube must be correct. The alignment can be checked by placing 7-mm or  $\frac{9}{32}$ -in. nut-driver over the orifice to exaggerate the angle. The nut-driver should stand straight, indicating the alignment and gas injection angle is correct. A slight downward pressure may be necessary to seat the nut-driver over the orifice-retainer ring.

If an angle adjustment is necessary remove the burner cap, head, and bowl to inspect the orifice holder and the brackets that hold them in place. Adjust as necessary. A misaligned burner may result in uneven flames around the burner head.

## Low Flame Simmer Adjustments

Remove the surface control knob and locate the adjustment screw on the valve body at about the 6-o'clock position.

**Note:** Low setting adjustments must be made with 2 other burners in operation on a medium setting. This procedure prevents the low flame from being set too low, resulting in the flame being extinguished when other burners are turned on.

## Testing the Flame Stability

**Test 1:** Turn the knob from **HI** to **LOW** quickly. If the low flame goes out, increase the flame size and test again.

**Test 2:** With the burner on **LOW** setting, open and close the oven door quickly. If the flame is extinguished by the air currents created by the door movement, increase the flame height and test again.

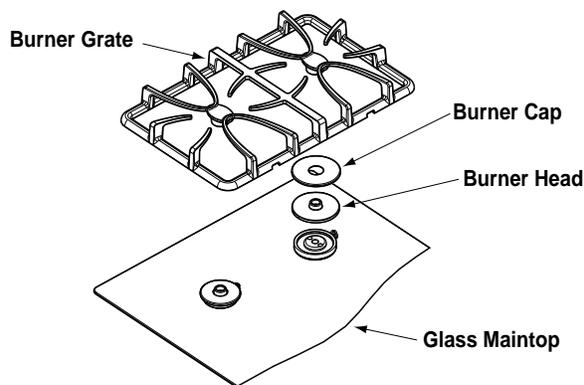
## Maintop Burner Assembly

**WARNING:** Shut off gas to the range before proceeding.

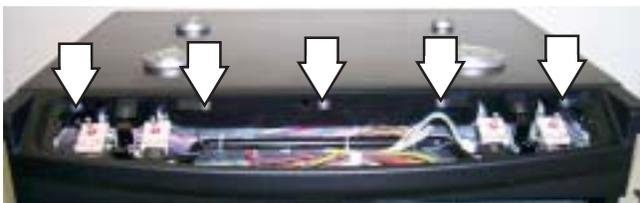
The maintop burner assembly comes out of the range as one unit.

To remove the maintop burner assembly:

1. Remove the iron burner grates, burner caps, and burner heads from the glass cooktop.



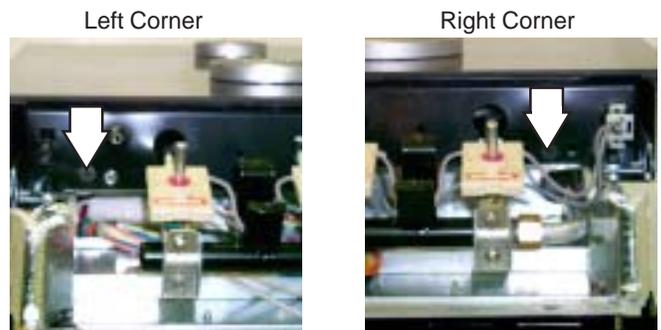
2. Remove the control panel assembly (see *Keypanel and ERC*).
3. Remove the 5 hex-head screws from the top inside edge of the control panel frame.



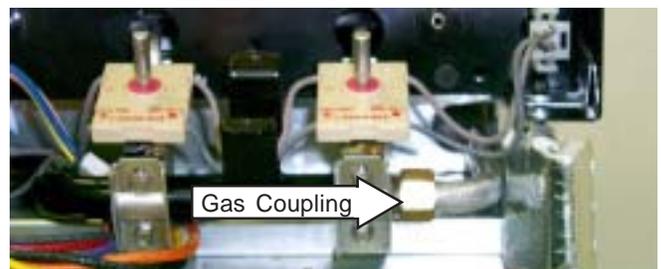
4. Open the door and remove the 5 hex-head screws under the control panel frame. Remove the control panel frame.
5. Unplug the left connector at the front corner of the maintop burner assembly.



6. Remove the 2 hex-head screws at the front corners of the maintop burner assembly.



7. Disconnect the gas manifold pipe coupling on the right side corner of the maintop burner assembly.

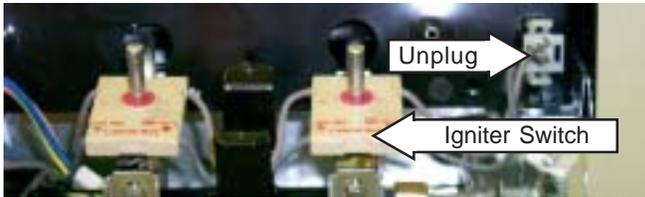


8. Slide the maintop burner assembly forward and remove. Place it top-side-up on a protected surface.

## Igniter Switches and Harness

The 4 igniter switches and harness are replaced as 1 unit.

1. Remove the control panel assembly (see *Keypanel and ERC*).
2. Remove the 5 hex-head screws from the top inside edge of the control panel frame (see *Maintop Burner Assembly*).
3. Unplug the igniter harness from the top frame.



4. Remove the wire ties that secure the igniter harness. Remove the igniters and harness.

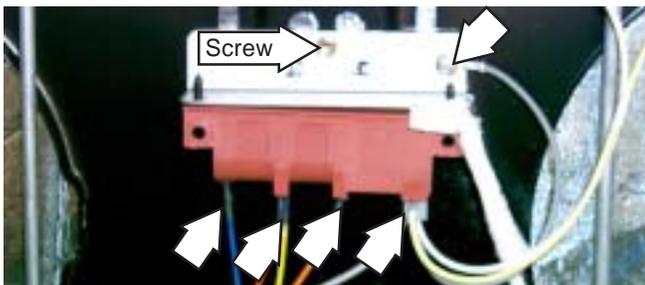
Note: When installing new igniter switches, make sure they are seated securely on top of the burner control. The bottom of the igniter switch conforms to the top of the burner control.

## Spark Module

The spark module is attached to the metal frame under the glass cooktop.

To remove the spark module:

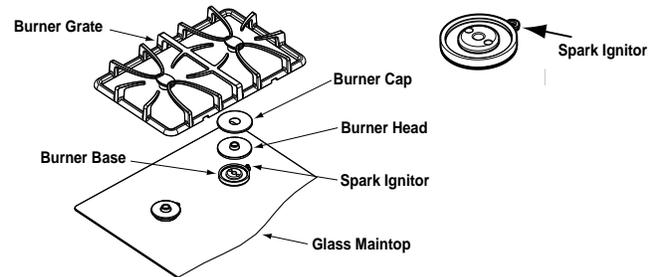
1. Remove the maintop burner assembly (see *Maintop Burner Assembly*).
2. Put a towel on a flat surface. Place the maintop burner assembly face down on the towel.
3. Disconnect all wiring to the spark module.
4. Remove the center screw that holds the spark module in place. Remove the spark module.



## Spark Igniter

To remove the spark igniter:

1. Remove the iron burner grate, burner cap, and burner head from the glass cooktop.



2. Insert a small, flat screwdriver blade between the edge of the spark igniter and burner base and gently pry out.



3. Unplug the wire from the back of the spark igniter.

**Caution:** When removing the wire from the spark igniter, make sure not to damage the heat shrink insulation on the wire. If damaged, repair insulation with fiberglass tape.

**Note:** When reconnecting the spark igniter, ensure the wire is pressed as far as possible into the spark igniter base.

