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:

DSOE305T
DDOE305T

SMC-0018
September, 2010

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SAVE THESE INSTRUCTIONS

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

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

Safety Information

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

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

DANGER

Immediate hazards which WILL result in severe personal injury or death.

WARNING

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

CAUTION

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

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

WARNING

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

CAUTION

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

Technical support for authorized servicers:

1-800-914-4799

Address your written correspondence to:

Viking Preferred Service
1803 HWY 82 West
Greenwood, MS 38930

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

Specification subject to change without notice.

Specifications***

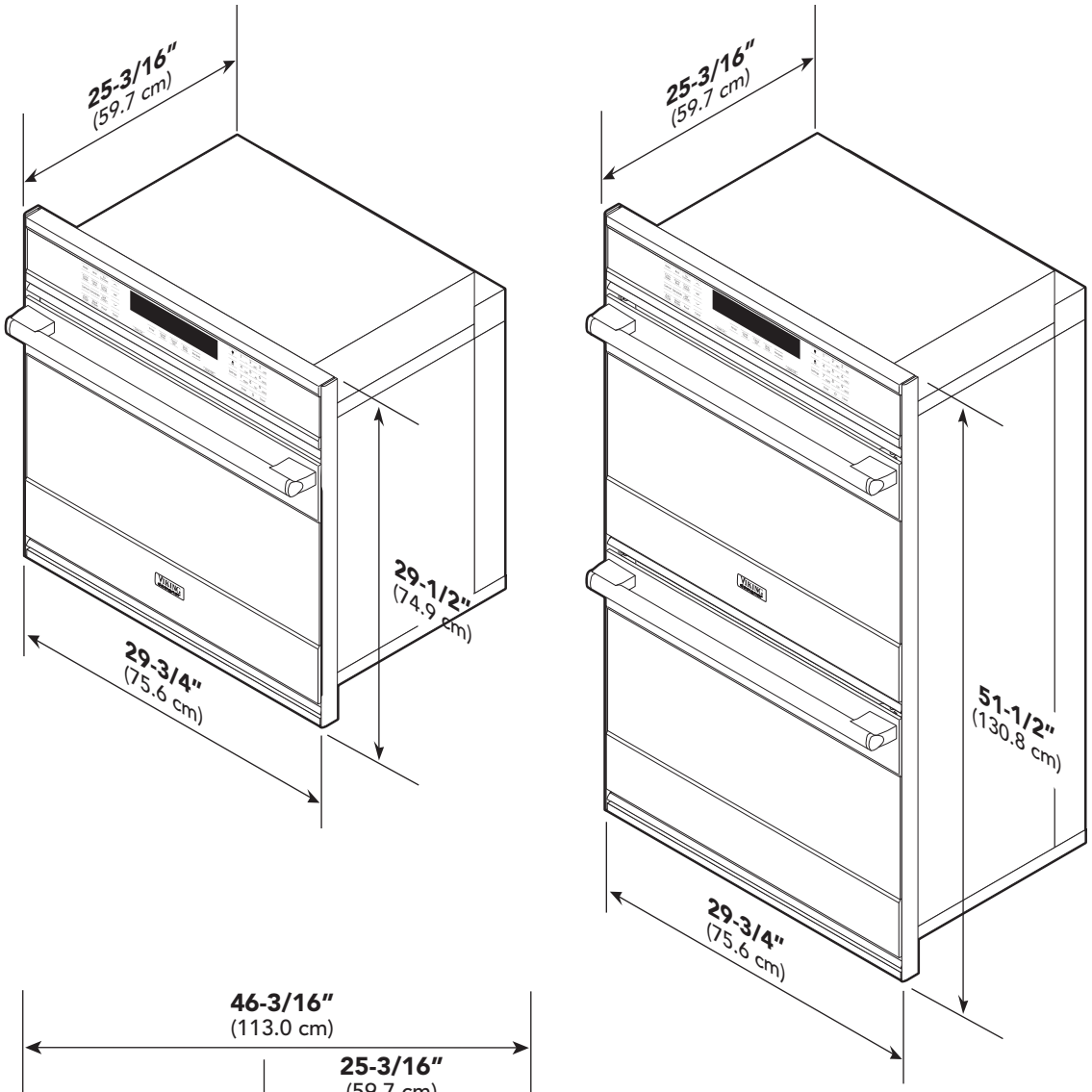
Designer Oven		
Description	**DSOE305T**	**DDOE305T**
Overall width	29-3/4" (00.0 cm)	
Overall height	29-1/2" (74.9 cm)	51-1/2" (130.8 cm)
Overall depth	To front of door 25-3/16" (64.3 cm)	
Cutout width	Standard—28-1/2" (72.4 cm) Flush mount*—29-5/8" (75.25 cm)	
Cutout height	Standard—28-1/4" (71.8 cm) 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.

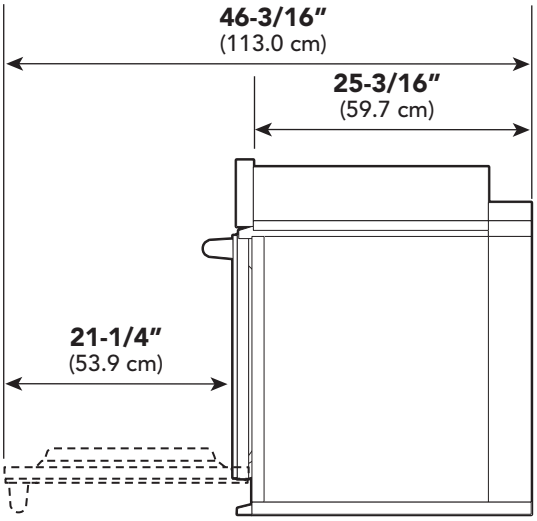
**Note:* *To install the oven in a flush mount application, the flush mount accessory kit (D30FTS for single ovens and D30FTD for double ovens) is required.*

***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 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.

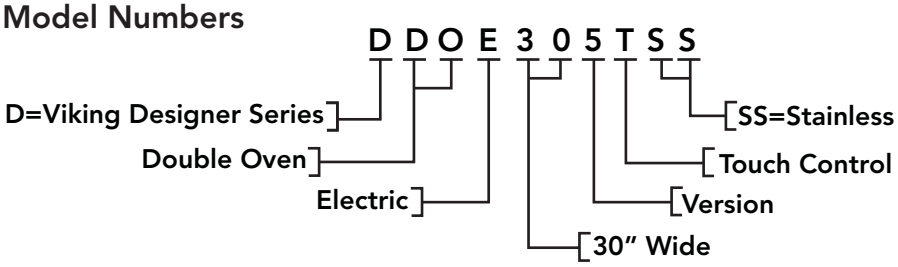
⚠ CAUTION

The oven is heavy—use extreme care when handling.

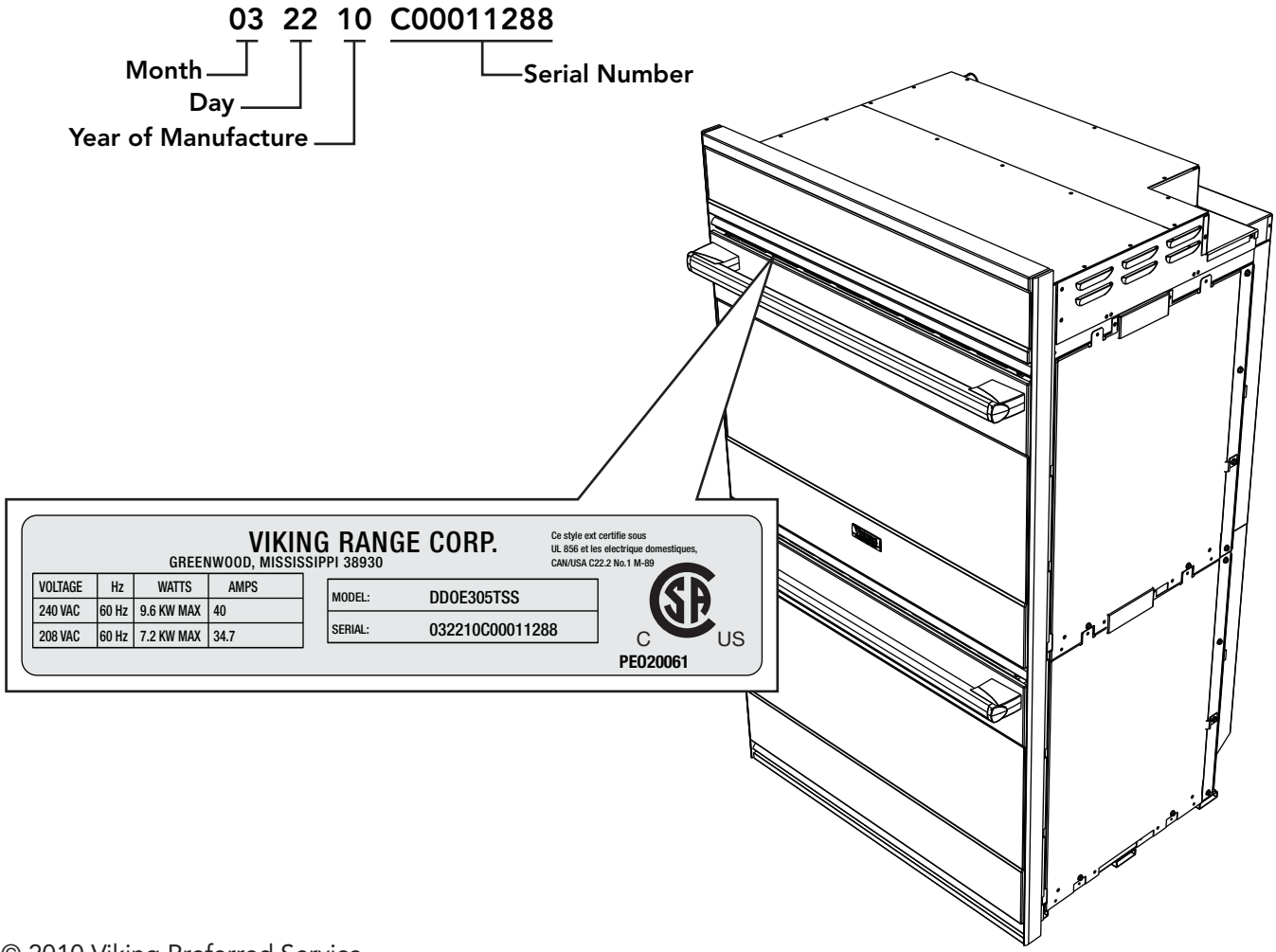
Model–Serial Number Matrix

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



Settings and Functions–Control Panel

Oven Function and Temperature Controls
Each oven function has a separate setting. The SET control up and down arrows can be used to set any temperature from 150˚F (65.6˚C) to 550˚F (287.8˚C).

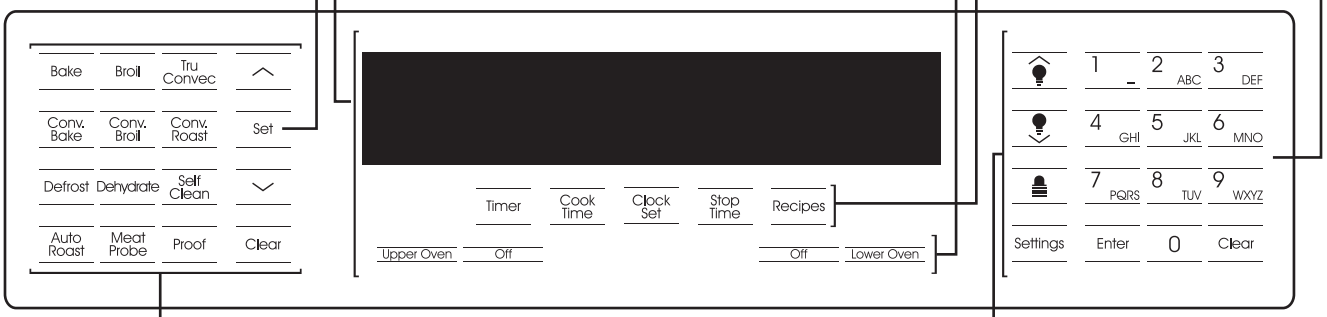
Electronic Timing Center
The Electronic Timing Center is used to program and control all timing functions.

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

Oven Selector Controls
The oven selector controls are used to turn the upper or lower oven on and off.

Electronic Keypad Entry
The electronic keypad entry is used to program and control all oven functions.

Recipes
Accesses, programs, and saves cooking cycles from favorite recipes.



Oven Selector Options

Oven Light Controls
Controls the interior lights in the upper and lower ovens.

Oven Lock
Childproofing feature preventing the controls from being activated when the oven is not in use.

Settings
Accesses custom features such as display brightness, Sabbath mode, and tones.

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

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

Defrost
Natural defrosting of food using fan without heat

Auto Roast
Automatic searing of the outside of meats; simplifies roasting

Broil
Three conventional broil settings for cuts of flat pieces of meat or meat 1-2 inches thick

Convection Broil
Faster than regular broiling with less smoke generation for thicker meats

Meat Probe
Automatically turns the oven off when the internal temperature of the meat being roasted is reached

TruConvec™
Multi-rack baking for breads, cakes, cookies (up to 6 racks of cookies at once)

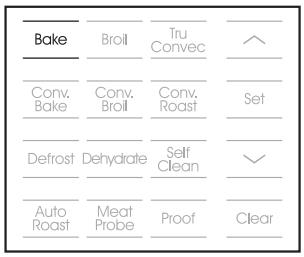
Convection Roast
Roasting whole turkeys, whole chickens, hams, etc.

Self-Clean
A self-cleaning cycle using high heat to burn off soils and deposits

Proof
Creates an optimal environment for the rising of yeast in many kinds of dough

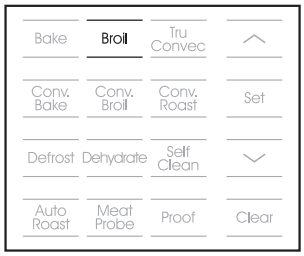
Settings and Functions

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.

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.

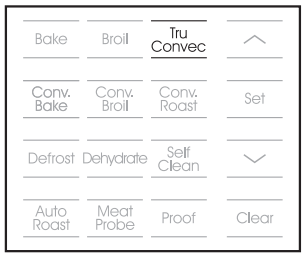
MED BROIL

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

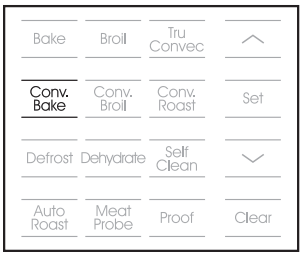
This mode uses only a fraction of the available power to the inner broil element for delicate top-browning. The inner broil element is on for only part of the time. Use this setting to gently brown meringue on racks 3 or 4 in 3-4 minutes.

