



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.

## Single and Double Wall Oven

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

**DSOE301SS**

**DDOE301SS**

**DDOE305SS**



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

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

<b>CAUTION</b>
<p>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.</p>

Technical support for authorized servicers:

1-800-914-4799

Address your written correspondence to:

Viking Preferred Service  
 1803 HWY 82 West  
 Greenwood, MS 38930

## Built-In Electric Ovens Warranty

### One Year Full Warranty

Built-in electric ovens and all of their component parts and accessories, 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 bake element, broil element, or convection cook element 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, outdoor use, improper installation, improper operation, or repair or service of the product by anyone other than an authorized Viking Range Corporation service agency or representative. This warranty does not apply to commercial usage. 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. 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 thereof 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\*\*\*

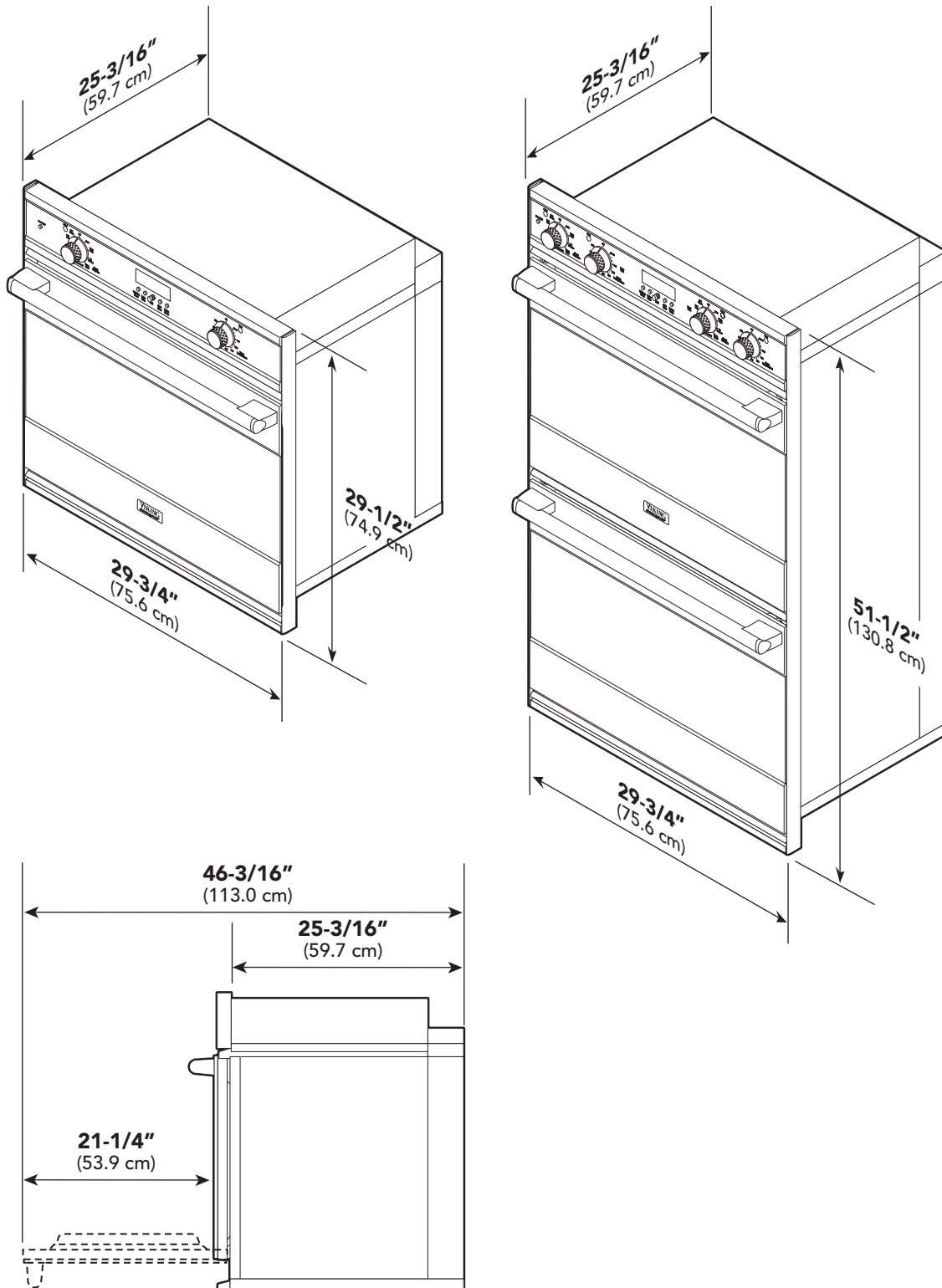
Designer Oven		
Description	DSOE301	DDOE301/305
Overall width	29-3/4" (00.0 cm)	
Overall height	29-1/2" (74.9 cm)	51-1/2" (130.8 cm)
Overall depth	To front of door 25-3/16" (64.3 cm)	
Cutout width	Standard—28-1/2" (72.4 cm) Flush mount*—29-5/8" (75.25 cm)	
Cutout height	Standard—28-1/4" (71.8 cm) Flush mount*—29-1/2" (74.9 cm)	Standard—50-1/4" (127.6 cm) Flush mount*—51-1/2" (130.8 cm)
Cutout depth	Standard—24" (61.0 cm) Flush mount*—25" (63.5 cm)	
Electrical requirements	Separate, grounded 4-wire, 240 VAC, 50 amp service with its own circuit breaker	
Maximum amp usage	23.3 amps—240 VAC 20.2 amps—208 VAC	46.7 amps—240 VAC 40.5 amps—208 VAC
Oven interior width	24-3/4" (62.9 cm)	
Oven interior height	15-3/4" (40.0 cm)	
Oven interior depth	18" (45.7 cm)	Upper—18" (45.7 cm) Lower—19" (48.3 cm)
Oven volume (measured to AHAM Standard)**	4.1 cu. ft.	Upper—4.1 cu. ft. Lower—4.1 cu. ft.
Oven volume (total oven cavity)	4.3 cu. ft.	Upper—4.3 cu. ft. Lower—4.5 cu. ft.

**\*Note:** To install the oven in a flush mount application, the flush mount accessory kit (D30FTS for single ovens and D30FTD for double ovens) is required.

**\*\*Note:** The AHAM Standard for measuring oven capacity subtracts the door plug and convection baffle dimension from the total oven volume.

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

## 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.

### Electrical Requirements

Check your national and local codes regarding this unit.



## WARNING

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

- Oven requires a separate, grounded 4-wire, 240V (AC), 50 amp service with its own circuit breaker.
- Wire sizes and connections must conform with the rating of the appliance and to the requirements of the National Electrical Code, ANSI/NFPA 70 – latest edition, or Canadian Electrical Code, CSA C22.1-1982 and C22.2 No. 01982 – latest edition, and all local codes and ordinances.
- Oven must be connected to the proper electrical voltage and frequency as specified on the model/serial rating plate (located under right side of control panel).
- Oven must be connected to grounded metal permanent wiring system. Check with a qualified electrician to make sure the oven is properly grounded.
- **DO NOT** ground to a gas pipe.
- **DO NOT** use an extension cord with this appliance, because this may result in electrical shock or other personal injury.
- This unit is equipped with a No. 10 ground wire in the conduit.

- The electrical conduit must be kept to the top left for a flush installation. **NEVER** cut the conduit.
- Connect the flexible armored cable directly to 4-wire, 240V household service. If codes permit and separate grounding wiring is used, we recommend that a qualified electrician determine the grounding path and that the wire gauge is in accordance with local codes.
- Junction boxes installed on rear wall directly behind oven must be recessed and located at the upper left-hand corner of the cabinet.
- A UL-Listed conduit connector must be provided at the junction box.
- **DO NOT** install a fuse in the neutral or grounding circuit. We recommend a time delayed fuse or circuit breaker. Connect directly to the fused disconnect (or circuit breaker box) through flexible armored, or non-metallic sheathed, copper cable (with grounding wire).

### Cleaning Safety

- Turn off all controls and wait for appliance parts to cool before touching or cleaning them.
- 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.



## Warnings

### Important Safety Notice and Warning

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

### 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 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 oven vent, surfaces near the vent opening, oven door, areas around the oven door, and oven window.
- The misuse of oven doors (e.g., stepping, sitting, or leaning on them) can result in potential hazards and/or injuries.

#### WARNING

##### ELECTRICAL SHOCK HAZARD

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

#### WARNING

##### ELECTRICAL SHOCK HAZARD

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

#### WARNING

##### BURN OR ELECTRICAL SHOCK HAZARD

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

#### WARNING

##### BURN OR ELECTRICAL SHOCK HAZARD

The misuse of the oven door(s) (e.g. stepping, sitting, or leaning on them) can result in hazards or injuries and damage to the product.

#### WARNING

**DO NOT** use the handle or oven door to lift the oven. **DO NOT** lift or carry the door by the handle.

#### WARNING

##### BURN HAZARD

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

## Warnings

### **WARNING**

This 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** 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!

### **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.**

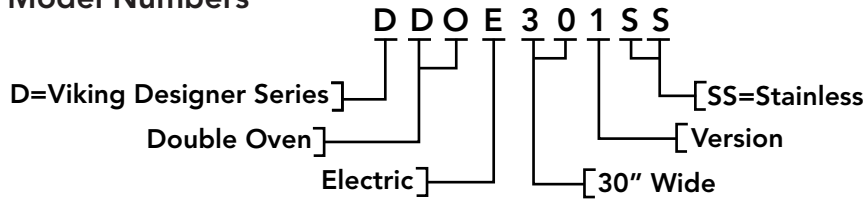
### **CAUTION**

The oven is heavy—use extreme care when handling.

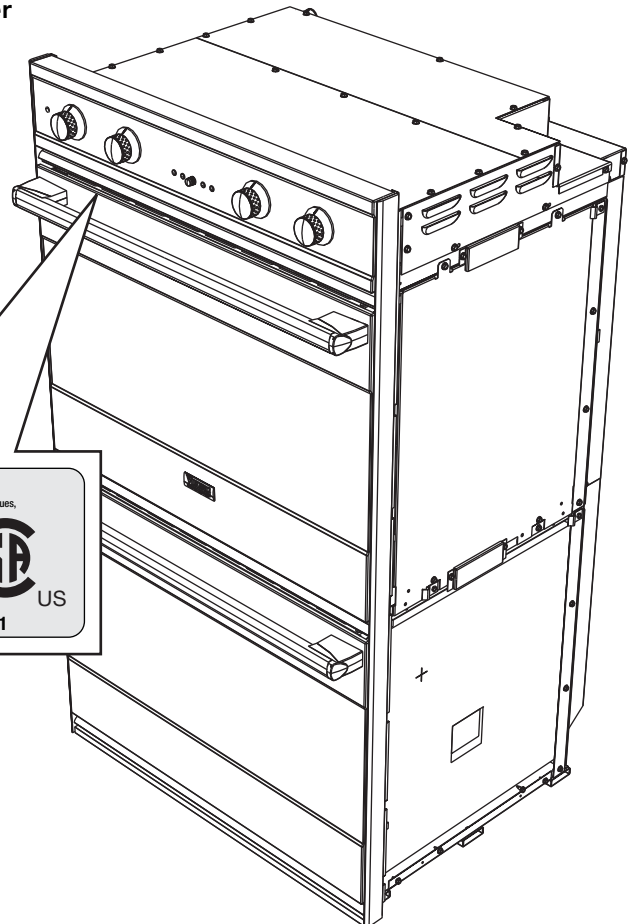
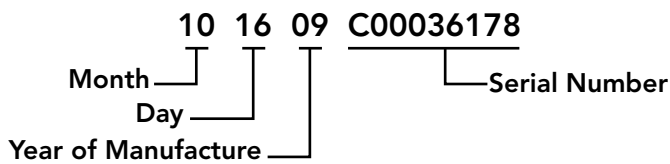
## Model–Serial Number Matrix

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



<b>VIKING RANGE CORP.</b>				Ce style est certifié sous UL 856 et les électrique domestiques, CAN/USA C22.2 No.1 M-89	
GREENWOOD, MISSISSIPPI 38930				 C US PE020061	
VOLTAGE	Hz	WATTS	AMPS	MODEL:	DD0E301SS
240 VAC	60 Hz	9.6 KW MAX	40	SERIAL:	101609C00036178
208 VAC	60 Hz	7.2 KW MAX	34.7		

## Settings and Functions—Control Panel

### Interior Oven Light Control

The oven has interior oven lights that are controlled by one switch on the control panel. Push the switch to turn the interior oven lights "ON" and "OFF".

### Electronic Timing Center

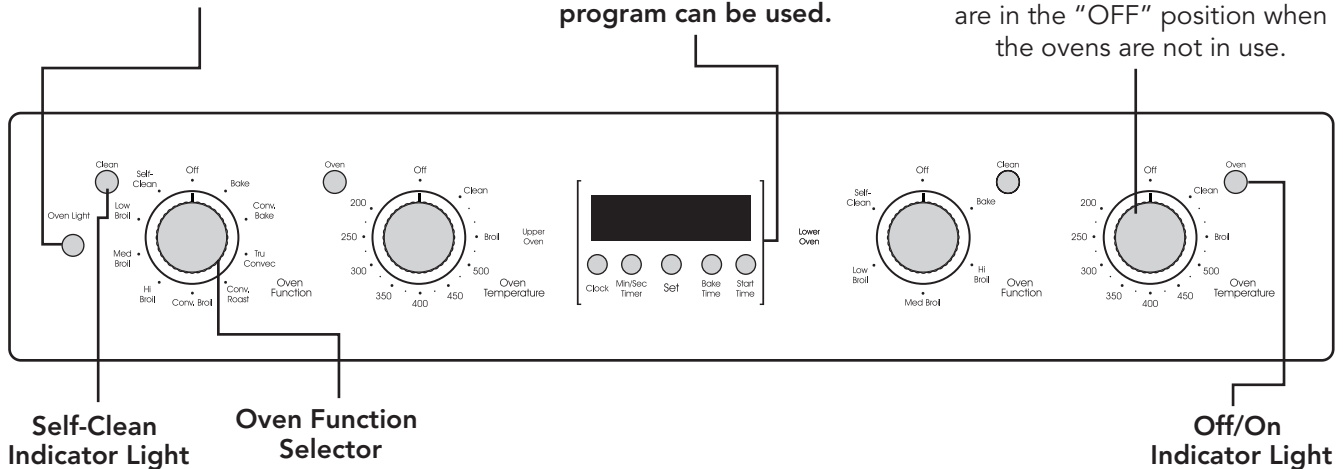
The Electronic Timing Center is used to program and control all timing functions.

**IMPORTANT: The time-of-day must be set before any other program can be used.**

### Temperature Control

Each oven has a separate temperature control dial. The controls can be set at any temperature from 200°F (93°C) to 550°F (288°C).

**ALWAYS** be sure the controls are in the "OFF" position when the ovens are not in use.



*Note: DDOE301 shown above (DDOE305 will have the same selector on right as the upper oven).*

### Bake

Conventional, single-rack baking (breads, cakes, cookies, pastry, pies, entrees, vegetables)

### Conv Bake (Convection Bake)

Multi-rack baking for heavier or frozen foods (e.g., four frozen pies, pizzas, entrees, vegetables)

### TruConvec™

Multi-rack baking for breads, cakes, cookies (up to six racks of cookies at once)

### Conv Roast (Convection Roast)

Whole turkeys, whole chickens, hams, etc.

### Conv Broil (Convection Broil)

Thicker meats, faster than regular broil, and with less smoke generation

### High-Broil

Dark meats at 1" thickness or less where rare or medium doneness is desired

### Medium-Broil

White meats such as chicken or meats greater than 1" thick that would be over-browned in high broil

### Low-Broil

Delicate broiling such as meringue

### Conv Dehydrate (Convection Dehydrate)

Use this setting to dehydrate fruits and vegetables

### Conv Defrost (Convection Defrost)

Use this setting to defrost foods

### Self-Clean

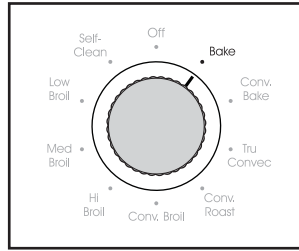
A pyrolytic self-cleaning cycle where the oven reaches elevated temperatures in order to burn off soils and deposits

*Note: The upper oven is a 9 program selector and the lower oven is a 5 program on the DDOE301. The DDOE305 has both upper and lower as a 9 program selection.*

## Settings and Functions

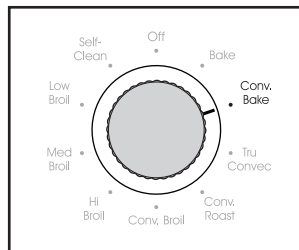
### BAKE

Full power heat is radiated from the bake element in the bottom of the oven cavity and supplemental heat is radiated from the broil element. This function is recommended for single-rack baking. Many cookbooks contain recipes to be cooked in the conventional manner. Conventional baking/roasting is particularly suitable for dishes that require a high temperature. Use this setting for baking, roasting, and casseroles.



### CONV BAKE (Convection Bake)

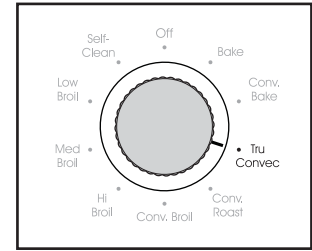
The bottom element operates at full power, and the top broil element operates at supplemental power. The heated air is circulated by the motorized fan in the rear of the oven providing a more even heat distribution. This even circulation of air equalizes the temperature throughout the oven cavity and eliminates the hot and cold spots found in conventional ovens. A major benefit of convection baking is the ability to prepare food in quantity using multiple racks—a feature not possible in a standard oven.



When roasting using this setting, cool air is quickly replaced, searing meats on the outside and retaining more juices and natural flavor on the inside with less shrinkage. With this heating method, foods can be baked and roasted at the same time with minimal taste transfer, even when different dishes are involved, such as cakes, fish or meat. The hot air system is especially economical when thawing frozen food. Use this setting for baking and roasting.

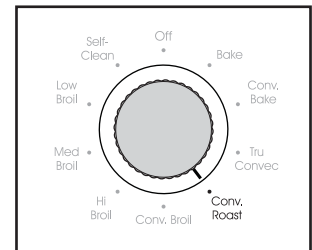
### TRU CONV (TruConvec™)

The rear element only operates at full power. There is no direct heat from the bottom or top elements. The motorized fan in the rear of the oven circulates air in the oven cavity for even heating. Use this setting for foods that require gentle cooking such as pastries, souffles, yeast breads, quick breads and cakes. Breads, cookies, and other baked goods come out evenly textured with golden crusts. No special bakeware is required. Use this function for single-rack baking, multiple-rack baking, roasting, and preparation of complete meals. This setting is also recommended when baking large quantities of baked goods at one time.



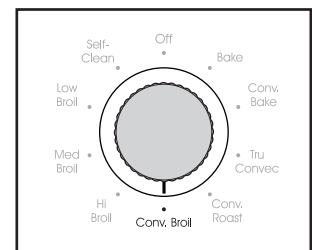
### CONV ROAST (Convection Roast)

The convection element runs in conjunction with the inner and outer broil elements. This transfer of heat (mainly from the convection element) seals moisture inside large roasts. Use this setting for whole turkeys, whole chickens, hams, etc.



### CONV BROIL (Convection Broil)

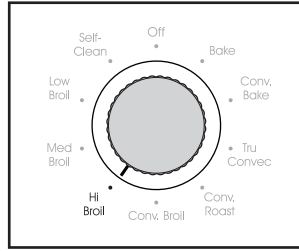
The top element operates at full power. This function is exactly the same as regular broiling with the additional benefit of air circulation by the motorized fan in the rear of the oven. Smoke is reduced since the airflow also reduces peak temperatures on the food. Use this setting for broiling thick cuts of meats.



## Settings and Functions

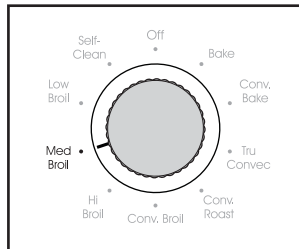
### HI BROIL

Heat radiates from both broil elements, located in the top of the oven cavity, at full power. The distance between the foods and the broil elements determines broiling speed. For fast broiling, food may be as close as 2" (5 cm) to the broil element or on the top rack. Fast broiling is best for meats where rare to medium doneness is desired. Use this setting for broiling small and average cuts of meat.



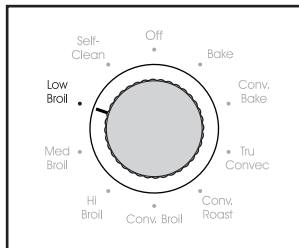
### MED BROIL

Inner and outer broil elements pulse on and off to produce less heat for slow broiling. Allow about 4" (10 cm) between the top surface of the food and the broil element. Slow broiling is best for chicken and ham in order to broil food without over-browning it. Use this setting for broiling small and average cuts of meat.



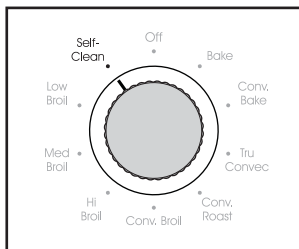
### LOW BROIL

This mode uses only a fraction of the available power to the inner broil element for delicate top-browning. The inner broil element is on for only part of the time. Use this setting to gently brown meringue on racks 3 or 4 in 3-4 minutes.