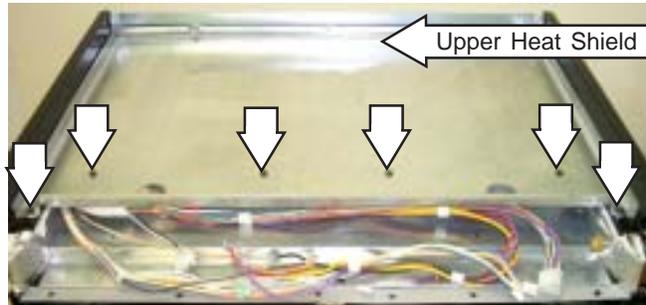


## Upper and Lower Heat Shields

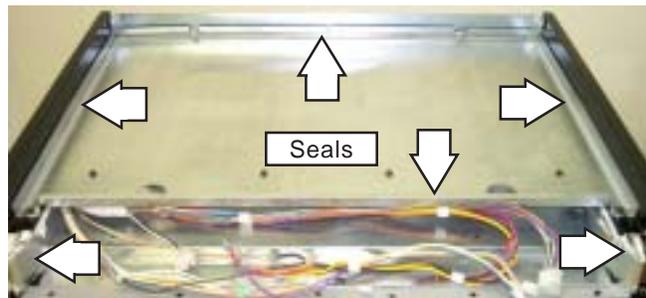
The upper and lower heat shields are located under the maintop burner assembly.

To remove the upper and lower heat shields:

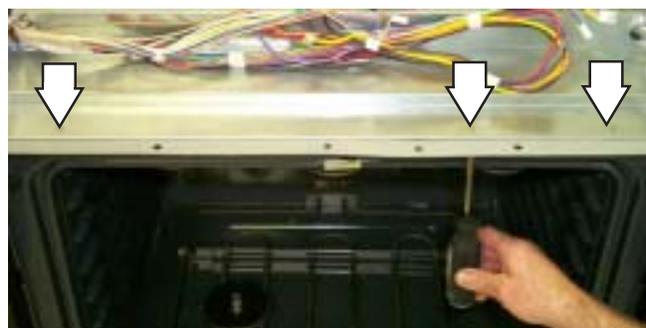
1. Remove the maintop burner assembly (see *Maintop Burner Assembly*).
2. Remove the 6 hex-head screws that hold the upper heat shield in place. Remove the upper heat shield.



**Note:** For proper operation, air to the burners is supplied only from around the burner knobs. When reassembling, it is important that all seals on the upper heat shield are in place (see photo below). Replace any damaged or worn seals.

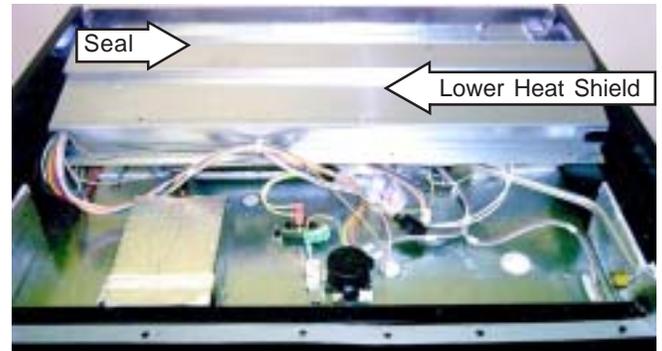


3. Open the door then remove the 3 hex-head screws that hold the lower heat shield in place.



4. Roll the lower heat shield back to access oven components.

**Note:** When reassembling, it is important that the seal on the lower heat shield is in place; it is located on the bottom edge (see photo). Replace if damaged or worn.



## Cooling Fan

The cooling fan has an approximate resistance value of 24Ω.

The oven uses a fan for cooling the oven components. Air is pulled in by the fan blades and circulated in the component compartment. The air is exhausted through louvers below the control panels and out the slots above the door.

### Cooling Timing Parameters JGS968

The cooling fan comes on when the oven is on. If the temperature is set over 300°F and the oven is turned off, the fan will remain on until the temperature drops below 300°F or 85 minutes has elapsed.

### Cooling Timing Parameters J2S968

The cooling fan comes on when the oven is on. If the temperature is set over 175°F and the oven is turned off, the fan will remain on until the temperature drops below 175°F or 85 minutes has elapsed.

### Cooling Timing Parameters JGSP48

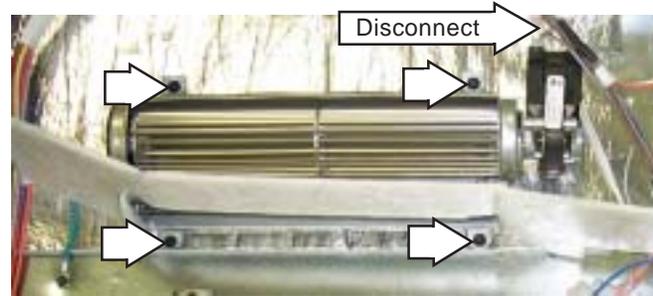
The cooling fan comes on when the oven is on. If the temperature is over 300°F and the oven is turned off, the fan will remain on until the temperature drops below 300°F.

The cooling fan is located under the heat shield of the maintop burner assembly.

#### To remove the cooling fan:

1. Remove the maintop burner assembly (see *Maintop Burner Assembly*).
2. Remove the upper heat shield (see *Upper and Lower Heat Shield*).

3. Disconnect the wiring from the cooling fan motor.
4. Use pliers to remove the plastic insulation fasteners from the sides of the fan housing.
5. Remove the 4 mounting screws that hold the cooling fan in place. Remove the cooling fan.

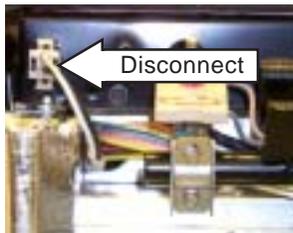


## Glass Cooktop

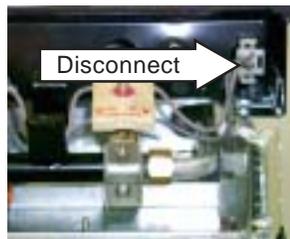
To remove the glass cooktop:

1. Remove the control panel assembly (see *Keypanel and ERC*).
2. Remove the control panel frame (see *Maintop Burner Assembly*).
3. Remove all spark igniters from the glass cooktop (see *Spark Igniter*).
4. Remove the 2 hex-head screws at the rear corners of the maintop burner assembly (see *Maintop Burner Assembly*).
5. Unplug the left and right connectors at the front corners of the maintop burner assembly.

Left Corner

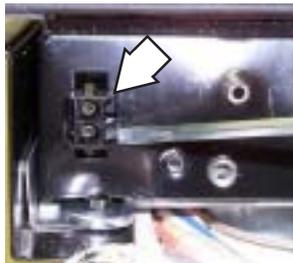


Right Corner

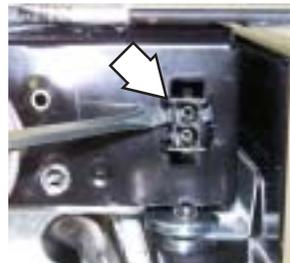


6. With a small, flat screwdriver push the tabs on the connector sockets and press each connector socket through the mounting hole.

Left Corner

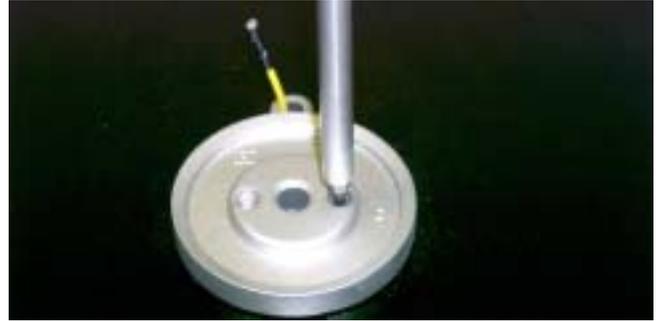


Right Corner

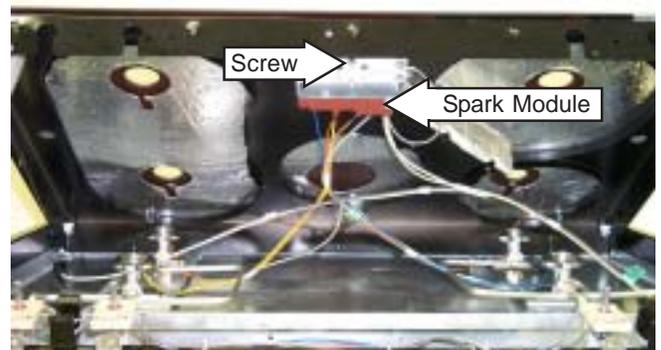


7. Remove the 2 Torx (T15) screws from each burner base. Remove the burner bases.

**Caution:** When replacing burner bases on glass-top models, do not overtighten Torx screws. Tighten to 14 to 20 in/lbs of torque.