TRU CONV (TruConvec™)



The rear element only operates at full power. There is no direct heat from the bottom element. 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 BAKE (Convection Bake)

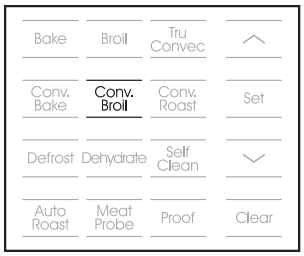


The bottom element operates at full power. The heated air is circulated by the motorized fan in the rear of the oven providing a more even heat distribution. This even circulation of air equalizes the temperature throughout the oven cavity and eliminates the hot and cold spots found in conventional ovens. 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.

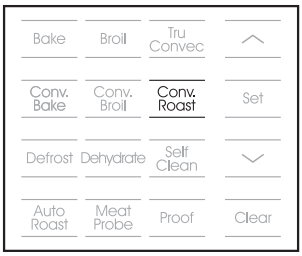
Settings and Functions

CONV BROIL (Convection Broil)



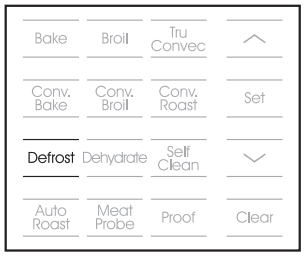
The top element operates at full power. This function is exactly the same as regular broiling with the additional benefit of air circulation by the motorized fan in the rear of the oven. Smoke is reduced since the airflow also reduces peak temperatures on the food. Use this setting for broiling thick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

CONV ROAST (Convection Roast)



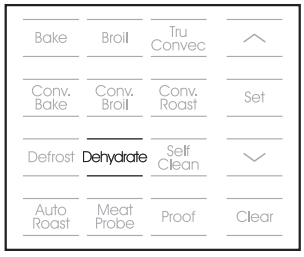
The convection element runs in conjunction with the inner and outer broil elements. This transfer of heat (mainly from the convection element) seals moisture inside large roasts. Use this setting for whole turkeys, whole chickens, hams, etc.

CONVECTION DEFROST



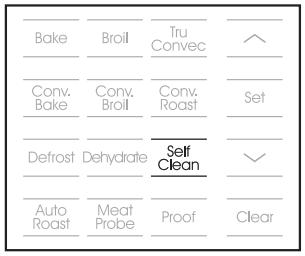
This oven can defrost frozen food. With the temperature control off, a motorized fan in the rear of the oven circulates air. This fan accelerates natural defrosting of the food without heat.

CONVECTION DEHYDRATE



This oven is designed not only to cook, but also to dehydrate fruits and vegetables. With this function, a motorized fan in the rear of the oven circulates warm air. Over a period of time, the water is removed from the food by evaporation. Removal of water inhibits growth of microorganisms and retards the activity of enzymes. It is important to remember that dehydration does not improve quality; only fresh, top-quality foods should be dehydrated in your oven.

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

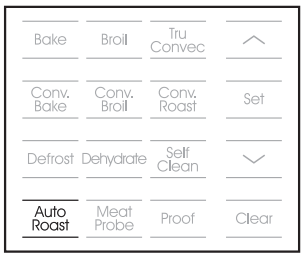
DO NOT touch the exterior portions of the oven after self-cleaning cycle has begun, since some parts become extremely hot to the touch!

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.

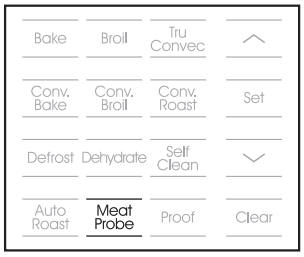
Settings and Functions

AUTO ROAST



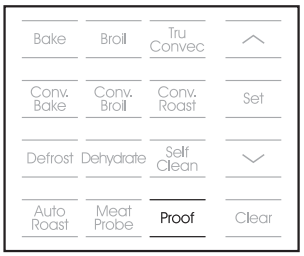
Use this function further simplifies roasting by automatically searing the outside of meats, raising the pre-set temperature by 100°F for a short time to sear the outside of the meat. The temperature then returns to the pre-set temperature in the standard convection roast mode.

MEAT PROBE



The meat probe takes the guesswork out of roasting by cooking foods to the ideal internal temperature. The probe temperature setting is used to automatically turn the oven off when the internal temperature of the meat being roasted is reached.

PROOFING



This function uses a low temperature to create an optimal environment for the yeast to rise in many types of dough.

This setting is designed for allowing yeast dough to rise to a temperature between 85°F (29°C) and 100°F (38°C). Yeast doughs rise or “proof” best when the temperature is between 85°F (29°C) and 100°F (38°C). To make sure the dough is warm enough, cover the bowl loosely with plastic wrap and/or cloth towel.

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.

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

⚠ CAUTION

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

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

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

Meat Probe
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.

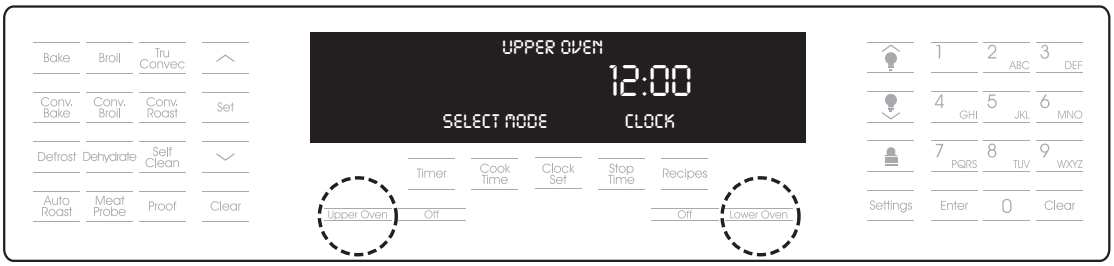
Error Screens

The T-Series oven will display any errors detected by the microprocessor. There are eight built-in error codes. When an error code is activate, the oven will not function. The table below lists the error codes, what will be displayed on the display screen, and a corrective action for each error code.

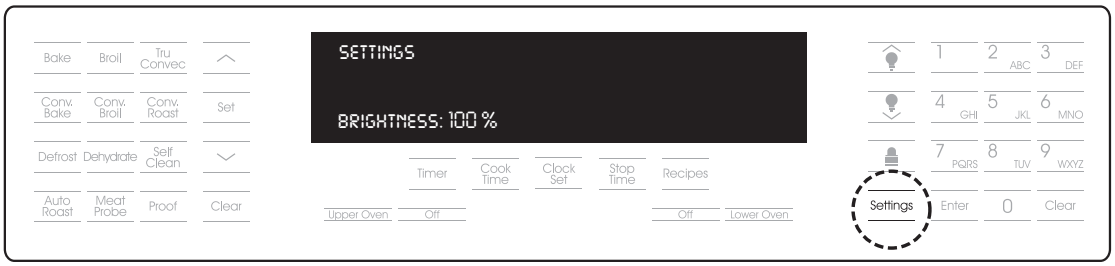
Error	Screen Display	Correction
Model Error	Time-of-Day and Model Error	An incorrect model number has been installed. Check for proper header.
RTD Error	Time-of-Day and RTD Error	An RTD is open or shorted. Check RTD(s) and repair or replace as necessary.
Probe Error	Time-of-Day and Probe Error	The meat probe is open or shorted or it may be a defective probe jack. Check the meat probe and jack, repair or replace as necessary.
Latch Error	Time-of-Day and Latch Error	The control is unable to lock or unlock the door latch. Verify power to the lock motor and check door interlock switches.
Keyboard Error	Time-of-Day and Keyboard Error	No connection exists between the keyboard and the control. Verify the cable connection between the main relay board and keyboard and repair or replace as necessary.
High Limit Error	Time-of-Day and High Limit Error	High Limit jumper not installed.
Cooling Error	Time-of-Day and Cooling Error	The cooling fan RPM's are below minimum speed. Verify connection to Hall Effect sensor.
Relay Error	Time-of-Day and Relay Error	No relay board connection. Verify relay connection to main relay board and repair or replace as necessary.

Accessing the diagnostic program

1. Activate the main control by selecting either the "UPPER OVEN" or "LOWER OVEN" pad. Shown below is the screen you will see when the UPPER OVEN is selected.

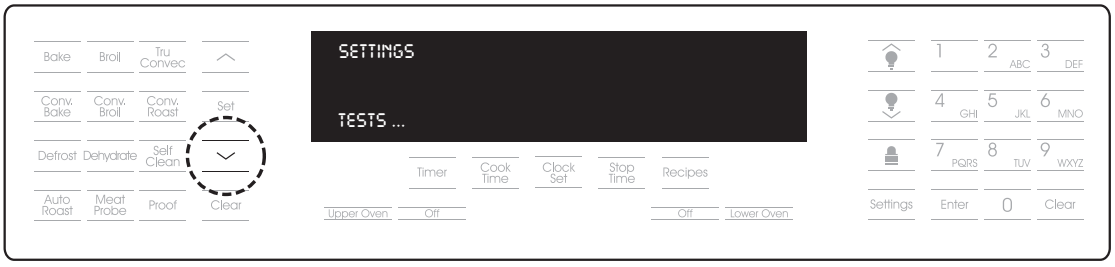


2. Depress the "SETTINGS" button on the control panel. You will see the word SETTINGS in the upper left corner of the screen and the BRIGHTNESS parameter.



3. Using the "DOWN ARROW" pad, scroll down until you see TIMEOUTS in the display.

4. Touch and hold the "down arrow" pad for five seconds (you will hear three tones) until the display changes from TIMEOUTS to TESTS.



Accessing the diagnostic program (cont.)

5. Now depress the "ENTER" pad. The word TESTS will begin to flash. While flashing, enter in the following code: "8 – 4 – 5 – 4 – 6 – 4 (V-I-K-I-N-G)". When you have successfully entered in the code, the display will change and read RUN ALL TESTS. You are now in the diagnostic mode.

When you have entered the diagnostic mode, you will be able to run the following nine main test programs:

1. Run all tests

2. Product Information

3. Individual display tests

4. Individual upper oven tests (DDOE305T)
   Individual oven tests (DSOE305T)

5. Individual lower oven tests (DDOE305T)

6. Individual keyboard tests

7. Run all upper oven tests (DDOE305T)
   Run all oven tests (DSOE305T)

8. Run all lower oven tests (DDOE305T)

9. Run all keyboard tests

Service Diagnostics and Testing

1. **Run all Tests**
   This test will cycle the entire upper and lower (double oven model) elements, fans, lights, door interlock switches, and door lock motors. It will also test all the individual touch pads on the control panel. The result of this test will allow you to check the entire oven, including all the components, display elements, and keyboard test. With the unit in diagnostic mode *(see accessing the diagnostic section, page 18)*, the first screen you will see will be the one shown below:

Once at the RUN ALL TESTS screen, press the "SET" or "ENTER" pad to run this test. Once the test has begun, use the "ENTER" pad, "UP ARROW" or "DOWN ARROW" pad to cycle through the tests. To end the test, select the "CLEAR" pad.

Note: *Have an amp meter connected the power to check if the elements are working.*

Step	Test	Result	To Change Test
1	Product Information	Display will show model, serial, and version number of the software	Enter, Up or Down arrow
2	Display all dots and segments	All digits in the display will light up	Enter, Up or Down arrow
3	Clear Screen	All digits in the display will extinguish	Enter, Up or Down arrow
4	Upper Inner Bake Element	SKIP THIS TEST (No amperage should be read on Step 4. Not used on DSOE and DDOE models)	Enter, Up or Down arrow
5	Upper Outer Bake Element	Run bake element***	Enter, Up or Down arrow
6	Upper Inner Broil Element	Run inner broil element	Enter, Up or Down arrow
7	Upper Outer Broil Element	Run outer broil element	Enter, Up or Down arrow
8	Upper Convection Element	Run convection element	Enter, Up or Down arrow
9	Upper Oven Temperature	Display upper oven temp	Enter, Up or Down arrow
10	Upper Meat Probe	Displays meat probe temp with probe inserted in socket (default is 0°F with no probe inserted)	Enter, Up or Down arrow
11	Upper Cooling Fan – High speed	Run cooling fan at high speed	Enter, Up or Down arrow
12	Upper Cooling Fan – Low speed	Run cooling fan at low speed* **Oven uses a single speed motor (same RPM's as high speed)*	Enter, Up or Down arrow
13	Upper Convection Fan – High speed	Run convection fan at high speed	Enter, Up or Down arrow
14	Upper Convection Fan – Low speed	Run convection fan at low speed	Enter, Up or Down arrow

****If no amperage is read, check STEP 4 (Inner Bake Element). If amperage is read, the plug on the relay board is reversed.*

Service Diagnostics and Testing

1. Run all Tests (cont.)

Step	Test	Result	To Change Test
15	Upper Convection Fan – Low speed reverse	Run convection fan at low speed reverse* **Oven uses a single direction convection motor (Same direction as low speed)*	Enter, Up or Down arrow
16	Upper Convection – High speed reverse	Run convection fan at high speed reverse* **Oven uses a single direction convection motor. (Same direction as high speed)*	Enter, Up or Down arrow
17	Upper Door Switch	Check door interlock	Enter, Up or Down arrow
18	Upper Oven Lights	Check upper cavity lights	Enter, Up or Down arrow
19	Upper Door Lock	Door lock motor advanced	Door must lock to advance
20	Upper Door Unlock	Engage door lock to unlock door	Door must unlock to advance
21	Lower Inner Bake Element	SKIP THIS TEST (No amperage should be read on Step 1. Not used on DSOE and DDOE models)	Enter, Up or Down arrow
22	Lower Outer Bake Element	Run Bake Element ***	Enter, Up or Down arrow
23	Lower Inner Broil Element	Run inner broil element	Enter, Up or Down arrow
24	Lower Outer Broil Element	Run outer broil element	Enter, Up or Down arrow
25	Lower Convection Element	Run convection element	Enter, Up or Down arrow
26	Lower Oven Temperature	Display lower oven temperature	Enter, Up or Down arrow
27	Lower Meat Probe	SKIP THIS TEST (No lower meat probe on the DDOE305T) Default 0 degrees	Enter, Up or Down arrow
28	Lower Cooling Fan – High speed	Run cooling fan at high speed	Enter, Up or Down arrow
29	Lower Cooling Fan – Low speed	Run cooling fan at low speed* **Oven uses a single speed motor (same RPM's as high speed)*	Enter, Up or Down arrow
30	Lower Convection Fan – High speed	Same as Upper Convection Fan	Enter, Up or Down arrow
31	Lower Convection Fan – Low speed	Same as Upper Convection Fan	Enter, Up or Down arrow
32	Lower Convection Fan – Low speed reverse	Same as Upper Convection Fan	Enter, Up or Down arrow
33	Lower Convection Fan – High speed reverse	Same as Upper Convection Fan	Enter, Up or Down arrow
34	Lower Door Switch	Check door interlock	Enter, Up or Down arrow
35	Lower Oven Lights	Check lower cavity lights	Enter, Up or Down arrow
36	Lower Door Lock	Door lock motor activated	Door must lock to advance
37	Lower Door Unlock	Engage door lock to unlock door	Door must unlock to advance

****If no amperage is read, check STEP 21 (Inner Bake Element). If amperage is read, the plug on the relay board is reversed.*