### SELF-CLEAN

This oven features an automatic pyrolytic self-cleaning cycle. During this cycle, the oven reaches elevated temperatures in order to burn off soil and deposits. An integral smoke eliminator helps reduce odors associated



with the soil burn off. A powder ash residue is left in the bottom of the oven after completion of the self-clean cycle. The door latch is automatically activated after selecting the self-clean setting. The latch ensures that the door cannot be opened while the oven interior is at clean temperatures.

### WARNING

This oven 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.**

## Cleaning and Maintenance

Any piece of equipment works better and lasts longer when maintained properly and kept clean. Cooking equipment is no exception. Your oven must be kept clean and maintained properly.

### Oven Surfaces

Several different finishes have been used in your electric oven. Cleaning instructions for each surface are given below. Your oven features a self-clean cycle for the oven interior. **NEVER USE AMMONIA, STEEL WOOL PADS OR ABRASIVE CLOTHS, CLEANSERS, OVEN CLEANERS, OR ABRASIVE POWDERS. THEY CAN PERMANENTLY DAMAGE YOUR OVEN.**

### 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 onto stem.

### Stainless Steel Parts

Some stainless steel parts may have a protective wrap, which must be peeled off. All stainless steel body parts should be wiped regularly with hot, soapy water at the end of each cooling period and with liquid cleaner designed for this material when soapy water will not do the job. If build-up occurs, **DO NOT** use steel wool, or abrasive cloths, cleaners, or powders. If it is necessary to scrape a stainless steel surface to remove encrusted material, soak area with hot, wet 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 surfaces. Scratches are almost impossible to remove.

### Brass Parts



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.

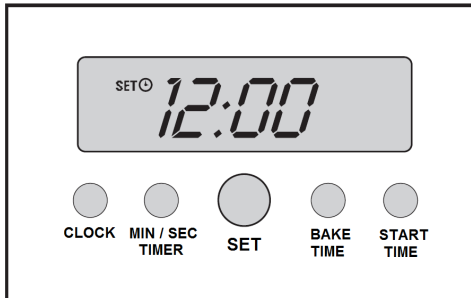
### Meat Probe (305 models only)

The meat probe may be cleaned with soap and water or a soap-filled scouring pad. Cool the probe before cleaning. Scour stubborn spots with a soap-filled scouring pad, rinse and dry.

- **DO NOT** immerse the meat probe in water.
- **DO NOT** store the probe in the oven.

## Diagnostic Procedures

The DSOE301, DDOE301, and DDOE305 use the same clock (TOD2) but because of the programming, the actual buttons are labeled differently on the control panel. Below are examples showing both clocks.

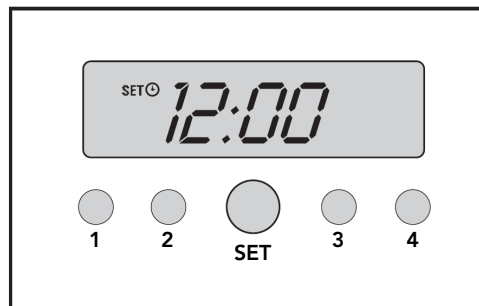


DSOE301/DDOE301



DDOE305

For the following procedures, the clock from the DSOE301/DDOE301 is being used as the example. In this manual, we will refer to (from left to right) Button 1—Button 2—(SET KNOB)—Button 3 and Button 4.



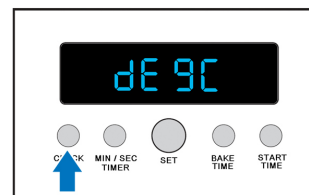
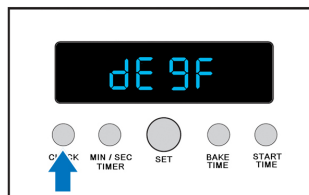
## User Settings

To enter into Settings parameter, press and hold "BUTTON 1" for three seconds. When the Settings mode is entered, the clock display will change to the first parameter (Temperature). To exit the Settings mode, press "BUTTON 2".

**Note:** Settings mode will automatically exit the Settings mode if nothing is pressed within 60 seconds.

### Degrees

The "F" indicates that the unit is set to display fahrenheit (below left). To change to celsius, depress "BUTTON 1". The unit set for celsius is shown (below right).

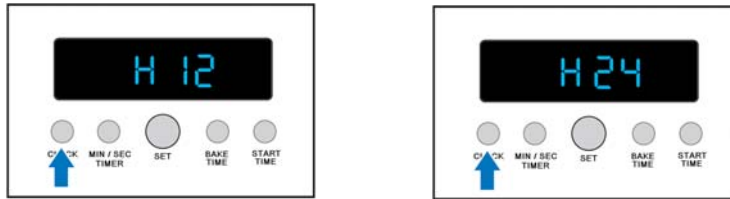




## User Settings (cont.)

### Clock Setting

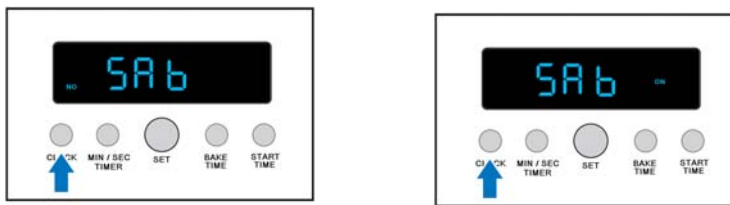
Rotate the "SET KNOB" clockwise one click to access the 12/24-hour Clock parameter (below left). The H 12 indicates that the unit is set to display in AM/PM time (12-hour clock). To change to 24-hour time, depress "BUTTON 1". The clock set to 24-hour clock is shown (below right).



**Note:** 12/24-hour clock function implemented in version 8.

### Sabbath Mode

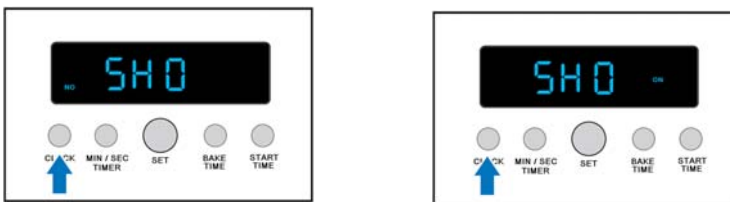
Rotate the "SET KNOB" clockwise one click to access the Sabbath mode parameter. The default is SABBATH NO (below left). In order to activate the Sabbath mode feature, depress "BUTTON 1". The Sabbath mode is shown ON and activated (below right)



**Note:** Sabbath function implemented in version 8.

### Showroom Mode

Rotate the "SET KNOB" clockwise one click to access the Showroom mode parameter. The default is SHOWROOM NO (below left). In order to activate the Showroom mode feature, depress "BUTTON 1". The Showroom mode is shown ON and activated (below right)



### Done

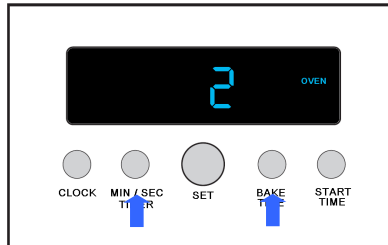
When the "SET KNOB" is advanced past the Showroom mode, the display will show DONE. Rotate the "SET KNOB" counter-clockwise to access previously shown Settings parameters. Depress "BUTTON 2" to exit.



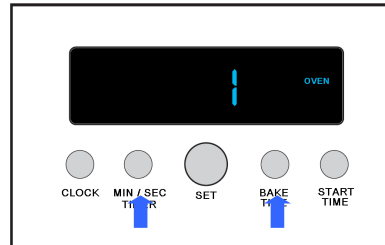
## OVEN SELECTION and OFFSET ADJUSTMENT

### OVEN SELECTION

To access this parameter, you must already be in the Settings parameters. To enter, push and hold "BUTTON 2" and "BUTTON 3" simultaneously and you will hear three beeps. Continue holding for five seconds until you hear a confirmation beep. You will see a numeric number "2" on the DDOE series or a numeric number "1" on the DSOE series in the display as shown below on left and right. If the oven selection is incorrect, depress "BUTTON 1" to toggle between 1 (single) or 2 (double). After setting the proper parameter, press "BUTTON 4" to exit the program mode.



Double oven (DDOE)



Single oven (DSOE)

### Important Parts Information

A replacement TOD2 (Clock) comes set at a default for a double oven (2). After replacing a clock on a single oven, you must access the Oven Selection parameter and set it to number "1" for a single oven.

*Note: Failure to do this will cause improper operation.*

### TOD2 (Clock) and EOC4 (Control Board) compatibility

There have been some changes to the EOC4 and TOD2 products that will affect how you service the products.

The EOC4 programming has been updated to a V25 (V20 and higher works with internal testing equipment) in the Designer Wall ovens (DDOE / DSOE). The TOD2 had to be updated to a V9 in order to work with the new EOC4 software. V10 is the current version for the TOD2.

In the event you need to replace an EOC4 or TOD2 in the field, please refer to the cross reference chart below. The servicer will need to verify the version of the TOD2 and EOC4 controls in the unit. This can be done through the diagnostics by looking at the components themselves to get the version number.

		EOC4 Compatible						
		Version	V12	V15	V19	V20	V24	V25
015195-000	TOD2 Interface	<b>V4-V6</b>	Yes	Yes	No	No	No	No
015195-000	TOD2 Interface	<b>V9</b>	No	No	Yes	Yes	Yes	Yes
015195-000	TOD2 Interface	<b>V10</b>	No	No	Yes	Yes	Yes	Yes
015195-000	TOD2 Interface	<b>V11</b>	No	No	Yes	Yes	Yes	Yes

## Offsets

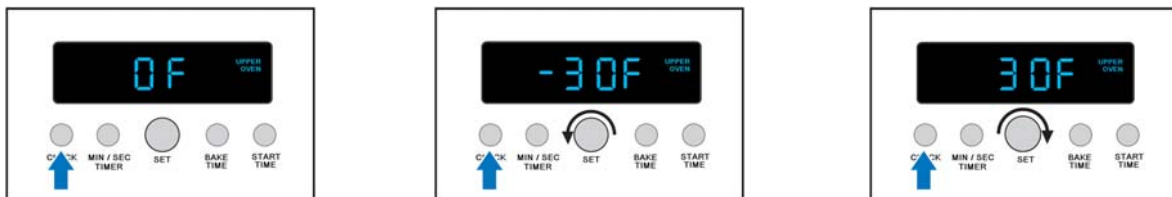
In order to adjust the Offset parameter, you must first enter the Settings parameter as shown on page 16. Next, access the Oven Selection parameter as shown on page 18. When you see either number "1" (single) or number "2" (double), rotate the "SET KNOB" clockwise.

First, you will see the Offset parameter for the upper oven (DDOE) (below left). This will also be for the single (DSOE) oven. If you need to adjust the lower oven temperature offset on a double oven, rotate the "SET KNOB" clockwise to access the Lower Oven parameter as shown (below center). If you rotate the "SET KNOB" clockwise past the lower offset, the word DONE will show in the display as shown (below right).



Once you have made your selection, press "BUTTON 1". The Default parameter is 0°F (below left).

Now, if for example you need to **INCREASE** the temperature in the upper oven by 30° (determined by checking the oven temperature with a loaded probe and averaging five temperature swings), you must **DECREASE** the offset by 30° (below middle). If you find that the oven is 30° too hot, then you must **INCREASE** offset by 30° (below right).



Once the proper adjustment has been made, depress "BUTTON 1" to accept the change. Then, depress "BUTTON 4" to exit the Settings mode.

**Remember: To increase (>) the temperature, decrease the offset. To decrease (<) the temperature, increase > the offset!**

## Diagnostics and Testing

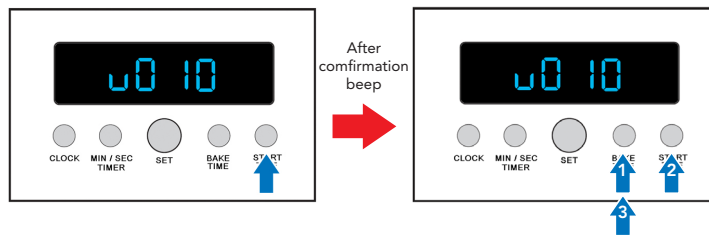
To enter Built-in Test mode, first enter the Settings mode.

Press and hold the "BUTTON 4" key. You will hear 3 beeps. Continue holding for five seconds, until the control board signals one confirmation beep.

Then press within five seconds "BUTTON 3", then "BUTTON 4", then "BUTTON 3".

When you have successfully entered the Diagnostic mode, the display will show the TOD2 software version number (currently Version 10, shown below on left).

**Note:** Version numbers 4, 5 and 6 will not work with EOC4 versions 19 or higher. Version 9 or higher will work with EOC4 versions 19 or Higher.

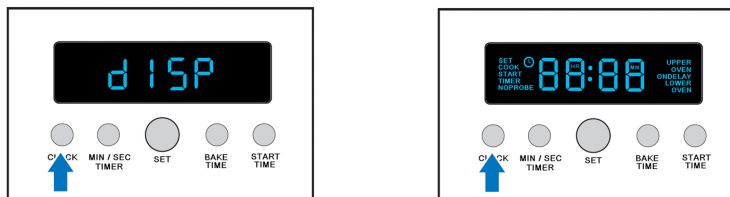


**Note:** While in the Diagnostic parameter, rotating the "SET KNOB" clockwise or counterclockwise will scroll through all the testing parameters. When in a particular test, depress "BUTTON 1" to get back to Parameter Selection to access other test. Depressing "BUTTON 4" at this point will exit the test mode.

When you have successfully entered the Diagnostic mode, rotate the "SET KNOB" clockwise. The display will show the supplied frequency to the oven (60 Hz is shown below).



Rotate the "SET KNOB" clockwise to the DISPLAY parameter (below left). Depress "BUTTON 1" to activate all elements within the clock (below right). Depress "BUTTON 1" to exit.



**Note:** Display test implemented in version 11.

## Diagnostics and Testing (cont.)

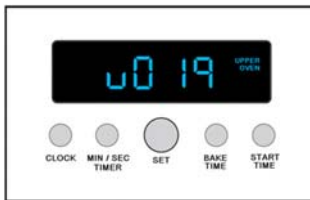
Rotate the "SET KNOB" clockwise to the UPPER EOC4 Testing parameter (below left). Press "BUTTON 1" to access all the individual component tests for the upper oven cavity. If you want to check the lower oven components, rotate the "SET KNOB" clockwise to access the lower oven cavity LOWER EOC4 Testing parameters (below middle). From this point, depressing "BUTTON 4" will exit the test mode. Press "BUTTON 1" to enter tests for a particular EOC. Advancing the "SET KNOB" once more will display the DONE screen (below right). To exit Test Mode, press "BUTTON 4".



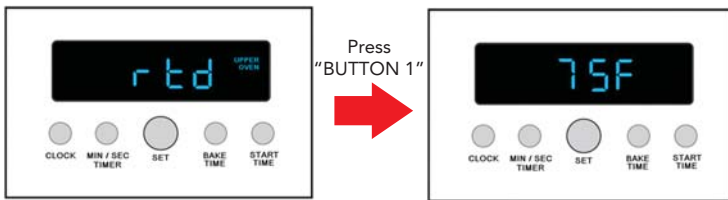
## Upper/Lower Diagnostics

The following tests are under EOC4 – Upper Oven (single)/EOC4 and Lower Oven (double oven). Use the "SET KNOB" toggle through all the test parameters. Press "BUTTON 1" to run a particular test and see the value associated with that test. Press "BUTTON 1" again to stop test and return to selection screen. The first parameter is the version number of the control board for the particular cavity being tested.

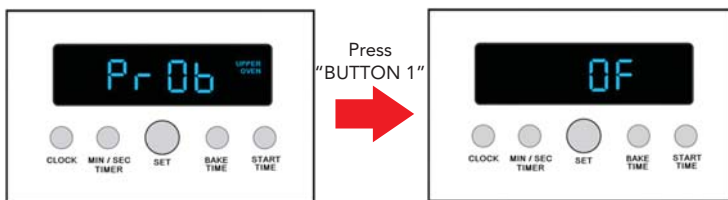
**EOC Version**–This number indicates the software version of the control board.



**RTD**–Displays temperature at RTD probe.



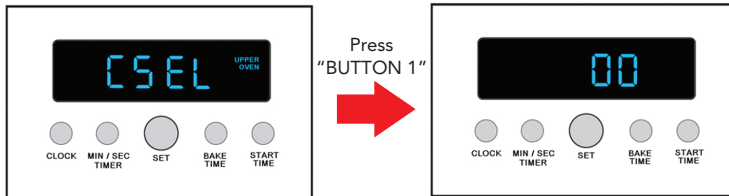
**Probe** (DDOE305 only)–Displays the meat probe temperature. If a meat probe is not plugged in, the display will show 0°.



## Upper/Lower Diagnostics

**Cycle Selector**—To test the selector functions, the value is a four-digit value. The first digit is the cycle ID, from 0 to 9. The remaining three digits are the raw AD value, divided by two. Rotate “SET KNOB” and compare values shown below.

**Note:** Start test with the selector in the OFF position.



Upper Oven	ID
Bake	1479
Convection	2420
Tru Convection	3358
Convection Roast	4297
Convection Bake	5239
Hi Broil	6182
Med Broil	7125
Low Broil	8066
Self-Clean	9015

Lower Oven	ID
Bake	1441
Hi Broil	2339
Med Broil	3237
Low-Broil	4143
Self-Clean	5053

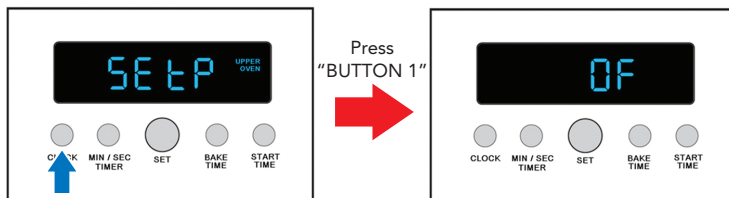
From OFF, rotate the “SET KNOB” switch either direction and compare display readout to charts shown here. Readings should be within + – 10%.

**Note:** It takes several seconds for all 4 digits to come up in the display. Turn the knob and then wait for 10 seconds to let the display settle out.

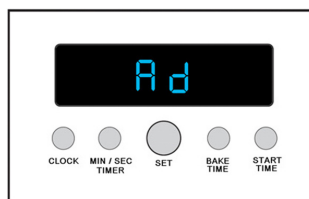
**Note:** To test the UPPER selector, you must be in the UPPER test mode. The same is true for the LOWER selector.

### Setpoint

When SEtP is in display, press “BUTTON 1”. With the thermostat in the OFF position, OF should be in the display. Rotating the temperature dial to any temperature should register in the display. This will test the potentiometer values of the thermostat.



**AD**—Raw setpoint AD (Analog to Digital) value.  
SKIP THIS TEST



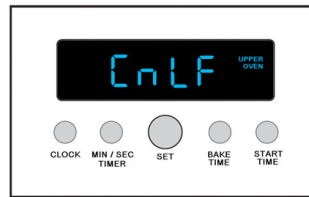
## Component Testing

On the following tests, when you have selected a particular component, press "BUTTON 1" to activate. The display will change to AC current. Press "BUTTON 1" one more time to turn it off and go back to the test selection menu, or rotate the "SET KNOB" to move to the next component in the menu.

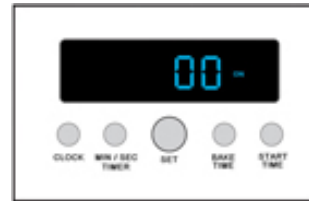
		240 Volts Current (AMPS)	280 Volts Current (AMPS)
<b>Inner Bake</b> Note: Inner bake is not used on DDOE and DSOE series ovens.			
<b>Outer Bake</b> Press "BUTTON 1" to operate Outer bake element.			
<b>Inner Broil</b> Press "BUTTON 1" to operate Inner broil element.			
<b>Outer Broil</b> Press "BUTTON 1" to operate Outer broil element.			
<b>Convection</b> Press "BUTTON 1" to operate Convection element.			
<b>Convection Fan Hi F</b> Press "BUTTON 1" to operate the Conv fan high.			

## Component Testing (cont.)

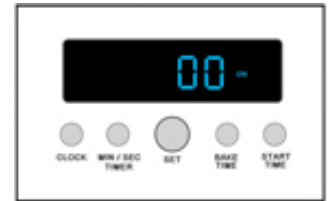
**Convection Fan Lo F**  
Press "BUTTON 1"  
to operate the  
Conv fan low.



240 Volts  
Current (AMPS)



208 Volts  
Current (AMPS)



**Cooling Fan High**  
Press "BUTTON 1"  
to operate  
Cooling fan high.



**Cooling Fan Low**  
Press "BUTTON 1"  
to operate Cooling  
fan low.  
**Note:** Same speed as  
High fan.



RPM's

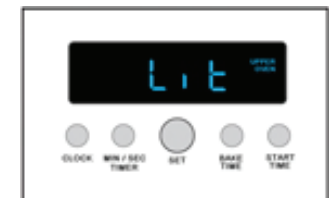
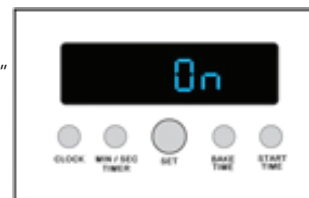
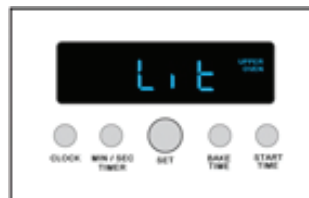
**Cooling Fan  
High Speed-RPM**  
When "BUTTON 1" is  
depressed, cooling fan  
comes on and the RPM'S  
are shown in the display.