8. The spark module is attached to the metal frame of the glass cooktop. Lift up the glass cooktop and remove the screw that holds the spark module in place.



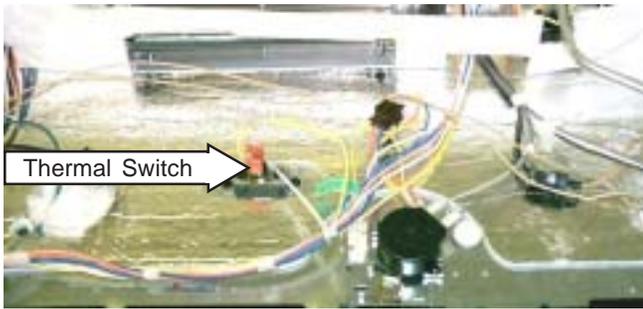
9. Remove the spark module from the metal frame.
10. Remove the glass cooktop.

**Caution:** The graphite gaskets that seal the burner compartment are very fragile. When replacing the glass cooktop, care must be given to avoid breaking. Replace all damaged graphite gaskets.

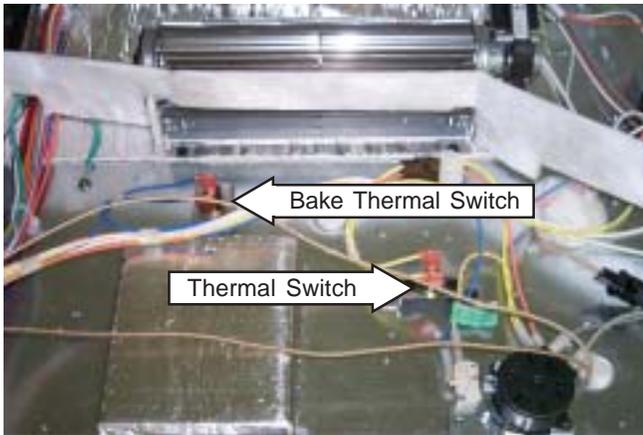
## Thermal Switches

The thermal switches are located on the floor of the component compartment in front of the fan motor and protect the electronics from damage should a high temperature condition occur. The All Gas Range has a single thermal switch. The Dual Fuel Range has an additional bake thermal switch located on the oven vent tube.

All Gas Range



Dual Fuel Range



### Thermal Switch

The thermal switches for both ranges are wired in series with the lock motor switches. The thermal switch opens at 275°F (135°C) for the All Gas Range and 240°F (115°C) for the Dual Fuel Range. The switches close when temperatures cool below 190°F (88°C). If the thermal switch opens during:

- Oven Temperature Below 600°F (315°C). Program is cancelled when thermal switch opens. Lock motor will run and the words **LOCK** and **DOOR** will be flashing in the display.

- Oven Temperature Above 600°F (315°C). Any mode of operation control will go to -F2- failure code. When this condition exists, check the fan operation (look for obstructions), inspect oven installation (make sure grill areas are not blocked), oven insulation and lock circuit.

### Bake Thermal Switch

The bake thermal switch is wired in series with the lock motor switches. The bake thermal switch opens at 169°F (76°C) and closes at 140°F (60°C). If the bake thermal switch opens during Bake, the program is cancelled and the lock motor will run. The words **LOCK DOOR** will flash in the display.

### To remove the thermal switches:

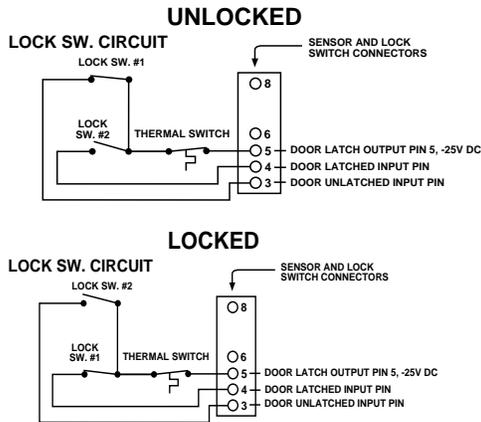
1. Remove the maintop burner assembly (see *Maintop Burner Assembly*).
2. Remove the upper and lower heat shield (see *Upper and Lower Heat Shield*).
3. Note the placement of the wiring to the thermal switch that is being removed. Disconnect the wiring.
4. Remove the 2 hex-head screws that hold the thermal switch in place.
5. Remove the thermal switch.

## Door Latch Assembly

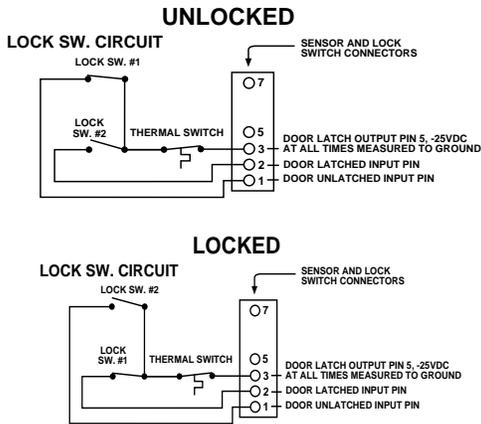
The door latch assembly consists of a lock motor cam and switch assembly, lock hook, and mounting plate. It is located under the lower heat shield of the maintop burner assembly.

The lock motor is energized when the control is set for **CLEAN** and **CLEAN TIME** is selected. The K4 relay contacts will close and complete the circuit that supplies the voltage to the lock motor.

## JGS968 & J2S968



## JGSP48

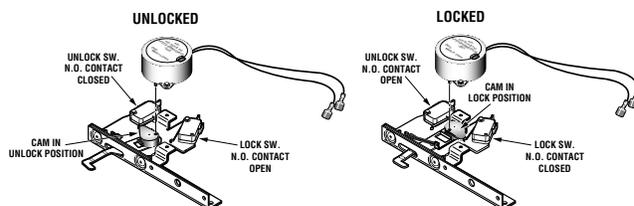


The control display will flash on and off in the display while the lock motor is in motion. When the door is locked, the words **LOCKED DOOR** remain lit in the display.

The cam on the motor performs two functions:

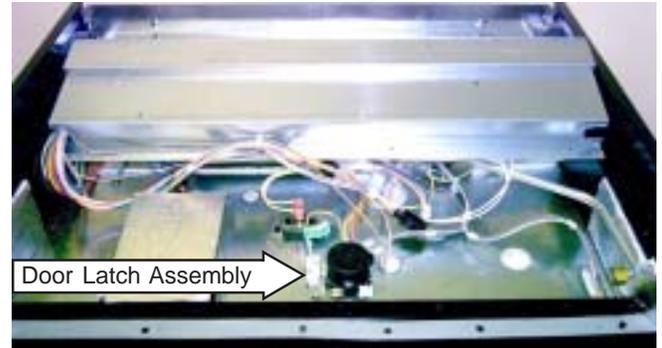
- Positions the lock hook in the door to prevent opening during the **CLEAN** operation.
- Operates the lock switches which tell the control if the door is unlocked or locked and ready for **CLEAN** operation.