Service Diagnostics and Testing

1. Run all Test (cont.)

Step	Test	Result
38	Press BAKE pad	Pressing Bake pad will advance to next test
39	Press BROIL pad	Pressing Broil pad will advance to next test
40	Press TRU CONVEC pad	Pressing Tru Convec pad will advance to next test
41	Press UP pad	Pressing UP pad will advance to next test
42	Press CONV BAKE pad	Pressing CONV Bake pad will advance to next test
43	Press CONV BROIL pad	Pressing CONV Broil pad will advance to next test
44	Press CONV ROAST pad	Pressing CONV Roast pad will advance to next test
45	Press SET pad	Pressing Set pad will advance to next test
46	Press DEFROST pad	Pressing Defrost pad will advance to next test
47	Press DEHYDRATE pad	Pressing Dehydrate pad will advance to next test
48	Press SELF-CLEAN pad	Pressing Self-Clean pad will advance to next test
49	Press DOWN pad	Pressing Down pad will advance to next test
50	Press AUTO ROAST pad	Pressing Auto Roast pad will advance to next test
51	Press MEAT PROBE pad	Pressing Meat Probe pad will advance to next test
52	Press PROOF pad	Pressing Proof pad will advance to next test
53	Press CLEAR pad	Pressing Clear pad will advance to next test
54	Press TIMER pad	Pressing Timer pad will advance to next test
55	Press COOK TIME pad	Pressing Cook Time pad will advance to next test
56	Press CLOCK pad	Pressing Clock pad will advance to next test
57	Press STOP TIME pad	Pressing Stop Time pad will advance to next test
58	Press RECIPES pad	Pressing Recipes pad will advance to next test
59	Press UPPER OVEN pad	Pressing the Upper Oven pad will advance to next test**
60	Press OFF pad	Pressing the Off pad will advance to next test**
61	Press OVEN ON pad	Pressing Oven On pad will advance to next test**
62	Press OVEN OFF pad	Pressing Oven Off pad will advance to next test*
63	Press LOWER OVEN pad	Pressing Lower Oven pad will advance to next test**
64	Press OFF pad	Pressing Off pad will advance to next test**
65	Press UPPER LIGHTS pad	Pressing Upper Lights pad will advance to next test**
66	Press LIGHTS pad	Pressing Lights pad will advance to next test*
67	Press 1 pad	Pressing 1 pad will advance to next test
68	Press 2 pad	Pressing 2 pad will advance to next test
69	Press 3 pad	Pressing 3 pad will advance to next test

**Single oven model **Double oven model*

Service Diagnostics and Testing

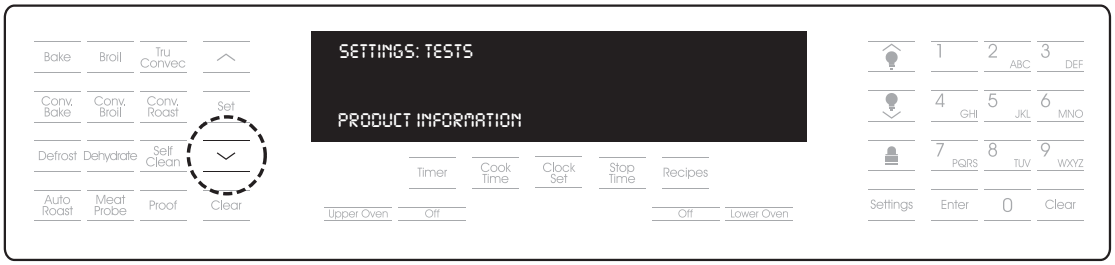
1. Run all Tests (cont.)

Step	Test	Result
70	Press LOWER LIGHTS pad	Pressing the Lower Lights pad will advance to next test**
71	Press 4 pad	Pressing 4 pad will advance to next test
72	Press 5 pad	Pressing 5 pad will advance
73	Press 6 pad	Pressing Tru Convec pad will advance to next test
74	Press LOCK pad	Pressing UP pad will advance to next test
75	Press 7 pad	Pressing CONV Bake pad will advance to next test
76	Press 8 pad	Pressing 8 pad will advance to next test
77	Press 9 pad	Pressing 9 pad will advance to next test
78	Press SETTINGS pad	Pressing Settings pad will advance to next test
79	Press ENTER pad	Pressing Enter pad will advance to next test
80	Press 0 pad	Pressing 0 pad will advance to next test
81	Press CLEAR pad	Pressing Clear pad will advance to next test

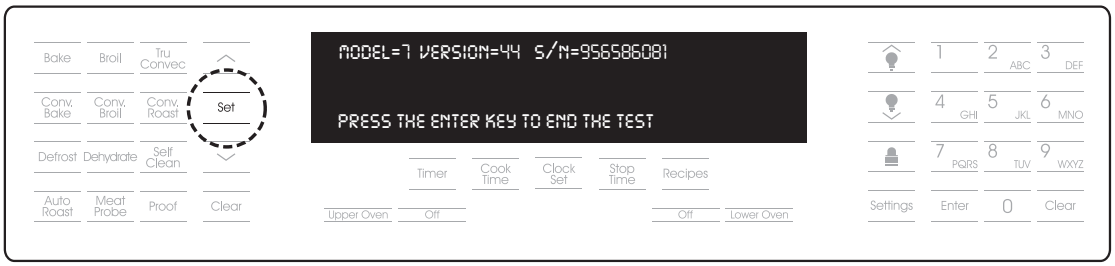
**Single oven model **Double oven model*

2. Product Information

This test will allow you to see the model, version, and serial number of the microprocessor. To enter this test, enter diagnostic mode *(see accessing the diagnostic section, page 18)*. With the unit in diagnostic mode, press the "DOWN ARROW" pad to scroll to the PRODUCT INFORMATION test. Once you have selected this test, the first screen you will see is shown below.



Press the "SET" pad to view the Product Information.



To exit this test, press the "ENTER", "CLEAR", or "DOWN ARROW" pad.

Service Diagnostics and Testing

3. Individual display tests

This test will allow testing of individual components. To enter this test, enter diagnostic mode *(see accessing the diagnostic section, page 18)*. With the unit in diagnostic mode, press the "DOWN ARROW" pad to scroll to the individual display tests and press the "ENTER" Pad. When you have selected this test, the first screen you will see will be the one shown below.

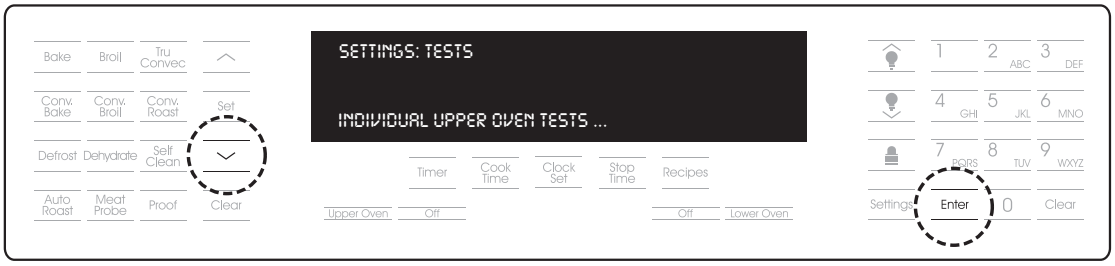
Below is a table consisting of all the individual components that can be tested in this program. To scroll through each test, use the "UP ARROW" or "DOWN ARROW" pad, and then select "TEST" to run the component test.

Step	To test:	Test	Result	To exit:
1	Press SET pad	Display all dots and segments	All digits in the display will light up	Enter, Clear, or Down arrow
2	Press SET pad	Clear screen	All digits in the display will extinguish	Enter, Clear, or Down arrow

To exit this test, select "ENTER", "CLEAR", or "down arrow" pad.

4. Individual upper oven tests (DDOE305T)
Individual oven tests (DSOE305T)

This test will allow testing of a specific component and then select it for testing. To enter this test, enter diagnostic mode *(see accessing the diagnostic section, page 18)*. With the unit in diagnostic mode, press the "DOWN ARROW" pad to scroll to the individual upper oven test and press the "ENTER" Pad. When you have selected this test, the first screen you will see will be the one shown below.



Service Diagnostics and Testing

4. Individual upper oven tests (DDOE305T – cont.)
Individual oven tests (DSOE305T – cont.)

The following is a table consisting of all the individual components that can be tested in this program. To scroll through each test, use the "UP ARROW" or "DOWN ARROW" pad, and then press "SET" or "ENTER" to run the selected component test.

Step	To test:	Test	Result	To exit:
1	Press SET	Inner Bake Element	SKIP THIS TEST (No amperage should be read on Step 1. Not used on DSOE and DDOE models)	Enter, Clear, or Down arrow
2	Press SET	Outer Bake Element	Run Bake Element***	Enter, Clear, or Down arrow
3	Press SET	Inner Broil Element	Run inner broil element	Enter, Clear, or Down arrow
4	Press SET	Outer Broil Element	Run outer broil element	Enter, Clear, or Down arrow
5	Press SET	Convection Element	Run convection element	Enter, Clear, or Down arrow
6	Press SET	Oven Temperature	Display upper oven temp	Enter, Clear, or Down arrow
7	Press SET	Meat Probe	Displays meat probe temp with probe inserted in socket (default is 0°F with no probe inserted)	Enter, Clear, or Down arrow
8	Press SET	Cooling Fan – High speed	Run cooling fan high speed	Enter, Clear, or Down arrow
9	Press SET	Cooling Fan – Low speed	Run cooling fan low speed	Enter, Clear, or Down arrow
10	Press SET	Convection Fan – High speed	Run convection fan high speed	Enter, Clear, or Down arrow
11	Press SET	Convection Fan – Low speed	Run convection fan low speed	Enter, Clear, or Down arrow
12	Press SET	Convection Fan – Low speed reverse	Run convection fan at low speed reverse* **Oven uses a single direction convection motor. (Same direction as high speed)*	Enter, Clear, or Down arrow
13	Press SET	Convection Fan – High speed reverse	Run convection fan at high speed reverse* **Oven uses a single direction convection motor. (Same direction as high speed)*	Enter, Clear, or Down arrow
14	Press SET	Door Switch	Check door interlock	Enter, Clear, or Down arrow
15	Press SET	Oven Lights	Check upper cavity lights	Enter, Clear, or Down arrow
16	Press SET	Door Lock	Engage door lock to lock door	Enter, Clear, or Down arrow

****If no amperage is read, check STEP 1 (Inner Bake Element). If amperage is read, the plug on the relay board is reversed.*

Service Diagnostics and Testing

4. Individual upper oven tests (DDOE305T – cont.)
Individual oven tests (DSOE305T – cont.)

Step	To test:	Test	Result	To exit:
17	Press SET	Door Lock State	Position of door lock switch	Enter, Clear, or Down arrow
18	Press SET	Door Unlock	Engage door lock to unlock door	Enter, Clear, or Down arrow
19	Press SET	Door Lock State	Position of door lock switch	Enter, Clear, or Down arrow

To exit this test, select the "ENTER", "CLEAR", or "DOWN ARROW" pad.

5. Individual lower oven tests (DSOE305T)
This test allows the individual to scroll to a specific component and then select it for testing. To enter this test, enter diagnostic mode *(see accessing the diagnostic section, page 18)*. With the unit in diagnostic mode, press the "DOWN ARROW" pad to scroll to the Individual lower oven test and press the "ENTER" Pad. When you have selected this test, the first screen you will see will be the one shown below.

The following is a table consisting of all the individual components that can be tested in this program. To scroll through each test, use the "UP ARROW" or "DOWN ARROW" pad, and then press "SET" or "ENTER" to run the selected component test.

Step	To test:	Test	Result	To exit:
1	Press SET	Inner Bake Element	SKIP THIS TEST (No amperage should be read on Step 1. Not used on DSOE and DDOE models)	Enter, Clear, or Down arrow
2	Press SET	Outer Bake Element	Run bake element***	Enter, Clear, or Down arrow
3	Press SET	Inner Broil Element	Position of door lock switch	Enter, Clear, or Down arrow
4	Press SET	Outer Broil Element	Run inner broil element	Enter, Clear, or Down arrow

****If no amperage is read, check STEP 1 (Inner Bake Element). If amperage is read, the plug on the relay board is reversed.*

Service Diagnostics and Testing

5. Individual lower oven test (DSOE305T – cont.)

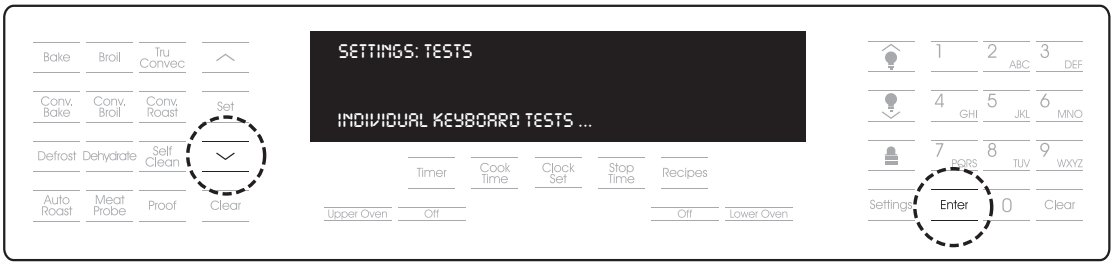
Step	To test:	Test	Result	To exit:
5	Press SET	Convection Element	Run outer broil element	Enter, Clear, or Down arrow
6	Press SET	Oven Temperature	Run convection element	Enter, Clear, or Down arrow
7	Press SET	Meat Probe	SKIP THIS TEST - No Lower Meat probe on DDOE model (default is 0°F)	Enter, Clear, or Down arrow
8	Press SET	Cooling Fan – High speed	Run cooling fan high speed	Enter, Clear, or Down arrow
9	Press SET	Cooling Fan – Low speed	*Run cooling fan at low speed **Oven uses a single speed motor. Same RPM's as high speed*	Enter, Clear, or Down arrow
10	Press SET	Convection Fan –High speed	Same as upper convection fan	Enter, Clear, or Down arrow
11	Press SET	Convection Fan – Low speed	Same as upper convection fan	Enter, Clear, or Down arrow
12	Press SET	Convection Fan – Low speed reverse	Same as upper convection fan	Enter, Clear, or Down arrow
13	Press SET	Convection Fan – High speed reverse	Same as upper convection fan	Enter, Clear, or Down arrow
14	Press SET	Door Switch	Check door interlock	Enter, Clear, or Down arrow
15	Press SET	Oven Lights	Check upper cavity lights	Enter, Clear, or Down arrow
16	Press SET	Door Lock	Engage door lock to lock door	Enter, Clear, or Down arrow
17	Press SET	Door Lock State	Position of door lock switch	Enter, Clear, or Down arrow
18	Press SET	Door Unlock	Engage door lock to unlock door	Enter, Clear, or Down arrow
19	Press SET	Door Lock State	Position of door lock switch	Enter, Clear, or Down arrow

To exit this test, select the "ENTER", "CLEAR", or "DOWN ARROW" pad.

