



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" Electronic Control Dual Fuel Range

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

**VDSC530T**



SMC-0012  
January, 2010

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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 appliances. It is possible, however, that during the lifetime of a product, service may be required. Products should be serviced only by a qualified authorized service technician who is familiar with the safety procedures required to perform the repair and is equipped with the proper tools, parts, testing instruments, and the appropriate service manual.

### Safety Information

We have provided many important safety messages throughout this manual and on the appliance. **ALWAYS** read and obey all safety messages. This is a safety alert symbol.



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

<b>DANGER</b>
Immediate hazards which <b>WILL</b> result in severe personal injury or death.
<b>WARNING</b>
Hazards or unsafe practices which <b>COULD</b> result in severe personal injury or death.
<b>CAUTION</b>
Hazards or unsafe practices which <b>COULD</b> result in minor personal injury, product or property damage.

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

<b>WARNING</b>
To avoid risk of serious injury or death, repairs should not be attempted by unauthorized personnel.

<b>CAUTION</b>
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.

To locate an authorized service agent, call:  
Viking Customer Service  
Phone No. 1-888-845-4641

Address your written correspondence to:  
Viking Preferred Service  
1803 HWY 82 West  
Greenwood, MS 38930

### **Professional Series Freestanding Dual Fuel Ranges**

#### **One Year Full Warranty**

Freestanding dual fuel ranges and all of their component parts, except as detailed below\*, are warranted to be free from defective materials or workmanship in normal household use for a period of twelve (12) months from the date of original retail purchase. Viking Range Corporation, warrantor, agrees to repair or replace, at its option, any part which fails or is found to be defective during the warranty period.

\*Glass (including light bulbs), painted and decorative items are warranted to be free from defective materials or workmanship for a period of ninety (90) days from the date of original retail purchase. ANY DEFECTS MUST BE REPORTED TO THE SELLING DEALER WITHIN NINETY (90) DAYS FROM DATE OF ORIGINAL RETAIL PURCHASE.

Viking Range Corporation uses the most up-to-date processes and best materials available to produce all color finishes. However, slight color variation may be noticed because of the inherent differences in painted parts and porcelain parts as well as differences in kitchen lighting, product locations, and other factors.

#### **Five Year Limited Warranty**

Any surface burner, griddle burner, grill burner, or oven burner which fails due to defective materials or workmanship in normal household use during the second through fifth year from the date of original retail purchase will be repaired or replaced, free of charge for the part itself, with the owner paying all other costs, including labor.

#### **Ten Year Limited Warranty**

Any porcelain oven or porcelain inner door panel which rusts through due to defective materials or workmanship in normal household use during the second through the tenth year from the date of original retail purchase will be repaired or replaced, free of charge for the part itself, with the owner paying all other costs, including labor.

#### **Ninety (90) Day Residential Plus Warranty**

This warranty applies to applications where use of the product extends beyond normal residential use. Examples are, but not limited to, bed and breakfasts, fire stations, private clubs, churches, etc. This warranty excludes all commercial locations such as restaurants, food service locations and institutional food service locations.

This warranty extends to the original purchaser of the product warranted hereunder and to each transferee owner of the product during the term of the warranty.

This warranty shall apply to products purchased and located in the United States and Canada. Products must be purchased in the country where service is requested. Warranty labor shall be performed by an authorized Viking Range Corporation service agency or representative. Warranty shall not apply to damage resulting from abuse, accident, natural disaster, loss of electrical power to the product for any reason, alteration, improper installation, improper operation or repair or service to the product by anyone other than an authorized Viking Range Corporation service agency or representative. Warranty shall not apply to damage resulting from indoor units being used in outdoor situations. This warranty does not apply to commercial usage. This warranty does not cover any food or medicine loss due to product failure. Warrantor is not responsible for consequential or incidental damage whether arising out of breach of warranty, breach of contract, or otherwise. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Owner shall be responsible for proper installation, providing normal care and maintenance, providing proof of purchase upon request, and making the appliance reasonably accessible for service. If the product or one of its component parts contains a defect or malfunction during the warranty period, after a reasonable number of attempts by the warrantor to remedy the defects or malfunctions, the owner is entitled to either a refund or replacement of the product or its component part or parts. Replacement of a component part includes its free installation. Warrantor's liability on any claim of any kind, with respect to the goods or services covered hereunder, shall in no case exceed the price of the goods or service or part there of which gives rise to the claim.

#### **VIKING RANGE CORPORATION**

111 Front Street, Greenwood, Mississippi (MS) 38930 USA  
662-455-1200

For more product information, call 1-888-VIKING1 (845-4641), or visit our web site at <http://www.vikingrange.com>

### WARRANTY SERVICE

Under the terms of this warranty, service must be performed by a factory authorized Viking Range Corporation service agent or representative. Service will be provided during normal business hours, and labor performed at overtime or premium rates shall not be covered by this warranty. To obtain warranty service, contact the dealer from whom the product was purchased, an authorized Viking Range Corporation service agent, or Viking Range Corporation. Provide model and serial number and date of original purchase. For the name of your nearest authorized Viking Range Corporation service agency, call the dealer from whom the product was purchased or Viking Range Corporation. **IMPORTANT:** Retain proof of original purchase to establish warranty period.

The return of the Owner Registration Card is not a condition of warranty coverage. You should, however, return the Owner Registration Card so that Viking Range Corporation can contact you should any question of safety arise which could affect you.

Any implied warranties of merchantability and fitness applicable to the described halogen elements are limited in duration to the period of coverage of the applicable express written limited warranties set forth above. Some jurisdictions do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which may vary from jurisdiction to jurisdiction.

**VIKING RANGE CORPORATION**  
111 Front Street • Greenwood, Mississippi 38930 USA  
(662) 455-1200  
[www.vikingrange.com](http://www.vikingrange.com)

**Specification subject to change without notice.**

## Specifications\*

30" Electronic Control Dual Fuel Range	
Description	VDSC530T-4B
Overall width	29-7/8" (75.9 cm)
Overall height	To top of side trim-35-7/8" (91.1 cm) min. 37" (94.0 cm) max. Legs adjust-1-1/8" (2.9 cm)
Overall depth from rear	
To end of side panel	24-5/16" (61.8 cm)
To front of door	25-3/4" (65.4 cm)
To end of landing ledge	28-1/16" (71.2 cm)
To end of door handle	28-11/16" (72.9 cm)
Additions to base height	To top of island trim-add 1" (2.5 cm) To top of backguard-add 8" (20.3 cm) To top of high shelf-add 23-1/2" (59.7 cm)
Gas requirements	Shipped Natural or LP/Propane, field convert with conversion kit (purchased separately); accepts standard residential 1/2" (1.3 cm) ID gas service line.
Gas manifold pressure	Natural 5.0" W.C.P./ Liquid Propane L/P 10.0" W.C.P.
Electrical requirements	240-208 VAC 60 Hz electrical connection box on product, connect with locally supplied 3-wire, flexible cord or "pigtail" rated 40 amp 125-250 VAC minimum. Cord must be agency approved for use with household electric ranges.
Maximum amp usage	240V-25.4 amps 208V-22.9 amps
Surface burner rating	
Natural	18,500 BTU (5.4 kW)/16,600 BTU (4.9 kW)
LP	15,000 BTU (4.4 kW)/12,500 BTU (3.7 kW)
Oven interior width	25-5/16" (64.6 cm)
Oven interior height	16-1/2" (41.9 cm)
Oven interior depth	Oven(s) interior height 16-1/2" (41.9 cm)
Oven volume	
Overall	4.7 cu. ft.
AHAM	4.1 cu. ft.
Approximate shipping weight	565 lbs. (254.3 kg)

\*Go to [vikingrange.com](http://vikingrange.com) for the latest specifications.

Minimum clearances from adjacent combustible construction:

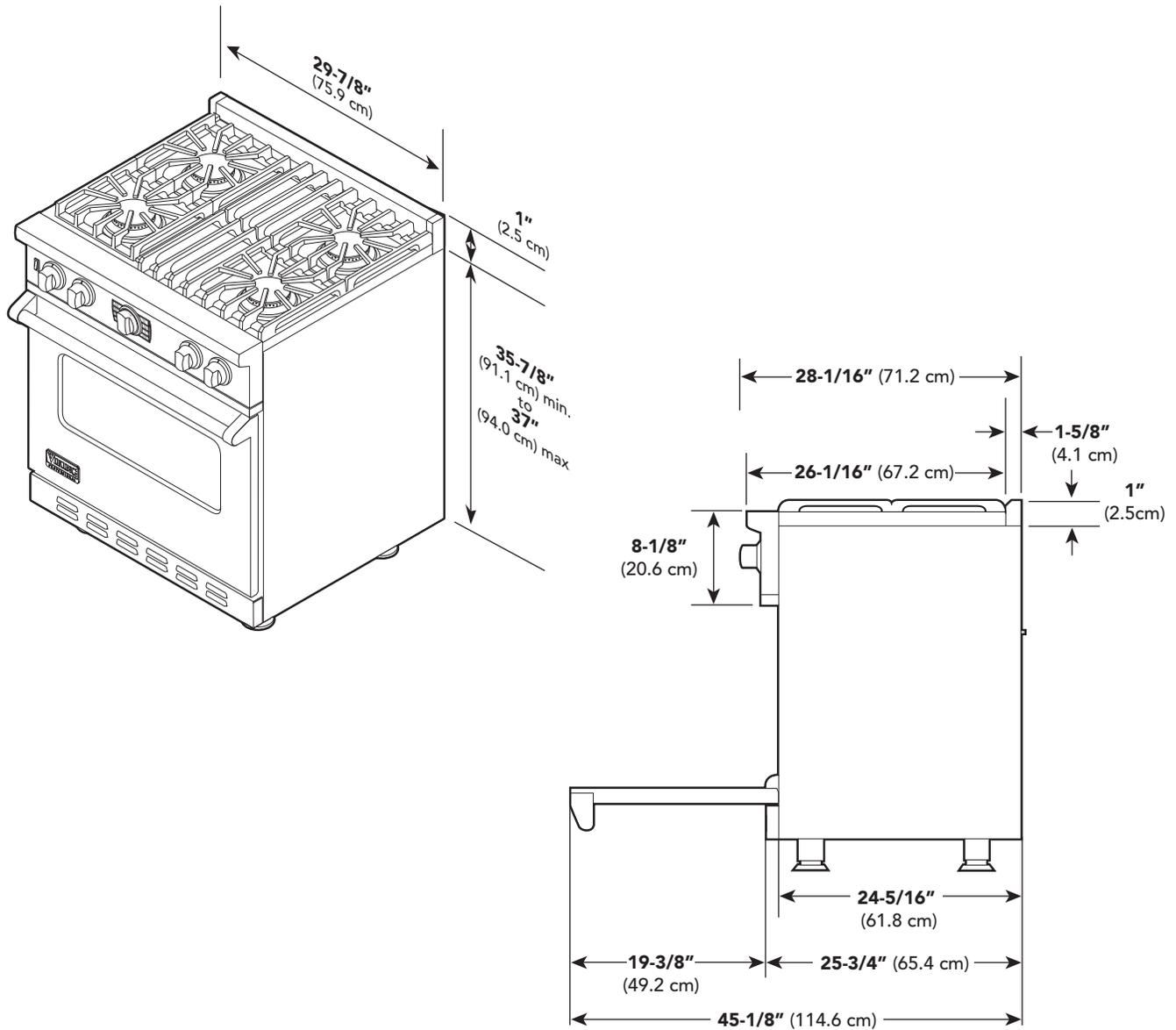
Below cooking surface (36" [91.4 cm] and below)

- Sides - 0"
- Top grate support - 36" (91.4 cm)

Above cooking surface (above 36" [91.4 cm])

- Sides - 6" (15.2 cm)
- Within 6" (15.2 cm) side clearance, wall cabinets no deeper than 13" (33.0 cm) must be minimum 18" (45.7 cm) above cooking surface
- Wall cabinets directly above product must be a minimum of 42" (106.7 cm) above cooking surface
- Rear - 0" with 8" backguard or high shelf; 0" with island trim and non-combustible rear wall
- 6" (15.2 cm) with island trim and combustible rear wall

## Dimensions



## 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., could create a 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.

## Warnings

### Heating Elements

- **NEVER** touch oven heating elements, areas near elements, or interior surfaces of oven.
- Heating elements may be hot even though they are dark in color. Areas near elements 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 spill-overs 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

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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.

Warnings

 **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**

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

 **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.**

 **CAUTION**

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

## Electrical and Gas Requirements

### Electrical Requirements

Check your national and local codes regarding this unit. This range requires 3-wire or 4-wire, 240-208 VAC/60 Hz. (See "Appendix A" for grounding instructions.) Unit must be fused separately from any other circuit.



### WARNING

**ELECTRICAL SHOCK HAZARD.** To avoid the risk of electrical shock, personal injury or death; verify electrical power is turned off at the breaker box and gas supply is turned off until the range is installed and ready to operate, installation by an authorized installer only.

### Gas Connection

The gas supply (service) line must be the same size or greater than the inlet line of the appliance. This range uses a 1/2" (1.3 cm) ID NPT (Sch40) inlet. Sealant on all pipe joints must be resistive to LP gas.

The range is designed specifically for natural gas or liquid propane (LP) gas. Before beginning installation, verify that the model is compatible with the intended gas supply.

### Manual shut-off valve:

This installer-supplied valve must be installed in the gas service line before the appliance in the gas stream and in a location where it can be reached quickly in the event of an emergency.

### Connecting Gas & Electric



### 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.**

Connect gas and electrical. Before placing appliance in operation, always check for gas leaks. This must be performed by your dealer, a qualified licensed plumber, or gas service company.

### In Massachusetts:

A "T" handle type manual valve must be installed in the gas supply line to the appliance.

**IMPORTANT:** Any conversion required must be performed by your dealer or a qualified licensed plumber or gas service company. Please provide the service person with this manual before work begins.

### Pressure Regulator:

- All heavy-duty, commercial type cooking equipment must have a pressure regulator on the incoming service line for safe and efficient operation, since service pressure may fluctuate with local demand. External regulators are not required on this range since a regulator is built into each unit at the factory. Under no condition bypass this built-in regulator.
- Manifold pressure should be checked with a manometer, natural gas requires 5.0" W.C.P. and LP gas requires 10.0" W.C.P. Incoming line pressure upstream from the regulator must be 1" W.C.P. higher than the manifold pressure in order to check the regulator. The regulator used on this range can withstand a maximum input pressure of 1/2" PSI (14.0" W.C.P.). If the line pressure is in excess of that amount, a step down regulator will be required.
- The appliance must be disconnected from the gas supply piping system during any pressure testing of that system.

### Flexible Connections:

If the unit is to be installed with flexible couplings and/or quick-disconnect fittings, the installer must use a heavy-duty AGA design-certified flexible connector of at least 1/2" (1.3 cm) ID NPT (with suitable strain reliefs) in compliance with ANSI Z21.41 and Z21.69.

### In Canada:

CAN 1-6, 10-88 metal connectors for gas appliances and CAN 1-6.9 M79 quick disconnect devices for use with gas fuel.

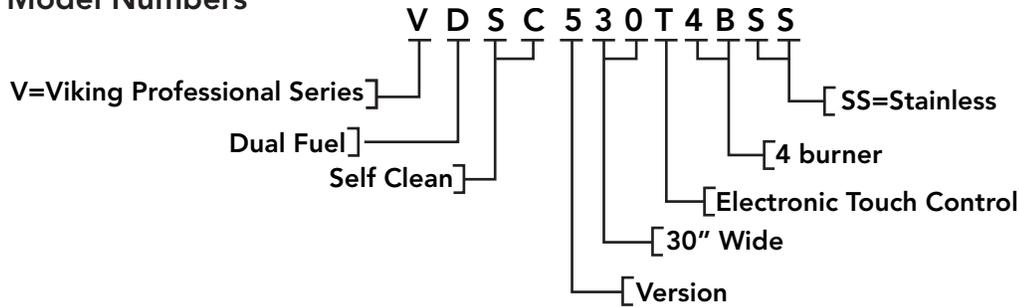
### In Massachusetts:

This appliance must be installed with a 36" (3-foot) long flexible gas connector.

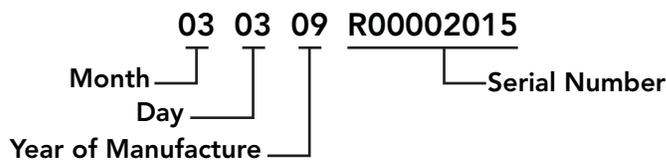
## Model – Serial Number Matrix

The serial number and model number for your appliance are located on the identification plate mounted on the underside of the control panel.

### Model Numbers



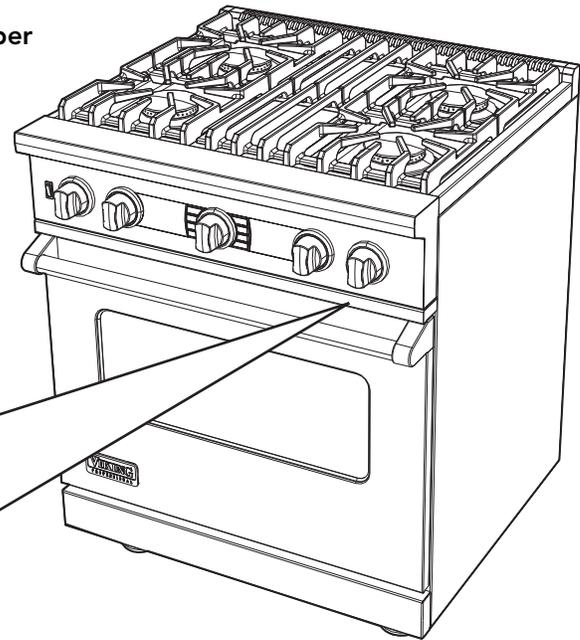
### Serial Numbers



GAZ DU HAUT			
BTU (KW) HR RATE	NATURAL	LP/PROPANE	
SURFACE 1@	15,000 (4.4)	12,500 (3.7)	
SURFACE 1@	18,500 (4.4)	16,000 (4.8)	
FOUR ELECTRIQUE			
VOLTS	Hz	WATTS	AMPS
240V/120VAC	60	5800	24
208V/120VAC	60	4200	20.8
005186-000			

**VIKING RANGE CORP.**  
 GREENWOOD, MISSISSIPPI 38930  
 MADE IN USA

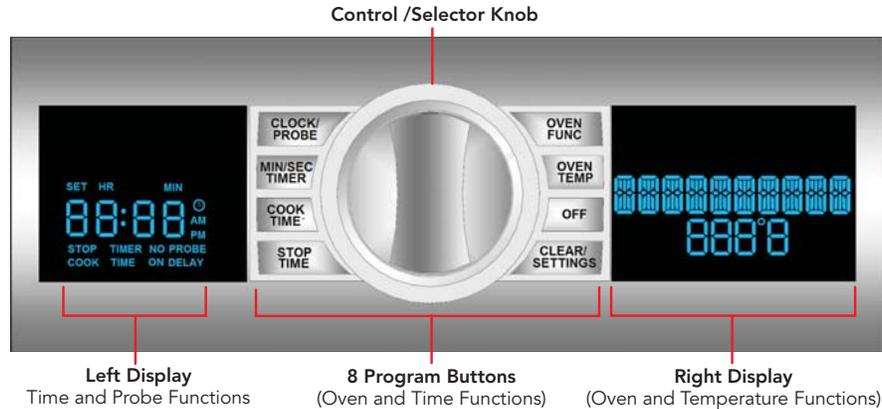
MODEL/	<b>VDSC530T4BSS</b>
MODEL/	
NUMBER/	<b>070109C00022890</b>
NUMBER/	



## Settings and Functions

### Control Operation

The following is the basic layout of the buttons, displays and how they are referenced below.



The main Controller governs all oven operations as well as timing and meat probe functions.

There are two digital displays, one on each side of the control knob and function buttons.

#### Left Display Window

The left display windows indicates the following:

- Time of Day
- Stop Time
- Cook Time
- Minute timer countdown



#### Clock, Time Function and Temp Probe Display

When AC power is applied (including after a power loss), the CLOCK display defaults to a flashing "12:00" and the word SET is displayed above the flashing display and begins the incremental time. *Set the time as shown on page 14.* When in any TIME programming mode, if a display indicator is flashing, pressing the "CLEAR/ SETTINGS" button will cancel the program and revert the display to the default setting (TIME OF DAY). Once a program has started, the CLEAR function is deactivated and the "OFF" button must be depressed to cancel a timed program.

Once set, the current time will be displayed. Depressing the "OFF" button will extinguish the display. Though the display is OFF, the clock function is operating.

#### Display Time of Day

If the display is off, depressing the "OVEN FUNC", "OVEN TEMP", "OFF" or "CLEAR/SETTINGS" buttons will activate the display and show the current time of day. Depressing the "CLOCK/PROBE" button will activate the display and allow adjustments to the current time of day.

Depressing the "MIN/SEC TIMER", "COOK TIME", and "STOP TIME" buttons will activate the display and allow time function programming. If you depress the "OFF" button once while in any of these modes, the TIME OF DAY will display. Depressing a second time will extinguish the display.

#### Right Display Window

The right display window indicates the following:

- Cooking Mode Selection
- Preheat Temperature
- Selected Temperature



#### Temperature And Oven Function

Temperature settings range from 150°F (55.5°C) – 550°F (287.8°C). Each increase/decrease is in 5°F (2°C) increments.

#### Temperature Display

Actual Temp (PREHEAT only): 1°F (1°C) increments  
 Meat Probe Actual Temp: 1°F (1°C) increments  
 Set Temp (all other cycles): 5°F (2°C) increments

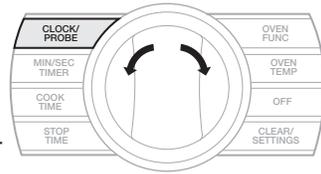
**Note:** PREHEAT and Meat Probe are the only cycles where actual temperature is displayed. Otherwise display shows only set temperature.

## Settings and Functions

### Clock/Probe

#### Setting Time of Day

(Clock defaults to "12:00" and flashes when first powered up or if power is interrupted.)

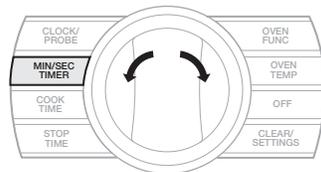


1. Press "CLOCK/PROBE" button. The clock display will flash.
2. Toggle "SELECTOR KNOB" right to increase or left to decrease to set desired time. Time will scroll in 1 minute increments per individual toggle. If "SELECTOR KNOB" is held in either right or left position, time will increase or decrease in 10 minute increments until desired time is reached. Clock automatically rolls from AM to PM.
3. Push in "SELECTOR KNOB" to accept time and start timer or after five seconds, time will auto-accept.

When clock is set and needs to be changed, press "CLOCK/PROBE" button and follow the two steps above. Clock display will flash when activated.

### Min/Sec Timer

(Used to operate timer independently from oven.)



1. Press "MIN/SEC TIMER" button. (0:00 will flash in display along with HR and MIN). Hours are to the left of the colon and minutes are to the right of the colon. TIMER will illuminate under display.
2. Toggle "SELECTOR KNOB" right to increase or left to decrease to set the desired time. Time will scroll in one minute increments per individual toggle. If "SELECTOR KNOB" is held in either right or left position, time will increase or decrease in 10 minute increments until desired time is reached.
3. Push in "SELECTOR KNOB" to accept time or after five second, stop time will auto-accept.

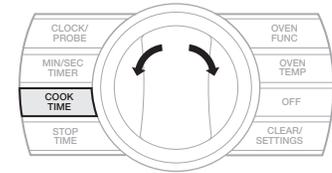


Time will count down on display from programmed time. There will be an audible beep at one minute and three beeps when time expires (0:00).

### Cook Time

(Start cooking now.)

The total cooking duration can be set to automatically shut the oven off at the desired time.



1. Press "COOK TIME" button. (0:00 will flash in display along with HR and MIN). Hours are to the left of the colon and minutes are to the right of the colon. COOK TIME will illuminate under display.



2. Toggle "SELECTOR KNOB" right to increase or left to decrease to set desired time. Time will scroll in one minute increments per individual toggle. If "SELECTOR KNOB" is held in either right or left position, time will increase or decrease in 10 minute increments until desired time is reached.
3. Push in "SELECTOR KNOB" to accept time or after five seconds, time will auto-accept.
4. Set OVEN FUNCTION and OVEN TEMPERATURE as detailed in "Set Oven Function and Temperature" on pages 16-17.

Timer will activate and count down once OVEN FUNCTION and OVEN TEMPERATURE have been activated. There will be an audible beep at one minute and three long beeps when time expires (0:00). Pressing the "COOK TIME" button, then the "CLEAR/SETTINGS" button will deactivate the timer during any cook program. The oven will continue to function normally. Depressing the "OFF" button during a timed cook cycle will shut timer and oven off.

**Note:** Cook timer does not count down during PREHEAT mode.

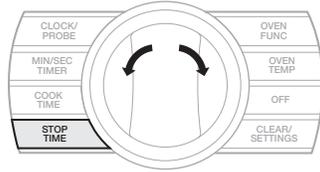
## Settings and Functions

### Stop Time

(Used in conjunction with COOK TIME.)

When your cooking needs require a specific start and finish cook

time; you would use this function along with COOK TIME. You will first set the time you want the recipe to finish then select the length of cook time. The EOC calculates the required the start time (plus 25 minutes for preheat).



For example:

Let's say you have a recipe that requires two hours of cooking at 350°F and you want the cooking to finish at 6:00 PM. You would first press the "STOP TIME" button and using the "SELECTOR KNOB", dial in 6:00 PM, then depress the "SELECTOR KNOB". The display will automatically switch to the COOK TIME program. Now dial in 2:00 for two hours of cooking and depress the "SELECTOR KNOB". You have now dialed in a cooking time of two hours and a finish time of 6:00 PM. Now, select a cooking program (Bake) and temperature (350°) (See page 16 for Oven Operation). The right display will show the selected cook program and temperature and the left display will show STOP TIME - 2:00 – DELAY. The oven will not start until the desired cook time + preheat time is reached, in this case 3:35 PM.

