



Preferred Service

Service Manual

This manual is to be used by qualified appliance technicians only. Viking does not assume any responsibility for property damage or personal injury for improper service procedures done by an unqualified person.

30 Inch Dual Fuel Range

This Base Manual covers general and specific information including, but not limited to the following models:

RDSCD230-5B



SMC-0028
June 2012

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SAVE THESE INSTRUCTIONS

REVIEW ALL SERVICE INFORMATION IN THE APPROPRIATE SERVICE MANUAL AND TECHNICAL SHEETS BEFORE BEGINNING REPAIRS.

Pride and workmanship go into every product to provide our customers with quality products. It is possible, however, that during its lifetime, a product may require service. Products should be serviced only by a qualified service technician that is familiar with the safety procedures required in the repair and who is equipped with the proper tools, parts, testing instruments, and the appropriate service manual.

Safety Information

We have provided many important safety messages in this manual and on the appliance. Always read and obey all safety messages. This is the safety alert symbol.



This symbol alerts you to hazards that can kill or hurt you and others. All safety messages will be preceded by the safety alert symbol and the word "DANGER", "WARNING", or "CAUTION". These words mean:

⚠ DANGER

IMMEDIATE HAZARDS WHICH WILL RESULT IN SEVERE PERSONAL INJURY OR DEATH.

⚠ WARNING

Hazards or unsafe practices which **COULD** result in severe personal injury or death.

⚠ CAUTION

Hazards or unsafe practices which **COULD** result in minor personal injury or product or property damage.

All safety messages will identify the hazard, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed.

⚠ WARNING

To avoid risk of serious injury or death, repairs should not be attempted by unauthorized personnel.

⚠ CAUTION

VIKING will not be responsible for any injury or property damage from improper service procedures. If performing service on your own product, you must assume responsibility for any personal injury or property damage which may result.

Technical support for authorized servicers:

1-800-914-4799

Address your written correspondence to:

Viking Preferred Service
1803 HWY 82 West
Greenwood, MS 38930

General Information



Serial Number

The serial number and model number for your appliance can be found by opening the door and looking under the control panel. It may also be under the base.

Serial Number 011810C0000000001

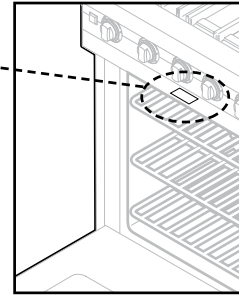
Month — Day — Year of Manufacture — Serial Number

Model Number

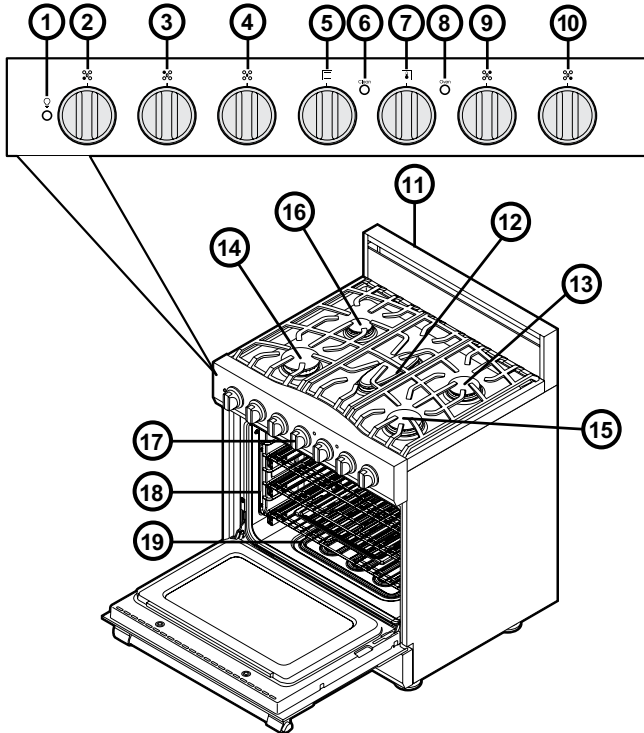
R D S C D 2 3 0 5 B

R = D3 Series
 D = Designer
 C = Custom
 S = Self-Cleaning
 C = Convection
 D = Dual Fuel
 G = Gas

2 = Series
 30 = 30" Wide
 5B = 5 Burners



Range Features



1. Interior oven light switch
2. Left rear burner control knob
3. Left front burner control knob
4. Center burner control knob
5. Oven function selector knob
6. Self-Clean indicator light
7. Oven temperature control knob
8. Oven temperature indicator light
9. Right rear burner control knob
10. Right front burner control knob
11. Backguard
12. One 9,000 BTU burner
13. One 12,000 BTU burner
14. One 18,000 BTU burner
15. One 17,000 BTU burner
16. One 8,000 BTU burner
17. Identification plate
18. Three full extension glide racks/Six rack positions
19. Broiler pan (located inside oven)

Warnings

Read and follow all instructions before using this appliance to prevent the potential risk of fire, electric shock, personal injury, or damage to the appliance as a result of improper usage of the appliance. Use appliance only for its intended purpose as described in this manual.

To ensure proper and safe operation: Appliance must be properly installed and grounded by a qualified technician. **DO NOT** attempt to adjust, repair, service, or replace any part of your appliance unless it is specifically recommended in this manual. All other servicing should be referred to a qualified servicer. Have the installer show you the location of the gas shutoff valve and how to shut it off in an emergency.

WARNING

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or death. **DO NOT** store or use gasoline or other flammable vapors and liquids in the vicinity of this or any appliance.

WHAT TO DO IF YOU SMELL GAS:

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

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

WARNING

- THIS RANGE CAN TIP
- INJURIES TO PERSONS CAN RESULT
- INSTALL ANTI-TIP DEVICE PACKED WITH RANGE

WARNING

To avoid risk of property damage, personal injury or death; follow information in this manual exactly to prevent a fire or explosion.

To Prevent Fire or Smoke Damage

- Be sure all packing materials are removed from the appliance before operating it.
- Keep area around appliance clear and free from combustible materials, gasoline, and other flammable vapors and materials.
- If appliance is installed near a window, proper precautions should be taken to prevent curtains from blowing over burners.
- **NEVER** leave any items on the rangetop. The hot air from the vent may ignite flammable items and may increase pressure in closed containers, which may cause them to burst.
- Many aerosol-type spray cans are **EXPLOSIVE** when exposed to heat and may be highly flammable. Avoid their use or storage near an appliance.
- Many plastics are vulnerable to heat. Keep plastics away from parts of the appliance that may become warm or hot. **DO NOT** leave plastic items on the rangetop as they may melt or soften if left too close to the vent or a lighted surface burner.
- Combustible items (paper, plastic, etc.) may ignite and metallic items may become hot and cause burns. **DO NOT** pour spirits over hot foods. **DO NOT** leave oven unsupervised when drying herbs, breads, mushrooms, etc; fire hazard.

In Case of Fire

Turn off appliance and ventilating hood to avoid spreading the flame. Extinguish flame, then turn on hood to remove smoke and odor.

- **Cooktop:** Smother fire or flame in a pan with a lid or cookie sheet.
- **NEVER** pick up or move a flaming pan.
- **Oven:** Smother fire or flame by closing the oven door. **DO NOT** use water on grease fires. Use baking soda, a dry chemical, or foam-type extinguisher to smother fire or flame.

Heating Elements

- **NEVER** touch oven bake and broil burner area or interior surfaces of oven.
- Bake and broil burners may be hot even though they are dark in color. Areas near burners and interior surfaces of an oven may become hot enough to cause burns.
- During and after use, **DO NOT** touch or let clothing or other flammable materials contact heating elements, areas near elements, or interior surfaces of oven until they have had sufficient time to cool.

Cleaning Safety

- Turn off all controls and wait for appliance parts to cool before touching or cleaning them. **DO NOT** touch the burner grates or surrounding areas until they have had sufficient time to cool.
- Clean appliance with caution. Use care to avoid steam burns if a wet sponge or cloth is used to wipe spills on a hot surface. Some cleaners can produce noxious fumes if applied to a hot surface.

Self-Clean Oven

- Clean only parts listed in this guide. **DO NOT** clean door gasket. The door gasket is essential for a good seal. Care should be taken not to rub, damage, or move the gasket. **DO NOT** use oven cleaners of any kind in or around any part of the self-clean oven.
- Before self-cleaning the oven, remove broiler pan, racks, and other utensils and wipe up excessive spillovers to prevent excessive smoke or flaming.
- This range features a cooling fan, which operates automatically during a clean cycle. If the fan does not turn on, cancel the clean operation and contact an authorized servicer.
- It is normal for the rangetop cooking surface of the range to become hot during a self-clean cycle. Therefore, touching the rangetop cooking surface during a clean cycle should be avoided.

Important Safety Notice and Warning

The California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) requires the Governor of California to publish a list of substances known to the State of California to cause cancer or reproductive harm and requires businesses to warn customers of potential exposures to such substances. Users of this appliance are hereby warned that when the oven is engaged in the self-clean cycle, there may be some low-level exposure to some of the listed substances, including carbon monoxide. Exposure to these substances can be minimized by properly venting the oven to the outdoors by opening the windows and/or door in the room where the appliance is located during the self-clean cycle.

Important Notice Regarding Pet Birds:

NEVER keep pet birds in the kitchen or in rooms where the fumes from the kitchen could reach. Birds have a very sensitive respiratory system. Fumes released during an oven self-cleaning cycle may be harmful or fatal to birds. Fumes released due to overheated cooking oil, fat, margarine and overheated non-stick cookware may be equally harmful.

About Your Appliance

CAUTION

NEVER use appliance as a space heater to heat or warm a room to prevent potential hazard to the user and damage to the appliance. **DO NOT** use the rangetop or oven as a storage area for food or cooking utensils.

- For proper oven performance and operation, **DO NOT** block or obstruct the oven vent duct located on the right side of the air grille.
- Avoid touching oven vent area while oven is on and for several minutes after oven is turned off. When the oven is in use, the vent and surrounding area become hot enough to cause burns. After oven is turned off, **DO NOT** touch the oven vent or surrounding areas until they have had sufficient time to cool.
- Other potentially hot surfaces include rangetop, areas facing the rangetop, oven vent, surfaces near the vent opening, oven door, areas around the oven door and oven window.
- The misuse of oven doors (e.g., stepping, sitting, or leaning on them) can result in potential hazards and/or injuries.

WARNING

ELECTRICAL SHOCK HAZARD. DO NOT touch a hot oven light bulb with a damp cloth as the bulb could break. Should the bulb break, disconnect power to the appliance before removing bulb to avoid electrical shock.

WARNING

ELECTRICAL SHOCK HAZARD. Disconnect the electric power at the main fuse or circuit breaker before replacing bulb.

WARNING

BURN OR ELECTRICAL SHOCK HAZARD. Make sure all controls are OFF and oven is COOL before cleaning. Failure to do so can result in burns or electrical shock.

⚠ CAUTION

DO NOT turn the temperature control on during defrosting. Turning the convection fan on will accelerate the natural defrosting of the food without the heat.

⚠ CAUTION

BURN HAZARD. The oven door, especially the glass, can get hot. Danger of burning: **DO NOT touch the glass!**

⚠ WARNING

This range features a self-cleaning cycle. During this cycle, the oven reaches elevated temperatures in order to burn off soil and deposits. A powder ash residue is left in the bottom of the oven after completion of the self-clean cycle.

NOTE: DO NOT use commercial oven cleaners inside the oven. Use of these cleaners can produce hazardous fumes or can damage the porcelain finishes. **DO NOT** line the oven with aluminum foil or other materials. These items can melt or burn during a self-clean cycle, causing permanent damage to the oven.

⚠ CAUTION

DO NOT touch the exterior portions of the oven after self-cleaning cycle has begun, since some parts become extremely hot to the touch!

During the first few times the self-cleaning feature is used, there may be some odor and smoking from the “curing” of the binder in the high-density insulation used in the oven. When the insulation is thoroughly cured, this odor will disappear. During subsequent self-cleaning cycles, you may sense an odor characteristic of high temperatures.

KEEP THE KITCHEN WELL-VENTED DURING THE SELF-CLEAN CYCLE.

⚠ WARNING

BURN HAZARD. When self-cleaning, surfaces may get hotter than usual, therefore, children should be kept away.

⚠ CAUTION

DO NOT store items of interest to children over the unit. Children climbing to reach items could be seriously injured.

Before Using Range

All products are wiped clean with solvents at the factory to remove any visible signs of dirt, oil, and grease which may have remained from the manufacturing process. Before starting to cook, clean the range thoroughly with hot, soapy water. There may be some burn off and odors on first use of the appliance—this is normal.