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

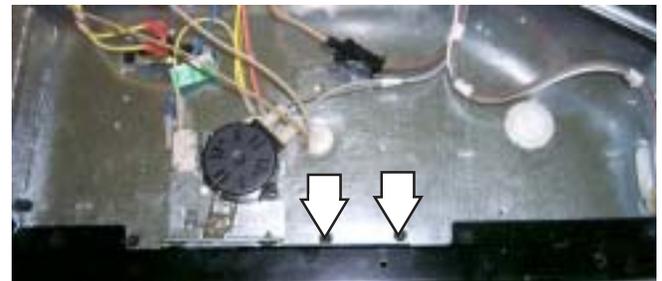


To remove the door latch assembly:

1. Remove the maintop burner assembly (see *Maintop Burner Assembly*).
2. Remove the upper and lower heat shield (see *Upper and Lower Heat Shield*).



3. Remove the 2 hex-head screws that hold the door latch assembly in place. Pull the assembly out to access the wiring harness connectors.



4. Note the placement of the wiring, then disconnect all wires to the door latch assembly.

### Motorized Door Lock Circuit Information

The lock motor circuits and the lock switch circuit control the locking and unlocking of the door.

The lock motor circuit applies voltage (120 VAC) to the lock motor. This circuit is from L, through the door switch, lock relay, and lock motor to neutral.

For this circuit to be complete, the lock relay must be energized by the ERC and the door must be closed. An open oven door results in **LOCK DOOR** flashing in the display after the control has been programmed for clean and **START** has been depressed.

(Continued next page)

The lock switch circuit signals the control if the lock motor is in the unlocked or locked position or somewhere in between. There are 2 lock switches mounted to and operated by the lock motor.

The lock switch circuit is from the ERC, through one of the lock switches (switch 2 for unlocked or switch 1 for locked) back to the ERC. If neither switch is closed, and the oven temperature is below 600°F (315°C) the ERC will energize the lock motor circuit until the correct switch closes to complete the circuit. (If circuit to the correct switch is open, lock motor will run continuously with the oven below 600°F (315°C).

### Clean Cycle and Lock Sequence:

#### 1. Program the Clean Cycle:

- Press **SELF-CLEAN** pad. 4 hours (4:00), appears on the time display. (Cleaning time can be changed from the 4-hour starting point by pressing the **SELF-CLEAN** pad a second time.)
- After **START** has been pressed, the word **ON** illuminates in red to indicate the cycle has begun.

#### 2. Locking the Door:

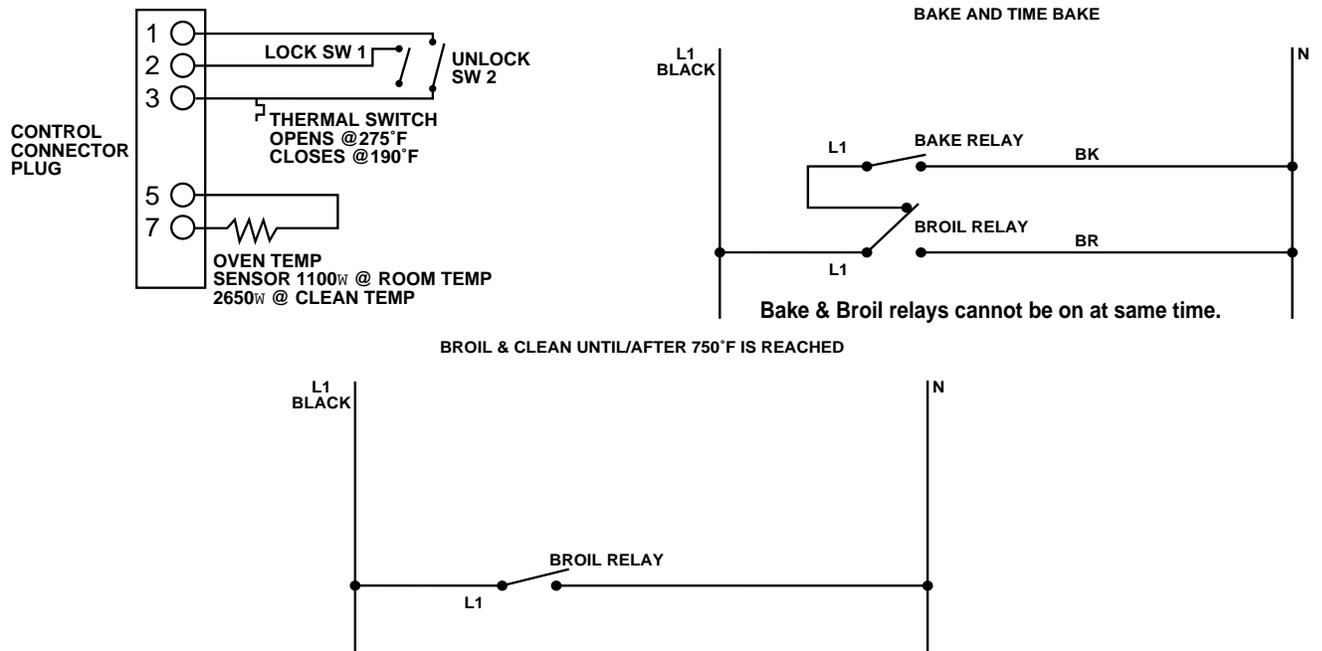
- After programming the clean cycle and pressing **START** pad, the control energizes the lock relay. Voltage (120 VAC) is applied to the lock motor circuit. Oven door must be closed before lock motor can run. **LOCK DOOR** will flash and control will beep until the door is closed.
- The lock motor begins to revolve and turns a cam mounted to the motor shaft.
- The words **LOCKED DOOR** will flash on and off on the display while the lock motor is in motion.
- As the cam revolves about  $\frac{1}{2}$  revolution (approximately 12 seconds), it has moved the lock hook into a corresponding slot in the oven door which secures the door.

- The movement of the cam has also closed lock switch 1 which signals the control that the door is locked. The control then removes power from the lock motor circuit by de-energizing the lock relay.
- The lock motor stops and lock switch 1 is held closed by the cam through the clean cycle.
- The words **LOCKED DOOR** stop flashing and remains illuminated in the display.
- The word **ON** illuminates in the display.

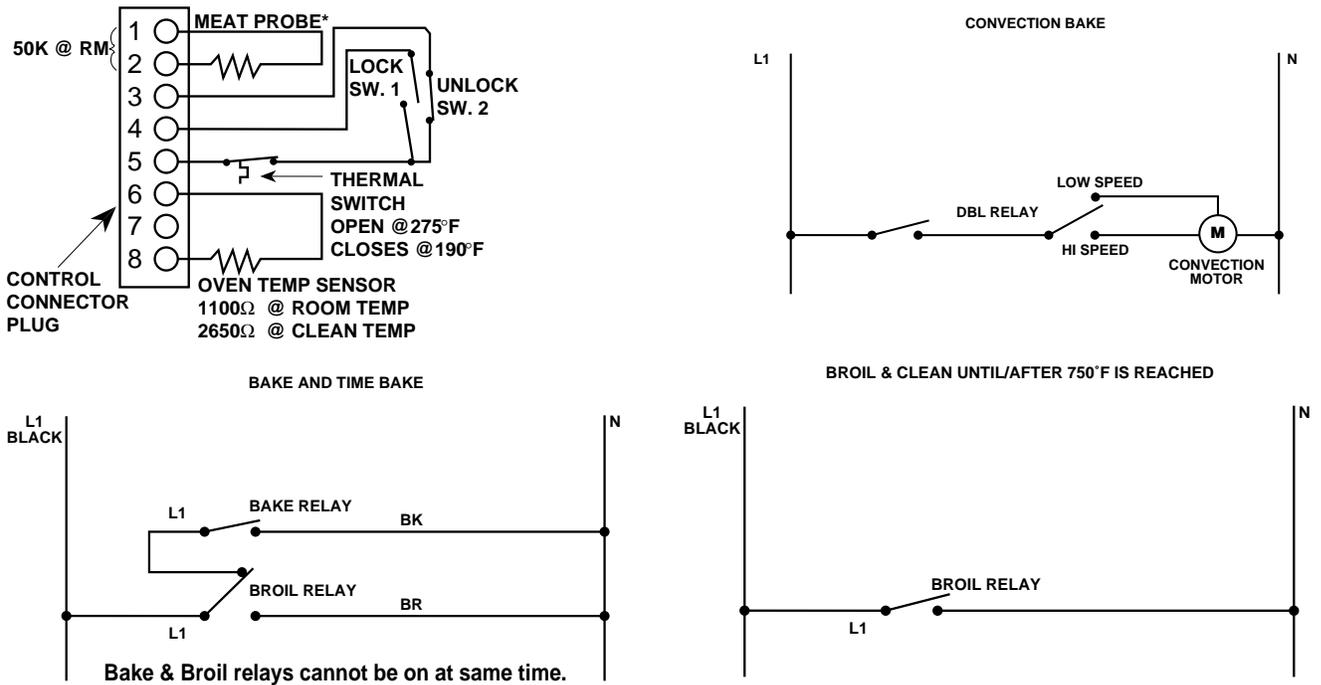
#### 3. During the Clean Cycle:

- The broil relay closes (audible click) and the broil burner begins to heat. The broil burner only will operate during the first 30 minutes of the clean cycle followed by the bake burner only during the remaining time.
- As the clean cycle progresses and the temperature of the oven control area rises, the cooling fan is activated.
- A normally closed thermal switch is mounted on a bracket in front of the cooling fan. This switch is in the lock switch circuit and will open the lock switch circuit in the event of an over-temperature condition in the control area (caused by a stalled fan, fan switch failure, or similar condition).
- An -F2- (over-temperature) failure code will appear on the control if this switch opens while the oven is above 600°F (315°C). With the oven between 400°F to 600°F (204°C to 315°C), the clean cycle will be cancelled by the opening of the switch and the control will revert back to the time-of-day mode.
- Below 400°F (204°C) the lock motor will revolve continuously and the words **LOCKED DOOR** will flash on the control until the circuit is reestablished.
- The oven will cycle to maintain an average clean temperature of 830°F (433°C).

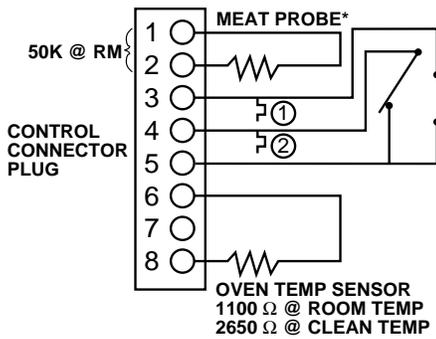
## Oven Sensor and Lock Switch Connector (All Gas Range without convection fan) JGSP48



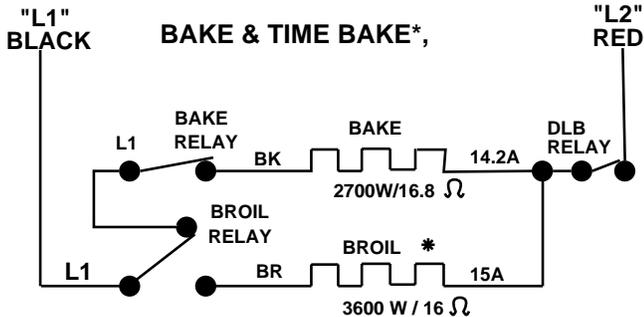
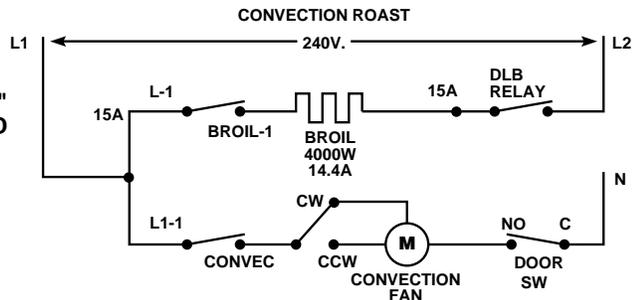
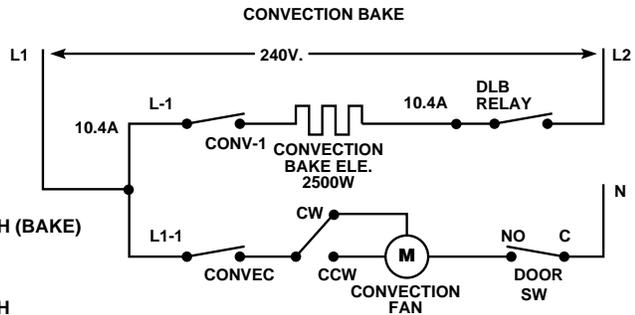
## Oven Sensor and Lock Switch Connector (All Gas Range with convection fan) JGS968



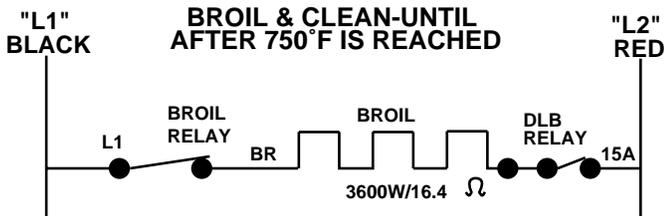
# Oven Sensor and Lock Switch Connector (Dual Fuel Range) J2S968



- ① THERMAL SWITCH (BAKE)  
OPEN @ 169°F  
CLOSES @ 140°F
- ② THERMAL SWITCH  
OPEN @ 240°F  
CLOSES @ 190°F



\*Approximately 25% on time in Bake.  
Bake & Broil relays cannot be on at same time.  
There is approx. 1 min. of dead time between  
bake and broil unit operation after preheat.  
Bake and broil units operate sequentially during first  
(preheat) cycle.  
\*\* 1 second dead time between bake and broil  
units while calling for heat in clean.



# Diagnostics and Service Information

## Failure Codes

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

FAILURE CODE	MEANING	CORRECTION
-F0-	Shorted OFF key	Determine if problem is with key panel or control by disconnecting ribbon cable and measuring flat cable pins 13 to 14. Should be open. Should be 100–150 ohms while pressing OFF key.
-F2-	Over temperature 1. Inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched or 2. Cooling fan stalls while oven above 650°F— open thermal switch in yellow leads	<ul style="list-style-type: none"> <li>• Welded relay contacts</li> <li>• Cooling fan stalled or blocked</li> <li>• Airflow to rear of unit</li> <li>• High resistance in oven sensor leads/connectors (especially at sensor in rear)</li> </ul>
-F3-	Open oven sensor (under 950 ohms)	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Look for damaged harness terminals if not a bad sensor.</li> </ul>
-F4-	Shorted oven sensor (over 2900 ohms)	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Separate sensor from harness to determine fault.</li> </ul>
-F7-	Shorted matrix or START key	Determine if problem is with key panel or control by disconnecting ribbon cable and measuring flat cable using pinout chart. Allow up to 1000 ohms when pressing a key.
-F8-	EEPROM data shift failure	If repeated, replace control.
-F9-	Cooling fan stalls while above 650°F; open thermal switch in yellow leads	Cooling fan or airflow to control area.
-FF-	Loss of latch motor safety circuit	Replace control.

## Oven Calibration

Testing has shown that this oven has the best cooking performance at a control setting of 350°F (177°C) when the average center oven temperature is between:

All Gas Range - 350°F and 390°F (177°C and 199°C).

Dual Fuel Range - 340°F and 380°F (171°C and 193°C).

Customers may change the average center oven temperature by  $\pm 35^\circ\text{F}$  ( $\pm 2^\circ\text{C}$ ) to satisfy their own cooking needs.