Service Diagnostics and Testing

6. Individual keyboard tests

This test allows you to scroll to a specific key that you wish to test. Unlike the RUN ALL TESTS program, you do not have to cycle through all the upper oven and lower oven (double oven model) components to access the keyboard test. To enter this test, enter diagnostic mode *(see accessing the diagnostic section, page 18)*. With the unit in diagnostic mode, press the "DOWN ARROW" pad to scroll to the Individual keyboard tests and press the "ENTER" Pad. When you have selected this test, the first screen you will see will be the one shown below.



To access an individual key, follow the steps below.

1. Touch the "SET" or "ENTER" pad.

2. You will see the BAKE KEY in the display.

3. Using the "UP ARROW" or "DOWN ARROW" pad, scroll to the individual pad that you wish to test. For example, if you wish to test the Defrost pad, cycle through all the pads until the Defrost pad is displayed.

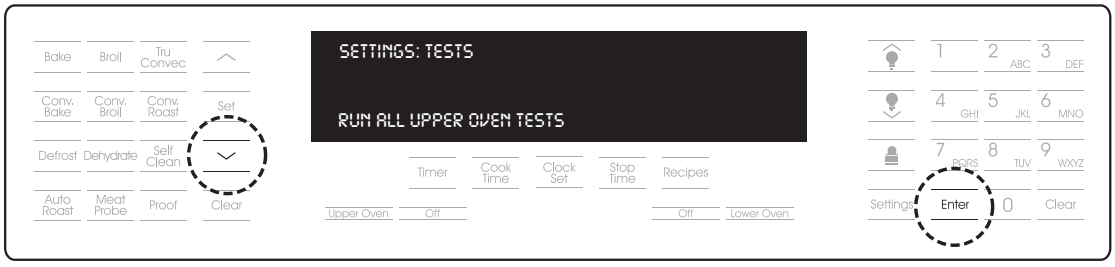
4. Touch the "SET" or "ENTER" pad.

5. The display will now read : Press the Defrost pad.

6. Depressing the DEFROST pad you should hear a single confirmation tone and the display will extinguish. This indicates that the particular keypad is working properly. A double confirmation tone indicates a pad other than the one being tested was pressed. If there is no response to the touch, then a defective touch board is indicated.

Service Diagnostics and Testing

7. Run all upper oven tests (DDOE305T)
Run all oven tests (DSOE305T)
This test is similar to RUN ALL TESTS with the exception that only the upper oven components are tested. This test will cycle the entire upper (double oven models) and single oven model elements, fans, lights, door interlock switches, and door lock motors in succession. To enter this test, enter diagnostic mode *(see accessing the diagnostic section, page 18)*. With the unit in diagnostic mode, press the "DOWN ARROW" pad to scroll to the RUN ALL UPPER OVEN TESTS and press the "ENTER" pad. When you have selected this test, the first screen you will see will be the one shown below.



To begin the test, select either the "SET" or "ENTER" pad. Once the test has begun, use the "ENTER" pad, "UP ARROW", or "DOWN ARROW" pad to cycle through the tests.

Below is a table consisting of all the individual components that can be tested in this program. To scroll through each test, use the "up arrow", or "down arrow" pad, and then press "SET" or "ENTER" to run the selected component test.

Step	Test	Result	To Change Test
1	Upper Inner Bake Element	SKIP THIS TEST (No amperage should be read on Step 1. Not used on DSOE and DDOE models)	Enter, Up or Down arrow
2	Upper Outer Bake Element	Run bake element***	Enter, Up or Down arrow
3	Upper Inner Broil Element	Run inner broil element	Enter, Up or Down arrow
4	Upper Outer Broil Element	Run outer broil element	Enter, Up or Down arrow
5	Upper Convection Element	Run convection element	Enter, Up or Down arrow
6	Upper Oven Temperature	Display upper oven temp	Enter, Up or Down arrow
7	Upper Meat Probe	Displays meat probe temp with probe inserted in socket (default is 0°F with no probe inserted)	Enter, Up or Down arrow
8	Upper Cooling Fan – High speed	Run cooling fan	Enter, Up or Down arrow
9	Upper Cooling Fan – Low speed	Run cooling fan at low speed* **Oven uses a single speed motor (same RPM's as high speed)*	Enter, Up or Down arrow
10	Upper Convection Fan – High speed	Run convection fan high speed	Enter, Up or Down arrow
11	Upper Convection Fan – Low speed	Run convection fan low speed	Enter, Up or Down arrow

****If no amperage is read, check STEP 1 (Inner Bake Element). If amperage is read, the plug on the relay board is reversed.*

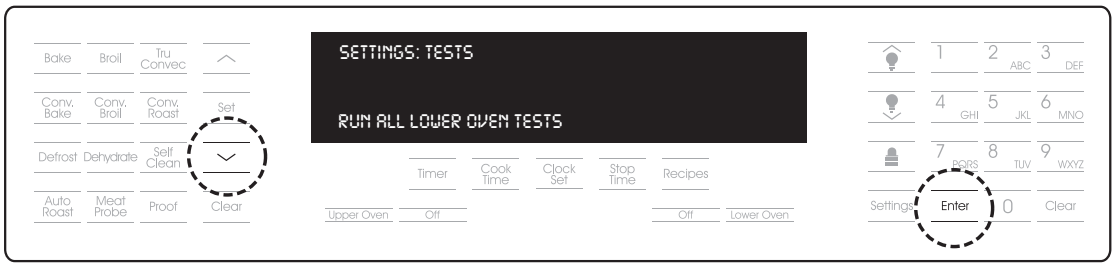
Service Diagnostics and Testing

7. Run all upper oven tests (DDOE305T – cont.)
Run all upper oven tests (DSOE305T – cont.)

Step	Test	Result	To Change Test
12	Upper Convection Fan – Low speed reverse	Run convection fan at low speed reverse* **Oven uses a single direction convection motor (Same direction as low speed)*	Enter, Up or Down arrow
13	Upper Convection Fan – High speed reverse	Run convection fan at low speed reverse* **Oven uses a single direction convection motor (Same direction as low speed)*	Enter, Up or Down arrow
14	Upper Door Switch	Check door interlock	Enter, Up or Down arrow
15	Upper Oven Lights	Check upper cavity lights	Enter, Up or Down arrow
16	Upper Door Lock	Door lock motor is advanced	Enter, Up or Down arrow
17	Upper Door Unlock	Engage door lock to unlock door	Enter, Up or Down arrow

To end the test, press the "CLEAR" pad.

8. Run all lower oven tests (DSOE305T)
This test is similar to RUN ALL TESTS with the exception that only the lower oven components are tested. This test will cycle the entire lower oven (double oven models) elements, fans, lights, door interlock switches, and door lock motors in succession. To enter this test, enter diagnostic mode *(see accessing the diagnostic section, page 18)*. With the unit in diagnostic mode, press the "DOWN ARROW" pad to scroll to the RUN ALL LOWER OVEN TESTS and press the "ENTER" Pad. When you have selected this test, the first screen you will see will be the one shown below.



To begin the test, select either "SET" or "ENTER" pad. Once the test has begun, use the "ENTER" pad, "UP ARROW", or "DOWN ARROW" pad to cycle through the tests.

The following is a table consisting of all the individual components that can be tested in this program. To scroll through each test, use the "DOWN ARROW" or "UP ARROW" pad, and then press "SET" or "ENTER" to run the selected component test.

Step	Test	Result	To Change Test
1	Lower Inner Bake Element	SKIP THIS TEST (Not used on DSOE and DDOE models)	Enter, Up or Down arrow
2	Lower Outer Bake Element	Run bake element***	Enter, Up or Down arrow

****If no amperage is read, check STEP 1 (Inner Bake Element). If amperage is read, the plug on the relay board is reversed.*

Service Diagnostics and Testing

8. Run all lower oven tests (DSOE350T – cont.)

Step	Test	Result	To Change Test
3	Lower Inner Broil Element	Run inner broil element	Enter, Up or Down arrow
4	Lower Outer Broil Element	Run outer broil element	Enter, Up or Down arrow
5	Lower Convection Element	Run convection element	Enter, Up or Down arrow
6	Lower Oven Temperature	Display lower oven temp	Enter, Up or Down arrow
7	Lower Meat Probe	SKIP THIS TEST (No lower meat probe on DDOE305T)	Enter, Up or Down arrow
8	Lower Cooling Fan – High speed	Run cooling fan high speed	Enter, Up or Down arrow
9	Lower Cooling Fan – Low speed	Run cooling fan at low speed* **Oven uses a single speed motor (same RPM's as high speed)*	Enter, Up or Down arrow
10	Lower Convection Fan – High speed	Run convection fan high speed	Enter, Up or Down arrow
11	Lower Convection Fan – Low speed	Run convection fan low speed	Enter, Up or Down arrow
12	Lower Convection Fan – Low speed reverse	Run convection fan at low speed reverse* **Oven uses a single direction convection motor (Same direction as low speed)*	Enter, Up or Down arrow
13	Lower Convection Fan – High speed reverse	Run convection fan at high speed reverse* **Oven uses a single direction convection motor (Same direction as low speed)*	Enter, Up or Down arrow
14	Lower Door Switch	Check door interlock	Enter, Up or Down arrow
15	Lower Oven Lights	Check lower cavity lights	Enter, Up or Down arrow
16	Lower Door Lock	Door lock motor is advanced	Enter, Up or Down arrow
17	Lower Door Unlock	Engage door lock to unlock door	Enter, Up or Down arrow

To end the test, press the "CLEAR" pad.

9. Run all keyboard tests

This test is similar to RUN ALL TESTS with the exception that only the keyboard pads are tested. This test will cycle through all the touch key pads on the control panel in succession, starting with the Bake pad. As you press the designated pad, a successful input will be followed by a single tone and the display will prompt the user as to the next keypad to depress. A double tone will indicate the designated pad was not pressed. To begin the test, select either the "SET" or "ENTER" pad.

Below is a table consisting of all the individual key pads that can be tested in this program.

Step	Test	Result
1	Press BAKE pad	Pressing Bake pad will advance to next test
2	Press BROIL pad	Pressing Broil pad will advance to next test
3	Press TRU CONVEC pad	Pressing Tru Convec pad will advance to next test

Service Diagnostics and Testing

9. Run all keyboard tests (cont.)

Step	Test	Result
4	Press UP pad	Pressing UP pad will advance to next test
5	Press CONV Bake pad	Pressing CONV Bake pad will advance to next test
6	Press CONV Broil pad	Pressing CONV Broil pad will advance to next test
7	Press CONV ROAST pad	Pressing the Conv Roast pad will advance to the next test
8	Press SET pad	Pressing the Set pad will advance to the next test
9	Press DEFROST pad	Pressing the Defrost pad will advance to the next test
10	Press DEHYDRATE pad	Pressing the Dehydrate pad will advance to the next test
11	Press SELF CLEAN pad	Pressing the Self-Clean pad will advance to the next test
12	Press DOWN pad	Pressing the Down pad will advance to the next test
13	Press AUTO ROAST pad	Pressing the Auto Roast pad will advance to the next test
14	Press MEAT PROBE pad	Pressing the Meat Probe pad will advance to the next test
15	Press PROOF pad	Pressing the Proof pad will advance to the next test
16	Press CLEAR pad	Pressing the Clear pad will advance to the next test
17	Press TIMER pad	Pressing the Timer pad will advance to the next test
18	Press COOK TIME pad	Pressing the Cook Time pad will advance to the next test
19	Press CLOCK pad	Pressing the Clock pad will advance to the next test
20	Press STOP TIME pad	Pressing the Stop Time pad will advance to the next test
21	Press RECIPES pad	Pressing the Recipes pad will advance to the next test
22	Press UPPER OVEN pad	Pressing the Upper Oven pad will advance to the next test**
23	Press OFF pad	Pressing the Off pad will advance to the next test**
24	Press OVEN ON pad	Pressing the Oven On pad will advance to the next test*
25	Press OVEN OFF pad	Pressing the Oven Off pad will advance to the next test*
26	Press LOWER OVEN pad	Pressing the Lower Oven pad will advance to the next test**
27	Press OFF pad	Pressing the Off pad will advance to the next test**
28	Press UPPER LIGHTS pad	Pressing the Upper Lights pad will advance to the next test**
29	Press LIGHTS pad	Pressing the Lights pad will advance to the next test*
30	Press 1 pad	Pressing the 1 pad will advance to the next test
31	Press 2 pad	Pressing the 2 pad will advance to the next test
32	Press 3 pad	Pressing the 3 pad will advance to the next test
33	Press LOWER LIGHTS pad	Pressing the Lower Lights pad will advance to the next test**
34	Press 4 pad	Pressing the 4 pad will advance to the next test
35	Press 5 pad	Pressing the 5 pad will advance to the next test