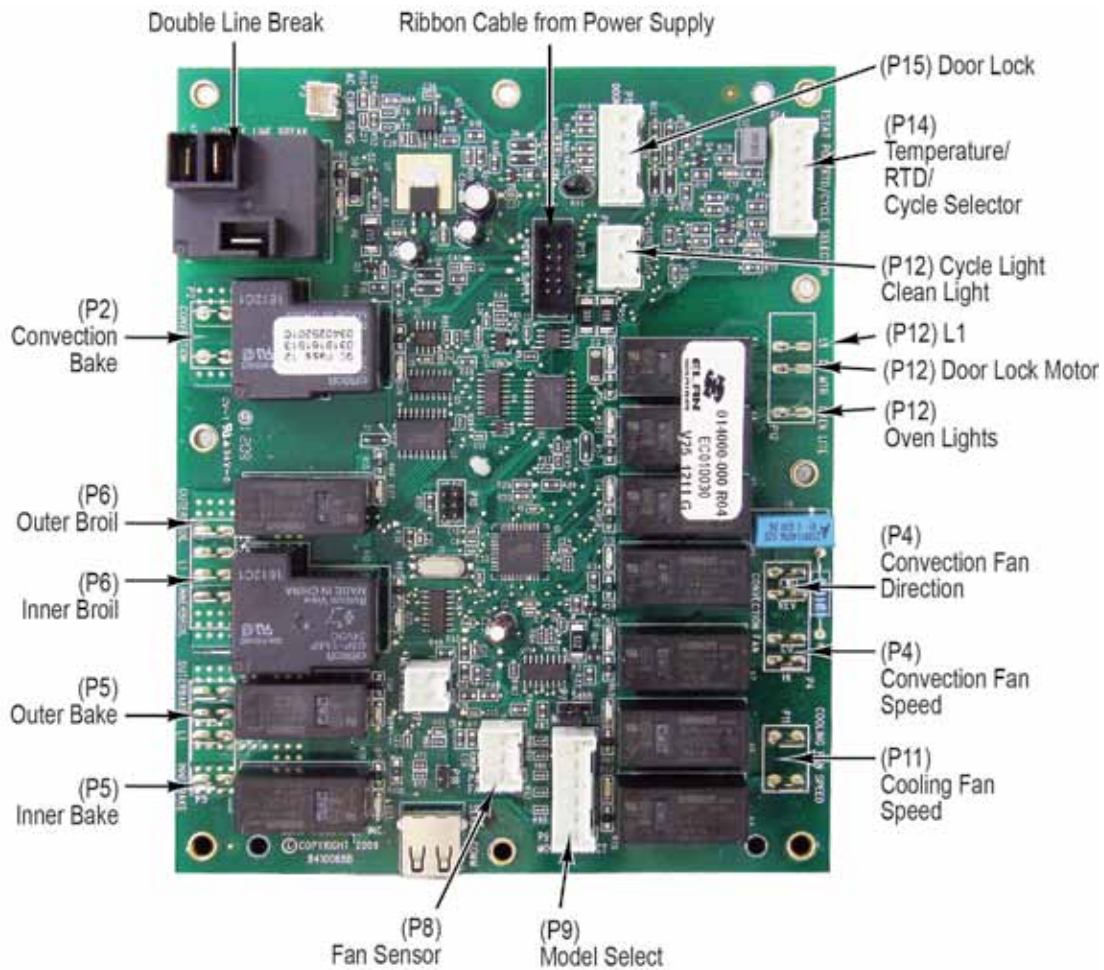
Oven

Important: Before first use, wipe interior with soapy water and dry thoroughly. Then, set the oven selector to bake, the thermostat to 450°F, and operate for an hour.

Model includes:

- A broad range of baking and broiling modes—up to eight cooking modes in all—to make even your most challenging baking projects a success.
- Exclusive one-piece tooled and porcelainized cooking surface contains spills for easy cleaning.
- Split baking and broiling elements—which reduces preheating time and provides greater control and more even heating.
- A reversing convection fan which is two times larger than most on the market—this allows you to cook foods more thoroughly and evenly—even when baking large quantities.
- Four convection modes offering greater air circulation to shorten cooking times and cook foods more evenly.
- Three broiling modes including a low-broil mode for delicate broiling and top-browning.
- A profiled, concealed bake element for easier cleaning.
- This appliance is certified by Star-K to meet strict regulations in conjunction with specific instructions found on www.star-k.org.

Oven Control Board Connections



Control Board Test Points

Component Testing			
Component	Operating Voltage (Approximate)	*Resistance (Approximate)	Test Location
Control Board (Input Voltage)	240 VAC	n/a	K17 red - P12 black (L1)
Convection Element	240 VAC	18.2 Ω	K17 yellow - P2 white/red
Outer Broil Element	240 VAC	40.2 Ω	K17 yellow - P6 grey
Inner Broil Element	240 VAC	22.8 Ω	K17 yellow - P6 violet
Outer Bake Element	240 VAC	37.7 Ω	K17 yellow - P5 blue
Inner Bake Element	240 VAC	38.6 Ω	K17 yellow - P5 orange
RTD (Resistive Thermal Device)	-	1100 Ω at 75°F (See chart for more options)	P14 violet - grey
Convection Motor	240 VAC	112 Ω	K17 red - P4 blue/black (FWD) K17 red - P4 yellow (REV)
Blower Motor	120 VAC	18.8 Ω	P1 white - P11 white/black
Door Latch Motor	240 VAC	12.86 k Ω	K17 red - P12 black/white
Door Latch Switch (Door Unlocked)	7.86 VDC	∞ (Open)	P15 brown - orange (**disconnected from board)
	0 VDC	0 Ω (Closed)	P15 brown - blue/white
Door Latch Switch (Door Locked)	0 VDC	0 Ω (Closed)	P15 brown - orange (**disconnected from board)
	7.70 VDC	∞ (Open)	P15 brown - blue/white (**disconnected from board)
Cycle Light	7.45 VDC	∞ (Open-30 meg Ω)	P1 violet - orange/black
Clean Light	7.45 VDC	∞ (Open-30 meg Ω)	P1 violet - white/black
Oven Light Switch - OFF (Door Closed)	7.76 VDC	∞ (Open)	P15 brown - violet/white (**disconnected from board)
Oven Light Switch - ON (Door Closed)	0 VDC	0 Ω	P15 brown - violet/white (**disconnected from board)
Oven Door Switch (Door Open)	11.0 VDC	∞ (Open)	P15 brown - grey (**disconnected from board)
Oven Door Switch (Door Closed)	0 VDC	0 Ω	P15 brown - grey

* Resistance checks made with power off.

** Disconnect connector from board for resistance test only.

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Control Board Diagnosis

With the control board assembly accessed (see page 22), the following components can be diagnosed without removal of the components.

Line Break Relay

The line break relay breaks the L2-side of line voltage. As the relay is energized, the relay closes and allows L2 power to the convection, broil, and bake elements. Locate the line break relay on the control board. The relay will have a red wire and a yellow wire connected to it. The red wire is L2 input from the main power supply. The yellow wire is L2 output from the line break relay.

When heating is selected by the control input, voltage is sent to the line break relay coil. A red LED in front of the coil verifies coil voltage is being sent to the relay. This does not indicate however that the relay is functioning.

To check the relay contacts, verify input voltage to the relay between the red wire (L2) and black wire (L1) at the connector P12. You should read 240 VAC.



Select a cooking program. When the relay contact is closed (red LED lit at base of relay) check for 240 VAC between the yellow wire and black (L1). If 0 VAC is read, disconnect power and remove the red and yellow wires off the relay.

Note: Make sure the red and yellow wires that were removed are not touching anything else prior to reapplying power.

Reconnect power and using your ohmmeter to check for continuity between the two relay contacts when the relay is energized. If you read infinite ohms (∞), this indicates a faulty relay and you will need to replace the control board.

Bake Element

Locate the P5 connector and the line break relay on the control board. The P5 connector will have a Molex plug containing a blue, black, and orange wire. The blue wire goes to the outer bake element, the orange wire goes to the inner bake element, and the black wire is L1 input from the main power supply.



With the power off and the Molex connector removed from the P5 control board connection, use an ohmmeter to measure resistance between the blue wire in the P5 Molex plug and the yellow wire from the line break relay. This will measure the resistance of the outer bake element and should be approximately 38 ohms. Likewise, the inner bake element can be measured by reading resistance between the orange wire in the Molex plug and the yellow wire from the line break relay. A resistance reading of approximately 38 ohms should be found. If either element fails to read resistance, remove element to repair or replace (Follow the bake element disassembly procedure).

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Bake Relay (Inner and Outer)

When a bake element is selected by the oven control board, voltage is sent to the bake relay coils. A red LED in front of each coil verifies coil voltage is being sent to that particular relay. This does not indicate however that the relay is functioning. When the individual element relays are energized, (L1-black) power is sent through the relay to the bake elements. (L2 power is controlled by the line break relay.)

Inner Bake Relay

Select a Bake cooking program. When the inner relay contact is energized (red LED lit at base of relay), check for 240 VAC between the yellow wire at the line break relay and the orange wire on P5. If 0 VAC is read, disconnect power and remove P5 Molex plug.



Reconnect power and using your ohmmeter, check for continuity between the two relay contacts (refer to photo, above). If you read infinite ohms (∞) when the relay is energized, this indicates a faulty relay and you will need to replace the control board. If you read 0 ohms, the relay contact is closing.

Outer Bake Relay

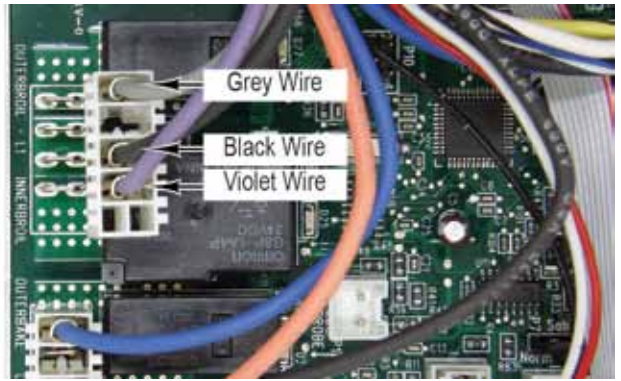
Select a Bake cooking program. When the outer relay contact is energized (red LED lit at base of relay) check for 240 VAC between the yellow wire at the line break relay and the blue wire on P5. If 0 VAC is read, disconnect power and remove P5 Molex Plug.



Reconnect power and using your ohmmeter, check for continuity between the two relay contacts (refer to photo, above). If you read infinite ohms (∞) when the relay is energized, this indicates a faulty relay and you will need to replace the control board. If you read 0 ohms, the relay contact is closing.

Broil Element

Locate the P6 connector and the line break relay on the control board. The P6 connector will have a Molex plug containing a grey, black, and violet wire. The grey wire goes to the outer broil element, the black wire is L1 input from main power supply, and the violet wire goes to the inner broil element.



With the power off and Molex connector removed from the P6 control board connection, use an ohmmeter to measure resistance between the grey wire in the Molex plug and the yellow wire at the line break relay. This will measure the resistance of the outer broil element and should be approximately 34 ohms. Likewise, the inner broil element can be measured by reading resistance between the violet wire in the Molex plug and the yellow wire at the line break relay. A resistance of approximately 30 ohms should be found. If either element fails to read resistance, remove the element to repair or replace (Follow the broil element disassembly procedure).

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Broil Relay (Inner and Outer)

When a broil element is selected by the oven control board, voltage is sent to the broil relay coils. A red LED in front of each coil verifies coil voltage is being sent to that particular relay. This does not indicate however that the relay is functioning. When the individual element relays are energized, (L1-black) power is sent through the relay to the broil elements. (L2 power is controlled by the line break relay.)

Inner Broil Relay

Select a Broil cooking program. When the inner relay contact is energized (red LED lit at base of relay), check for 240 VAC between the yellow wire at the line break relay and the violet wire on P6. If 0 VAC is read, disconnect power and remove the P6 Molex plug.



Reconnect power and using your ohmmeter, check for continuity between the two relay contacts (refer to photo, above). If you read infinite ohms (∞) when the relay is energized, this indicates a faulty relay and you will need to replace the control board. If you read 0 ohms, the relay contact is closing.

Outer Broil Relay

Select a Broil cooking program. When the outer relay contact is energized (red LED lit at base of relay) check for 240 VAC between the yellow wire at the line break relay and the grey wire on P6. If 0 VAC is read, disconnect power and remove P6 Molex plug.



Reconnect power and using your Ohm meter, check for continuity between the two relay contacts (refer to photo, above). If you read infinite ohms (∞) when the relay is energized, this indicates a faulty relay and you will need to replace the control board. If you read 0 ohms, the relay contact is closing.

Convection Element

Locate the P2 connector and the line break relay on control board. The P2 connector will have a Molex plug containing a white/red and black wire. The white/red wire goes to the convection element and the black wire is L1 input from main power supply.