To change:

- Press and hold **BAKE** and **BROIL** pads until **SF** appears in display.
- Press **BAKE** pad to enter oven calibration mode. **00** appears if oven calibration has not been changed previously. If oven calibration has been changed previously, a temperature between  $\pm 35^\circ\text{F}$  ( $\pm 2^\circ\text{C}$ ) will be displayed.
- Press increase or decrease pads to change average oven temperature.
- Press **START** pad to return to Time of Day.

## Relay Contacts Operation Test and Control Voltage Check

### All Gas Range

#### TERMINALS VOLTAGE

L1- TO N	120 VAC ALL THE TIME
BAKE TO N	120 VAC when in BAKE mode
BROIL TO N	120 VAC when in BROIL mode
<b>SWITCH CONTACTS</b>	
DOOR MOTOR TO N	120 VAC locking or unlocking

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

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

## Dual Fuel Range

#### TERMINALS VOLTAGE

L1-N	120 VAC ALL THE TIME.	
COM to N	120 VAC ALL THE TIME.	
L1-BA-DLD	240 VOLTS when oven is not calling for heat (BAKE, CONV. and BROIL relay contacts open).	
*Light-L1	120 VOLTS when light is on.	
COM to MDL	120 VOLTS not locking or unlocking, door closed.	
L1 to CF	120 VOLTS when oven door is closed and CONV. BAKE and Conv. Roast not operating.	
<b>CIRCUIT TERMINALS OHMS</b>		
Oven sensor Temp.	6 to 8	1100 $\Omega$ @ Rm 2650 $\Omega$ @ 865°F
Door Unlatched	3 to 5 4 to 5	0 $\Omega$ open
Door Latched	4 to 5 3 to 5	0 $\Omega$ open

\*If oven light is not working, make the following checks:

- Check oven light bulb.
- Light is to come on when door is opened. Check voltage across light socket terminals. It should read 120 VAC. If 0 volts, check jamb switch and wiring.
- Light is to come on when control light pad is pressed. RLY105 should click. Check voltage from P104-7 to L1. It should read 120 VAC. If 0 volts, check oven light keypad using ohmmeter test. If keypad is good, replace the control.

## LP Conversion Instructions

The pressure regulator and the burner orifices are set for natural gas. To use liquid Propane Gas, the regulator and burner orifices must be converted. The L.P. orifice spuds for the cooktop burners can be located within a bracket behind the storage drawer.



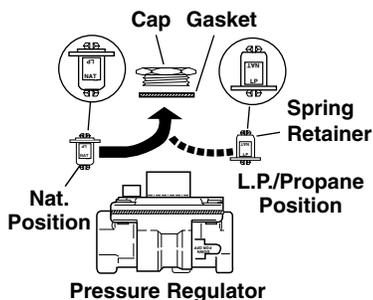
**Do not operate the cooktop or oven burners of this range when using L.P. (bottled) gas before converting the pressure regulator and burner orifices for L.P. gas use. Failure to do so could cause high flames and toxic fumes which can result in serious injury.**

**WARNING:** This conversion must be performed by a qualified installer or gas supplier in accordance with the manufacturer's instructions and all codes and requirements of the authority having jurisdiction. Failure to follow instructions could result in serious injury or property damage. The qualified agency performing this work assumes responsibility for the conversion.

To adjust your range for use with L.P. gas, follow these instructions:

1. Disconnect all electrical power, at the main circuit breaker or fuse box.
2. Shut off the gas supply to the range by closing the manual shut-off valve.

## ADJUSTING THE PRESSURE REGULATOR

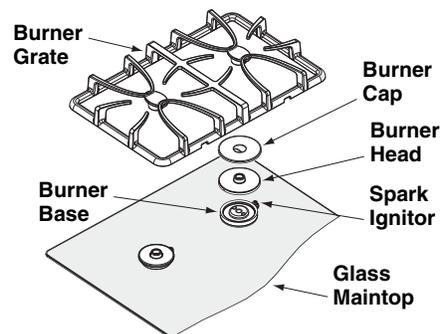


**CAUTION:** If you are using L.P. (bottled) gas, all the adjustments described in the following steps must be made before you make any burner adjustments.

- a. Remove the storage drawer.
- b. Find the pressure regulator by reaching through the storage compartment and the opening at the back of the range.
- c. Unscrew the cap.
- d. Carefully look at the spring retainer to locate the NAT or L.P. position.
- e. Place your thumb against the flat side of the spring retainer and press down to remove the retainer.
- f. Turn the spring retainer over so that L.P. is showing on the bottom.
- g. Snap the retainer back into position and retighten the cap back onto the regulator.

## ADJUSTING THE COOKTOP BURNERS

- a. Remove the top grates, burner caps and burner heads.

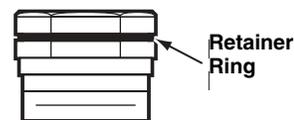


- b. Using a 7mm or 9/32" nut driver, remove the top burner orifices. These may be accessed through the burner air/gas mixer tube (chimney).



**NOTE:** The orifices have a spring-loaded retaining ring around the hex head to hold the orifice in the nut driver during installation and removal. A slight amount of force is required to push the nut driver down over the ring.

**NOTE:** On the small burner remove the burner base if the nut driver will not fit through the chimney.





**IMPORTANT:** Save these orifices for future conversion back to natural gas.

- c. Locate the L.P. orifices. The L.P. orifices are shipped attached to the range on the area behind the storage drawer. Remove storage drawer to see.

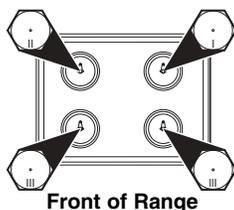
Each orifice will also show a series of engraved marks (I, II, III or X) located on the top.



These marks denote the precise location of each orifice to the cooktop burner.

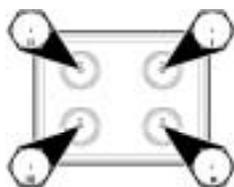
- d. Install the L.P. orifices in their precise locations.

### NON-CONVECTION RANGE



Front of Range

### CONVECTION RANGE



Front of Range

Return the natural orifices to the bracket and reattach the bracket and these instructions to the range using the screw previously removed.

## ADJUSTING THE OVEN BURNERS

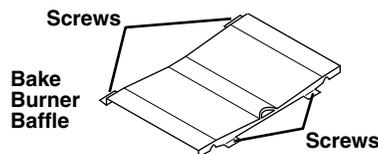
(On Gas Models only)



**CAUTION:** The following adjustments must be made before turning on the gas to the burner. Failure to do so could result in serious injury due to high flames and toxic fumes.

### BAKE BURNER

1. Remove the oven door and oven bottom.
2. Remove the four screws securing bake burner baffle (flame spreader).

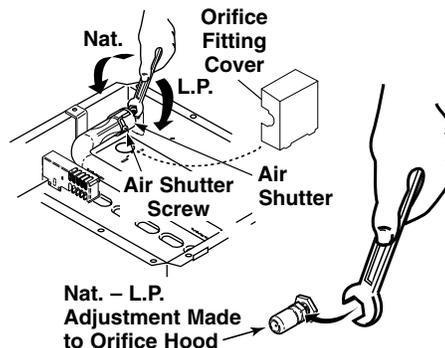


3. Remove the bake burner baffle (flame spreader).
4. Remove the orifice fitting cover.



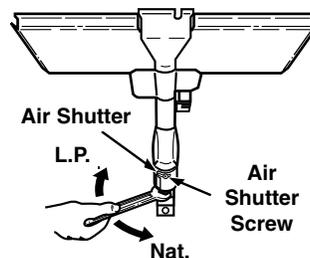
**IMPORTANT:** Do not overtighten or you may bend the orifice hood or needle.

5. Use a 1/2" open-end or adjustable wrench to turn the orifice hood in the L.P. direction, clockwise about 1 1/2 turns, until snug.



### BROIL BURNER

Use a 1/2" open-end or adjustable wrench to turn the orifice hood in the L.P. direction, clockwise about 1 1/2 turns, until snug.