### To Set Delayed Start:

1. Press "STOP TIME" button. (Current time will flash and STOP will illuminate under display.)
2. Toggle "SELECTOR KNOB" right to increase or left to decrease to set desired time. Time will scroll in one minute increments per individual toggle. If "SELECTOR KNOB" is held in either right or left position, time will increase or decrease in 10 minute increments until desired time is reached.



3. Push in "SELECTOR KNOB" to accept time or after five seconds, stop time will auto-accept.

Once accepted, the illuminated STOP TIME will go off and COOK TIME will illuminate under display. COOK TIME will display "0:00".



4. Set "COOK TIME" as detailed in "Cook Time" on page 14.
5. Set OVEN FUNCTION and TEMPERATURE FUNCTION as detailed in "Set Oven Function and Temperature" on page 16-17.

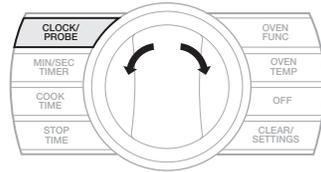
Once OVEN FUNCTION and OVEN TEMPERATURE have been selected and activated, their settings will be displayed during delay and through the cooking process. Timer will display programmed bake time. Below displayed bake time, DELAY will be illuminated. Pressing "CLOCK/PROBE" button shows time while maintaining delay programming. There will be an audible beep at one minute and three long beeps when time expires (0:00). Pressing the "CLEAR/SETTINGS" button will deactivate timer at any time.



Settings and Functions

**Meat Probe**

Refer to the Use and Care manual for proper use and placement of the temperature probe for required results.



1. With the probe inserted in the oven cavity socket, Press "CLOCK/PROBE" button to activate. Right display will read Meat Probe Set Point. (See "Temperature Range and Default" chart on page 29). PROBE will illuminate under left display.
2. Toggle "SELECTOR KNOB" right to increase or left to decrease to desired temperature in 1°F increments.
3. Push in "SELECTOR KNOB" to accept time or after five seconds, probe time will auto-accept.
4. Set OVEN FUNCTION and TEMPERATURE as detailed in "Set Oven Function and Temperature" on pages 16-17.



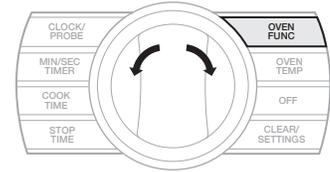
Meat probe will display actual internal meat temperature as it cooks. When programmed "Probe Temperature" is achieved, there will be three long "beeps" and right display alternates between FUNCTION/Set Point and DONE/Meat Set Point. On left display, PROBE icon flashes. Oven will automatically turn off. The control emits a short reminder beep every 60 seconds until the "OFF" or "CLEAR/SETTINGS" button is pressed.

**Note:** DELAY COOK cannot be performed in conjunction with a COOK BY PROBE operation as DELAY COOK has no Start Time programmed in.

**Note:** TIMED COOK can be performed along with a MEAT PROBE, but only when Meat Probe is used for monitoring only.

**Set Oven Function:**

1. Press "OVEN FUNCTION" button. (BAKE is set as default and flashes.)
2. Toggle "SELECTOR KNOB" left or right to desired oven function.
3. When desired oven function is flashing, push in "SELECTOR KNOB" to accept and advance to temperature settings. Exit with "OFF" button or auto exit after five seconds with no "SELECTOR KNOB" push.



**Function Displays (General)**

The functions look as follows:

BAKE



CONVECTION BAKE



TRUE CONVECTION



CONVECTION ROAST



CONVECTION BROIL HI (fixed 550°F)



CONVECTION BROIL MED (fixed 450°F)



CONVECTION BROIL LO (fixed 350°F)



BROIL HIGH (fixed 550°F)



## Settings and Functions

### Function Displays (General) (cont.)

**BROIL MEDIUM**  
(fixed 450°F)



**BROIL LOW**  
(fixed 350°F)



**AUTO ROAST**



**DEFROST**



**DEHYDRATE**



**PROOF**



**SELF CLEAN**



### Set Oven Temperature:

Once the oven function is selected, the function display stops flashing and proceeds to temperature setting.

1. When a temperature is flashing in the display you can adjust up or down in increments of 5 or 25 degrees.
  - a. The default temperature for BAKE is 350°F. All Convection programs (except CONV BROIL) and AUTO ROAST default to 325°. If the default temperature requires adjustments, toggle to the left to decrease or to the right to increase the temperature in 5° increments. If you hold in either direction, the temperature will increase in 25° increments until desired temperature has been achieved.
  - b. For ALL broil programs, the temperatures are fixed and cannot be adjusted. *Refer to the chart on page 29 for parameters.*
  - c. DEHYDRATE and PROOF default to 90°F.
  - d. SELF CLEAN has no temperature adjustment.
2. When desired temperature is flashing, push in "SELECTOR KNOB" to accept desired oven temperature and start timer or after five seconds, temperature will auto accept (except SELF CLEAN). Once oven temperature has been selected, it ceases to flash.

## Settings and Functions

### Set Oven Temperature (cont.):

3. Display will intermittently display both set OVEN FUNCTION with set OVEN TEMPERATURE and PREHEAT and actual temperature until set temperature is reached at which point the set OVEN FUNCTION and set OVEN TEMPERATURE are locked in.

Oven will not be activated until both OVEN FUNCTION and OVEN TEMPERATURE are set. Oven temperature can be changed at any time by pressing "OVEN TEMPERATURE" and repeating steps 1 and 2. Oven can be deactivated at any time by pressing "OFF".

**Note:** OVEN TEMPERATURE button does not need to be pushed as the program automatically moves to setting OVEN TEMPERATURE after OVEN FUNCTION is selected.

**Note:** If an oven function is not selected, control exits to comply with 2-step "ON" requirement.

**Note:** If no selection has been made in OVEN TEMPERATURE, oven auto-starts at default temperature.

**Note:** While preheating, display will alternate between PREHEAT and FUNCTION and TEMPERATURE selected.

**Note:** PREHEAT is the only cycle where actual temperature is displayed, otherwise the display shows set temperature.

**Note:** Certain functions include a PREHEAT cycle. Once set temperature has been reached, the oven will automatically exit PREHEAT and follow normal operation mode.

### Self-Clean

If Self-Clean is selected:

1. The control initiates the door lock. During this period, the display shows LOCKING.
2. Once the door is locked, the control displays SELF CLEAN and the time remaining on the display.
3. The control continues in Self-Clean mode for the required Self-Clean duration.
4. Once the Self-Clean cycle is complete, the control displays COOLDOWN. The door remains locked.
5. When 500°F is reached, the control unlocks the door and COOLDOWN is no longer displayed.

**Note:** The cooling fan will operate throughout the complete 3.5 hour self-clean cycle, as well as the cool down stage until the cavity temperature drops below 250° temp.

### Normal Operation

Once the FUNCTION and TEMPERATURE are set, and PREHEAT completes, oven will beep indicating set temperature has been reached and normal operation begins.

1. The display shows set temperature.
2. Oven temperature can be adjusted at any time by pressing "OVEN TEMPERATURE", then rotating "SELECTOR KNOB". Push in "SELECTOR KNOB" to accept or auto-accept after five seconds. If user wants to return to previous setting, press the "CLEAR/SETTINGS" button (as long as the "SELECTOR KNOB" has not been pushed in).
3. If oven is no longer at correct temperature due to opening oven door, control will revert to PREHEAT.

## Settings and Functions

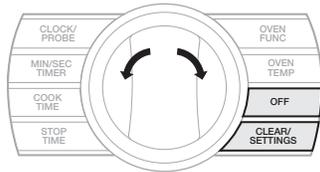
### Hold Mode

Automatically begins at end of TIMED COOK or DELAY COOK.

1. Control sounds a short reminder beep, every 60 seconds and temperature is set at 150°.
2. Display alternates between Function and Hold. After two hours in HOLD mode, oven turns .. "OFF".

### Sabbath Mode

This mode offers users belonging to religions with "no work" restrictions to program their ovens to comply with the Sabbath requirement. When oven door is opened in Sabbath mode, the oven light stays off while the convection fan and heating elements remain on.



### Showroom Mode

In Showroom mode, all operations of the oven (heating elements, convection and cooling fans) are disabled. The oven cavity lights will operate, as well as the oven controls and display.

### Control Lock

This feature allows user to lock out the control panel to prevent adjustments to the user settings.

1. To activate, press "OFF" and "CLEAR/ SETTINGS" buttons simultaneously. You will here 3 beeps indicating that the sequence was entered properly. Continue holding for 5 seconds. There will be an audible "beep" and the right display panel will show LOCKED and the left display (CLOCK) will go out. Pressing any of the 8 buttons or the "SELECTOR KNOB" will sound a three tone signal and right display will show LOCKED.
2. In order to deactivate, repeat the procedure used to lock the door. When the sequence is entered successfully, the word UNLOCKED will display for 3 seconds, then extinguish while the clock display comes on and displays the time of day.

**Note:** Door lock will not work in conjunction with this function.

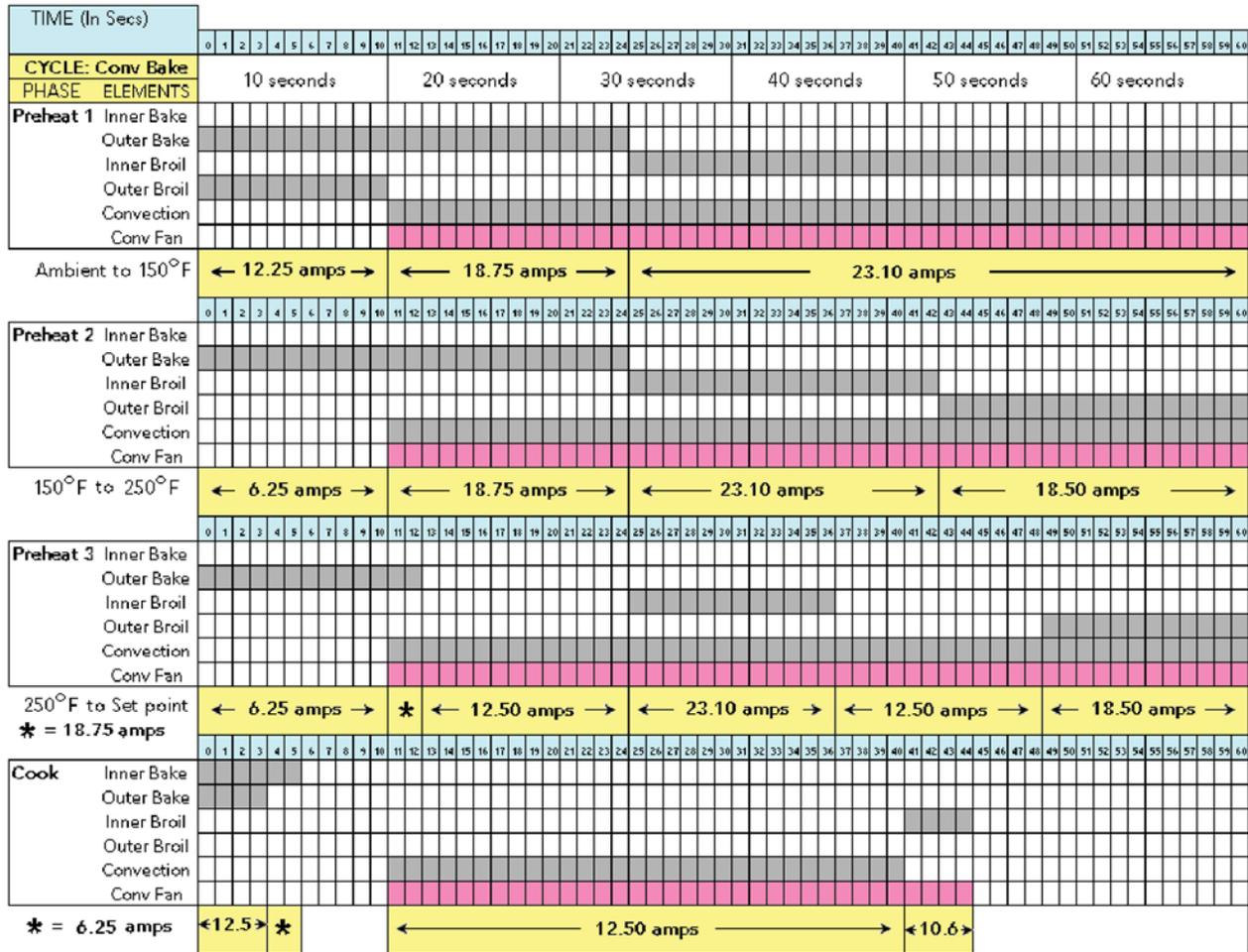
## Settings and Functions–Cycle Charts

### BAKE Cycle Cart



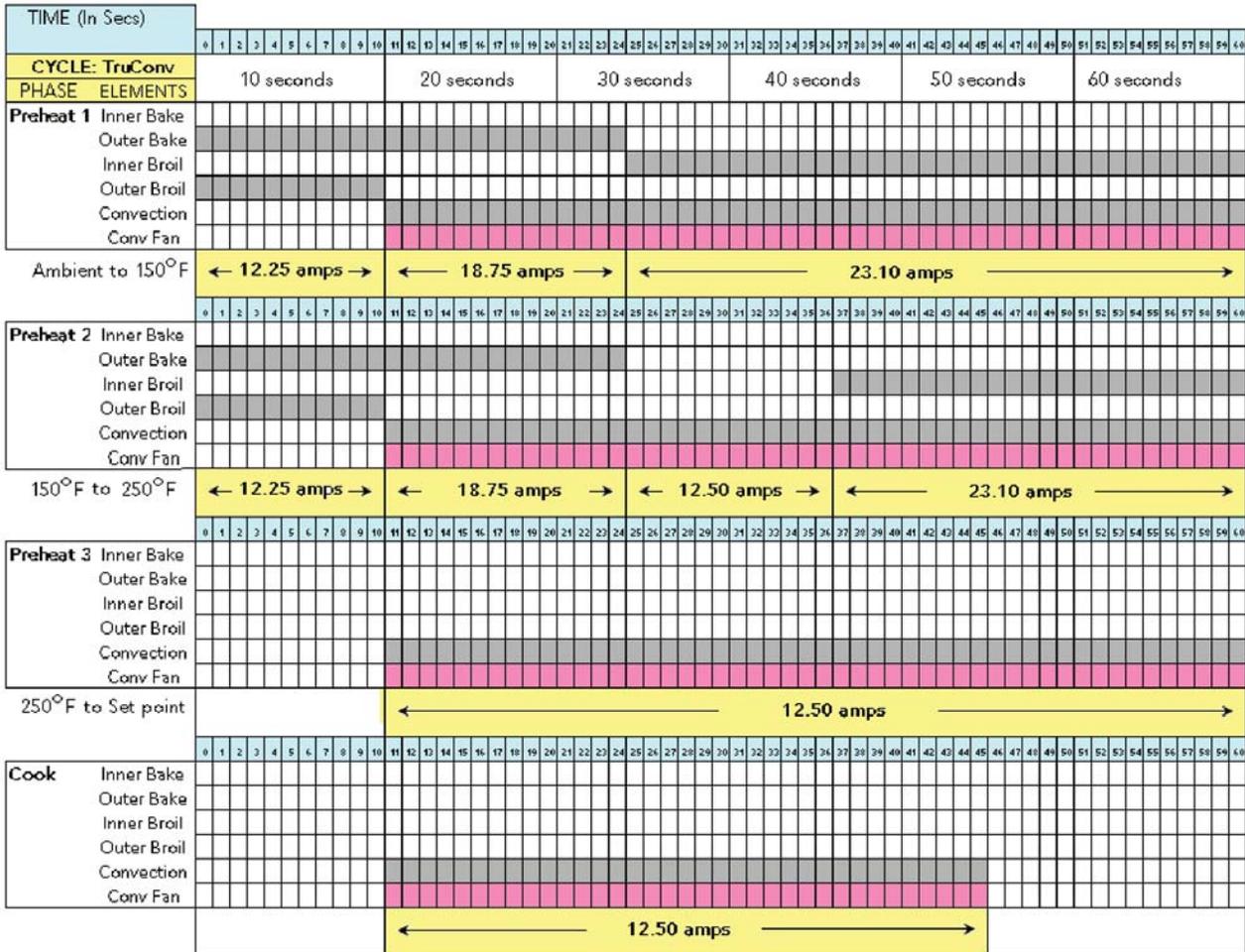
## Settings and Functions–Cycle Charts

### CONVECTION BAKE Cycle Chart

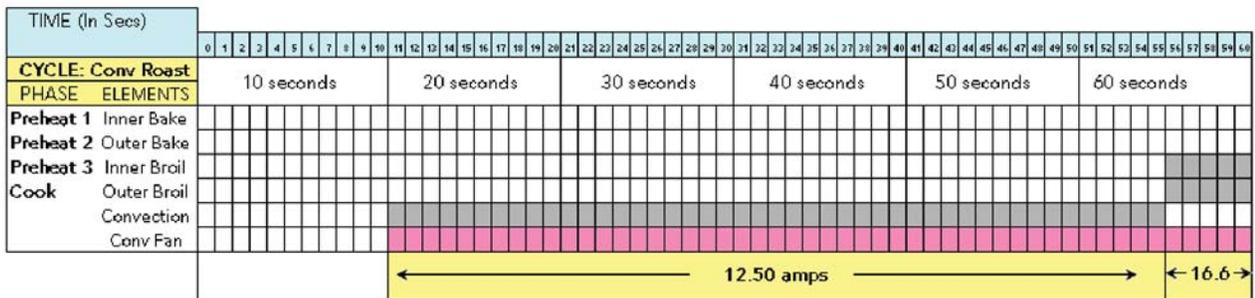


## Settings and Functions–Cycle Charts

TRUCONVEC Cycle Cart

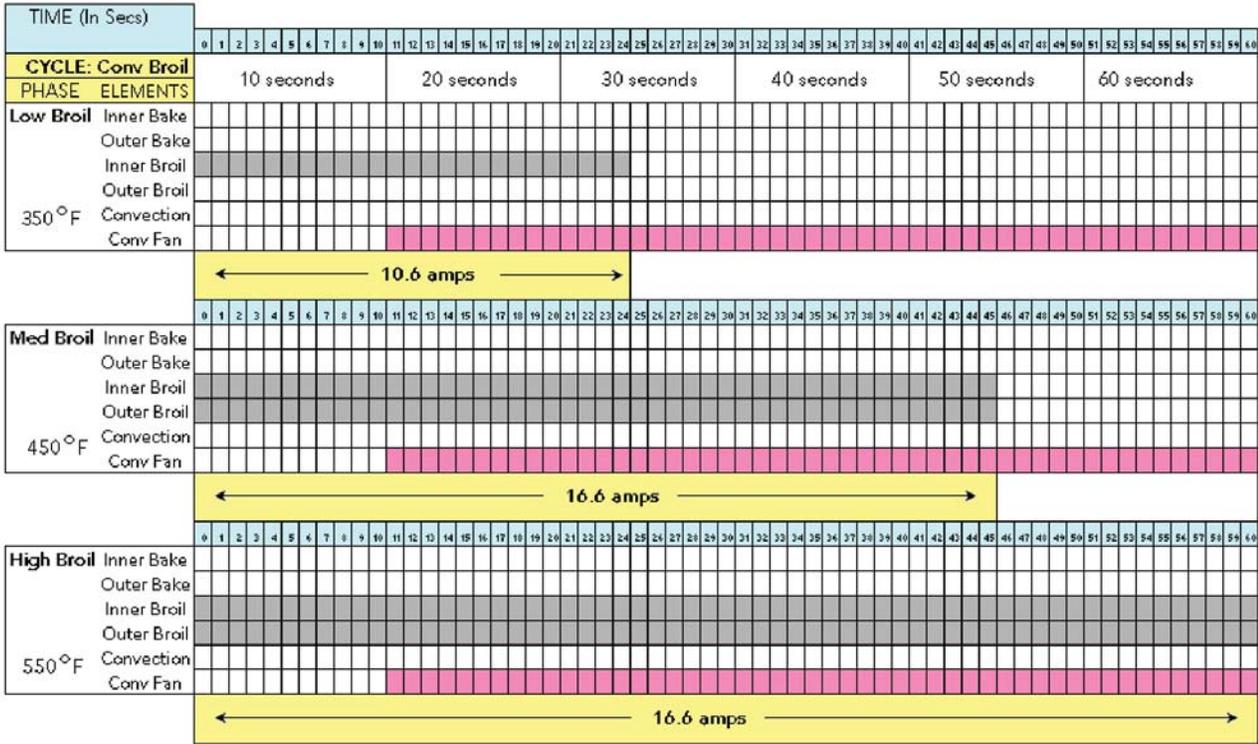


CONVECTION ROAST Cycle Cart

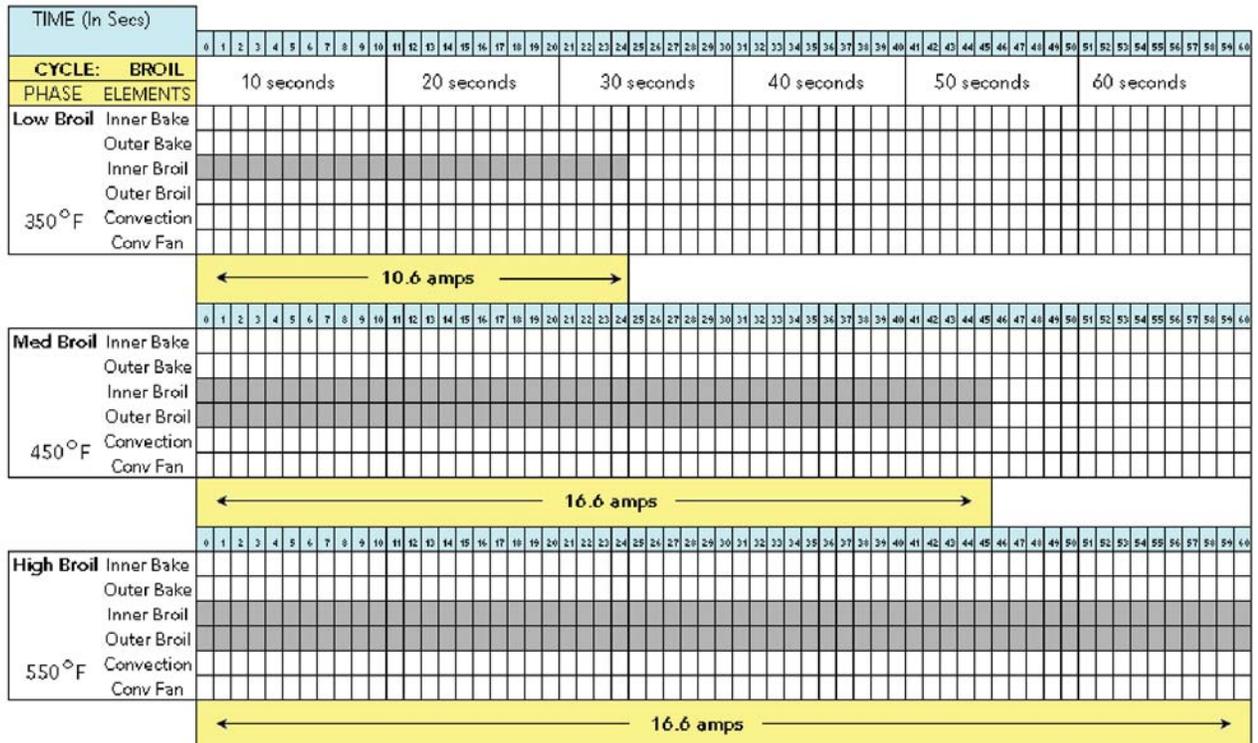


## Settings and Functions–Cycle Charts

CONVECTION BROIL Cycle Chart

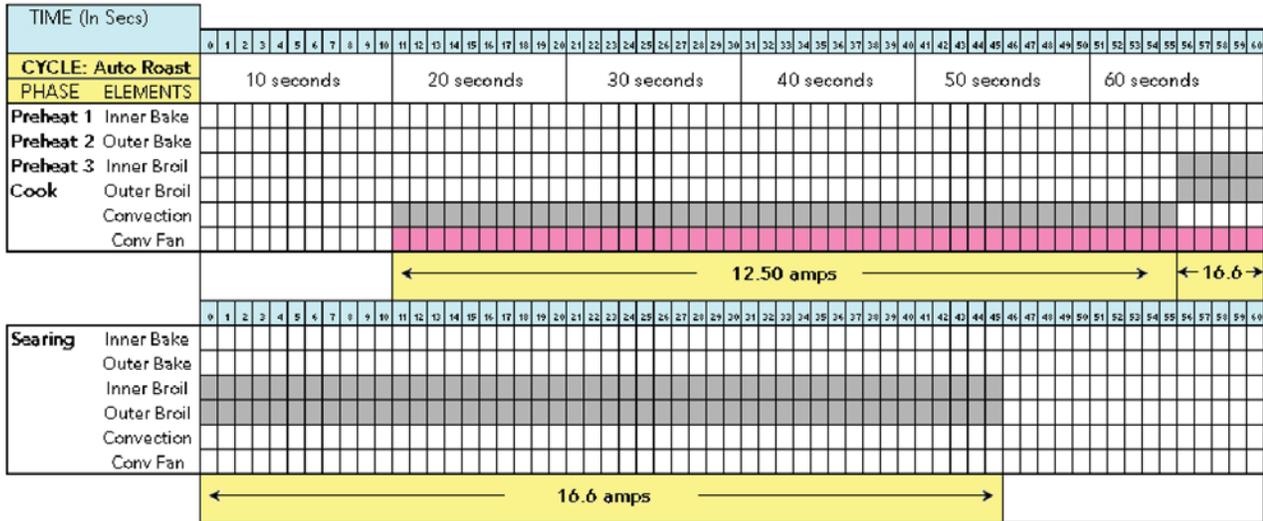


CONVECTION ROAST Cycle Chart

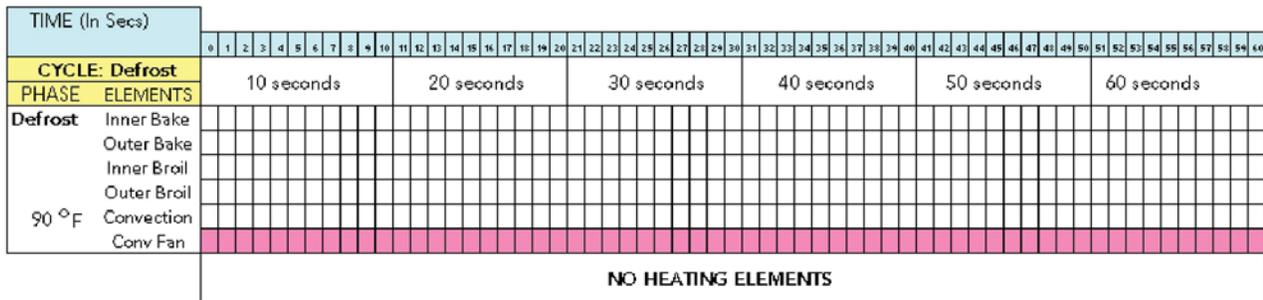


## Settings and Functions–Cycle Charts

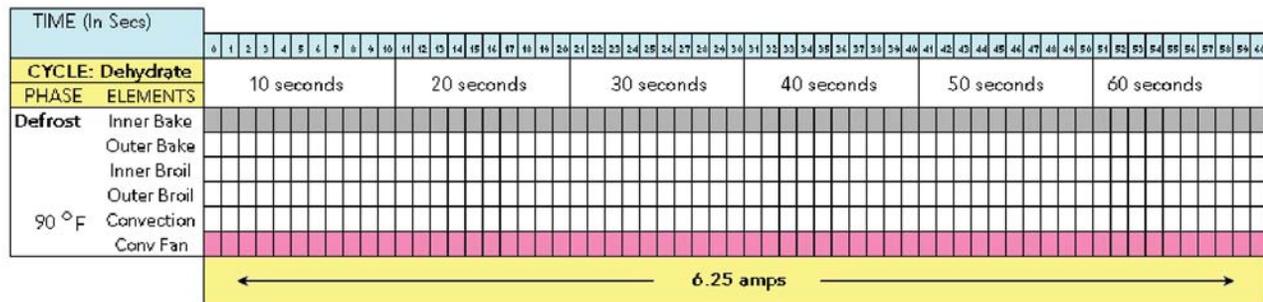
### AUTO ROAST Cycle Chart



### DEFROST Cycle Chart



### DEHYDRATE Cycle Chart



## Settings and Functions–Cycle Charts

### PROOF Cycle Charts

TIME (In Secs)		0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60																																																											
<b>CYCLE: PROOF</b>		10 seconds										20 seconds										30 seconds										40 seconds										50 seconds										60 seconds									
<b>PHASE</b>	<b>ELEMENTS</b>																																																												
<b>Proof</b>	Inner Bake																																																												
	Outer Bake																																																												
	Inner Broil																																																												
	Outer Broil																																																												
	Convection																																																												
	Conv Fan																																																												
90 °F		← 6.25 amps →																																																											