With the power off and Molex connector removed from the P2 control board connection, use an ohmmeter to measure resistance between the white/red wire in the Molex plug and the yellow wire at the line break relay. This will measure the resistance of the convection element and should be approximately 18 ohms. If the element fails to read resistance, remove element to repair/replace (Follow the convection element disassembly procedure).

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Convection Relay

When the convection element is selected by the oven control board, voltage is sent to the convection relay coils. A red LED in front of each coil verifies coil voltage is being sent to that particular relay. This does not indicate however that the relay is functioning. When the convection element relay is energized, (L1-black) power is sent through the relay to the convection element. (L2 power is controlled by the line break relay.)

To test, select a Convection cooking program. When the convection relay contact is energized (red LED lit at base of relay), check for 240 VAC between the yellow wire at the line break relay and the white/red wire on P2. If 0 VAC is read, disconnect power and remove P2 Molex plug.



Reconnect power and using your ohmmeter, check for continuity between the two relay contacts (refer to photo, above). If you read infinite ohms (∞) when the relay is energized, this indicates a faulty relay and you will need to replace the control board. If you read 0 ohms, the relay contact is closing.

Cooling Fan

Locate the P11 terminal connections on the control board. The P11 connections will have Molex plug containing two white/black wires.



With the P11 board connection removed, use an ohmmeter to measure resistance between either white/black wire and P1 white wire on the power supply board. The resistance should be approximately 18 ohms. If no resistance is read, remove fan to repair/replace (Follow the cooling fan disassembly procedure).

With the white/black wires attached to the P11 board connection, use a voltmeter to measure voltage between the white/black wires on the board and P1 white on the power supply board. The voltage should be 120 VAC when a cooking mode is selected. If 120 VAC is present and no fan rotation, replace the cooling fan (follow cooling fan disassembly procedure). If no voltage is present, verify wiring. If wiring is OK, replace the oven control board.

Cooling Fan Relay

The oven control board is designed to operate a two-speed cooling motor. The oven utilizes a one-speed motor so both the HI and LO speeds are jumped together on the board. On initial startup, the oven control board selects the fan power relay (K8) and the LO speed (K9). When the oven temp reaches 250°F temp, the board will switch the speed relay to HI. However, both are jumped together so this change is not noticed. If a fan error is shown, proceed with the test shown below.



When the unit is switched ON, voltage is sent to both relay coils. A red LED in front of each coil verifies coil voltage is being sent to that particular relay. This does not indicate however that the relays are functioning.

To test, connect power. With your meter set for AC voltage, check between P1 white on power supply board and the white/black wires on P11 (refer to photo above). The reading should be 120 VAC. If 0 volts are shown and the red LED is lit, then the oven control board is defective.

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Convection Fan

Locate the P4 connector and line break relay. The P4 connector will have a Molex plug containing 4 wires:

- (1) blue/black wire - FWD motor winding and HI speed capacitor
- (2) yellow/white wire - REV motor winding
- (3) orange/white wire- LO speed capacitor
- (4) orange/black wire - HI speed capacitor



Convection Operation

The convection system consists of a two-speed, two-direction fan motor. The main power, speed, and direction are controlled by the oven control board by three relays (K5, K6, and K7). K5 is the main control (Power) relay and is an SPDT relay. It controls all functions of the convection fan system. The photo below shows the K5 relay energized.



Clockwise (FWD)–Low Speed

When closed, it sends power to the common terminal of the K6 relay (direction) and is an SPDT relay.

The output from K5 is connected to the C (common) terminal of K6. When it is not energized (as shown above), power flows through the C terminal, to the N.C. (normally closed) contact and out the FWD contact on the board.

K7 is the speed relay. It is an SPDT relay. When not energized, the LO circuit is energized through C terminal of the K7 relay. This will cause both capacitors to be in series causing the fan to run at a reduced speed. The photo below shows the K7 energized. The N.O. (normally open) terminal is now closed causing a bypass of one of the two capacitors. With only one capacitor in series, the unit will run at a higher speed.



Clockwise (FWD)–High Speed

The photo below shows the K6 relay energized which will cause the motor to rotate in a REV (counterclockwise) direction. K7 is not closed, so the speed is LOW.



Counterclockwise (REV)–Low Speed

The photo below shows the K6 (direction) and K7 (speed) relays energized. This will cause the motor to rotate in a REV (counterclockwise) direction and at a higher speed.



Counterclockwise (REV)–High Speed

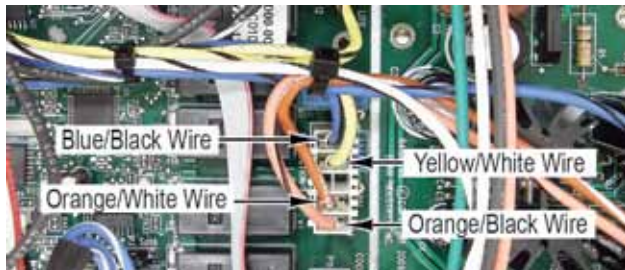
To check the individual direction and speeds, perform the following checks:

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Testing Control Board

Leave the Molex connector attached to P4 board connection. While the convection fan is turning in the forward direction (clockwise), use a voltmeter to measure voltage between the blue/black wire in the Molex plug and the red wire (L2) at the line break relay. The voltage should be 240 VAC. This will indicate the K5 and K6 of the oven control board are functioning properly.



Leave the Molex connector attached to P4 board connection. While the convection fan is turning in the reverse direction (counterclockwise), use a voltmeter to measure voltage between the orange/black wire in the Molex plug and the red wire (L2) at the line break relay. The voltage should be 240 VAC. This will indicate the K5 and K6 of the oven control board are functioning properly.

When K7 is at rest, testing between LO and L2 should show a voltage reading of 240 VAC. The red LED in front of the relay will NOT be lit. When K7 is energized, testing between HI and L2 should show a voltage reading of 240 VAC and the red LED in front of the relay will be illuminated.

If voltage is not present, this indicates a faulty relay and the oven control board will need to be replaced. Also check wiring to the main power supply and repair/replace as needed.

Testing The Capacitors

The range uses two $2\mu\text{F}$ capacitors. Using either an analog or digital meter, use your highest ohms setting and check between each terminal of the capacitor. Make sure one of the leads to the capacitor is temporarily removed. On an analog meter, the pointer will increase until it reaches its capacitance (nearly infinity), then return to 0 ohms. Reversing the leads will repeat the process. On a digital multimeter, the pointer is replaced by the value displayed by a numerical number in the display. It too will return to 0 ohms indicating a good capacitor.

If the capacitor(s) is open, then it will never charge. If it is shorted, the resistance will be infinite immediately and won't change. If either is true, replace the capacitor(s).

Testing Fan Motor

If all the voltage tests on the oven control board are correct, the capacitors and the convection motor need to be checked. With the Molex connector removed from the P4 board connection and capacitor leads removed, use an ohmmeter to measure resistance between blue/black wire (forward direction) in the Molex plug and the red wire at the line break relay. The resistance should be approximately 100 ohms. Likewise, the reverse direction can be measured by reading resistance between the yellow/white wire in the Molex plug and the red wire at the line break relay. Resistance should be approximately 100 ohms. If either or both readings are not as shown, replace the convection fan motor (Follow the convection fan disassembly procedure).

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Door Lock Assembly

The door lock motor is a 240 VAC motor. One side of the motor is wired directly to L2 (red wire). L1 power to the lock motor is connected on the P12 connector (DL) on the main control board. When the relay energizes, L1 power is sent to the lock motor. The photo below shows the P12 connector.



There are three microswitches mounted on the door lock assembly. One switch is not used on this model.

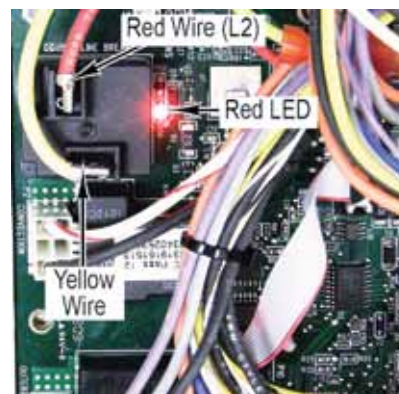
When the door is in the unlocked position, the cam is depressing the S1 switch plunger. The N.O. switch contact is closed and a completed circuit is made at the P15 connection between the brown and blue/white wires. This signals the board that the door is unlocked.

S2 is also N.O. and is open when the door is unlocked. When the lock motor is activated and begins to lock, the S1 contact opens. When the plunger catches the door liner and pulls inwards, the S2 switch plunger is actuated. The switch contact is closed and a completed circuit is made at the P15 connection between the brown and orange wires. This signals the board that the door is locked.

When it is time to unlock the door, power is sent to the door lock motor and it continues its rotation. The plunger releases the door liner and opens the contact on S2. When the door is fully opened, S1 is closed by the motor cam. This will signal the board that the door is unlocked.

Testing Lock Motor

With the Molex connector removed from the P12 board connection, use an ohmmeter to measure resistance between the red wire (L2) on the line break relay and the black/white wire at P12. The resistance should be approximately 12.5K ohms. If no resistance is read, remove the latch motor to repair/replace (Follow the latch motor disassembly procedure).



Testing Latch Switches

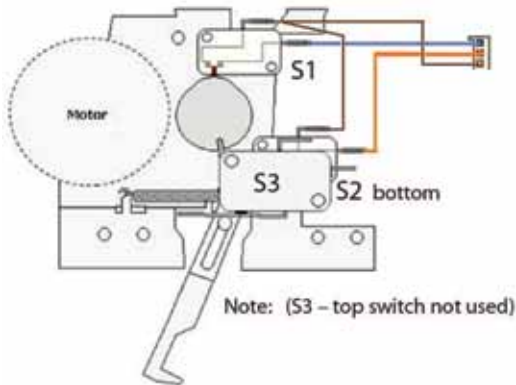
To check the latch switches, access the control board and unplug the P15 Molex plug. With the door in the unlocked position, you should read continuity (0 ohms) between the brown wire and the blue/white wires, and read infinite ohms (∞) between the brown and orange wires. If your readings are incorrect or reversed, remove the latch and inspect, repair/replace (follow latch motor disassembly procedure).

⚠ WARNING

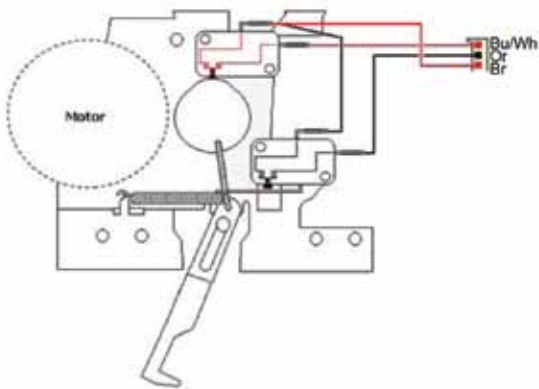
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Checking the door lock position switches

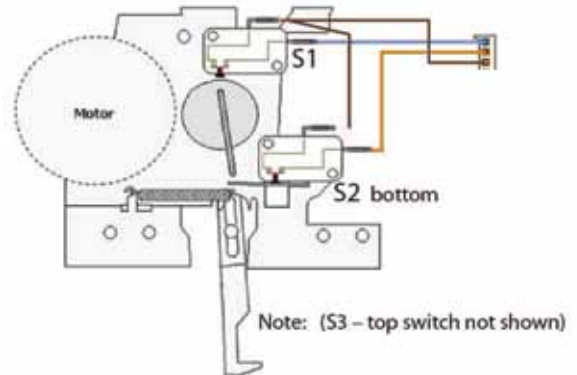
With the door in the unlocked position, the S1 switch (N.O.) is activated by the motor cam. Shown below are the switch positions and wire colors. To test, check continuity between the blue/white and brown wires. The reading should be 0 ohms. The S2 switch is N.O. and will read infinite ohms (∞) when the door is unlocked.



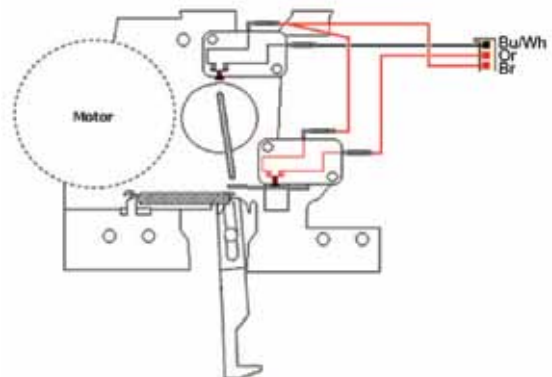
Shown below is the closed circuit in red.



When the door locks, the S1 switch (N.O.) is no longer in contact with the motor cam and will read infinite ohms (∞). The S2 switch is N.O. and should close when the door is locked. To test, check continuity between the orange and brown wires. The reading should be 0 ohms when the door is locked.



Shown below is the closed circuit in red.



⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

RTD Sensor

Proper diagnostics of the RTD (Resistance Temperature Detector) will eliminate unnecessary replacement. The RTD is designed to change resistance as the temperature in the oven cavity changes. As the temperature increases, so does the resistance. At 75°F, the resistance should be approximately 1090 ohms.

Locate the P14 connector on control board. The violet and grey wires go to the oven sensor.



With the Molex plug removed, use an ohmmeter to measure resistance between the violet and grey wires in the Molex connector. At ambient temperature, you should read around 1090 ohms ($\pm 10\%$). An open reading (∞) indicates either a broken wire or an open RTD. Finally, test each wire to ground to check for a pinched wire to the oven frame. If wiring is OK, replace the sensor.

If the RTD resistance is within the specifications given, it is not necessary to replace the RTD. If the RTD test resistance is within specifications and the consumer is having erratic oven temperatures, please call Viking Technical support (1-800-914-4799) for assistance.

RTD Characteristics

RTD (Resistance Temperature Detector)	
Temperature (°F)	Approximate Resistance (Ω)
50	1038
75	1090
100	1143
200	1350
300	1553
350	1654
400	1754
450	1852
500	1950
550	2047
600	2153
650	2238
700	2332
750	2425
800	2518
850	2609
900	2700

NOTE: Door switch must be depressed in order for the convection fan and all convection cycles to operate when the door is opened.

WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Spark Module Test**Surface Burner Igniter Will Not Spark**

1. Check for and remove any foreign objects/soil buildup around the igniter and operate burner again.
2. If still inoperative, disconnect power to the range.
3. Remove the control panel from the range.
4. Disconnect the wire harness from the inoperative spark module.
5. Reconnect power and test for 120 VAC from the black to the white wire.
6. If 120 VAC is present, disconnect power and reconnect wire harness. (If no 120 VAC, check wiring.)



7. Remove the grate, burner cap, and burner head.
8. Disconnect the black wire from the back of the spark module.
9. Check for 0 ohms between the black wire and the metal top of the igniter. (If open, replace wire.)



10. If 120 VAC is present in step 5 and the black igniter wire has continuity, replace the spark module.

Spark Module Test (Stack Burner Valve)**Surface Burner Igniter Will Not Spark**

1. Check for and remove any foreign objects/soil buildup around the igniter and operate burner again.
2. If still inoperative, disconnect power to the range.
3. Remove the control panel from the range.
4. Reconnect power.
5. With the stack burner switch in the off position, test for 120 VAC across switch wires. (If no 120 VAC, check wiring.)
6. With the stack burner switch in the on position, test for 120 VAC across switch wires. (If 120 VAC present, replace switch.)



7. Remove the grate, burner cap, and burner head.
8. Disconnect power.
9. Disconnect the black wire from the spark module.
10. Check for 0 ohms between the black wire on spark module and the metal top of the igniter. (If open, replace wire.)



11. If 0 ohms present in step 10, replace the spark module.

Troubleshooting Guide

Symptom	Possible Cause	Corrective Action
No bake, no broil, no oven lights, no power from line break relay (K17) red wire to P12 black wire.	House breaker or fuse open.	Reset breaker or replace fuse.
	Defective oven wiring (shorted, open, or burned).	Repair or replace defective wiring.
No bake, no broil, oven lights and surface igniters operate.	House breaker or fuse open.	Reset breaker or replace fuse.
	Open oven control board.	Replace oven control board.
	Defective oven wiring (shorted, open, or burned).	Repair or replace defective wiring.
No or insufficient bake, oven lights operate.	Open bake element.	Replace bake element.
	Open selector.	Replace selector.
	Open thermostat.	Replace thermostat.
	Open relay K10, K11, K12, K13, or K17.	Replace oven control board.
	Open oven control board.	Replace oven control board.
	Defective oven wiring (shorted, open, or burned).	Repair or replace defective wiring.
No or insufficient broil, oven lights operate.	Open broil element.	Replace broil element.
	Open selector.	Replace selector.
	Open thermostat.	Replace thermostat.
	Open relay K12, K13, or K17.	Replace oven control board.
	Open oven control board.	Replace oven control board.
	Defective oven wiring (shorted, open, or burned).	Repair or replace defective wiring.
No or insufficient convection bake, oven lights operate.	Open bake element.	Replace bake element.
	Open broil element.	Replace broil element.
	Open convection element.	Replace convection element.
	Open convection fan motor.	Replace convection fan motor.
	Open selector.	Replace selector.
	Open thermostat.	Replace thermostat.
	Open relay K5, K6, K10, K11, K12, K13, K14, or K17.	Replace oven control board.
	Open oven control board.	Replace oven control board.
No or insufficient convection roast, oven lights operate.	Open broil element.	Replace broil element.
	Open convection element.	Replace convection element.
	Open convection fan motor.	Replace convection fan motor.
	Open selector.	Replace selector.
	Open thermostat.	Replace thermostat.
	Open relay K5, K6, K7, K12, K13, K14, or K17.	Replace oven control board.
	Open oven control board.	Replace oven control board.
	Defective oven wiring (shorted, open, or burned).	Repair or replace defective wiring.

Symptom	Possible Cause	Corrective Action
No or insufficient convection broil, oven lights operate.	Open broil element.	Replace broil element.
	Open selector.	Replace selector.
	Open thermostat.	Replace thermostat.
	Open convection fan motor.	Replace convection fan motor.
	Open relay K5, K6, K7, K12, K13, or K17.	Replace oven control board.
	Open oven control board.	Replace oven control board.
	Defective oven wiring (shorted, open, or burned).	Repair or replace defective wiring.
No or insufficient TruConvec, oven lights operate.	Open convection element.	Replace convection element.
	Open convection fan motor.	Replace convection fan motor.
	Open selector.	Replace selector.
	Open thermostat.	Replace thermostat.
	Open relay K5, K6, K14, or K17.	Replace oven control board.
	Open oven control board.	Replace oven control board.
	Defective oven wiring (shorted, open, or burned).	Repair or replace defective wiring.
No self-clean, bake and broil operate normally, oven lights operate, door won't lock, no clean indicator light.	Open door latch motor.	Replace door latch motor.
	Out of calibration selector.	Replace selector.
	Out of calibration thermostat.	Replace thermostat.
	Open relay K3.	Replace oven control board.
	Open oven control board.	Replace oven control board.
	Defective oven wiring (shorted, open, or burned).	Repair or replace defective wiring.
No self-clean, bake and broil operate normally, oven lights operate, door will lock, no clean indicator light.	Open door latch switch.	Replace door latch assembly.
	Open oven control board.	Replace oven control board.
	Defective oven wiring (shorted, open, or burned).	Repair or replace defective wiring.
Oven in self-clean mode, oven heats, oven not reaching elevated clean temperatures.	Open door latch switch.	Replace door latch assembly.
	Oven sensor out of calibration.	Replace oven sensor.
	Open oven control board.	Replace oven control board.
	Defective oven wiring (shorted, open, or burned).	Repair or replace defective wiring.
Oven door won't unlock (oven below elevated clean temperatures).	Open door latch motor.	Replace door latch motor.
	Oven sensor out of calibration.	Replace oven sensor.
	Faulty oven control board.	Replace oven control board.
	Open relay K3.	Replace oven control board.
	Defective oven wiring (shorted, open, or burned).	Repair or replace defective wiring.
Oven lights inoperable (bulbs OK).	Open light switch.	Replace light switch.
	Open oven control board.	Replace oven control board.
	Defective oven wiring (shorted, open, or burned).	Repair or replace defective wiring.

Troubleshooting



Symptom	Possible Cause	Corrective Action
Blower motor inoperable.	Open blower motor.	Replace blower motor.
	Oven sensor out of calibration.	Replace oven sensor.
	Open relay K8 or K9.	Replace oven control board.
	Open oven control board.	Replace oven control board.
	Defective oven wiring (shorted, open, or burned).	Repair or replace defective wiring.

LED Error Codes

The LED error codes are displayed on the control panel using the cycle and clean lights. Refer to the chart below to determine the type of error that is being displayed.

LED Error Codes		
Type of error	Cycle Light	Clean Light
Latch	OFF	1 flash
RTD (Oven Probe)	1 flash	OFF
Model	2 flashes (The model header failure only occurs at power up of unit. Install correct header and restart power up.)	ON
Cooling Fan	3 flashes	ON
High limit	4 flashes	ON

Selector and Thermostat Characteristics

The tables show the operating characteristics of the selector and thermostat positions. The selector and thermostat are potentiometers (variable resistors) whose resistance varies per user selections. The selected resistance informs the board of the user's selections. All values are approximate.

Selector Position	Resistance - Voltage blue to yellow		Resistance - Voltage blue to black		Resistance - Voltage black to yellow	
Off	10.0 kΩ	5 VDC	∞	5 VDC	∞	0
Bake	10.0 kΩ	5 VDC	374 Ω	0.24 VDC	9.48 kΩ	4.74 VDC
Convection Bake	10.0 kΩ	5 VDC	1.60 kΩ	0.86 VDC	8.42 kΩ	4.12 VDC
Tru Convection	10.0 kΩ	5 VDC	2.60 kΩ	1.47 VDC	7.28 kΩ	3.49 VDC
Convection Roast	10.0 kΩ	5 VDC	3.85 kΩ	2.08 VDC	6.01 kΩ	2.88 VDC
Convection Broil	10.0 kΩ	5 VDC	5.00 kΩ	2.64 VDC	4.81 kΩ	2.31 VDC
Hi Broil	10.0 kΩ	5 VDC	6.14 kΩ	3.21 VDC	3.78 kΩ	1.80 VDC
Med Broil	10.0 kΩ	5 VDC	7.20 kΩ	3.66 VDC	2.72 kΩ	1.26 VDC
Low Broil	10.0 kΩ	5 VDC	8.28 kΩ	4.21 VDC	1.58 kΩ	0.77 VDC
Self Clean	10.0 kΩ	5 VDC	9.41 kΩ	4.82 VDC	443 Ω	0.22 VDC

Resistance checks are made on the selector wire harness with the selector wire harness disconnected from the board at location P14 and thermostat disconnected. The harness is connected to P14 for voltage checks.



Thermostat Position	Resistance - Voltage blue to yellow		Resistance - Voltage blue to orange		Resistance - Voltage orange to yellow	
Off	10.0 kΩ	5 VDC	∞	5 VDC	∞	0
200°F	10.0 kΩ	5 VDC	8.75 kΩ	4.32 VDC	1.31 kΩ	0.64 VDC
300°F	10.0 kΩ	5 VDC	6.88 kΩ	3.37 VDC	3.23 kΩ	1.40 VDC
400°F	10.0 kΩ	5 VDC	4.75 kΩ	2.50 VDC	5.20 kΩ	2.46 VDC
500°F	10.0 kΩ	5 VDC	2.89 kΩ	1.56 VDC	7.10 kΩ	3.42 VDC
Broil	10.0 kΩ	5 VDC	2.19 kΩ	1.11 VDC	8.00 kΩ	3.88 VDC
Clean	10.0 kΩ	5 VDC	696 Ω	0.36 VDC	9.34 kΩ	4.63 VDC

Resistance checks are made on the thermostat wire harness with the thermostat wire harness disconnected from the board at location P14 and selector disconnected. The harness is connected to P14 for voltage checks.

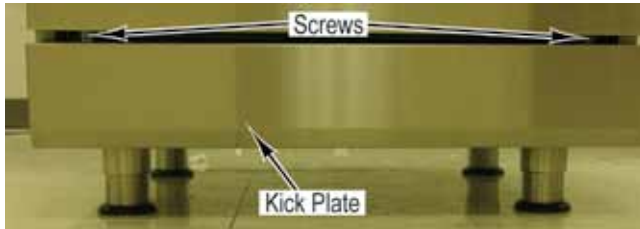
⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Access Control Board Assembly

The Control board is located below the oven cavity. Access is required in order to perform many troubleshooting procedures.

1. Remove screws and lift kick plate from keyhole screws.



2. Remove keyhole screws and lower access grill from range.



3. Remove screws and slide control panel assembly from range.



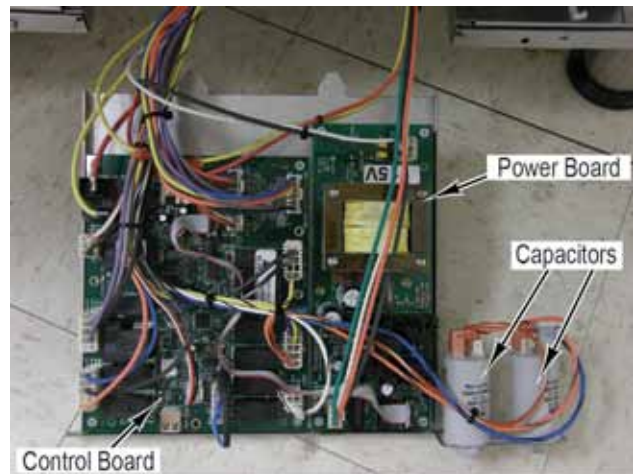
Note: During installation, make sure the tabs on the control panel are aligned with the slots on the range.