**Cooling Fan  
Low Speed-RPM**  
**Note:** The DDOE301 and  
DSOE301 use a single  
speed fan. The results will  
be the same as high  
speed.



**Lights-Oven**  
This parameter will cycle  
the EOC light relay ON  
and OFF with each press  
of "BUTTON 1", as well  
as the display showing  
the status.



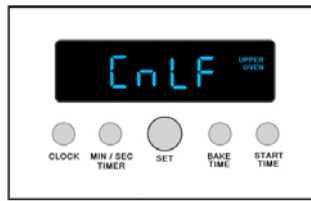


Component Testing (cont.)

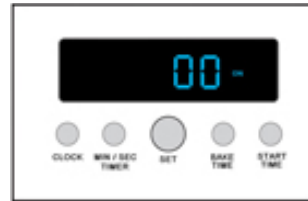
Conv Fan

Low Speed Reverse

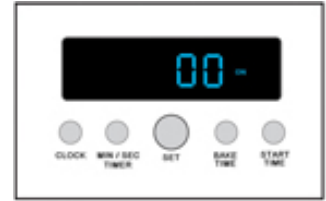
**Note:** The DDOE301 and DSOE301 use a one directional fan. The results will be the same as CnLF.



240 Volts  
Current (AMPS)



208 Volts  
Current (AMPS)



Conv Fan

High Speed Reverse

**Note:** The DDOE301 and DSOE301 use a one directional fan. The results will be the same as CnHF.



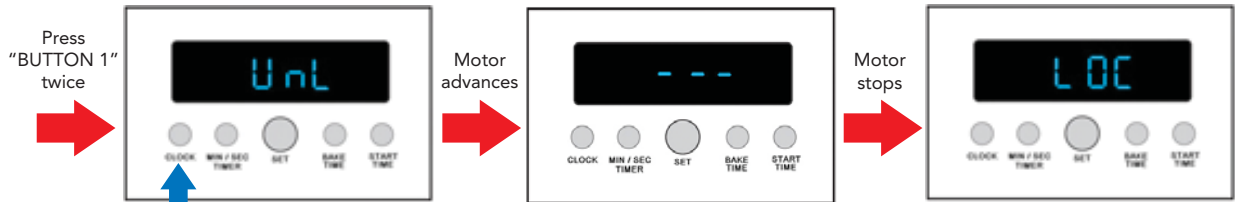
Latch Motor

This parameter will cycle the EOC lock relay and operate the lock motor. Press "BUTTON 1" and LAtC will show in the display. Press "BUTTON 1" again to lock and un-lock the door and the display will show the current state. When in-between switch contacts three dashes will show in display.

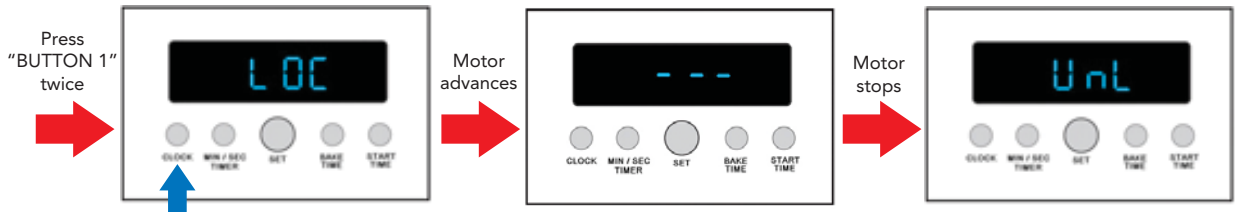


When in-between switch contacts, three dash's will show in display.

To Lock Door



To Unlock Door



**Caution:** Door must be installed and closed while performing LATCH MOTOR test or damage may occur to latch assembly.

## Component Testing (cont.)

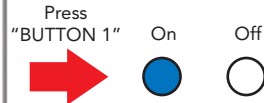
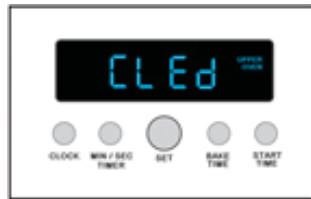
### Heat Light LED

Each press of "BUTTON 1" will turn the Oven Cycle light on and off.



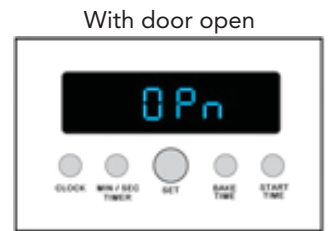
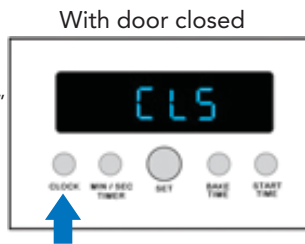
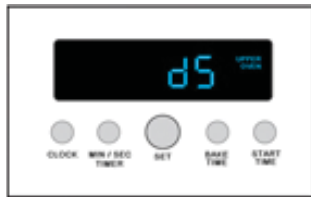
### Clean Light LED

Each press of "BUTTON 1" will turn the Clean light on and off.



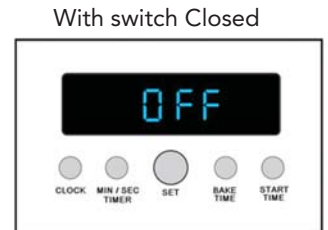
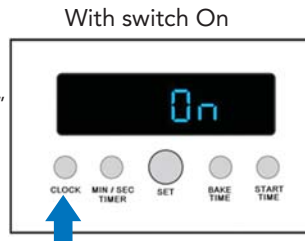
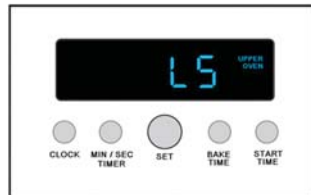
### Door Switch

Opening and closing the door will test the door interlock switch.



### Light Switch

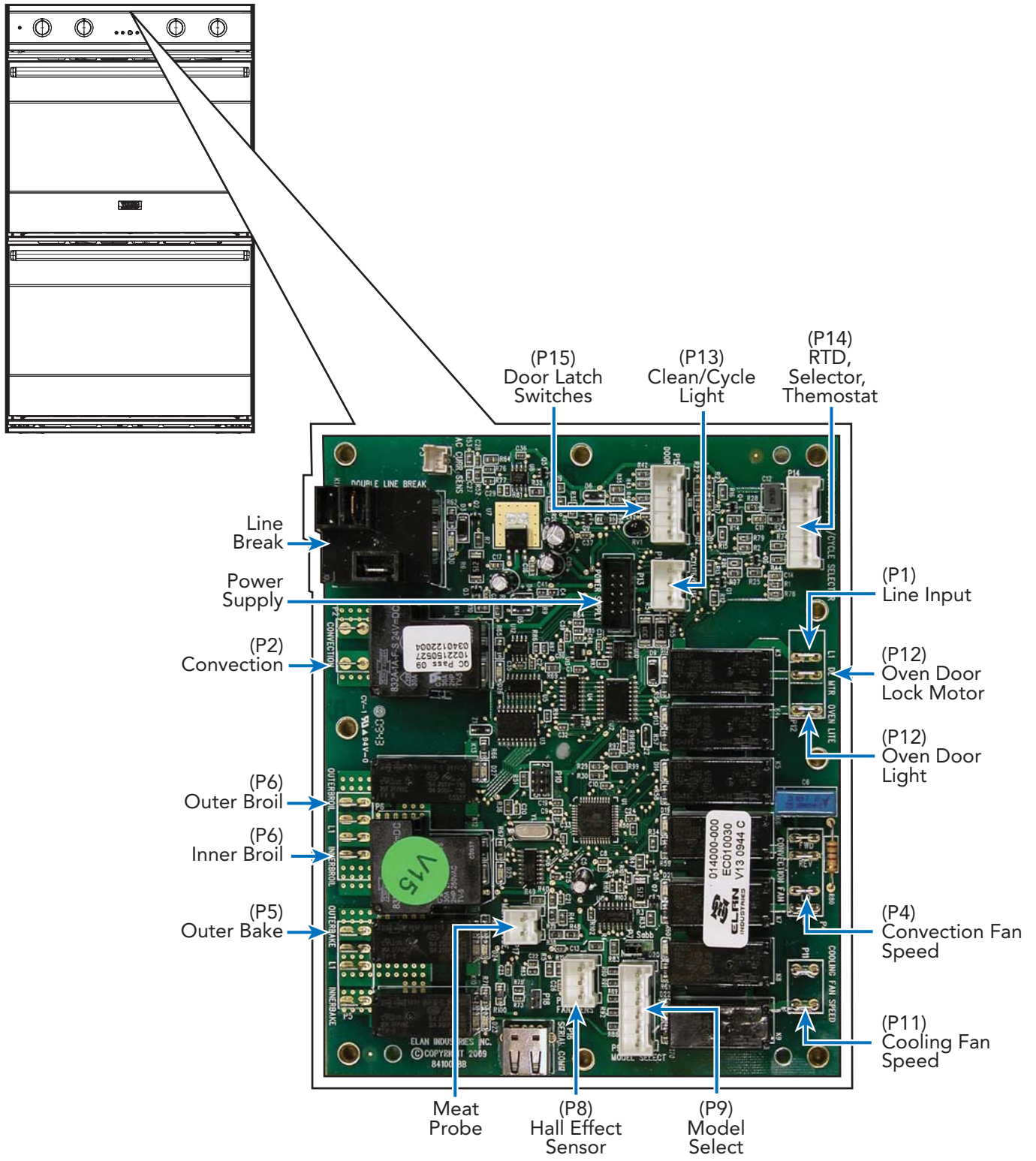
Pressing the panel light switch ON and OFF to test switch.



**Note:** This test for Upper oven and single ovens only!

When testing is complete, press "BUTTON 4" twice to exit Test Mode.

Parts Location–Control Board



## Control boards

The unit has an upper and lower control board that controls functions of the respective oven cavity. Components can be diagnosed via the control board. With the control board accessed (see *Control board Access procedure, page 40*), the following can be measured:

Component	Oven Board Test Point	Readings
Outer Bake Element	(P5) Blue – line break Yellow	28.4 Ω
Inner Broil Element	(P6) Violet – line break Yellow	23.7 Ω
Outer Broil Element	(P6) Gray – line break Yellow	45.5 Ω
Convection Element	(P2) White/Red – line break Yellow	34.4 Ω
Cooling Fan Motor	(P11) White/Black – P(1) White (Power Board)	18.4 Ω
Convection Motor – Hi Speed	(P4) Orange/Black – (P11) Dbl White	38.3 Ω
Convection Motor – Low Speed	(P4) Orange/White – (P11) Dbl White	44.1 Ω
Oven Lights	(P12) Yellow/Black – (P1) White (Power Board)	27.7 Ω
RTD	(P14) Violet – (P14) Gray	1089 Ω @ room temp
Door Latch Motor	(P12) Black/White – (P1) White (Power Board)	2180 k Ohms
Door Switch	(P15) Gray – (P15) Brown (DL Com)	Infinite Ω door open 0 Ω door closed
Oven Light Switch	(P15) Violet/White – (P15) Brown	Infinite Ω light switch off 0 Ω light switch on
Door Latch Switch	(P15) Blue – (P15) Brown	0 Ω door unlocked Infinite Ω door locked
Door Lock Switch	(P15) Orange – (P15) Brown	Infinite Ω door unlocked 0 Ω door locked
Hall Effect Sensor	(P8) Red – (P8) Black	425 Ω connector plugged in and 21.2M Ω connector unplugged
Hall Effect Sensor	(P8) White – (P8) Black	9.9K Ω connector plugged in and 21.2M Ω connector unplugged
Clean Light	(P1) Orange/Black – (P1) Violet	21.5M Ω
Cycle Light	(P1) White/Black – (P1) Violet	21.5M Ω

## Control boards (cont.)

### Thermostat-(P14) Orange-(P14) Blue

Setting	Resistance (Ω)
Off	Infinite
200	4.4K
225	4.3K
250	4.2K
275	4.1K
300	3.9K
325	3.8K
350	3.6K
375	3.4K
400	3.2K
425	2.9K
450	2.7K
475	2.4K
500	2.1K
525	1922
Broil	1527
	1126
	940
Clean	568

### Lower Oven Thermostat-(P14) Orange-(P14) Blue

Setting	Resistance (Ω)
Off	Infinite
200	1365
250	1820
300	2140
350	2310
400	2350
450	2260
500	1990
Broil	1530
Clean	565

### Selector-(P14) Black-(P14) Yellow

Setting	Resistance (Ω)
Off	Infinite
Self-Clean	453
Low Broil	1521
Medium Broil	2.4K
Hi Broil	3.2K
Convection Broil	3.8K
Convection Roast	4.2K
TrueConv	4.5K
Convection Bake	4.6K
Bake	4.6K

### Lower Oven Selector-(P14) Black-(P14) Yellow

Setting	Resistance (Ω)
Off	Infinite
Self-Clean	981
Low Broil	1890
Medium Broil	2230
Hi Broil	1960
Bake	1190

### Control board LED's

D12 – K3 Relay (L1)	D23 – Inner Bake
D13 – K4 Relay (Door Lock Motor)	D24 – Outer Bake
D14 – K5 Relay (Oven Light)	D25 – Inner Broil
D19 – K6 Relay (Convection Speed Lo)	D26 – Convection
D20 – K8 Relay (Cooling Fan Power)	D27 – Outer Broil
D21 – K7 Relay (Convection Speed Hi)	D30 – Line Break
D22 – K9 Relay (Cooling Fan Speed)	

## Fail Codes

TOD2 Code	Clean Light	Cycle Light	Error	Detection	Action	Priority*	How To Clear
<b>F01</b>	Flash: 1	Off	Door Latch	Door lock is not in unlocked position during a cook or a locked position during a clean.	If in clean cycle, cancel cycle and go to the diagnostics and test door latch. If door does not lock after one minute something is wrong with the latch (latch will not run unless the door switch button is depressed).	<b>A</b>	Turn cycle off. Power down and correct door lock issue.
<b>F02</b>	Off	Flash: 1	RTD	Open or Short	Cancel any cook or clean cycle, EOC4 will be inoperable.	<b>A</b>	Power down and replace or plug in RTD.
<b>F03</b>	On	Flash: 3	Cooling Fan Hall Effect	EOC4 is not receiving a square wave in the allowable frequency range.	Cancel bake or clean operation immediately.	<b>A</b>	Turn cycle off. Power down and correct cooling fan issue.
<b>F04</b>	N/A	N/A	Meat Probe Shorted	Meat Probe input is shorted.	Cancel any cook by probe operation.	<b>B</b>	Correct short, reenter timed or delay function.
<b>F06</b>	On	Flash: 2	Invalid Model Header	Model header is undefined.	This is read-only at power up. EOC4 will be inoperable.	<b>A</b>	Power down and insert correct model header.
<b>F07</b>	On	Flash: 7	Door Switch	The door is open during CLEAN (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).		<b>A</b>	Turn cycle off. Power down and correct door lock issue.
<b>F08</b>	On	Flash: 8	Communication Error	RS485 Serial communication is lost or unable to establish a connection between EOC4 and any UI (if one is present).	The EOC4 can still perform a cook if the UI is a TOD2 and the user selected a cook cycle via the selector potentiometers. The EOC4 will not however do a Clean cycle or Preheat since it doesn't know if the other unit is currently operating (for double ovens).	<b>A or B</b> depending on the UI.	Turn unit off. Power down and correct issue.

\***Priority A:** Critical error, cancel current cycle, turns off all elements.

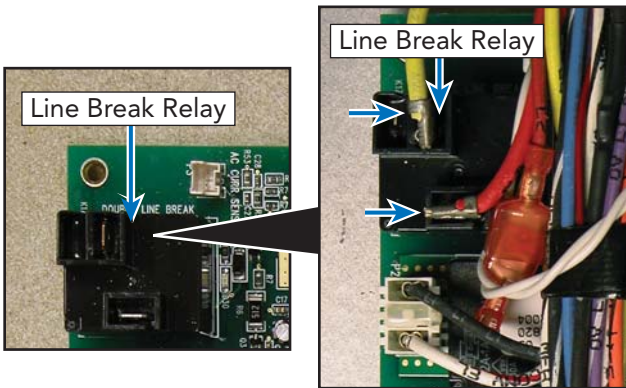
**Priority B:** Non-Critical, cancel only the feature that is affected, allow oven to still operate.

## Control Board Diagnosis

With the control board assembly removed, 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 when the line break relay energizes.

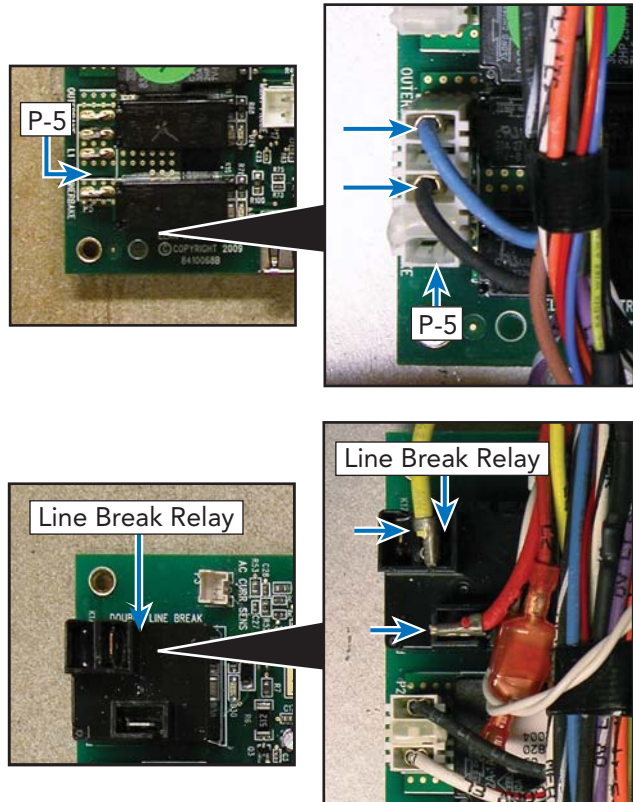


When heating is selected by the control input, voltage is sent to the line break relay coil. A red LED (D30) in front of the coil verifies coil voltage is being sent to the relay. This means that 12 VDC is being sent to the relay coil. It does not indicate that the relay contacts are closing. To check the relay contacts, verify input voltage to the relay between the red wire (L2) and (L1) black at the main terminal block is 240 VAC.

Select a cooking program. When the relay contact is closed (D30 LED at base of relay is illuminated red) 240 VAC should be measured between the yellow wire and (L1) black. If 0 VAC is measured, disconnect power and remove the red and yellow wire off the relay. With power applied, use an Ohm meter to check for continuity between the two relay contacts with the relay energized. If infinite resistance ( $\infty$ ) is measured, this indicates a bad relay and replacement of the control board is necessary.

### 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 and black wire. The blue wire goes to the outer bake element and the black wire is L1 input from the main power supply.



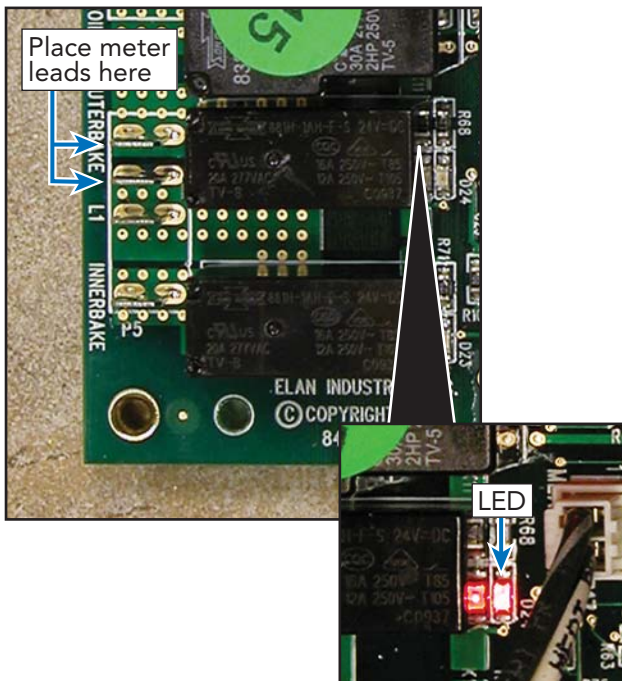
With the power off and the Molex connector removed from the P5 control board connection, use an Ohm meter to measure the resistance between the blue wire in the Molex plug and the yellow wire from the line break relay. This will measure the resistance of the outer bake element and a reading of 23.7  $\Omega$  should be measured. If the element fails to read resistance, repair or replace bake element as necessary (see *Bake Element Disassembly*, page 55).

## Control Board Diagnosis

### Bake Relay

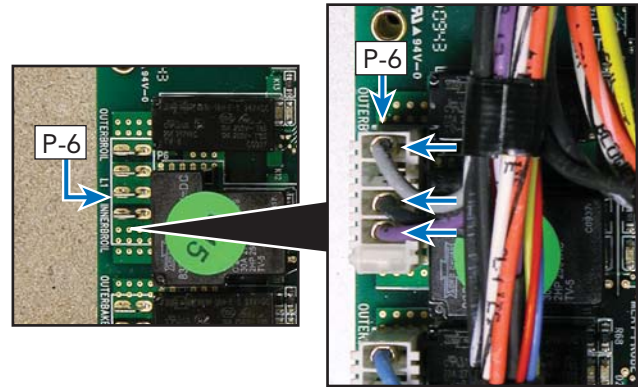
The DSOE and DDOE series oven use one concealed bake element in the cavity floor. It is connected on the control board to the Outer Bake connection (Inner Bake is not used).

