KAC-38

KitchenAid

TECHNICAL EDUCATION

48″ Dual Fuel Slide-In Range

Model: KDRP487MSS

JOB AID 4317355

FORWARD

This KitchenAid Job Aid, “48″ Dual Fuel Slide-In Range,” (Part No. 4317355), provides the technician with information on the installation, operation, and service of the 48″ Dual Fuel Slide-In Range. It is to be used as a training Job Aid and Service Manual. For specific information on the model being serviced, refer to the “Use and Care Guide,” or “Wiring Diagram” provided with the range.

The Wiring Diagram and Strip Circuits used in this Job Aid are typical and should be used for training purposes only. Always use the Wiring Diagram supplied with the product when servicing the unit.

GOALS AND OBJECTIVES

The goal of this Job Aid is to provide detailed information that will enable the service technician to properly diagnose malfunctions and repair the KitchenAid 48″ Dual Fuel Slide-In Range.

The objectives of this Job Aid are to:

- Understand and follow proper safety precautions.
- Successfully troubleshoot and diagnose malfunctions.
- Successfully perform necessary repairs.
- Successfully return the range to its proper operational status.

WHIRLPOOL CORPORATION assumes no responsibility for any repairs made on our products by anyone other than Authorized Service Technicians.

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GENERAL

KITCHENAID MODEL & SERIAL NUMBER DESIGNATIONS

MODEL NUMBER

MODEL NUMBER	K	DR	P	48	7	M	SS	0

INTERNATIONAL SALES IND. OR MARKETING CHANNEL IF PRESENT

PRODUCT GROUP
- K = KITCHENAID

PRODUCT IDENTIFICATION
- DD = DUAL FUEL DROP-IN / SLIDE-IN
- DR = DUAL FUEL RANGE
- ED = ELECTRIC DROP-IN RANGE
- EE = ELECTRIC EYE-LEVEL RANGE
- ER = ELECTRIC STANDARD RANGE
- ES = ELECTRIC SLIDE-IN RANGE
- GD = GAS DROP-IN RANGE
- GE = GAS EYE-LEVEL RANGE
- GR = GAS STANDARD RANGE
- GS = GAS SLIDE-IN RANGE

MERCHANDISING SCHEME
- C = CERAMIC GLASS TOP
- H = CERAMIC W/HALOGEN
- I = IMPERIAL
- P = PROFESSIONAL / COMMERCIAL
- S = STANDARD
- T = TEMPERED GLASS TOP

CAPACITY / SIZE / SERIES / CONFIGURATION

1ST POSITION	2ND POSITION
1 = DROP-IN	0 = 30″ WIDE
2 = DROP-IN / SLIDE-IN COMBO	6 = 36″ WIDE
3 = SLIDE-IN	8 = 48″ WIDE
4 = COMMERCIAL	
5 = STANDARD	
7 = EYE-LEVEL	
8 = 48″	
9 = 60″	

FEATURES
- 0 = STANDARD FEATURES
- 2 = PLUS FEATURES OR SEALED BURNERS W / GRILL / CONVECTION OVEN
- 3 = SEALED BURNERS W / GRIDDLE / CONVECTION OVEN
- 4 = SEALED BURNERS W / GRILL & GRIDDLE / CONVECTION OVEN
- 5 = DELUXE FEATURES
- 7 = DELUXE FEATURES / CONVECTION OR SEALED BURNERS / CONVECTION OVEN

YEAR OF INTRODUCTION
- K= 2001, L - 2002, M = 2003

COLOR CODE
- SS = STAINLESS STEEL

ENGINEERING CHANGE (NUMERIC)

SERIAL NUMBER

SERIAL NUMBER	X	P	04	54321

MANUFACTURING SITE
- X = OXFORD, MS

YEAR OF PRODUCTION
- P = 2003, R = 2004

WEEK OF PRODUCTION
- 04 = 4th WEEK

PRODUCT SEQUENCE NUMBER

MODEL & SERIAL NUMBER LABEL AND TECH SHEET LOCATIONS

The Model/Serial Number label and Tech Sheet locations are shown below.

SPECIFICATIONS

Model Number	KDRP487MSS
Dimensions/Specifications	
Weight	
Ratings	Pigtail Required
Electric Voltage/Phase/Frequency(Hz)	240/208V, Single, 60 Hz
Total Connected Load In Kw	240 V Recommended
Circuit Amps	50 Amp
Exterior	
Cabinet Finish	Stainless
Control Panel Color	Brushed Chrome
Control Knob Material	Heavy Duty, Plastic
Cooktop Controls	Infinite
Cooktop Control Type	Push-to-Turn
Cooktop Control Location	Front
Gas Cooktop Burners	Yes
Gas Burner Type	Sealed
Gas Right Front Output (BTU)(Nat/LP)	6000 BTU/2300 BTU
Gas Left Front Output (BTU)(Nat/LP)	6000 BTU/2300 BTU
Gas Right Rear Output (BTU)(Nat/LP)	15000 BTU/12000 BTU
Gas Left Rear Output (BTU)(Nat/LP)	15000 BTU/12000 BTU
Gas Center RF Output (BTU)(Nat/LP)	15000 BTU/12000 BTU
Gas Center RR Output (BTU)(Nat/LP)	15000 BTU/12000 BTU
Gas Center LF Output (BTU)(Nat/LP)	15000 BTU/12000 BTU
Gas Center LR Output (BTU)(Nat/LP)	15000 BTU/12000 BTU
Gas Ignition Cooktop	Electronic
Gas Valves Degrees	210 degrees
Main/Single Oven Cycles or Options	
Oven Control Type (Both Ovens)	Electronic w/Knob Interface
Oven Control Location	Centered Over Oven, Communicates & Coordinates With Second Oven Control
Oven Broil	5 Levels
Closed Door Broil	Yes
Convection	3rd Element
Oven Light Switch	Automatic/Manual
Preheat Percentage Indication	Yes
Sabbath Mode	No
Selector	Yes
Start	Yes
Timer	Yes
Cook Time	Yes
Stop Time	Yes

Model Number	KDRP487MSS
Interior	
Main Oven (Both Ovens)	
Cooking System	True Convection
Cleaning System	Self Cleaning
Auto Self Clean Latch	Yes
Main Oven Dimensions	
Main Oven Volume (cu ft)	3.25; Usable: 2.86
Main Oven Height (in)	16"
Main Oven Width (in)	19"
Main Oven Depth (in)	18 1/2"; Usable: 16 1/4"
Rack Guides #	5
Oven Racks #	3
Oven Rack Type/#	3 Upper
Oven Light #/Location	2 Side Halogen
Main Hidden Bake Element	Yes
Main Oven Bake (w@240/208v)	2000 W/1500 W
Main Oven Broil (w@240/208v)	2667 W/2000 W
Main Oven Convection (w@240/208v)	1600 W/1200 W
Accessories	
Backsplash Part/Comment	9" Standard
Island Trim Part/Comment	Standard
LP Conversion Kit Part/Comment	Standard
Stainless Steel Cleaner	Included
Wok Ring	Optional (Part # 8284965)
Miscellaneous	
Product Literature	
Installation Instructions Part/Comment	8301285; Conversion, 8301283
Service Manual Part Number	4317355
Tech Sheet Part Number	8301281
Use & Care Guide Oven Part/Comment	8301284
Agency Approvals	CSA, AGA, CGA
Anti-tip Device With Unit	Yes
Residential Use Only	Yes
Warranty	
Full	12 Months, parts & labor
Extended	
Electronic Controls	2nd Through 5th Year, Parts
Electrical Elements	2nd Through 5th Year, Parts
Porcelain Liner/Door	2nd Through 10th Year, Parts
Sealed Gas Burners	2nd Through 5th Year, Parts

KITCHENAID WARRANTY

ONE-YEAR FULL WARRANTY

For one year from the date of purchase, when this appliance is operated and maintained according to instructions attached to or furnished with the product, KitchenAid will pay for factory specified parts and repair labor costs to correct defects in materials or workmanship. Service must be provided by a KitchenAid-designated service company.

SECOND THROUGH FIFTH YEAR LIMITED WARRANTY ON ELECTRIC ELEMENTS, CERAMIC GLASS COOKTOP, GAS BURNERS, AND SOLID STATE TOUCH CONTROL SYSTEM

On electric ranges and electric cooktops, in the second through fifth years from the date of purchase, when this appliance is operated and maintained according to instructions attached to or furnished with the product, KitchenAid will pay for factory specified parts for any electric element to correct defects in materials or workmanship.

On ceramic glass ranges and ceramic gas cooktops, in the second through fifth years from the date of purchase, when this appliance is operated and maintained according to instructions attached to or furnished with the product, KitchenAid will pay for factory specified parts for the ceramic glass cooktop. KitchenAid warrants that the ceramic glass cooktop will not discolor, the cooktop pattern will not wear off, the rubber seal between the ceramic glass cooktop and porcelain edge will not crack, the ceramic glass cooktop will not crack due to thermal shock and the surface unit elements will not burn out.

On gas ranges and gas cooktops, in the second through fifth years from the date of purchase, when this appliance is operated and maintained according to instructions attached to or furnished with the product, KitchenAid will pay for factory specified parts for any gas burner to correct defects in materials or workmanship.

On ranges and built-in ovens, in the second through fifth years from the date of purchase, when this appliance is operated and maintained according to instructions attached to or furnished with the product, KitchenAid will pay for factory specified parts for the porcelain oven cavity/inner door if the part rusts through due to defects in materials or workmanship. KitchenAid will pay for factory specified parts for solid state touch control system and Magnetron tube in combination ovens to correct defects in materials or workmanship.

SIXTH THROUGH TENTH YEAR LIMITED WARRANTY ON RANGES AND BUILT-IN OVENS PORCELAIN OVEN CAVITY/INNER DOOR

On ranges and built-in ovens only, in the sixth through tenth years from the date of purchase, when this appliance is operated and maintained according to instructions attached to or furnished with the product, KitchenAid will pay for factory specified parts for the oven cavity/inner door if the part rusts through due to defects in materials or workmanship.

KitchenAid will not pay for:

1. Service calls to correct the installation of your appliance, to instruct you how to use your appliance, to replace house fuses or correct house wiring, or to replace owner-accessible light bulbs.
2. Repairs when your appliance is used in other than normal, single-family household use.
3. Pickup and delivery. Your appliance is designed to be repaired in the home.
4. Damage resulting from accident, alteration, misuse, abuse, fire, flood, improper installation, acts of God or use of products not approved by KitchenAid or KitchenAid Canada.
5. Repairs to parts or systems resulting from unauthorized modifications made to the appliance.
6. Replacement parts or repair labor costs for units operated outside the United States or Canada.
7. In Canada, travel or transportation expenses for customers who reside in remote areas.
8. Any labor costs during the limited warranty periods.

KITCHENAID AND KITCHENAID CANADA SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so this exclusion or limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state or province to province.

Outside the 50 United States and Canada, this warranty does not apply. Contact your authorized KitchenAid dealer to determine if another warranty applies.

If you need service, first see the “Troubleshooting” section of the Use and Care Guide. After checking “Troubleshooting,” additional help can be found by checking the “Assistance or Service” section, or by calling the KitchenAid Customer Interaction Center, **1-800-422-1230** (toll-free), from anywhere in the U.S.A. In Canada, contact your KitchenAid-designated service company, or call **1-800-807-6777**.

— NOTES —

INSTALLATION INFORMATION

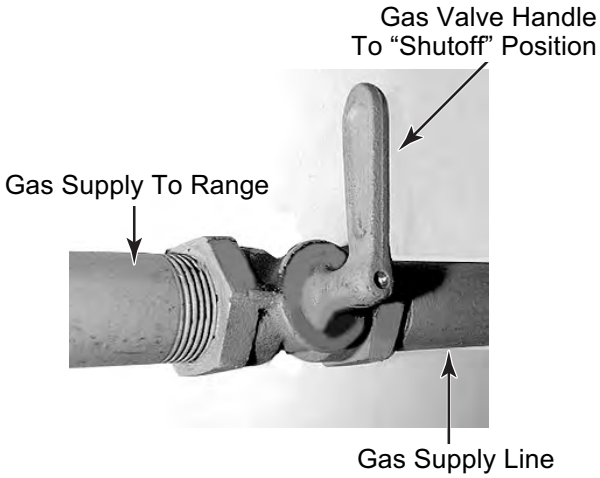
L.P. GAS CONVERSION

⚠WARNING

	**Electrical Shock Hazard** **Disconnect power before servicing.** **Replace all parts and panels before operating.** **Failure to do so can result in death or electrical shock.**
	**Fire Hazard** **Shut off gas supply line valve.** **Make all conversions before turning gas supply valve back on.** **Failure to follow these instructions can result in explosion, fire, or other injury.**

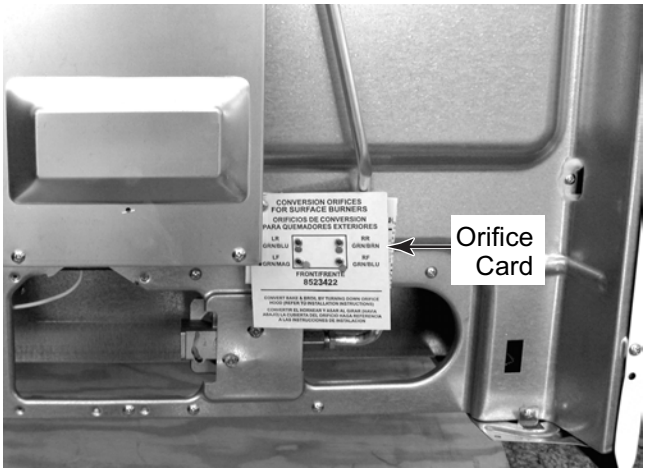
NOTE: Gas conversion from natural to L.P. gas must be done by a qualified installer.

1. Check to make sure that the main gas supply line to the range has been shut off, (see below), and that the power supply cord is disconnected from the AC outlet.



2. **To convert the cooktop burners for use with L.P. gas:**
   a) Remove the grates and burner caps.
   b) Remove the two T-20 torx screws from each of the burner heads and remove the heads from the cooktop.

NOTE: The L.P. orifices are fastened to the back of the range near the bottom on a cardboard form.



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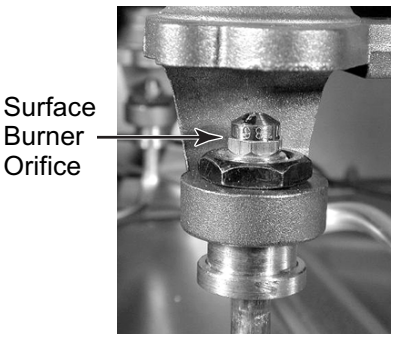
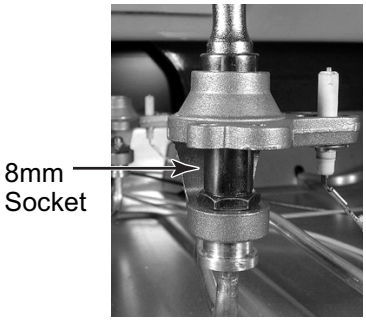
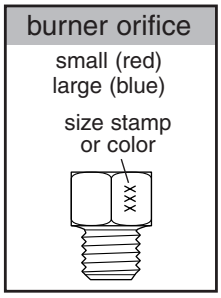
c) Use an 8 mm socket and carefully remove the orifice spud from each of the four burners.

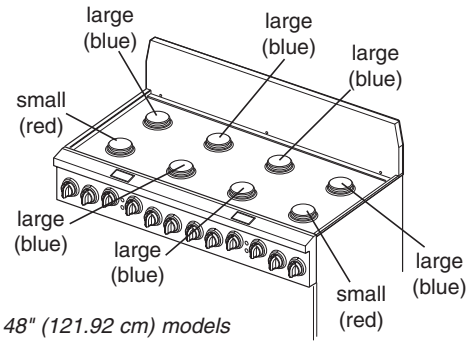




d) Install the eight L.P. gas orifices in the burners, as shown in the following charts (do not overtighten them):

Rating	Color	Size	Where Used
2,300 BTU	red	0.70 mm	small burners
12,000 BTU	blue	1.10 mm	large burners





48" (121.92 cm) models

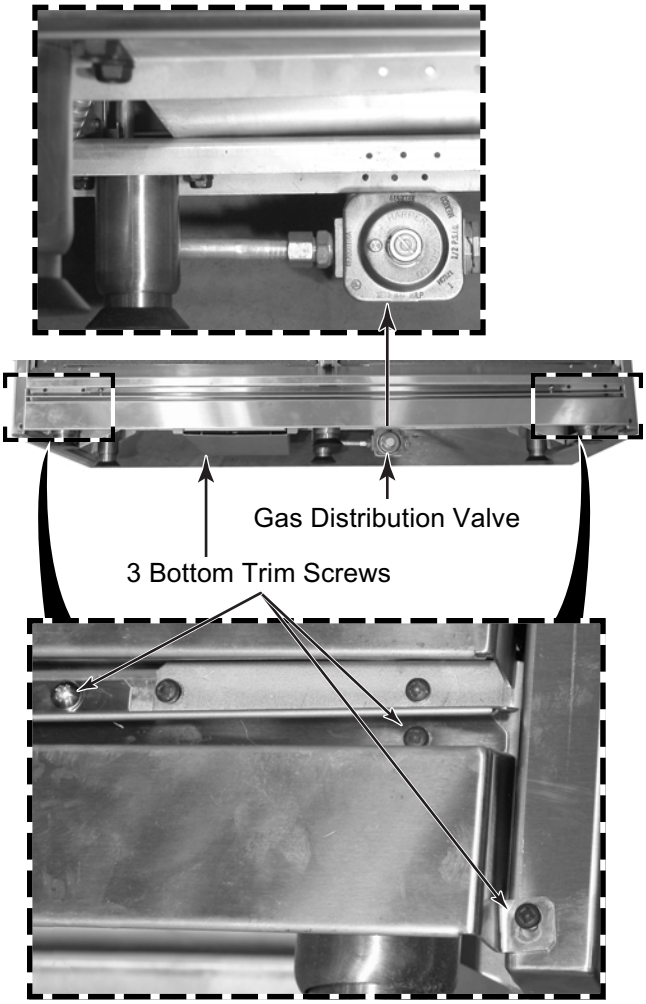
e) Place the natural gas orifices in the orifice card holes.

3. **To convert the gas distribution valve for use with L.P. gas:**

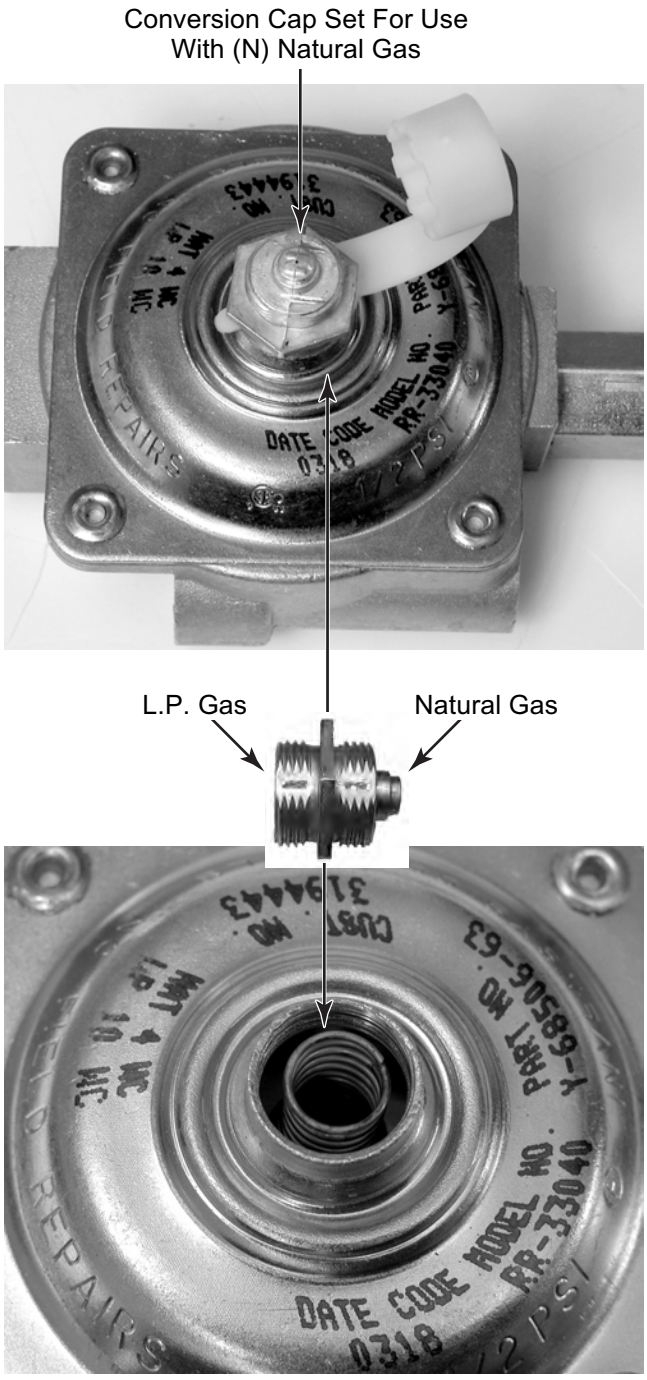
NOTE: The gas distribution valve on your unit may look different than the one shown in the procedure. However, the gas conversion is the same.

a) Remove the bottom trim from the range.

b) Remove the three screws from each end of the bottom trim and remove the trim.