4. Reverse procedure for installation.

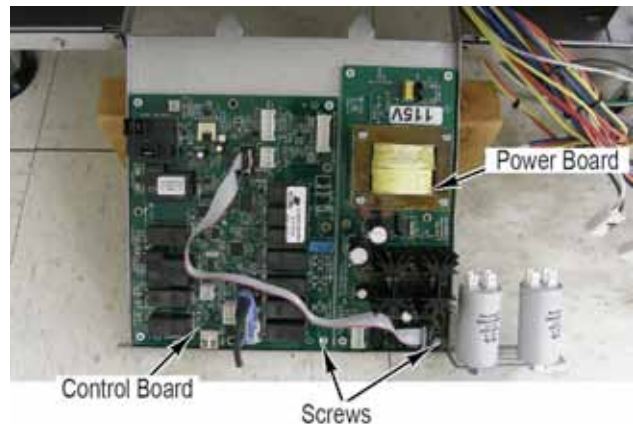
Control and Power Board Removal

The Control Board and the Power Board are located below the oven cavity.

1. Access Control Board (see Access Control Board Assembly).
2. Mark and disconnect all connectors from control board, power board, and capacitors.



3. Place control board panel assembly on suitable work surface.
4. Remove screws and control board from lower mounting plate.



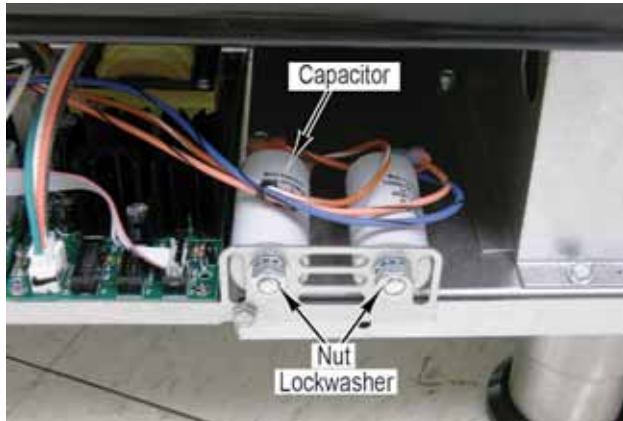
5. Reverse procedure for installation.

WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Motor Capacitor Removal

1. Access Control Board (see Access Control Board Assembly).
2. Mark and disconnect wires from capacitor.
3. Remove nut, lockwasher, and capacitor from lower mounting plate.



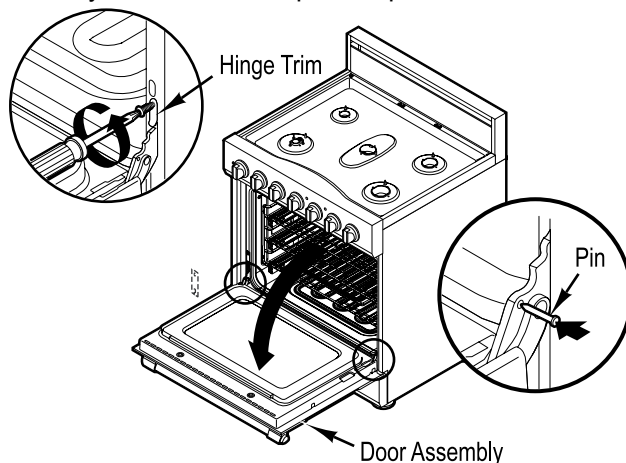
4. Reverse procedure for installation.

Door Assembly Removal

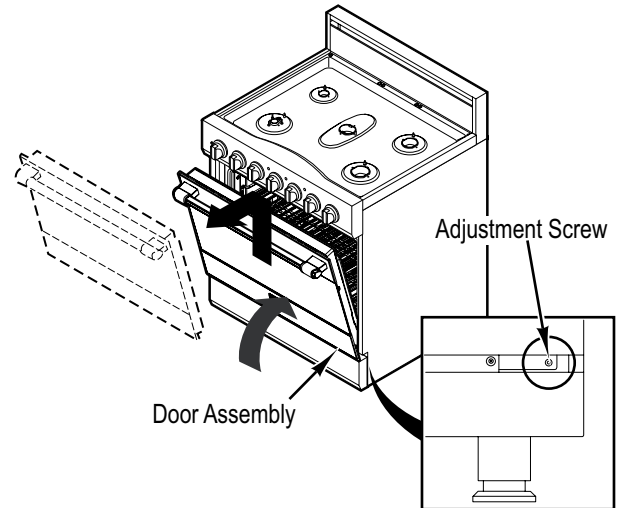
1. Open door completely. Place pins supplied with unit in pin holes.

Important: For personal safety, only use pins supplied with unit. Pins can be ordered if needed #005116-000.

2. Remove screws and hinge trim from range.
3. Gently close door until pins stop door.



4. Lift door up and out.

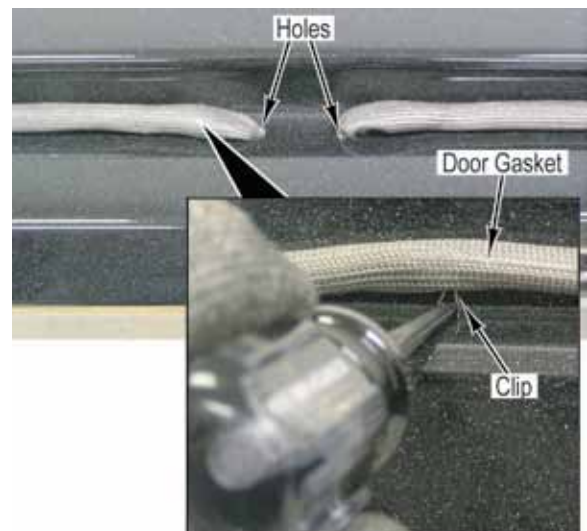


Note: If the door needs to be adjusted, loosen hinge trim screws. Adjust the screws located between the door and kick plate using a $5/32$ " hex head Allen wrench. Tighten hinge trim screws after adjustment is made.

5. Reverse procedure for installation.

Door Gasket Removal

1. Open door and insert a narrow tool or small, flat-blade screwdriver into the center of each clip and pry upward.
2. Remove the door gasket from two holes in the bottom of the door liner.



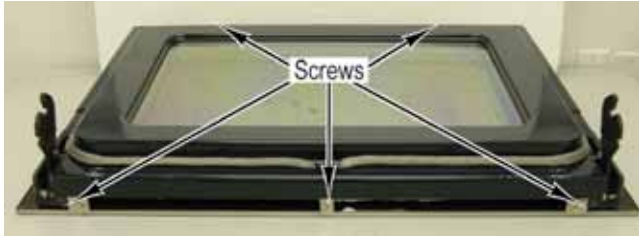
3. Reverse procedure for installation.

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Outer Door Panel Assembly Removal

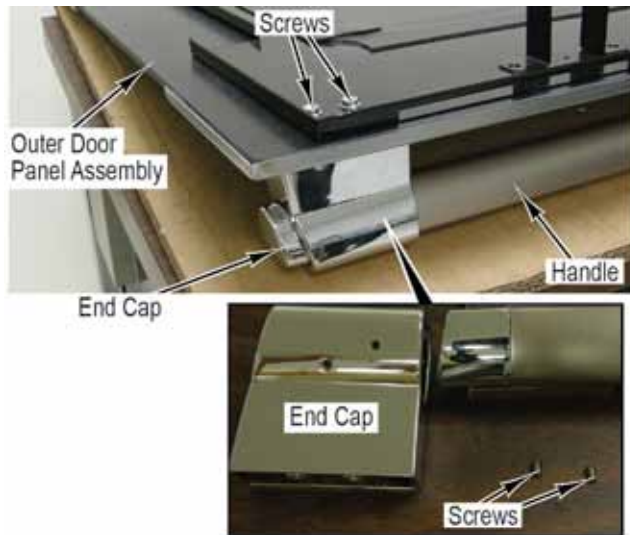
1. Remove oven door (see Door Assembly Removal).
2. Place the door, handle side down, on a protected surface.
3. Remove screws that attach the outer door panel assembly to the inner door panel assembly.



4. Lift the inner door panel assembly from the outer door panel assembly.
5. Reverse procedure for installation.

Door Handle Removal

1. Remove outer door panel assembly (see Outer Door Panel Assembly Removal).
2. Remove screws and handle assembly from outer door panel assembly.
3. Remove screws and slide end caps from handle.

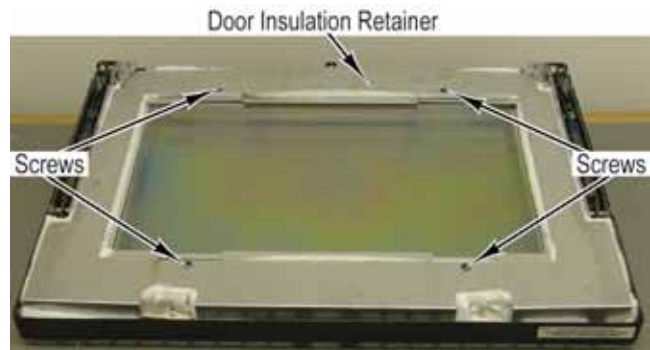


Note: View set screw markings thru end cap holes, then install set screws.

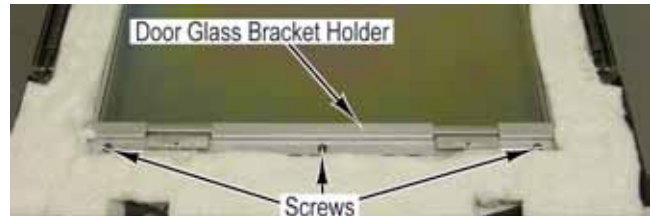
4. Reverse procedure for installation.

Inner Door Glass Removal

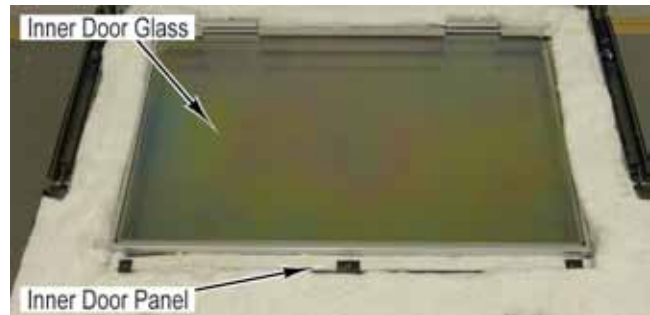
1. Remove outer door panel assembly (see Outer Door Panel Assembly Removal).
2. Remove screws and door insulation retainer from door glass bracket holders.



3. Remove screws and door glass bracket holder from inner door panel.



4. Remove inner door glass from inner door panel.



5. Remove black fiberglass rope from inner door panel.



Note: Use care with insulation, make sure to replace any damaged or missing insulation. Keep vent on inner door panel clear of insulation.

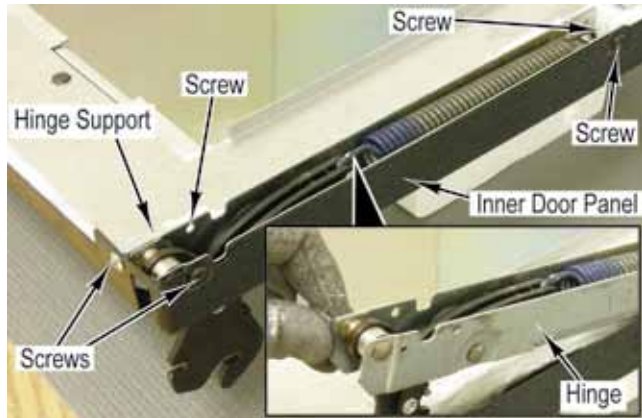
6. Reverse procedure for installation.

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Door Hinge Removal

1. Remove outer door panel assembly (see Outer Door Panel Assembly Removal).
2. Remove screws and hinge from inner door panel.
3. Remove screw and hinge support from hinge.



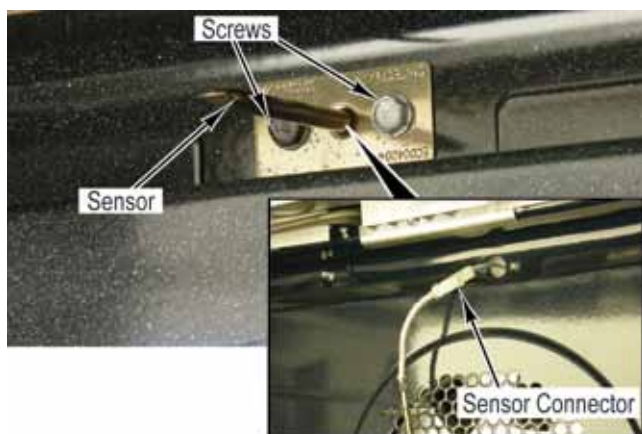
Note: Use care with insulation, make sure to replace any damaged or missing insulation. Keep vent on inner door panel clear of insulation.