When the BAKE relay contact is energized (red LED D24 at base of relay is illuminated red), check for 240 VAC between the yellow wire at the line break relay and the blue wire on P5. If 0 VAC is measured, disconnect power and remove P5 Molex plug. Reconnect power and using an Ohm meter, check for continuity between the relay contacts. When the relay is energized; if infinite ohms ( $\Omega$ ) are measured, this indicates a bad relay and replacement of the control board is necessary. If 0 ohms are measured, 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 inner broil element, the black wire is L1 input from main power supply, and the gray wire goes to the outer 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 inner broil element and should be approximately 24  $\Omega$ . Likewise, the outer 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 45  $\Omega$  should be found. If either element fails to read resistance, remove the element to repair or replace as necessary (see *Broil Element Disassembly, page 51*).



## Control Board Diagnosis

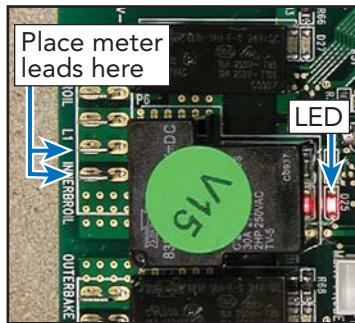
### Broil Relay (Inner and Outer)

When a broil element is selected, voltage is sent to the broil relay coils. A red LED (D25 and D27) in front of the respective relay verifies coil voltage is being sent to that particular relay. This means that 12 VDC is being sent to the relay coil. It does not indicate that the relay contacts are closing. When the individual element relays are energized, power (L1-black) is sent through the relay to the broil elements. Power (L2-red) is supplied from the line break relay).

### Inner Broil Relay

Select a cooking program. When the inner relay contact is energized (D25 LED at base of relay illuminates red), check for 240 VAC between the yellow wire at the line break relay and the violet wire on P6. If 0 VAC is measured, disconnect power and remove the P6 Molex plug.

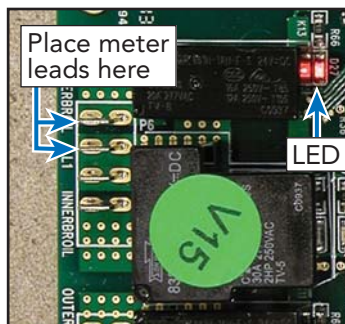
Reconnect power and using an Ohm meter, check for continuity between the two relay contacts. When the relay is energized; if you read infinite ohms ( $\Omega$ ) this indicates a bad relay and replacement of the control board is necessary. If 0 ohms are measured, the relay contact is closing.



### Outer Broil Relay

Select a cooking program. When the outer relay contact is energized (D27 LED at base of relay illuminates red), check for 240 VAC between the yellow wire at the line break relay and the gray wire on P6. If 0 VAC is measured, disconnect power and remove P6 Molex plug.

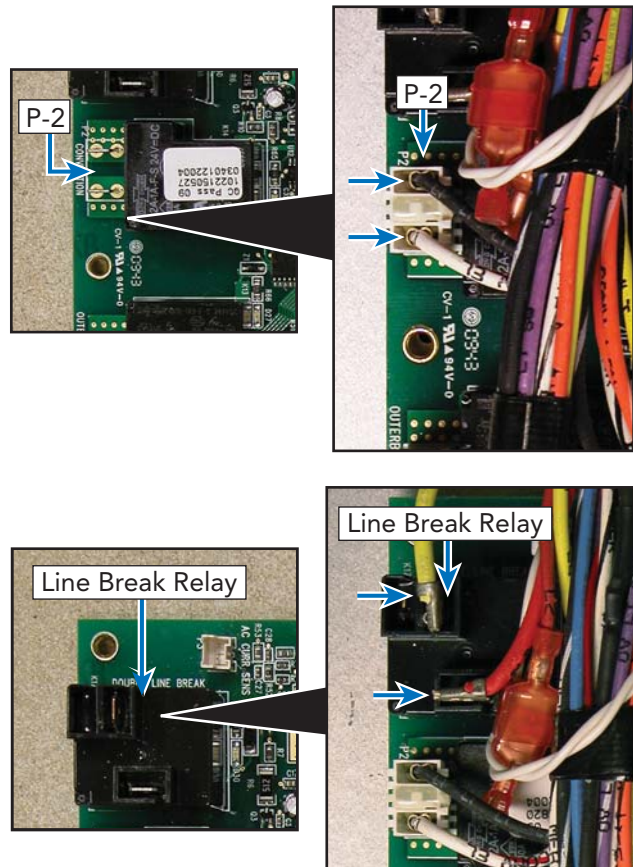
Reconnect power and using an Ohm meter, check for continuity between the two relay contacts. When the relay is energized; if infinite



ohms ( $\Omega$ ) are measured this indicates a bad relay and replacement of the control board is necessary. If 0 ohms are measured, 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 34.4  $\Omega$ . If the element fails to read resistance, remove element to repair or replace as necessary (see *Convection Element Disassembly*, page 52).

## Control Board Diagnosis

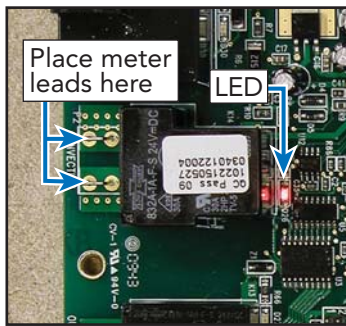
### Convection Relay

When the convection element is selected, voltage is sent to the convection relay coils. A red LED (D26) in front of each coil verifies coil voltage is being sent to that particular relay. This means that 12 VDC is being sent to the relay coil. It does not indicate that the relay contacts are closing. When the convection element relay is energized, power (L1-black) is sent through the relay to the convection element. Power (L2-red) is supplied by the line break relay).

To test, select a cooking program. When the convection relay contact is energized (D26 at base of relay illuminates red), check for 240 VAC between the yellow wire at the line break relay and the white/red wire on P2. If 0 VAC is measured, disconnect power and remove P2 Molex plug.

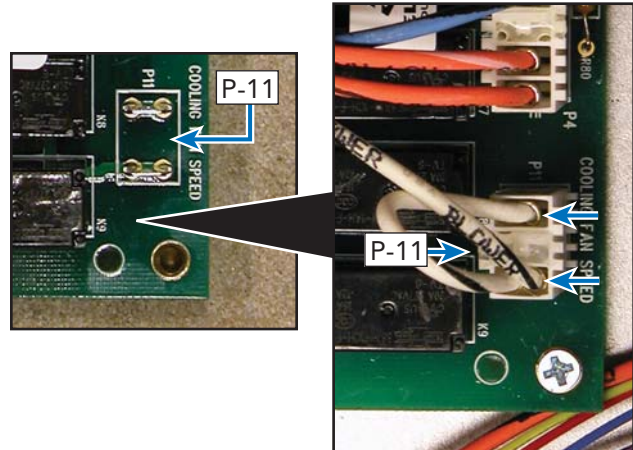
Reconnect power and using an Ohm meter, check for continuity between the two relay contacts. When the relay is energized; if infinite ohms ( $\Omega$ )

are measured this indicates a bad relay and you will need to replace the control board. If 0 ohms are measured, 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 measured, remove fan to repair or replace as necessary (*see Oven Cooling Fan Disassembly, page 56*).

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 (*see Oven Cooling Fan Disassembly, page 56*). If no voltage is present, verify wiring. If wiring is OK, check the relay on the control board.

## Control Board Diagnosis

### Fan Relay

The unit is designed to operate a two-speed cooling motor. The DSOE and DDOE series utilize a one-speed motor so both the HI and LO speeds are jumped together on the control board. On initial startup, the Fan Power relay (K8) and the LO speed (K9) is selected. When the oven temp reaches proper temperature, the board will switch the speed relay to HI. However, both are jumped together so this change is not noticed. If a fan error is shown, proceed with the test shown below.

When the unit is switched on, voltage is sent to the fan relay coil(s). A red LED (D20, D22) 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.

When a cooking program is activated, the initial cooling fan speed depends on the cycle selected. When set for CONVECTION ROAST, CONVECTION BROIL, HIGH BROIL, MEDIUM BROIL and SELF CLEAN, the fan runs at HIGH speed.

BAKE, CONVECTION BAKE, TRU CONVECTION and LOW BROIL start at LOW speed and when the oven temperature reaches 400°F, the EOC switches to HIGH speed.

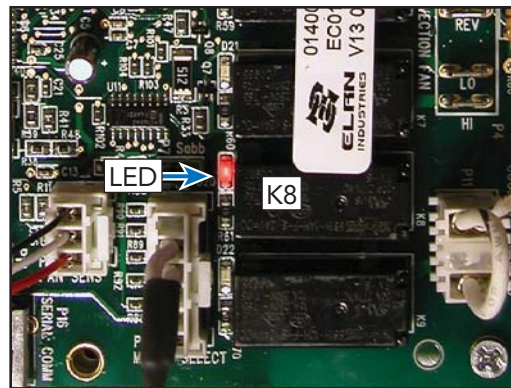
When the oven is turned off (cycle selector in OFF position), the fan switches from high to low when the temperature at the RTD drops below 375°F, and shuts off completely when the temperature drops below 250°F.

**To test**, disconnect power and disconnect P11 Molex plug. With voltmeter set for AC voltage, check between neutral and the terminal. The reading should be 120 VAC. If 0 volts are shown and the red LED (D20 D22) is illuminated, the control board should be replaced.

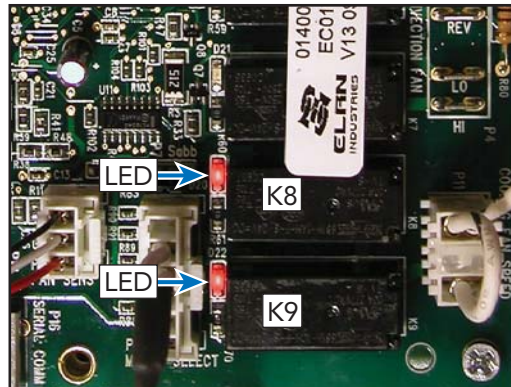
### Fan-Hi Speed

When the EOC calls fan operation, K8 relay is energized and the fan operates. When a program calls for LOW speed, K9 is energized. Because both are tied together, the results are the same.

With both relays engaged and voltmeter set for AC voltage, check between neutral and each terminal. The reading should be 120 VAC. If 0 volts is measured and red LED (D20 D22) is illuminated, then the control board needs to be replaced.



### Fan-Lo Speed



## Control Board Diagnosis

### Convection Fan

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

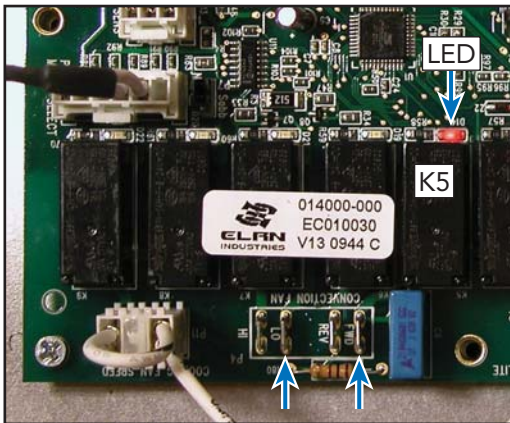
- (1) & (2) A blue wire jumper between terminals REV and FWD
- (3) orange/white wire–LO speed capacitor
- (4) orange/black wire–HI speed capacitor

### Convection Operation

The main power and speed are controlled by the EOC by two relays (K5 and K7). K6 (directional is not used on the DSOE and DDOE series ovens.

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.

### Low Speed–Clockwise (FWD)

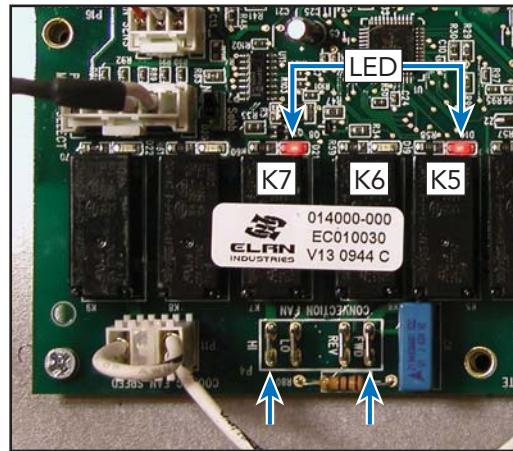


When closed, it sends power through K6 relay and out the LO contact of the K7 relay.

The output from K5 is connected to the C (common terminal) of K6. Because K6 is not used, both the FWD and REV contacts are jumped together.

### Clockwise (FWD)–High Speed

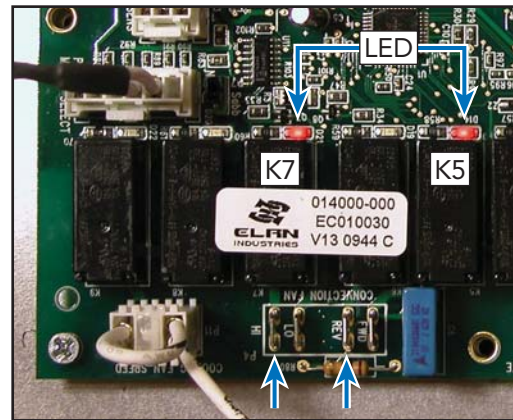
K7 is the speed relay. It too is an SPDT relay. When not energized, the LO circuit is energized through the C terminal of the K7 relay. The N.O. terminal is now closed resulting in the unit running at a higher speed.



### Testing Control Board

Use a volt meter to measure voltage between the orange/white (Low Speed) and the orange/black (High Speed) wire in the Molex plug and the neutral terminal block.

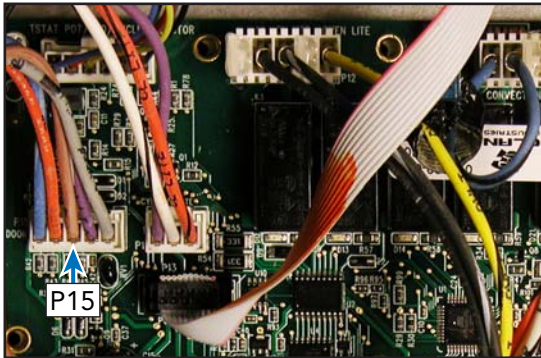
The voltage should be 120 VAC. This will indicate the K5 and K7 are functioning properly. With K7 energized, 120 volts should be measured between neutral and the HI contact and when the relay is not energized between neutral and the LO contact.



## Control Board Diagnosis

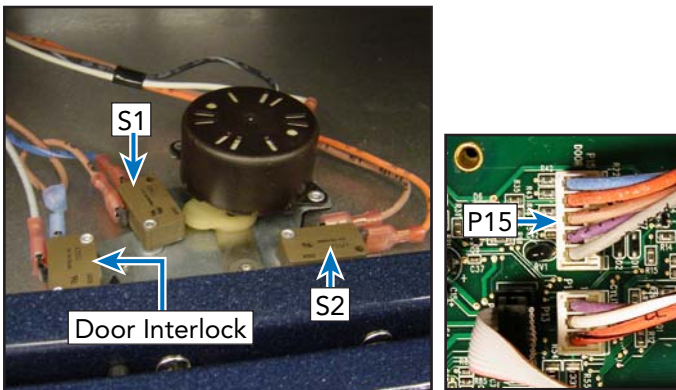
### Door Lock Assembly

The door lock motor is a 120 volt motor. One side of the motor is wired directly to the main neutral terminal block. L1 power to the lock motor is connected on the P15 connector (DL) on the main control board.



When the door is required to lock or unlock, the K3 relay energizes and sends line voltage to the door lock motor.

The position of the door lock motor is monitored by the S1 and S2 door interlock switches connected to P15 shown below (right).



There are three micro switches mounted on the door lock assembly. One switch is not used on this model. The photo above 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 neutral terminal block. The resistance should be approximately 12.3K  $\Omega$ . If no resistance is read, remove the latch motor to repair or replace as necessary (see *Lock Motor Disassembly*, page 50).

### Testing Latch Switches

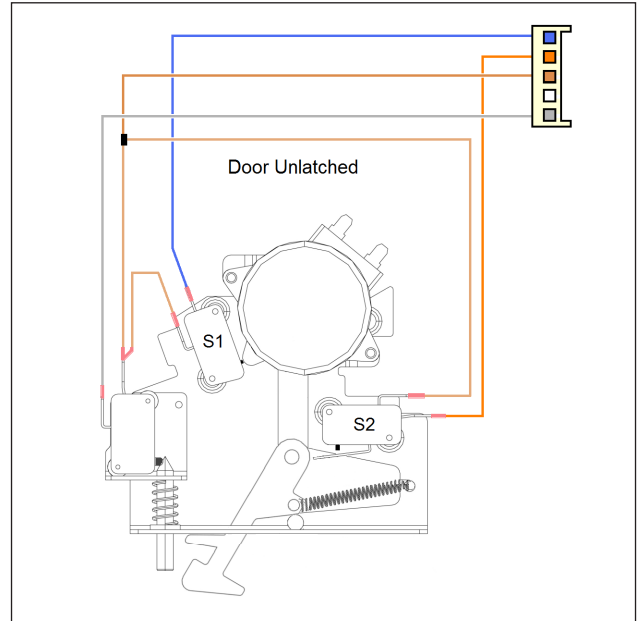
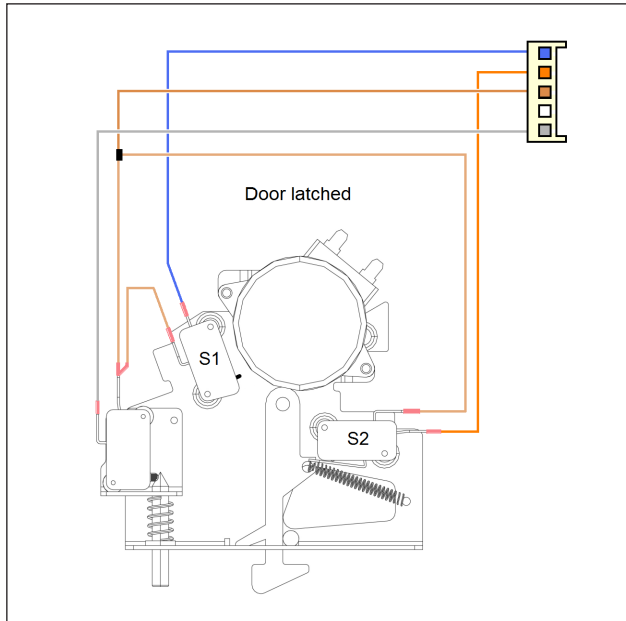
To check the latch switches, access the control board and unplug the P15 Molex plug. With the door in the unlocked position, you should read continuity between the light brown wire and the blue/white wire and zero (0)  $\Omega$  between the light brown wire and the blue/white. If your readings are incorrect or reversed, remove the latch and inspect, repair/replace (see *Lock Motor Disassembly*, page 50).

## Control Board Diagnosis

### Checking the door lock position switches

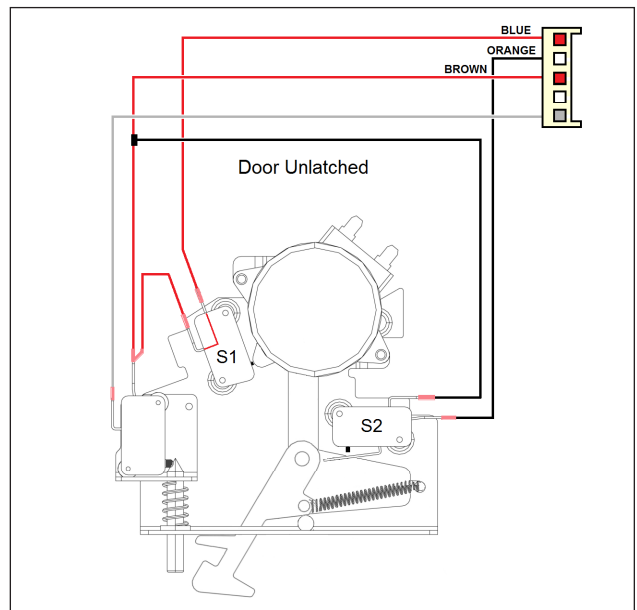
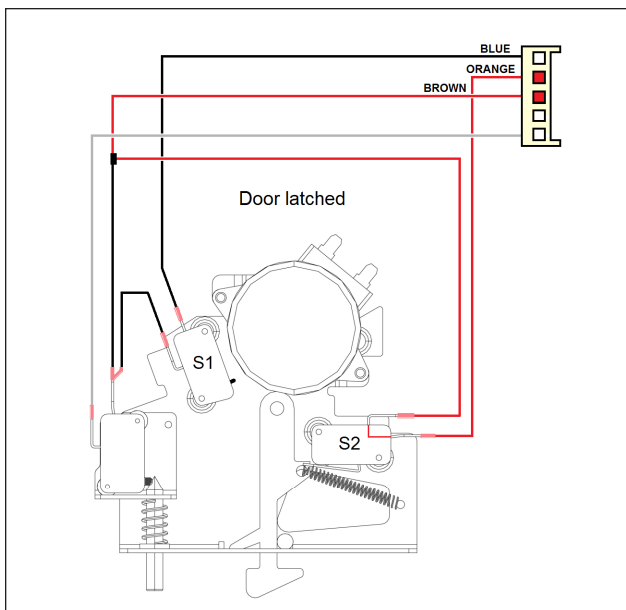
With the door in the unlocked position, the S1 switch (N.O.) is being activated by the motor cam. Shown below are the switch positions and wire colors. To test, ohm out the wires between blue and light brown. The reading should be zero (0)  $\Omega$ . The S2 switch is N.O. and will read infinite ohms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

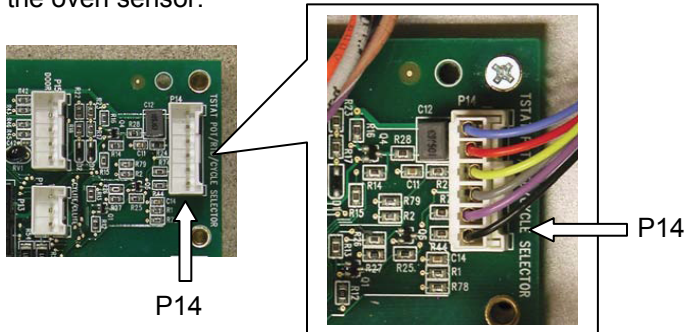
Shown below is the closed circuit in red.