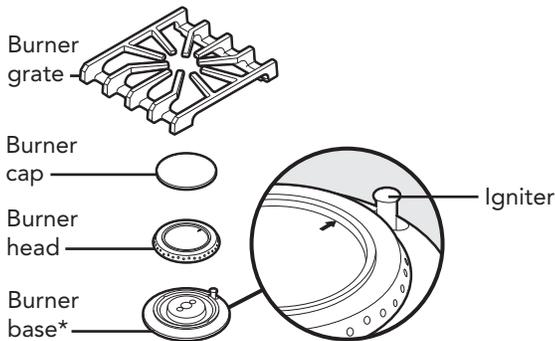
### SELF CLEAN Cycle Chart (shown in 2 minute increments)

TIME (In 2 Sec)		0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100 102 104 106 108 110 112 114 116 118 120																																																																																																																							
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## Cleaning and Maintenance

Any piece of equipment works better and lasts longer when maintained properly and kept clean. Cooking equipment is no exception. Your range must be kept clean and maintained properly. Before cleaning, make sure all controls are in the "OFF" position. Disconnect power if you are going to clean thoroughly with water.

### Surface Burners



\* **Note:** When replacing burner head, arrow must be pointing towards back of range.

Wipe up spill-overs as soon as possible after they occur and before they get a chance to burn in and cook solid. In the event of a spill-over, follow these steps:

- Allow the burner and grate to cool to a safe temperature level.
- Lift off the burner grate. Wash in warm soapy water.
- Remove the burner cap and burner head and clean.

### Burner Caps

The surface burner caps should be routinely removed and cleaned. **ALWAYS** clean the burner caps after a spill-over. Keeping the burner caps clean will prevent improper ignition and uneven flames. To clean, pull burner cap straight up from the burner base. Wipe off surface burner caps with warm, soapy water and a soft cloth after each use. Use a non-abrasive cleanser such as Bon Ami™ and a soft brush or soft Scotch Brite™ pad for cooked-on foods. Dry thoroughly after cleaning. For best cleaning and to avoid possible rusting, **DO NOT** clean in dishwasher or self-cleaning oven.

### Burner Head

If ports on burner head are clogged, clean with a straight pin. **DO NOT** enlarge or distort the ports. **DO NOT** use a toothpick to clean the ports. When replacing burner head, carefully align the 2 tabs underneath the burner head with the outside edge of the burner base. Make sure the tabs are not aligned with the igniter and the burner cap is level.

**Note:** For stubborn stains, use a non-abrasive cleanser such as Bon Ami™ and a soft brush or soft Scotch Brite™ pad.

**Cleaning Tip:** For difficult-to-clean burner caps and heads, place parts in a zip seal bag with ammonia.

### Burner Base

The base should be wiped regularly with hot soapy water at the end of each cooling period. **DO NOT** use steel wool, abrasive cloths, cleanser, or powders. To remove encrusted materials, soak the area with a hot towel to loosen the material, then use a wooden/nylon spatula. **DO NOT** use a metal knife, spatula, or any other metal tool to scrape the aluminum base.

- Wipe up any spills which remain on the sealed top surface.
- Replace burner cap, burner head, and grates after drying thoroughly.

### Control Panel

**DO NOT** use any cleaners containing ammonia or abrasives. They could remove the graphics from the control panel. Use hot, soapy water and a soft clean cloth.

### Oven Surfaces

Several different finishes have been used in your oven. Your oven features a self-clean cycle for the oven interior. See the "Self-Clean Cycle" section for complete instructions. **NEVER USE AMMONIA, STEEL WOOL PADS OR ABRASIVE CLOTHS, CLEANSERS, OVEN CLEANERS, OR ABRASIVE POWDERS. THEY CAN PERMANENTLY DAMAGE YOUR OVEN.**

## Cleaning and Maintenance (cont.)

### Control Knobs

MAKE SURE ALL THE CONTROL KNOBS POINT TO THE OFF POSITION BEFORE REMOVING. Pull the knobs straight off. Wash in detergent and warm water. Dry completely and replace by pushing firmly on to stem.

### Stainless Steel Parts

All stainless steel body parts should be wiped regularly with hot soapy water at the end of each cooling period and with a liquid cleaner designed for that material when soapy water will not do the job. **DO NOT** use steel wool, abrasive cloths, cleansers, or powders. If necessary, scrape stainless steel to remove encrusted materials, soak the area with hot towels to loosen the material, then use a wooden or nylon spatula or scraper. **DO NOT** use a metal knife, spatula, or any other metal tool to scrape stainless steel. **DO NOT** permit citrus or tomato juice to remain on stainless steel surface, as citric acid will permanently discolor stainless steel. Wipe up any spills immediately.

### Brass Parts



## CAUTION

All special ordered brass parts are coated with an epoxy coating. **DO NOT USE BRASS CLEANERS OR ABRASIVE CLEANERS ON ANY BRASS PARTS.** All brass body parts should be wiped regularly with hot soapy water. When hot soapy water will not do the job, use every day household cleaners that are not abrasive.

### Broiler Pan and Grid

Clean with detergent and hot water. For stubborn spots, use a soap-filled steel wool pad.

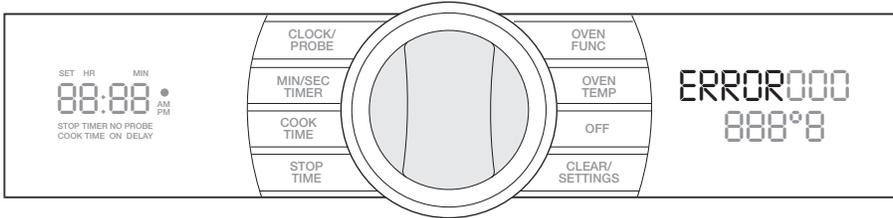
### Oven Racks

Clean with detergent and hot water. Stubborn spots can be scoured with a soap-filled steel wool pad. **DO NOT CLEAN THE OVEN RACKS OR RACK-SUPPORT USING THE SELF-CLEAN CYCLE.** They could sustain damage due to the extreme heat of the self-clean cycle.

## Error Codes

When an error occurs, the control does the following:

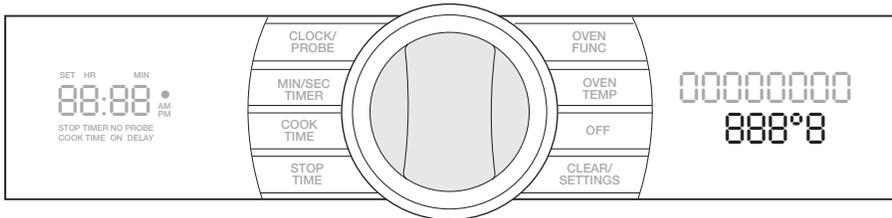
- Operation is canceled
- Error is displayed
- Error beeps every 30 seconds regardless if Sabbath Mode enabled



To clear the error code, press the "OFF" or "CLEAR/SETTINGS" button. The beeping will stop, error code goes away, and normal display is shown again. A restart may be attempted, however if the error condition has not been corrected, the error will flash again.

Error Display	Detection
Door Latch	Unit in clean mode and door takes greater than one minute to lock
RTD Prob	RTD open or shorted
Cooling	Cooling fan speed input indicates the fan is not running
Meat Probe	Meat probe shorted or operation inconsistent with expected operation
No Probe	Meat probe input open
Model Header	No model header on EOC4 or incorrect model header for VDSC
Door	The door is open during CLEAN (either the door latch has failed, the door sensor has failed or the user has opened the door immediately after selecting CLEAN before the latch can engage)
Comm	Loose communication link between EOC4 & VDSC
Key Short	Key press input seen for over 30 seconds
Keyboard	Internal disconnection sensed between the VDSC-tactile key PCB and the VDSC-display PCB (these are 2 separate boards connected by a cable).

## Temperature Range & Default

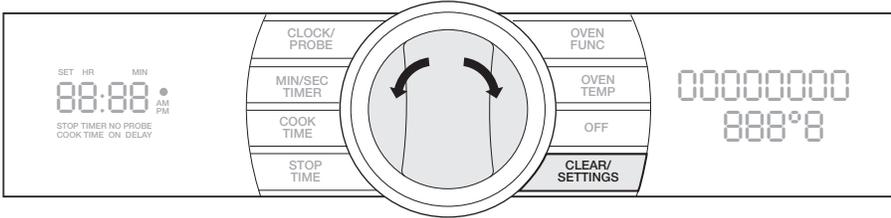


Function	Default Temperature	User Adjustment Range
Bake	350°F (180°C)	150° to 550°F (70° to 290°C)
Convection Bake	325°F (160°C)	150° to 550°F (70° to 290°C)
True Convection	325°F (160°C)	150° to 550°F (70° to 290°C)
Convection Roast	325°F (160°C)	150° to 550°F (70° to 290°C)
Convection Broil Hi	550°F (290°C) * Not shown in display	Fixed
Convection Broil Med	450°F (230°C) * Not shown in display	Fixed
Convection Broil Low	350°F (180°C) * Not shown in display	Fixed
Broil Hi	550°F (290°C) * Not shown in display	Fixed
Broil Med	450°F (230°C) * Not shown in display	Fixed
Broil Low	350°F (180°C) * Not shown in display	Fixed
Auto Roast (see note)	325°F (160°)	150° to 550°F (70° to 290°C)
Dehydrate	90°F (32°C)	90° to 110°F (32° to 44°C)
Proof	90°F (32°C)	90° to 110°F (32° to 44°C)
Self Clean	820°F (Not displayed)	Fixed
Meat Probe	160°F (180°C)	120° to 190°F (50° to 88°C)

**Note:** 1. The Defrost function consists of air flow only; temperature is neither displayed nor controlled.

2. Auto Roast includes an automated SEARING function: The control operates at Set Point + 100°F for the first 30 minutes, then reverts to Set Point temperature.

## User Settings

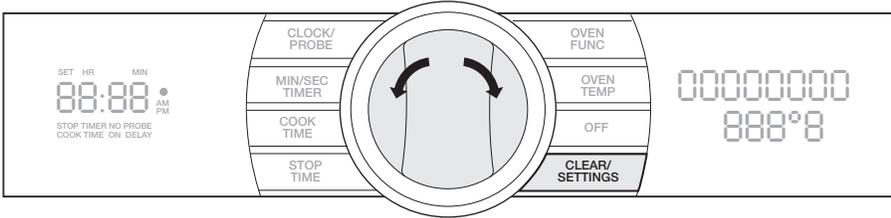


To adjust settings:

1. Press "CLEAR" and hold 2 seconds to activate.
2. Toggle "SELECTOR KNOB" right or left to desired setting.
3. When desired setting is flashing, press "SELECTOR KNOB" to change value.
4. When done with adjustments, toggle to EXIT. Press "SELECTOR KNOB" or "OFF" to exit.

User Setting	Function
°F or °C	Select Temperature format. Default is °F.
12/24 Hr	Select Time format. Default is 12 hr.
Sabbath Mode	Default is OFF. Refer to EOC4 Product Specification. In general, any operation that can change state based on the door opening (lights, fans, etc.) is disabled. If Sabbath Mode is enabled, display SABBATH.
Brightness	Select the brightness from 1-5 with 5=brightest setting. Default is 5.
User Offset	Adjust the Temperature Offset. The default is 0. To select, press the "SELECTOR KNOB" and the display shows 00°F. Rotate the knob as appropriate, the display will increase or decrease [example: Warmer +100°F or Colder -150°F] in 50°F [20°C] increments. The max offset is +/- 300°F [+/- 160°C]. When done, press the "SELECTOR KNOB" to exit. Any User Offset entered is not applied to the Self-Clean function.
Showroom Mode	Disables heating elements, cooling fan and convection fan motor. Oven lights and all display functions operate normally.
Exit	Final step in User Settings. From this step, the user can either exit the User Settings (press on the "SELECTOR KNOB") or enter the diagnostic mode (see page 32).

## Offset Temperature Adjustment



This function is outside the other User Settings. Under most circumstances, the user should not need to access the Offset Temperature Adjustment.

To adjust settings:

1. Press "CLEAR/SETTINGS" and hold 2 seconds to activate.
2. Toggle "SELECTOR KNOB" right or left to desired setting.
3. When desired setting is flashing, press and hold "CLEAR/SETTINGS" and "OVEN TEMP" for five seconds to enter.
4. Toggle left/right to get to desired setting (OFFSET).
5. Press "SELECTOR KNOB" to make value flash; toggle up/down as desired (-30°F to 30°F; 5°F increments) Press "SELECTOR KNOB" to accept. Value stops flashing.
6. When done with adjustments, toggle to EXIT. Press "SELECTOR KNOB" or "OFF" to exit.

**Note:** Temperature Offset entered is not applied to the Self-Clean setting.

**Important Note:** Make sure that a proper temperature test is performed, using a loaded temp probe, before adjusting the Offsets. Failure to do so can result in improper oven temperatures. Use Viking Temperature Probe Kit part # G50012698 for accurate readings (see Bulletin 2005-37P).

If you find that the temperature is off, then proper adjustment to the offset setting is required. Decreasing the offset will increase the temperature, while increasing the offset will decrease the temperature.

**Example:** If testing the oven at 350°F you find the average temperature is at 320°F, then you need to adjust the oven temperature up by 30°F.

### Adjusting The Offset

Access the Offset adjust program. The Default will show the following:

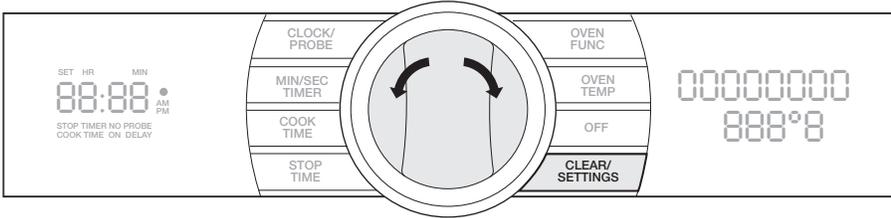
00FFSET0  
880°F

Now, depress the "SELECTOR KNOB" and the 0° will begin to flash. Rotate the "SELECTOR KNOB" towards the left until the following is in the display:

00FFSET0  
-30°F

By bringing the offset < you will actually increase the temperature by 30°F. The opposite would be true. If the temperature is 30°F too high, then you would need to adjust the offset > by 30°F.

## Advanced Settings



To adjust settings:

1. Press "CLEAR/SETTINGS" button and hold 2 seconds to activate.
2. Keep toggling the "SELECTOR KNOB" to the right until EXIT shows in the right display. Hold "SELECTOR KNOB" to the right 2 seconds until one beep is heard.
3. Within 3 seconds, press "OVEN FUNC," "OVEN TEMP," "OVEN FUNC".
4. When entered successfully you will see VERSION XX in the display.

To exit the diagnostics at any time, press the "OFF" button. While in a sub-step, you can back out by depressing the "SELECTOR KNOB" or press the "CLEAR/SETTINGS" button. Using the "OFF" button will completely remove you from the diagnostic program.

Advanced Setting	Function
Control Version	<p>Displays the versions, Main Menu is shown below. (this is the VDSC User Interface software version).</p> <p><b>Display 1 (Left)</b>   <b>Display 2 (Right)</b></p> <p>  </p> <p>Toggle "SELECTOR KNOB" toward the right</p> <p>  </p> <p>Toggle "SELECTOR KNOB" toward the right or left</p> <p>  </p> <p><b>Note:</b> The model number refers to the header block attached to the control.</p>
Test	<p>Allows the Tech to go through the following menu items to check I/O. Toggle to advance; press to select. The Main Menu is shown below.</p> <p><b>Display 1 (Left)</b>   <b>Display 2 (Right)</b></p> <p>  </p> <p>Press "SELECTOR KNOB" for following Sub-Menus</p> <p>  </p> <p>  </p>

## Advanced Settings (cont.)

Advanced Setting	Function		
Test (cont.)	<p>Press "SELECTOR KNOB" for following Sub-Menus.</p> <table border="0"> <tr> <td style="vertical-align: top;"> <p><b>Display 1 (Left)</b></p> <p>Displays AC current—</p> <p>Displays Fan Speed—</p> <p>Displays Fan Speed—</p> <p>Displays AC current—</p> <p>Displays AC current—</p> <p>Displays AC current—</p> <p>Displays AC current—</p> <p>Display goes blank—</p> <p>Display goes blank—</p> </td> <td style="vertical-align: top;"> <p><b>Display 2 (Right)</b></p> <p><b>INNER BAKE</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>OUTER BAKE</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>IN BROILO</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>OUT BROILO</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>CONV ELEM</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>CNV FAN HF</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>CNV FAN LF</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>COOL FAN H</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "Fan Speed")</p> <p><b>COOL FAN L</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "Fan Speed")</p> <p><b>COOL SPD H</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "Fan Speed")</p> <p><b>COOL SPD L</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "Fan Speed")</p> <p><b>OVEN_LIGHT</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>CNV_FAN_LR</b> 888°8 — Displays "Off" (push SELECTOR KNOB" for "Fan Speed")</p> <p><b>CNV_FAN_HR</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "Fan Speed")</p> <p><b>DOOR_LATCH</b> 888°8 — Displays latch state (push "SELECTOR KNOB" for "UnL" unlatched, "LoC" latched, "_" unknown)</p> <p><b>HEAT_LIGHT</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>CLN_LIGHTO</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>DOOR00000</b> 888°8 — Displays door state (push "SELECTOR KNOB" for "CLS" closed or "OPn" open)</p> <p><b>LIGHT00000</b> 888°8 — Displays light state (push "SELECTOR KNOB" to change to "On" or "Off")</p> </td> </tr> </table> <p><b>Note:</b> To exit, depress the "SELECTOR KNOB" or press the "CLEAR/SETTINGS" button.</p>	<p><b>Display 1 (Left)</b></p> <p>Displays AC current—</p> <p>Displays Fan Speed—</p> <p>Displays Fan Speed—</p> <p>Displays AC current—</p> <p>Displays AC current—</p> <p>Displays AC current—</p> <p>Displays AC current—</p> <p>Display goes blank—</p> <p>Display goes blank—</p>	<p><b>Display 2 (Right)</b></p> <p><b>INNER BAKE</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>OUTER BAKE</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>IN BROILO</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>OUT BROILO</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>CONV ELEM</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>CNV FAN HF</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>CNV FAN LF</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>COOL FAN H</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "Fan Speed")</p> <p><b>COOL FAN L</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "Fan Speed")</p> <p><b>COOL SPD H</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "Fan Speed")</p> <p><b>COOL SPD L</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "Fan Speed")</p> <p><b>OVEN_LIGHT</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>CNV_FAN_LR</b> 888°8 — Displays "Off" (push SELECTOR KNOB" for "Fan Speed")</p> <p><b>CNV_FAN_HR</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "Fan Speed")</p> <p><b>DOOR_LATCH</b> 888°8 — Displays latch state (push "SELECTOR KNOB" for "UnL" unlatched, "LoC" latched, "_" unknown)</p> <p><b>HEAT_LIGHT</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>CLN_LIGHTO</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>DOOR00000</b> 888°8 — Displays door state (push "SELECTOR KNOB" for "CLS" closed or "OPn" open)</p> <p><b>LIGHT00000</b> 888°8 — Displays light state (push "SELECTOR KNOB" to change to "On" or "Off")</p>
<p><b>Display 1 (Left)</b></p> <p>Displays AC current—</p> <p>Displays Fan Speed—</p> <p>Displays Fan Speed—</p> <p>Displays AC current—</p> <p>Displays AC current—</p> <p>Displays AC current—</p> <p>Displays AC current—</p> <p>Display goes blank—</p> <p>Display goes blank—</p>	<p><b>Display 2 (Right)</b></p> <p><b>INNER BAKE</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>OUTER BAKE</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>IN BROILO</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>OUT BROILO</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>CONV ELEM</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>CNV FAN HF</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>CNV FAN LF</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>COOL FAN H</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "Fan Speed")</p> <p><b>COOL FAN L</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "Fan Speed")</p> <p><b>COOL SPD H</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "Fan Speed")</p> <p><b>COOL SPD L</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "Fan Speed")</p> <p><b>OVEN_LIGHT</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>CNV_FAN_LR</b> 888°8 — Displays "Off" (push SELECTOR KNOB" for "Fan Speed")</p> <p><b>CNV_FAN_HR</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "Fan Speed")</p> <p><b>DOOR_LATCH</b> 888°8 — Displays latch state (push "SELECTOR KNOB" for "UnL" unlatched, "LoC" latched, "_" unknown)</p> <p><b>HEAT_LIGHT</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>CLN_LIGHTO</b> 888°8 — Displays "Off" (push "SELECTOR KNOB" for "On")</p> <p><b>DOOR00000</b> 888°8 — Displays door state (push "SELECTOR KNOB" for "CLS" closed or "OPn" open)</p> <p><b>LIGHT00000</b> 888°8 — Displays light state (push "SELECTOR KNOB" to change to "On" or "Off")</p>		

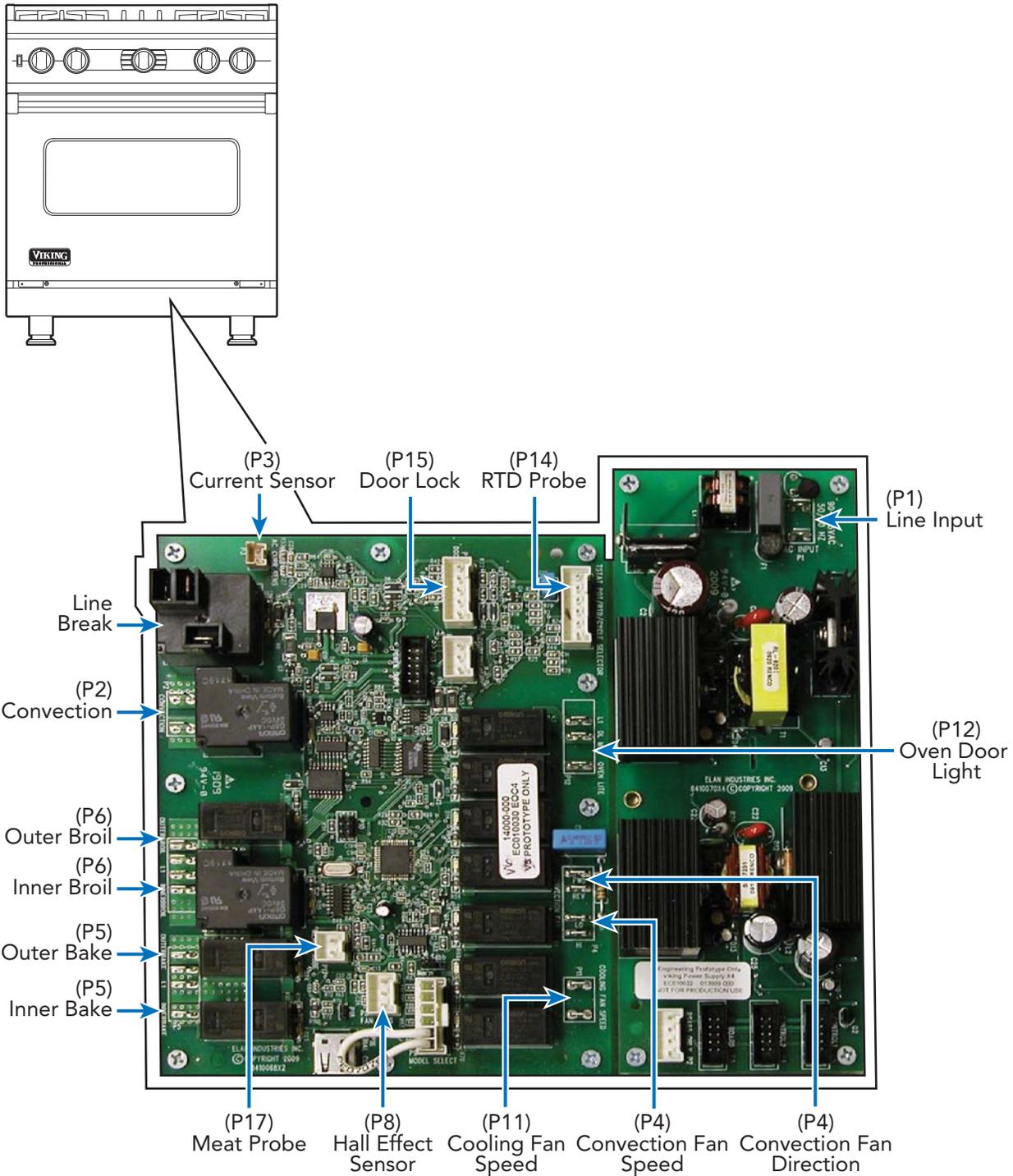
## Advanced Settings (cont.)