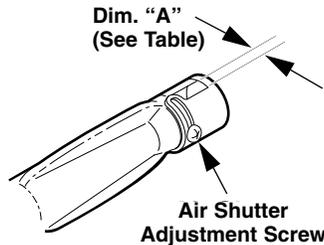


### AIR SHUTTER SETTING FOR BAKE AND BROIL BURNERS

1. Use a screwdriver to loosen the air shutter screw.
2. Adjust the air shutters. The table below gives the recommended initial air shutter setting. Your final settings may vary.

## INITIAL AIR SHUTTER SETTINGS

Gas Supply	Location	Dim. "A"
L.P. Gas	Broil Burner	11/32"
	Bake Burner	11/32"
Natural Gas	Broil Burner	11/32"
	Bake Burner	11/32"



(Adjust at the opening nearest the air shutter screw.)

3. Retighten the air shutter screw.

**Bake and broil flame must be checked with the door closed to properly check flame characteristics.**

4. Turn on the bake or broil burner.

As you watch the flame with the oven door closed, check the following through the oven door window:

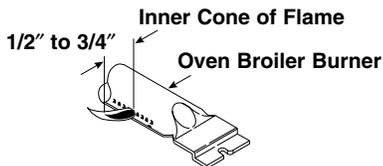
- If the flames are yellow, open the air shutter more.
- If the flames blow away or flutter from the burner, close the air shutter more.



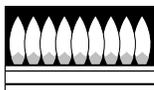
**WARNING:** If you attempt to measure the inner cone of the flame, please use caution; burns could result.

5. Checking the flame size:

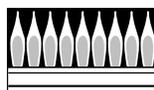
Check the inner cone of the flame. It should be approximately 1/2" to 3/4" long for the bake and broil burners.



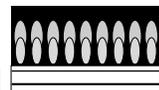
If the flame size is incorrect, recheck all conversion steps.



"A" YELLOW FLAMES  
Call for Service



"B" SLIGHT YELLOW TIPPING  
Normal for L.P. Gas



"C" SOFT BLUE FLAMES  
Normal for Natural Gas

6. When all adjustments are made and the results are satisfactory:

- Replace the orifice fitting cover.
- Replace the oven baffle (flame spreader).
- Replace the oven bottom.

### IN SOME CASES:

- With L.P. gas, some yellow tipping on the outer cone is normal.
- Foreign particles in the gas line may cause an orange flame at first, but this will soon disappear.

### SPECIAL NOTE:

To convert the oven back to natural gas, reverse the instructions given in making L.P. Adjustments.



Once the conversion is complete and checked ok, fill out the L.P. sticker and include your name, organization and date conversion was made. Apply the sticker to the range near the regulator to alert others in the future that this appliance has been converted to L.P. If converting back to natural gas from L.P., please remove the sticker so others know the appliance is set to use natural gas.

## ADJUSTING LOW FLAME SETTING ON COOKTOP BURNERS

Low setting adjustments must be made with two other burners in operation on a medium setting. This procedure prevents the low flame from being set too low, resulting in the flame being extinguished when other burners are turned on.

- Remove the valve control knobs.
- Through the opening, locate the valve bypass screw located on the lower right side of the valves.
- Using a small screwdriver, screw down the brass bypass screw fully in a clockwise rotation.