## Control Board Diagnosis

### RTD Sensor

Locate the P14 connector on control board. The P14 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 Zero resistance (shorted RTD) or infinite resistance (open RTD) is read, verify sensor wiring is connected completely through circuit. If wiring is OK, replace the sensor.

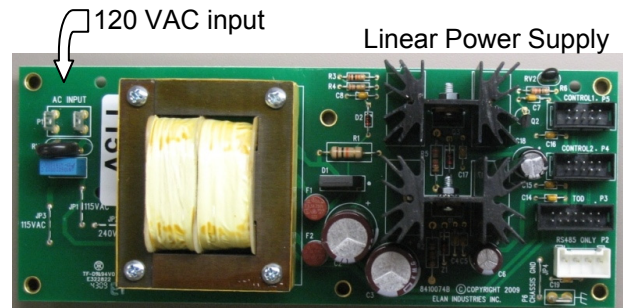
### RTD Characteristics

RTD (Resistance Temperature Detector)	
Temperature ( $^{\circ}$ 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.*

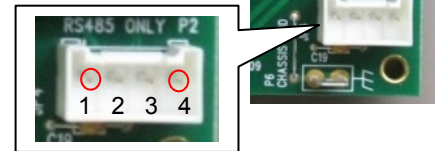
### Test Main Power Board

The main power board receives power directly from the power supply. Verify 120 VAC between Neutral (white wire) and L1 (black wire). If no voltage is present, verify supply and check breaker.



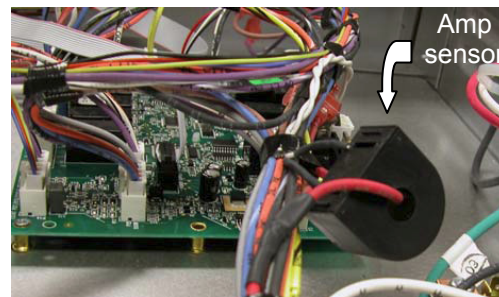
With voltage present to the power board, verify the out put voltage. Locate pin connection P2. Output voltage can be checked between pin 1 – 4 (see below). Voltage should be 8VDC. If 0 volts is read, replace the board.

P5 is the interface connection to the upper relay board P13. P4 is the interface connection to the lower relay board P13 and P3 is the interface connection to the TOD (clock) user interface.



### Amp Sensor

An current (Amp) sensor is used on the wall oven to measure current flow. The DDOE301 and DDOE305 have 2 on the unit. One for each cavity. The amp sensor is placed around the L2 (red) feed and connected to the control board.

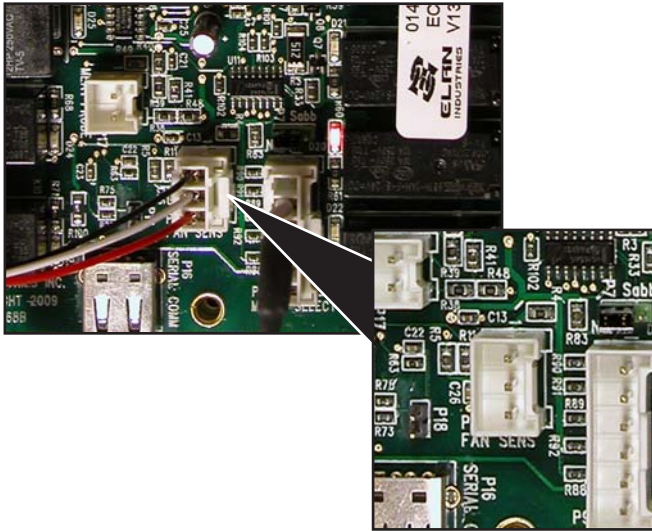


To test the sensor, unplug the sensor and check resistance across the two wires. A resistance reading 28.2  $\Omega$  should be measured.

*Note: The current sensor is only utilized in the diagnostic mode. It is disabled during normal operation.*

## Hall Effect Sensor

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



To check the cooling fan, verify the cooling fan is operating. If the fan is not turning, then verify power is being supplied to the motor. If the fan is running, locate the 3-wire Molex plug on the control board. With the oven switched OFF, unplug the connector from the board as shown above and set the voltmeter to DC voltage.

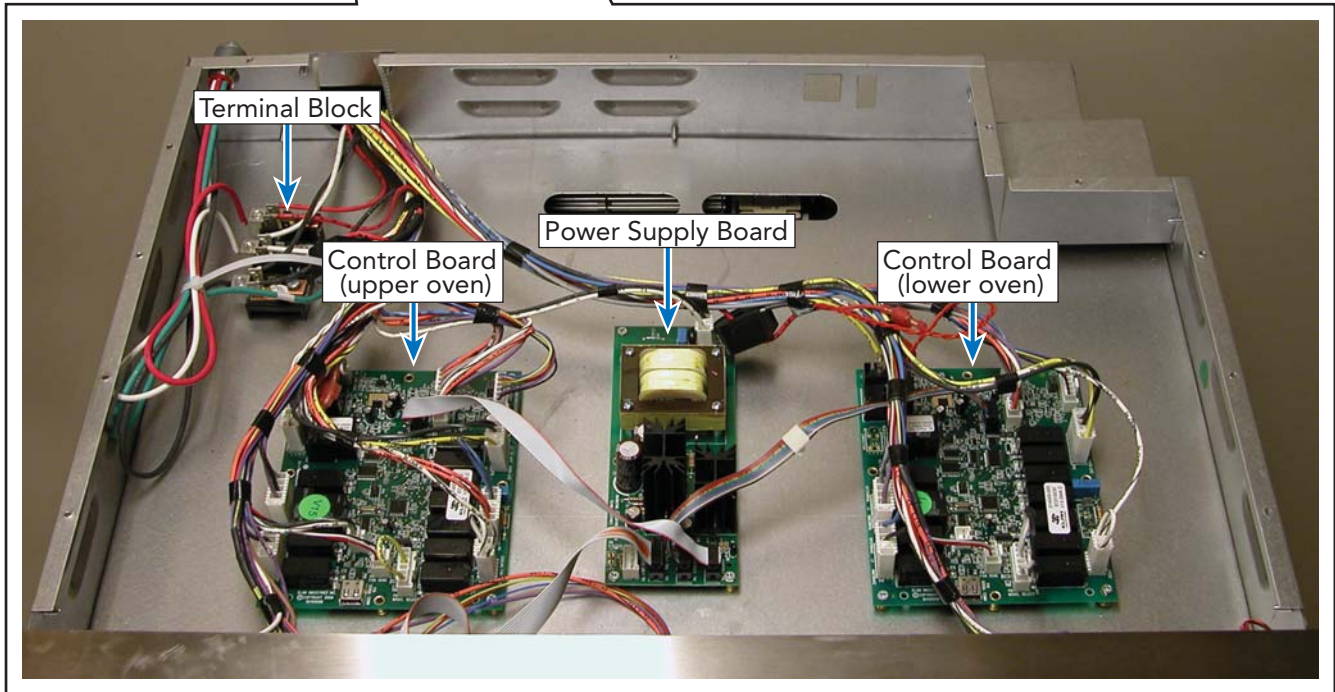
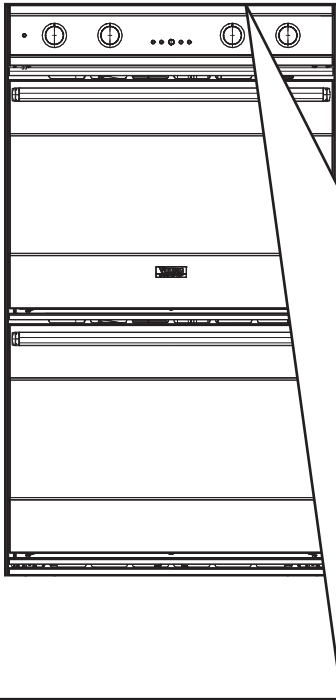
A voltage of +5 volts between the pin (1) white and pin (3) black should be measured. Measure the voltage between pin (2) white and pin (3) black and +5 volts should be measured as well. Measure the voltage between pin (1) red and pin (2) white and 0 volts should be measured. If the voltages are not correct and there is 120 volts supplied, replacement of the control board is necessary. If the voltages are correct, reconnect the 3-wire Molex plug. Place meter leads in pin (1) red and pin (2) white.

Activate the oven so that the fan is energized. With the fan turning, 2.5 VDC should be measured. If 2.5 VDC is present, then connect meter leads between pin (2) white and pin (3) black. A voltage of 2.5 VDC should be measured. If 2.5 VDC is not measured, but a full 5 VDC is measured, then the Hall Effect Sensor is defective and replacement of the cooling fan is necessary.

Another test that can be made is with the oven shut off and the Molex plug connected, place meter leads between pin (1) red and pin (2) white. With the voltmeter set to DC voltage, a reading of 0 or 5 volts should be measured depending on where the motor is positioned. If the motor is spun manually the voltage should jump between 0 – 5 volts. The same is true if the meter leads are placed between pin (2) white and pin (3) black. As the fan is manually spun a voltage of 0 to 5 volts will be measured. 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.



## Parts Location–Oven Top



**Note:** DDOE301SS model shown.

## ⚠ WARNING

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

### Main Top/Front Disassembly

To access main top/front:

1. Slide the unit out 6 – 8”.
2. Remove screws securing front top panel.



3. Remove panel.



4. Reverse to reassemble.

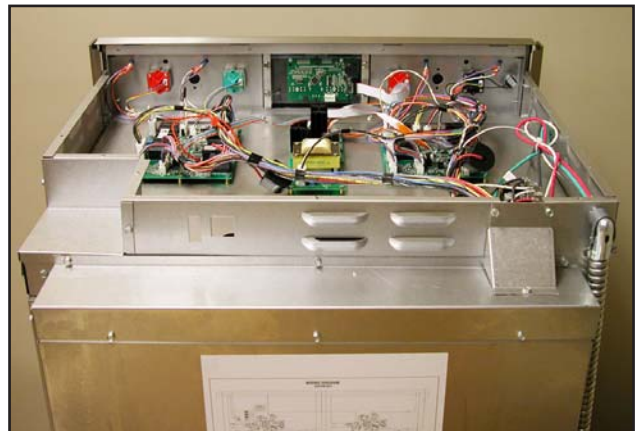
### Main Top/Rear Disassembly

To access main top/rear:

1. Slide unit out of installation.
2. Remove main top/front (see *Main Top/Front Disassembly* on left).
3. Remove screws securing rear main top.



4. Remove panel.



5. Reverse to reassemble.

**Note:** DDOE301SS model shown.

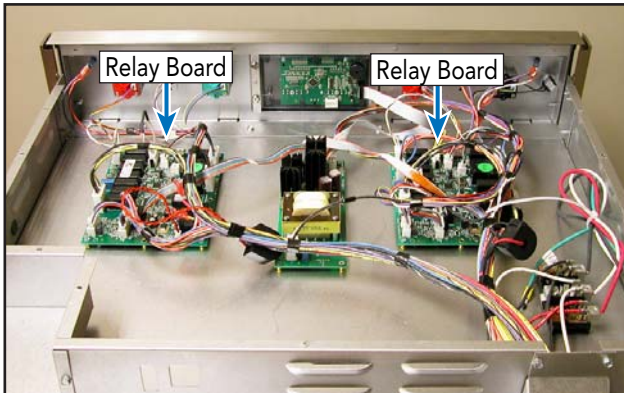
## ⚠ WARNING

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

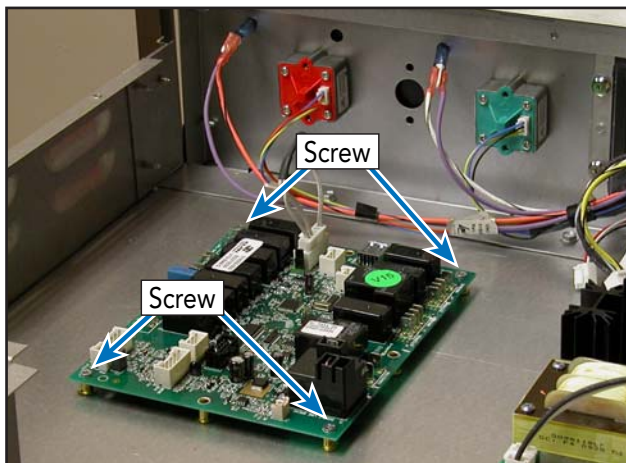
### Control Board

To access control board:

1. Remove main top/front and main top/rear (see *Main Top/Front and Main Top/Rear Disassembly*, page 39).
2. Control board is accessible.



3. Label and disconnect wiring.
4. Remove screws securing control board.

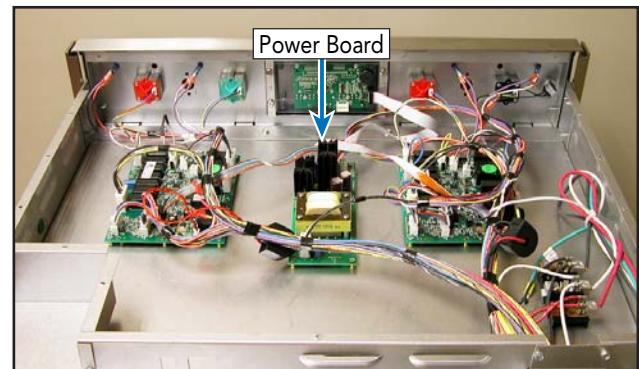


5. Repair or replace control board as necessary.
6. Reverse procedure to reinstall.

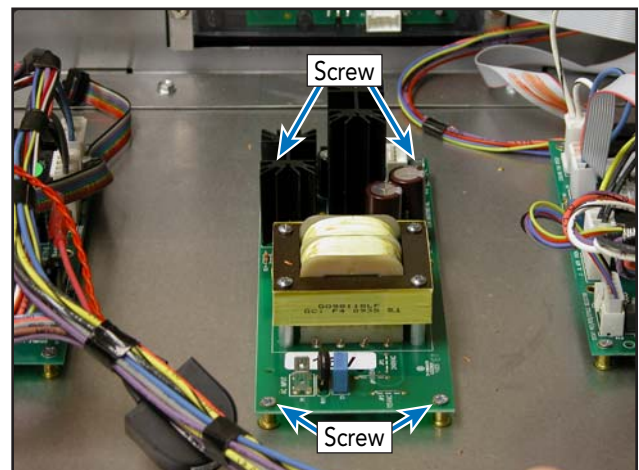
### Power Supply Board

To access power supply board:

1. Remove main top/front and main top/rear (see *Main Top/Front and Main Top/Rear Disassembly*, page 39).
2. Power supply board is accessible.



3. Label and disconnect wiring.
4. Remove screws securing power supply board.



5. Repair or replace power supply board as necessary.
6. Reverse procedure to reinstall.

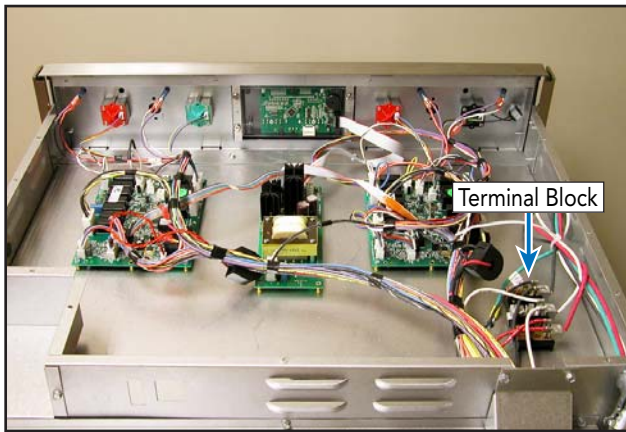
## ⚠ WARNING

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

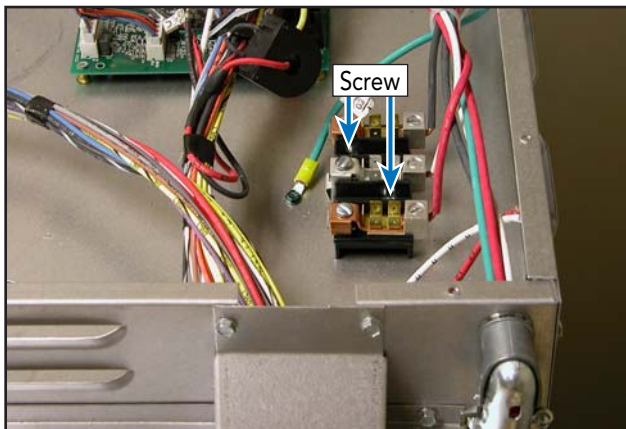
### Terminal Block

To access terminal block:

1. Remove main top/front and main top/rear (see *Main Top/Front and Main Top/Rear Disassembly, page 39*).
2. Terminal block is accessible.



3. Disconnect wires.
4. Remove screws securing terminal block.

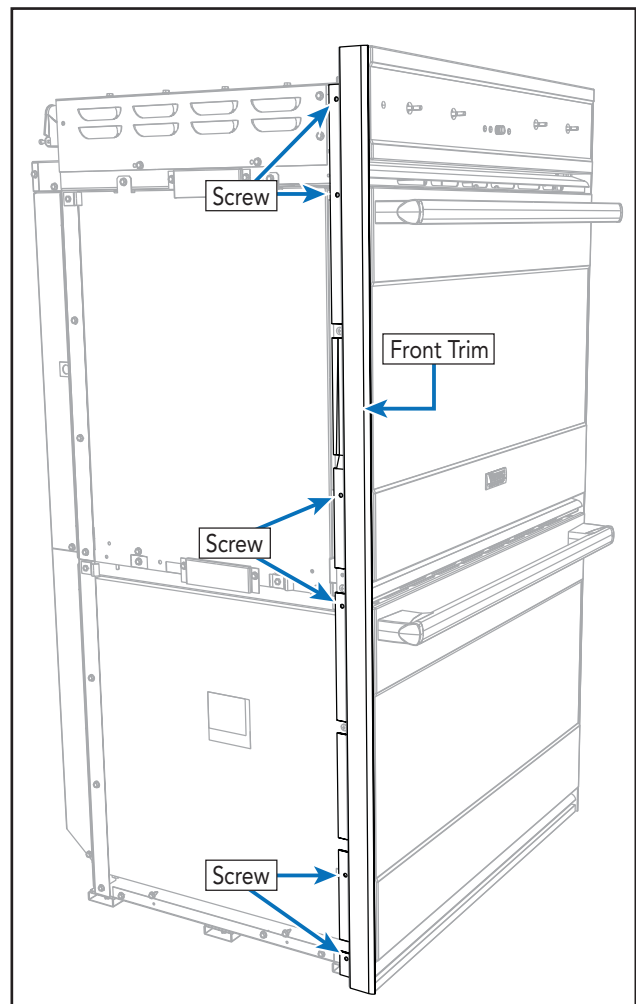


5. Repair or replace terminal block as necessary.
6. Reverse procedure to reinstall.

### Control Panel Disassembly

To access control panel:

1. Remove oven knobs.
2. Remove screws securing front trim and remove trim.



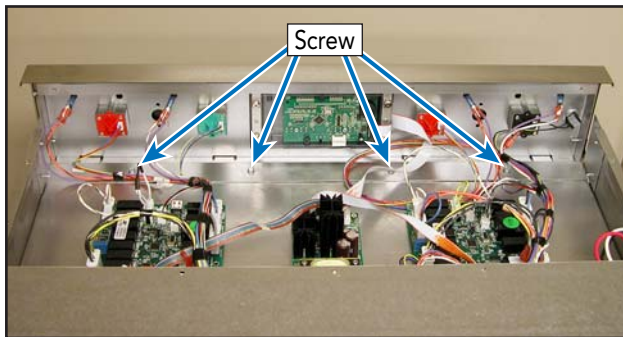
3. Remove main top/front (see *Main Top/Front Disassembly, page 39*).