**Single oven model **Double oven model*

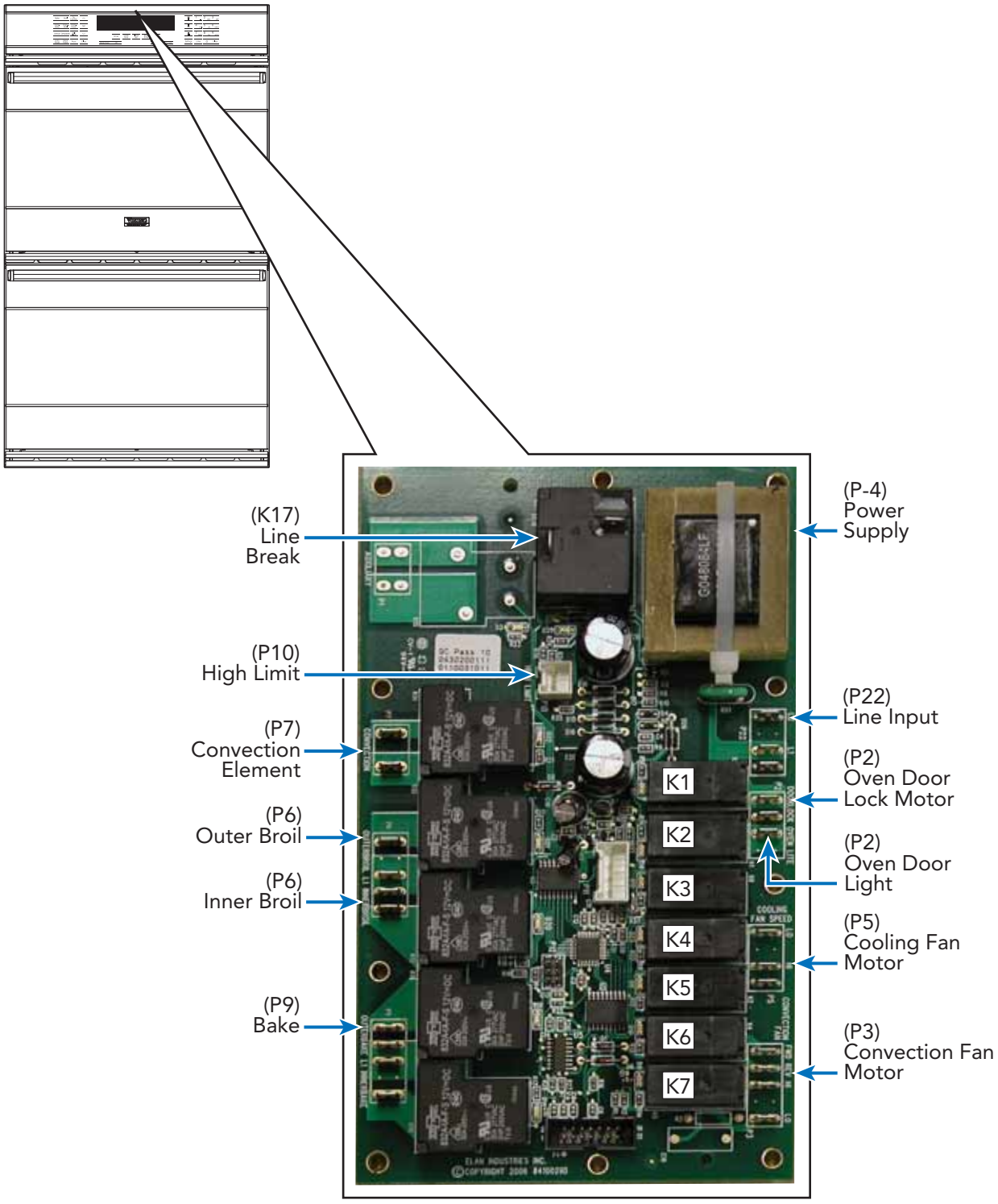
Service Diagnostics and Testing

9. Run all keyboard tests (cont.)

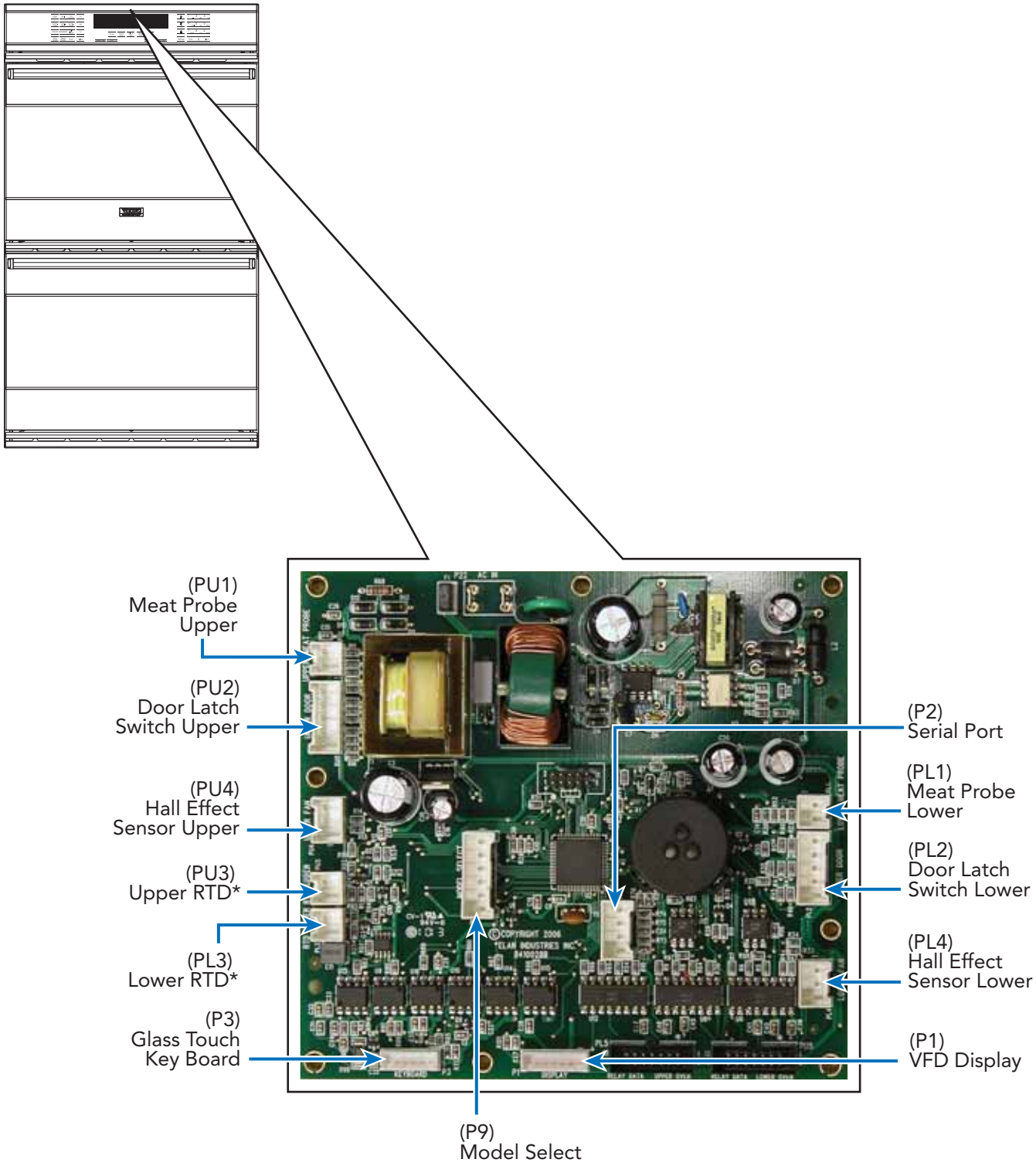
Step	Test	Result
36	Press 6 pad	Pressing the 6 pad will advance to the next test
37	Press LOCK pad	Pressing the Lock pad will advance to the next test
38	Press 7 pad	Pressing the 7 pad will advance to the next test
39	Press 8 pad	Pressing the 8 pad will advance to the next test
40	Press 9 pad	Pressing the 9 pad will advance to the next test
41	Press SETTINGS pad	Pressing the Settings pad will advance to the next test
42	Press ENTER pad	Pressing the Enter pad will advance to the next test
43	Press 0 pad	Pressing the 0 pad will advance to the next test
44	Press CLEAR pad	Pressing the Clear pad will advance to the next test

To end the test, press the “CLEAR” pad.

Parts Location–Relay Board



Parts Location–Main Control Board



**Insure that the upper and lower RTDs are installed to correct connections.*

Relay boards

The unit has an upper and lower relay board that controls functions of the respective oven cavity. Components can be diagnosed via the relay board. With the relay board accessed *(see Relay board Access procedure, page 49), the following can be measured:*

Component	Oven Board Test Point	Readings
Bake Element	(P9) Blue – line break Yellow	28.9 Ω
Inner Broil Element	(P6) Violet – line break Yellow	23.7 Ω
Outer Broil Element	(P6) Gray – line break Yellow	46.1 Ω
Convection Element	(P7) White/Red – line break Yellow	34.4 Ω
High Limit	(P10) White – (P10) White	0 Ω Closed, Infinite Ω open (High limit is NC and opens on temperature rise 275˚F [135˚C])
Cooling Fan Motor	(P 5) White – N @ terminal block	20.1 Ω
Convection Motor – Hi Speed	(P3) Orange/Black – (P3) Blue/Black	38.3 Ω
Convection Motor – Low Speed	(P3)Orange/White – (P3) Blue/Black	44.1 Ω
Oven Lights	(P2)Yellow/Black – N @ terminal block	17.0 Ω
Lower RTD	(PL3) Gray – (PL3) Violet	1089 Ω @ room temp
Upper RTD	(PU3) Gray – (PU3) Violet	1089 Ω @ room temp
Door Latch Motor	(P22) Black/White – N @ terminal block	2.4 K Ω
Lower Door Switch	(PL2) Gray – (PL2) Violet/White	Infinite Ω door open, 0 Ω door closed
Upper Door Switch	(PU2) Gray – (PU2) Violet/White	Infinite Ω door open, 0 Ω door closed
Upper Door Lock Switch – S1	(PU2) Blue – (PU2) Brown	0 Ω Door unlatched, Infinite Ω door latched
Upper Door Lock Switch – S2	(PU2) Orange – (PU2) Brown	Infinite Ω door unlocked, 0 Ω door locked
Lower Door Lock Switch – S1	(PL2) Blue – (PL2) Brown	0 Ω Door unlatched, Infinite Ω door latched
Lower Door Lock Switch – S2	(PL2) Orange – (PL2) Brown	Infinite Ω door unlocked, 0 Ω door locked
Lower Hall Effect Sensor	(PL4) Red – (PL4) Black	Refer to page 46 for Hall Effect Sensor Testing
Upper Hall Effect Sensor	(PU4) Red – (PU4) Black	Refer to page 46 for Hall Effect Sensor Testing
Lower Hall Effect Sensor	(PL4) White – (PL4) Black	Refer to page 46 for Hall Effect Sensor Testing
Upper Hall Effect Sensor	(PU4) White – (PU4) Black	Refer to page 46 for Hall Effect Sensor Testing

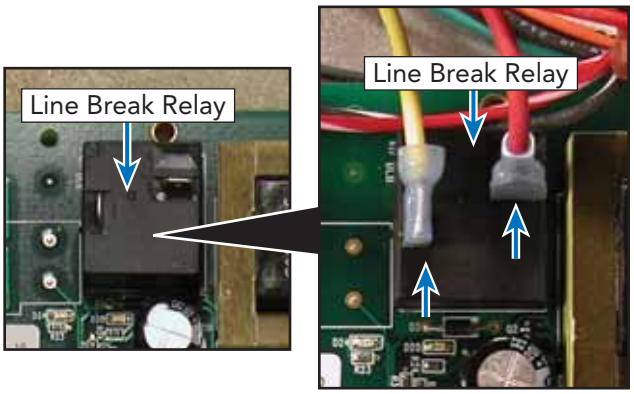
Relay board LED's

D7 – Door Lock Motor	D19 – Outer Bake
D8 – Oven Light	D20 – Inner Broil
D9 – Cooling Fan Speed	D21 – Outer Broil
D10 – Convection Speed Hi	D22 – Convection Element
D11 – Convection Speed Lo	D23 – Cooling Fan Speed
D12 – K8 Relay – Cooling Fan Power	D25 – Line Break

Relay Board Diagnosis

With the relay board assembly removed, the following components can be diagnosed without removal of the components:

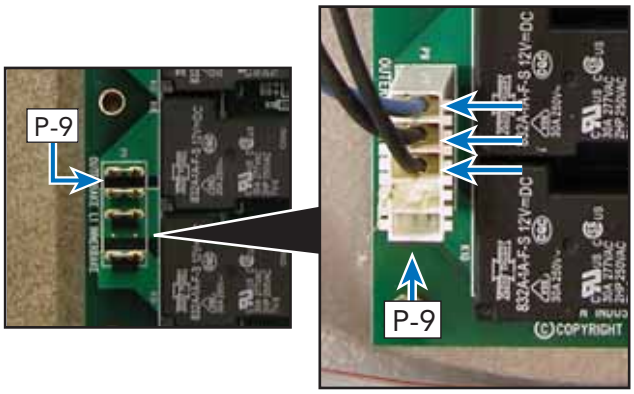
Line Break Relay
The line break relay breaks the L2 side of line voltage. As the relay is energized, the relay closes and allows L2 to the convection, broil and bake element. Locate the line break relay on the relay board. The relay will have a red wire and a yellow wire connected to it. The red wire is L2 input from the main power supply and the yellow wire supplies L2 when the line break relay energizes.

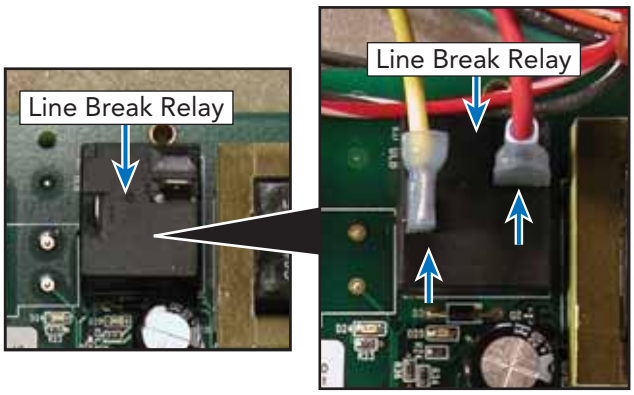


When heating is selected by the control input, voltage is sent to the line break relay coil. A red LED (D25) in front of the coil verifies coil voltage is being sent to the relay. This means that 12 VDC is being sent to the relay coil. It does not indicate that the relay contacts are closing. To check 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 (D25 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 Ohmmeter to check for continuity between the two relay contacts with the relay energized. If infinite resistance (∞) is measured, this indicates a bad relay and replacement of the relay board is necessary.

Bake Element
Locate the P9 connector and the line break relay on the relay board. The P9 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.



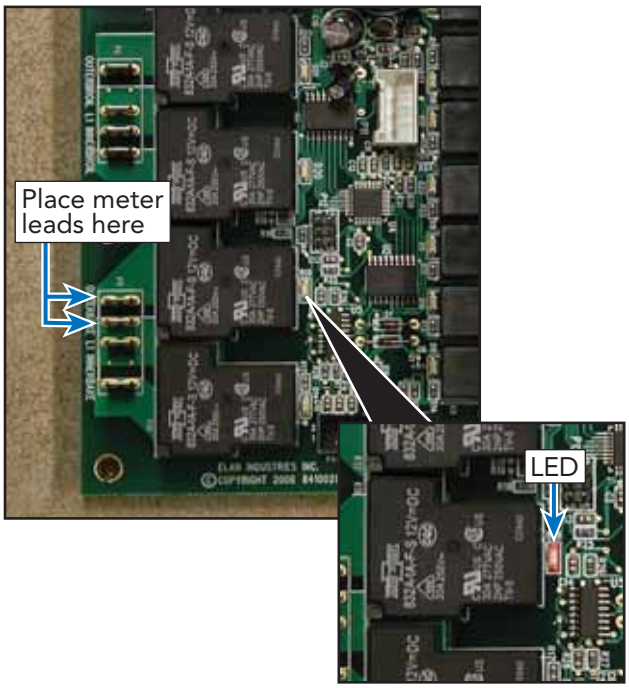


With the power off and the Molex connector removed from the P9 relay board connection, use an Ohmmeter to measure resistance between the blue wire in the Molex plug and the yellow wire from the line break relay. This will measure the resistance of the outer bake element and a reading of 28.9 Ω should be measured. If the element fails to read resistance, repair or replace bake element as necessary *(see Bake Element Disassembly, page 61).*

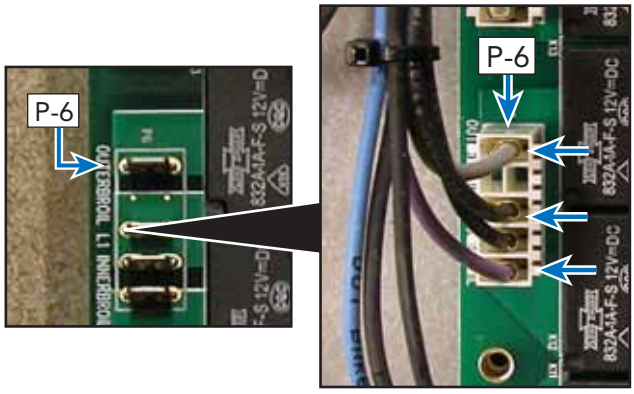
Relay Board Diagnosis

Bake Relay
The VESO and VDSO series oven use one concealed bake element in the cavity floor. It is connected on the relay board to the outer bake connection (inner bake is not used).