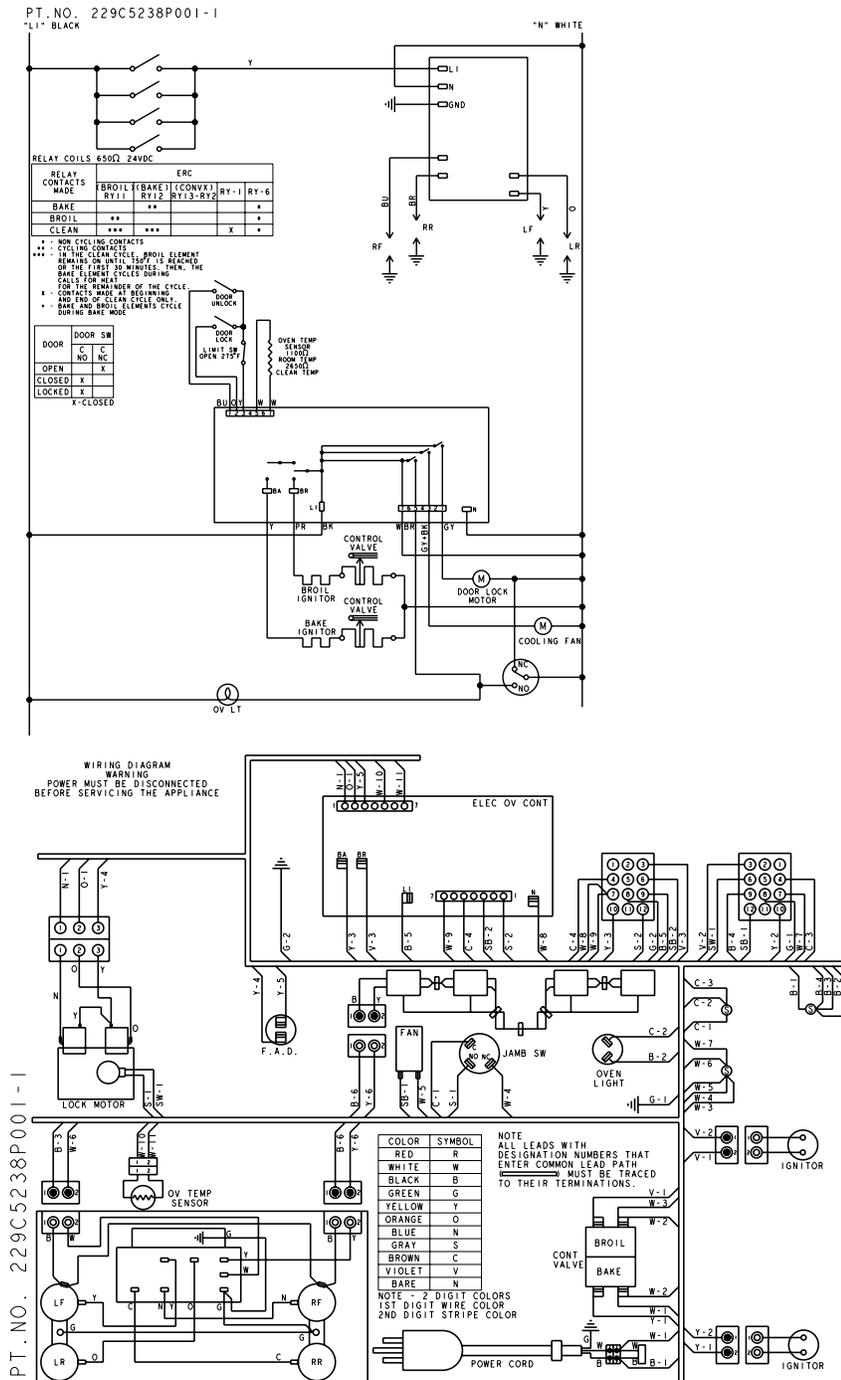
# Schematics and Wiring Diagrams

**WARNING:** Disconnect electrical power before servicing.

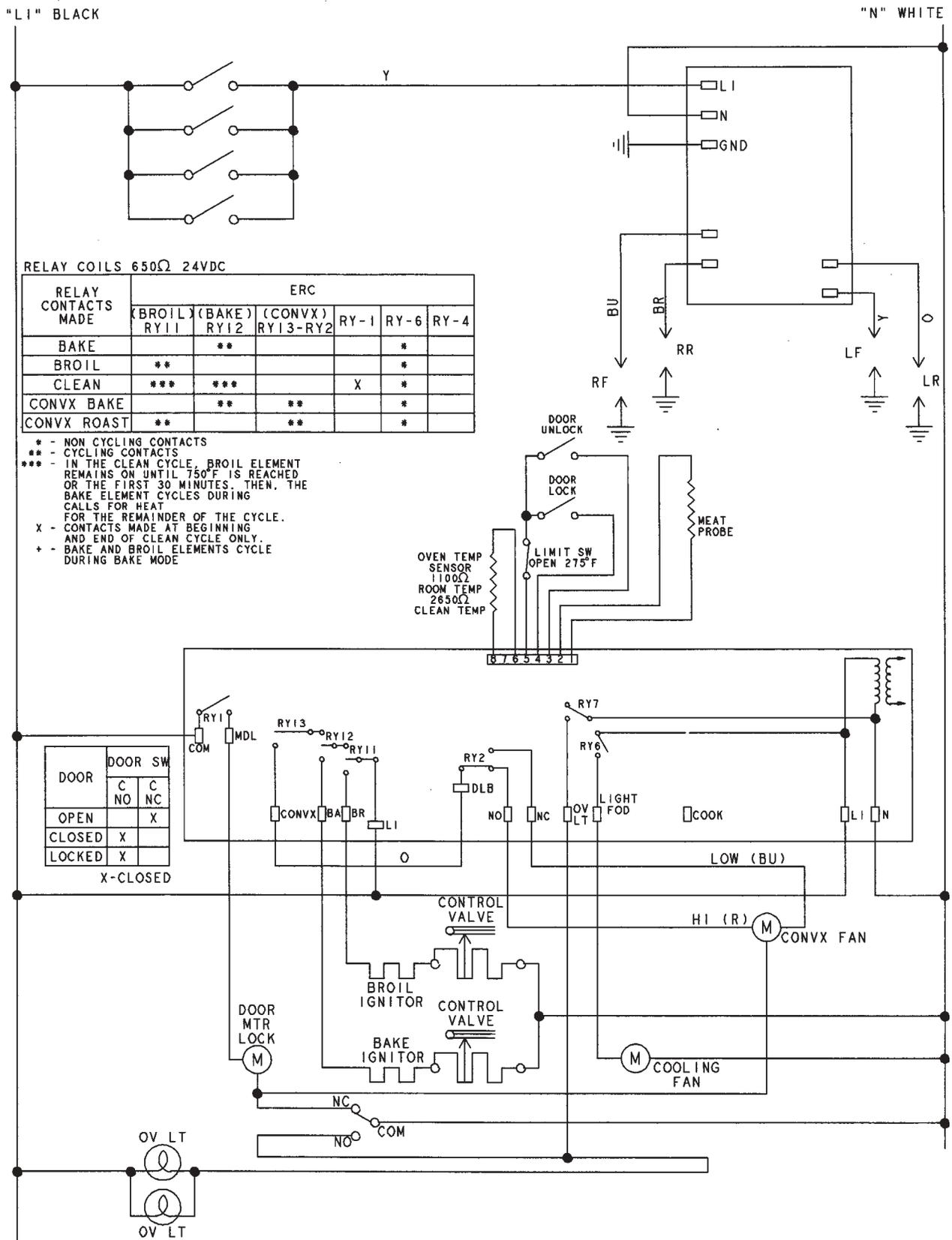
**Caution:** Label all wires prior to disconnection. Wiring errors can cause improper and dangerous operation. Verify operation after servicing.

**Note:** There is a double line break on the 240V circuit.

## All Gas Range Without Convection Fan JGSP48



# All Gas Range Schematic with Convection Fan JGS968

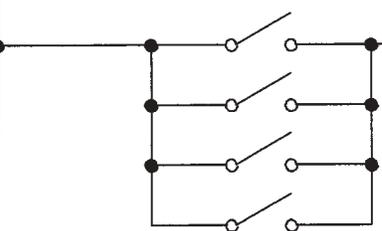




# Dual Fuel Range Schematic J2S968

"L1" BLACK

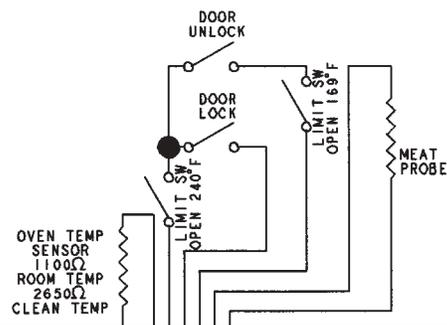
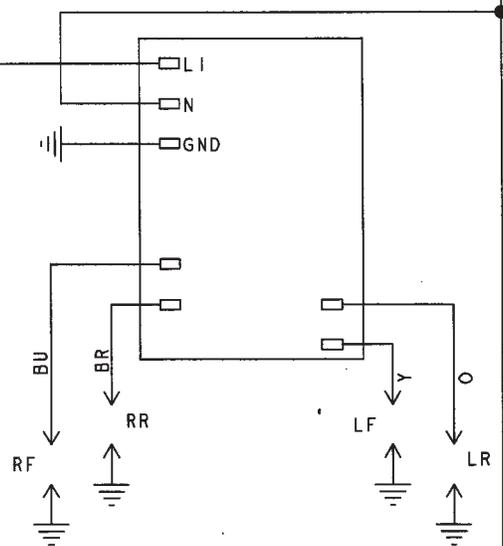
"N" WHITE



RELAY COILS 650Ω 24VDC

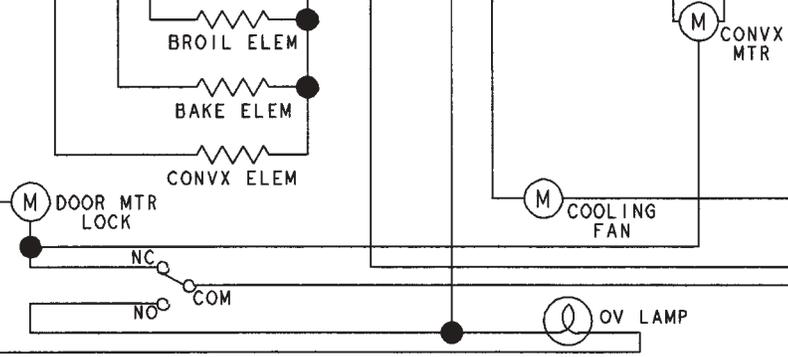
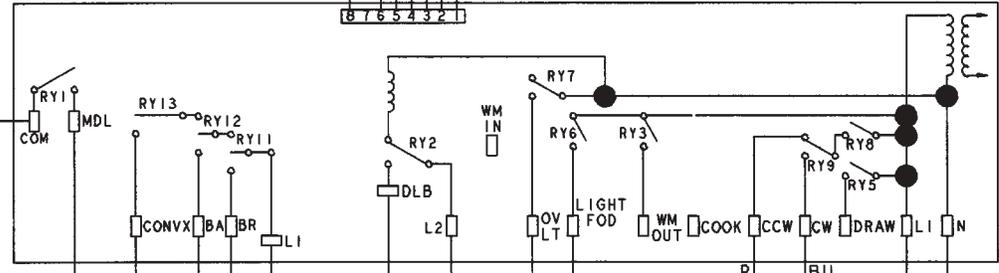
RELAY CONTACTS MADE	ERC					
	(BROIL) RY11	(BAKE) RY12	(CONVX) RY13-RY2	RY-1	RY-6	RY-4
BAKE	**	**			*	
BROIL	**				*	
CLEAN	***	***		X	*	
CONVX BAKE		**	**		*	
CONVX ROAST	**		**		*	

- \* - NON CYCLING CONTACTS
- \*\* - CYCLING CONTACTS
- \*\*\* - IN THE CLEAN CYCLE, BROIL ELEMENT REMAINS ON UNTIL 750°F IS REACHED OR THE FIRST 30 MINUTES. THEN, THE BAKE ELEMENT CYCLES DURING CALLS FOR HEAT FOR THE REMAINDER OF THE CYCLE.
- X - CONTACTS MADE AT BEGINNING AND END OF CLEAN CYCLE ONLY.
- + - BAKE AND BROIL ELEMENTS CYCLE DURING BAKE MODE



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

X-CLOSED



"I 2" RFD

# Dual Fuel Range Wiring Diagram J2S968

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

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