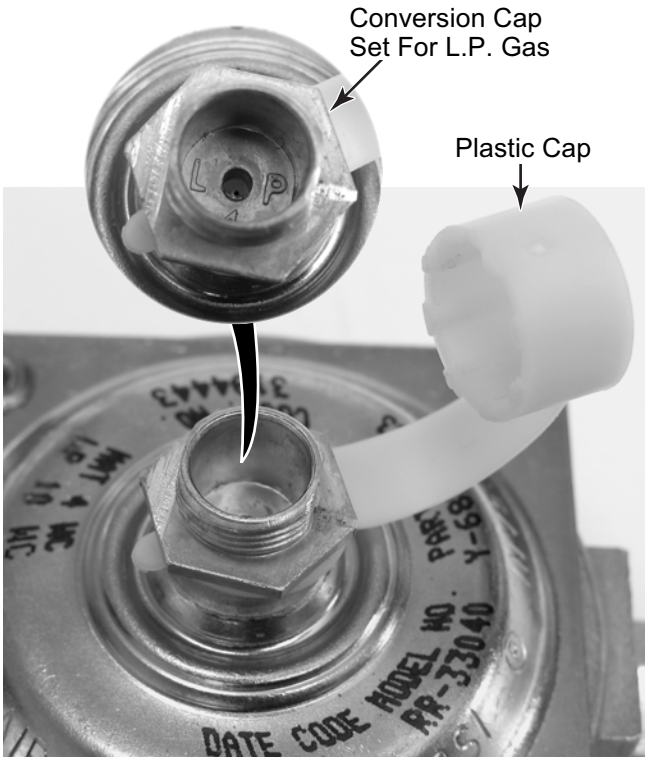


c) Unscrew the conversion cap from the gas distribution valve and remove it and the plastic cap. Note the difference between the L.P. and Natural gas ends of the cap. **NOTE:** The valve you are servicing may not have a plastic cap.



d) Install the loop on the plastic cap over the natural gas side of the conversion cap.

e) Install the plastic cap and the conversion cap on the gas distribution valve with the L.P. side facing up (you will see "LP" stamped inside the cap, as shown below).

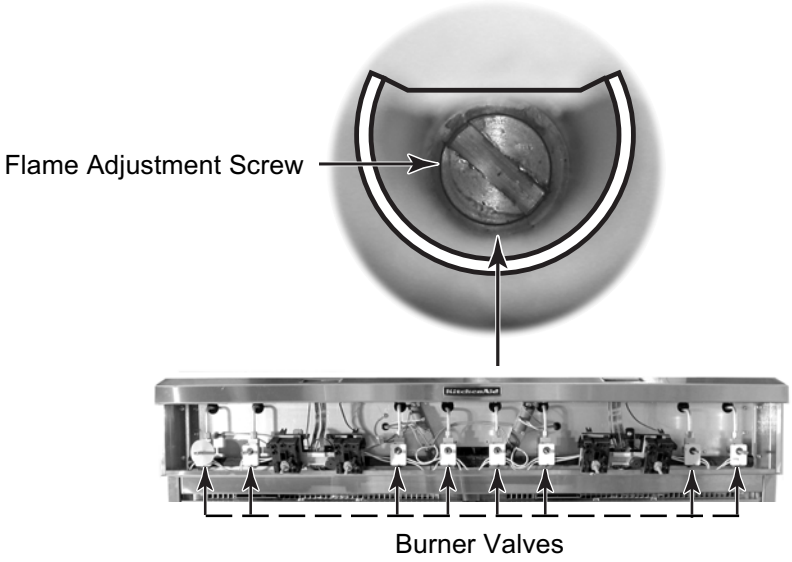


4. Reinstall the bottom trim.
5. Turn the gas supply valve handle on.

ADJUSTING FOR THE PROPER FLAME

COOKTOP BURNERS

1. Turn on one of the surface burners and set the flame to its lowest (LOW) setting. The flame should be steady and the inner cone should be dark blue in color. The size should be approximately 1/4″ (0.64 cm) high.
2. If the low flame needs to be adjusted:
   a) Remove the control knob.
   b) Look inside the gas valve stem and note the small screw. Insert a small screwdriver into the gas valve stem and fit it in the screw slot.
   c) Hold the gas valve stem with a pair of pliers, and turn the screw in either direction until the flame size is approximately 1/4″ high.
   d) Replace the control knob.
   e) Turn the control knob from HI to LO and check to make sure that it remains adjusted properly.
   f) Check the other burners, and adjust them, if necessary.



INSTALLING THE ANTI-TIP BRACKET

⚠WARNING

Tip-Over Hazard

A child or adult can tip the range and be killed.

Connect anti-tip bracket to rear range foot.

Reconnect the anti-tip bracket, if the range is moved.

Failure to follow these instructions can result in death or serious burns to children and adults.

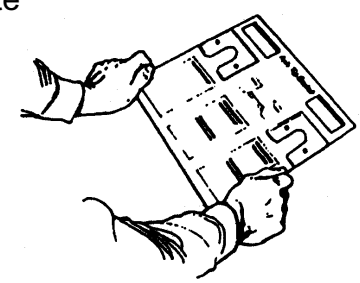
PARTS SUPPLIED

Plastic Anchors

Screws

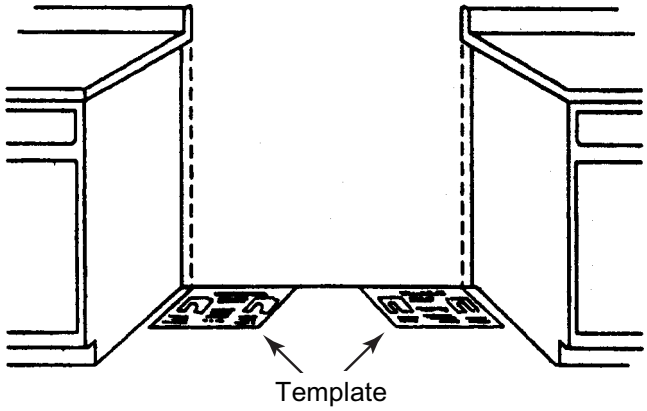
Anti-Tip Bracket

Template



NOTE: The anti-tip bracket can be installed to hold either the right or left rear leg of the range.

1. Determine which leg you wish to anchor to the floor.
2. Place the anti-tip bracket template on the floor in the range opening so that the top edge is against the wall, molding, or cabinet, and the bracket template is in the location where the anti-tip bracket will be installed.
3. Tape the template to the floor.

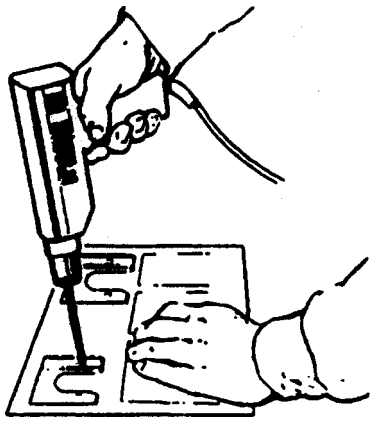


NOTE: For mounting to a wood floor, proceed to step 4. For concrete or ceramic floors, proceed to step 5.

4. **To mount the anti-tip bracket to a wood floor:**

   a) Use the bracket template to mark the hole locations to be drilled.

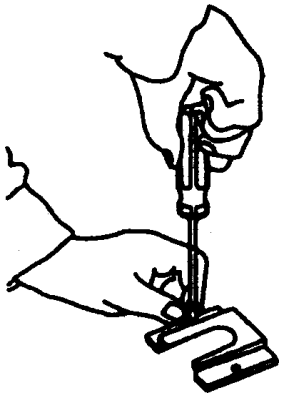
   b) Use a 1/8″ drill bit and drill the two holes.



   c) Remove the template from the floor.

   d) Line up the two mounting holes in the anti-tip bracket with the two holes you just drilled in the floor.

   e) Use the two screws that were supplied and fasten the anti-tip bracket to the floor.



5. **To mount the anti-tip bracket to a concrete or ceramic floor:**

   a) Use the bracket template to mark the hole locations to be drilled.

   b) Use a 3/16″ drill bit and drill the two holes.

   c) Remove the template from the floor.

   d) Tap the two plastic anchors into the mounting holes with a hammer.

   e) Line up the two mounting holes in the anti-tip bracket with the two holes you just drilled in the floor.

   f) Use the two screws that were supplied and fasten the anti-tip bracket to the floor.

6. Move the range close to the cabinet opening and plug the power supply cord into a grounded outlet.

7. Remove the cardboard shipping piece from under the range.

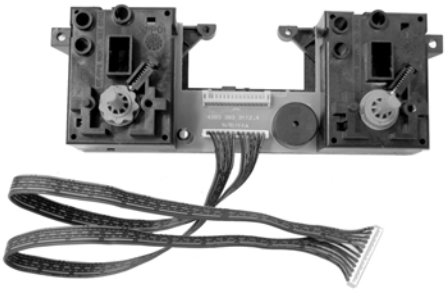
8. Move the range into position and make sure that the rear leveling leg slides into the anti-tip bracket, as shown.

THEORY OF OPERATION

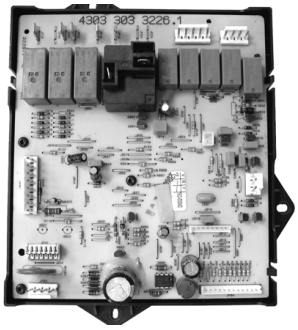
ELECTRONIC OPERATION

The components that control the electronic operation of this range include the following:

Thermostat & Selector Switch Assembly



Electronic Control (Secondary Board)



Main Electronic Control

Each oven has its own components, with the exception of the main electronic control. The main electronic control is used to synchronize the two secondary boards for the displayed "Time of Day." It also monitors the secondary boards to prevent two self-clean functions from occurring at the same time. In addition, it prevents a self-clean and cooking function from occurring at the same time.

The main control is supplied with 24 VAC from the control board power transformer. It communicates between the secondary oven electronic controls with 5 volt pulses from the main control's P9-1 yellow wire, and uses the P9-3 orange wire as a ground reference. If the main control malfunctions, an **F04** error code will be indicated in the clock displays. Refer to the Tech Sheet that is supplied with the unit for additional information.

The two thermostat & selector switch assemblies are mounted on the front manifold panel, and function the same as a touch pad on a microwave oven.

As you turn a selector switch to a particular setting, (i.e. Bake, Broil, Clean, etc.), individual relays on the oven's electronic control close, and the appropriate circuits are completed.

MODES / RELAYS	BAKE	BROIL	CONV ELEM	CONV FAN	LIGHT	BLOWER
RESET	O	O	O	O	O	⊠
BAKE PREHEAT	X	+	O	O	X	X
BAKE	+	+	O	O	X	X
BROILPREHEAT	O	X	O	O	X	X
BROIL	O	+	O	O	X	X
CONV. BAKE-PREHEAT	+	O	X	X	X	X
CONV. BAKE	+	O	+	X	X	X
CONV. BROIL-PREHEAT	O	X	O	X	X	X
CONV. BROIL	O	+	O	X	X	X
CONV. ROAST-PREHEAT	X	+	O	X	X	X
CONV. ROAST	+	+	O	X	X	X
BREAD-PREHEAT	X	X	O	X	X	X
BREAD BAKING	+	+	+	X	X	X
PROOF	O	+	O	O	O	O
KEEP WARM	+	+	O	O	X	O
CLEAN	+	+	O	O	O	X

RELAY LOGIC KEY

O – OFF

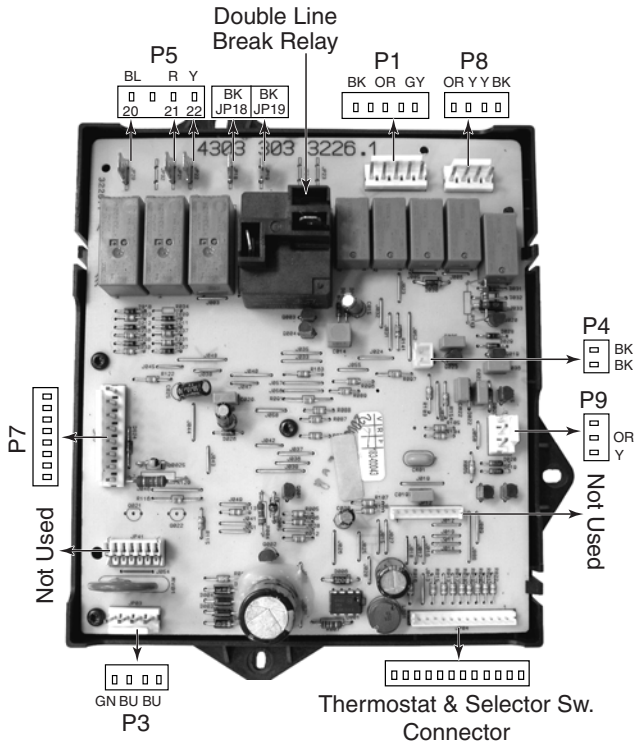
X – ON

\+ – CYCLING (MAX. PERIOD = 60 SEC.)

⊠ – ON OR OFF

NOTE: DURING THE SELF CLEAN FUNCTION, THE OTHER OVEN CANNOT OPERATE.

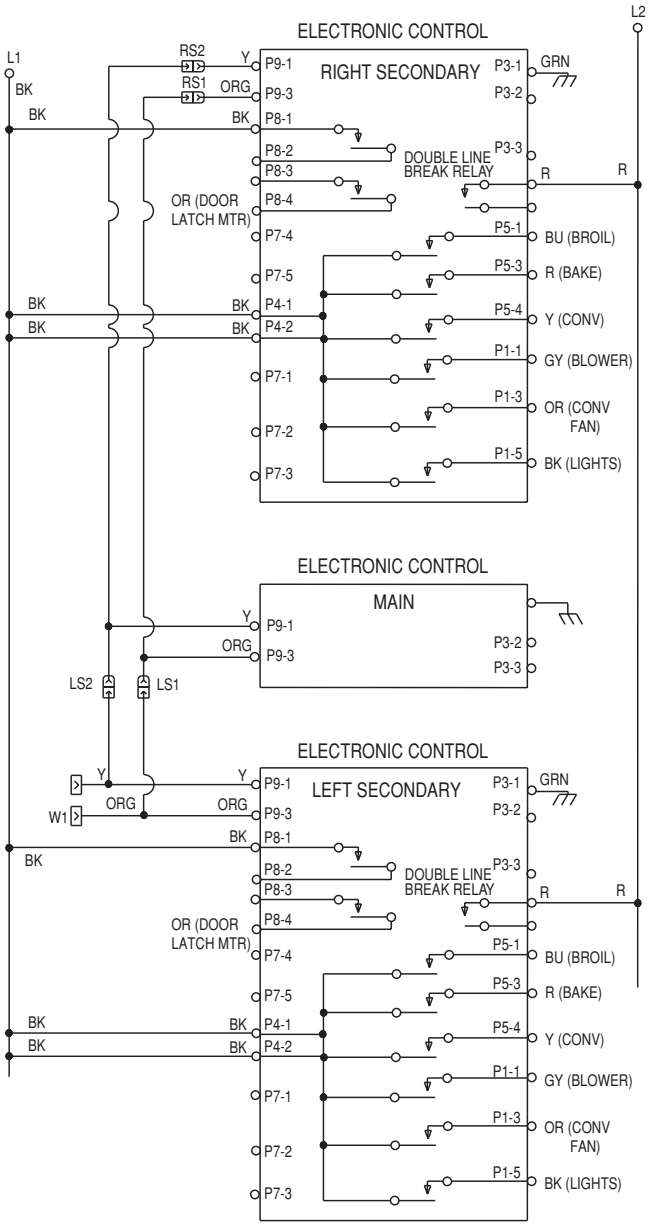
The electronic controls have six cooking relays, as shown in the wiring diagram to the right, and two door latching relays that operate during self-cleaning. They also have a double line break relay that is a safety relay to control the circuit to the L2 side of the line.



The main electronic control synchronizes the "Time of Day" readout information that the two secondary electronic control boards share. If for some reason the clocks do not indicate the exact times, the main electronic control may be defective.

It also monitors the secondary boards to prevent two self-clean functions from occurring at the same time. In addition, it prevents a self-clean and cooking function from occurring at the same time.

The main electronic control and the two electronic controls (secondary boards) interconnect wiring is shown below.

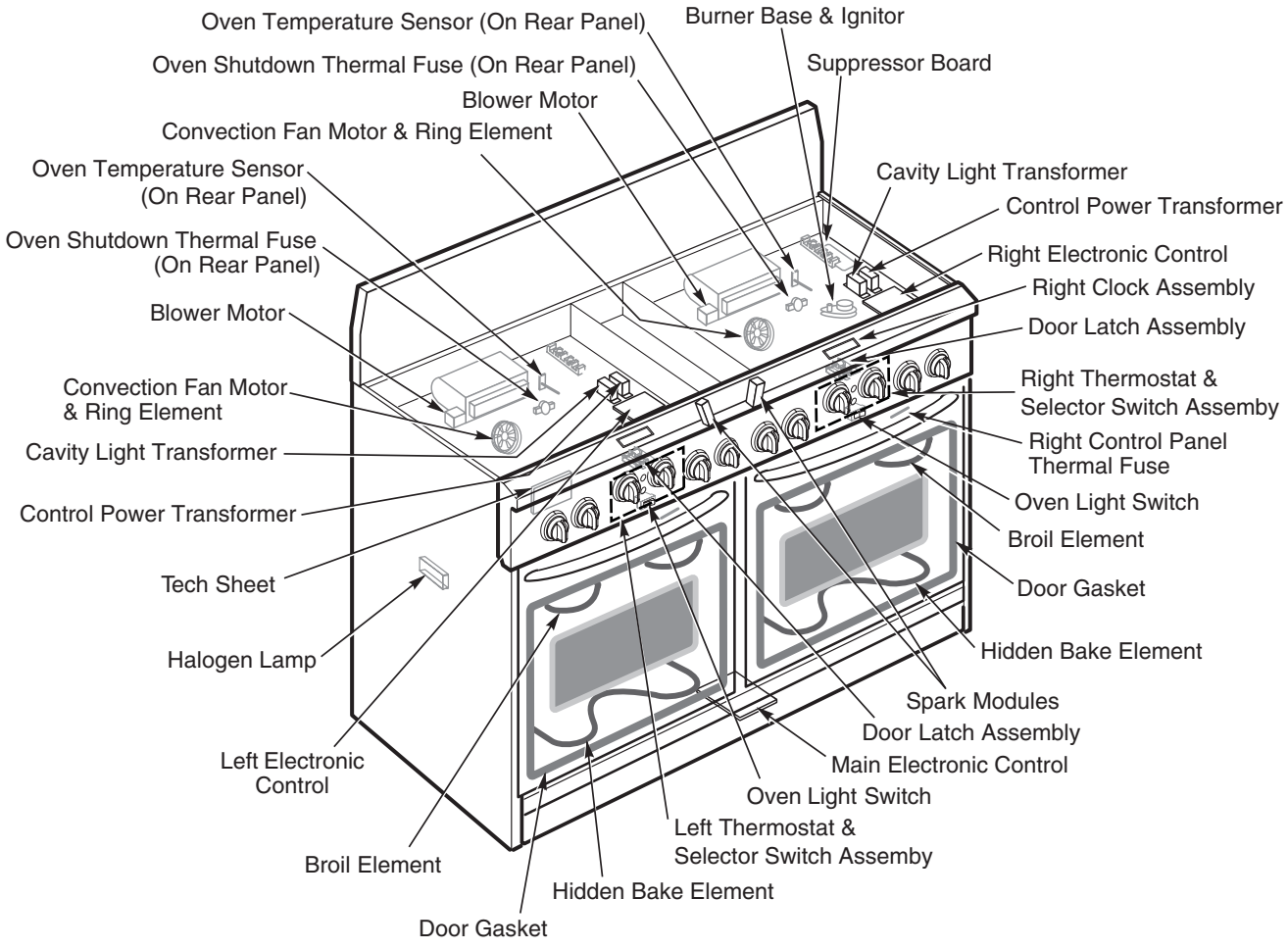


NOTE: The blower remains off until the oven reaches 190°F, and may continue running for up to 45 minutes after the oven is turned off.