## ⚠ WARNING

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

### Control Panel Disassembly (cont.)

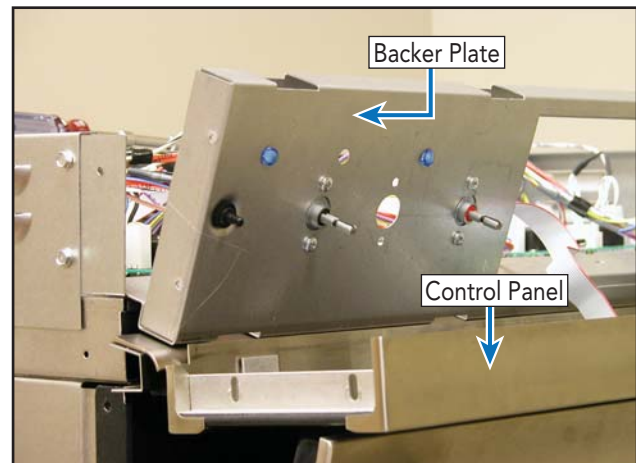
4. Remove screws securing control panel to oven.



5. Remove screws on each end of control panel.



6. Separate control panel from backer plate.



7. Reverse procedure to reinstall.

**Note:** DDOE301SS model shown.

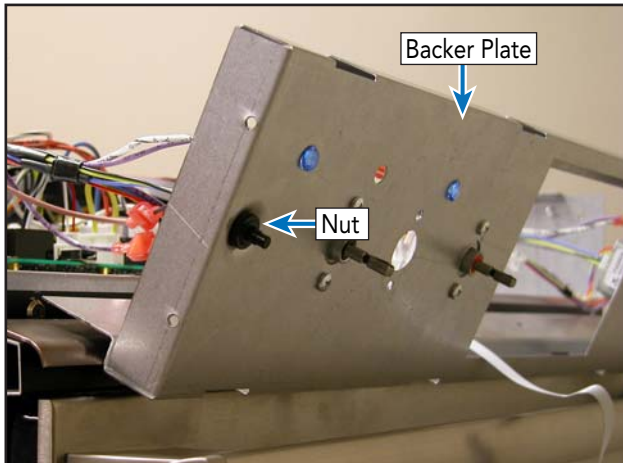
## ⚠ WARNING

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

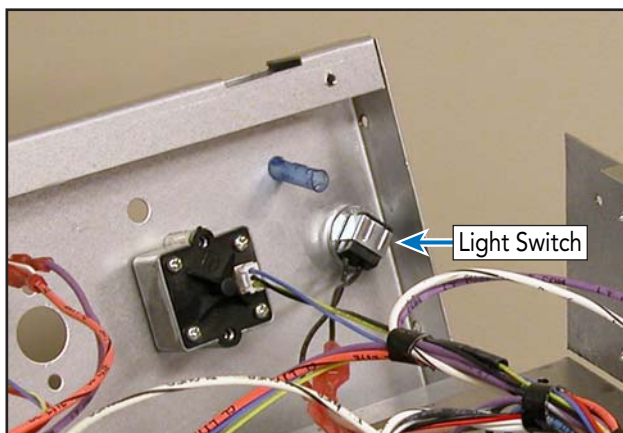
### Oven Light Switch

To access oven light switch:

1. Remove control panel (see *Control Panel Disassembly*, page 41).
2. Remove nut securing light switch to backer plate.



3. Remove light switch and disconnect wiring.

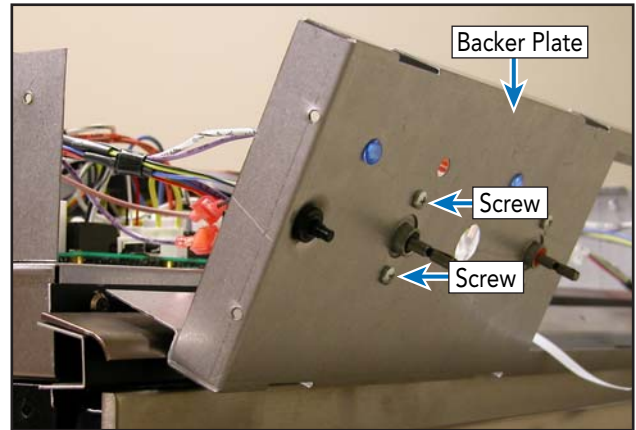


4. Repair or replace light switch as necessary.
5. Reverse procedure to reinstall.

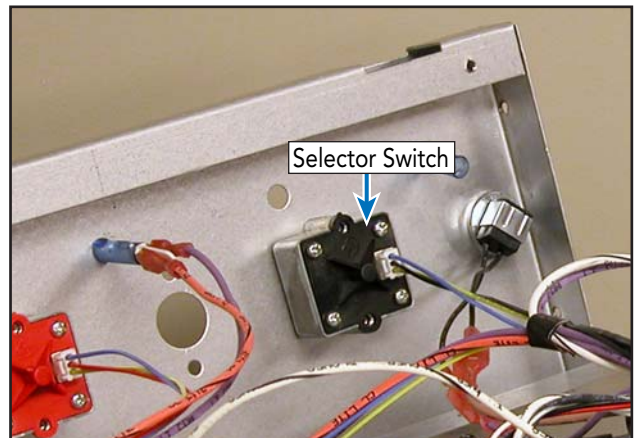
### Oven Selector Switch

To access oven selector switch:

1. Remove control panel (see *Control Panel Disassembly*, page 41).
2. Remove screws securing selector switch to backer plate.



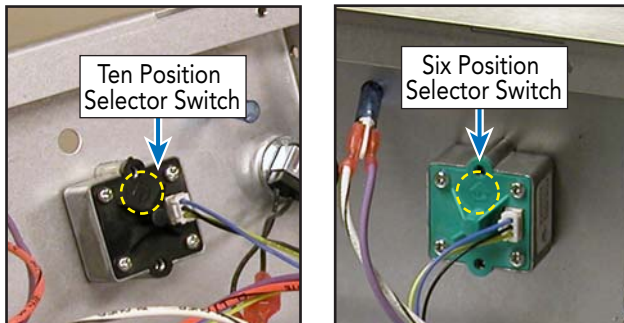
3. Remove oven selector switch and disconnect wiring.



## ⚠ WARNING

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

### Oven Selector Switch (cont.)



**Note:** The DDOE 301 uses a ten position (black) and a six position (green) selector switch. Switches must not be interchanged.

4. Repair or replace oven selector switch as necessary.
5. Reverse procedure to reinstall.

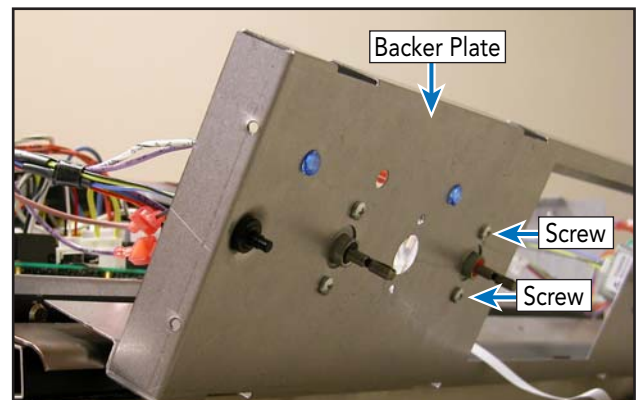
**Note:** When replacing the selector switch take note of the position when reinstalling. There is an indicator mark on the back of the switch (yellow highlight) which (yellow highlight) shows the "TOP" for orientation.

**Note:** DDOE301SS model shown.

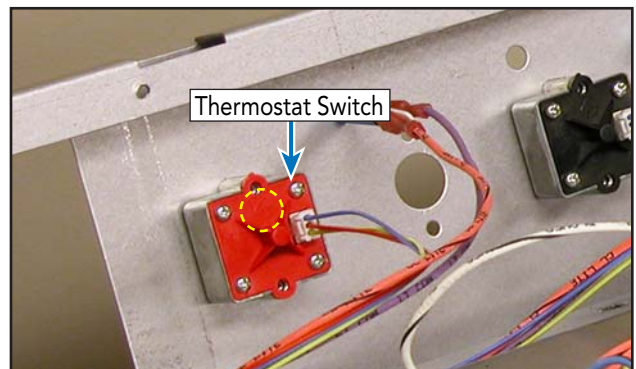
### Oven Thermostat Switch

To access oven thermostat switch:

1. Remove control panel (see *Control Panel Disassembly*, page 41).
2. Remove screws securing oven thermostat switch to backer plate.



3. Remove oven thermostat switch and disconnect wiring.



4. Repair or replace oven thermostat switch as necessary.
5. Reverse procedure to reinstall.

**Note:** When replacing the thermostat switch take note of the position when reinstalling. There is an indicator mark on the back of the switch (yellow highlight) which shows the "TOP" for orientation.

## ⚠ WARNING

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

### Clock

To access clock:

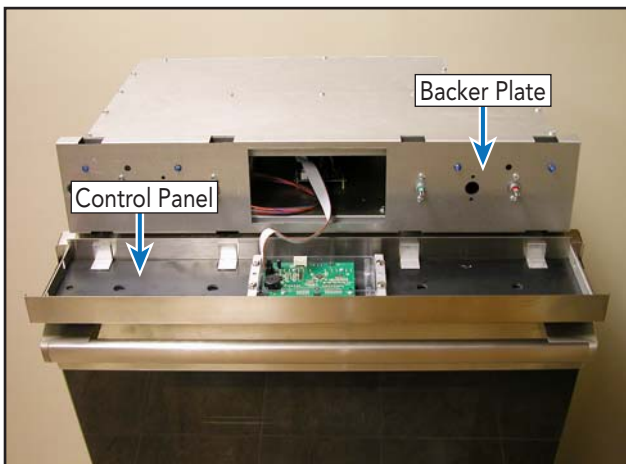
1. Follow control panel disassembly steps one and two (see *Control Panel Disassembly*, page 41).

**Note:** The clock assembly can be accessed without pulling the unit completely out.

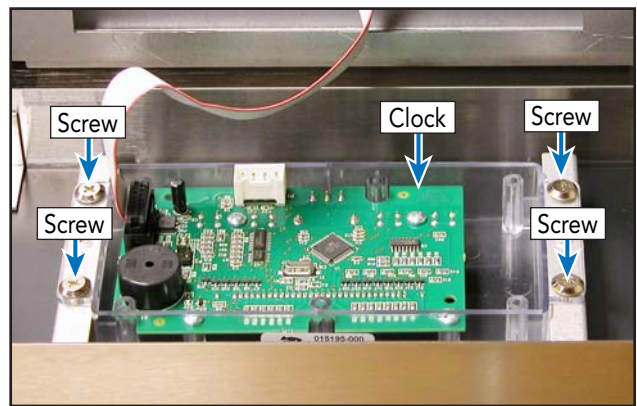
2. Remove screws on each end of control panel.



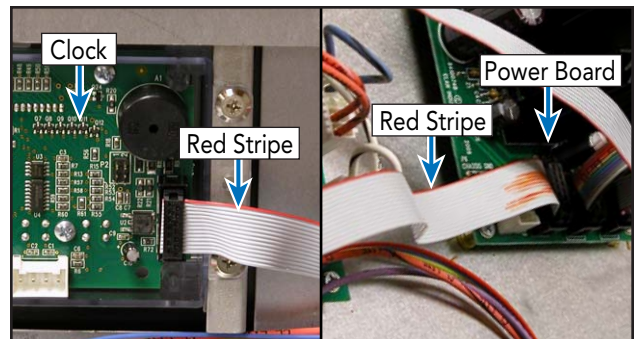
3. Separate control panel from backer plate.



4. Remove screws securing clock to control panel.
5. Disconnect wiring and remove clock.



6. Repair or replace clock as necessary.
7. Reverse procedure to reinstall.

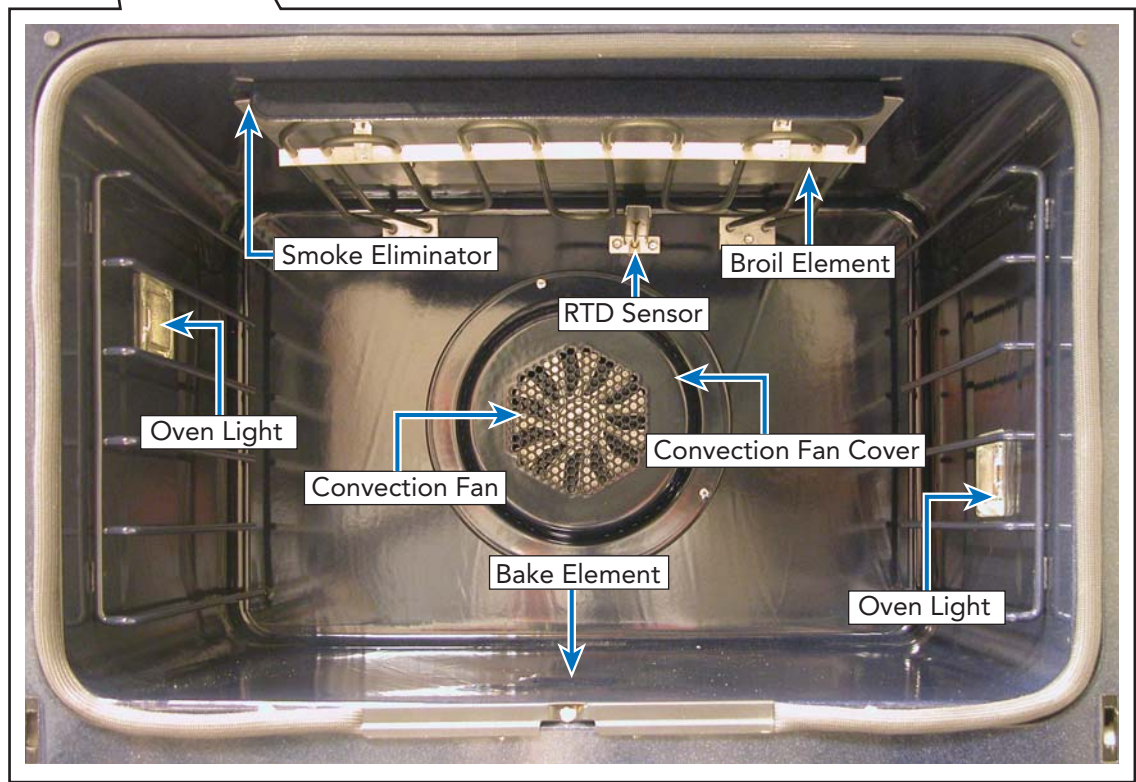
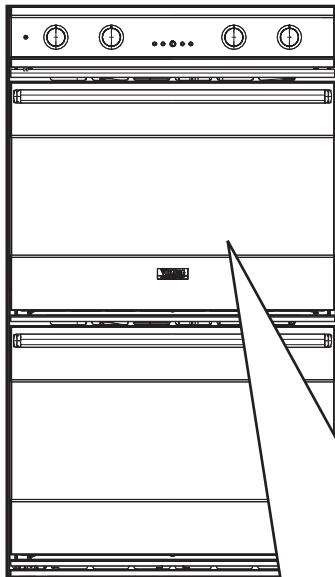


**Note:** If replacing a ribbon cable, the orientation of the plugs must be the same. Hold both ends of the ribbon cable side by side. With the plugs in the same orientation, verify that the red marked side is the same on both plugs. If the red mark is on the left on one plug and the right on the other plug, this will not work and could damage the control boards.



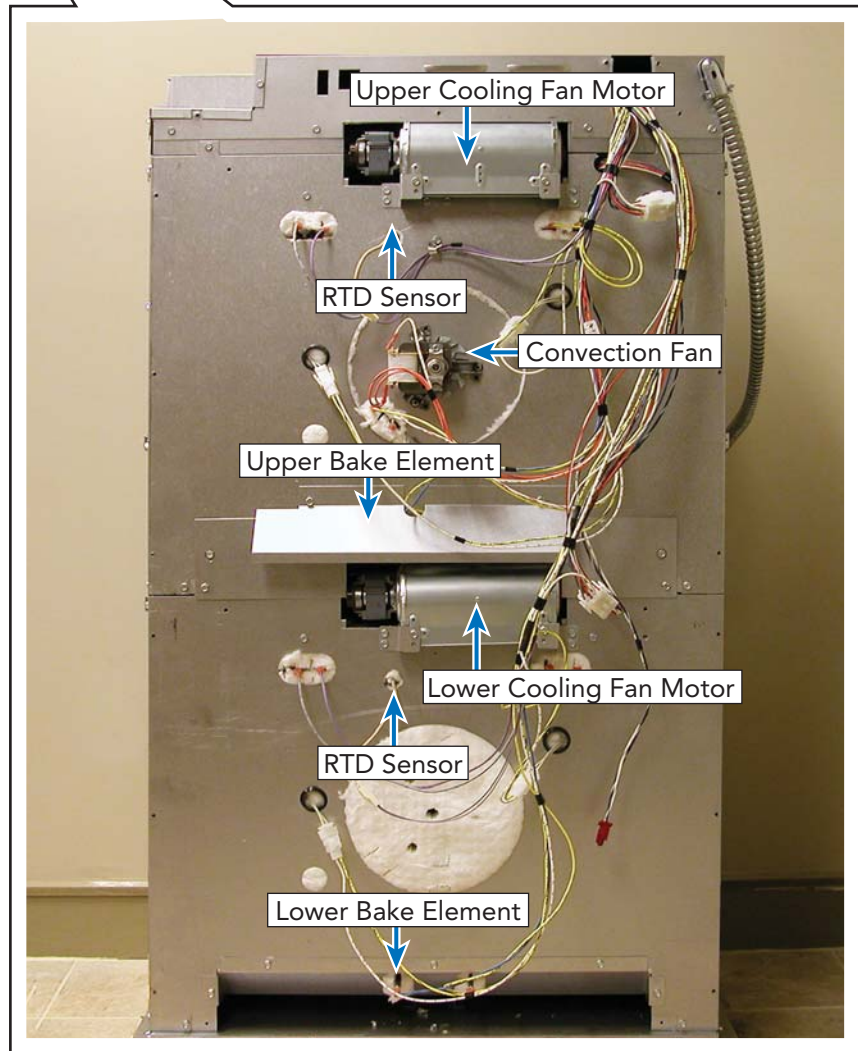
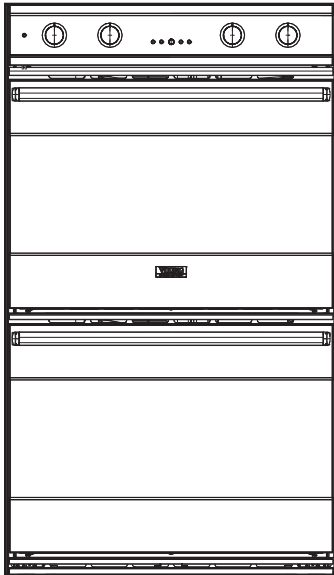


Parts Location–Oven



**Note:** DDOE301SS upper oven shown.

Parts Location-Back



**Note:** DDOE301SS model shown.

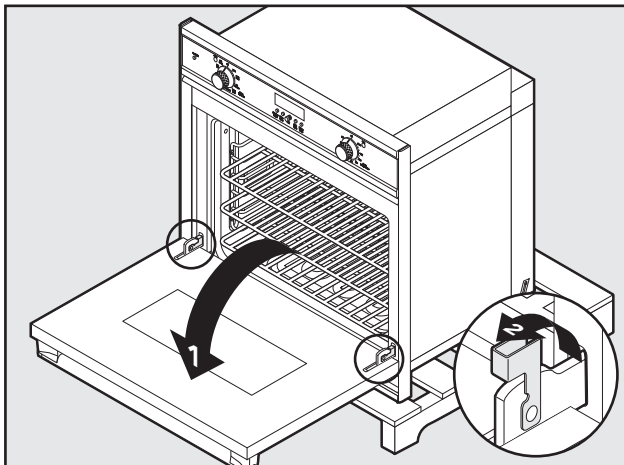
## ⚠ WARNING

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

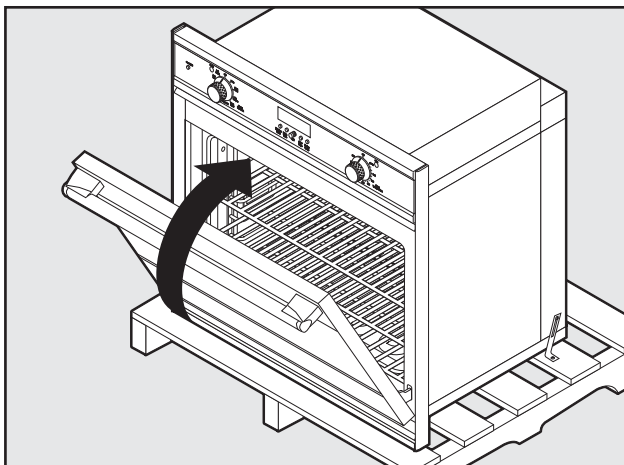
### Door Removal

To remove oven door:

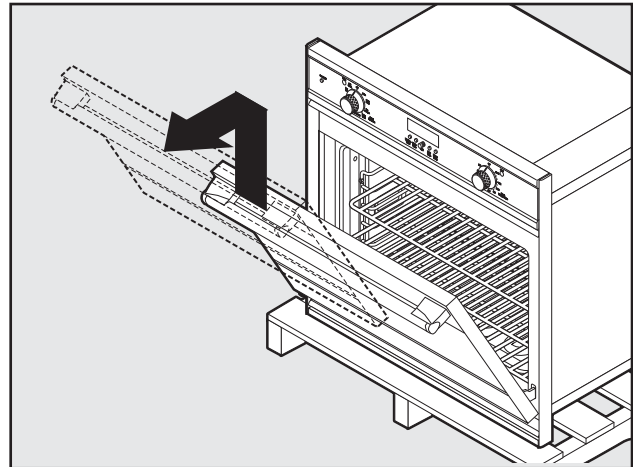
1. Open door completely.
2. Slide locking tabs, located on left and right side of door hinge, down completely to disengage hinge from receiver.