Advanced Setting	Function																												
<p>Auto Test</p>	<p>Press "AUTO TESTS" for following Main Menu.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p><b>Display 1 (Left)</b></p> </div> <div style="text-align: center;"> <p><b>Display 2 (Right)</b></p> <p>AUTO TESTS 888°8</p> </div> </div> <p>Press "SELECTOR KNOB" for following Sub-Menus.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">208V</td> <td style="width: 20%;">240V</td> <td style="width: 20%; text-align: center;"> </td> <td style="width: 40%; text-align: center;">INNER BAKE 888°8</td> </tr> <tr> <td>4.88A</td> <td>6.56A</td> <td style="text-align: center;"> </td> <td style="text-align: center;">OUTER BAKE 888°8</td> </tr> <tr> <td>6.01A</td> <td>8.01A</td> <td style="text-align: center;"> </td> <td style="text-align: center;">OIN BROIL00 888°8</td> </tr> <tr> <td>5.36A</td> <td>7.22A</td> <td style="text-align: center;"> </td> <td style="text-align: center;">OUTER BROIL 888°8</td> </tr> <tr> <td>10.6A</td> <td>14.68A</td> <td style="text-align: center;"> </td> <td style="text-align: center;">CONV/ELEM0 888°8</td> </tr> <tr> <td>1000 RPM</td> <td>2000 RPM</td> <td style="text-align: center;"> </td> <td style="text-align: center;">COOL SP HD 888°8</td> </tr> <tr> <td>208</td> <td>240</td> <td style="text-align: center;"> </td> <td style="text-align: center;">IN VOLTAGE 888°8</td> </tr> </table> <p><b>Note:</b> If an element, wire or component is defective, "FAIL" will display in right display.</p>	208V	240V		INNER BAKE 888°8	4.88A	6.56A		OUTER BAKE 888°8	6.01A	8.01A		OIN BROIL00 888°8	5.36A	7.22A		OUTER BROIL 888°8	10.6A	14.68A		CONV/ELEM0 888°8	1000 RPM	2000 RPM		COOL SP HD 888°8	208	240		IN VOLTAGE 888°8
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208	240		IN VOLTAGE 888°8																										
<p>Display Test</p>	<p>The control will allow the Service Tech to cycle through different scenarios to check as desired. The Main Menu is shown below.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p><b>Display 1 (Left)</b></p> </div> <div style="text-align: center;"> <p><b>Display 2 (Right)</b></p> <p>DISP_TESTS 888°8</p> </div> </div> <p>Press "SELECTOR KNOB" once to access the ALL display test or toggle the "SELECTOR KNOB" toward the right once to access LEFT ALL or twice to access RIGHT ALL. When left or right display is shown, press the "SELECTOR KNOB" again to display the selected window, then depress the "SELECTOR KNOB" to illuminate the left display.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> <p>ALL00000000 888°8</p> </div> </div> <p>Press "SELECTOR KNOB" again for both displays to illuminate. Depress the "CLEAR/SETTINGS" button to go back one step.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> <p>0000000000 888°8</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> <p>LEFT ALL00 888°8</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> <p>0000000000 888°8</p> </div> </div>																												

## Advanced Settings (cont.)

Advanced Setting	Function
Display Test (cont.)	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>Display 1 (Left)</b></p>  </div> <div style="width: 45%;"> <p><b>Display 2 (Right)</b></p> <p>RIGHT ALL00 888°8</p> <p>0000000000 888°8</p> </div> </div> <p><b>Note:</b> Depress "CLEAR/SETTINGS" at any time will bring you up one step in any diagnostic mode.</p>
Cycle Count	<p>Displays the number of cooking cycles performed. The Main Menu is shown below.</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>Display 1 (Left)</b></p>  </div> <div style="width: 45%;"> <p><b>Display 2 (Right)</b></p> <p>00CYCLE500 888°8</p> </div> </div> <p>Press "SELECTOR KNOB" for following Sub-Menus.</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Displays — <b>81:00</b> AM/PM cycle count</p> <p>Displays — <b>88:85</b> AM/PM cycle count</p> </div> <div style="width: 45%;"> <p>COOK COUNT 888°8</p> <p>CLN COUNT0 888°8</p> </div> </div> <p>Toggle "SELECTOR KNOB" left to display COOK COUNT or right to exit. Toggle a second time will show EXIT. Depress "SELECTOR KNOB" here will bring you back to the main CYCLE parameter.</p> <p><b>Note:</b> 30 seconds have to pass in a cycle before the cycle counter is incremented. This avoids false counts if the cycle is changed and/or canceled by the user.</p>
Error Codes	<p>The unit shows the ten (10) most recent errors stored in EEPROM. The Main Menu is shown below. After Default Error (Component/Cycle) is shown, each toggle of the "SELECTOR KNOB" to the right will display the next error code. After the last error is shown, the next toggle will show EXIT in the display. Depress "SELECTOR KNOB" here will bring you back to the main ERROR parameter.</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>Display 1 (Left)</b></p>  </div> <div style="width: 45%;"> <p><b>Display 2 (Right)</b></p> <p>00ERROR500 888°8</p> </div> </div> <p>Press "SELECTOR KNOB" for following Sub-Menus</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Displays — <b>88:88</b> AM/PM cycle count when last error occurred</p> <p>Displays — <b>88:83</b> AM/PM cycle count when last error occurred</p> </div> <div style="width: 45%;"> <p>00ERROR500 888°8</p> <p>RTD PROBE0 888°8</p> <p>00BAKE000 888°8</p> </div> </div> <p>— Error description/cycle when error occurred (alternates every 2 seconds).</p>
Ambient	<p>Displays the ambient temperature of the display module. The Main Menu is shown below:</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>Display 1 (Left)</b></p> <p>Displays — <b>88:88</b> AM/PM ambient temperature of display module</p> </div> <div style="width: 45%;"> <p><b>Display 2 (Right)</b></p> <p>00AMBIENT0 875°8</p> </div> </div>
Exit	<p>Final step in the Advanced Settings. Press "SELECTOR KNOB" to exit.</p>

Parts Location–Control Board



## Control Board Test Points

Components can be diagnosed via the control board. With the control board accessed (*refer to Control Board access procedure page 65*), the following can be measured:

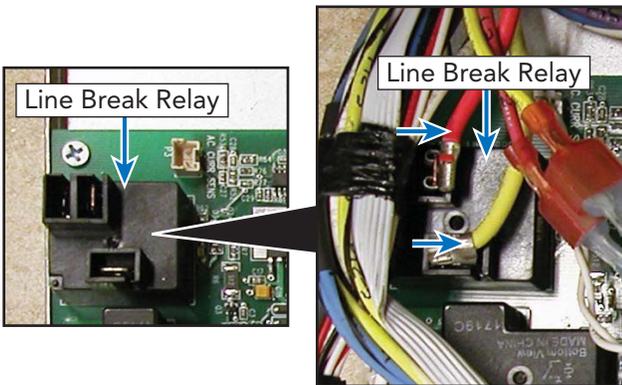
Component	Oven Board Test Point	Readings
Inner Bake Element	(P5) Orange/black–line break yellow	38 Ω
Outer Bake Element	(P5) Blue – line break yellow	38 Ω
Inner Broil Element	(P6) Gray – line break yellow	30.0 Ω
Outer Broil Element	(P6) Purple – line break yellow	33.5 Ω
Convection Element	(P2) White – line break yellow	18.3 Ω
Cooling Fan Motor	(P11) White – chassis ground	18.6 Ω
Convection Motor – Forward	(P4) Blue/black – line break red Capacitor leads removed	100.00 Ω
Convection Motor – Reverse	(P4 )Yellow/white–line break red Capacitor leads removed	100.00 Ω
Oven Lights	(P12) Yellow/black–line break red	12.1 Ω
RTD	(P14) Gray – (P14) violet	1089 Ω @ room temp
Door Latch Motor	(P12) Black/white–line break red	12.3 k Ohms
Door Switch	(P15) Gray – (P15) brown	Infinite Ω door open 0 Ω door closed
Oven Light Switch	(P15) Violet – (P15) brown	Infinite Ω light switch off 0 Ω light switch on
Door Latch Switch	(P15) Brown – (P15) blue/white	0 Ω door unlatched infinite Ω door latched
Door Lock Switch	(P15) Brown – (P15) orange	Infinite Ω door unlocked 0 Ω door locked
Line Input	(P12) Black – line break red	240 VAC
Power Supply Line Input	(P1) White – (P1) black	120 VAC
Hall Effect Sensor	(P8) Red – (P8) black	490 Ω
Meat Probe	(P17) White – (P17) black	9720 Ω

## Control Board Diagnosis

With the control board assembly removed (see page 65), 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 to the convection, broil and bake element. 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 and the yellow wire supplies L2 line break relay energizes.



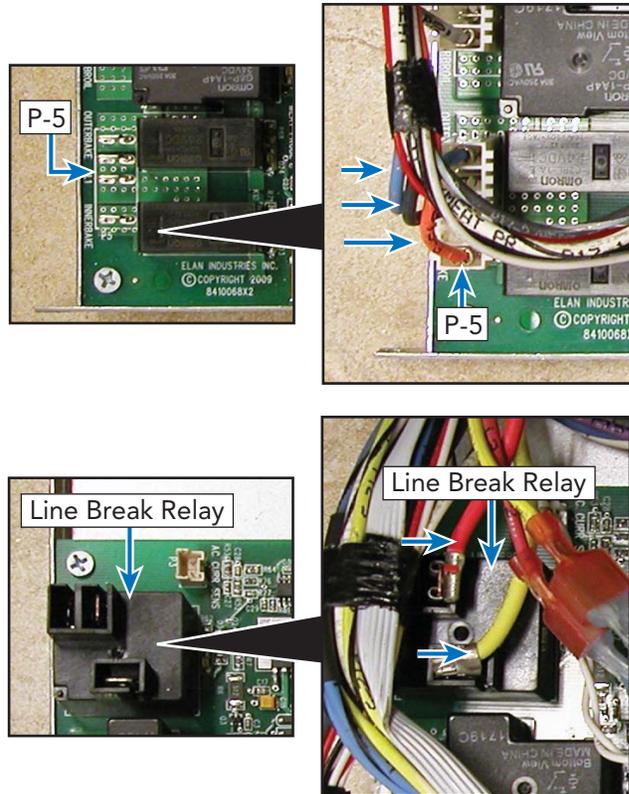
When heating is selected by the control input, 12 VDC is sent to the Line break relay coil. A red LED in front of the coil verifies coil voltage is being sent to the relay. This does not indicate however that the relay is functioning.

To check the relay contacts, verify input voltage to the relay between the red wire (L2) and (L1) black at the main terminal block. 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 (L1) black. If 0 VAC is read, disconnect power and remove the red and yellow wire off the relay. Reconnect power and using your Ohm meter to check for continuity between the two relay contacts when the relay is energized. If you read infinite ohms ( $\infty$ ), this indicates a bad 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 Ohm meter to measure resistance between the blue wire in the 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  $\Omega$ . Likewise, the inner bake element can be measured by reading resistance between the orange black wire in the Molex plug and the yellow wire from the line break relay. A resistance reading of approximately 38  $\Omega$  should be found. If either element fails to read resistance, remove element to repair or replace (*follow bake element disassembly procedure*).

## Control Board Diagnosis

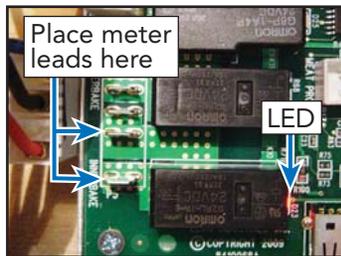
### Bake Relay (Inner and Outer)

When a bake element is selected by the EOC board, 12 VDC 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. (L1 power is controlled by the line break relay).

### Inner Bake Relay

Select a 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.

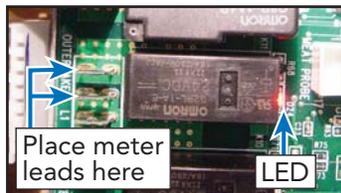
Reconnect power and using your Ohm meter, check for continuity between the two relay contacts (refer to photo, right). When the relay is energized; if you read infinite ohms ( $\infty$ ) this indicates a bad relay and you will need to replace the control board. If you read 0 ohms, the relay contact is closing.



### Outer Bake Relay

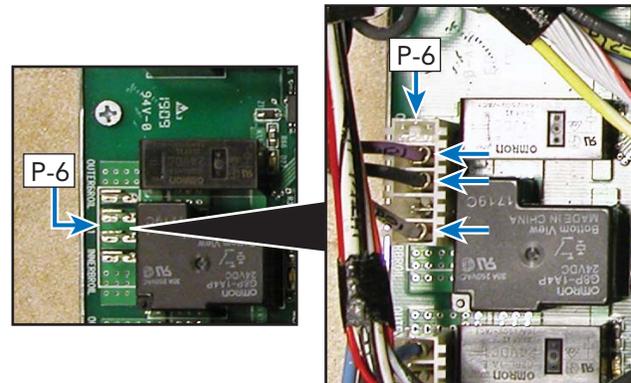
Select a cooking program. When the outer relay contact is energized (red LED lit at base of relay) check for 240 VAC between the yellow wire at the line break relay and the blue wire on P5. If 0 VAC is read, disconnect power and remove P5 Molex Plug.

Reconnect power and using your Ohm meter, check for continuity between the two relay contacts (refer to photo, right). When the relay is energized; if you read infinite ohms ( $\infty$ ) this indicates a bad relay and you will need to replace the control board. If you read 0 ohms, the relay contact is closing.

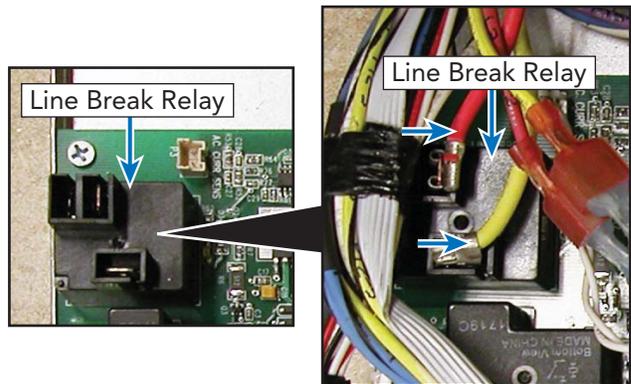


### Broil Element

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



With the power off and Molex connector removed from the P6 control board connection, use an Ohm meter to measure resistance between the violet 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 33  $\Omega$ . Likewise, the inner broil element can be measured by reading resistance between the gray wire in the Molex plug and the yellow wire at the line break relay. A resistance of approximately 30  $\Omega$  should be found. If either element fails to read resistance, remove the element to repair or replace (follow broil element disassembly procedure).

## Control Board Diagnosis

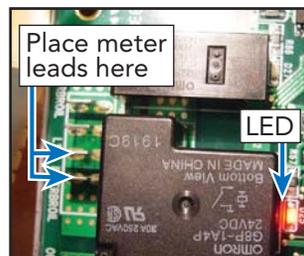
### Broil Relay (Inner and Outer)

When a broil element is selected by the EOC board, 12 VDC 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. (L1 power is controlled by the line break relay).

### Inner Broil Relay

Select a 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 gray wire on P6. If 0 VAC is read, disconnect power and remove the P6 Molex plug.

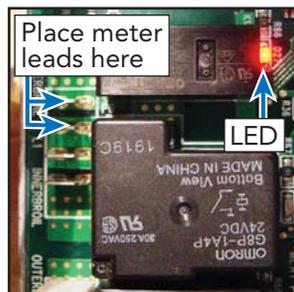
Reconnect power and using your Ohm meter, check for continuity between the two relay contacts (*refer to photo, right*). When the relay is energized; if you read infinite ohms ( $\infty$ ) this indicates a bad relay and you will need to replace the control board. If you read 0 ohms, the relay contact is closing.



### Outer Broil Relay

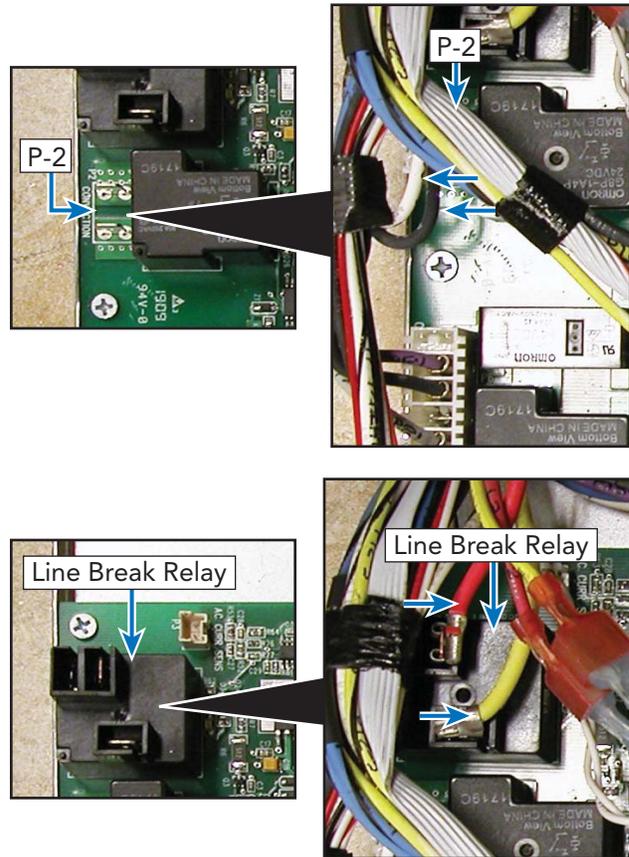
Select a cooking program. When the outer relay contact is energized (red LED lit at base of relay) check for 240 VAC between the yellow wire at the line break relay and the violet wire on P6. If 0 VAC is read, disconnect power and remove P6 Molex plug.

Reconnect power and using your Ohm meter, check for continuity between the two relay contacts (*refer to photo, right*). When the relay is energized; if you read infinite ohms ( $\infty$ ) this indicates a bad 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 Ohm meter 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  $\Omega$ . If the element fails to read resistance, remove element to repair/replace (*follow convection element disassembly procedure*).

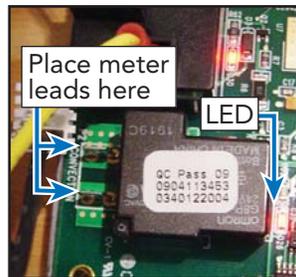
## Control Board Diagnosis

### Convection Relay

When the convection element is selected by the EOC board, 12 VDC 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. (L1 power is controlled by the line break relay).

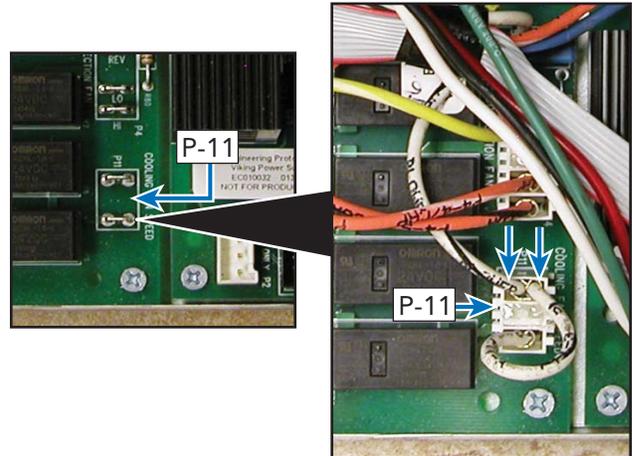
To test, select a cooking program. When the convection relay contact is energized (red LED lit at base of relay) check for 240 VAC between the yellow wire at the line break relay and the white/red wire on P2. If 0 VAC is read, disconnect power and remove P2 Molex plug.

Reconnect power and using your Ohm meter, check for continuity between the two relay contacts (*refer to photo*). When the relay is energized; if you read infinite ohms ( $\infty$ ) this indicates a bad 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 connector on the control board. The P11 connector will have a Molex plug containing white/black wires.



With the Molex connector removed from the P11 board connection, use an Ohm meter to measure resistance between one of the white/black wires and neutral at P1 on the power supply board. The resistance should be approximately 18  $\Omega$ . If no resistance is read, remove fan to repair/replace (*follow cooling fan disassembly procedure*).

With the Molex connector attached to the P11 board connection, use a voltmeter to measure voltage between the white/black wire of the Molex plug and the white wire in the Molex plug at the P1 power supply board. The voltage should be 120 VAC. 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, check the relay on the EOC board.

## Fan Relay

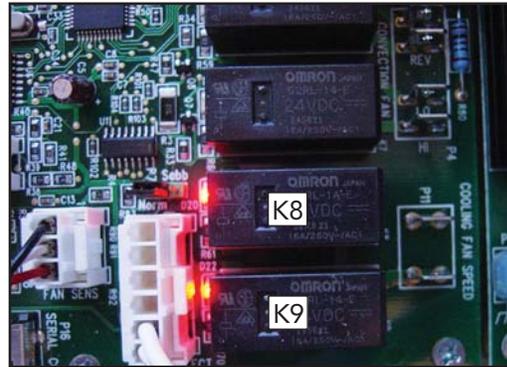
The EOC is designed to operate a 2-speed cooling motor. The VDSC530T utilizes a one speed motor so both the HI and LO speeds are jumped together on the board. On initial startup, the EOC selects the Fan Power relay (K8) and the LO speed (K9). When the oven temp reaches 250° temp, the board will switch 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, 12 VDC 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.

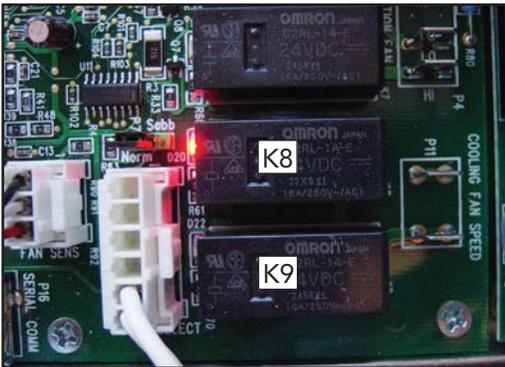
To test, disconnect power and remove P11 Molex plug. Reconnect power and access the diagnostic procedures shown on page 33 to select the COOL FAN H (Hi) parameter. With your meter set for AC voltage, check between neutral and the terminal (refer to photo below). The reading should be 120 VAC. If 0 volts are shown and the red LED is lit, then the EOC is defective.

Switch the parameter to COOL FAN L (Lo) and depress the "SELECTOR KNOB". Both relays should be engaged. With your meter set for AC voltage, check between neutral and the terminal (refer to photo below). The reading should be 120 VAC. If 0 volts and the red LED's are lit, then the EOC is defective.

## Fan-Lo Speed



## Fan-Hi Speed



## ⚠ WARNING

This unit utilizes capacitors for the different speeds. They should be discharged before handling to avoid electric shock.