COMPONENT ACCESS

This section instructs you on how to service each component inside the 48″ Dual Fuel Slide-In Range. The components and their locations are shown below.

COMPONENT LOCATIONS



REMOVING THE COOKTOP, BURNER BASE, & IGNITOR

⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

Fire Hazard

Shut off gas supply line valve before servicing.

Check all gas line connections and replace all parts and panels before operating.

Failure to do so can result in explosion, fire or other injury.

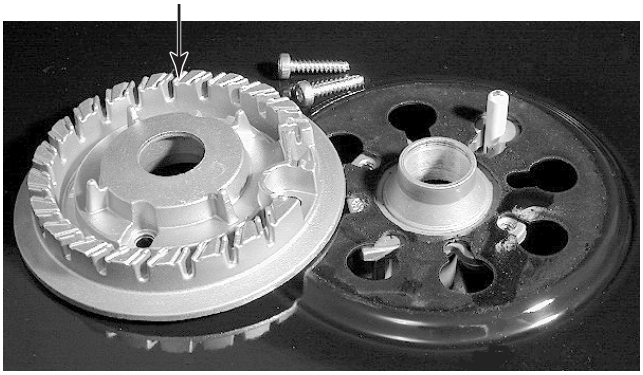
1. Turn off gas supply and disconnect power to the range.
2. Remove the grates from the range.

3. Remove the burner caps from the burner heads.

4. **To remove the cooktop:**

   a) Remove the two T-20 torx screws from each of the burner heads and remove the heads from the cooktop.

Burner Head

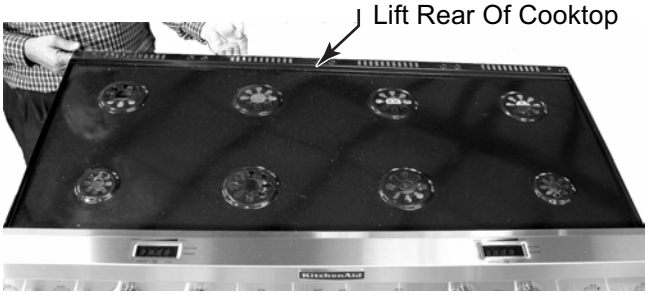


   b) Remove the screws from the front and rear corners of the cooktop.

Screws Screws

   c) Lift the rear of the cooktop and pull the cooktop off the top of the unit.

Lift Rear Of Cooktop

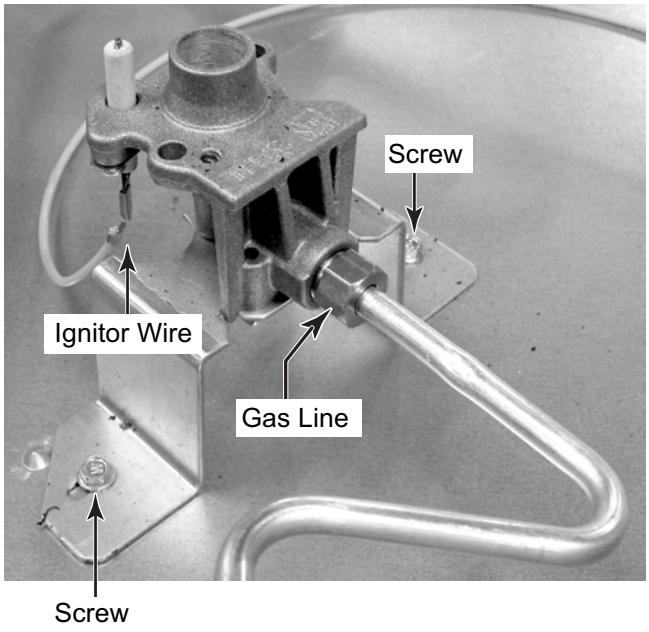


5. **To remove a burner base and an ignitor:**

   a) Remove the gas line from the burner base.

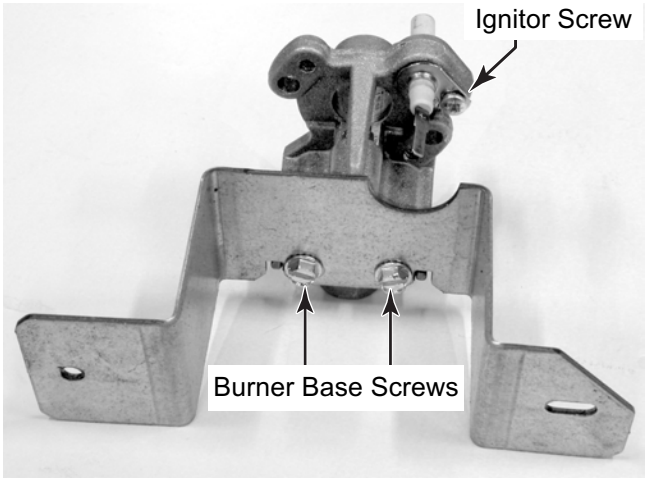
   b) Disconnect the wire from the ignitor.

   c) Remove the two hex-head screws from the burner base bracket and position the assembly so that you can access the ignitor screw.



   d) Remove the screw from the ignitor and remove the ignitor from the burner base.

   e) Remove the two hex-head screws from the burner base and remove the base from the bracket.



REMOVING THE CONTROL PANEL AND COMPONENTS

⚠WARNING

	**Electrical Shock Hazard** **Disconnect power before servicing.** **Replace all parts and panels before operating.** **Failure to do so can result in death or electrical shock.**
	**Fire Hazard** **Shut off gas supply line valve before servicing.** **Check all gas line connections and replace all parts and panels before operating.** **Failure to do so can result in explosion, fire or other injury.**

The control panel components that are serviced in this section consist of:

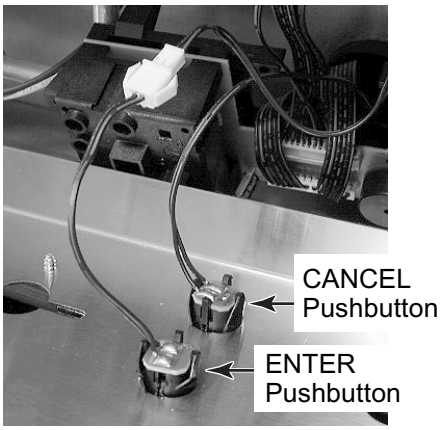
- Spark Modules
- Ignition Switches
- Gas Valves
- Clocks
- Thermostat & Selector Switch Assemblies
- Electronic Controls
- Cavity Light and Control Power Transformers

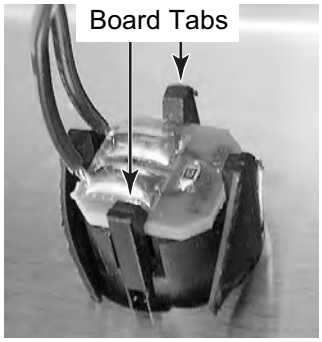
1. Turn off gas supply and disconnect power to the range.
2. Remove the grates from the range.

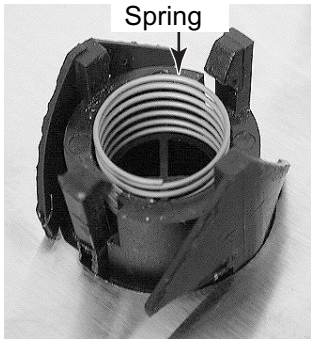
3. **To remove the control panel:**
   a) Pull the knobs off the gas valves, selector switches, and thermostats.
   b) Remove the two indicated machine screws from each bezel of the two thermostats & selector switches. **NOTE:** The thermostat and selector switch for each oven is an assembly, and is mounted to the control panel with two machine screws. Leave the remaining bezel sheet-metal screws in place. It is not necessary to remove them.

   c) Lower the control panel so the six top tabs are free of the slots and rotate it forward and rest it on a small table.

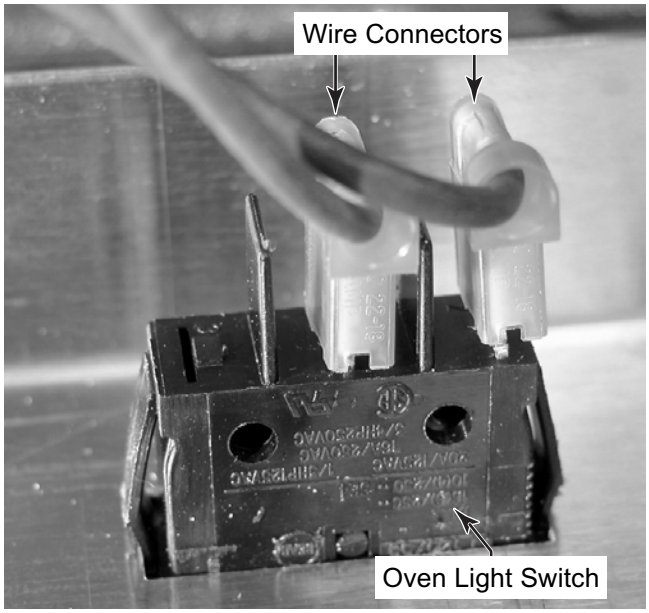
d) Carefully unsnap the CANCEL and ENTER pushbutton boards for both ovens, and remove the coil springs. Be careful not to break the fragile holder tabs.





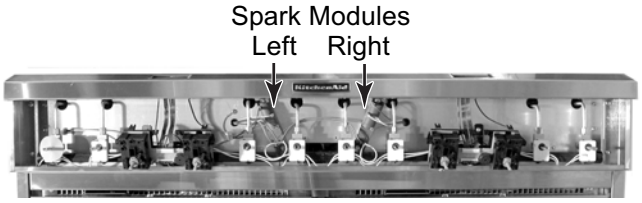


e) Disconnect the two wires on each of the two oven light switches.



f) Remove the control panel from the unit.

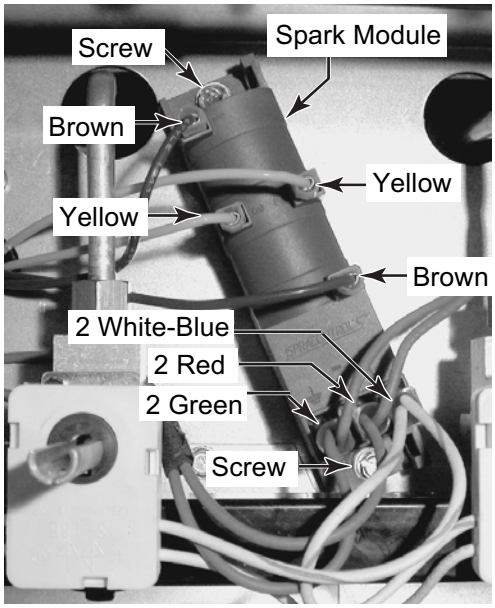
4. **To remove a spark module:**



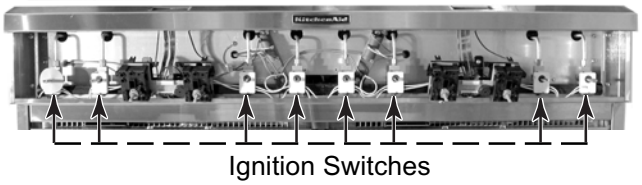
a) Remove the control panel from the unit (see step 3 on page 4-4 for the procedure).

b) Disconnect the wires from the spark module terminals.

c) Remove the two hex-head screws from the spark module and remove the module.



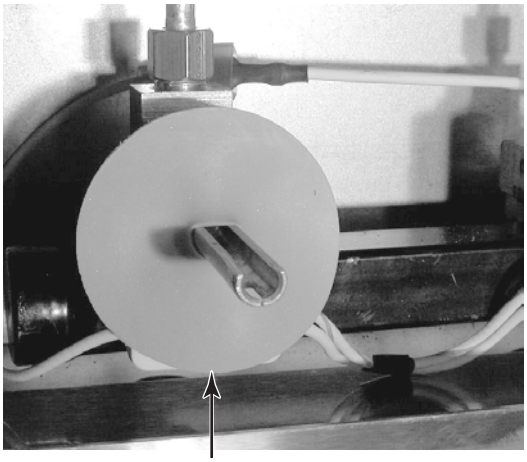
5. **To remove the (8) ignition switches:**



a) Remove the control panel from the unit (see step 3 on page 4-4 for the procedure).

Continued on the next page.

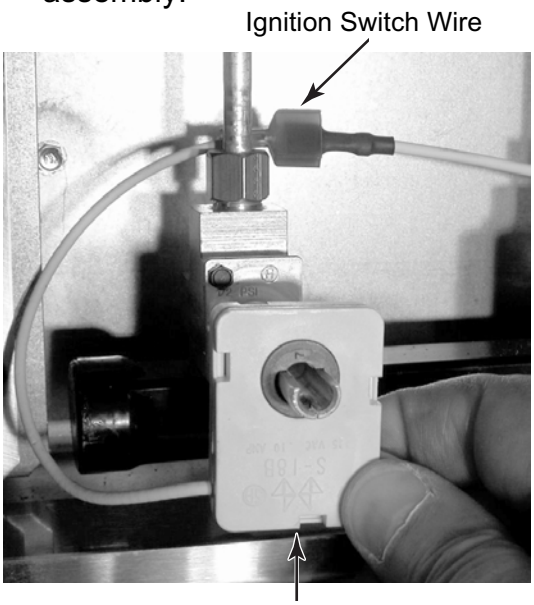
b) Pull the round rubber shields off the eight gas valve shafts.



Rubber Shield

c) Disconnect the ignition switch assembly wire connector from the main harness.

d) Pull each of the ignition switches off the shafts of the gas valves. **NOTE:** The ignition switches are replaced as an assembly.



6. **To remove a gas valve:**

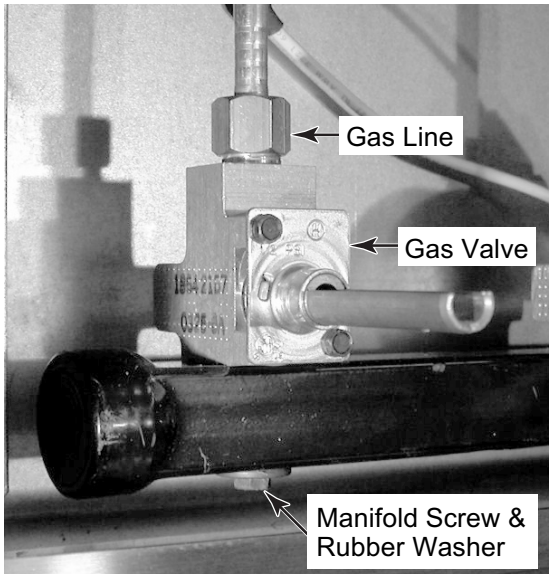
a) Remove the control panel from the unit (see step 3 on page 4-4 for the procedure).

b) Remove the ignition switch from the valve under test (see step 5 on page 4-5 for the procedure).

c) Remove the gas line from the valve.

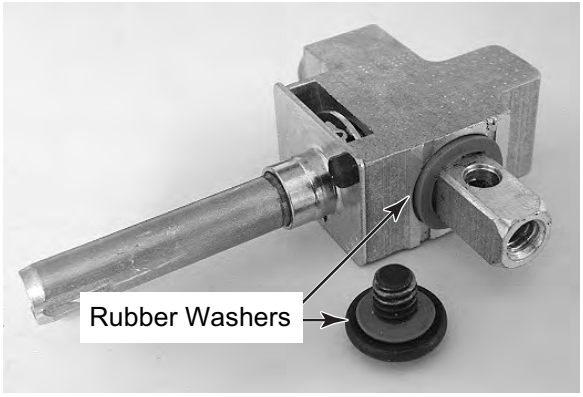
d) Using a 1/4″ open-end wrench, remove the screw and rubber washer from the gas valve.

e) Pull the gas valve off the manifold.



REASSEMBLY NOTES:

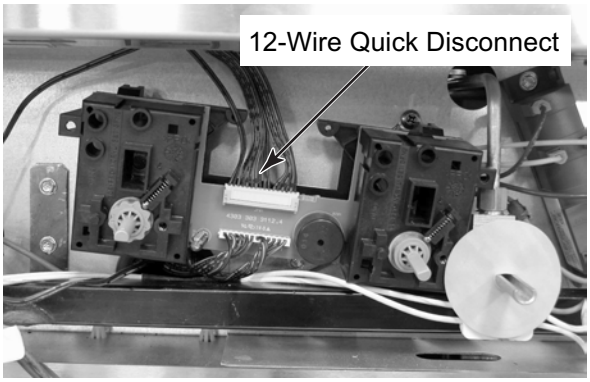
1. When installing a new gas valve, make sure that the rubber washers are in place on the valve and the screw.
2. Do not overtighten the gas valve screw when installing it on the manifold.



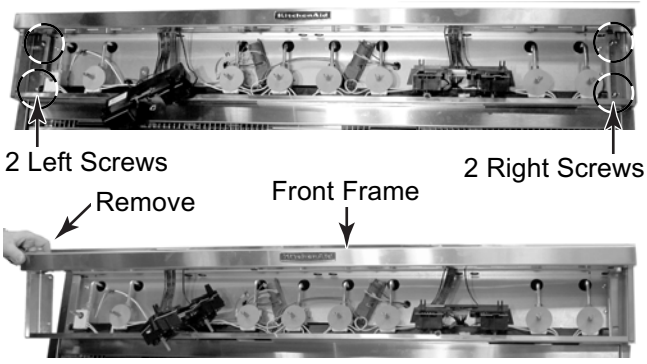
7. **To remove a clock:**

a) Remove the control panel from the unit (see step 3 on page 4-4 for the procedure).

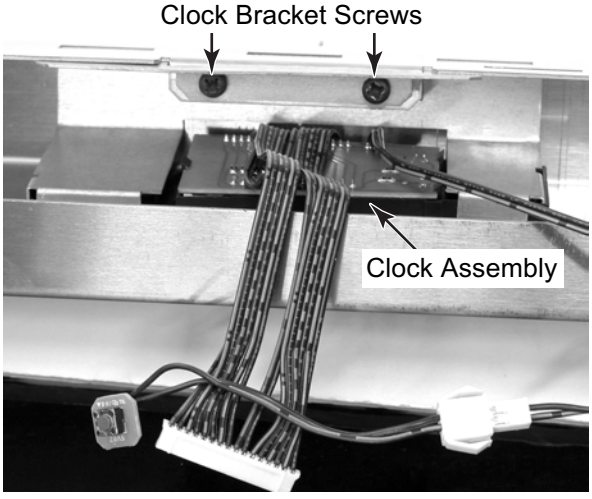
b) Disconnect the 12-wire quick disconnect from the thermostat & selector switch assembly.



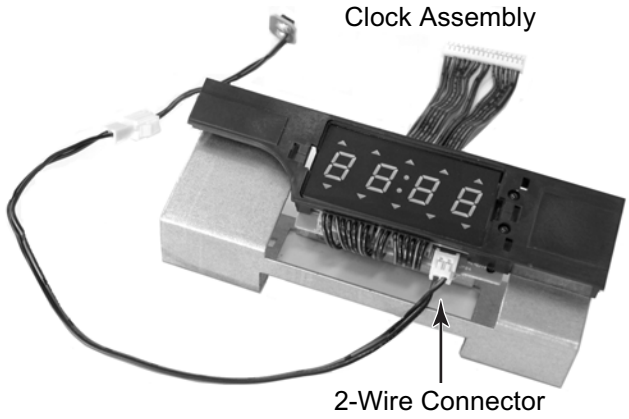
c) Remove the two left and two right screws from the front panel frame and remove the frame from the unit.



d) Remove the two screws from the clock assembly bracket and remove the assembly from the frame.



e) Disconnect the 2-wire connector from the clock board.

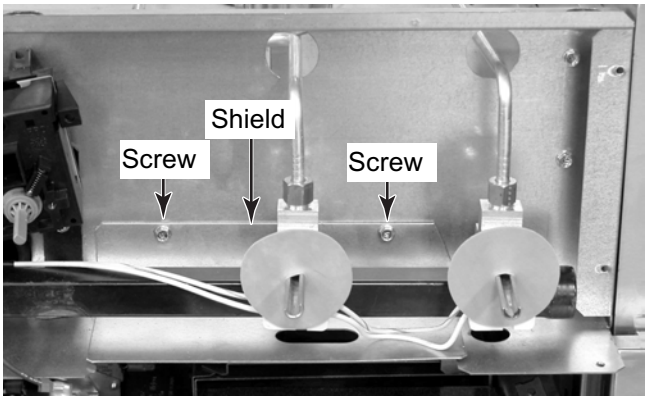


8. **To remove the left or right thermostat & selector switch assembly:**

a) Remove the control panel from the unit (see step 3 on page 4-4 for the procedure).

b) Remove the front panel frame (see step 7 for the procedure).