3. Close oven door to the broil stop position.



4. Lift door up and out.



5. Reverse procedure to reinstall.

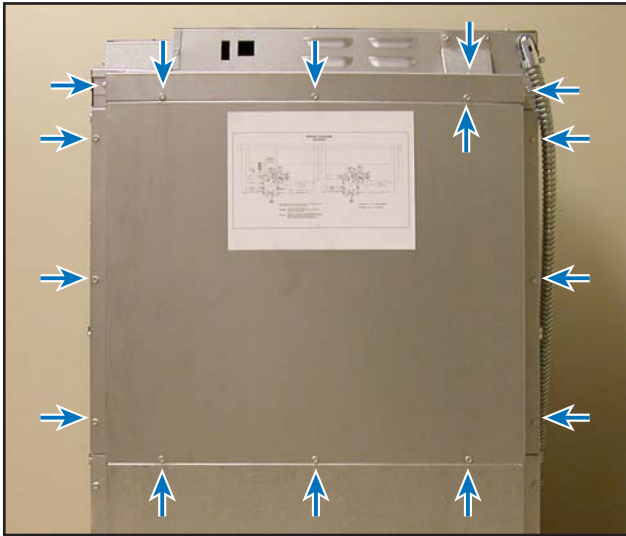
**Note:** DSOE301SS model shown.

**⚠ WARNING**

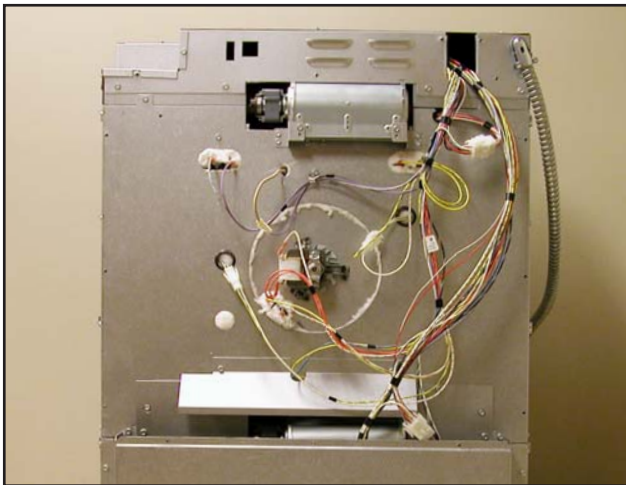
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power.

**Upper Rear Cover Disassembly**  
(double oven only)

1. Remove unit from installation.
2. Slide the unit out until rear cover is accessible.
3. Remove screws securing upper rear cover.



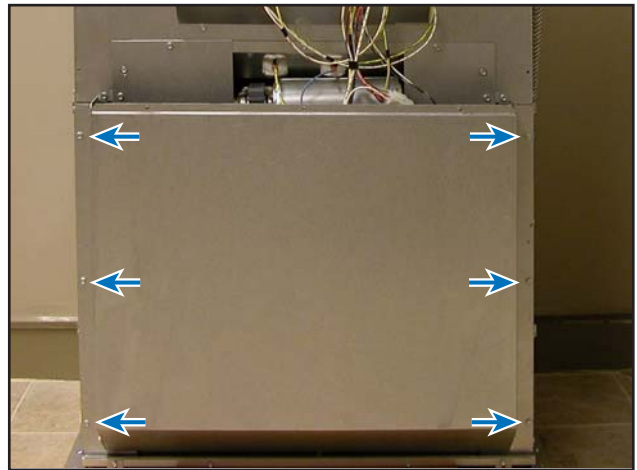
4. Remove panel.



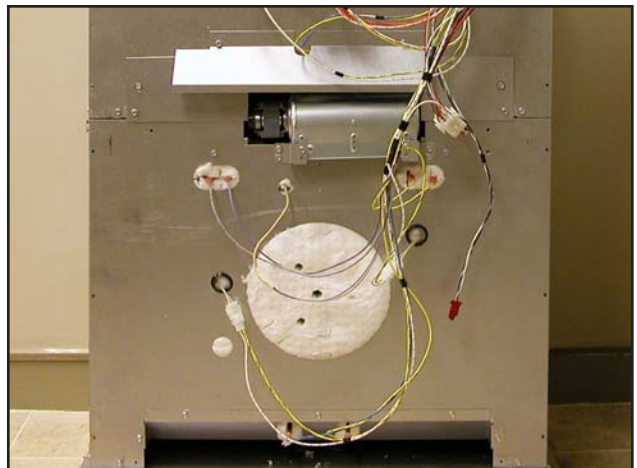
5. Reverse to reassemble.

**Rear Cover Disassembly**

1. Remove unit from installation.
2. Slide the unit out until rear cover is accessible.
3. Remove upper rear cover (see *Upper Rear Cover Disassembly* on left).
4. Remove screws securing lower rear cover.



5. Remove panel.



6. Reverse to reassemble.

**Note:** DSOE301SS model shown.

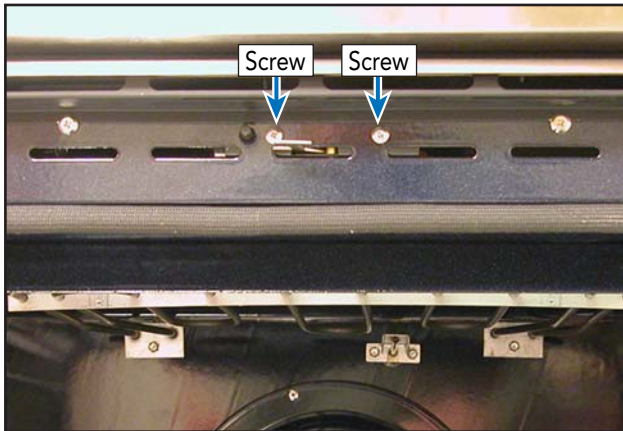
## ⚠ WARNING

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

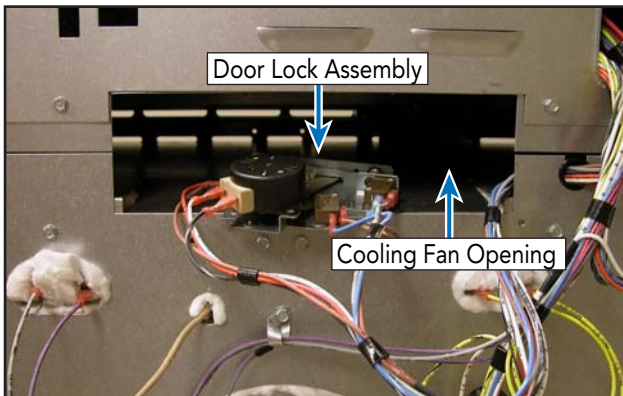
### Door Lock Assembly

To access door lock assembly:

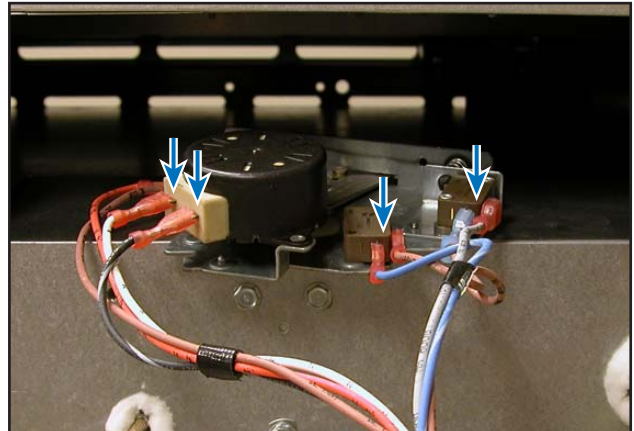
1. Remove unit from installation.
2. Open oven door.
3. Remove screws securing door lock assembly to front frame.



4. Remove rear cover (see *Upper Rear/Rear Cover Disassembly*, page 49).
5. Remove cooling fan. (see *Oven Cooling Fan Disassembly*, page 56).
6. Slide door lock assembly through cooling fan opening at rear of unit.



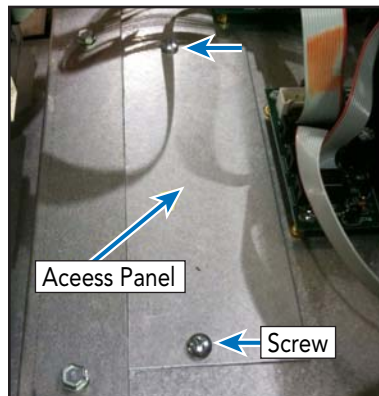
7. Disconnect wiring.



**Note:** A string or wire should be tied to the old latch hook so that when the new latch is replaced, the service technician can use the wire to pull the hook and latch through the front frame.

8. Repair or replace door lock assembly as necessary.
9. Reverse procedure to reinstall.

**Note:** On early production units, access to the upper door latch required removal of the oven from the cabinet. In March of 2010, an access panel was added the top frame behind the control panel.



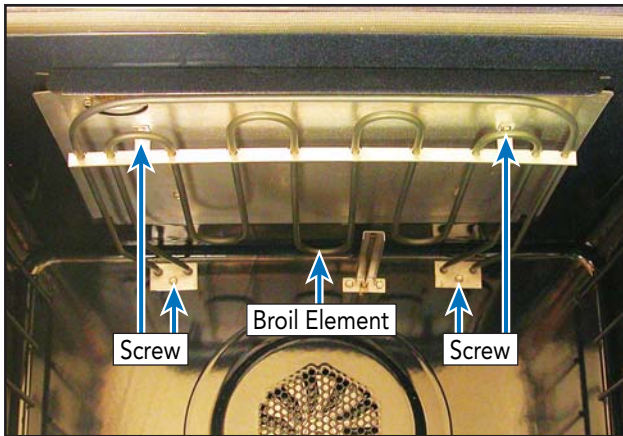
The image to the left shows the access panel. Access to the lower latch will still require removal of the oven for service.

## ⚠ WARNING

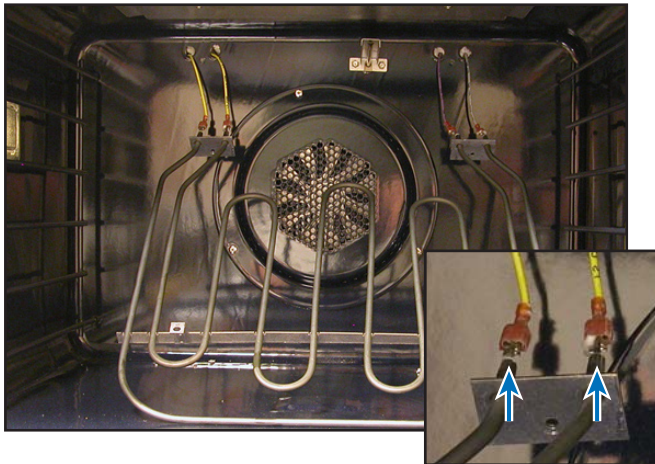
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power.

### Broil Element

1. Open oven door.
2. Remove screws securing broil element.



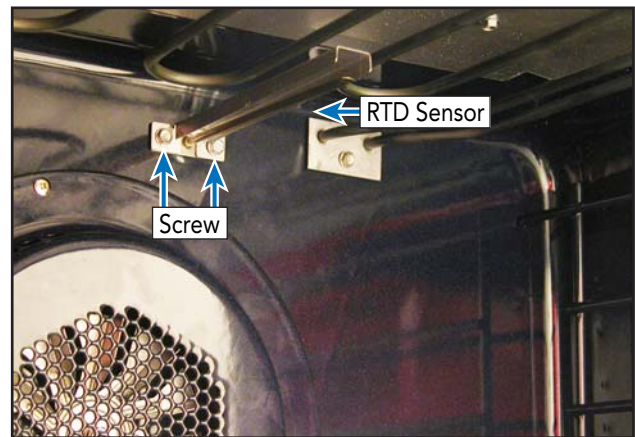
3. Slide broil element into cavity and disconnect wiring.



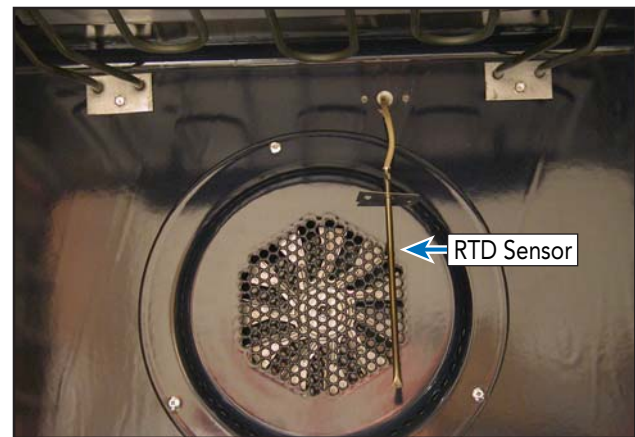
4. Repair or replace broil element as necessary.
5. Reverse procedure to reinstall.

### RTD Sensor

1. Open oven door.
2. Remove screws securing sensor and cover to oven cavity.



3. Slide sensor into oven cavity and disconnect wiring.



4. Repair or replace RTD sensor as necessary.
5. Reverse procedure to reinstall.

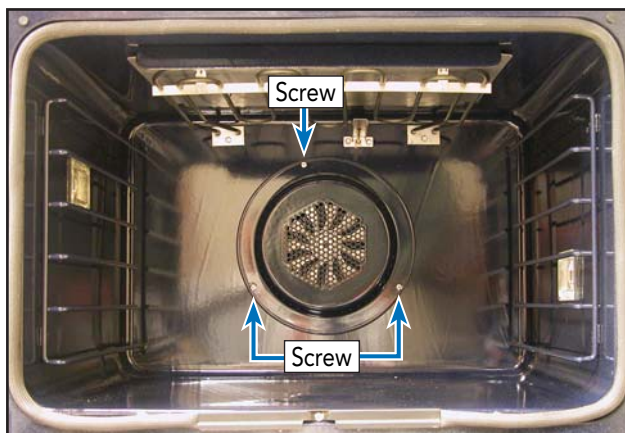
## ⚠ WARNING

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

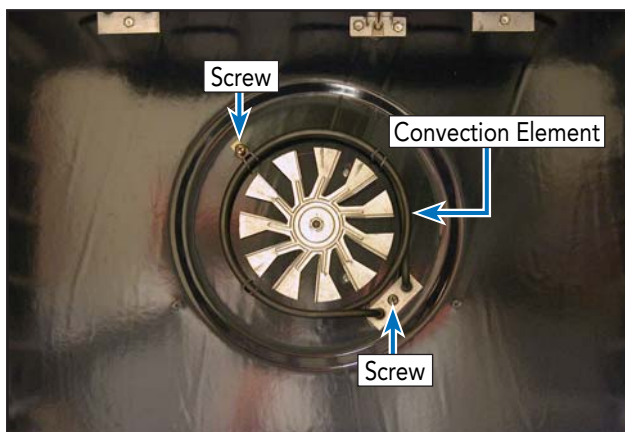
### Convection Element

To access convection element:

1. Open oven door.
2. Remove screws securing convection fan cover.



3. Remove screws securing convection element to oven cavity.



4. Slide convection element into cavity and disconnect wiring.



5. Repair or replace convection element as necessary.
6. Reverse procedure to reinstall.

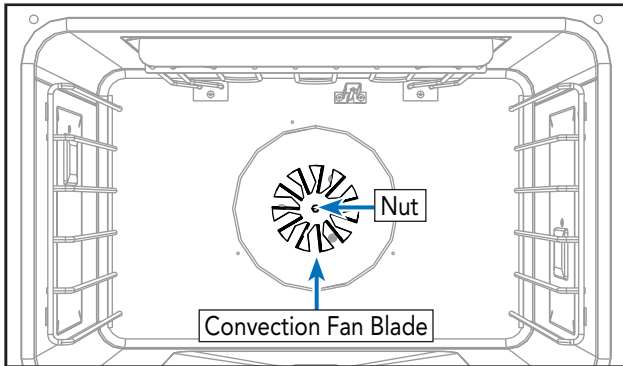
## ⚠ WARNING

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

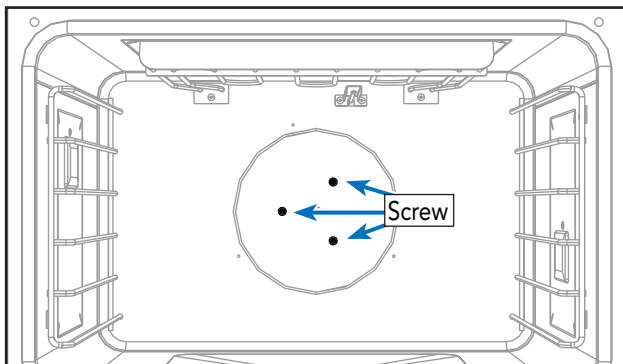
### Convection Fan

To access convection fan:

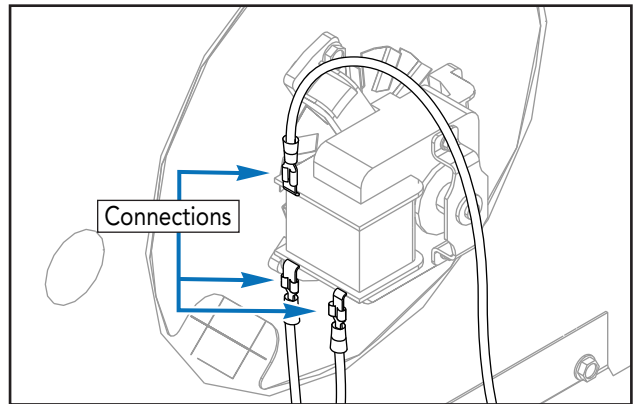
1. Remove unit from installation (in order to replace the convection motor, the oven has to be completely removed from the cabinet).
2. Remove oven door (see *Door Removal*, page 48).
3. Remove rear cover (see *Upper Rear/Rear Cover Disassembly*, page 49).
4. Remove convection element (see *Convection Element*, page 52).
5. Remove nut securing fan blade to convection fan motor shaft.



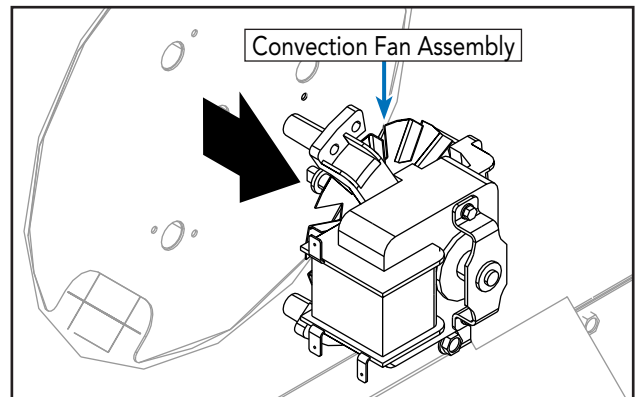
6. Remove screws securing convection fan assembly to oven cavity.



7. Disconnect wiring.



8. Remove convection fan assembly.



9. Repair or replace convection fan assembly as necessary.
10. Reverse procedure to reinstall.

**Note:** Removing the convection fan is a two man operation.



## ⚠ WARNING

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

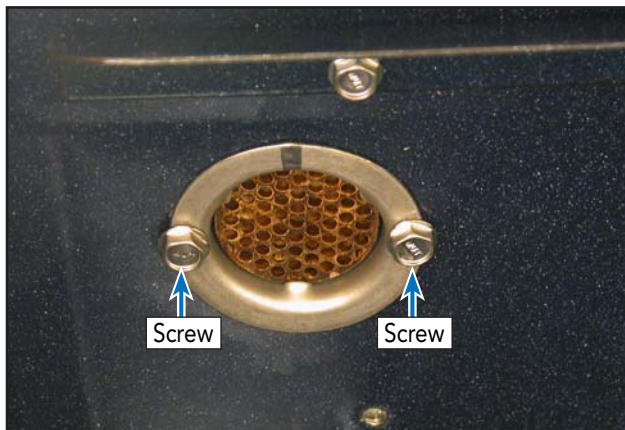
### Smoke Eliminator

To access smoke eliminator:

1. Open oven door.
2. Remove broil element (see *Broil Element Disassembly*, page 51).
3. Remove screws securing broil baffle and remove baffle.



4. Remove screws securing smoke eliminator to oven cavity.



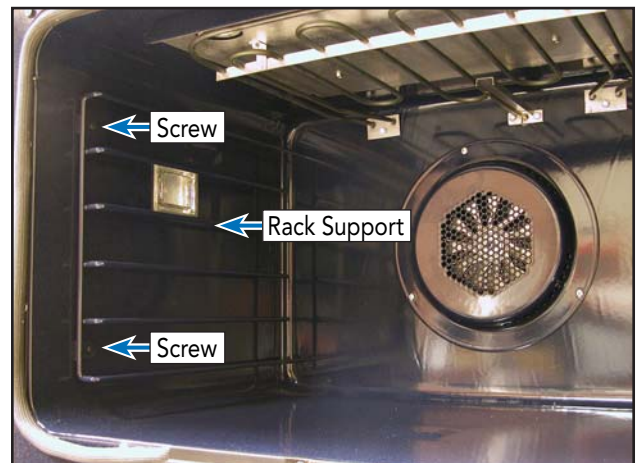
5. Repair or replace smoke eliminator.
6. Reverse procedure to reinstall.