## Control Board Diagnosis

### Convection Fan

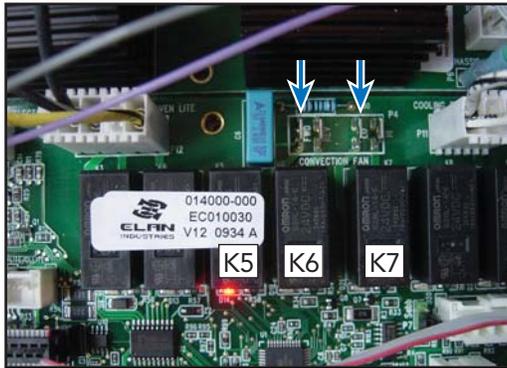
Locate the P4 connector and line break relay. The P4 connector will have a Molex plug containing 4 wires:

- (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 2-speed, 2-direction fan motor. The main power, speed and direction are controlled by the EOC 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

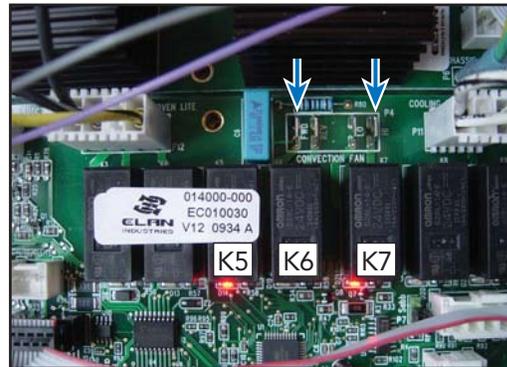


When closed, it sends power to the common terminal of the K6 relay (*Direction*) and is an SPDT relay.

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, through the N.C. contact and out the **FWD** contact on the board.

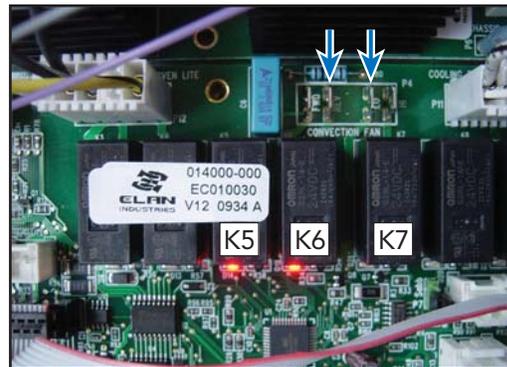
K7 is the speed relay. It too is an SPDT relay. When not energized, the LO circuit is energized through C terminal of the K7 relay. This will cause both capacitors to be in series causing the fan to run at a reduced speed. The photo below shows the K7 energized. The N.O. terminal is now closed causing a bypass of one of the 2 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.

### Counter Clockwise (REV)–Low Speed



## ⚠ WARNING

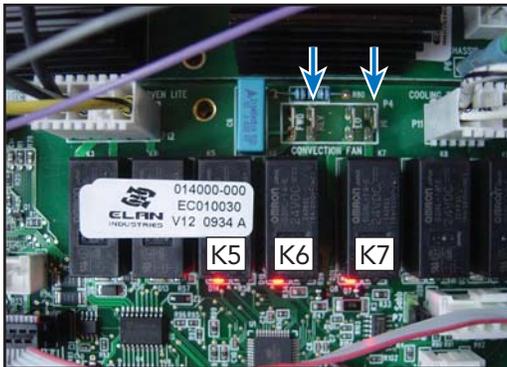
This unit utilizes capacitors for the different speeds. They should be discharged before handling to avoid electric shock.

## Control Board Diagnosis

### Convection Fan (continued)

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.

### Counter Clockwise (REV)–High Speed



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

### Testing Control Board

Using either the **CNV FAN LF** or **HF** test with the Molex connector attached to P4 board connection; use a volt meter to measure voltage between the blue/black wire in the Molex plug while the convection fan is turning in the *forward* direction (Clockwise) 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 EOC are functioning properly.

When switched to the **CNV FAN HR** or **LR** direction voltage can be measured between the orange/black wire in the Molex plug when the convection fan is turning in the *reverse* direction (Counterclockwise) and the red wire (L2) at line the break relay. The voltage should be 240 VAC. This will indicate the K5 and K6 of the EOC 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 (CNV FAN HF or CNV HR) 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 bad relay and the EOC 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 2uf 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 zero  $\Omega$ . 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 zero  $\Omega$  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 EOC 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 Ohm meter to measure resistance between blue/black wire (forward direction) in the Molex plug and

## Control Board Diagnosis

### Testing Fan Motor (continued)

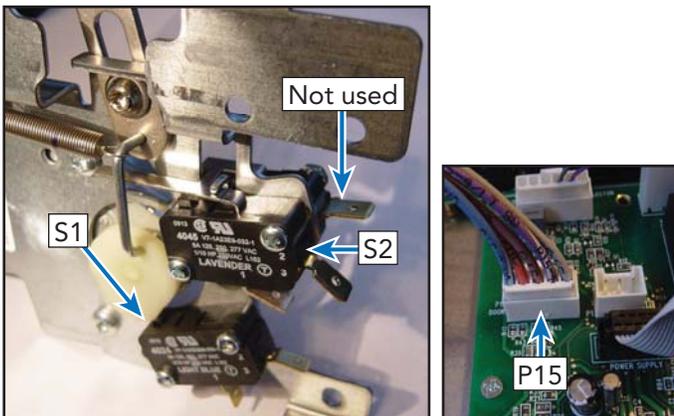
the red wire at the line break relay. The resistance should be approximately 100  $\Omega$ . Likewise, the reverse direction can be measured by reading resistance between the yellow/white wire in the Molex plug and the red wire at the line break relay. Resistance should be approximately 100  $\Omega$ . If either or both readings are not as shown, replace the convection fan motor (*follow convection fan disassembly procedure*).

### Door Lock Assembly

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



There are three micro switches mounted on the door lock assembly. One switch is not used on this model. The photo below shows the latch assembly lifted upwards to expose the switch positioning.



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 light brown wire and blue/white. 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 light brown wire and orange. 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 Ohm meter to measure resistance between black/white wire in the Molex plug and the red wire at line break relay. The resistance should be approximately 12.3K  $\Omega$ . If no resistance is read, remove the latch motor to repair/replace (*follow latch motor disassembly procedure*).

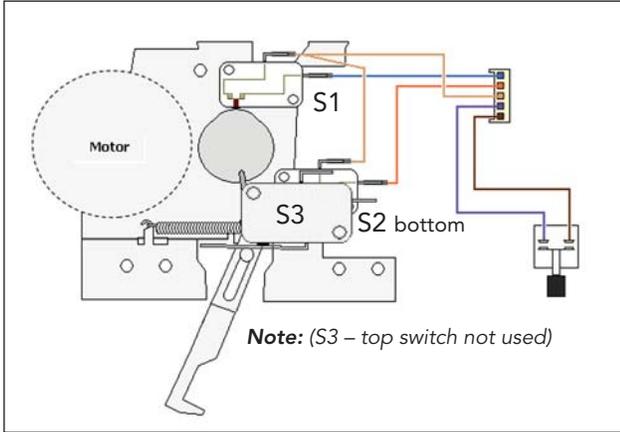
### Testing Latch Switches

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 between the light brown wire and the blue/white wire and zero  $\Omega$  between the light brown wire and the blue/white. If your readings are incorrect or reversed, remove the latch and inspect, repair/replace (*follow latch motor disassembly procedure*).

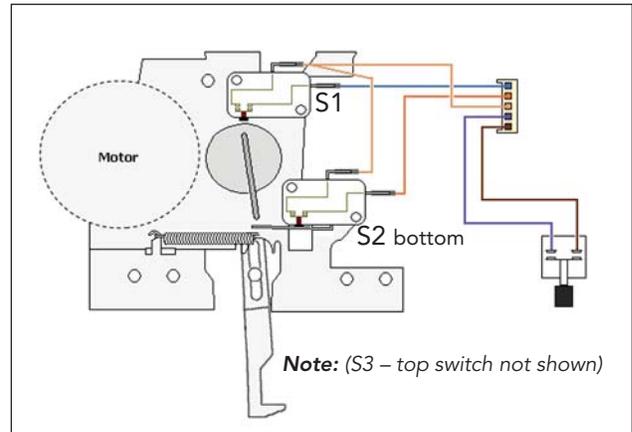
## Control Board Diagnosis

### Checking the door lock position switches

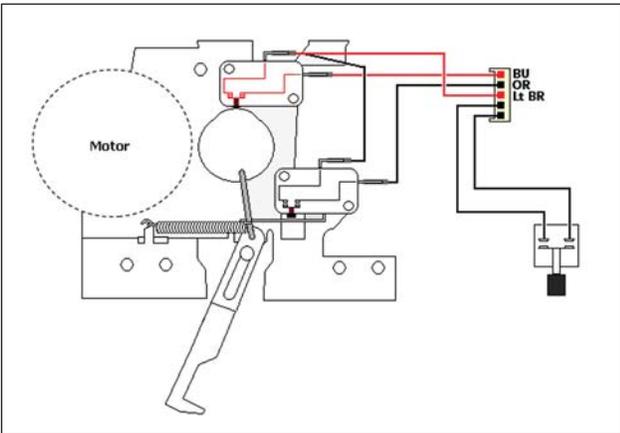
With the door in the unlocked position the S1 switch (N.O.) is being activated by the motor cam. Shown below are the switch positions and wire colors. To test, ohm out the wires between blue and light brown. The reading should be zero (0)  $\Omega$ . The S2 switch is N.O. and will read infinite ohms ( $\infty$ ) when the door is unlocked.



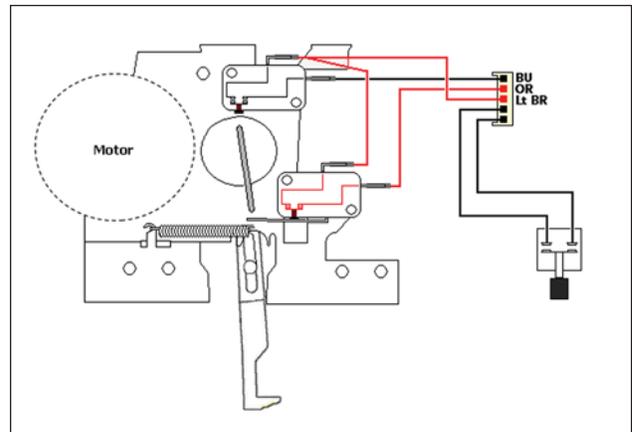
When the door locks, the S1 switch (N.O.) is no longer in contact with the motor cam and will read zero (0)  $\Omega$ . The S2 switch is N.O. and should close when the door is locked. To test, ohm out the orange and light brown. The reading should read zero (0)  $\Omega$  when the door is locked.



Shown below is the closed circuit in red.



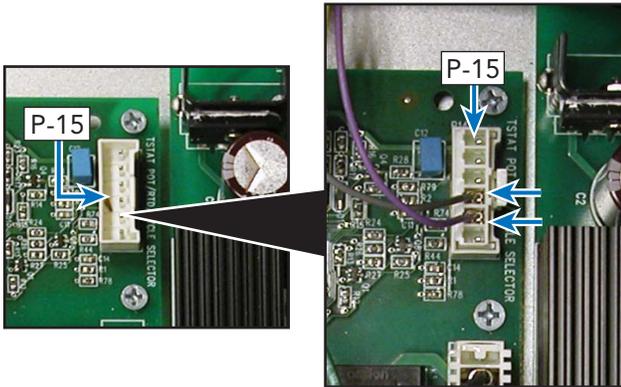
Shown below is the closed circuit in red.



## Control Board Diagnosis

### RTD Sensor

Locate the P15 connector on control board. The P15 connector will have a Molex plug containing a gray and violet wire. The gray and violet wires go to the oven sensor.



With the Molex plug removed, use an Ohm meter to measure resistance between the gray and violet wires in the Molex connector. At room temperature the reading should be approximately 1050 – 1100  $\Omega$ . If no or infinite resistance is read, verify sensor wiring is connected completely through circuit. If wiring is OK, replace the sensor.

### RTD Characteristics

RTD (Resistance Temperature Detector)	
Temperature (°F)	Resistance (Approximate)
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	2318
850	2609
900	2700

**Note:** Door switch must be depressed in order for the Convection Fan and all convection cycles, Auto Roast and Dehydrate heating elements to operate when the door is opened.

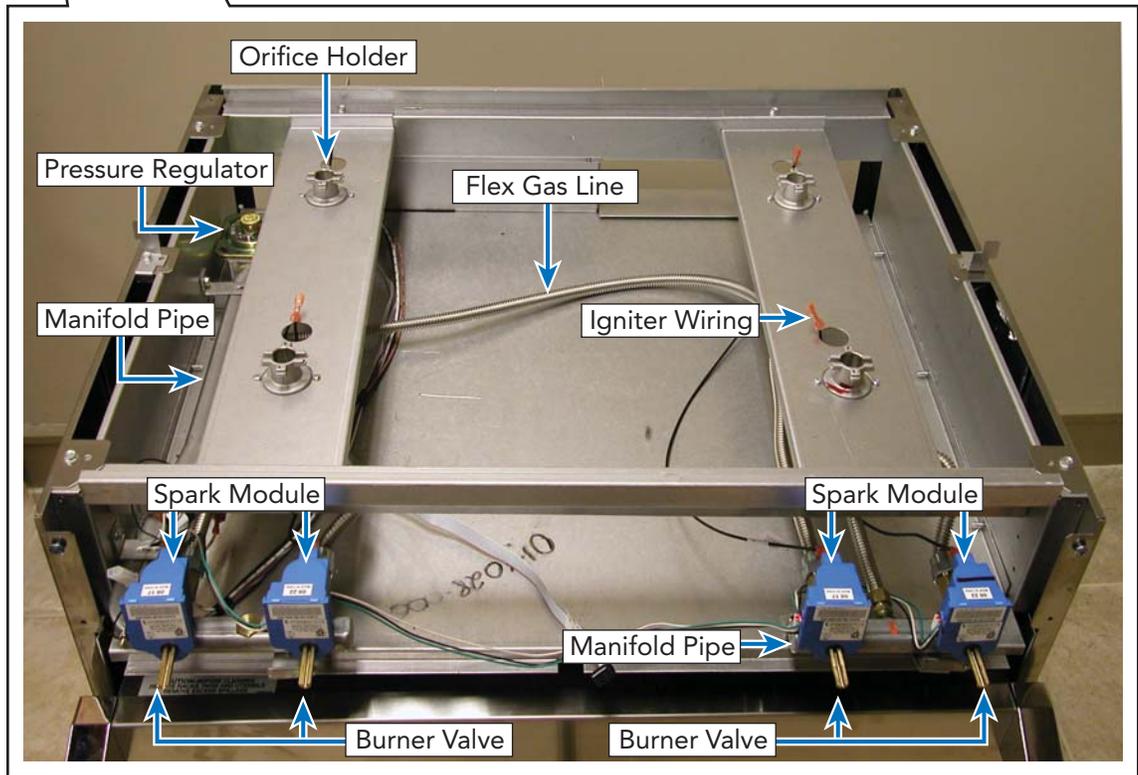
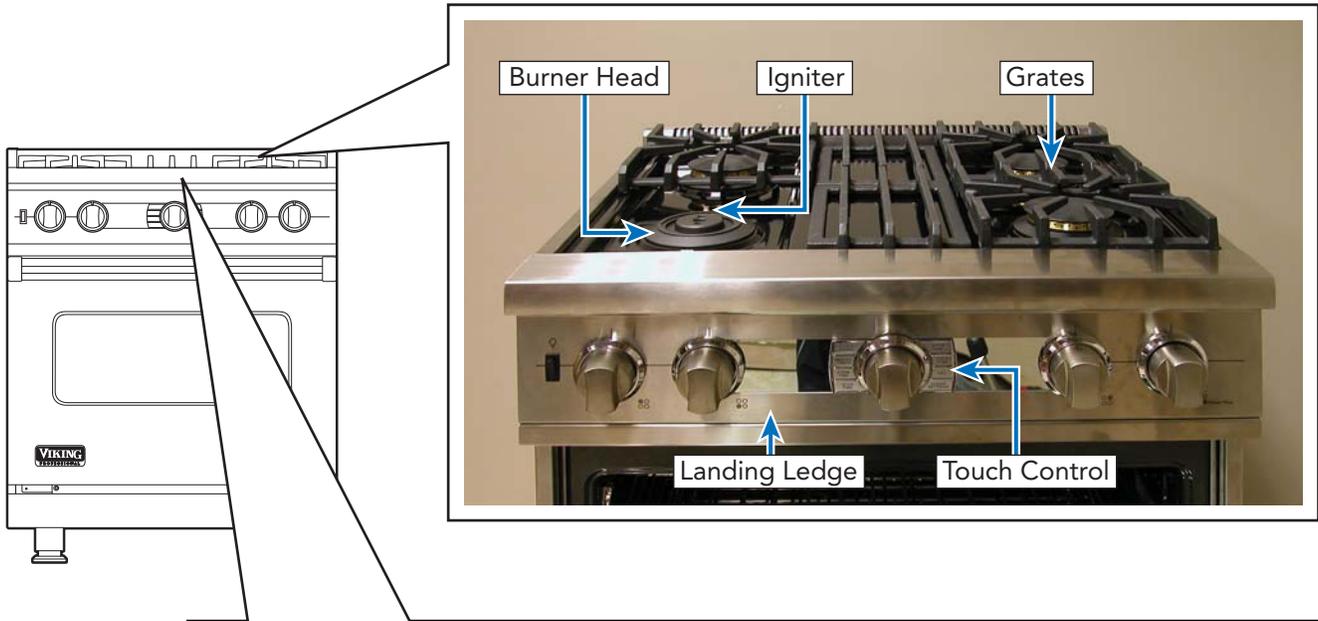
### IRIS Spark Module Test

#### (Surface Burner Igniter will not spark)

To check the spark module perform the following:

1. Check for any debris/build up around the igniter and operate the burner again.
2. Disconnect power and remove the landing ledge (see procedure for control panel disassembly).
3. Disconnect the wire harness from the suspect spark module.
4. Reconnect power and test for 120 VAC from black to white.
5. If no power is present, check wiring. If power is present, disconnect power and reconnect wire harness.
6. Disconnect black wire from the spark module and check for 0  $\Omega$  between the black wire and the tip of spark electrode.
8. If infinite resistance is found, remove the burner base and unplug the electrode. Check the electrode terminal to tip. If infinite ohms, replace the burner base assembly.
9. Test the wire between the module and ignitor. Replace if defective. Replace electrode and replace wire.
10. If 120 volts are present at the module and the ignition system tests good, replace the spark module.

Parts Location-Range Top



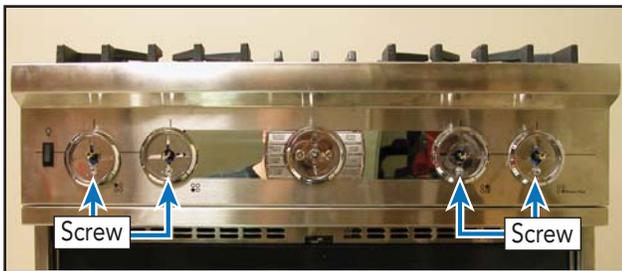
## ⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect gas supply and electrical power to unit before servicing. Discharge capacitor through a resistor before attempting to service. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power and gas supply. Before placing appliance into operation, always check for gas leaks with soapy water solution. **DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS.**

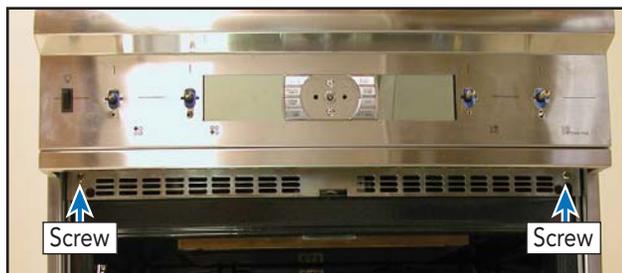
## Landing Ledge

To access control panel, light switch, gas valves and spark module:

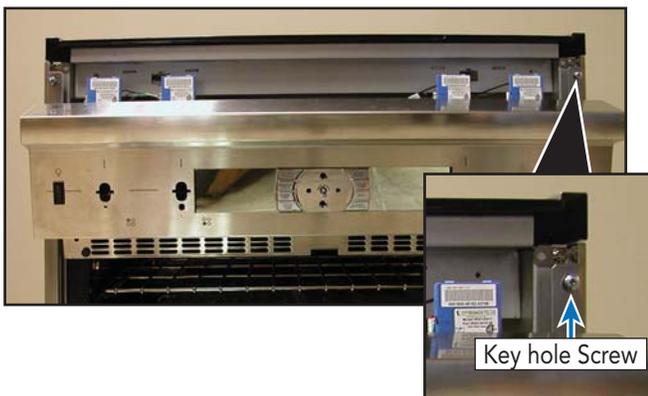
1. Remove knobs and screws securing burner and oven control bezels.



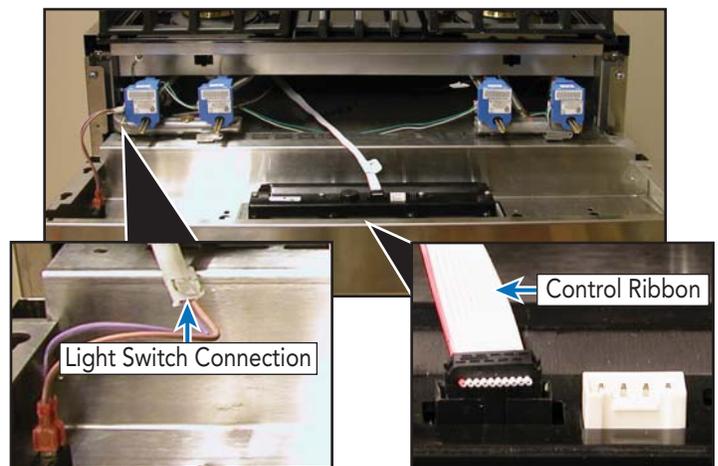
2. Open oven door and remove screws securing landing ledge.



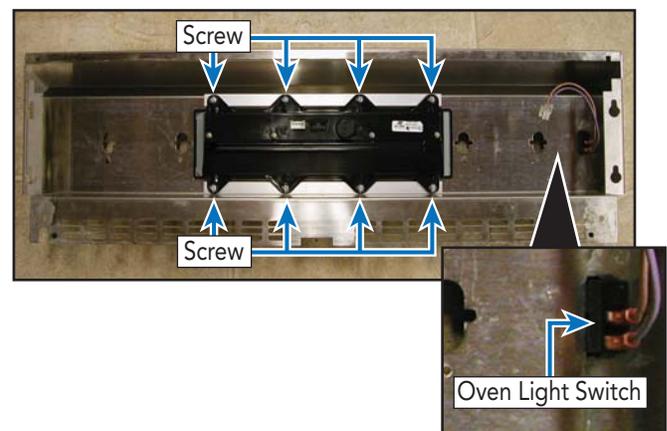
3. Lift up on control panel to disengage from keyhole slots.



4. Lower landing ledge and disconnect control ribbon and oven light switch wires.



5. If the control board needs replacing, remove screws securing oven control to the landing ledge (shown below). If only removing landing Ledge to access other components, simply unplug the two wires to the oven light switch and place landing ledge in a secure location.



6. Repair/replace landing ledge as needed.
7. Reverse procedure to reinstall.

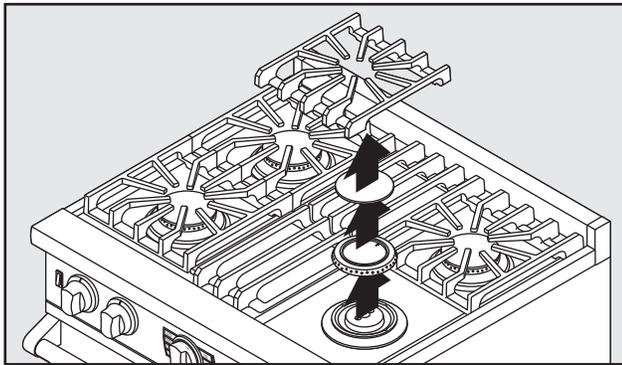
## ⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect gas supply and electrical power to unit before servicing. Discharge capacitor through a resistor before attempting to service. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power and gas supply. Before placing appliance into operation, always check for gas leaks with soapy water solution. **DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS.**

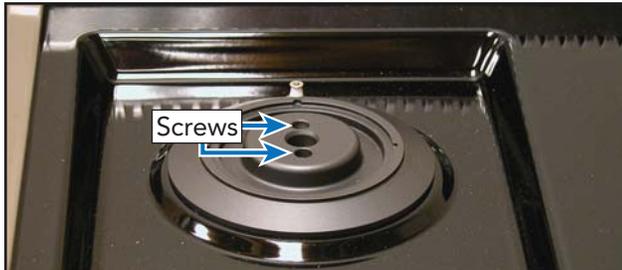
### Main Top Access

To access the main top:

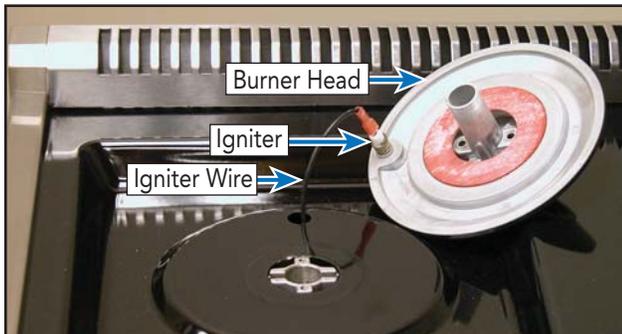
1. Remove grates, caps, burner heads, slide unit out to access rear.