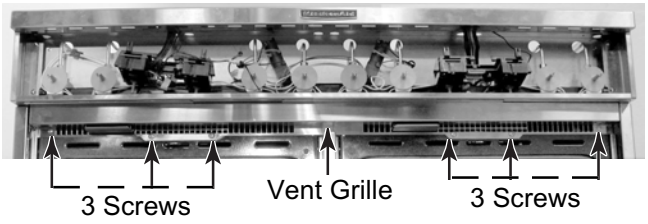
c) Remove the two hex-head screws from the left and right shields and remove the shields.



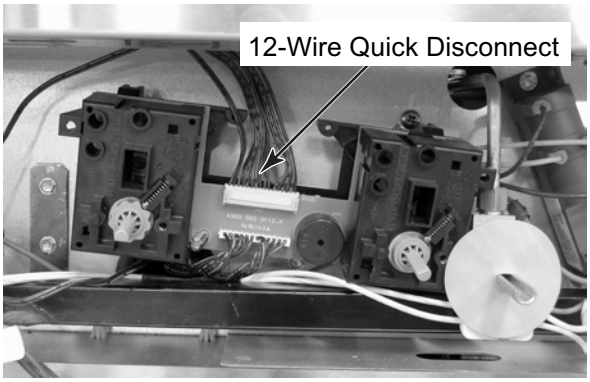
Continued on the next page.

d) Open both oven doors.

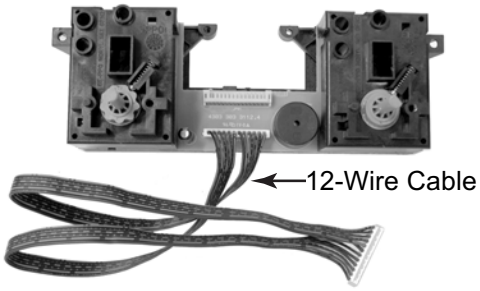
e) Remove the six screws from the vent grille and remove the grille.



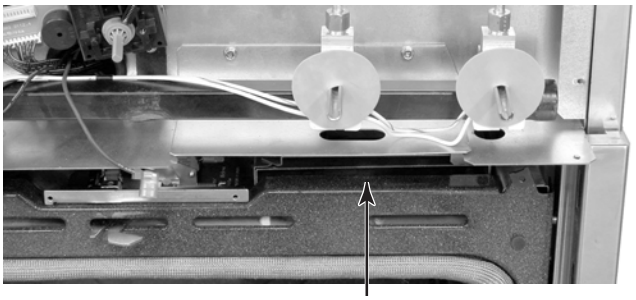
f) Disconnect the 12-wire quick disconnect from the thermostat & selector switch assembly



g) Remove the thermostat & selector switch assembly from the unit by pulling the 12-wire cable through the access holes in the chassis.



9. **To remove the left or right electronic control:**



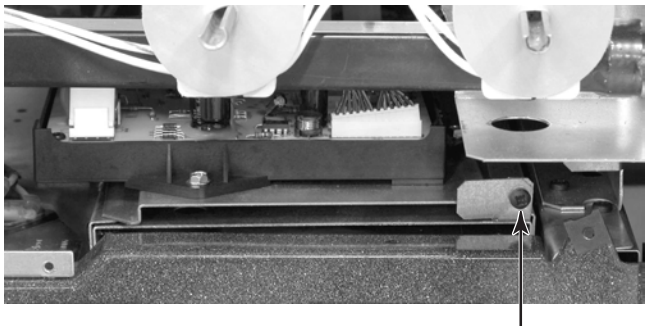
Right Electronic Control Location

a) Remove the control panel from the unit (see step 3 on page 4-4 for the procedure).

b) Remove the front panel frame (see step 7 on page 4-7 for the procedure).

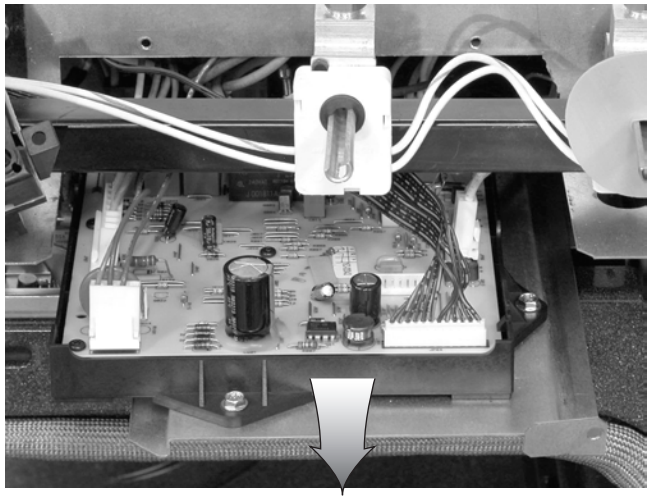
c) Remove the thermostat & selector switch assembly (see steps 8c through 8g on pages 4-7 and 4-8 for the procedure).

d) Remove the screw from the front of the electronic control and transformer platform for the electronic control.



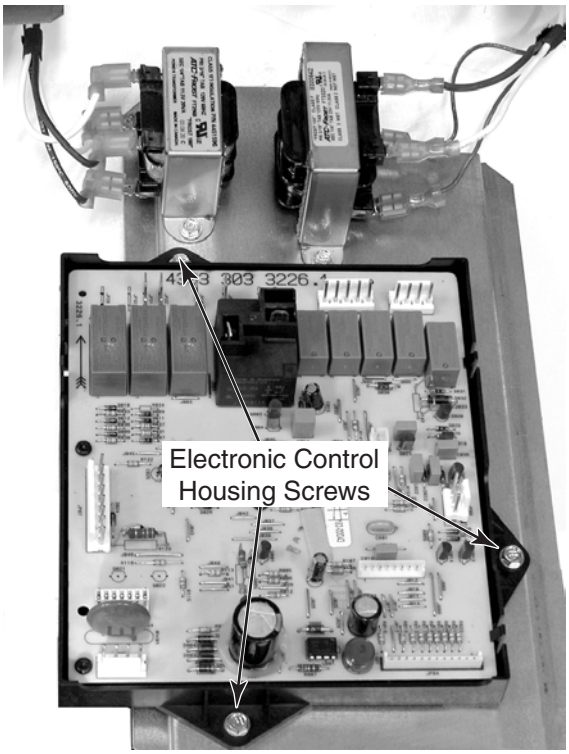
Platform Screw

e) Pull the electronic control and transformer platform forward and disconnect the wire connectors from the pins. **NOTE:** The board connector and pin callouts are shown on the next page.

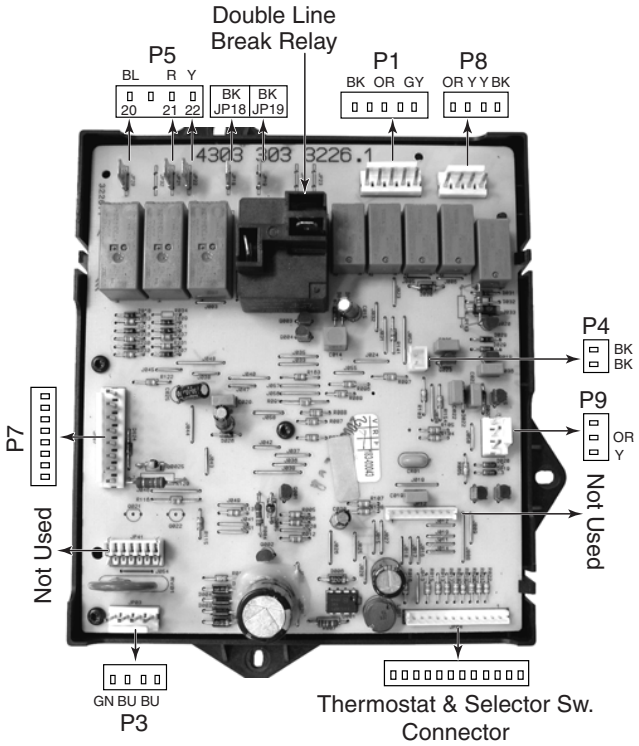


Pull Platform Forward

f) Pull the electronic control and transformer platform out of the unit, remove the three hex-head screws from the housing, and remove the housing and electronic control assembly.



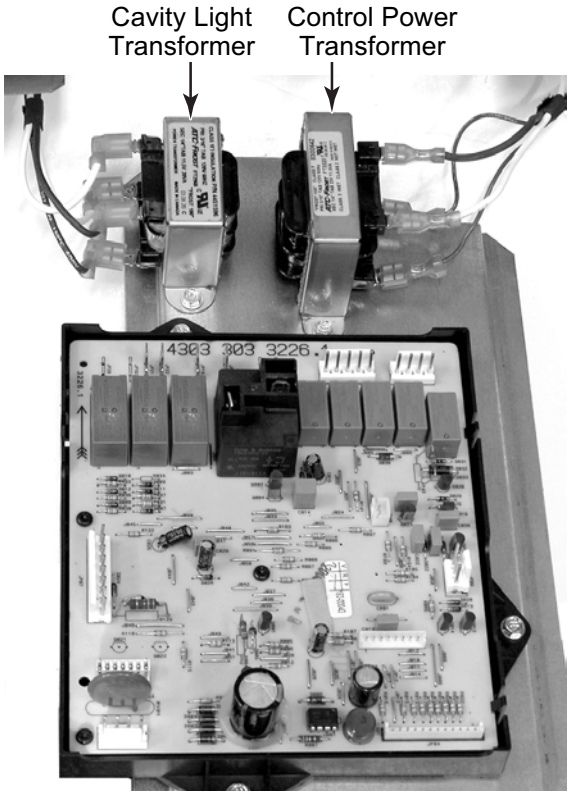
Electronic Control Connector & Pinouts



10. **To remove the left or right cavity light transformer or control power transformer**

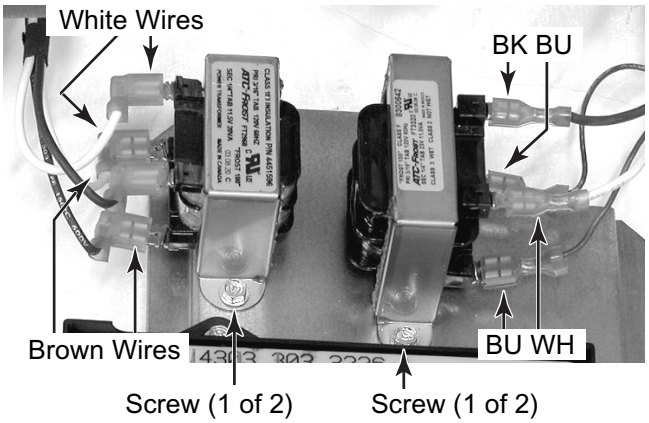
a) Remove the thermostat & selector switch assembly (see step 8 on pages 4-7 and 4-8 for the procedure).

b) Remove the electronic control and transformer platform from the unit (see step 9 on page 4-8 for the procedure).



c) Disconnect the wire connectors from the transformer you are servicing.

e) Remove the two hex-head screws from the transformer and remove it from the platform.



REMOVING AN OVEN DOOR LATCH ASSEMBLY & A CONTROL PANEL THERMAL FUSE

⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

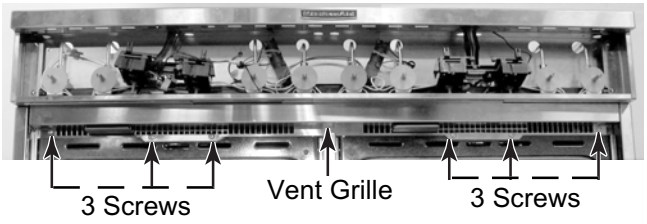
Fire Hazard

Shut off gas supply line valve before servicing.

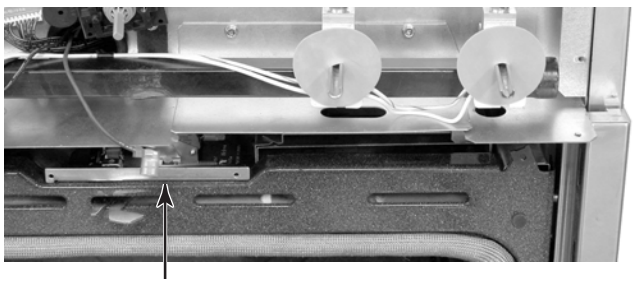
Check all gas line connections and replace all parts and panels before operating.

Failure to do so can result in explosion, fire or other injury.

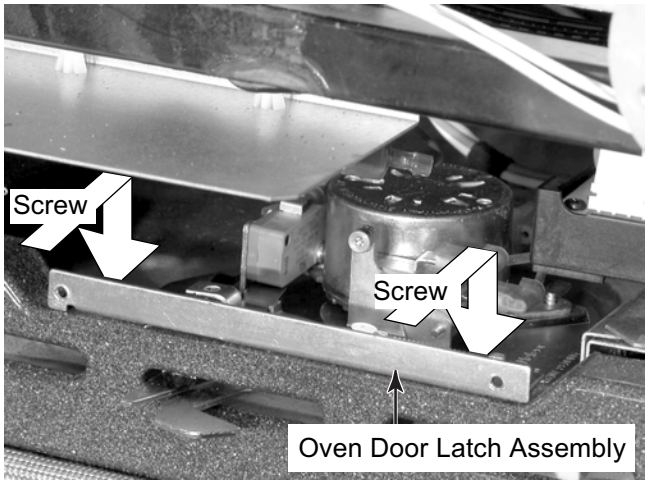
1. Turn off gas supply and disconnect power to the range.
2. Remove the control panel from the unit (see step 3 on page 4-4 for the procedure).
3. Remove the front panel frame (see step 7 on page 4-7 for the procedure).
4. Remove the six screws from the vent grille and remove the grille.



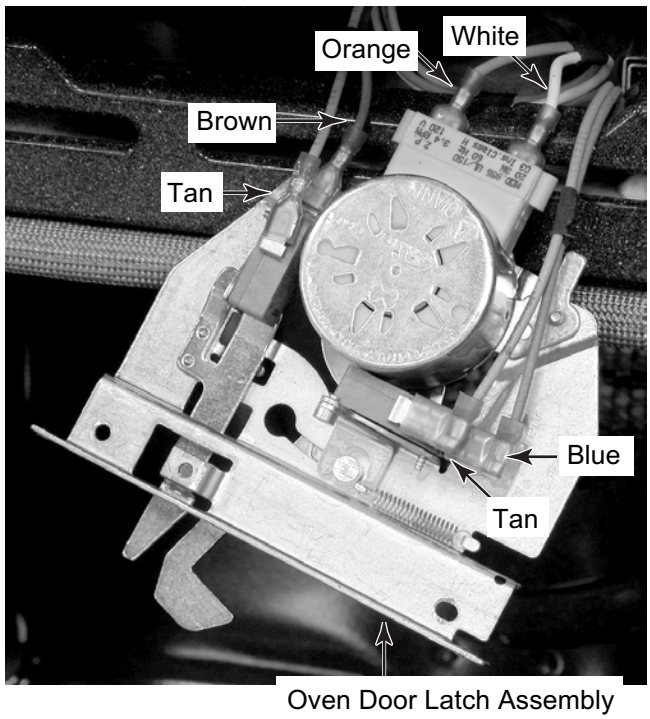
5. **To remove an oven door latch assembly:**



a) Use a 90° ratchet and remove the two screws from the oven door latch assembly.



b) Pull the oven door latch assembly out of the unit and disconnect the wires from the switches and motor.

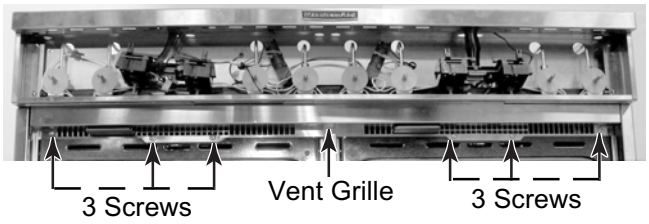


6. **To remove a control panel thermal fuse:**

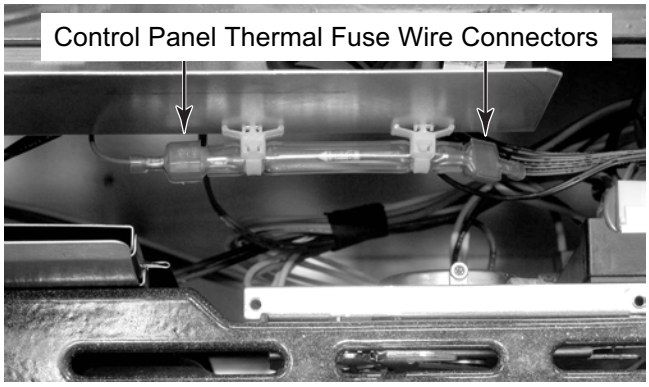
a) Remove the control panel from the unit (see step 3 on page 4-4 for the procedure).

b) Remove the front panel frame (see step 7 on page 4-7 for the procedure).

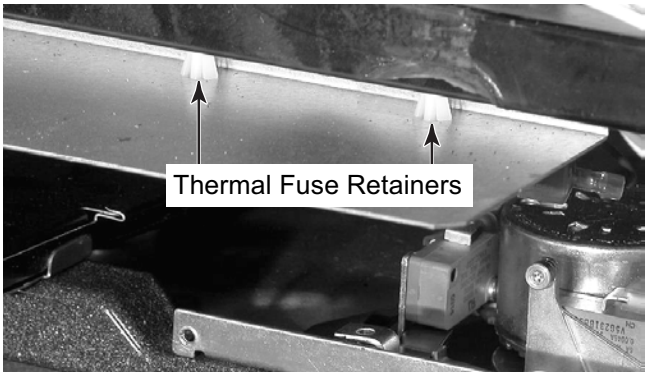
c) Remove the six screws from the vent grille and remove the grille.



d) Disconnect the two wires from the ends of the control panel thermal fuse.



e) Unclip the plastic thermal fuse retainers from the top of the bracket, and then cut the retainers from around the fuse.



REMOVING THE MAIN ELECTRONIC CONTROL

⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

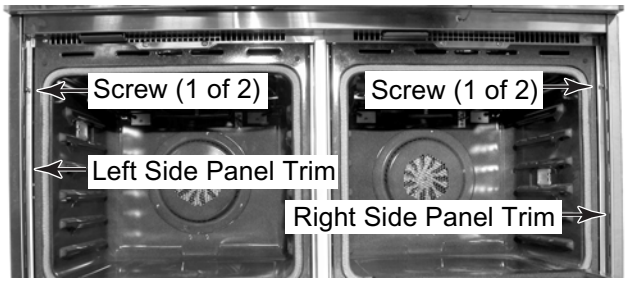
Fire Hazard

Shut off gas supply line valve before servicing.

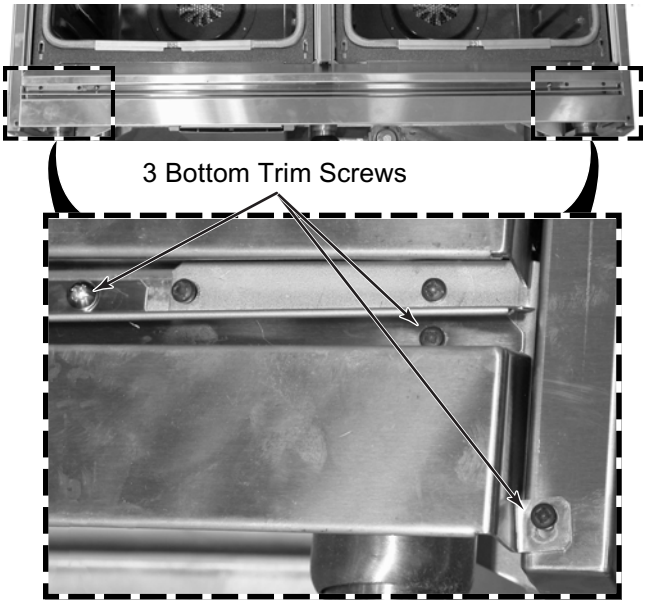
Check all gas line connections and replace all parts and panels before operating.

Failure to do so can result in explosion, fire or other injury.