4. Reverse procedure for installation.

Temperature Sensor (RTD) Removal

1. Remove oven door (see Door Assembly Removal).
2. Remove screws that attach the sensor to the back of the oven liner.
3. Pull the sensor connector into the oven cavity and disconnect sensor connector.

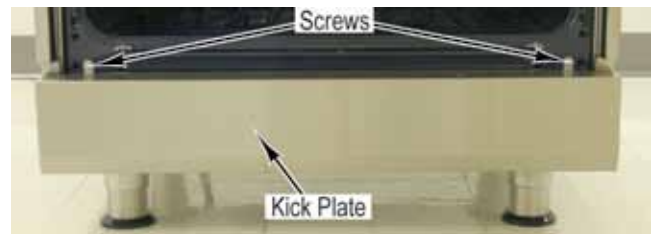
Note: During removal or install, it may be helpful to insert a small screwdriver or awl into the connector to guide the wiring and connector thru the oven cavity.



4. Reverse procedure for installation.

Bake Element Removal

1. Remove oven door (see Door Assembly Removal).
2. Remove screws and lift kick plate from keyhole screws.



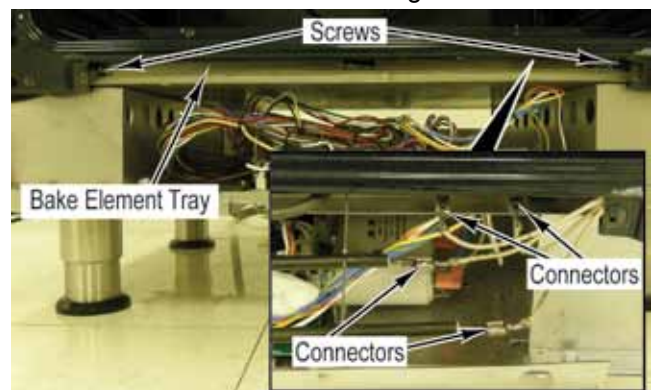
3. Remove keyhole screws and lower access grill from range.
4. Remove screws and bake tray cover from range.



5. Remove bake element insulation from range.

Note: Use care with insulation, make sure to replace any damaged or missing insulation.

6. Remove screws and slide bake element tray forward to gain access to connectors.
7. Mark and disconnect connectors from bake element.
8. Remove bake element from range.



9. Reverse procedure for installation.

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Rack Support Removal

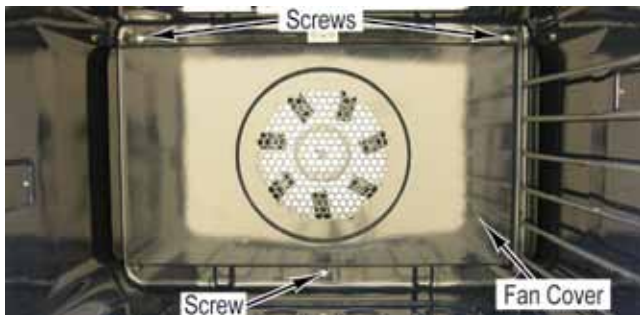
1. Remove oven door (see Door Assembly Removal).
2. Remove screws and rack support from holes in back wall of oven cavity.



3. Reverse procedure for installation.

Convection Fan Cover Removal

1. Remove one oven rack support (see Rack Support Removal).
2. Remove screws and fan cover from oven cavity.



3. Reverse procedure for installation.

Smoke Eliminator Removal

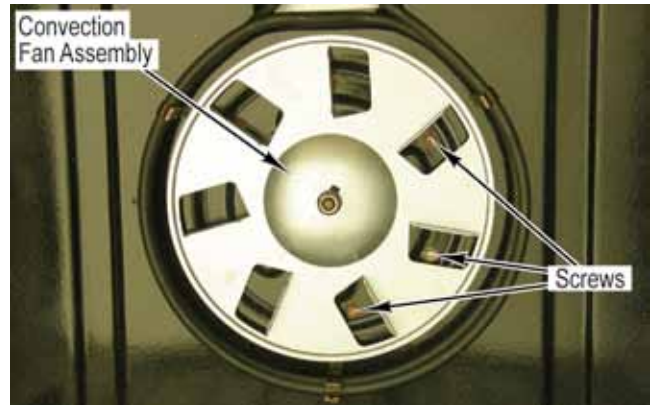
1. Remove convection fan cover (see Convection Fan Cover Removal).
2. Remove screws that hold the smoke eliminator to the top, left, rear corner of the oven liner.
3. Pull down to remove smoke eliminator from oven.



4. Reverse procedure for installation.

Convection Fan Assembly Removal

1. Remove convection fan cover (see Convection Fan Cover Removal).
2. Remove screws and set convection fan assembly on oven liner.



3. Disconnect connector and remove convection fan assembly from oven cavity.



Note: The mounting hole pattern for the convection fan assembly is NOT symmetrical. Line up holes before installing.

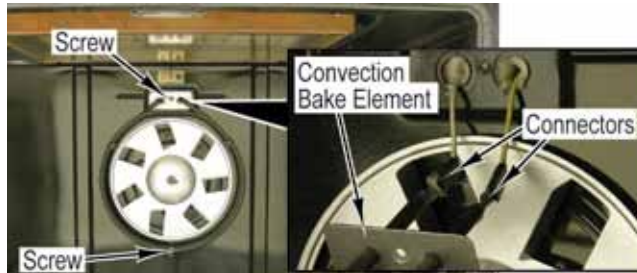
4. Reverse procedure for installation.

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Convection Bake Element Removal

1. Remove convection fan cover (see Convection Fan Cover Removal).
2. Remove screws that attach the convection bake element to the oven liner.
3. Mark and disconnect wires from convection element.



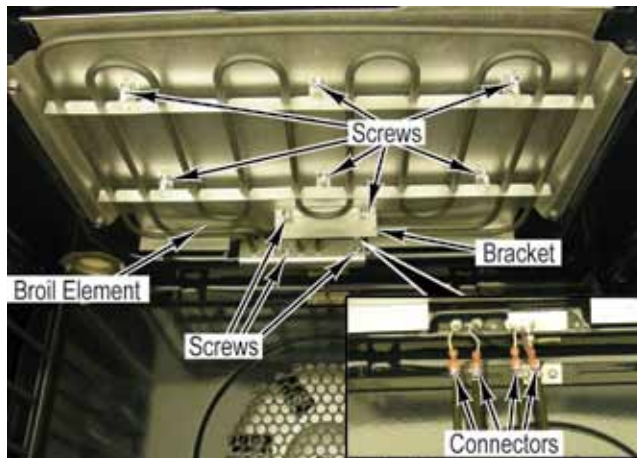
4. Reverse procedure for installation.

Broil Element Removal

1. Remove oven door (see Door Assembly Removal).
2. Remove screws and bracket from broil assembly.
3. Remove screws that hold the broil assembly to the back of the oven liner.
4. Remove screws that hold the broil assembly to the top of the oven liner.

Note: Use care when pulling broil assembly into the oven cavity. Make sure the connectors remain on the broil assembly.

5. Carefully pull connectors through the oven cavity wall and lower the broil assembly.
6. Mark and disconnect connectors from broil element.



Note: During installation, make sure broil connectors go back through the oven liner.

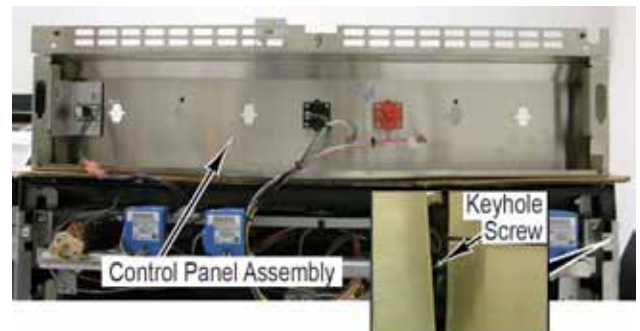
7. Reverse procedure for installation.

Control Components Accessed

1. Remove oven door (see Door Assembly Removal).
2. Remove all surface burner knobs.
3. Remove screws and bezels from control panel assembly where knobs have been removed.
4. Remove screws from below control panel assembly.



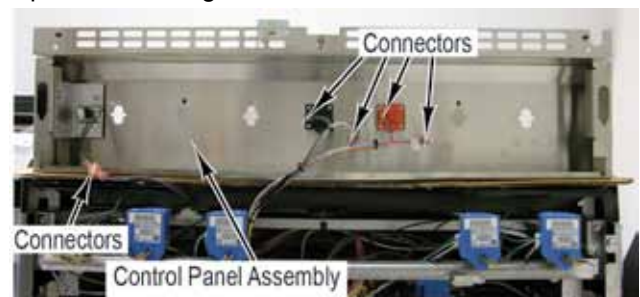
5. Lift up to remove control panel assembly from keyhole screws.
6. Place control panel assembly on protective surface on the top of range.



7. Reverse procedure for installation.

Control Panel Assembly Removal

1. Access control components (see Control Components Accessed).
2. Mark and disconnect all connectors to remove control panel from range.



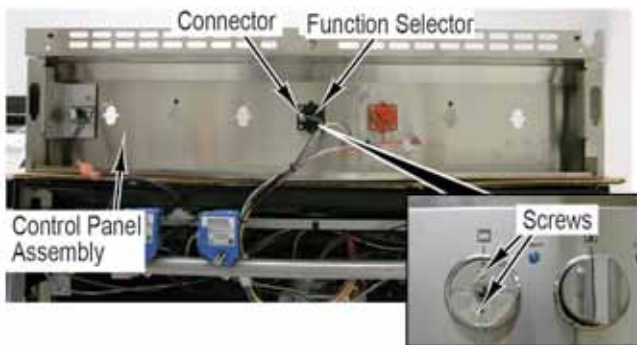
3. Reverse procedure for installation.

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Oven Function Selector Removal

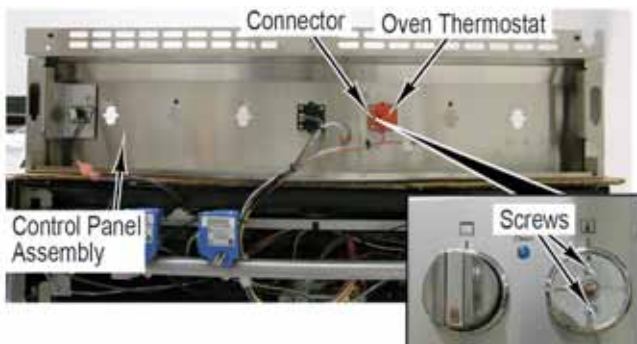
1. Access control components (see Control Components Accessed).
2. Disconnect connector from the oven function selector.
3. Remove screws, bezel, and oven function selector from control panel.



4. Reverse procedure for installation.

Oven Thermostat Removal

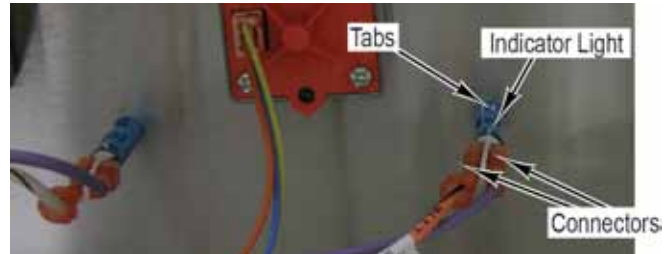
1. Access control components (see Control Components Accessed).
2. Disconnect connector from the oven thermostat.
3. Remove screws, bezel, and thermostat from control panel.



4. Reverse procedure for installation.

Indicator Light Removal

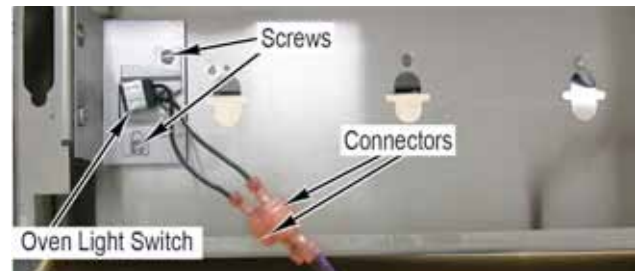
1. Access control components (see Control Components Accessed).
2. Disconnect connectors from the indicator light.
3. Press both tabs in and push indicator light out from control panel.