When the bake relay contact is energized (red LED D19 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 P9. If 0 VAC is measured, disconnect power and remove the P9 Molex plug. Reconnect power and using an Ohmmeter, check for continuity between the relay contacts. When the relay is energized; if infinite ohms (Ω) are measured, this indicates a bad relay and replacement of the relay 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 relay 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.

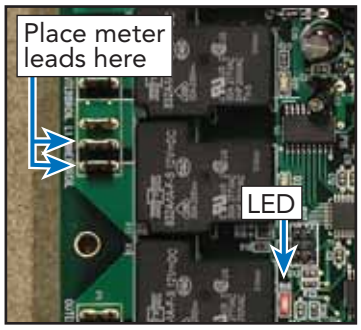


With the power off and Molex connector removed from the P6 relay board connection, use an Ohmmeter to measure resistance between the violet wire in the Molex plug and the yellow wire at the line break relay. This will measure the resistance of the inner broil element and should be approximately 24 Ω. 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 Ω should be found. If either element fails to read resistance, remove the element to repair or replace as necessary *(see Broil Element Disassembly, page 57).*

Relay Board Diagnosis

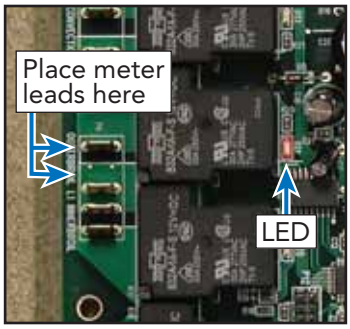
Broil Relay (Inner and Outer)
When a broil element is selected, voltage is sent to the broil relay coils. A red LED (D19 and D20) in front of the respective relay verifies coil voltage is being sent to that particular relay. This means that 12 VDC is being sent to the relay coil. It does not indicate 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, (D20 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.



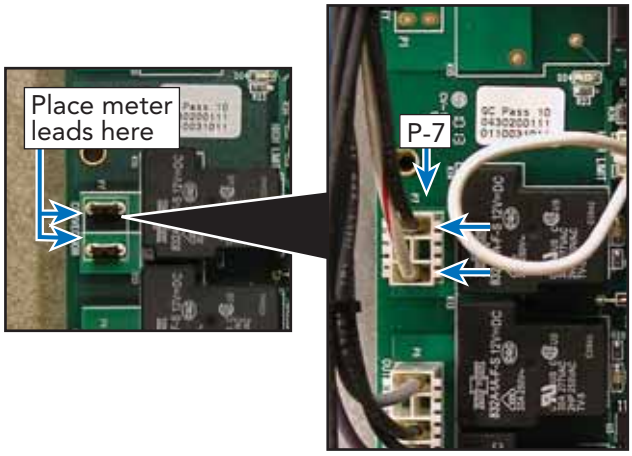
Reconnect power and using an Ohmmeter, check for continuity between the two relay contacts. When the relay is energized; if you read infinite ohms (Ω) this indicates a bad relay and replacement of the relay board is necessary. If 0 ohms are measured, the relay contact is closing.

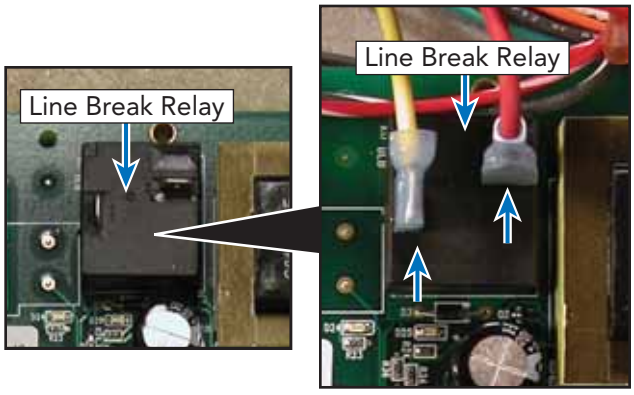
Outer Broil Relay
Select a cooking program. When the outer relay contact is energized (D21 LED at base of relay illuminates red), check for 240 VAC between the yellow wire at the line break relay and the gray wire on P6. If 0 VAC is measured, disconnect power and remove P6 Molex plug.



Reconnect power and using an Ohmmeter, check for continuity between the two relay contacts. When the relay is energized; if infinite ohms (Ω) are measured this indicates a bad relay and replacement of the relay board is necessary. If 0 ohms are measured, the relay contact is closing.

Convection Element
Locate the P7 connector and the line break relay on relay board. The P7 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.



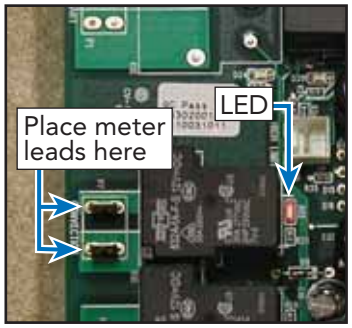


With the power off and Molex connector removed from the P2 relay board connection, use an Ohmmeter to measure resistance between the white/red wire in the Molex plug and the yellow wire at the line break relay. This will measure the resistance of the convection element and should be approximately 34.4 Ω. If the element fails to read resistance, remove element to repair or replace as necessary *(see Convection Element Disassembly, page 58)*.

Relay Board Diagnosis

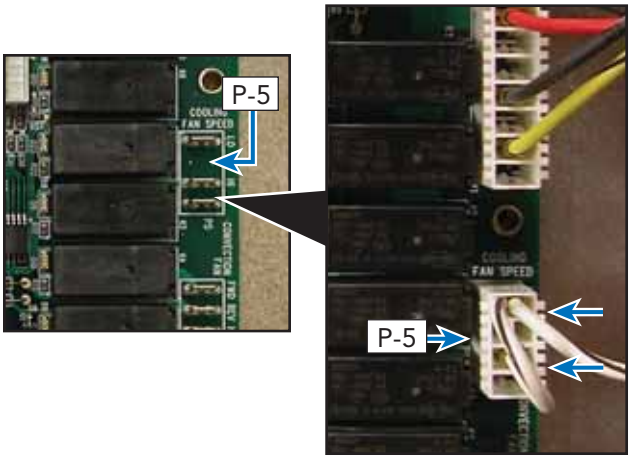
Convection Relay
When the convection element is selected, voltage is sent to the convection relay coils. A red LED (D22) in front of each coil verifies coil voltage is being sent to that particular relay. This means that 12 VDC is being sent to the relay coil. It does not indicate that the relay contacts 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 (D22 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 P7 Molex plug.



Reconnect power and using an Ohmmeter, check for continuity between the two relay contacts. When the relay is energized; if infinite ohms (Ω) are measured this indicates a bad relay and you will need to replace the relay board. If 0 ohms are measured, the relay contact is closing.

Cooling Fan
Locate the P5 connector on the relay board. The P5 connector will have a Molex plug containing white/black wires.



With the Molex connector removed from the P5 board connection, use an Ohmmeter to measure resistance between one of the white/black wires and neutral at P1 on the power supply board. The resistance should be approximately 20 Ω. If no resistance is measured, remove fan to repair or replace as necessary *(see Oven Cooling Fan Disassembly, page 62).*

With the Molex connector attached to the P5 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 62).* If no voltage is present, verify wiring. If wiring is OK, check the relay on the relay board.

Relay Board Diagnosis

Fan Relay
The unit is designed to operate a 2-speed cooling motor. The DSOE305T and DDOE305T series utilizes a one-speed motor so both the HI and LO speeds are jumped together on the relay board. However, both are jumped together so this change is not noticed. If a fan error is shown, proceed with the test shown below.

When the unit is switched on, voltage is sent to both relay coils. A red LED (D9 D23) 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.

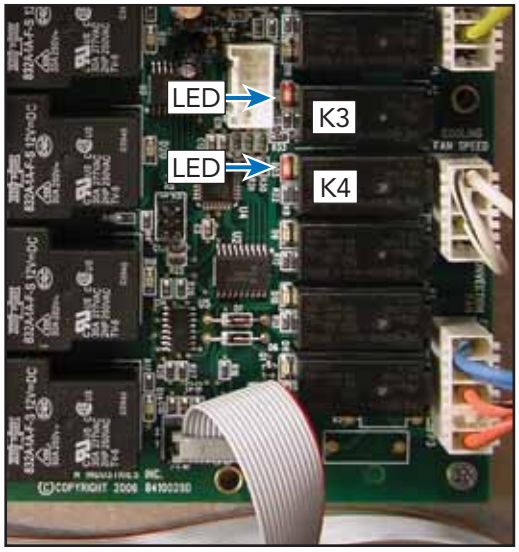
BAKE, CONVECTION BAKE, TRU CONVECTION and LOW BROIL start at LOW speed and when the oven temperature reaches 400˚F (204.5˚C), the EOC switches to HIGH speed.

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 (190.5˚C), and shuts off completely when the temperature drops below 250˚F (121˚C).

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 (D12 and/or D23) are illuminated, the relay board should be replaced.

Fan–Hi Speed
The EOC is designed to run a 2-speed fan, however the DDOE and DSOE models use a single speed fan motor. When the EOC calls for fan operation, the main fan relay K3 is energized and the fan operates. When a program calls for low speed, the low speed relay K4 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 (D9 D23) is illuminated, then the relay board needs to be replaced.



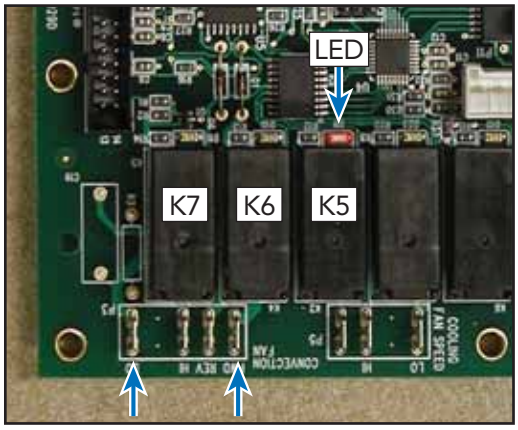
Relay Board Diagnosis

Convection Fan
Locate the P3 connector and line break relay. The P3 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 the Speed relay (K7) and the main control power relay (K5). The K6 relay (Directional) is not used on this series of ovens. The main control (power) relay is a SPDT relay and controls all functions of the convection fan system. The photo below
shows the relay energized.

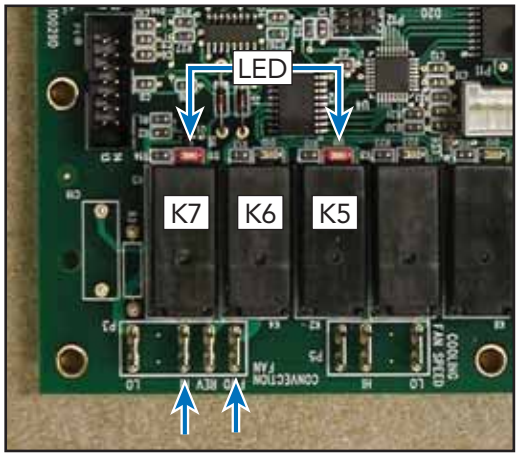
Low Speed–Clockwise (FWD)



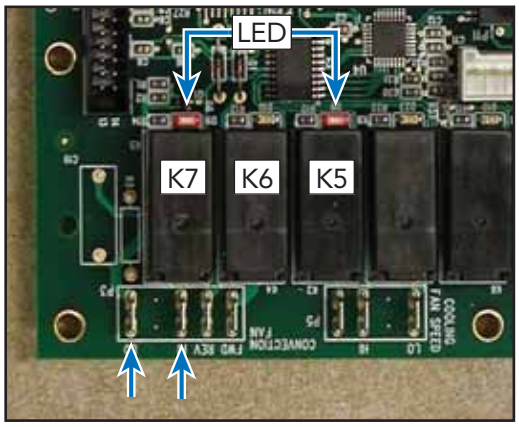
When closed, it sends power through the relay and out to the LO speed relay contact.

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

Clockwise (FWD)–High Speed
The speed relay is a SPDT relay. When not energized, the LO circuit is energized through the C terminal of the relay. The N.O. terminal is now closed resulting in the unit running at a higher speed.

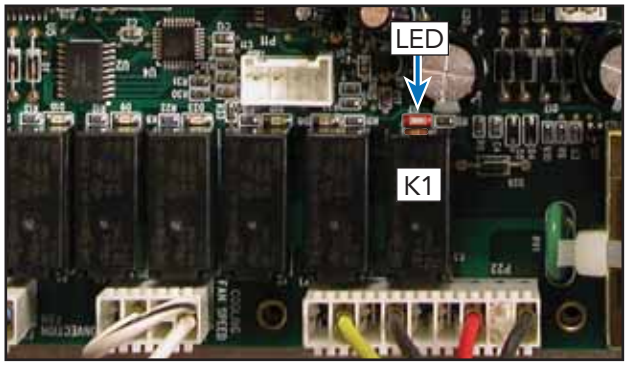


Testing Relay Board
Use a volt meter to measure 120 volts AC between the orange/white (low speed) when K7 is Not energized and the orange/ black (high speed) with K7 energized wire in the Molex plug and the neutral terminal block.



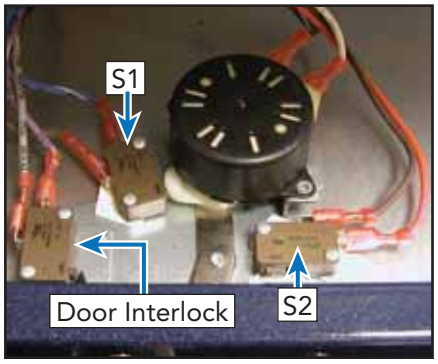
Relay Board Diagnosis

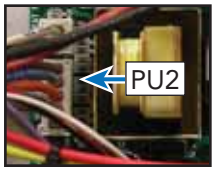
Door Lock Assembly
The door lock motor is a 120 VAC motor. One side of the motor is wired directly to the main neutral terminal block. L2 Power (red) at the K1 relay (relay board) supplies power to the lock motor when the relay is energized.



When the door is required to lock or unlock, the K1 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 PL2 (lower oven) and PU2 (upper oven) shown above.





There are three switches mounted on the door lock assembly. S1, S2 and the door interlock switch. The photo above shows the location of the switches.

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 PL2 (lower oven) and PU2 (upper oven) connection between the light brown and blue/white wires. This signals the board that the door is unlocked.