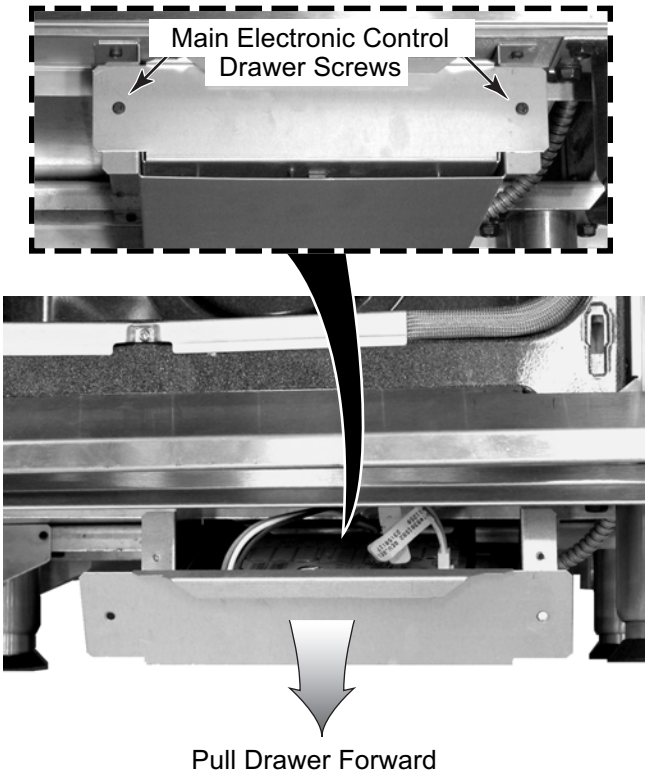
1. Turn off gas supply and disconnect power to the range.
2. Remove the two oven doors (see page 4-26 for the procedure).
3. Remove the two screws from the left and right front side panel trim pieces, then pull the trim forward, and remove it.



4. Remove the three screws from each end of the bottom trim and remove the trim.

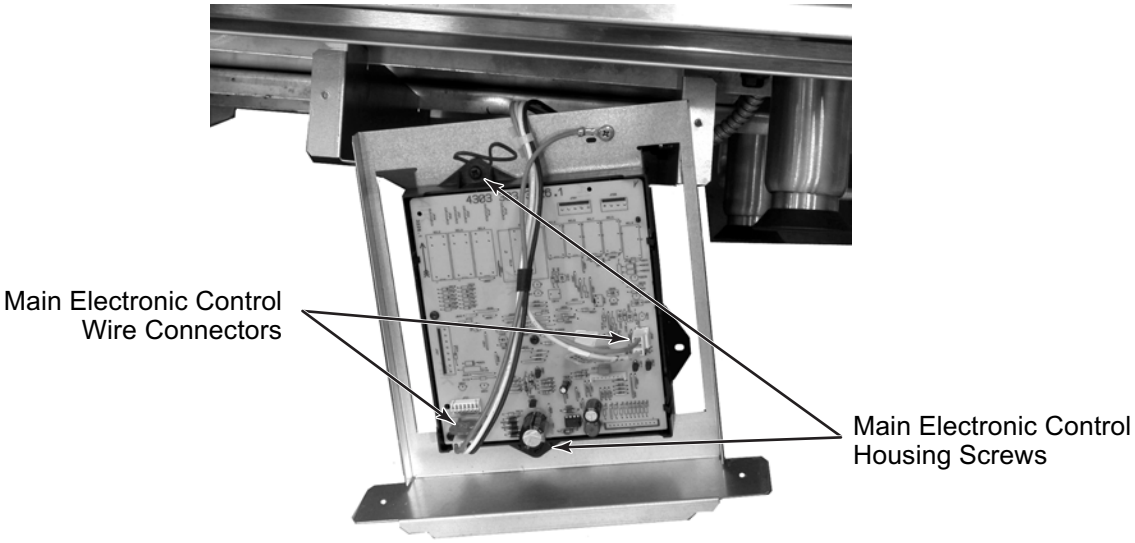


5. Remove the two screws from the front of the main electronic control drawer, located below the left side of the unit, and pull the drawer out.



6. Disconnect the wire connectors from the main electronic control.

7. Remove the screws from the main electronic control board holder and remove the control assembly from the drawer.



REMOVING A HALOGEN LAMP ASSEMBLY

⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

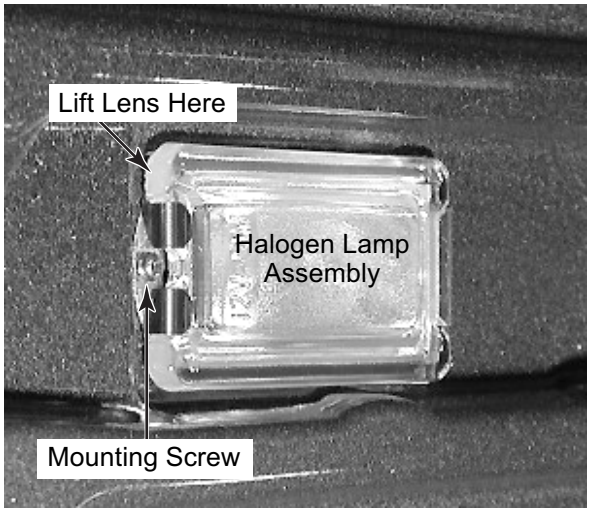
Fire Hazard

Shut off gas supply line valve before servicing.

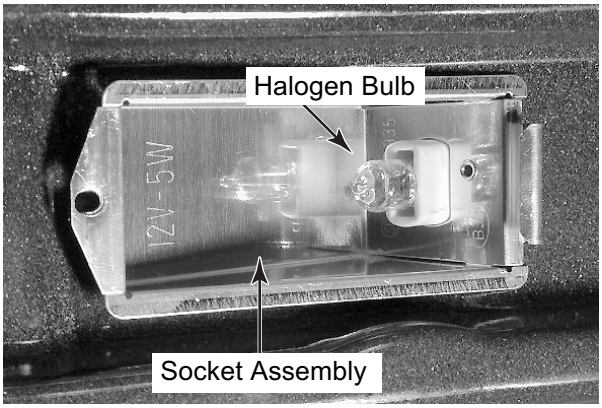
Check all gas line connections and replace all parts and panels before operating.

Failure to do so can result in explosion, fire or other injury.

1. Turn off gas supply and disconnect power to the range.
2. Remove the racks from inside the oven.
3. Remove the lens from the halogen lamp socket by lifting the end by the mounting screw and unsnapping it.
4. Remove the screw from the halogen lamp assembly.



5. Pull the halogen bulb out of the socket.



6. Pull the halogen socket assembly out of the oven liner and cut the wires near the socket terminals.

7. Cut the new halogen lamp socket wires to the proper length.
8. Remove 3/8″ of insulation from the cut wires on the wire harness and the halogen lamp socket. Splice the halogen lamp socket wires to the harness wires, and twist two wire nuts over the bare wire ends.

REMOVING A BROIL ELEMENT

⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

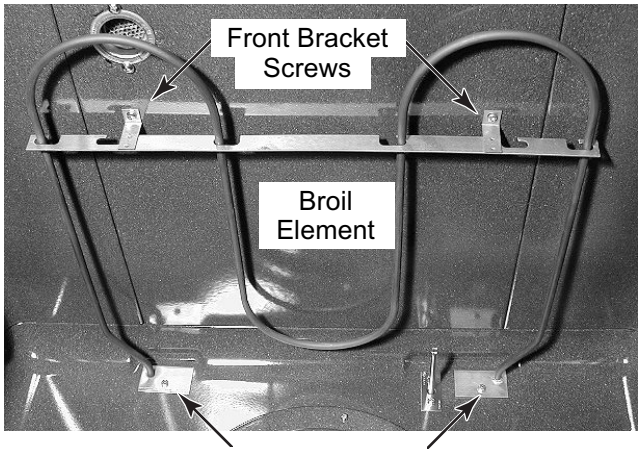
Fire Hazard

Shut off gas supply line valve before servicing.

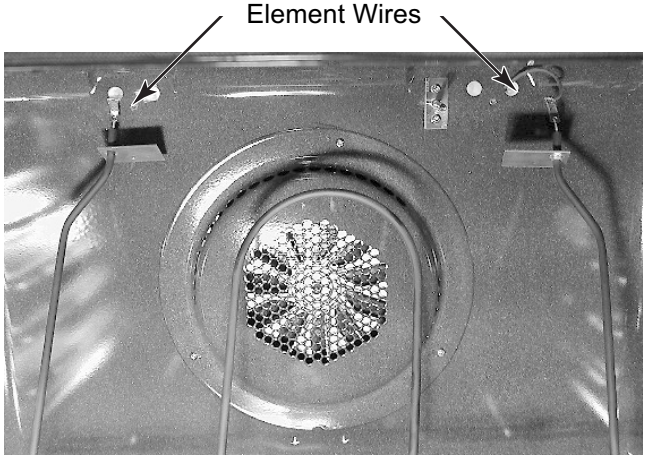
Check all gas line connections and replace all parts and panels before operating.

Failure to do so can result in explosion, fire or other injury.

1. Turn off gas supply and disconnect power to the range.
2. Remove the racks from inside the oven.
3. Remove the two front bracket screws and two rear bracket screws from the broil element.



4. Carefully pull the element forward so that the terminal connectors are through the oven liner holes, and disconnect the wires from the terminals.



REMOVING AN OVEN TEMPERATURE SENSOR

⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

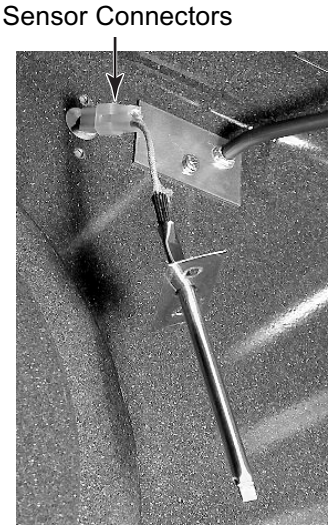
Fire Hazard

Shut off gas supply line valve before servicing.

Check all gas line connections and replace all parts and panels before operating.

Failure to do so can result in explosion, fire or other injury.

1. Turn off gas supply and disconnect power to the range.
2. Remove the racks from inside the oven.
3. Remove the two mounting screws from the oven temperature sensor and pull the connectors out of the mounting hole in the oven liner.
4. Disconnect the sensor connector from the main wire harness connector.



REMOVING A REAR PANEL

⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

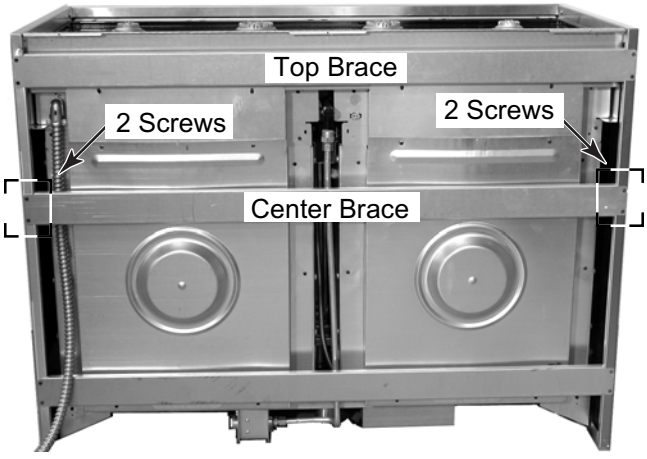
Fire Hazard

Shut off gas supply line valve before servicing.

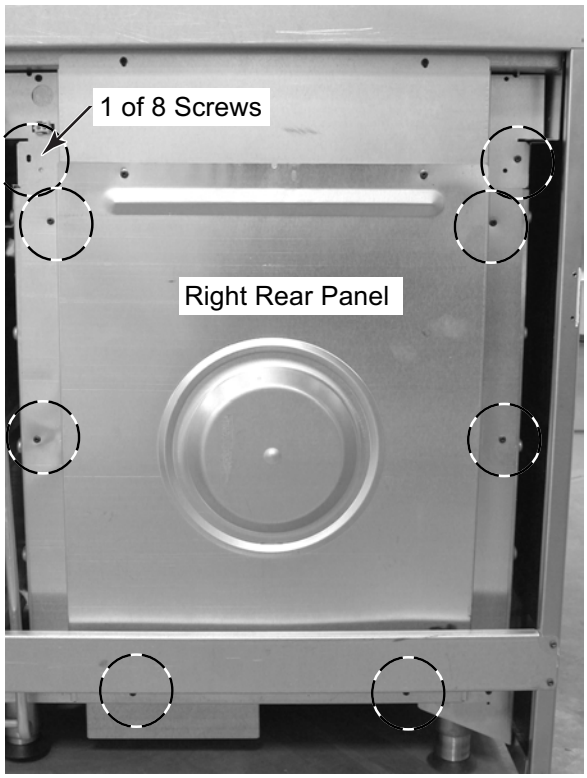
Check all gas line connections and replace all parts and panels before operating.

Failure to do so can result in explosion, fire or other injury.

1. Turn off gas supply and disconnect power to the range.
2. Pull the range out of its mounting location so that you can access the rear of the unit.
3. Remove the four screws from just the center brace and remove the brace.



4. Remove the eight screws from the rear panel and remove the panel.

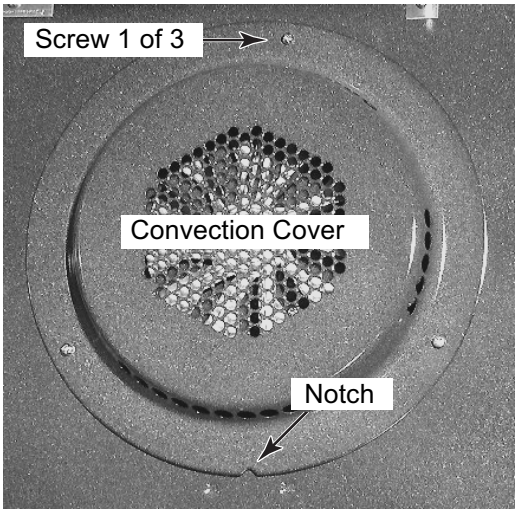


REMOVING A CONVECTION BAKE ELEMENT & FAN MOTOR ASSEMBLY

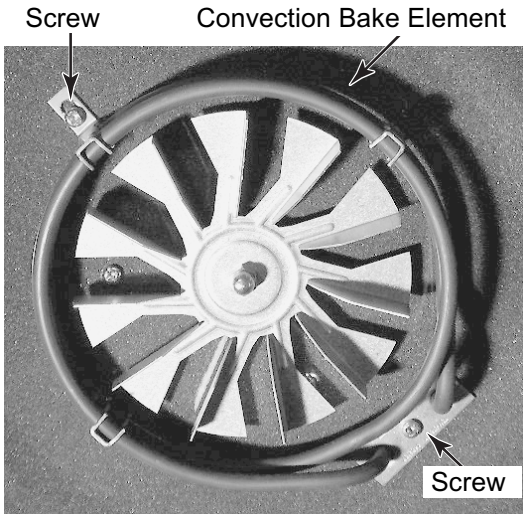
⚠WARNING

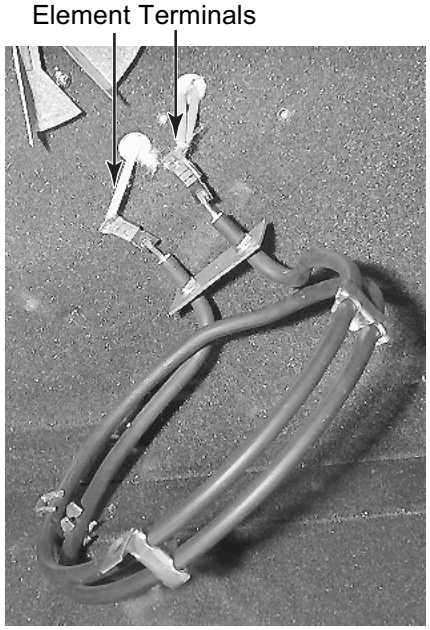
	**Electrical Shock Hazard** **Disconnect power before servicing.** **Replace all parts and panels before operating.** **Failure to do so can result in death or electrical shock.**
	**Fire Hazard** **Shut off gas supply line valve before servicing.** **Check all gas line connections and replace all parts and panels before operating.** **Failure to do so can result in explosion, fire or other injury.**

1. Turn off gas supply and disconnect power to the range.
2. Remove the oven door from the range (see page 4-26 for the procedure).
3. Remove the racks from inside the oven.
4. Remove the three screws from the convection cover and remove the cover from the rear of the oven liner. Note the location of the notch in the cover. Be sure to position the cover with the notch as shown when you reinstall it.



5. **To remove a convection bake element:**
   a) Remove the two screws from the convection bake element.
   b) Pull it forward so you can access the terminals.
   c) Disconnect the wires from the element terminals.

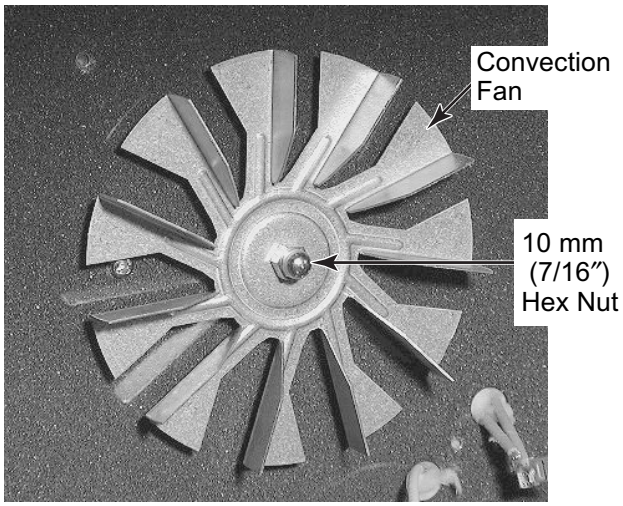




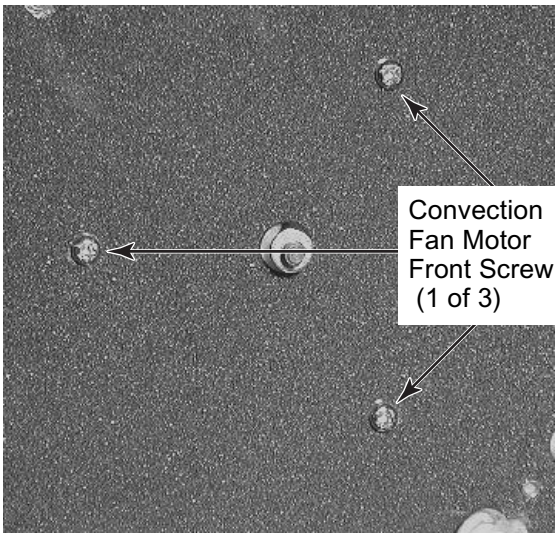
6. **To remove a convection fan motor:**

a) If not already done, remove the convection cover and the convection bake element from the rear of the oven liner (see page 4-18 for the procedure).

b) Use a 10 mm (7/16″) socket and remove the hex nut from the convection fan. **NOTE:** The nut has a left-rotation thread for removal.



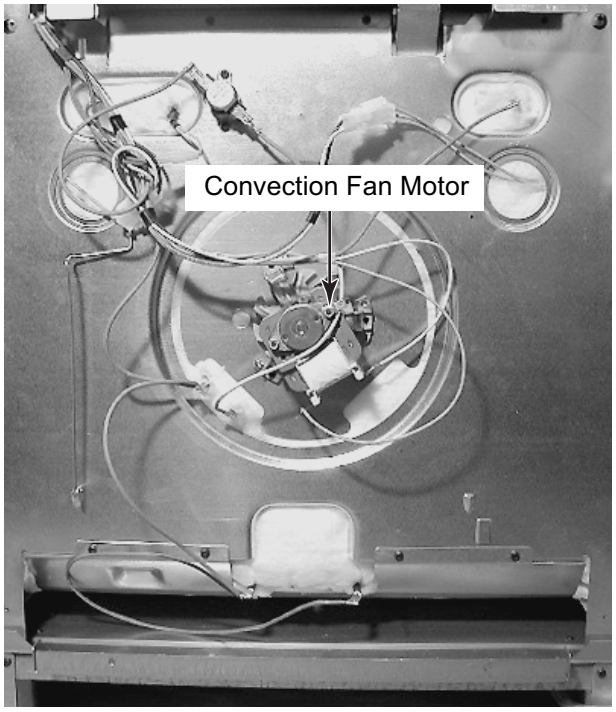
c) Remove the three front convection fan motor screws from the rear of the oven liner.



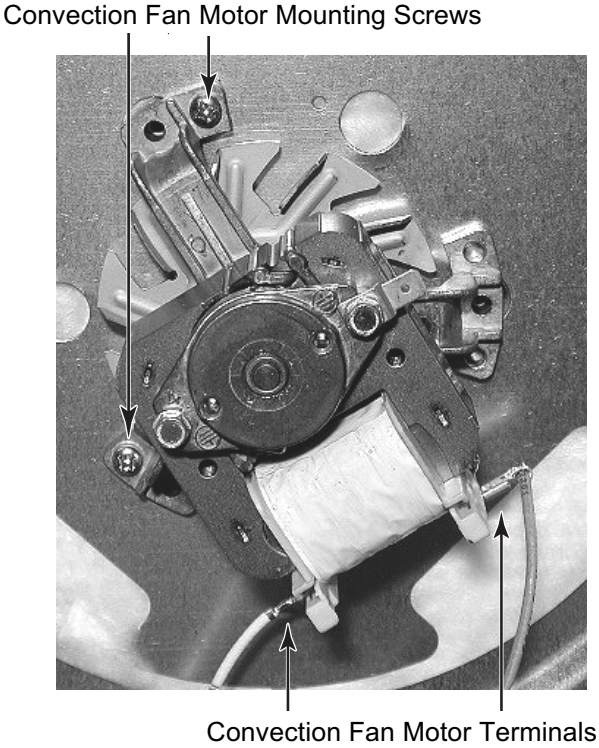
d) Pull the range out of its mounting location so that you can access the rear of the unit.

e) Remove the rear panel from the range (see page 4-17 for the procedure).

f) Remove the two convection fan motor mounting screws and remove the motor from the rear of the range.