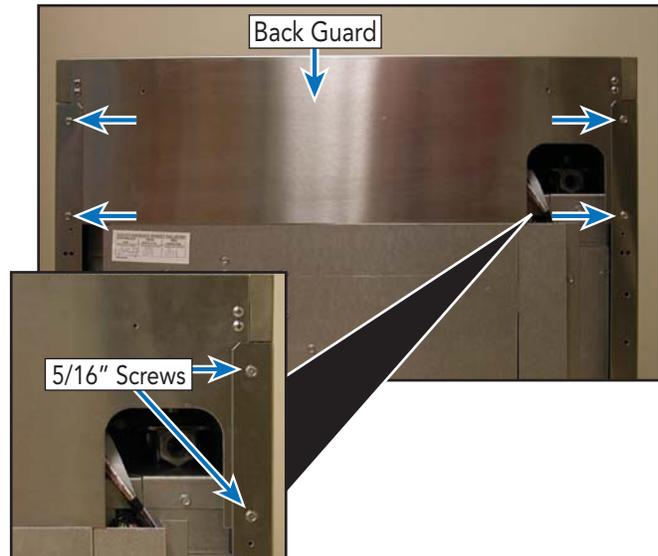
2. Remove 1/8" Hex head screws securing burner base to orifice holder.



3. Lift burner head off main top, mark igniter wires, and disconnect from igniter.

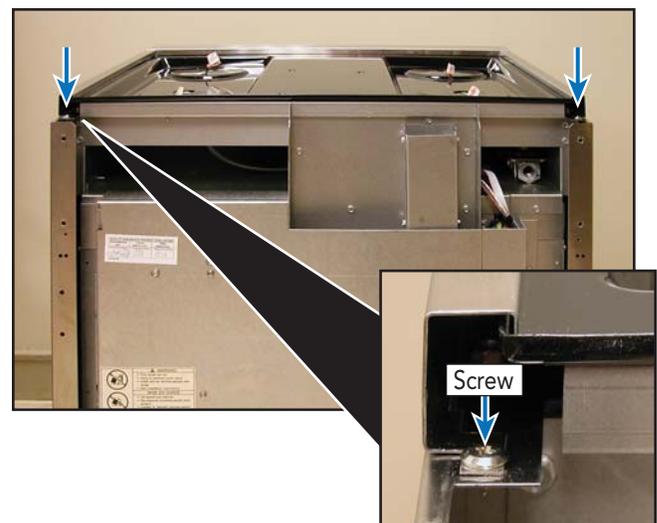


4. Remove 5/16" screws securing back guard.



5. Lift back guard up and out.

6. Remove Phillips head screws in rear securing the left and right side trims.

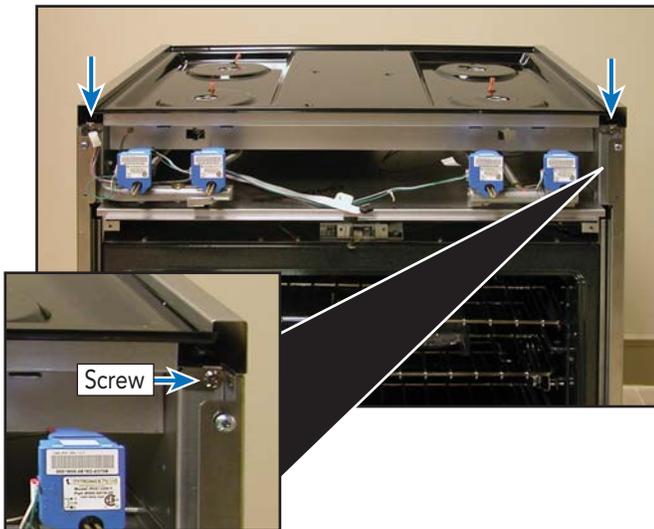


## ⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect gas supply and electrical power to unit before servicing. Discharge capacitor through a resistor before attempting to service. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power and gas supply. Before placing appliance into operation, always check for gas leaks with soapy water solution. **DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS.**

### Main Top Access (cont.)

7. Remove landing ledge (see *Landing Ledge* section, page 49).
8. Remove Phillips head screws in front securing the left and right side trims.

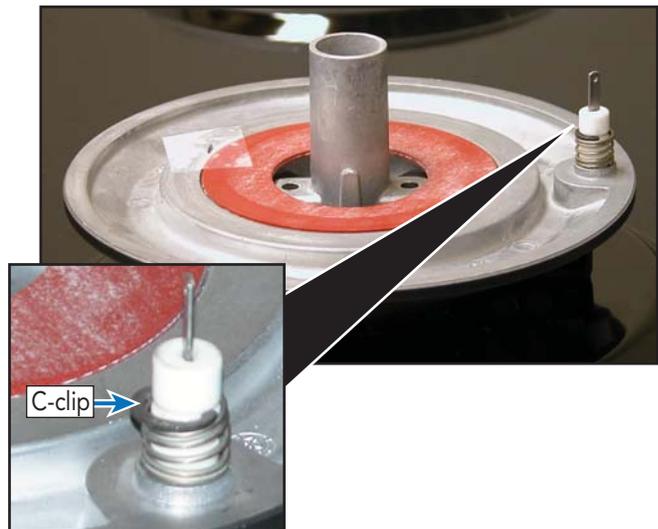


9. Remove side trims and repair/replace main top.
10. Reverse procedure to reinstall.

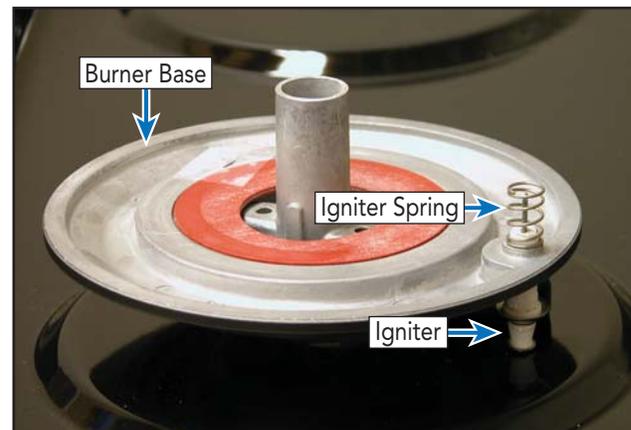
### Surface Igniter

To access the surface igniters:  
(follow steps 1 – 3 under *Main Top Access*, page 50)  
**Note:** Igniters are not sold separately. Burner base must be replaced which includes the igniter.

1. Remove C-clip from igniter, spring, and clip.



2. Remove igniter from burner base and repair/replace igniter.



3. Reverse procedure to reinstall.

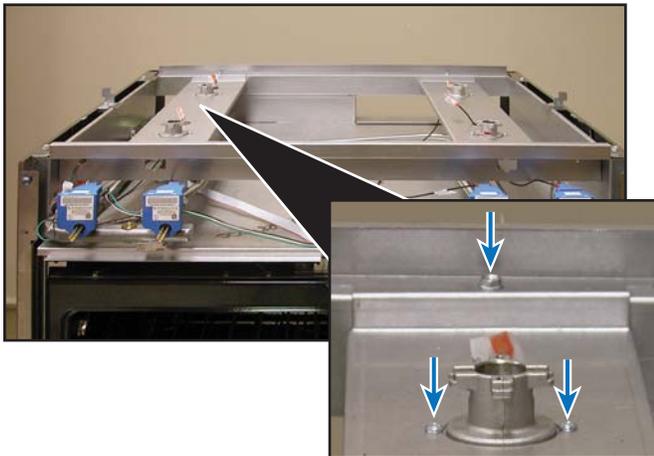
## ⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect gas supply and electrical power to unit before servicing. Discharge capacitor through a resistor before attempting to service. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power and gas supply. Before placing appliance into operation, always check for gas leaks with soapy water solution. **DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS.**

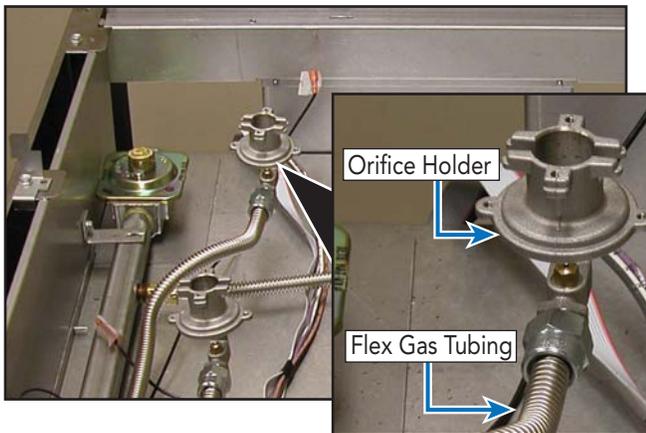
### Orifice Holder

To access the orifice holder:

1. Remove main top (see *Main Top Access* section, page 50).
2. Remove 5/16" screw securing front to back bracket and Phillips Head screws securing orifice holder to bracket.



3. Disconnect flex gas tubing from orifice holder and repair/replace orifice holder.



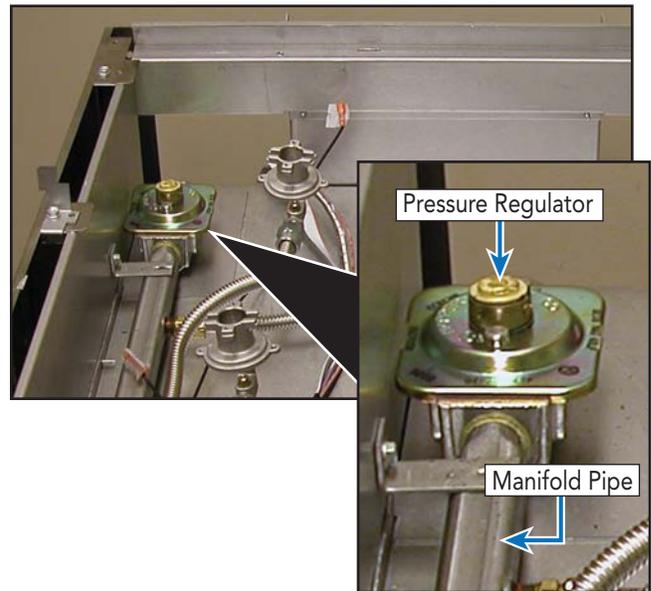
4. Reverse procedure to reinstall.

### Pressure Regulator

Gas pressure is controlled via a pressure regulator. The regulator takes incoming supply pressure and drops it down to a working pressure of 5" WCP (Natural Gas) and 11" WCP (LP Gas).

To access pressure regulator:

1. Remove left side orifice holders (see *Orifice Holder* section).
2. Disconnect main gas supply tubing. Disconnect pressure regulator from manifold pipe.



3. Repair/replace pressure regulator.
4. Reverse procedure to reinstall.

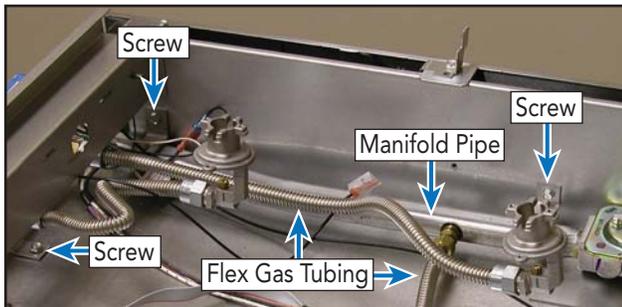
## ⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect gas supply and electrical power to unit before servicing. Discharge capacitor through a resistor before attempting to service. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power and gas supply. Before placing appliance into operation, always check for gas leaks with soapy water solution. **DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS.**

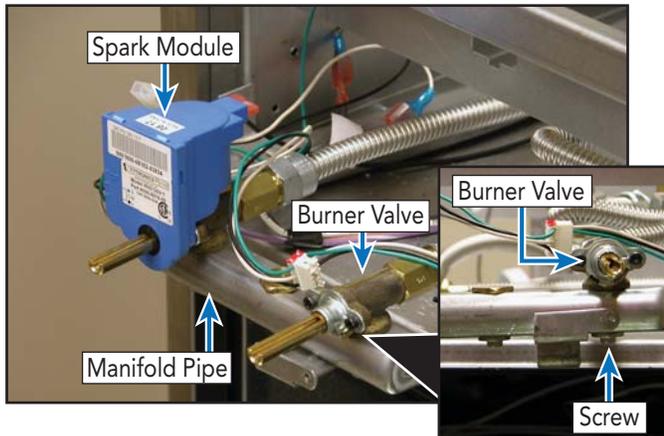
### Manifold Pipe

To access left side manifold pipe:

1. Remove landing ledge (follow steps 1-4 of Landing Ledge section, page 49).
2. Remove left side orifice holders (see Orifice Holder section, page 52).
3. Disconnect main gas supply tubing, flex gas tubing, and 5/16" screws securing manifold pipe.



4. Slide manifold pipe out. Disconnect wiring and remove spark modules by pulling forward from burner valve. Remove screw securing left side burner valves. Remove valves. Repair/replace left side manifold pipe.

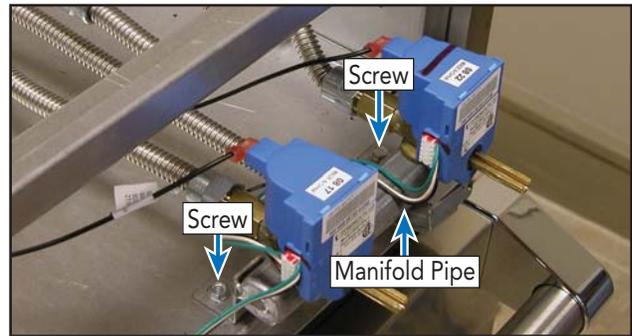


5. Reverse procedure to reinstall.

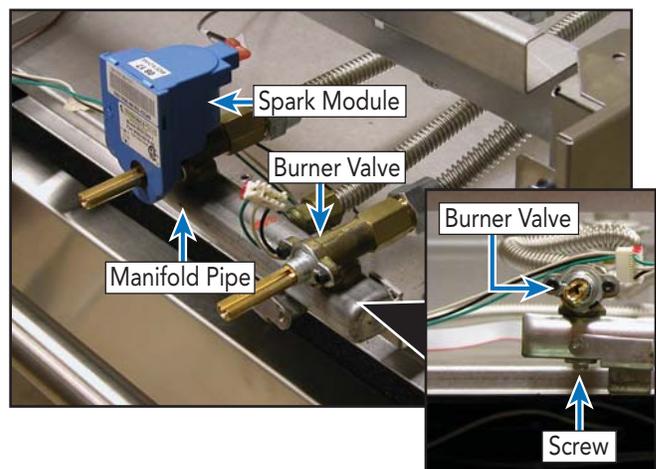
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To access right side manifold pipe:

1. Remove landing ledge (follow steps 1-4 of Landing Ledge section, page 49).
2. Remove right side orifice holders (see Orifice Holder disassembly, page 52).
3. Remove 5/16" screws securing manifold pipe.



4. Slide manifold pipe out. Disconnect wiring and remove spark modules by pulling forward from burner valve. Remove screw securing right side burner valves. Remove valves. Repair/replace right side manifold pipe.



5. Reverse procedure to reinstall.

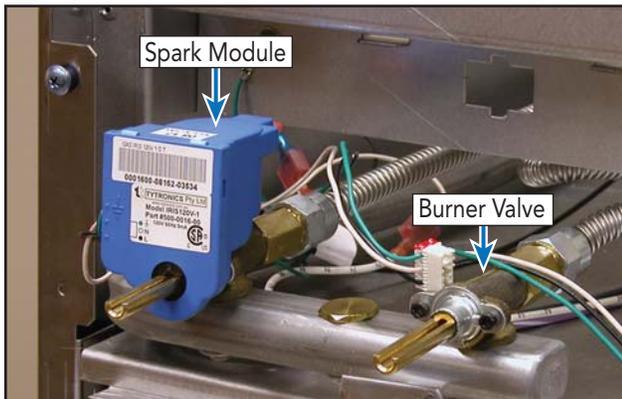
## ⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect gas supply and electrical power to unit before servicing. Discharge capacitor through a resistor before attempting to service. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power and gas supply. Before placing appliance into operation, always check for gas leaks with soapy water solution. **DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS.**

### IRIS Spark Module

To access spark module:

1. Remove landing ledge (follow steps 1-4 of Landing Ledge section, page 49).
2. Disconnect wiring. Remove module from manifold by pulling forward from burner valve.

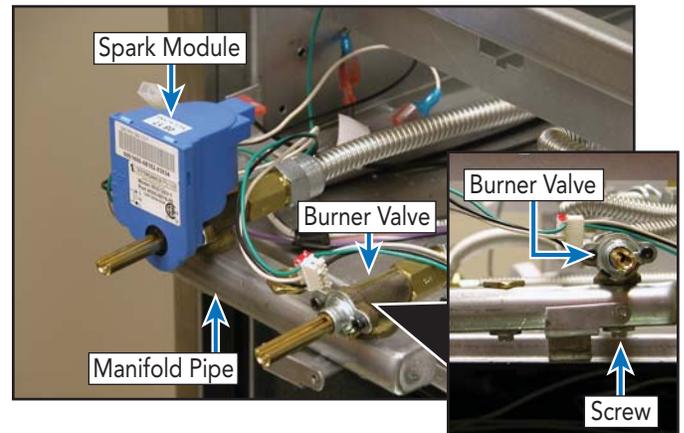


3. Repair/replace module as necessary.
4. Reverse procedure to reinstall.

### Burner Valve

To access burner valve:

1. Remove main top (see Main Top Access section, page 50).
2. Remove landing ledge (see steps 1-4 of Landing Ledge section, page 49).
3. Remove orifice holders (See Orifice Holder section, page 52).
4. Slide out manifold pipe (see steps 3 and 4 of Manifold Pipe section, page 53).
5. Remove spark module (see Spark Module section).
6. Remove screw securing valve on bottom of manifold pipe.



7. Repair/replace valve as necessary.
8. Reverse procedure to reinstall.

## ⚠ WARNING

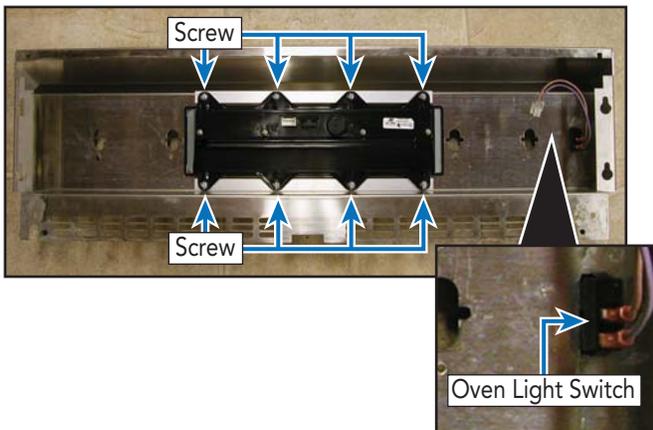
To avoid risk of electrical shock, personal injury, or death, disconnect gas supply and electrical power to unit before servicing. Discharge capacitor through a resistor before attempting to service. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power and gas supply. Before placing appliance into operation, always check for gas leaks with soapy water solution. **DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS.**

### User Interface

A user interface board is used to communicate the end user's preferences to the control board. Once input is received from the user interface to the control board, the appropriate components are energized to achieve the desired results.

To access user interface:

1. Remove landing ledge (see *Landing Ledge* section steps 1-4, page 49).
2. Remove screws securing oven control, depress tabs securing oven light switch, and remove control and light switch.

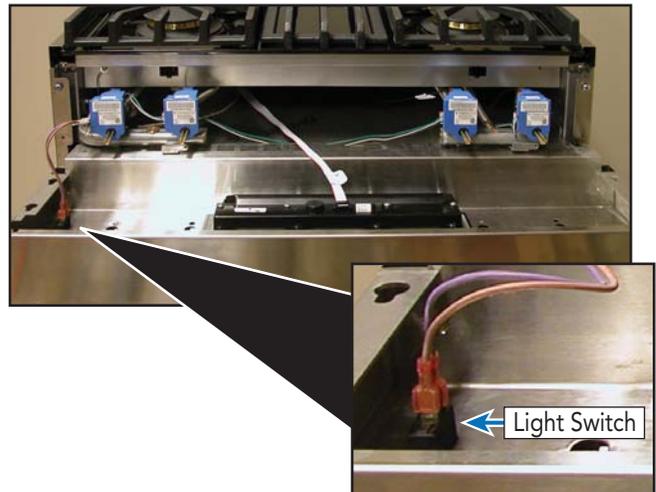


3. Repair/replace user interface as needed.
4. Reverse procedure to reinstall.

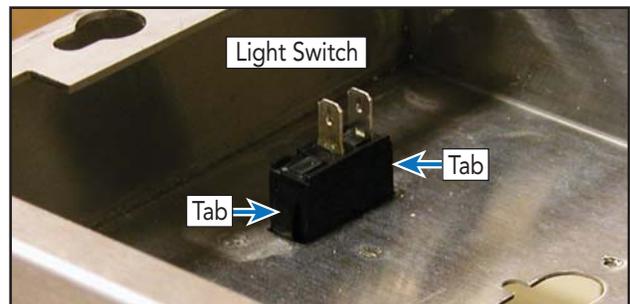
### Oven Light Switch

To access oven light switch:

1. Follow user interface steps 1-3 (see *User Interface* section).
2. Lower control panel and disconnect oven light switch wiring.



3. Depress tabs and repair/replace oven light switch as needed.



4. Reverse procedure to reinstall.

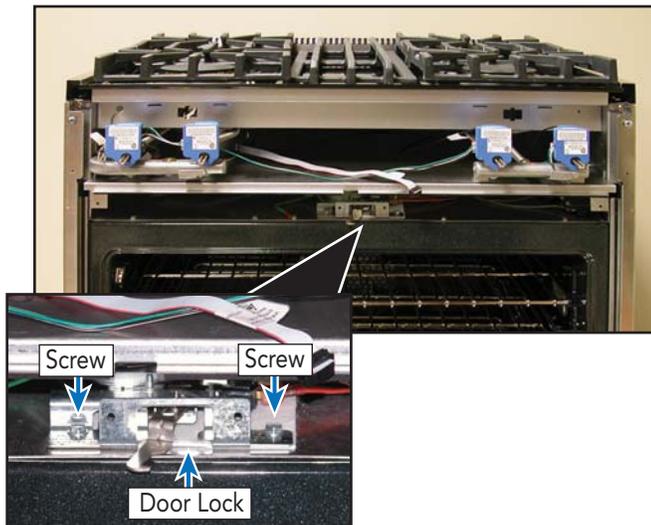
## ⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect gas supply and electrical power to unit before servicing. Discharge capacitor through a resistor before attempting to service. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power and gas supply. Before placing appliance into operation, always check for gas leaks with soapy water solution. **DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS.**

### Door Lock Assembly

To access door latch assembly:

1. Follow landing ledge steps 1-4 (see *Landing Ledge* section, page 49).
2. Remove 5/16" screws securing door lock assembly and remove door lock assembly.

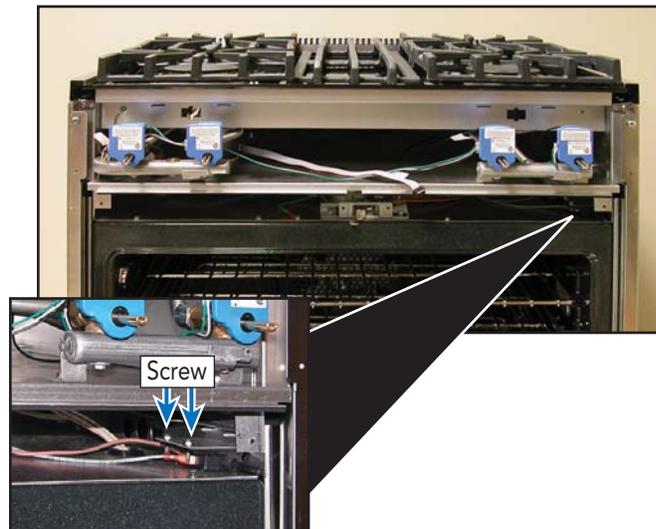


3. Mark wires and disconnect.
4. Repair/replace door lock assembly as needed.
5. Reverse procedure to reinstall.

### Door Switch

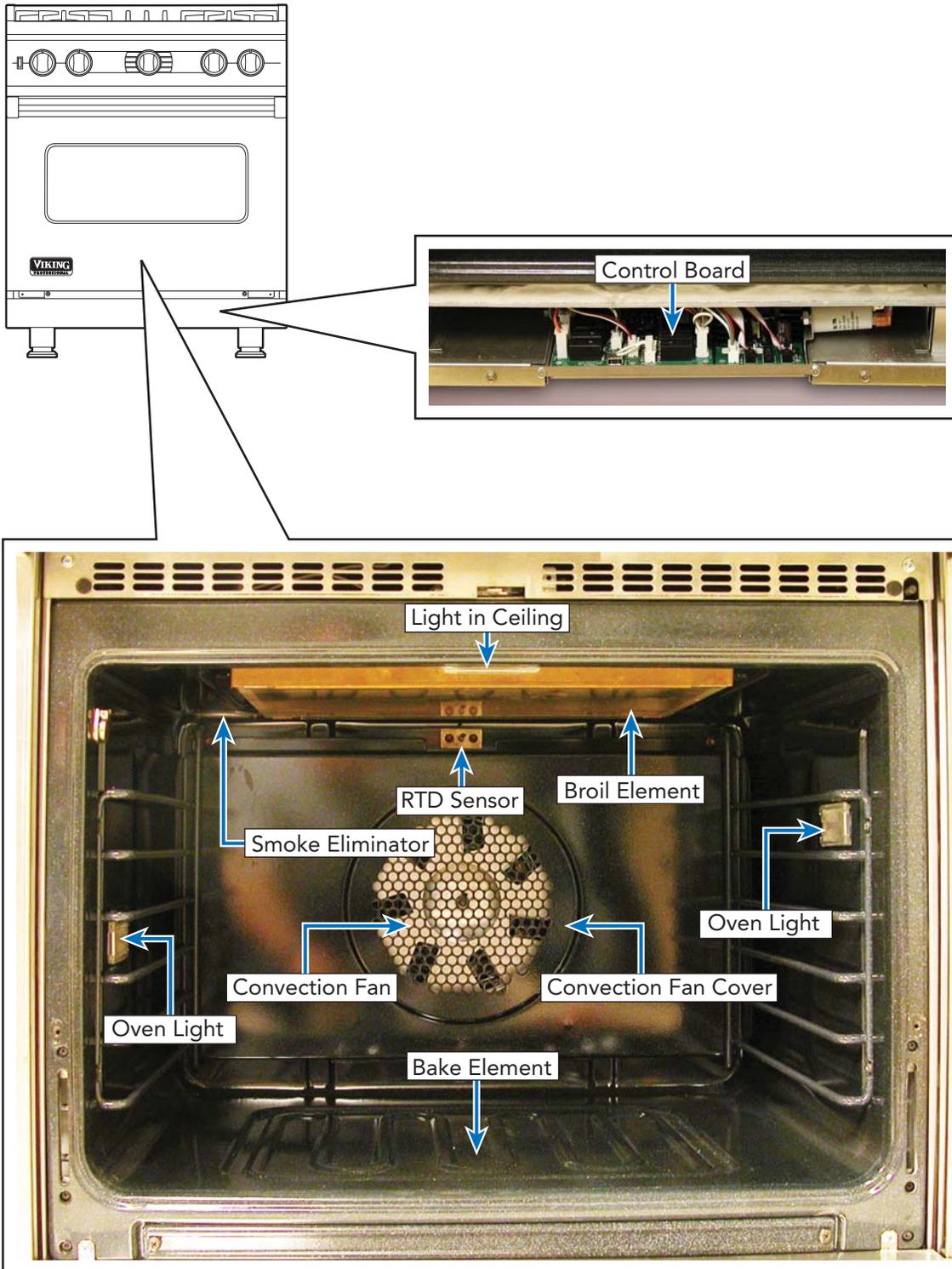
To access door switch:

1. Follow landing ledge disassembly steps 1-4 (see *Landing Ledge* section, page 49).
2. Remove two screws securing door switch.