S2 is also N.O. and is open when the door is unlocked. When the lock motor is activated and begins to lock, the S1 contact opens. When the plunger catches the door liner and pulls inwards, the S2 switch plunger is actuated. The switch contact is closed and a completed circuit is made at PL2 (lower oven) and PU2 (upper oven) connection between the light brown and orange wires. This signals the board that the door is locked. When it is in 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.

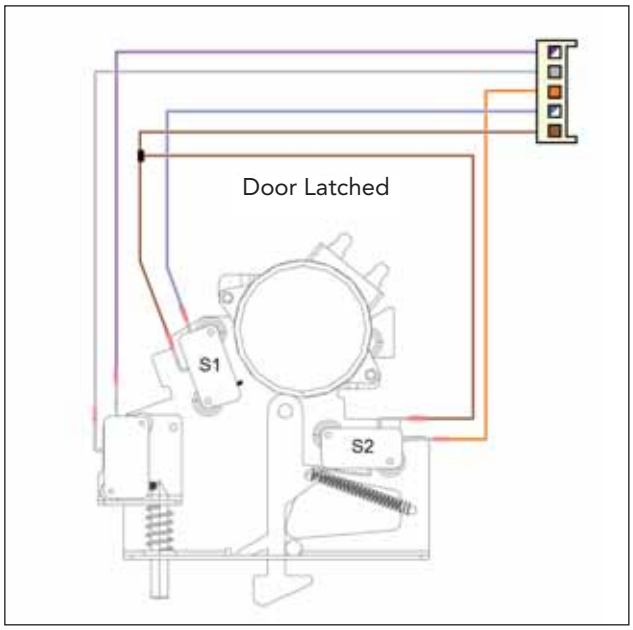
Testing Latch Switches
To check the latch switches, access the relay board and unplug the PL2 (lower oven) or PU2 (upper oven) Molex plug. With the door in the unlocked position you should read continuity between the light brown wire and the blue/white wire and zero (0) Ω between the light brown wire and the blue/white. If your readings are incorrect or reversed, remove the latch and inspect, repair/replace *(see Door Lock assembly, page 56)*.

Testing Lock Motor
With the Molex connector removed from the P2 on the relay board connection, use an Ohmmeter to measure resistance between black/white wire in the Molex plug and the neutral terminal block. The resistance should be approximately 2.4K Ω. If no resistance is read, remove the latch motor to repair or replace as necessary *(see Door Lock assembly, page 56)*.

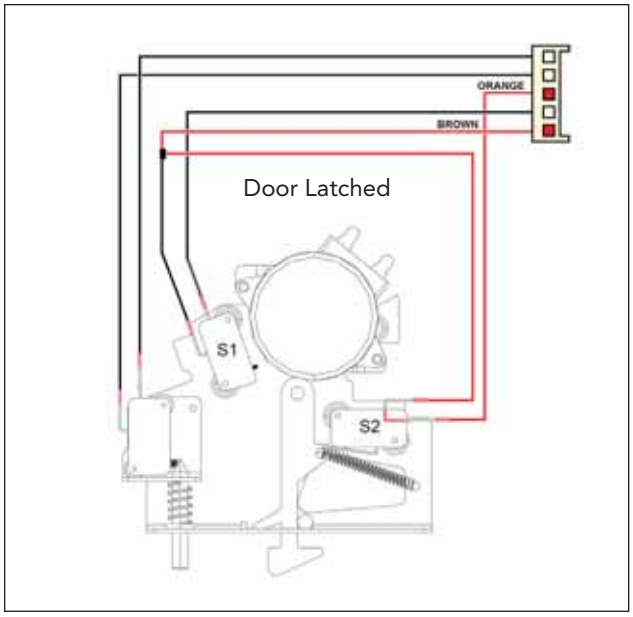
Relay Board Diagnosis

Checking the door lock position switches

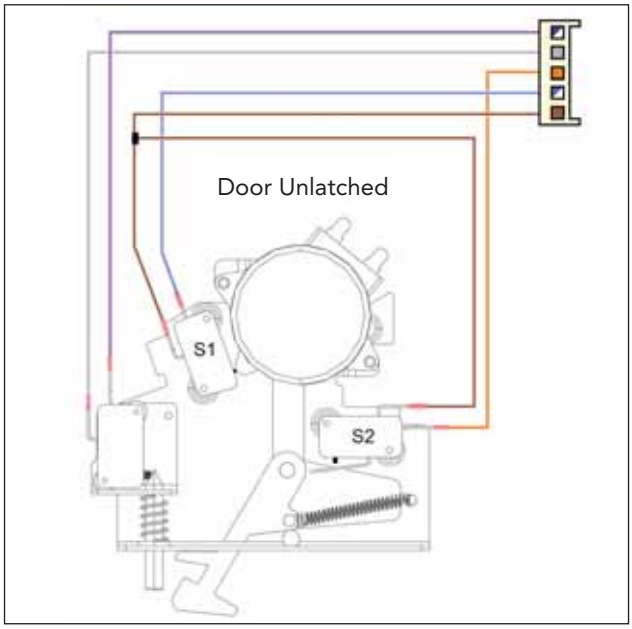
With the door in the unlocked position, the S1 switch (N.O.) is being activated by the motor cam. Shown below are the switch positions and wire colors. To test, ohm out the wires between blue and light brown. The reading should be zero (0) Ω. The S2 switch is N.O. and will read infinite ohms (∞) when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



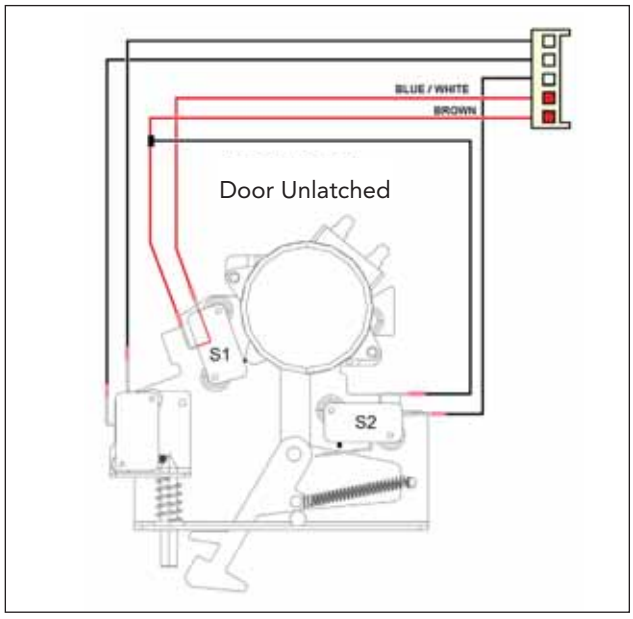
Shown below is the closed circuit in red.



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



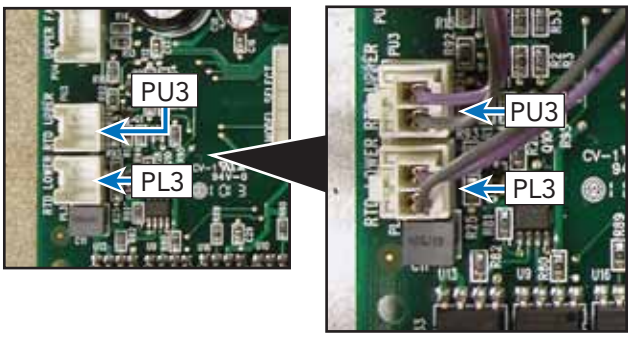
Shown below is the closed circuit in red.



Relay Board Diagnosis

RTD Sensor

Locate the PL3 (lower oven) or PU3 (upper oven) connector on main relay board. The PL3 (lower oven) or PU3 (upper oven) 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 Ohmmeter to measure resistance between the gray and violet wires in the Molex connector. At room temperature the reading should be approximately 1050 – 1100 Ω. 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 sensor.

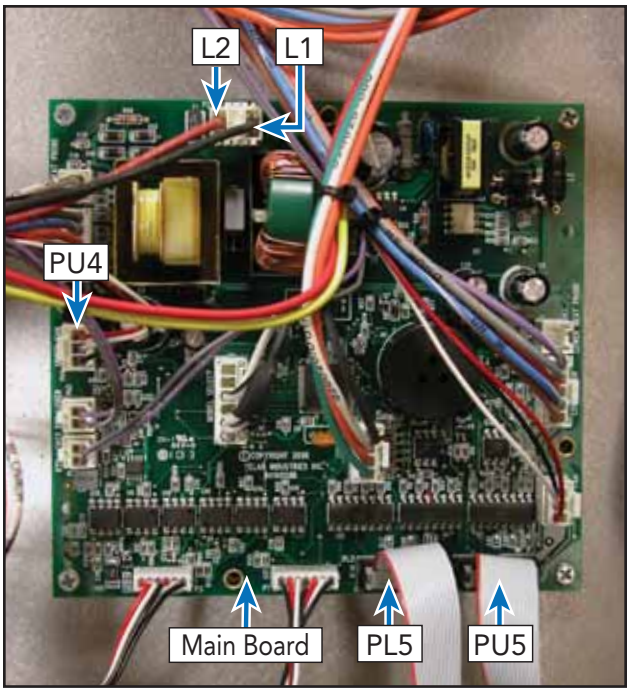
RTD Characteristics

RTD (Resistance Temperature Detector)	
Temperature (˚F)	Resistance (Approximate)
50	1038
75	1090
100	1143
200	1350
300	1553
350	1654
400	1754
450	1852
500	1950
550	2047
600	2153
650	2238
700	2332
750	2425
800	2318
850	2609
900	2700

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

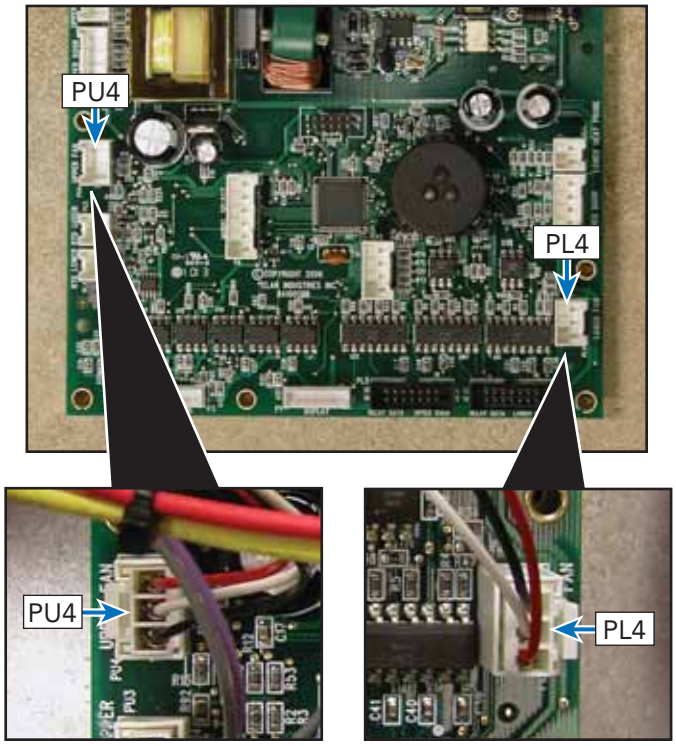
Test Main Power Board

The main power board receives power directly from the power supply. Verify 240 VAC between L2 (red wire) and L1 (black wire). If no voltage is present, verify supply and check breaker. With voltage present to the power board, power is supplied to the upper relay board via a cable connection between power board connection P4 and relay board connection PU5, lower power board via cable connection between power board connection P4 and lower relay board connection PL5. If no output is received at the relay boards, power is supplied to the main power board, cable connectors are in tact, and the cable connections are proper, replace the main power board.



Hall Effect Sensor

The cooling motor incorporates a device called a Hall Effect Sensor. The sensor is connected to the main power board at PL4 (lower oven) and PU4 (upper oven). Below you will see the three wire connectors to the Hall Effect Sensor, which consists of a red (1), white (2), and black (3). The Hall Effect Sensor is built into the cooling motor.



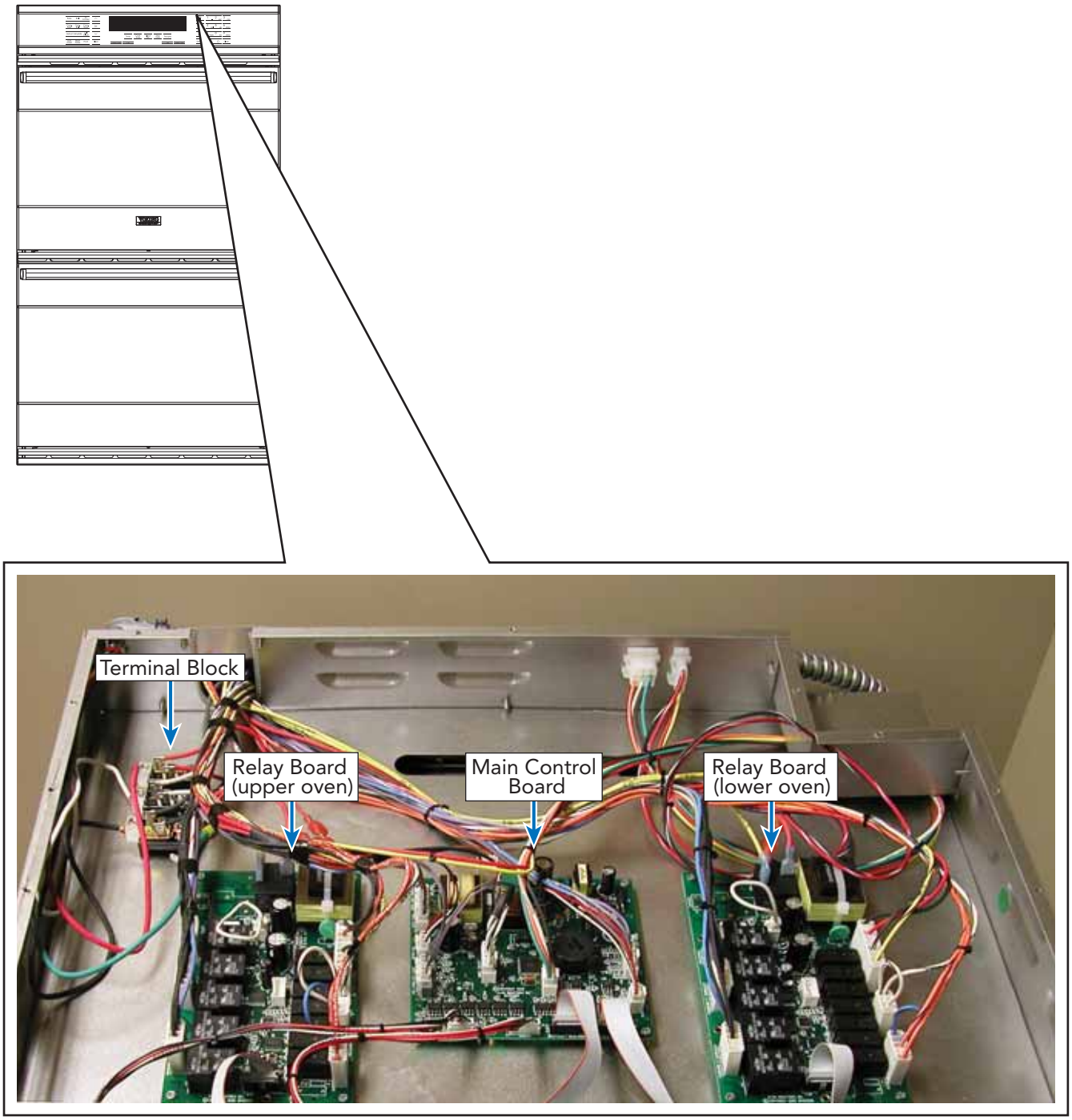
To check the cooling fan, verify the cooling fan is operating. If the fan is not turning, then verify power is being supplied to the motor as shown on page 41. If the fan is running, locate the 3-wire Molex plug on the relay board. With the oven switched OFF, unplug the connector from the board as shown above and set the voltmeter to DC voltage.