BACK OF RANGE



REMOVING A BLOWER MOTOR ASSEMBLY

⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

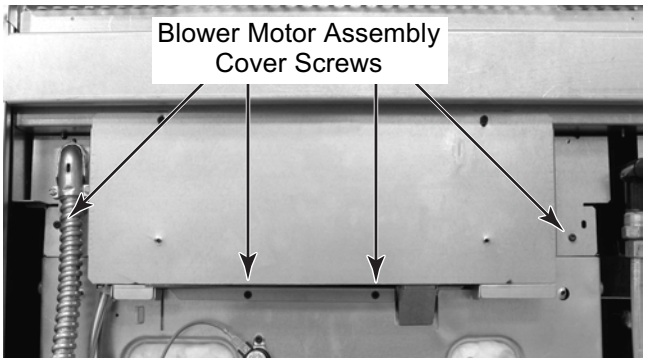
Fire Hazard

Shut off gas supply line valve before servicing.

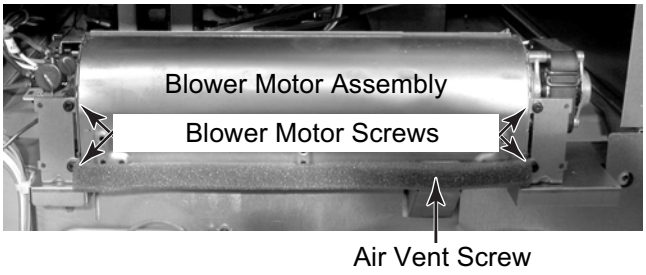
Check all gas line connections and replace all parts and panels before operating.

Failure to do so can result in explosion, fire or other injury.

1. Turn off gas supply and disconnect power to the range.
2. Pull the range out of its mounting location so that you can access the rear of the unit.
3. Remove the top and center braces and the rear panel for the blower motor assembly that you are servicing (see page 4-17 for the procedures).
4. Remove the four screws from the blower motor assembly cover and remove the cover from the range.



5. Remove the four mounting screws and the air vent screw from the blower motor assembly and remove the assembly from the range.



REMOVING THE SUPPRESSOR BOARD

⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

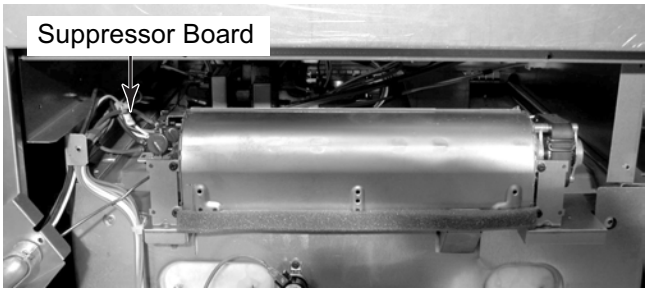
Fire Hazard

Shut off gas supply line valve before servicing.

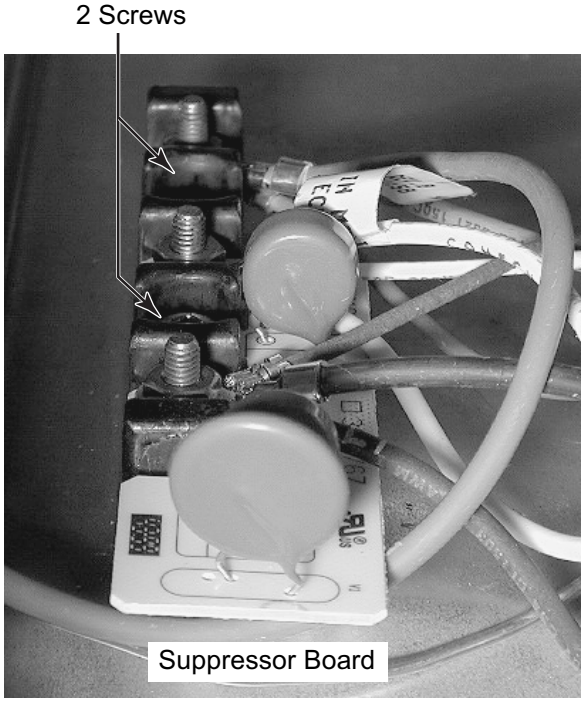
Check all gas line connections and replace all parts and panels before operating.

Failure to do so can result in explosion, fire or other injury.

1. Turn off gas supply and disconnect power to the range.
2. Pull the range out of its mounting location so that you can access the rear of the unit.
3. Remove the top and center braces from the back of the range (see page 4-17 for the procedure).
4. Remove the blower motor assembly cover (see page 4-20 for the procedure).



5. Remove the two screws from the suppressor board.
6. Disconnect the wires from the terminals and remove the board from the range.



REMOVING AN OVEN SHUTDOWN THERMAL FUSE

⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

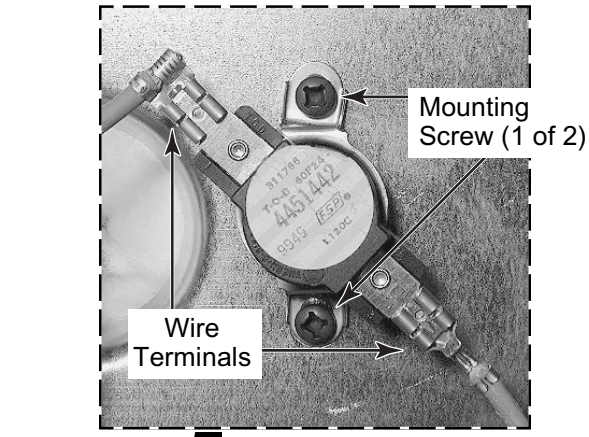
Fire Hazard

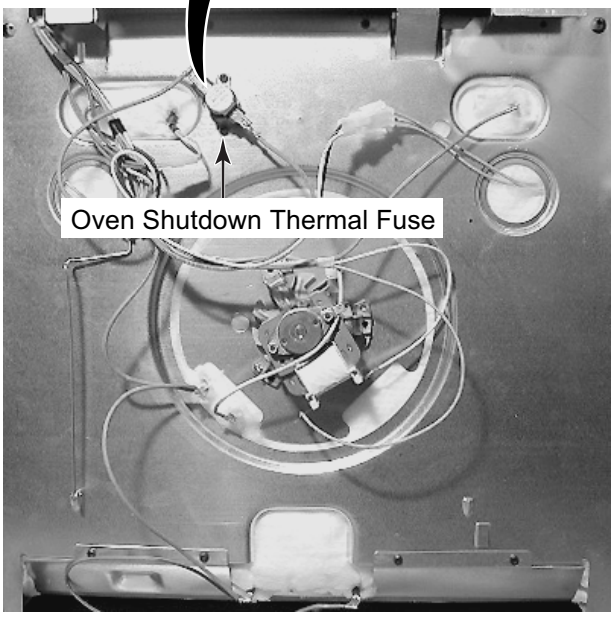
Shut off gas supply line valve before servicing.

Check all gas line connections and replace all parts and panels before operating.

Failure to do so can result in explosion, fire or other injury.

1. Turn off gas supply and disconnect power to the range.
2. Pull the range out of its mounting location so that you can access the rear of the unit.
3. Remove the rear panel for the oven shut-down thermal fuse that you are servicing (see page 4-17 for the procedure).
4. Remove the two screws from the oven shutdown thermal fuse and remove the fuse from the rear of the range.
5. Disconnect the wires from the thermal fuse terminals.





REMOVING A HIDDEN BAKE ELEMENT

⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

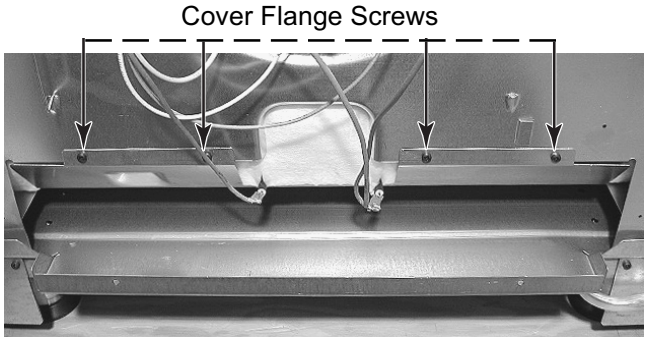
Fire Hazard

Shut off gas supply line valve before servicing.

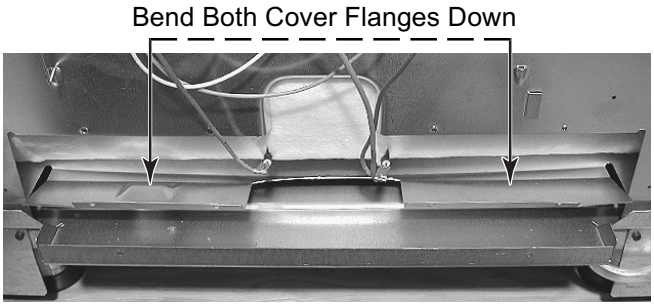
Check all gas line connections and replace all parts and panels before operating.

Failure to do so can result in explosion, fire or other injury.

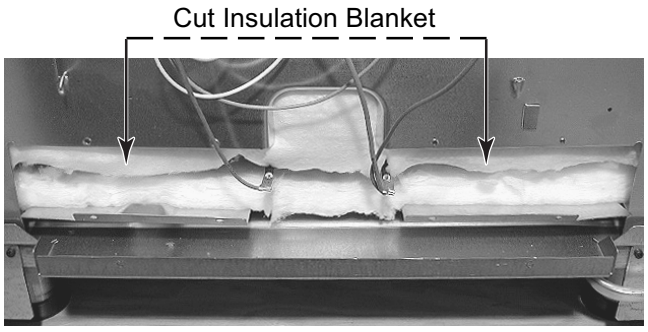
1. Turn off gas supply and disconnect power to the range.
2. Pull the range out of its mounting location so that you can access the rear of the unit.
3. Remove the top and bottom braces and the rear panel for the hidden bake element that you are servicing (see page 4-17 for the procedures).
4. Remove the four screws from the hidden bake element cover flanges.



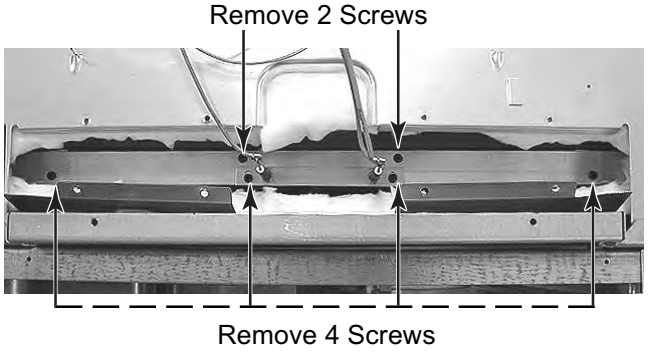
5. Bend the cover flanges down as far as they will go.



6. Use a pen knife or a single-edged razor blade and cut the insulation blanket, as shown. Be sure to separate the insulation blanket as cleanly as possible.

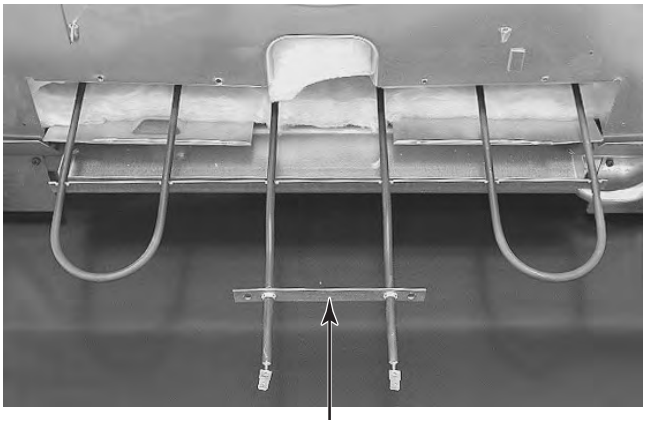


7. Carefully move the upper and lower sections of the insulation blanket out of the way so that you can access the hidden bake element and its mounting bracket.
8. Remove the two hidden bake element bracket screws and the four mounting bracket screws.



Continued on the next page.

9. Carefully pull the hidden bake element and its mounting bracket out of the range.



Pull Out Hidden Bake Element

REMOVING THE GAS DISTRIBUTION VALVE

⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

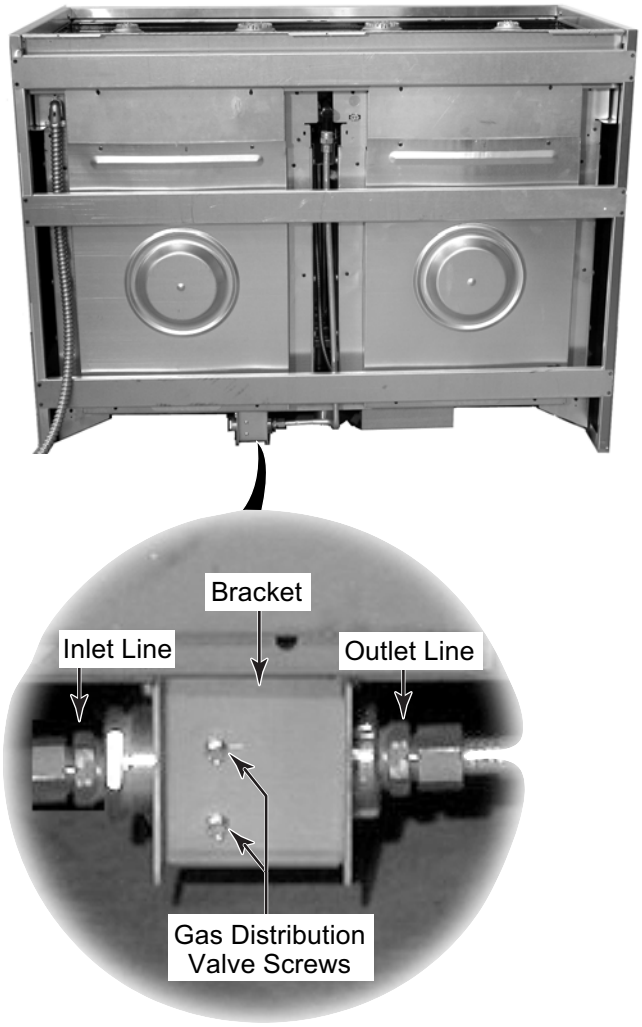
Fire Hazard

Shut off gas supply line valve before servicing.

Check all gas line connections and replace all parts and panels before operating.

Failure to do so can result in explosion, fire or other injury.

1. Turn off gas supply and disconnect power to the range.
2. Pull the range out of its mounting location so that you can access the rear of the unit.
3. Remove the gas inlet and outlet lines from the gas distribution valve.
4. Remove the two screws that mount the gas distribution valve to the mounting bracket and remove the valve.

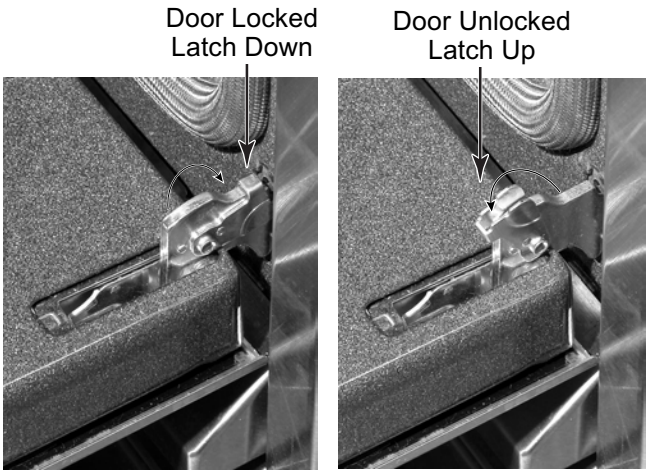


REMOVING AN OVEN DOOR

CAUTION: Do not lift the oven door by its handle.

To remove an oven door:

1. Open the oven door to its fully open position.
2. Rotate the door locking mechanism to the unlocked (up) position.



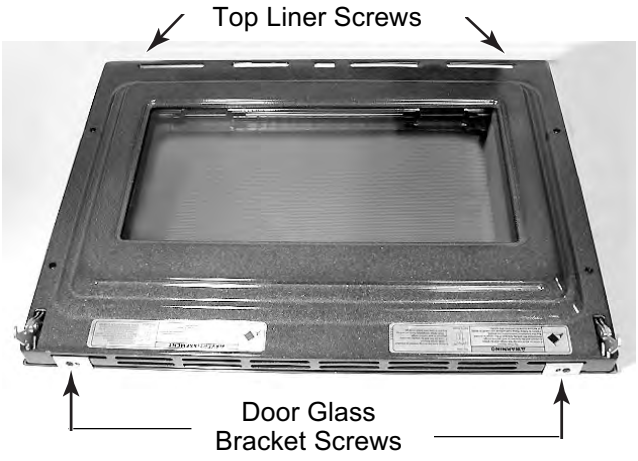
3. Close the oven door to its first stop.
4. Grasp the sides of the door and lift the door until it stops, then pull the hinge hangers out of the slots.

To reinstall an oven door:

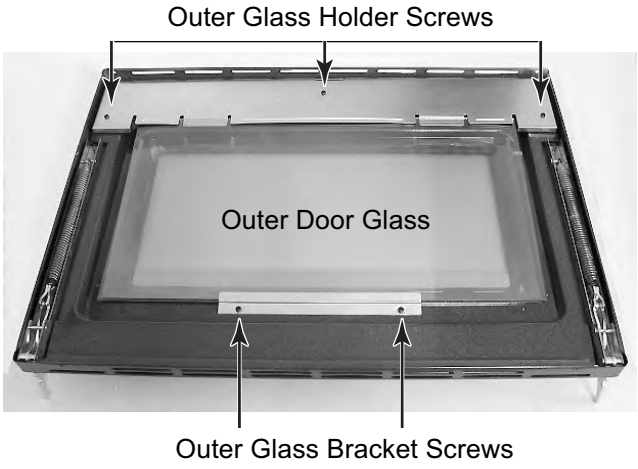
1. Grasp the sides of the door and tilt it back at a slight angle, then insert the hinge hangers into the hinge slots as far as they will go.
2. Rotate the top of the door towards the range so the hinge hangers fit onto the support pins.
3. Close the oven door and make sure that the hinge hangers are fully seated on the support pins. If they are not seated properly, the door will not close tightly and may be off-center. To seat the hinge hangers, open the door slightly, and push in on the bottom until the hangers are fully seated.
4. Open the oven door to its fully open position and rotate the mechanism down to the “locked” position.
5. Close the oven door.

REMOVING THE OVEN DOOR GLASS, HINGES, & HANDLE

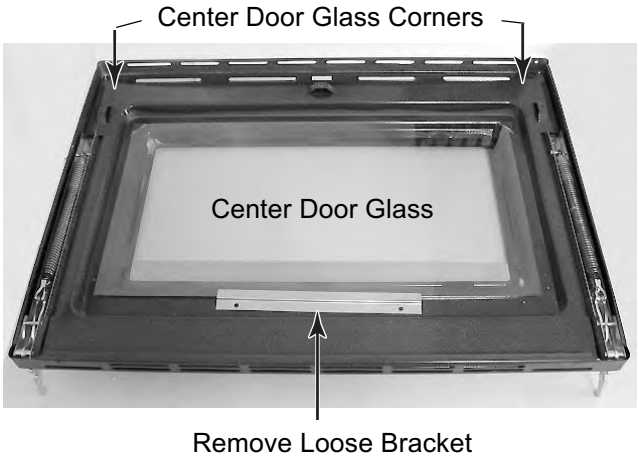
1. Remove the oven door from the range (see page 4-26 for the procedure).
2. Place the oven door on a padded work surface with the front decorative glass facing down.
3. Remove the two top door liner screws and the two door glass bracket screws, and lift the liner assembly off the decorative door glass and handle.



4. **To remove the outer door glass:**
   a) Remove the three outer glass holder screws and two outer glass bracket screws from the door liner.
   b) Lift the outer glass with the glass holder, and the bracket off the door liner.