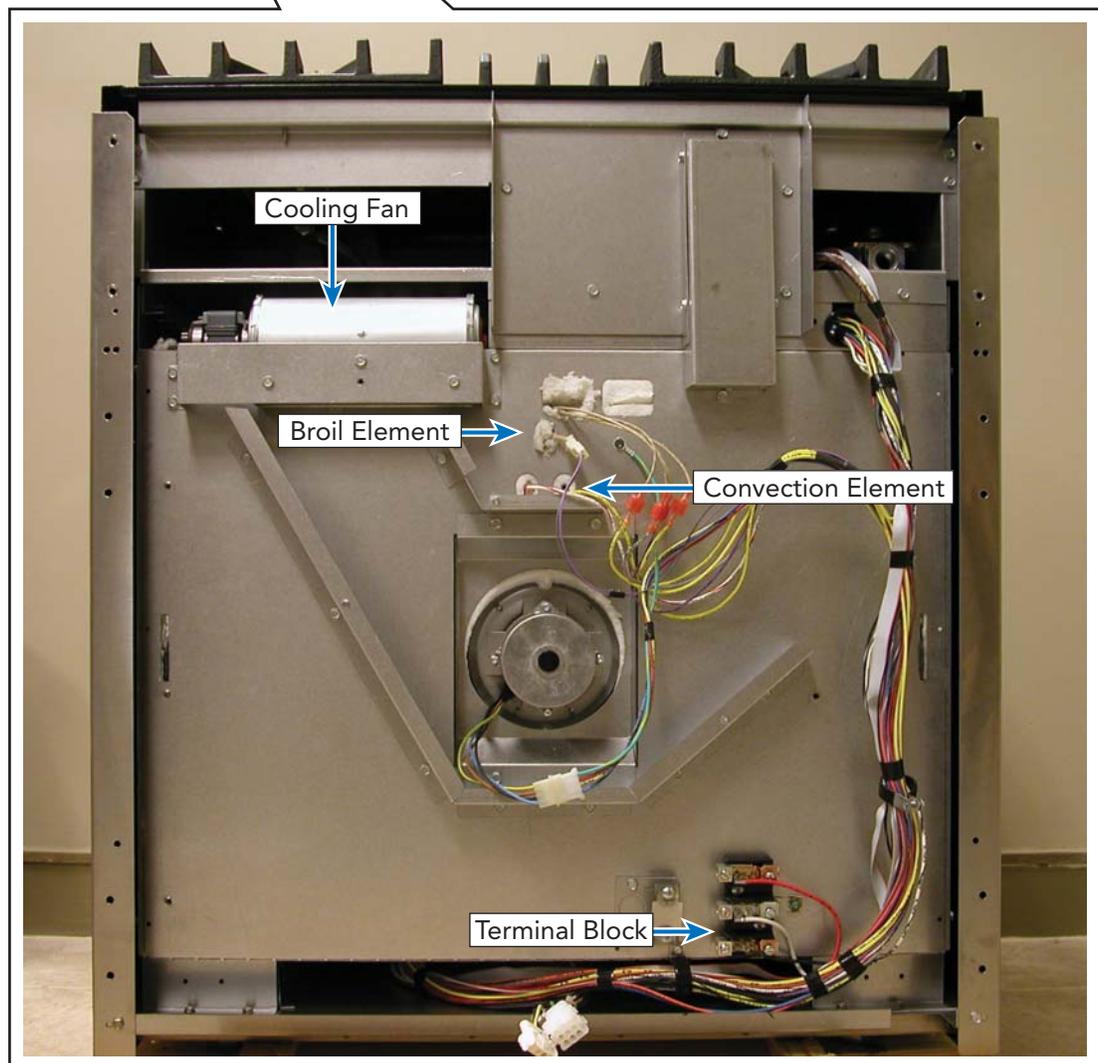
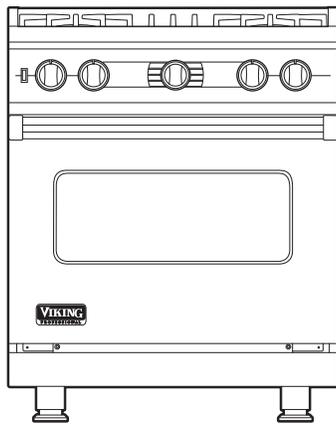


3. Mark wires and disconnect.
4. Repair/replace door switch as needed.
5. Reverse procedure to reinstall.

Parts Location–Oven



Parts Location–Main Back

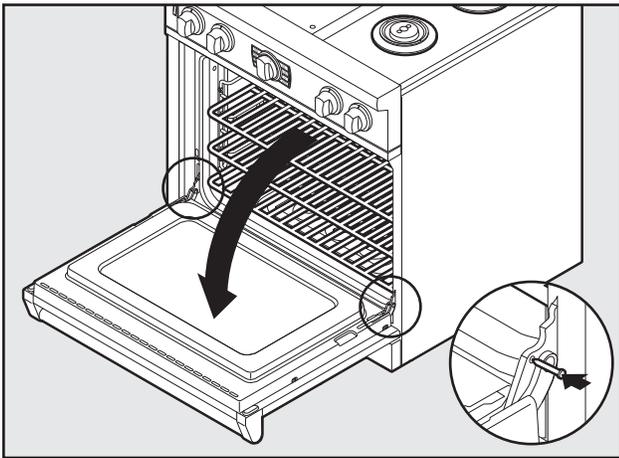


## **WARNING**

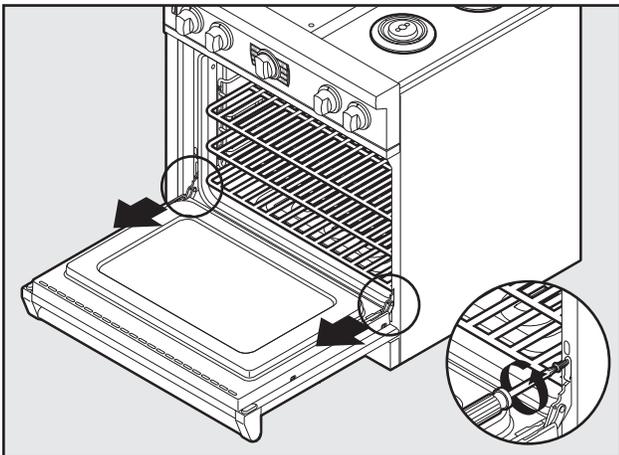
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

### Door Removal

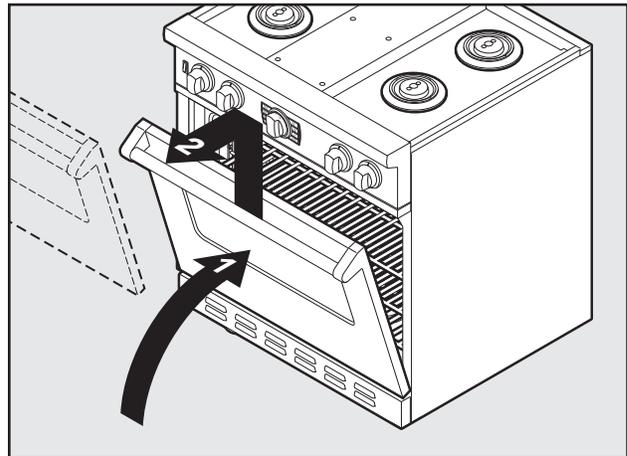
1. Open door completely. Place pins, supplied with unit, in pin hole. For personal safety, **ONLY** use pins supplied with the unit.



2. Remove hinge trim screws. Take off hinge trim. Identify right and left hinge for future re-installation.



3. Close until pins stop door. Lift door up and out.



4. Reverse procedure to reinstall.

## ⚠ WARNING

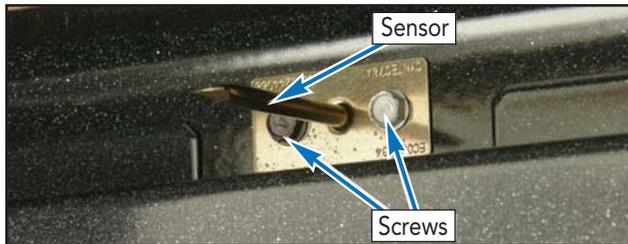
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

### RTD Sensor

The oven sensor is a Resistance Temperature Detector (RTD) that has a positive temperature coefficient. The sensor measures changes in resistance and communicates this to the control board.

To access RTD:

1. Remove oven door (see *Door Removal* section, page 59).
2. Remove screws that attach the sensor to the back of the oven liner.
3. Pull the sensor from the liner until the sensor connector protrudes into the oven cavity.

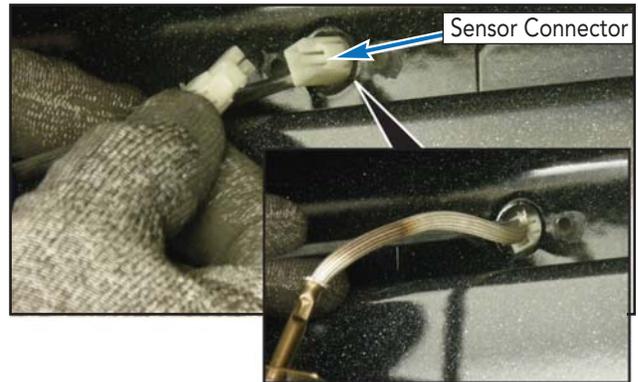


**Note:** The connector will not come through the hole in the oven liner.

4. Apply side pressure to the sensor connector to secure the connector against the opening in the oven liner.
5. While maintaining side pressure on the connector, disconnect the old sensor and connect the new sensor.

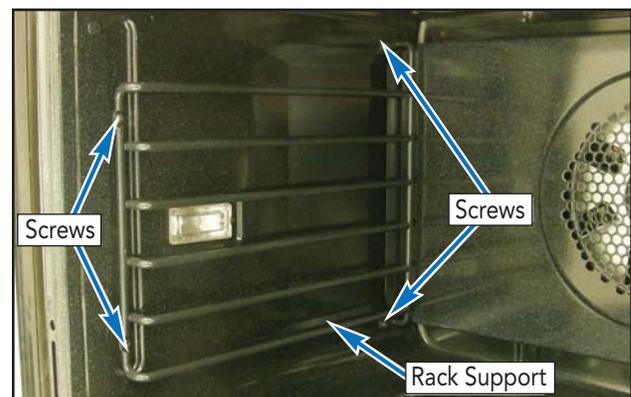
**Note:** When reinstalling the oven sensor, it may be helpful to insert a small screwdriver or awl into the connector and push the wiring and connector into place.

6. Install screws that attach the sensor to the back of the oven liner.



### Rack Support

1. Remove oven door (see *Door Removal* section, page 59).
2. Remove screws and rack support from each side of oven cavity.



3. Reverse procedure for installation.

## ⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

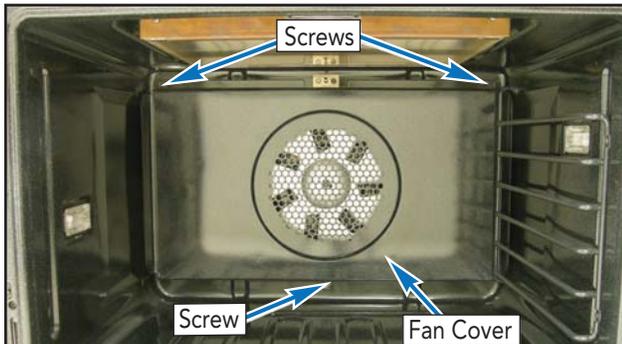
### Convection Fan Assembly

The convection fan assembly incorporates a heating element and a two direction fan to move air through the cavity ensuring even heat distribution.

### Convection Fan Cover

To access Convection Fan Cover:

1. Remove left rack support (see *Rack Support* section, page 60).
2. Remove screws and fan cover from oven cavity.

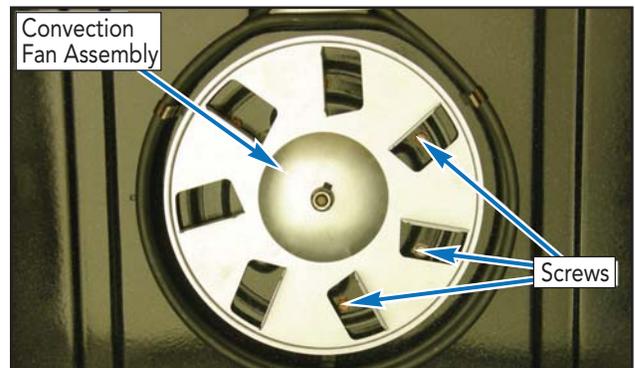


3. Reverse procedure for installation.

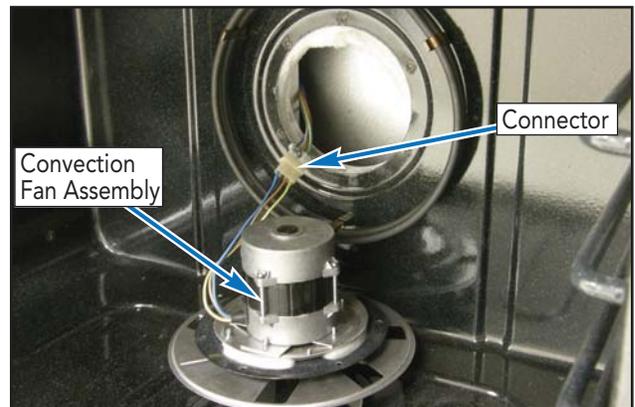
### Convection Fan

To access Convection Fan:

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



3. Disconnect connector and lift 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.

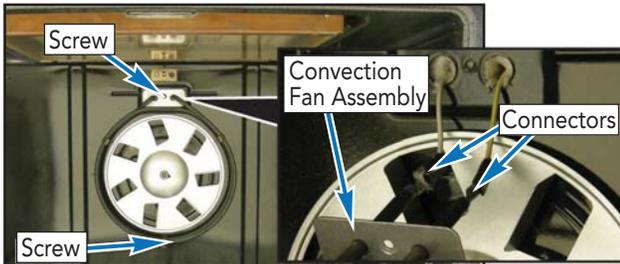
## ⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

### Convection Element

To access Convection Element:

1. Remove convection fan cover (see *Convection Fan Cover* section, page 61).
2. Remove screws that attach the convection bake element to the oven liner.



3. Disconnect two wires from convection element.
4. Reverse procedure for installation.

### Smoke Eliminator

To access Smoke Eliminator:

1. Remove convection fan cover (see *Convection Fan Cover* section, page 61).
2. Remove the screws that hold the smoke eliminator to the top, left, rear corner of the oven liner.
3. Pull down the smoke eliminator to remove from oven liner.



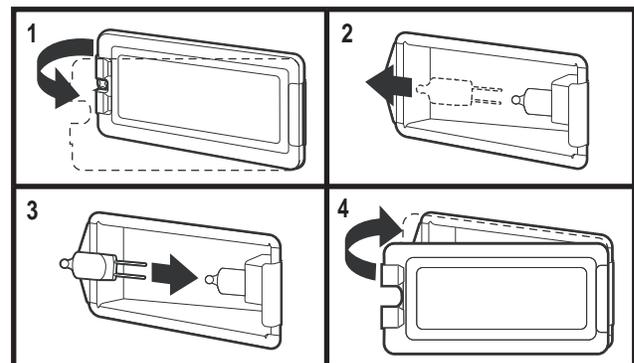
4. Repair/replace element as necessary.

### Interior Light bulb Replacement

## ⚠ CAUTION

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

1. 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.



## ⚠ WARNING

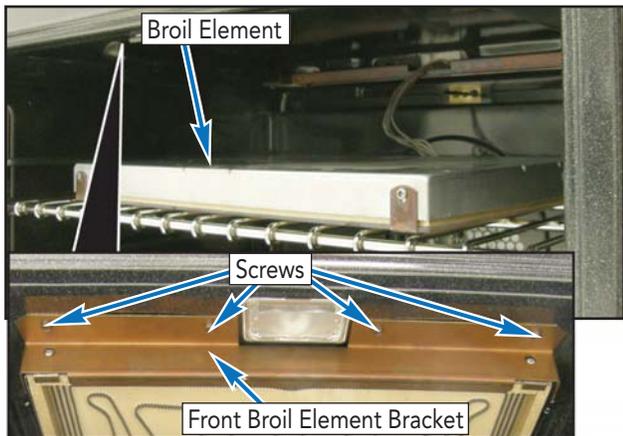
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

### Broil Element

The unit uses a dual ribbon element to achieve the broil function. The broil element has four wires that are attached at the rear and go to the control board.

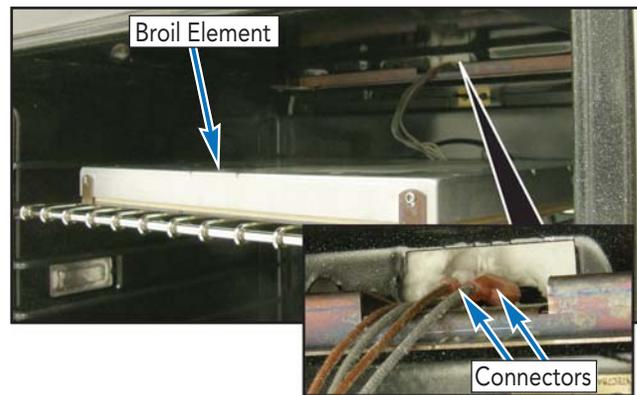
To access Broil Element:

1. Remove oven door (see *Door Removal* section, page 59).
2. Place oven rack in second position from top.
3. Remove screws and front broil element bracket from oven cavity.



4. Remove broil element from back broil element bracket and lower broil element to the oven rack.
5. Pull connectors into the oven cavity.

6. Mark and disconnect four connectors from broil element.



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

7. Reverse procedure for installation.

## ⚠ WARNING

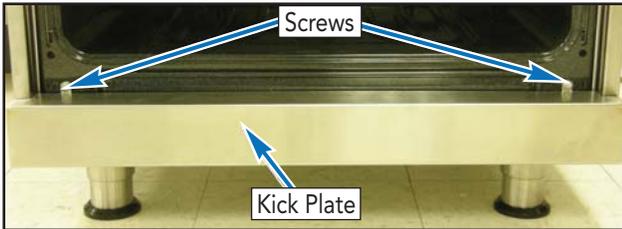
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

### Bake Element

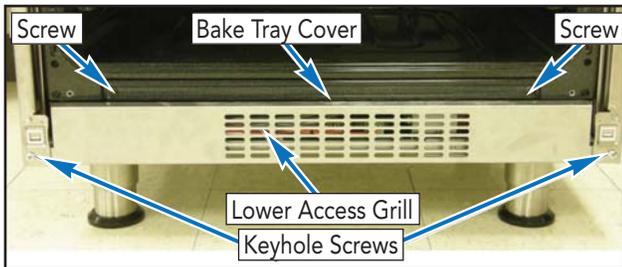
The unit uses a single pass outer element and 8 pass inner element to achieve the bake function.

To access Bake Element:

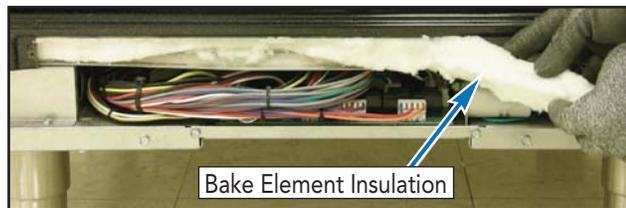
1. Remove oven door (see *Door Removal* section, page 59).
2. Remove screws and lift kick plate from keyhole screws.



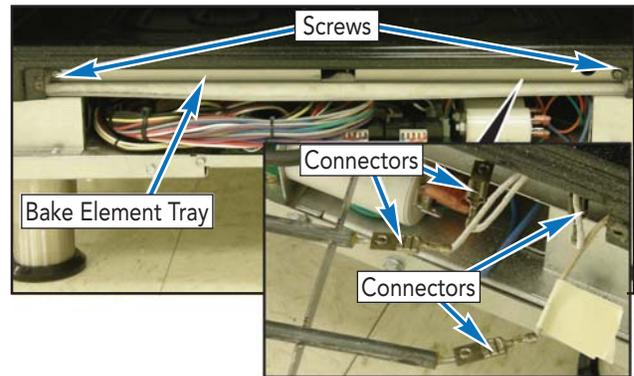
3. Remove keyhole screws and lower access grill from range.
4. Remove screws and bake tray cover.



5. Remove bake element insulation from range.



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



9. Reverse procedure for installation.

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

## ⚠ WARNING

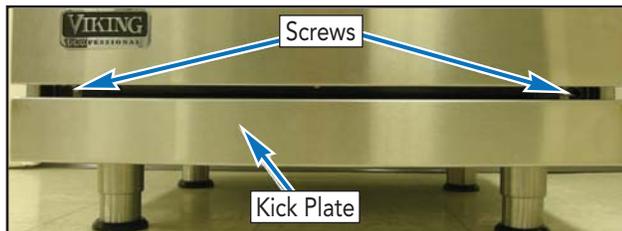
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

### Control Board Access

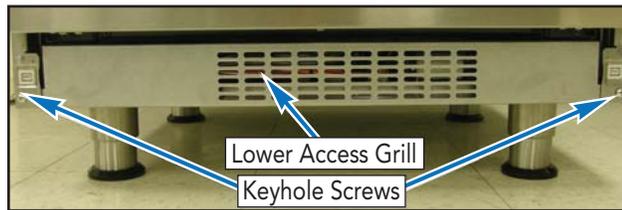
The range uses a control board to perform various oven functions. As input is received by the board, corresponding output actions are performed (relays open/close).

To access Control Board:

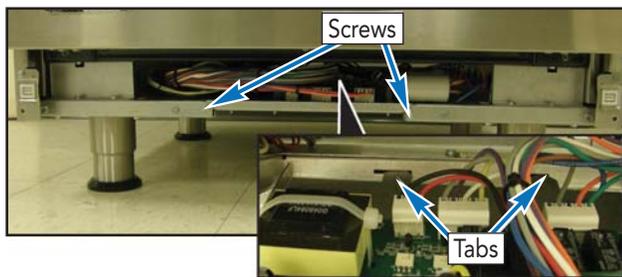
1. Remove screws and lift kick plate from keyhole screws.



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.

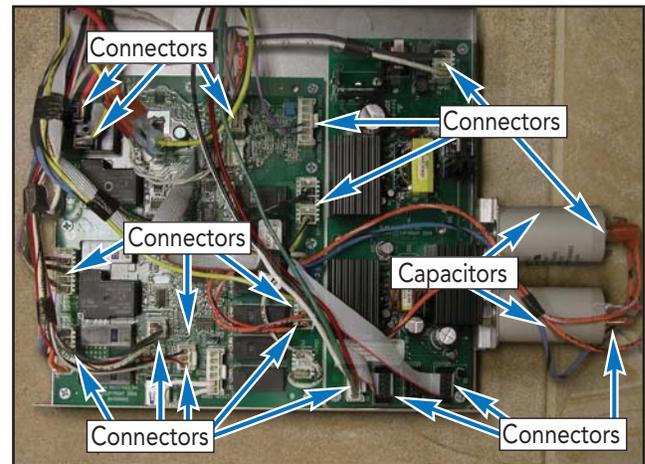
4. Reverse procedure for installation.