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### Rack Support

To access rack support:

1. Remove oven door (see *Door Removal*, page 48).
2. Remove screws and rack supports from each side of oven cavity.



3. Reverse procedure to reinstall.

**⚠ WARNING**

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

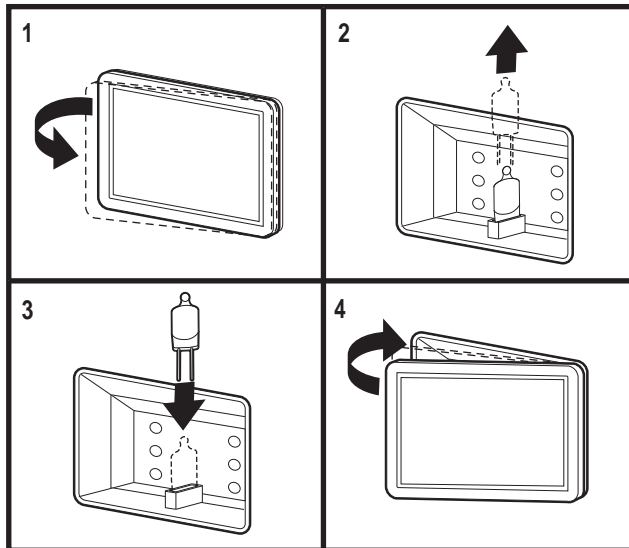
### Oven Light

**⚠ CAUTION**

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

To access oven light:

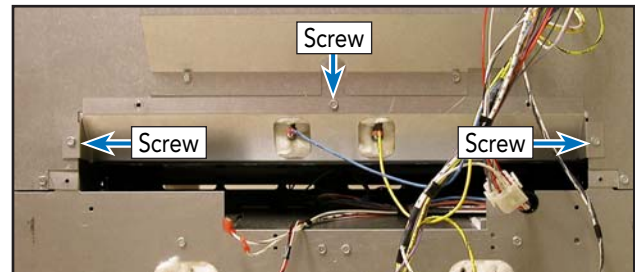
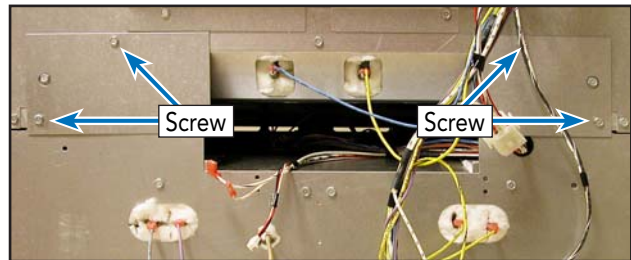
1. Unsnap oven light cover.
2. Firmly grasp light bulb and pull out of socket.
3. Replace with new halogen bulb following wattage and voltage rating on old halogen bulb.
4. Reinstall light cover.



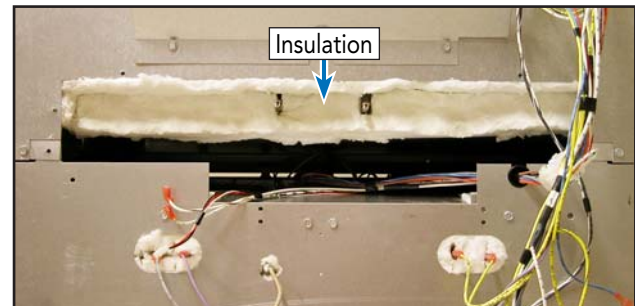
### Bake Element

To access bake element:

1. Slide unit out of installation (in order to replace the bake element, the oven has to be completely removed from the cabinet).
2. Remove rear cover (see *Upper Rear/Rear Cover Disassembly*, page 49).
3. Remove oven cooling fan (see *Oven Cooling Fan*, page 56).
4. Disconnect wiring, remove screws securing rear trim pieces and remove trim.



5. Carefully remove insulation covering bake element.

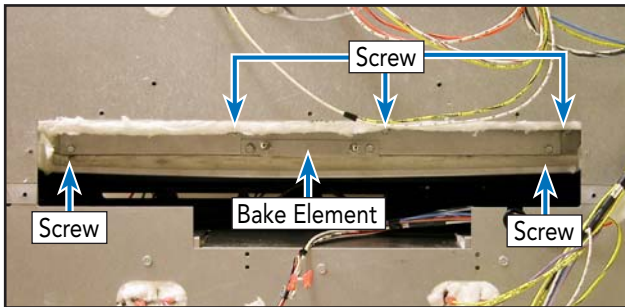


**⚠ WARNING**

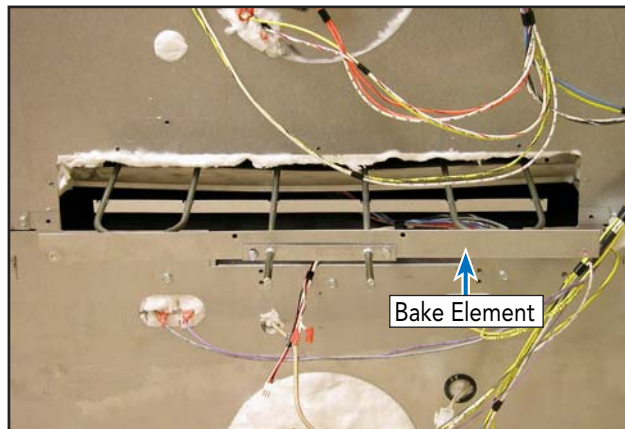
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power.

**Bake Element (cont.)**

- Remove screws securing bake element to unit.



- Slide bake element out.



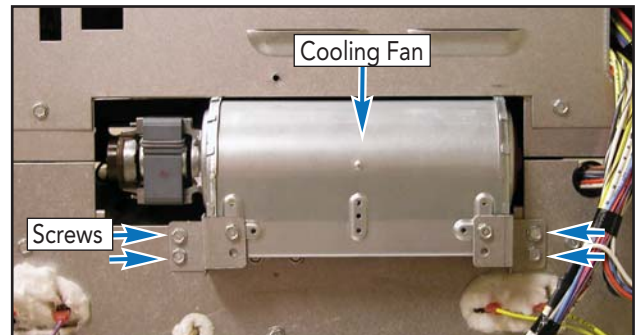
- Repair or replace bake element as necessary.
- Reverse procedure to reinstall.

**Oven Cooling Fan**

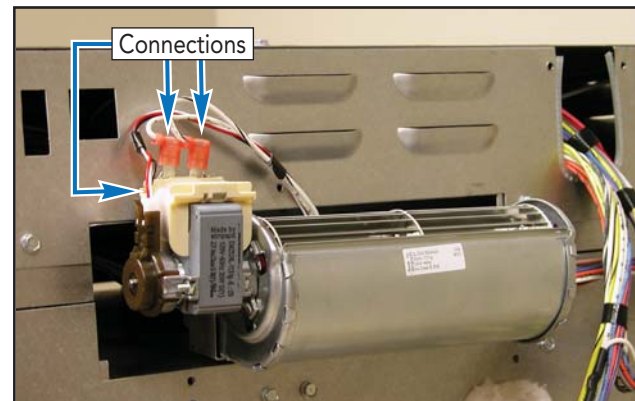
The DDOE is designed to circulate air around the control box area whenever the oven is switched on. The cooling fan has a Hall Effect Sensor that monitors the fan and communicates information to the control board.

To access the cooling fan:

- Slide unit out of installation.
- Remove rear cover (see *Upper Rear/Rear Cover Disassembly*, page 49).
- Remove screws securing cooling fan.



- Remove fan and disconnect wiring to fan and Hall Effect Sensor.



- Repair or replace cooling fan as necessary.
- Reverse procedure to reinstall.

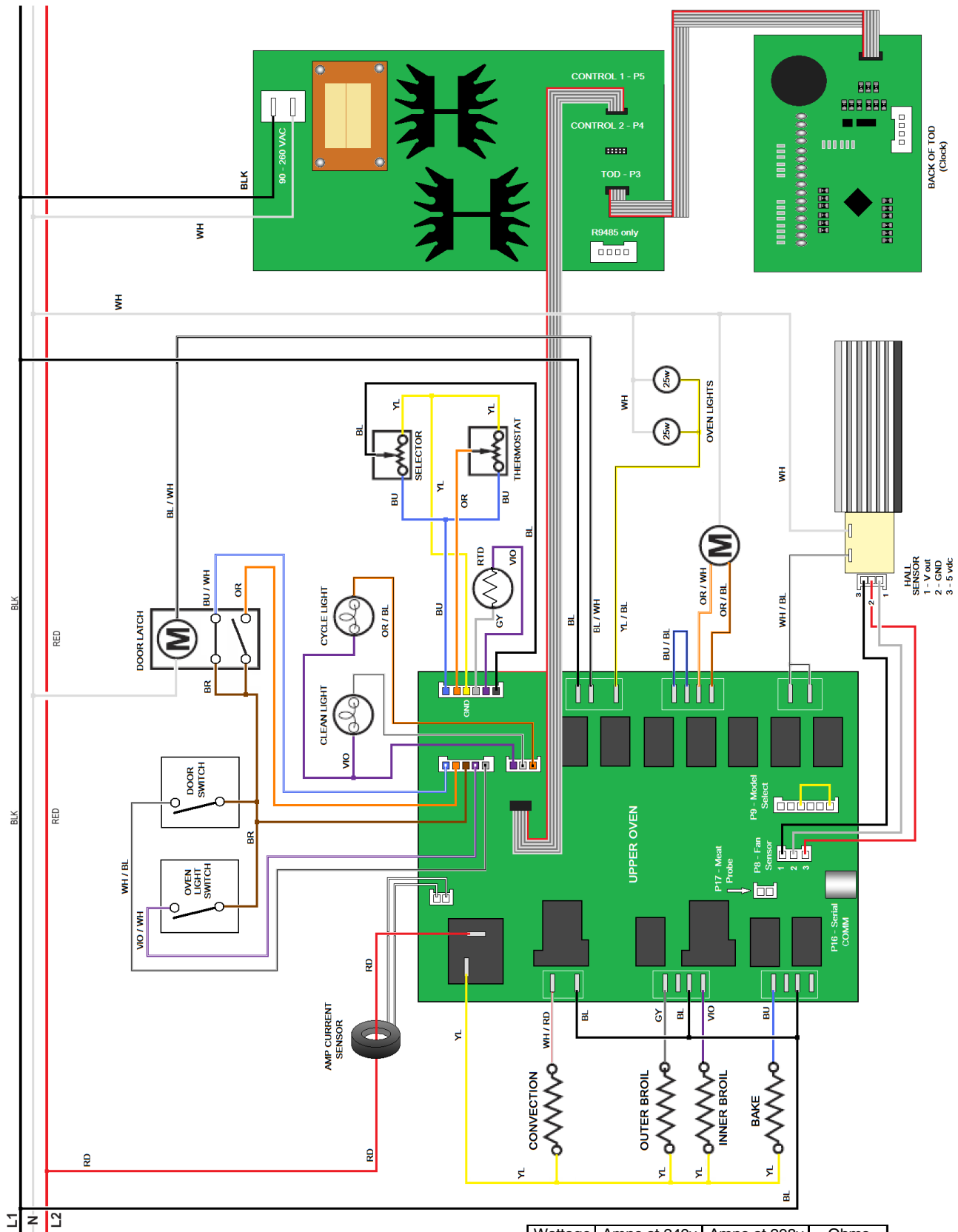
## Troubleshooting Guide

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
Convection fan inoperable	Defective oven wiring Convection Fan Motor Control board	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 Bake element/broil element	Repair/replace defective wiring Test convection element Verify relay operation, wiring, and inputs Replace bake element/broil element
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) Open Control board	Repair/replace defective wiring Replace control board (check operation of blower motor)
Bake element inoperable	Defective oven wiring Bake element Control board	Repair/replace wiring Test bake element Verify relay operation, wiring, and inputs
Broil element inoperable	Defective oven wiring Broil element Control board	Repair/replace wiring Test broil element Verify relay operation, wiring, and inputs
No self-clean, bake and broil operate normally, oven lights operate, door won't lock, no clean indicator light	Open door latch motor Out of calibration selector Out of calibration thermostat Open relay	Confirm resistance Replace selector Replace thermostat Replace control board
No self-clean, bake and broil operate normally, oven lights operate, door will lock, no clean indicator light	Open door latch switch Open control board Defective oven wiring (shorted, open, or burned)	Replace door latch assembly Replace control board Repair or replace defective wiring
Oven in self-clean mode, oven heats, no door lock indicator light (oven not reaching elevated clean temperatures)	Open door latch switch Oven sensor out of calibration Control board Defective oven wiring (shorted, open, or burned)	Replace door latch assembly Replace selector Replace control board Repair or replace defective wiring

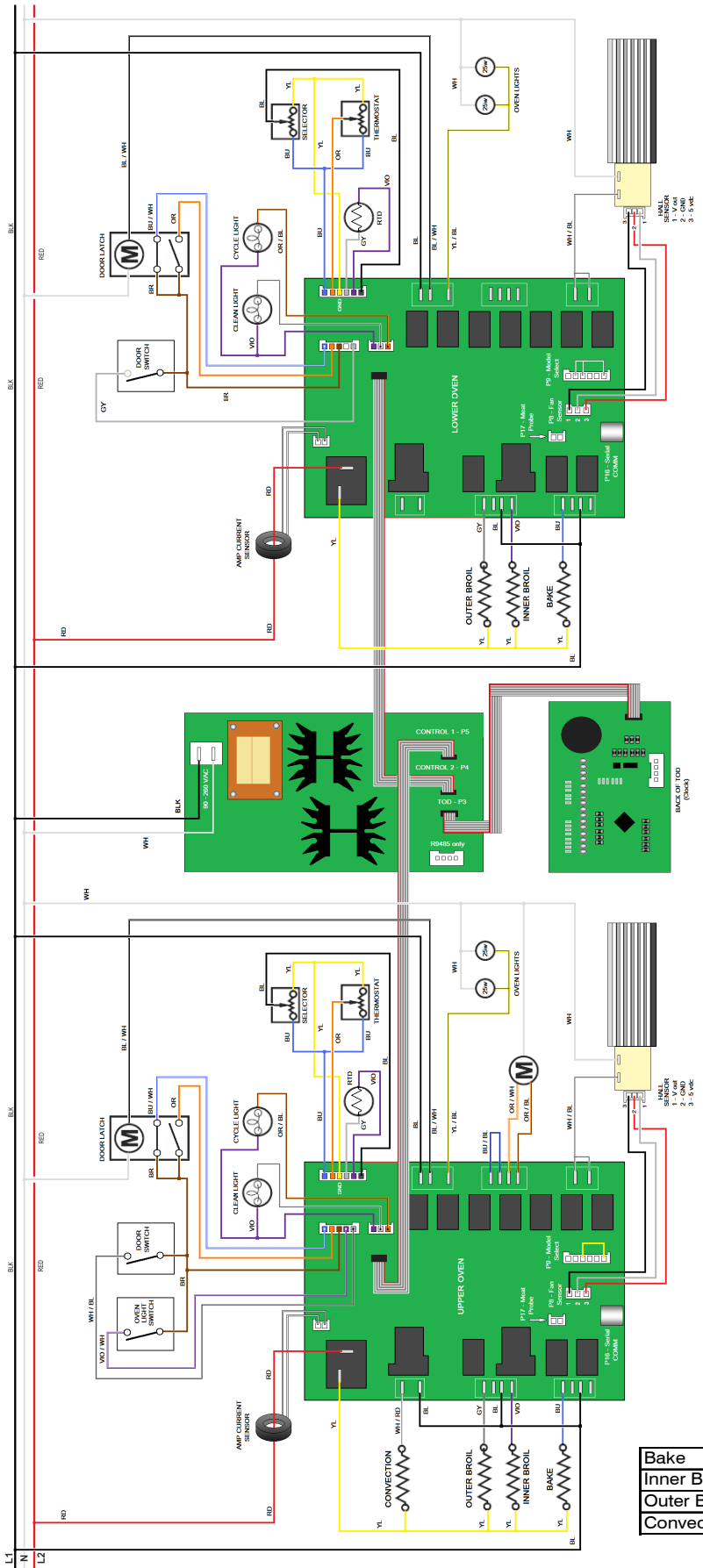
## Troubleshooting Guide (cont.)

Problem	Probable Cause	Correction
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 Oven sensor Open relay	Check blower resistance Ohm oven sensor Replace control board



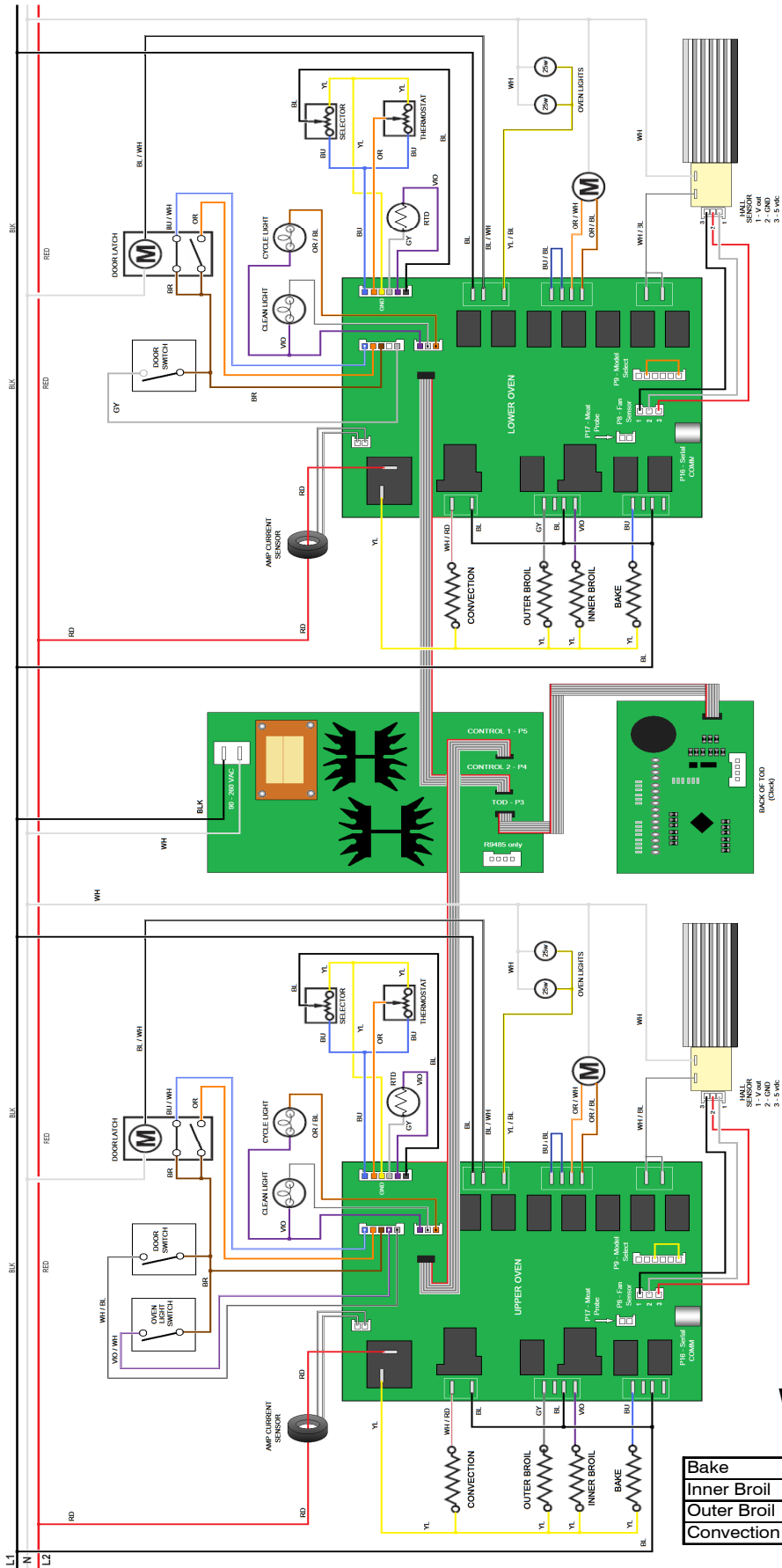
Wiring Schematic DSOE301

	Wattage	Amps at 240v	Amps at 208v	Ohms
Bake	2000	8.33	7.22	28.8
Inner Broil	2400	10.00	8.67	24
Outer Broil	1200	5.00	4.33	48
Convection	1600	6.67	5.78	36



**Wiring Schematic DDOE301**

	Wattage	Amps at 240v	Amps at 208v	Ohms
Bake	2000	8.33	7.22	28.8
Inner Broil	2400	10.00	8.67	24
Outer Broil	1200	5.00	4.33	48
Convection	1600	6.67	5.78	36



**Wiring Schematic DDOE305**

	Wattage	Amps at 240v	Amps at 208v	Ohms
Bake	2000	8.33	7.22	28.8
Inner Broil	2400	10.00	8.67	24
Outer Broil	1200	5.00	4.33	48
Convection	1600	6.67	5.78	36