5. **To remove the center door glass,** remove the bottom bracket, (it is loose), and slide the two top corners of the glass out of the door liner slots.



6. **To remove the hinges and the inner door glass:**

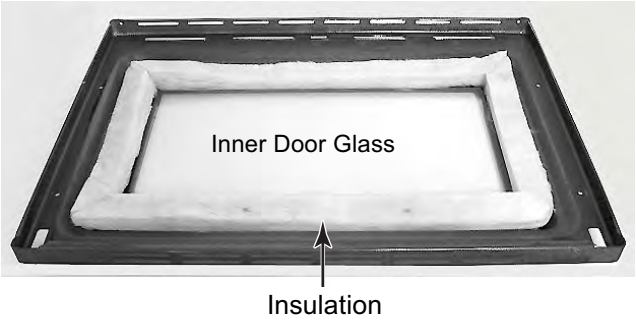
NOTE: You will have to remove both hinges to remove the inner door glass from the oven door liner.

   a) Lift either side of the door liner, remove the two door hinge screws, and remove the hinge.

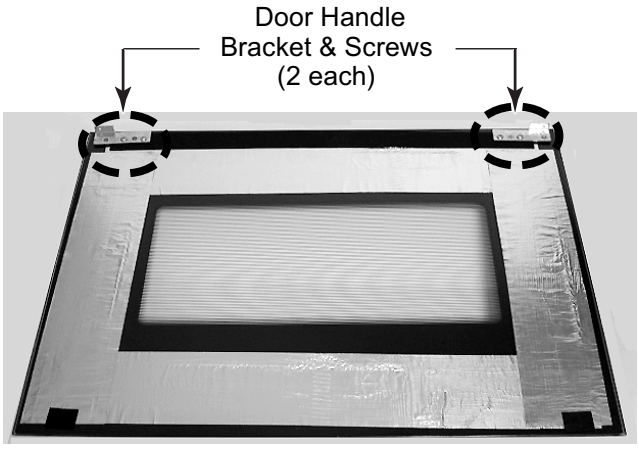
   b) Lift the other side of the door liner, remove the two screws for the other hinge, and remove the hinge.
   c) Lift the inner door glass cover off the liner.

Continued on the next page.

d) Remove the insulation and the inner door glass.

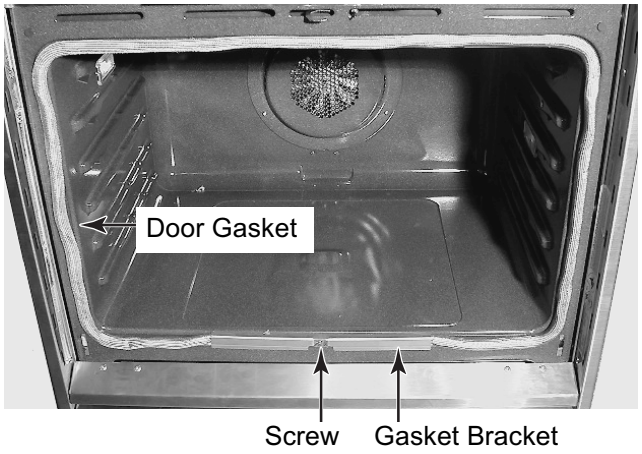


7. **To remove the door handle,** remove the two door handle screws from the bracket.

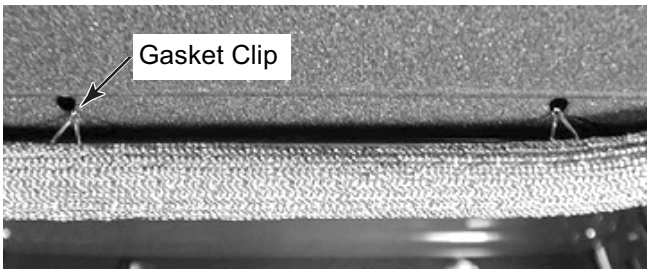


REMOVING THE OVEN DOOR GASKET

1. Open the oven door to its fully open position.
2. Remove the screw from the door gasket bracket and remove the bracket from the range.



3. Pull the ends of the gasket out of the liner holes.



REASSEMBLY NOTE: When you install the new gasket, make sure that all of the clips are seated in their liner holes, and that the ends of the gasket are pushed fully into their holes. Use the pointed end of a pencil to push the gasket ends into the holes.

— NOTES —

COMPONENT TESTING

Before testing any of the components, perform the following checks:

- The most common cause for control failure is corrosion on connectors. Therefore, disconnecting and reconnecting wires will be necessary throughout test procedures.
- All tests/checks should be made with a VOM or DVM having a sensitivity of 20,000 ohms-per-volt DC, or greater.
- Check all connections before replacing components, looking for broken or loose wires, failed terminals, or wires not pressed into connectors far enough.
- Resistance checks must be made with power cord unplugged from outlet, and with wiring harness or connectors disconnected.

⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

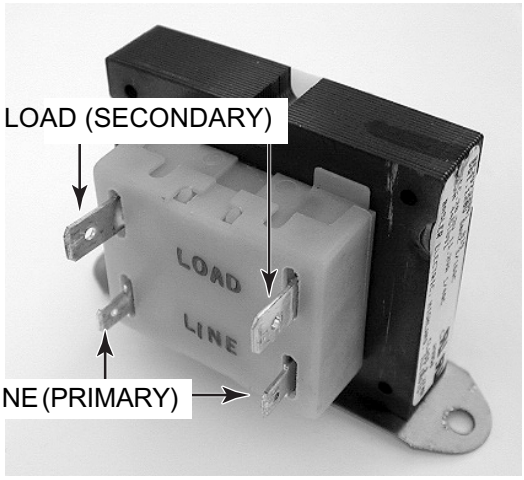
Replace all parts and panels before operating.

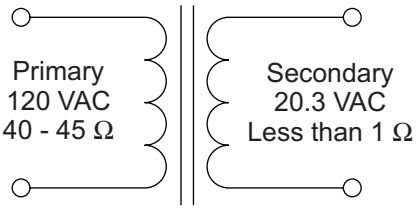
Failure to do so can result in death or electrical shock.

CONTROL POWER & CAVITY LIGHT TRANSFORMERS

Refer to page 4-9 for the procedure for servicing the control power and cavity light transformers.

1. Turn off gas supply and disconnect power to the range.
2. Disconnect the wires from the transformer's terminals.
3. Set the ohmmeter to the R X 1 scale.
4. Touch the ohmmeter test leads to the transformer LINE (primary) terminals. The meter should indicate 40 to 45 Ω.
5. Touch the ohmmeter test leads to the transformer LOAD (secondary) terminals. The meter should indicate less than 1 Ω.





⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

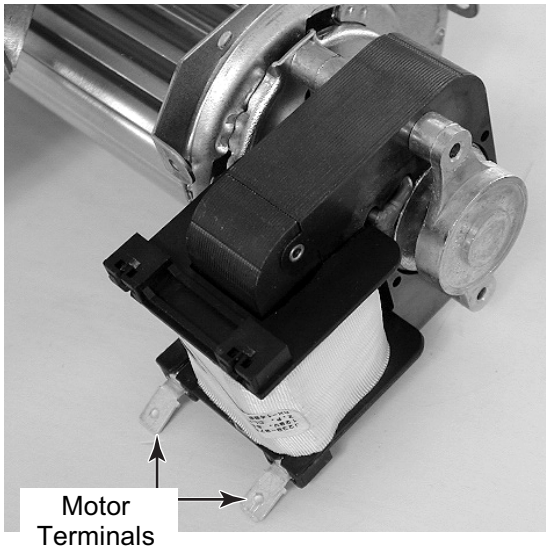
Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

BLOWER MOTOR

Refer to page 4-20 for the procedure for servicing the blower motor.

1. Turn off gas supply and disconnect power to the range.
2. Disconnect the wires from the blower motor's terminals.
3. Set the ohmmeter to the R X 1 scale.
4. Touch the ohmmeter test leads to the motor terminals. The meter should indicate 14 to 18 Ω.



CONVECTION BAKE ELEMENT

Refer to page 4-18 for the procedure for servicing the convection bake element.

1. Turn off gas supply and disconnect power to the range.
2. Disconnect the wires from the convection bake element terminals.
3. Set the ohmmeter to the R x 1 scale.
4. Touch the ohmmeter test leads to the convection bake element terminals. The meter should indicate 33 to 37 Ω.

⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

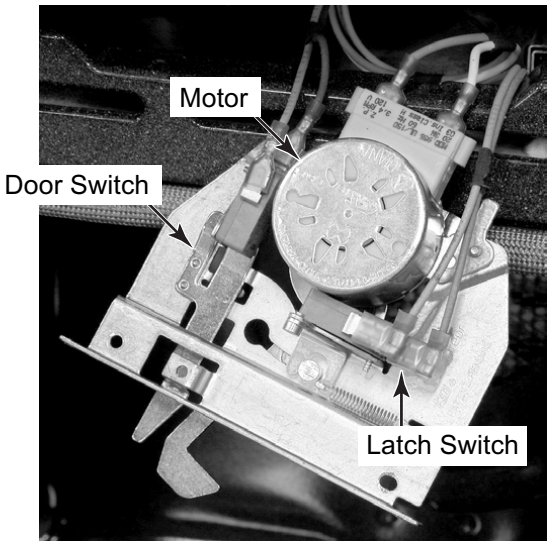
Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

OVEN DOOR LATCH ASSEMBLY

Refer to page 4-10 for the procedure for servicing the oven door latch assembly.

1. Turn off gas supply and disconnect power to the range.
2. Disconnect a wire from each of the two switches and from the motor.
3. Set the ohmmeter to the R x 1 scale.
4. **To test the door switch,** touch the ohmmeter test leads to the switch terminals. The meter should indicate a closed circuit (0 Ω) with the door latch in the “unlocked” position, and an open circuit (infinity ∞) with the door latch in the “locked” position.
5. **To test the latch switch,** touch the ohmmeter test leads to the switch terminals. The meter should indicate a closed circuit (0 Ω) with the door latch in the “locked” position, and an open circuit (infinity ∞) with the door latch in the “unlocked” position.
6. **To test the motor:**
   a) Set the ohmmeter to the R x 100 scale.
   b) Touch the ohmmeter test leads to the motor terminals. The meter should indicate 2450 Ω.



⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

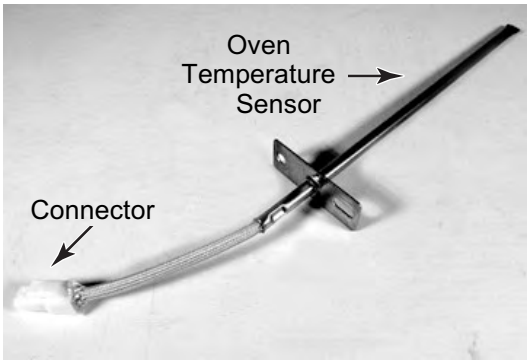
Failure to do so can result in death or electrical shock.

OVEN TEMPERATURE SENSOR

Refer to page 4-16 for the procedure for servicing the oven temperature sensor.

1. Turn off gas supply and disconnect power to the range.
2. Disconnect the oven temperature sensor connector from the wiring harness.
3. Set the ohmmeter to the R x 100 scale.
4. Touch the ohmmeter test leads to the oven temperature sensor connector pins. Depending on the oven temperature, you should obtain the corresponding resistance reading, as shown in the following chart:

Temperature (˚F)	Resistance (ohms)
32	1000
75	1100
250	1450
350	1650
450	1860
550	2050
650	2230
900	2700



Resistance Test (At The Electronic Control)

NOTE: To test the oven temperature sensor at the electronic control, perform the following steps.

1. Disconnect the P7-4 (violet) and the P7-5 (violet) wire connectors from the electronic control.
2. Set the ohmmeter to the R x 100 scale.
3. Touch the ohmmeter test leads to the P7-4 (violet) and the P7-5 (violet) wire connectors. The meter should indicate approximately 1080 Ω at 70˚F (21˚C).

⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

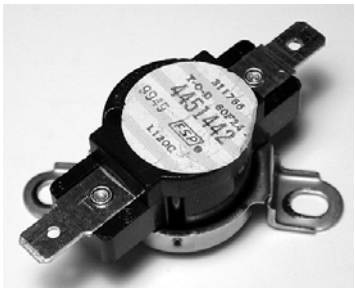
Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

OVEN SHUTDOWN THERMAL FUSE

Refer to page 4-22 for the procedure for servicing the oven shutdown thermal fuse.

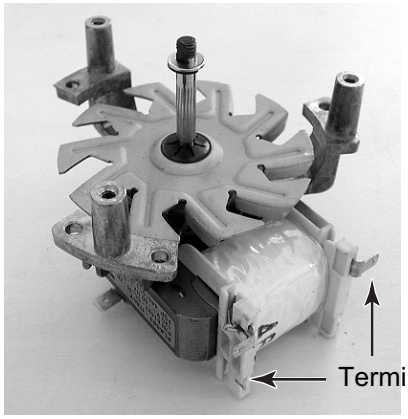
1. Turn off gas supply and disconnect power to the range.
2. Disconnect the wires from the oven shutdown thermal fuse terminals.
3. Set the ohmmeter to the R x 1 scale.
4. Touch the ohmmeter test leads to the oven shutdown thermal fuse terminals. The meter should indicate a closed circuit (0 Ω).



CONVECTION FAN MOTOR

Refer to page 4-18 for the procedure for servicing the convection fan motor.

1. Turn off gas supply and disconnect power to the range.
2. Disconnect the wires from the convection fan motor terminals.
3. Set the ohmmeter to the R x 1 scale.
4. Touch the ohmmeter test leads to the convection fan motor terminals. The meter should indicate 8 to 12 Ω.



⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

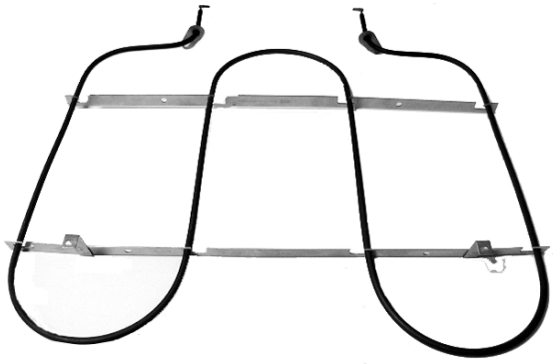
Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

BROIL ELEMENT

Refer to page 4-15 for the procedure for servicing a broil element.

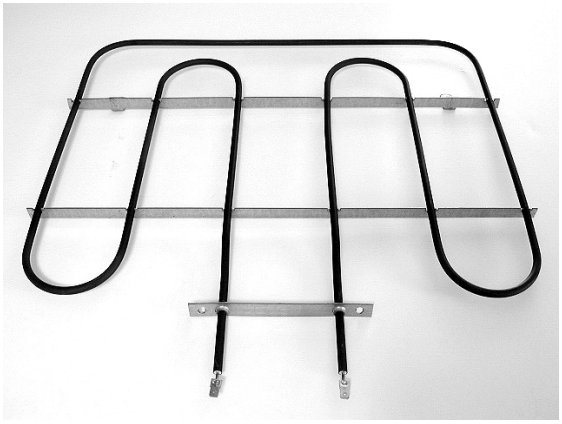
1. Turn off gas supply and disconnect power to the range.
2. Disconnect the wires from the broil element terminals.
3. Set the ohmmeter to the R x 1 scale.
4. Touch the ohmmeter test leads to the broil element terminals. The meter should indicate 17 to 20 Ω.



HIDDEN BAKE ELEMENT

Refer to page 4-23 for the procedure for servicing a hidden bake element.

1. Turn off gas supply and disconnect power to the range.
2. Disconnect the wires from the hidden bake element terminals.
3. Set the ohmmeter to the R x 1 scale.
4. Touch the ohmmeter test leads to the hidden bake element terminals. The meter should indicate 25 to 30 Ω.



⚠WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

IGNITION SWITCHES

Refer to page 4-5 for the procedure for servicing the ignition switches.

NOTE: The ignition switches will be serviced as a complete assembly. If a switch is defective, the complete assembly must be replaced.

1. Turn off gas supply and disconnect power to the range.
2. Locate the 2 white-blue ignition switch wires on the spark module and disconnect the connector from the terminal.
3. Locate the white wire coming from the ignition switches and disconnect it from the main harness.
4. Set the ohmmeter to the R x 1 scale.
5. Touch the ohmmeter test leads to the white and white-blue wire connectors. With all of the switches in the Off position, the meter should indicate an open circuit (infinite ∞). When a switch is turned to the LITE position, the meter should indicate a closed circuit (0 Ω).

2 Wht/Blu Ignition Switch Wires
On Spark Module Terminals

— NOTES —

DIAGNOSIS & TROUBLESHOOTING

DIAGNOSIS

- All diagnoses of this range must begin with a normal check of the line voltage, blown fuses, and failed components.
- All units that have failed during the first few days of use should be checked for loose connections, or miswiring.
- All checks should be made with a meter having a sensitivity of 20,000 ohms-per-volt, or greater.

FAILURE/ERROR DISPLAY CODES

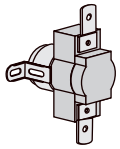
FAULT CODE	CODE EXPLANATION	RECOMMENDED REPAIR PROCEDURE
F01	Temperature sensor opened	1. Unplug range or disconnect power. 2. Check sensor connection. 3. Measure sensor resistance (1080 at 70°F[21°C]. Add 2 per 1°F[.55°C].) 4. If resistance is not valid, replace sensor. 5. If sensor resistance and connections are good, check for pinched sensor wires from the control to the sensor. 6. If sensor resistance and connections are good, then check for welded-closed relays on the control.
F02	Welded element relays	1. Unplug range or disconnect power. 2. With the control powered down, check continuity across P4-1 or P4-2 (both are L1) and the following connections: P5-1 for Broil element P5-3 for Bake element P5-4 for Convection element
F04	Communication error	Unplug range or disconnect power. • If both displays show a failure: - Check main control harness. - Check LS and RS connectors. - Replace main control. - Check P9 connector on right control. - Replace right control. - Check P9 connector on left control. - Replace left control. • If only right display shows failure: - Check main control harness. - Check RS connector. - Check P9 connector on right control. - Replace right control. • If only left display shows failure: - Check main control harness. - Check LS connector. - Check P9 connector on left control. - Replace left control.
F05	Door or latch problems	1. Unplug range or disconnect power. 2. Check the Latch Assembly: - Check latch arm pivot joint, arm/motor connection, plunger and plunger spring. 3. Check the Latch Motor: - Check for firm electrical connections. - Disconnect the two wires from the motor and measure the resistance of the motor. The resistance should be approximately 2450. If the motor is open or shorted, it should be replaced. 4. Check the Latch Switch: - Disconnect it and use a continuity tester: Door latched = switch closed, continuity should read 0 Ω. Door unlatched = switch open, continuity should read infinite. 5. Check Door Open/Closed Switches: - Disconnect it and use a continuity tester: Door open = switch open, continuity should read infinite. Door closed = switch closed, continuity should read 0 Ω. 6. Check power and element connections.
F06	Electronic control malfunction	1. Unplug range or disconnect power. 2. Replace control.