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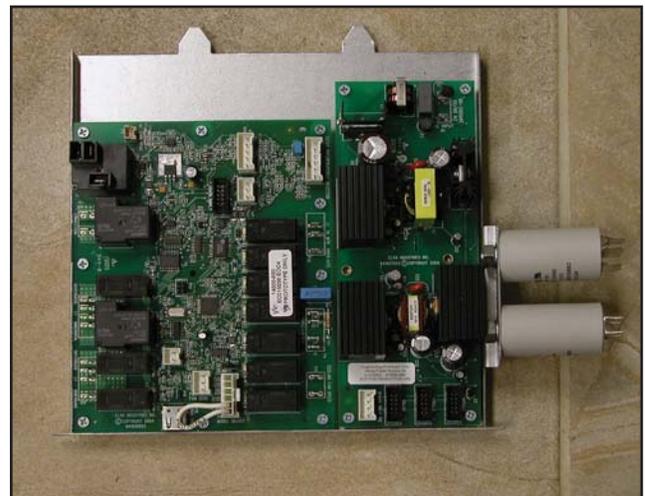
### Control Board Removal

Control Board Accessed

1. Mark and disconnect all connectors from control board and capacitors.



2. Place control board panel assembly on suitable work surface.
3. The main control board, power board and capacitors are replaced as one assembly.



4. Reverse procedure for installation.

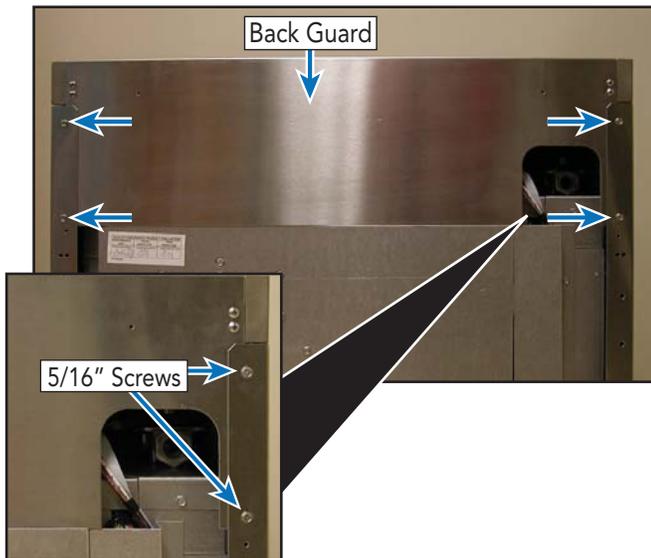
## ⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

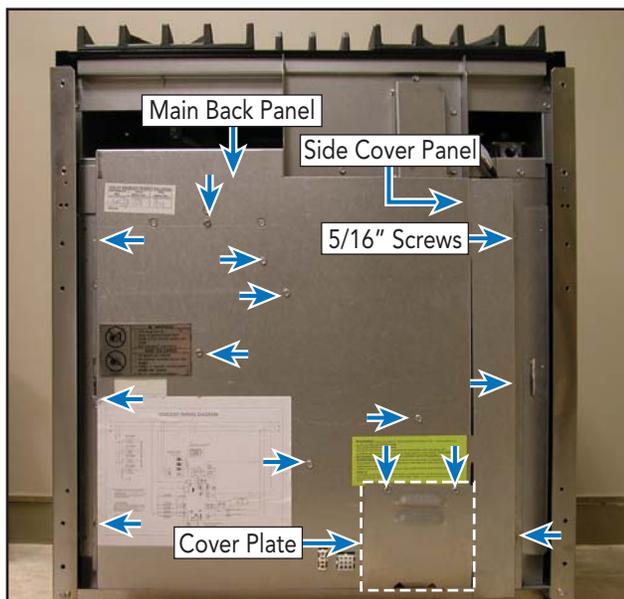
### Main Back Access

To access the main back:

1. Remove 5/16" screws securing back guard. Lift back guard up and out.



2. Remove 5/16" screws securing side cover and main back cover.

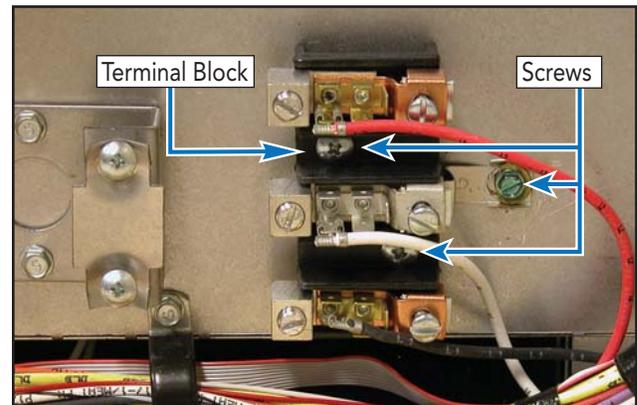


3. Remove covers and repair/replace as necessary.
4. Reverse procedure to reinstall.

### Terminal Block

To access the terminal block:

1. Remove cover plate (see Main Back Access section).
2. Mark wires and disconnect wiring and power cord.



3. Remove screws securing terminal block and repair/replace block as necessary.
4. Reverse procedure to reinstall.

## ⚠ WARNING

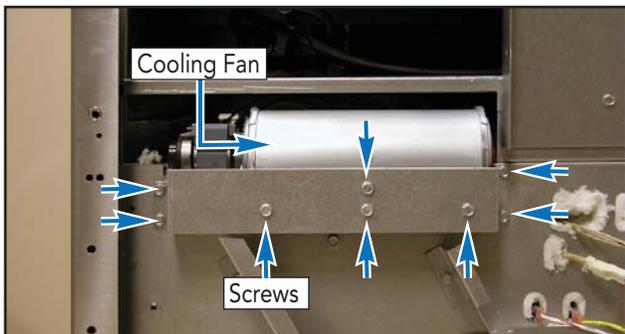
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

### Oven Cooling Fan

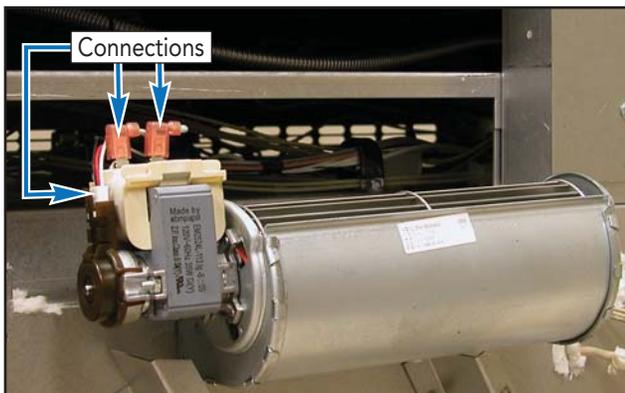
The VDSC is designed to circulate air around the burner box area whenever the oven is switched on. The oven cooling fan has a Hall Effect sensor that monitors the fan and communicates information to the control board.

To access oven cooling fan:

1. Remove main back cover (see *Main Back Access section, page 66*).
2. Remove screws securing cooling fan.



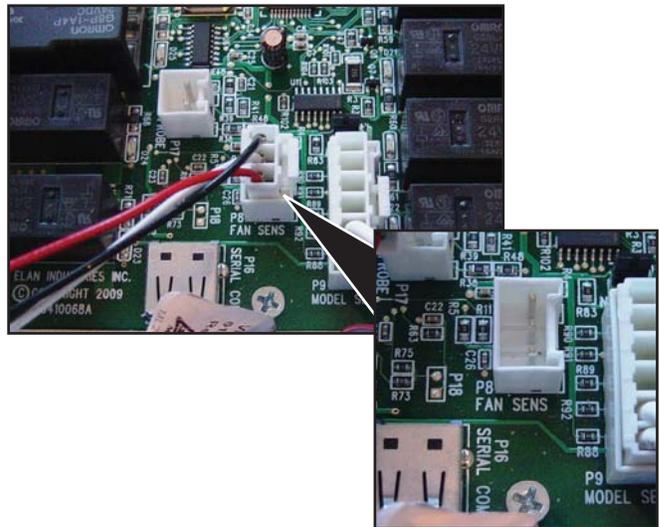
3. Slide fan out, disconnect wiring to fan motor, and wiring to Hall Effect Sensor.



4. Repair/replace as necessary.
5. Reverse procedure to reinstall.

### Hall Effect Sensor

The cooling motor incorporates a device called a Hall Effect Sensor. The sensor is connected to the main control board. Below you see the three wire connector to the hall effect sensor, which consists of a black (1), white (2) and red (3) wires. The Hall Effect sensor is built into the cooling motor.



If you receive a COOLING FAN ERROR alert, the first thing to do is to access the diagnostics and see if the cooling fan is operating. If the fan is not turning, then check to see if there is power going to the motor (as shown on page 41). If the fan is running, locate the 3-wire Molex plug on the EOC. With the oven switched OFF, unplug the connector from the board as shown above and set your volt meter to DC voltage.

You should read +5 volts between the pin (1) wire and pin (3) wire. You will also read +5 volts between the pin (2) wire and pin (3) wire. You should read 0 volts between pin (1) and pin (2). If the voltages are not correct and there is 120 volts supplied to the board, replace the EOC.



### WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

### Hall Effect Sensor (cont.)

If the voltages are correct, reconnect the 3-wire Molex plug. Place your meter leads into pin (1) black and pin (2) white. Activate the oven or the diagnostic program so that the fan is energized. With the fan turning, you should be reading 2.5 volts DC. If yes, then connect your meter between pin (2) white and pin (3) red. Again you should read 2.5 volts DC. If you do not read 2.5 volts but a full 5 volts DC, then the Hall Effect Sensor is defective and the fan motor (with sensor) will need to be replaced.

Another test that can be made is with the oven shut off and the Molex plug connected, place your meter leads into pin (1) black and pin (2) white. Set your meter to DC Volts. You will read either 0 or 5 volts, depending on where the motor is positioned. If you manually spin the motor you will see the meter jump between 0-5 volts. The same is true if you were to place your meter leads in pin (2) white and pin (3) red. As you manually spin the fan you will see 0 or 5 volts. Therefore, in any position, one side will read 0 volts while the other will read 5 volts. This is a good test to see that the three wire cable and hall effect sensor has closed contacts.

## Troubleshooting Guide

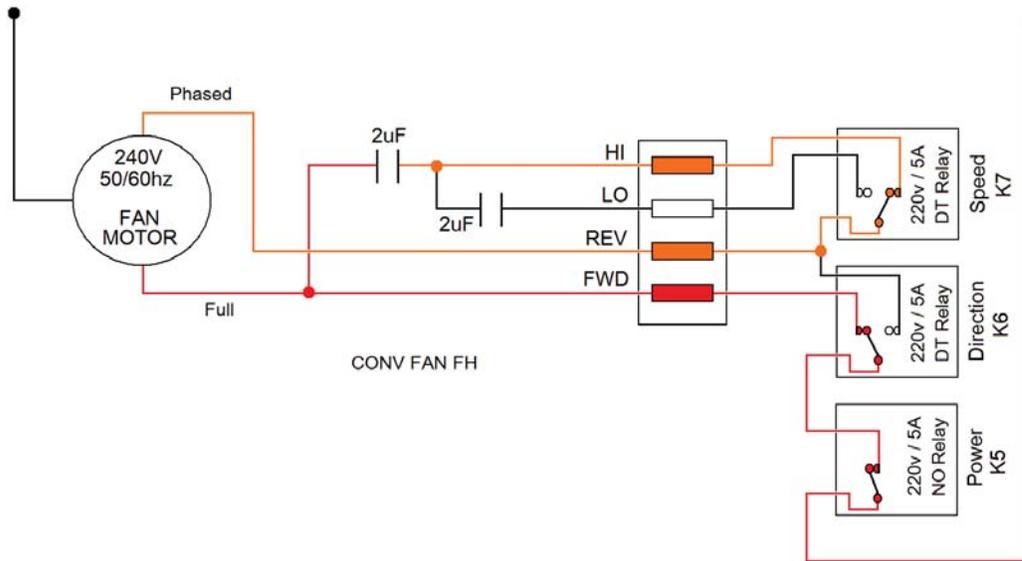
Below and on the following page are some general guides should a problem be detected. Please refer to the test procedures in this manual to determine the defective component.

Problem	Probable Cause	Correction
Nothing operates	Wiring Breaker	Repair or replace wiring as needed Reset breaker
Surface burner igniter inoperable—no sparking	Debris/soil on igniter Igniter wire Single point spark module	Clean igniter and remove debris Repair/replace wire Test module (refer to test procedure under diagnostics)
Igniters spark, but no flame	Gas supply valve Gas supply interrupted	Verify gas supply/valve is on Check pressure regulator
Igniters spark continuously after ignition	Power supply is not grounded Reversed polarity Wet/dirty igniters	Verify ground Verify proper polarity Dry/clean igniters
Burner ignites but flame is large, distorted, yellow	Debris/soil on igniter Conversion problem Wrong type gas	Clean burner head Verify conversion is complete Verify gas type is proper for range setting (LP or Natural)
Convection fan inoperable	Defective oven wiring Convection fan motor Oven control board Defective capacitors	Repair/replace defective wiring Test convection fan motor Verify relay operation, wiring, and inputs
Convection fan operates, but no heat	Defective oven wiring Convection element Oven control board	Repair/replace defective wiring Test convection element Verify relay operation, wiring, and inputs
Oven lights inoperable	Defective oven wiring Light bulb Light switch Door switch	Repair/replace wiring Replace light bulb Test light switch Test door switch
No bake, broil, oven lights, power to control board (P1 white to black)	House breaker or fuse open Defective oven wiring (shorted, open, or burned)	Reset breaker or replace fuse Repair/replace defective wiring
No bake, broil, oven lights 120 VAC at control board (P1 white to black)	Defective oven wiring (shorted, open, or burned) Oven control board	Repair/replace defective wiring Replace control board (check operation of blower motor)
Bake element inoperable	Defective oven wiring Bake element Oven control board	Repair/replace wiring Test bake element Verify relay operation, wiring, and inputs
Broil element inoperable	Defective oven wiring Broil element Oven control board	Repair/replace wiring Test broil element Verify relay operation, wiring, and inputs

## Troubleshooting Guide (cont.)

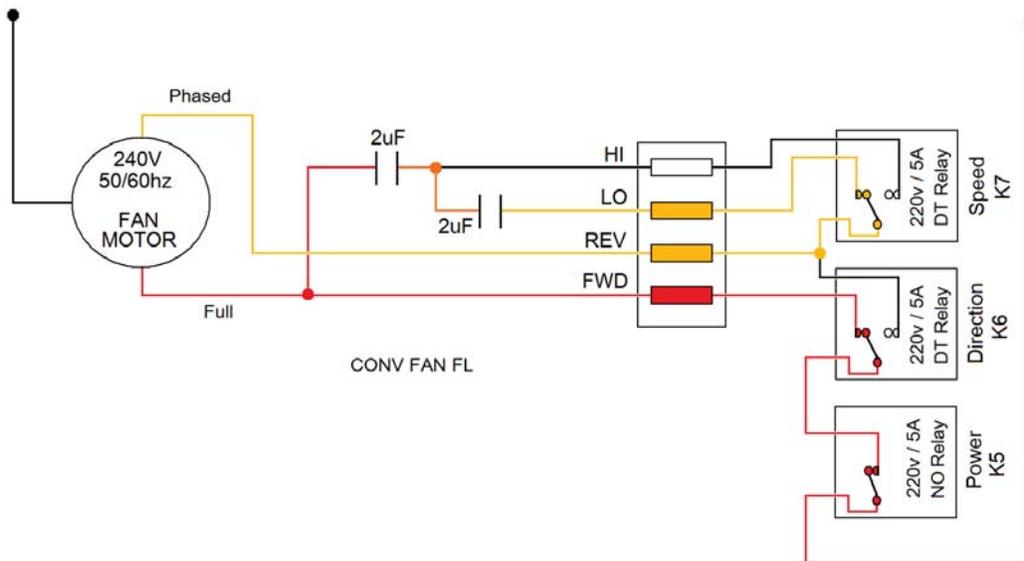
Problem	Probable Cause	Correction
No cooking functions or fans. Oven lights and UI functioning	Unit set to Showroom Mode	Disable Showroom Mode
Lights won't come on when door is opened, will work with light switch	Unit in Sabbath Mode.	Disable Sabbath Mode
No self-clean, bake and broil operate normally, oven lights operate, door won't lock	Open door latch motor Defective door interlock switches Open relay	Confirm resistance Test switches as per instructions on page 45 Replace control board
DOOR ERR shows in display and UI beeps	Open door interlock switch	Test repair or replace door switch or control board
DOOR LATCH Err shows in display and UI beeps	Defective latch switch (S1 or S2). Broken wire to switch Defective control board	Test repair or replace door switch or control board
No self-clean, bake and broil operate normally, oven lights operate, door will lock	Oven control board Defective oven wiring (shorted, open, or burned)	Replace control board Repair or replace defective wiring
Oven in self-clean mode, oven heats, (oven not reaching elevated clean temperatures)	Oven sensor out of calibration Control board	Replace RTD Sensor Replace control board
Oven door won't unlock (oven below elevated clean temperatures)	Open door latch motor Oven sensor out of calibration Control board Open relay Defective oven wiring (shorted, open, or burned)	Replace door latch motor Ohm oven sensor Replace control board Repair or replace defective wiring
Oven lights inoperable (bulbs OK)	Control board Open relay Defective oven wiring (shorted, open, or burned)	Replace control board Replace control board Repair or replace defective wiring
Oven light will not work	Light bulb is burned out Supply voltage	Check bulb and replace if defective Verify source voltage
Blower motor inoperable	Open blower motor Open relay	Check blower resistance Replace control board
Cooling fan runs all the time	Open RTD Broken wire to RTD Defective control board	Replace RTD Repair wiring to RTD Replace control board

## Convection Fan Current Flow



### Convection Fan – Forward – High Speed

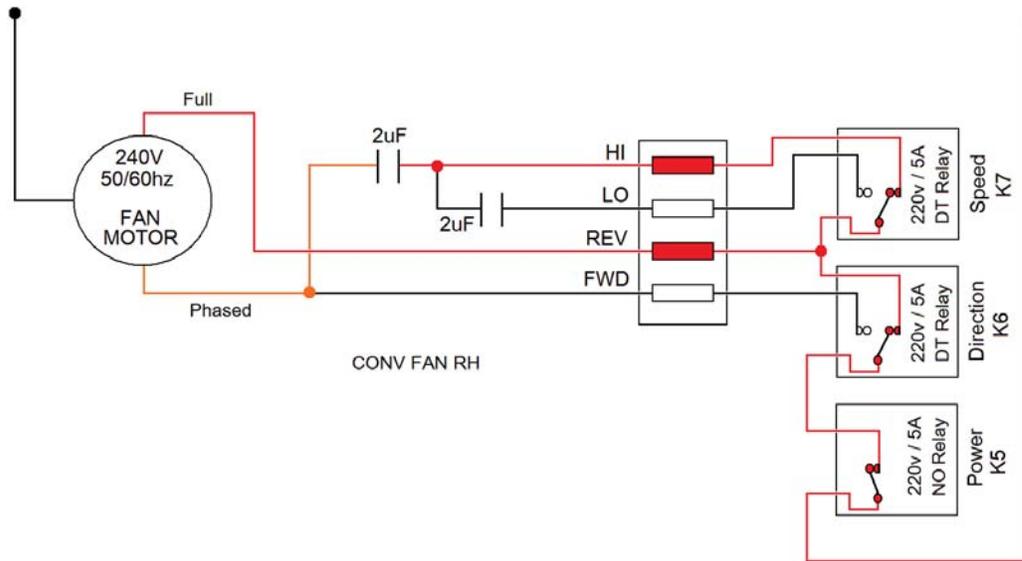
When the board selects a forward high speed, the K5 relay sends L1 through the K6 NC contact, then straight into the motor. L1 is also sent into the 1st capacitor. K7 is energized so the phased power exiting the 1st capacitor bypasses the 2nd capacitor. The phased current travels through the N.O. (now closed) contact of K7 and out the REV terminal to the motor. The motor will run at High speed (cw).



### Convection Fan – Forward – Low Speed

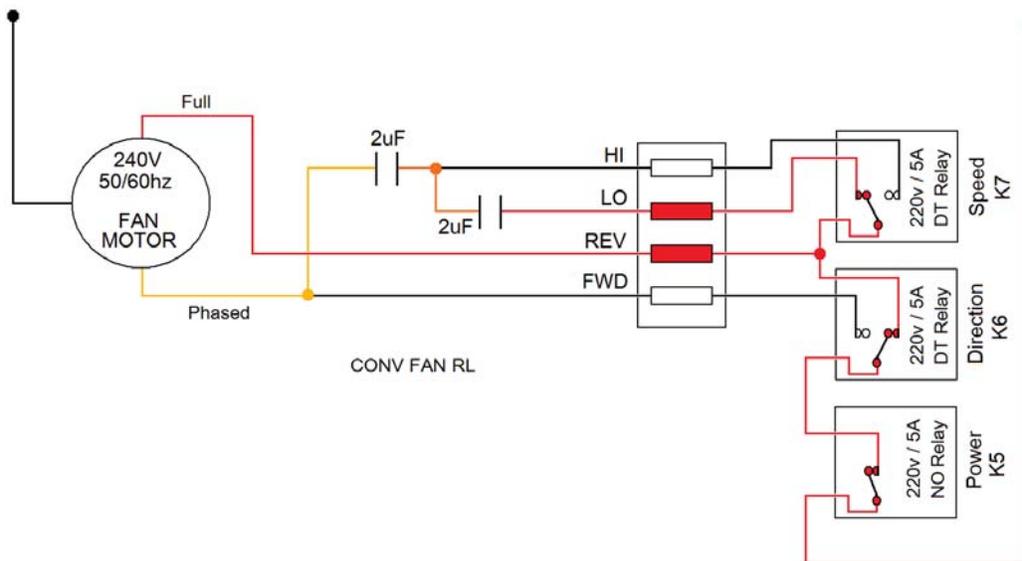
When the board selects a forward low speed, the K5 relay sends L1 through the K6 NC contact, then straight into the motor. L1 is also sent into the 1st capacitor. K7 is not energized so the phased power exiting the 1st. Capacitor has to enter the 2nd one. The phased current travels through the N.C. contact in the K7 relay and out the REV terminal to the motor. The motor will run at Low speed (cw).

Convection Fan Current Flow



Convection Fan – Reverse – High Speed

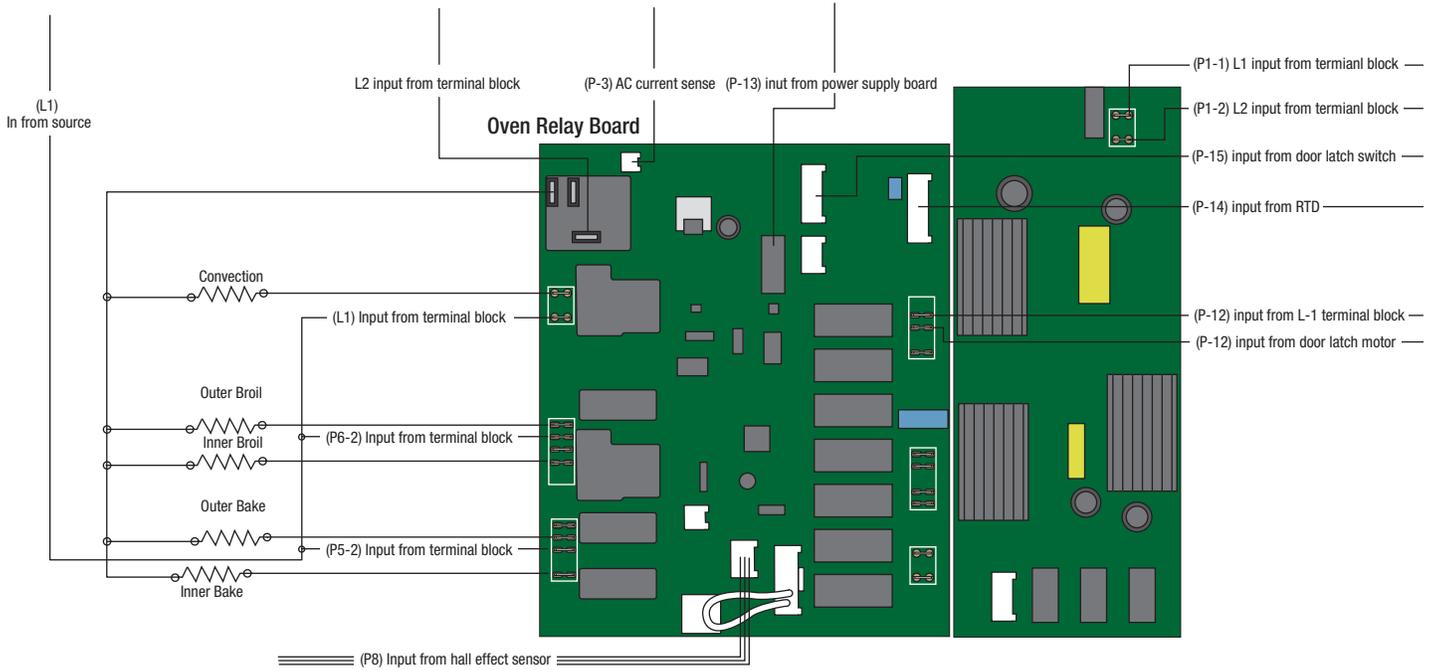
When the board selects a reverse high speed, the K5 relay sends L1 through the K6 N.O. contact (now closed), then out to the REV terminal and straight into the motor. L1 is also sent into the K7 relay through the N.O. contact (now closed) and then out to the HI terminal. It then enters the 1st capacitor. The phased current travels to the motor. The motor will run at High speed (ccw).



Convection Fan – Reverse – Low Speed

When the board selects a reverse low speed, the K5 relay sends L1 through the K6 N.O. contact (now closed), then out to the REV terminal and straight into the motor. L1 is also sent into the K7 relay through the N.C. contact and then out to the LO terminal. It then enters the 1st capacitor. The phased power exiting the 1st capacitor then enters the 2nd one. The phased current then travels to the motor. The motor will run at Low speed (ccw).

## Control Board Input



## Control Board Output