4. Reverse procedure for installation.

Oven Light Switch Removal

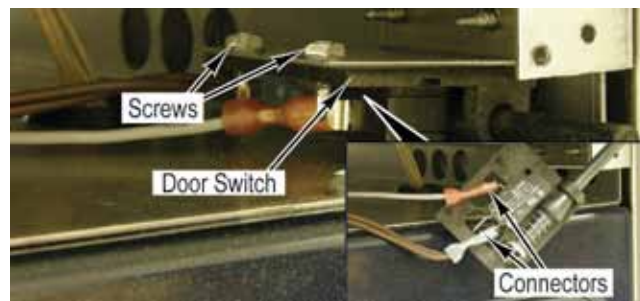
1. Access control components (see Control Components Accessed).
2. Mark and disconnect connectors from light switch.
3. Remove screws and oven light switch from control panel.



4. Reverse procedure for installation.

Door Switch Removal

1. Access control components (see Control Components Accessed).
2. Remove screws and door switch from range.
3. Mark and disconnect connectors from door switch.



4. Reverse procedure for installation.

⚠ WARNING

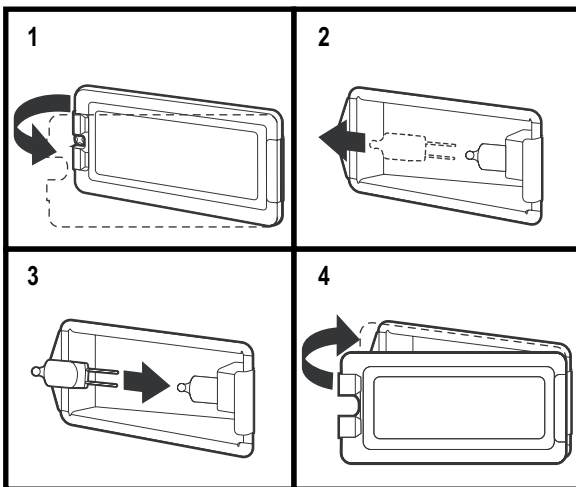
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Oven Light Bulb Removal

⚠ CAUTION

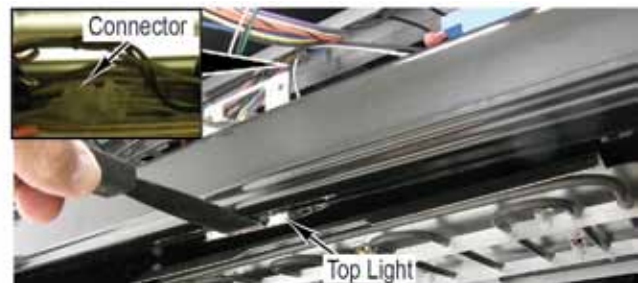
DO NOT touch bulb with bare hands. Clean off any signs of oil from the bulb and handle with a soft cloth.

1. Open oven door and unsnap glass light cover using a screwdriver in the access groove.
2. Firmly grasp light bulb and pull out.
3. Replace with halogen bulb using volt and wattage requirements listed on glass cover.
4. Replace the light cover by snapping glass cover onto metal box.



Top Light Housing Removal

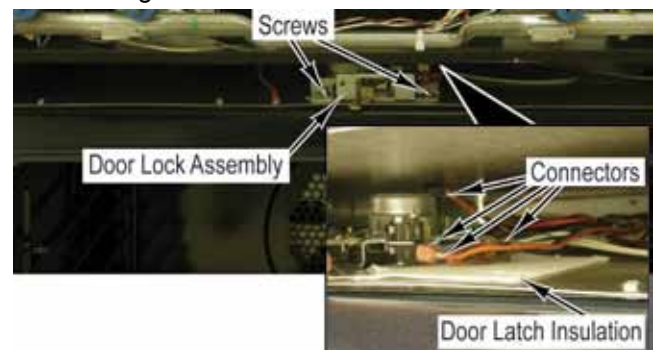
1. Access control components (see Control Components Accessed).
2. Remove glass light cover and bulb.
3. Disconnect connector for top light and housing ground wire.
4. Use a putty knife to depress tab in front of light housing and tilt front of housing down to remove housing from cavity.



5. Reverse procedure for installation.

Door Lock Assembly Removal

1. Access control components (see Control Components Accessed).
2. Remove screws and door lock assembly from range.
3. Mark and disconnect connectors from door lock assembly.
4. Remove door lock assembly and door latch insulation from range.



5. Reverse procedure for installation.

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

IRIS Module Removal

1. Access control components (see Control Components Accessed).
2. Disconnect connectors from module.
3. Pull to remove module from burner valve.



4. Reverse procedure for installation.

Backguard Removal

1. Access the rear of the range.
2. Remove screws and backguard from range.



3. Reverse procedure for installation.

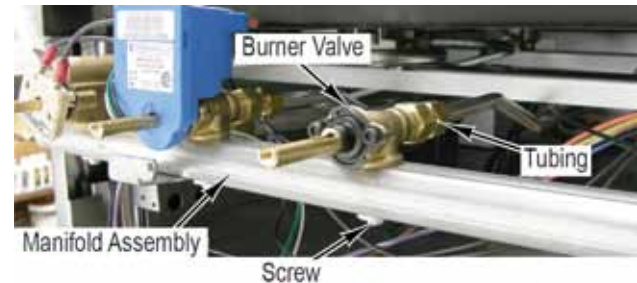
Surface Burner Valve Removal

⚠ DANGER

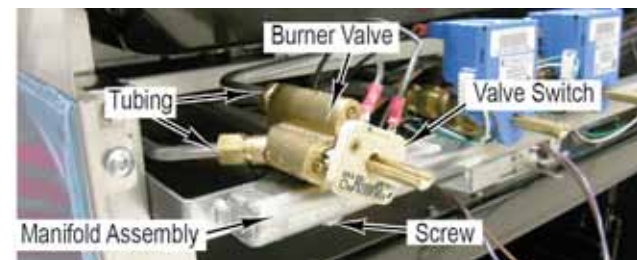
Gas leak hazard. To avoid risk of personal injury or death, leak testing of the appliance must be conducted according to the manufacturer's instructions. Before placing appliance in operation, always check for gas leaks with soapy water solution.

DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS.

1. Shut off main gas supply to the range.
2. Access control components (see Control Components Accessed).
3. Pull to remove spark module from burner valve.
4. Remove tubing from back of burner valve.
5. Remove screw and burner valve from manifold assembly.



6. For the stack burner valve, pull to remove the valve switch from the valve.



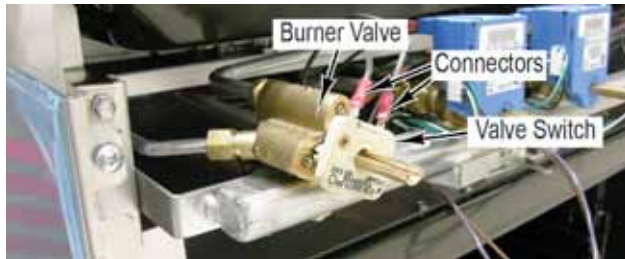
7. Reverse procedure for installation.
8. Perform gas leak test.

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Stack Valve Burner Switch Removal

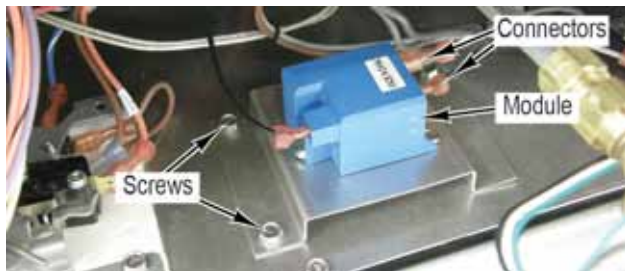
1. Remove the control panel assembly (see Control Panel Assembly Removal).
2. Disconnect connectors from valve switch.
3. Pull to remove valve switch from burner valve.



4. Reverse procedure for installation.

Stack Valve Igniter Module Removal

1. Remove the control panel assembly (see Control Panel Assembly Removal).
2. Disconnect connectors from module.
3. Remove screws and module from range.



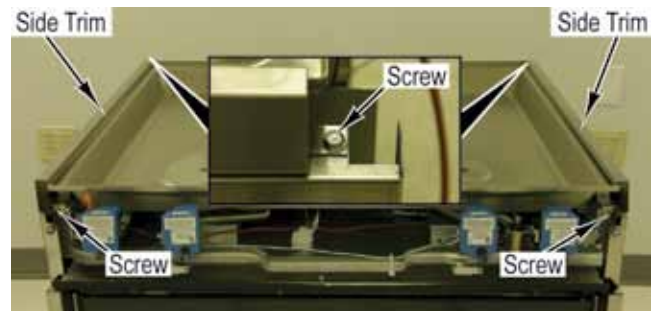
4. Reverse procedure for installation.

Main Top Removal

1. Remove the control panel assembly (see Control Panel Assembly Removal).
2. Remove backguard assembly (see Backguard Assembly Removal).
3. Remove grates, burner caps, and burner heads from each burner base assembly.
4. Remove screws from each burner base assembly.



5. Remove screws and side trim from each side of range.



6. Lift main top from range.



Note: Make sure to return insulation to original position under each side trim.

7. Reverse procedure for installation.

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

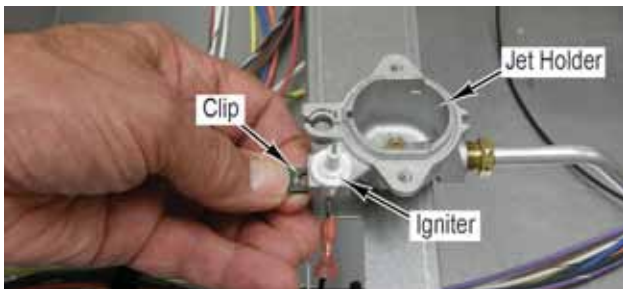
Jet Holder Removal

⚠ DANGER

Gas leak hazard. To avoid risk of personal injury or death, leak testing of the appliance must be conducted according to the manufacturer's instructions. Before placing appliance in operation, always check for gas leaks with soapy water solution.

DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS.

1. Shut off main gas supply to the range.
2. Remove main top (see Main Top Removal).
3. Remove clip and igniter from jet holder.



4. Loosen and slide tubing nut away from jet holder.
5. Remove inverted screws from jet holder.
6. Lift jet holder to remove from tubing.



7. Reverse procedure for installation.
8. Perform gas leak test.

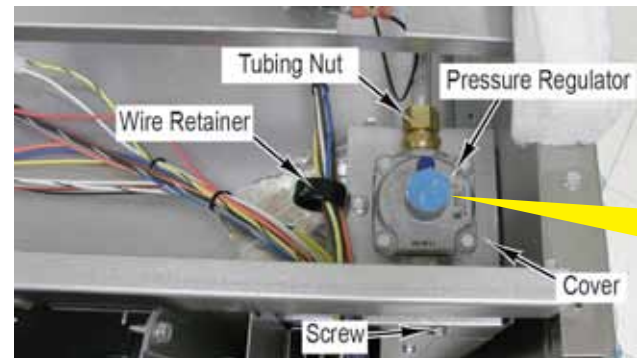
Pressure Regulator Removal

⚠ DANGER

Gas leak hazard. To avoid risk of personal injury or death, leak testing of the appliance must be conducted according to the manufacturer's instructions. Before placing appliance in operation, always check for gas leaks with soapy water solution.

DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS.

1. Shut off main gas supply to the range.
2. Remove main top (see Main Top Removal).
3. Remove tubing nut from pressure regulator.
4. Remove screw and wire retainer from cover.
5. Remove screw and cover from range.
6. Remove pressure regulator from cover.



7. Reverse procedure for installation.

Note: Use approved sealant when installing pressure regulator.

8. Perform gas leak test.

⚠ DANGER

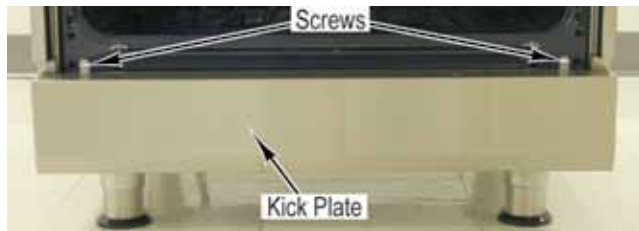
When removing or installing the gas regulator make sure that you have a wrench on manifold to prevent twisting and damaging the manifold.