CONTROL PANEL TESTS

COMPONENTS	FRONT/REAR SERVICEABLE	CHECK POINTS	RESULTS
Door Switch	Front	P7-1 (BRN) to P7-3 (TAN)	Door Open = Open Circuit Door Closed = Closed Circuit
Door Lock Motor (with Door Closed)	Front	P8-4 (ORG) to Neutral (WH) With the Oven Door Closed	2450 Ω @ 21°C (70°F)
Oven Temperature Sensor	Front	P7-4 (V) to P7-5 (V)	1080 Ω @ 21°C (70°F)
Blower	Rear	P1-1 (GY) to Neutral (W)	14 to 18 Ω
Oven Light Transformer	Front	Primary Winding Secondary Winding	40 to 45 Ω Less than 1 Ω
Oven Light Switch	Front	P1-5 (BK) to Neutral (WH)	"Auto"= Closed Circuit "Off"= Open Circuit
Oven Shutdown Thermal Fuse	Rear	Output Side of Double Line Break Relay (Red Wire) to Red Wire at Terminal Block	Closed Circuit
Bake Element	Rear	P5-3 (R) to Output Side of Double Line Break Relay (Red Wire)	25 to 30 Ω
Broil Element	Front	P5-1 (BU) to Output Side of Double Line Break Relay (Red Wire)	17 to 20 Ω
Convection Ring Element	Front	P5-4 (Y) to Output Side of Double Line Break Relay (Red Wire)	33 to 37 Ω
Convection Fan Motor	Rear	P1-3 (OR) to Neutral (W)	8 to 12 Ω
Lock Switch	Front	P7-2 (BU) to P7-3 (TAN)	Door Unlocked = Open Circuit Door Locked = Closed Circuit

OVEN SHUTDOWN THERMAL FUSE

Thermal Fuse Part No.	Opening Temp. °F	Reclose Temp. °F	Marking (with Black Letters)
4452223	266°F ± 10°F	–31°F MAX	Pink/Wht Stripe
4451442	248°F+ 18°F to 248°F – 0°F		Yellow/Wht Stripe
4450934	338°F ± 11.7°F		Red
4450334	275°F ± 11.7°F		Orange/Wht Stripe
4450250	320°F ± 11.7°F		Blue
4450249	302°F ± 11.7°F		Green/Wht Stripe
8300802	230°F+ 18°F to 230°F – 0°F		Blue/Wht Stripe



RELAY LOGIC (FOR BOTH ELECTRONIC SECONDARY CONTROLS)

MODES / RELAYS	BAKE	BROIL	CONV ELEM	CONV FAN	LIGHT	BLOWER
RESET	O	O	O	O	O	⊠
BAKE PREHEAT	X	+	O	O	X	X
BAKE	+	+	O	O	X	X
BROIL PREHEAT	O	X	O	O	X	X
BROIL	O	+	O	O	X	X
CONV. BAKE-PREHEAT	+	O	X	X	X	X
CONV. BAKE	+	O	+	X	X	X
CONV. BROIL-PREHEAT	O	X	O	X	X	X
CONV. BROIL	O	+	O	X	X	X
CONV. ROAST-PREHEAT	X	+	O	X	X	X
CONV. ROAST	+	+	O	X	X	X
BREAD-PREHEAT	X	X	O	X	X	X
BREAD BAKING	+	+	+	X	X	X
PROOF	O	+	O	O	O	O
KEEP WARM	+	+	O	O	X	O
CLEAN	+	+	O	O	O	X

RELAY LOGIC KEY

O – OFF

X – ON

\+ – CYCLING (MAX. PERIOD = 60 SEC.)

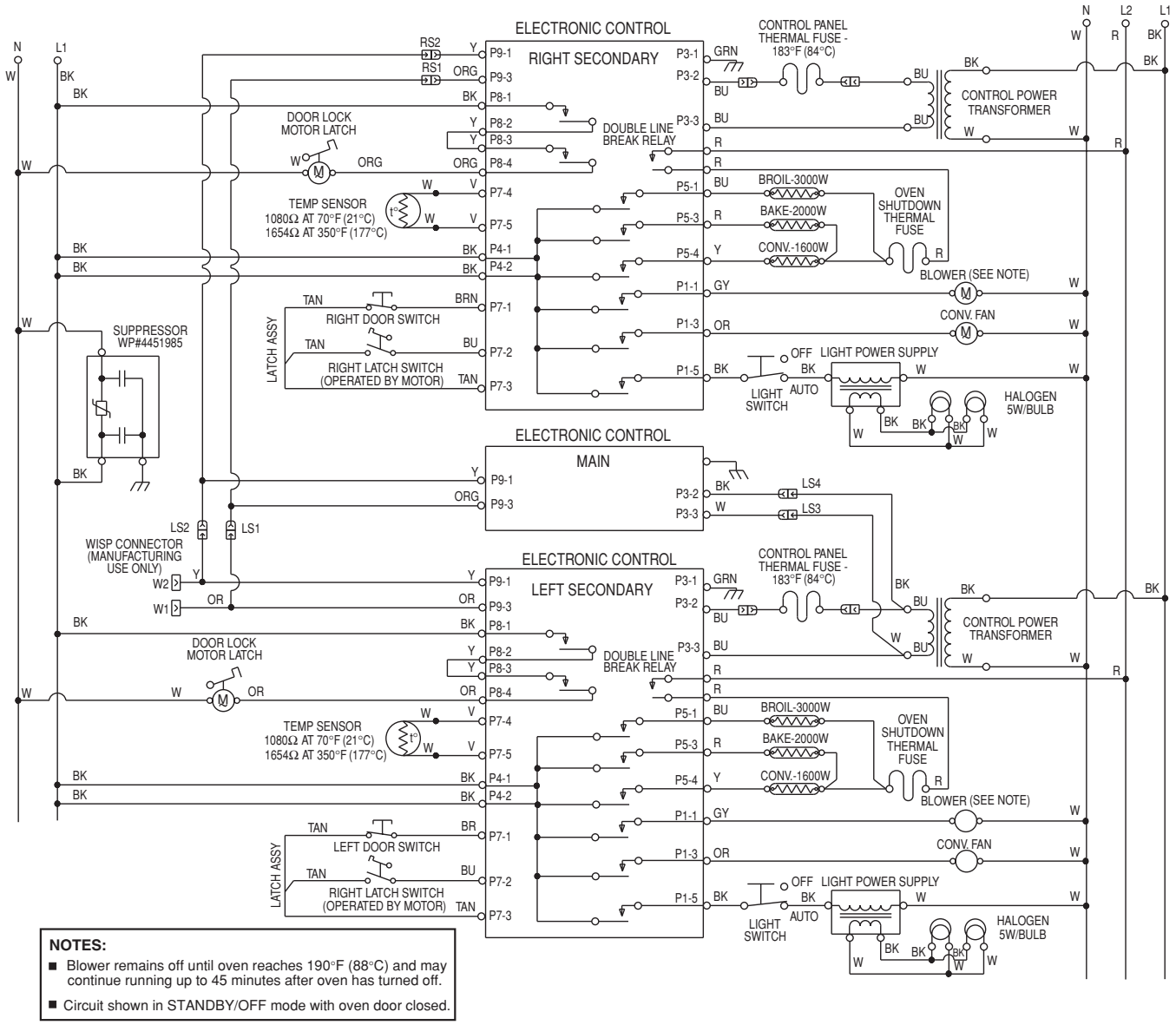
⊠ – ON OR OFF

NOTE: DURING THE SELF CLEAN FUNCTION, THE OTHER OVEN CANNOT OPERATE.

— NOTES —

WIRING DIAGRAM & STRIP CIRCUITS

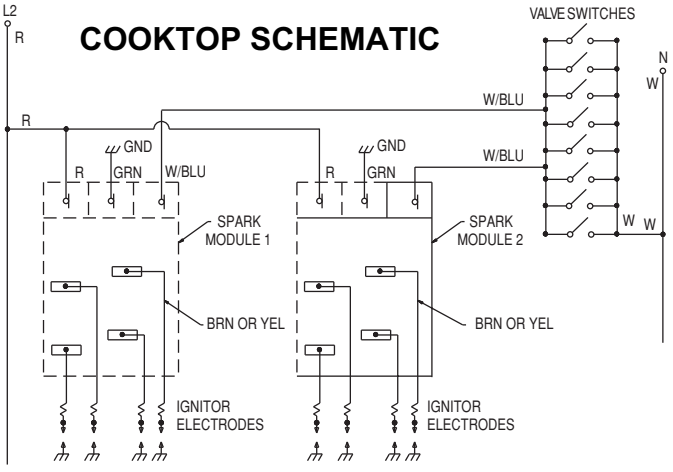
WIRING DIAGRAM



NOTES:

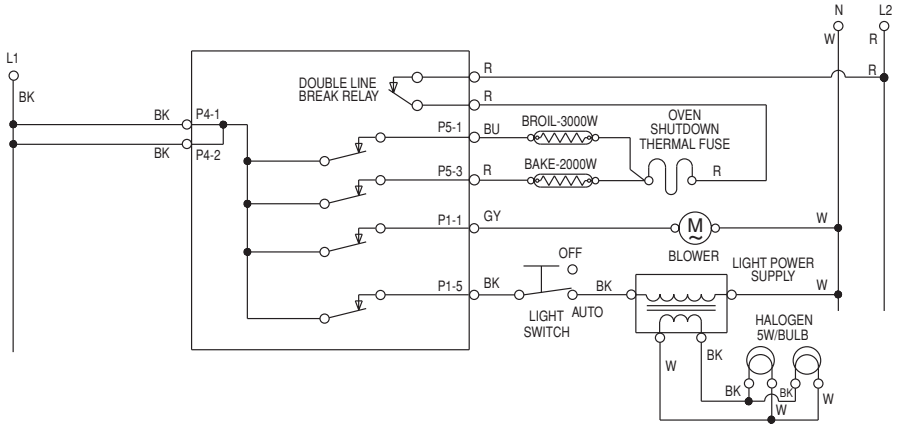
- Blower remains off until oven reaches 190°F (88°C) and may continue running up to 45 minutes after oven has turned off.
- Circuit shown in STANDBY/OFF mode with oven door closed.

COOKTOP SCHEMATIC

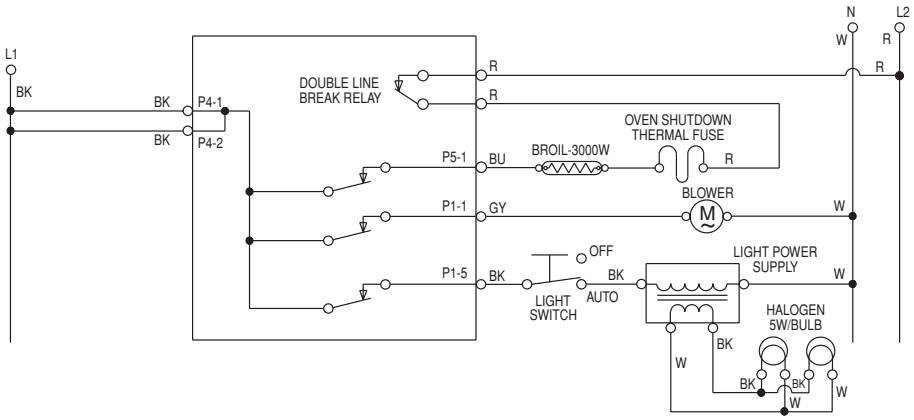


STRIP CIRCUITS

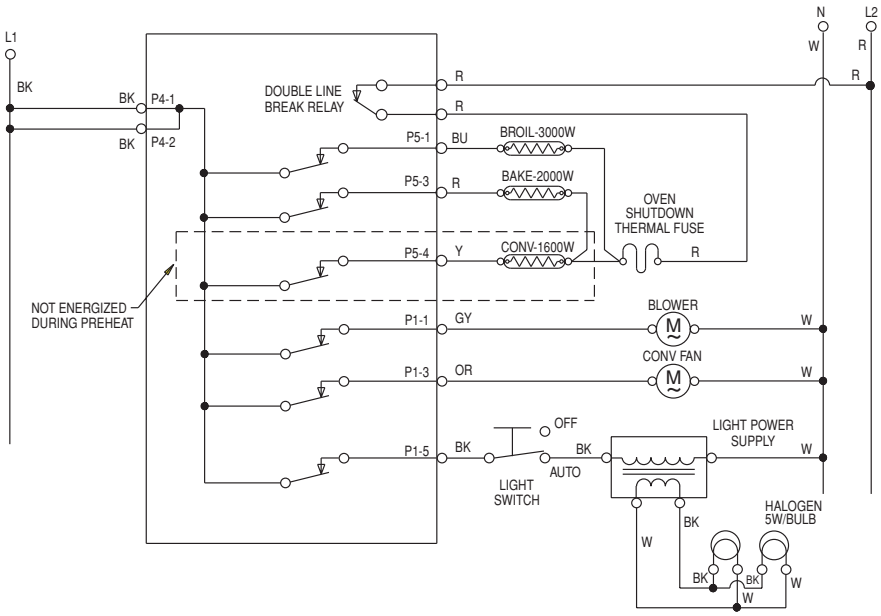
PREHEAT BAKE / BAKE



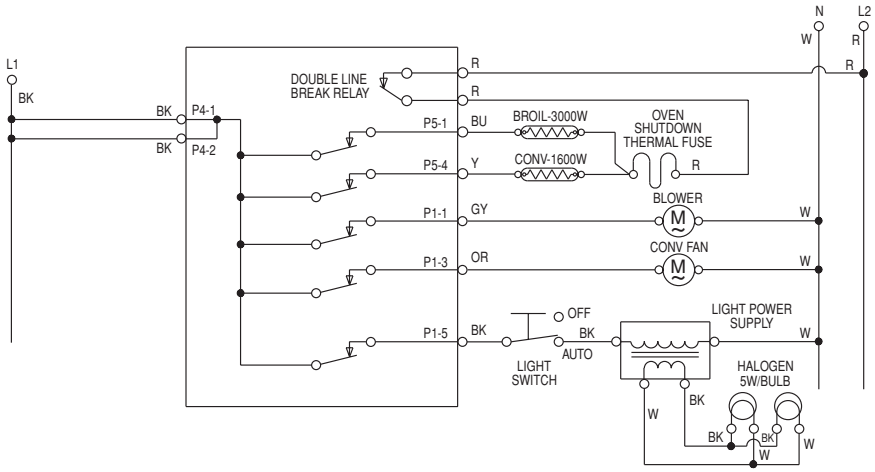
PREHEAT BROIL / BROIL



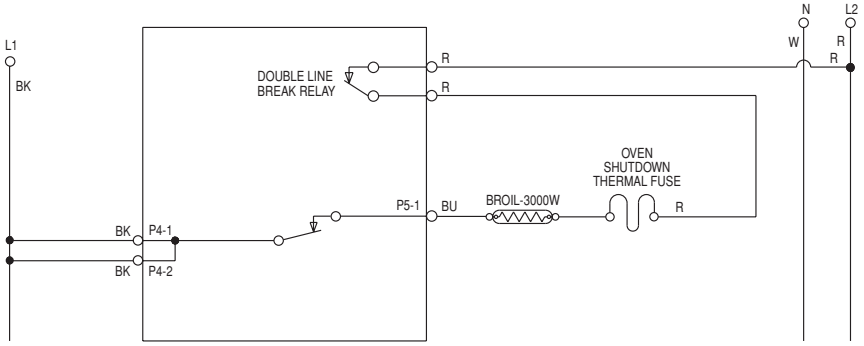
PREHEAT BREAD / BREAD



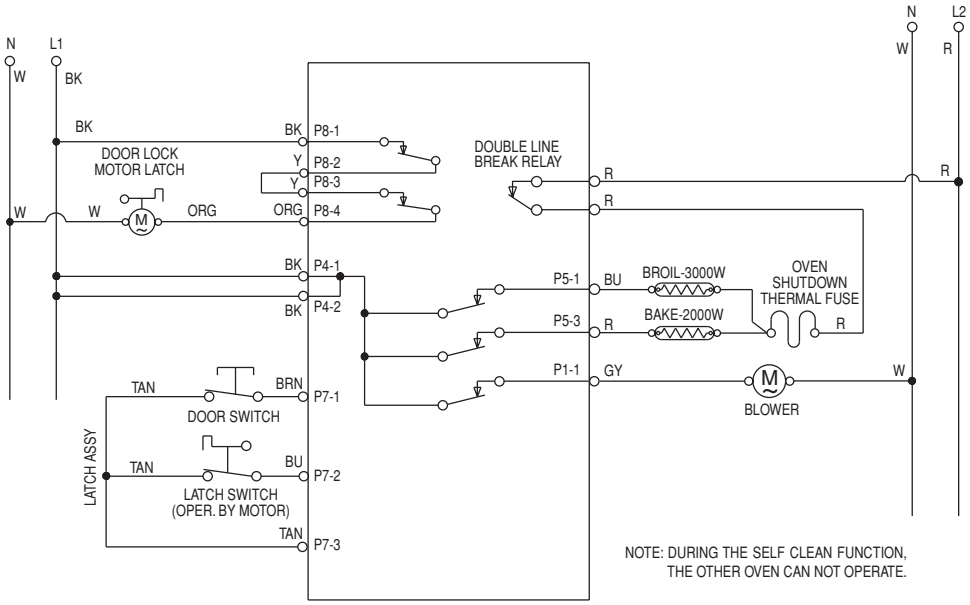
PREHEAT CONVECTION BAKE / CONVECTION BAKE



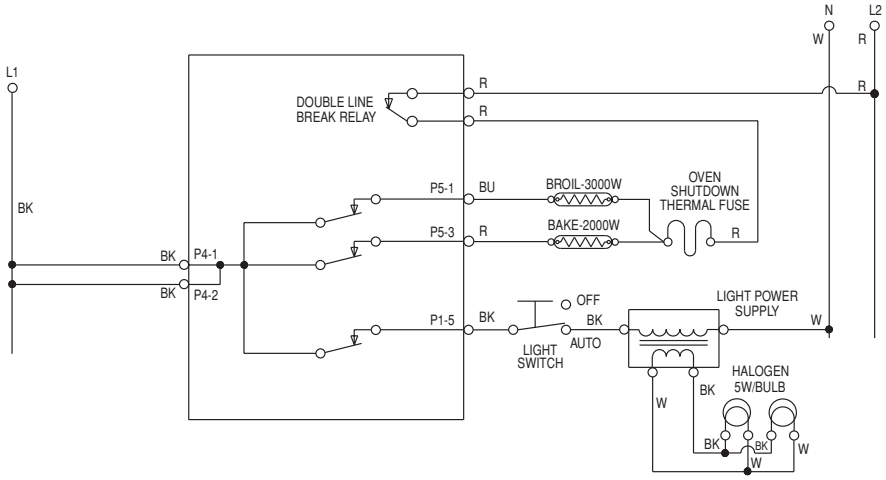
PROOF



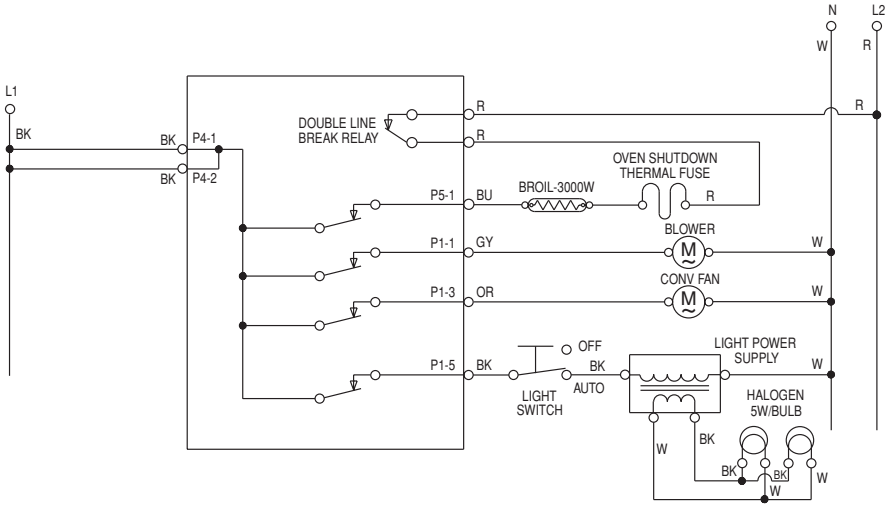
CLEAN



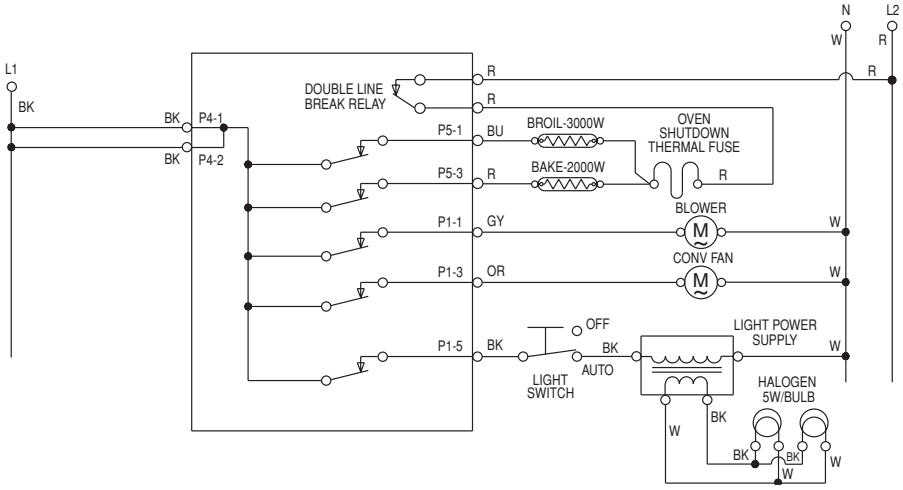
KEEP WARM



PREHEAT CONVECTION BROIL / CONVECTION BROIL



PREHEAT CONVECTION ROAST / CONVECTION ROAST



— NOTES —

— NOTES —

PRODUCT SPECIFICATIONS
AND
WARRANTY INFORMATION SOURCES

IN THE UNITED STATES:

FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL:

FOR WHIRLPOOL PRODUCTS: 1-800-253-1301
FOR KITCHENAID PRODUCTS: 1-800-422-1230
FOR ROPER PRODUCTS: 1-800-447-6737

FOR TECHNICAL ASSISTANCE WHILE AT THE CUSTOMER'S HOME CALL:

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www.servicematters.com

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