⚠ WARNING

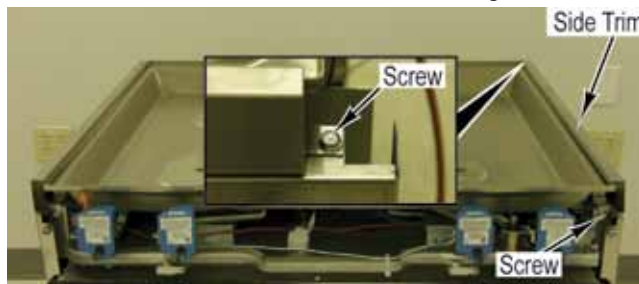
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Side Trim and Side Panel Removal (Right side shown)

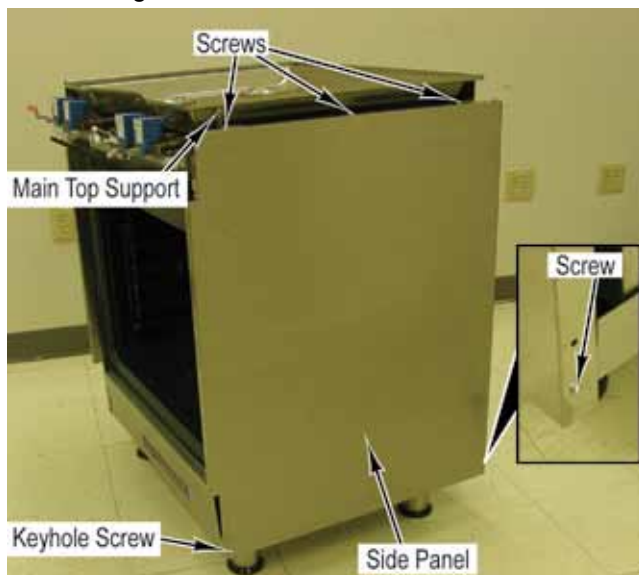
1. Remove the control panel assembly (see Control Panel Assembly Removal).
2. Remove backguard assembly (see Backguard Assembly Removal).
3. Remove screws and lift kick plate from keyhole screws.



4. Remove screws and side trim from range.



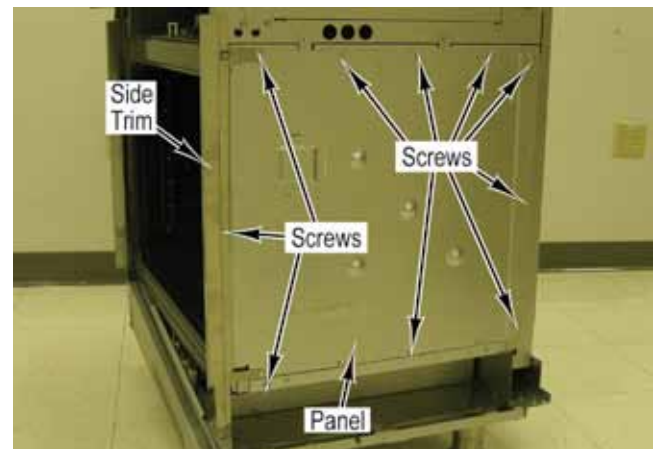
5. Remove keyhole screw from front of range.
6. Remove screw from back of range.
7. Remove screws, main top support, and side panel from range.



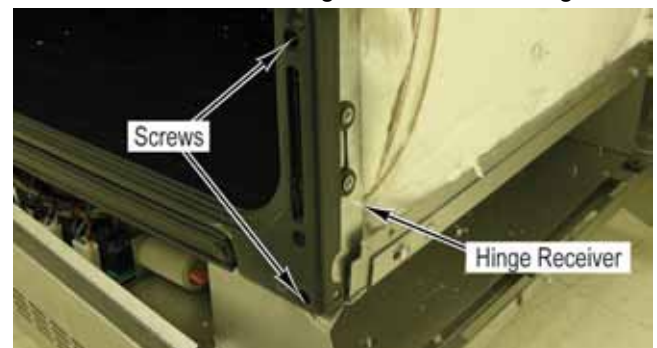
8. Reverse procedure for installation.

Hinge Receiver Removal

1. Remove side panel (see Side Panel Removal).
2. Remove screws and side trim from range.
3. Remove screws and panel from range.



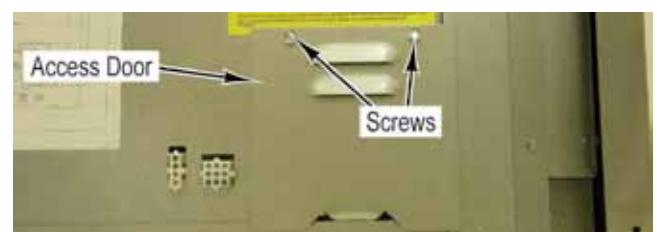
4. Remove screws and hinge receiver from range.



5. Reverse procedure for installation.

Back Panel Removal

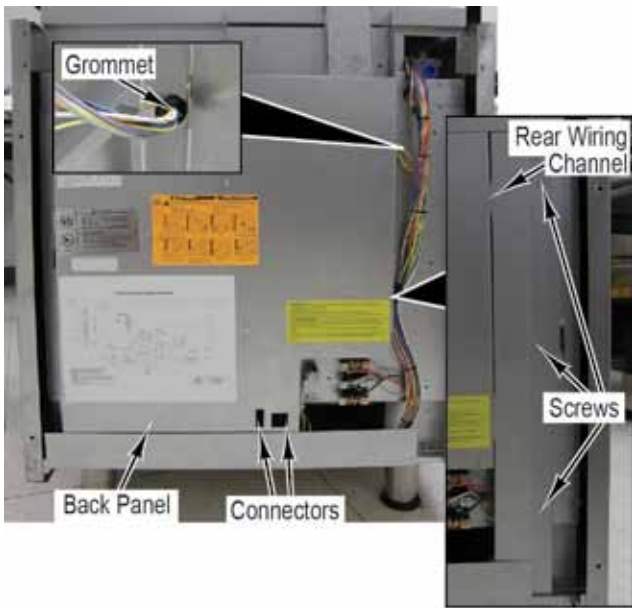
1. Remove backguard assembly (see Backguard Assembly Removal).
2. Remove screws and access door from back cover.



⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit, unless test procedures require power to be connected. Discharge capacitor through a resistor before attempting to service. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

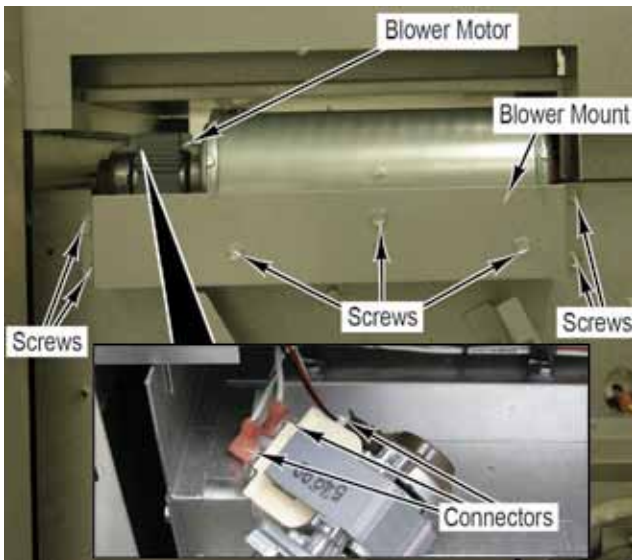
3. Push connectors through back panel.
4. Remove screws and rear wiring channel from range.
5. Remove screws and back panel from range.
6. Slide grommet with power cord from panel.



7. Reverse procedure for installation.

Cooling Blower Motor Removal

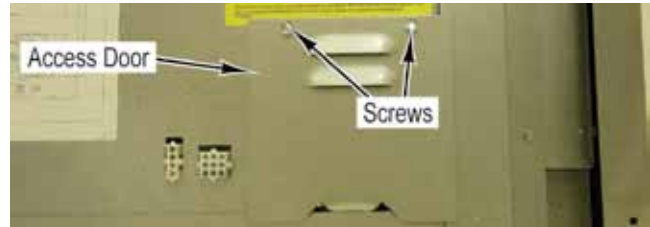
1. Remove back panel (see Back Panel Removal).
2. Remove three screws from blower motor.
3. Remove four screws and blower mount from range.
4. Mark and disconnect three connectors and remove blower motor.



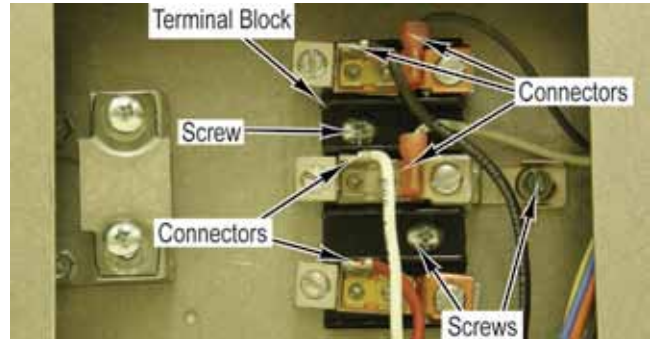
5. Reverse procedure for installation.

Terminal Block Removal

1. Access the rear of the range.
2. Remove screws and access door from back cover.



3. Mark and disconnect all connectors from terminal block.
4. Remove screws and terminal block from range.



5. Reverse procedure for installation.

Orifice Removal

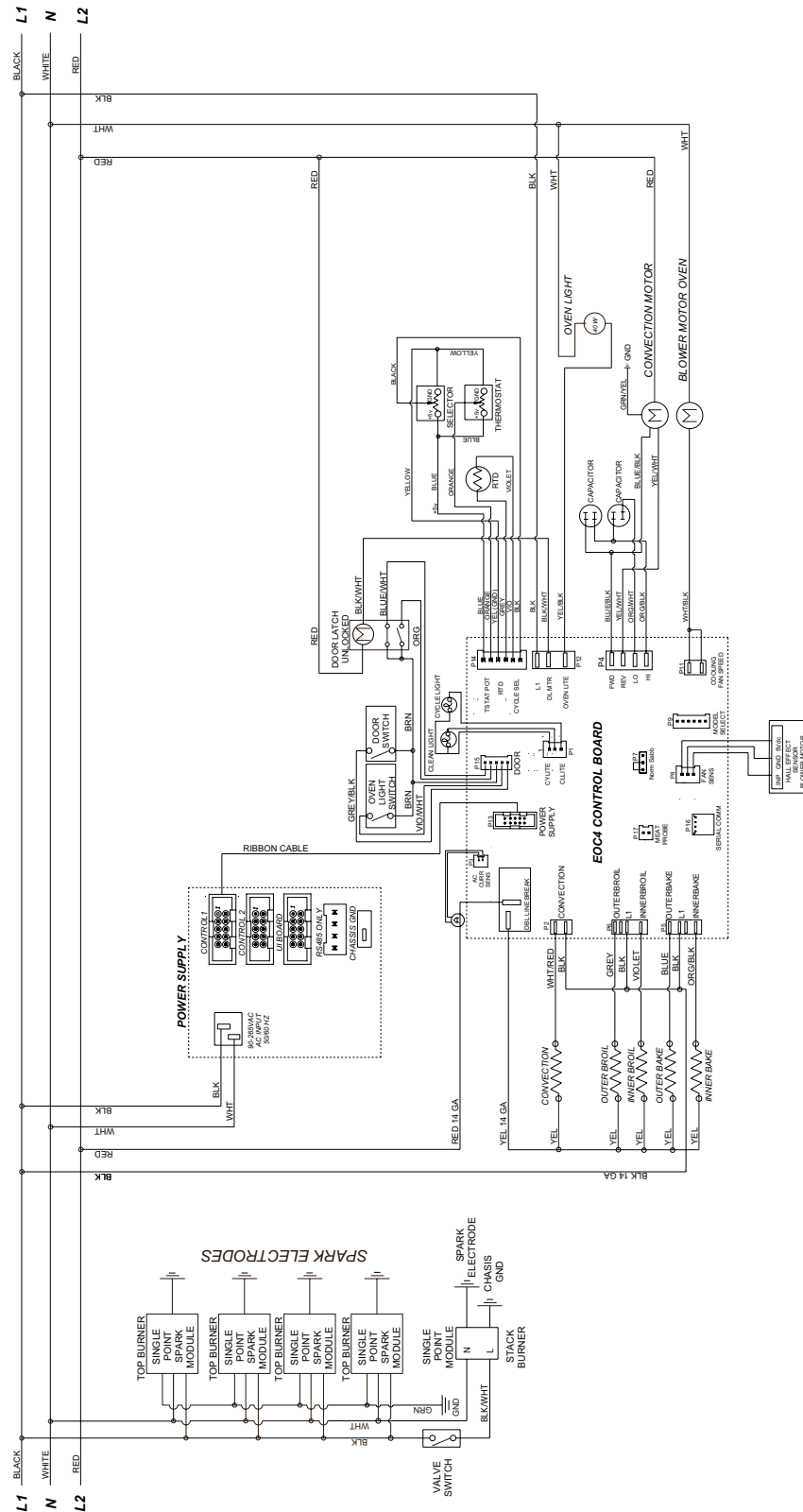
1. Remove grates, burner caps, and burner heads from burner base assembly.
2. Remove orifice from jet holder.



3. Reverse procedure for installation.

Wiring Diagram

RDSCD230-5B WIRING DIAGRAM



DSCD230 Dual Fuel Range