A voltage of +5 volts should be read on the Main relay board between the pin (1) red and pin (3) black. 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 240 Voltages being supplied to the Relay board, replacement of the relay 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: *DDOE305T model shown.*

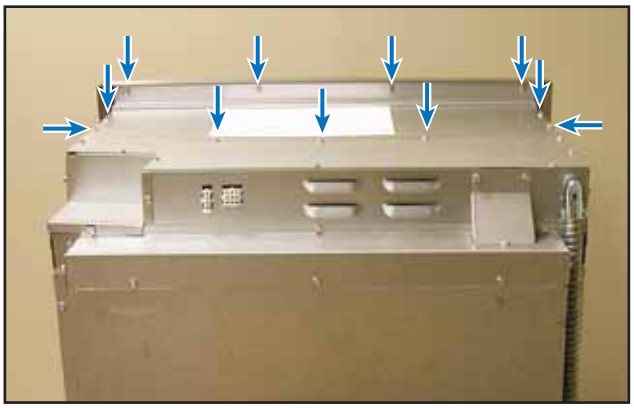
⚠ WARNING

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.

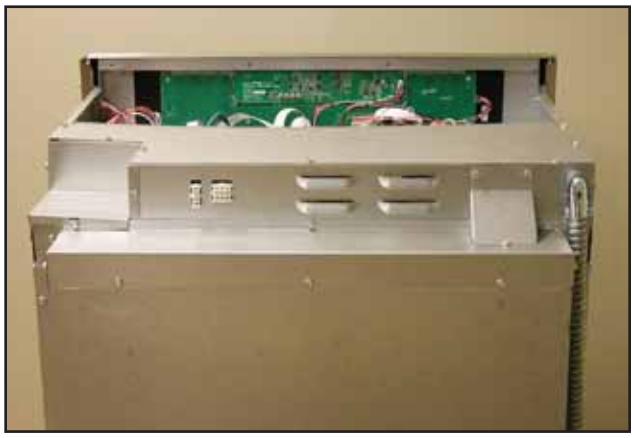
Main Top/Front Disassembly

To access main top/front:

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



3. Remove panel.

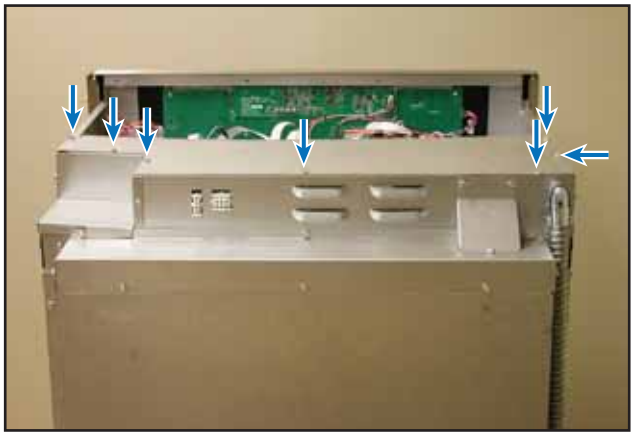


4. Reverse to reassemble.

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: *DDOE305T model shown.*

⚠ WARNING

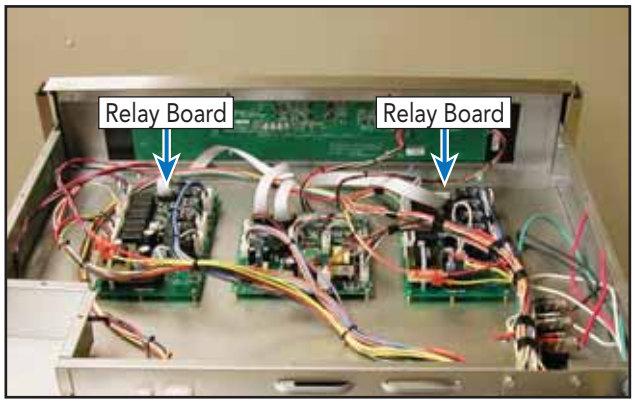
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power.

Relay Board

To access relay board:

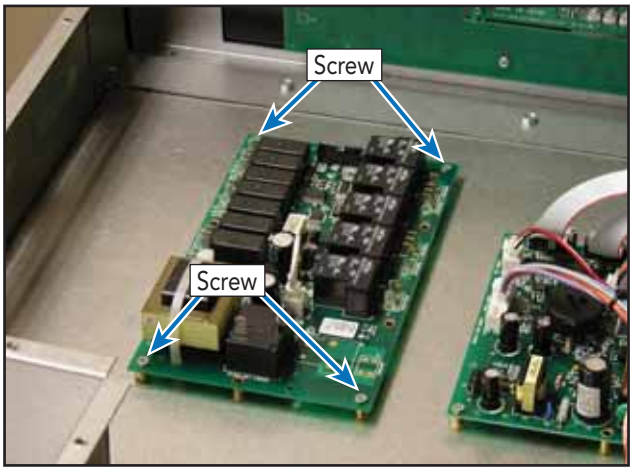
1. Remove main top/front and main top/rear *(see Main Top/Front and Main Top/Rear Disassembly, page 48).*

2. Relay board is accessible.



3. Label and disconnect wiring.

4. Remove screws securing relay board.



5. Repair or replace relay board as necessary.

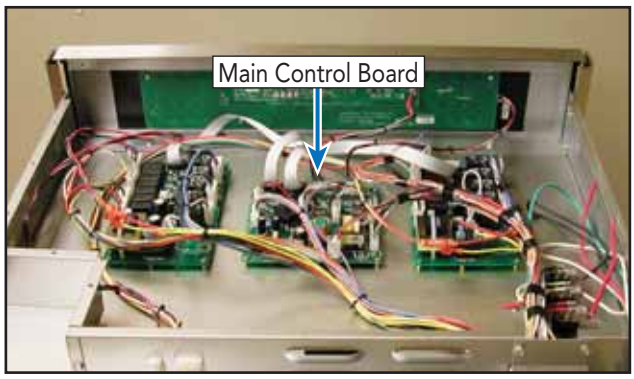
6. Reverse procedure to reinstall.

Main Control Board

To access main control board:

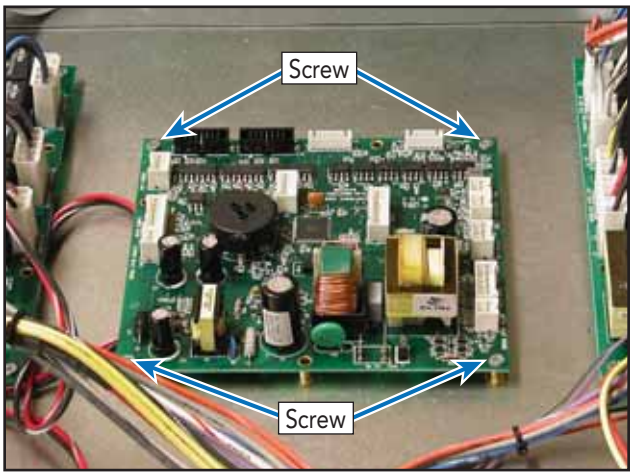
1. Remove main top/front and main top/rear *(see Main Top/Front and Main Top/Rear Disassembly, page 48).*

2. Main control board is accessible.



3. Label and disconnect wiring.

4. Remove screws securing main control board.



5. Repair or replace main control board as necessary.

6. Reverse procedure to reinstall.

Note: *DDOE305T model shown.*

WARNING

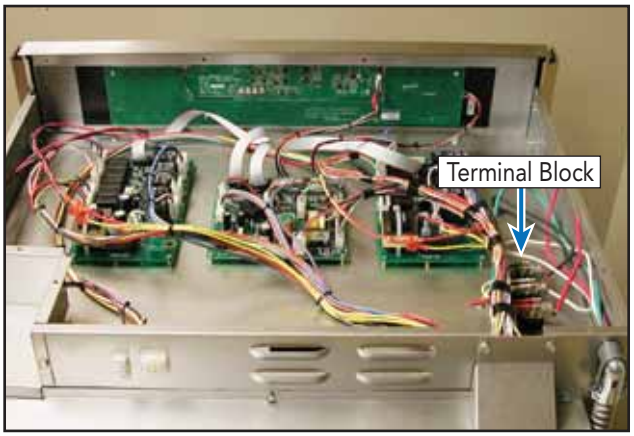
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power.

Terminal Block

To access terminal block:

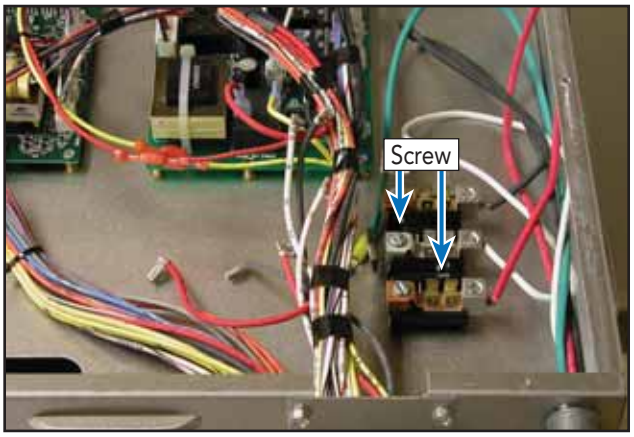
1. Remove main top/front and main top/rear *(see Main Top/Front and Main Top/Rear Disassembly, page 48).*

2. Terminal block is accessible.



3. Disconnect wires.

4. Remove screws securing terminal block.



5. Repair or replace terminal block as necessary.

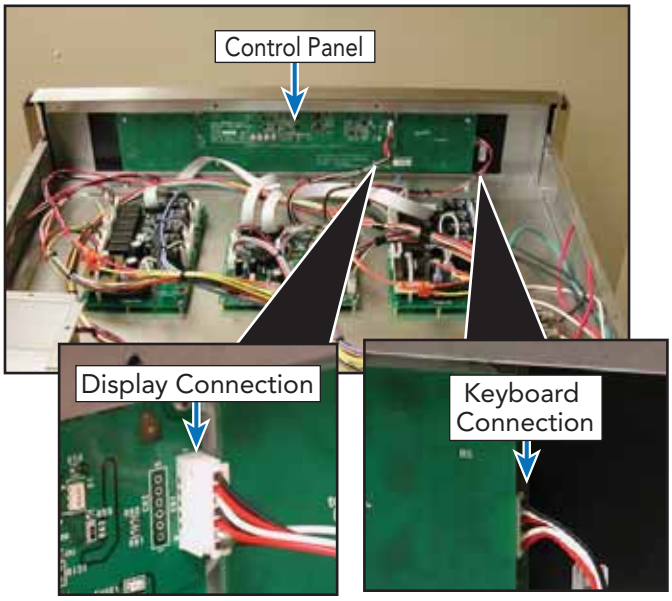
6. Reverse procedure to reinstall.

Control Panel Disassembly

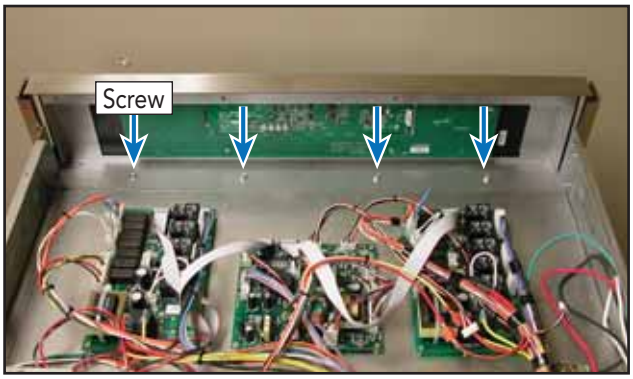
To access control panel:

1. Remove main top/front and main top/rear *(see Main Top/Front and Main Top/Rear Disassembly, page 48).*

2. Disconnect wiring from main control board to display and keyboard.



3. Remove screws securing control panel.



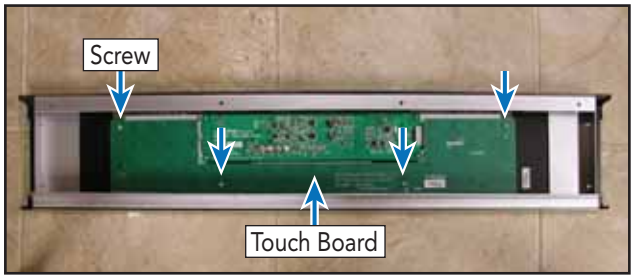
WARNING

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.)

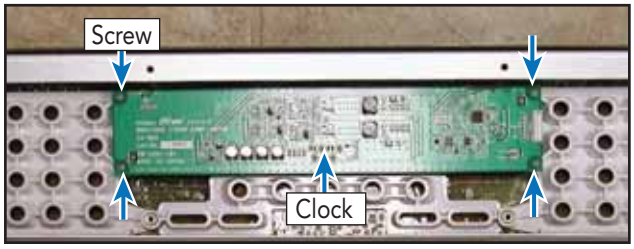
4. Slide control panel out.

5. Remove screws securing touch board.



6. Remove touch board.

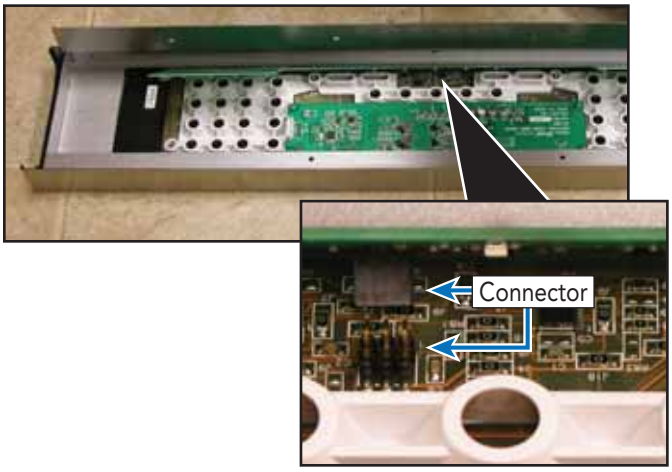
7. Remove screws securing clock.



8. Repair or replace clock as necessary.

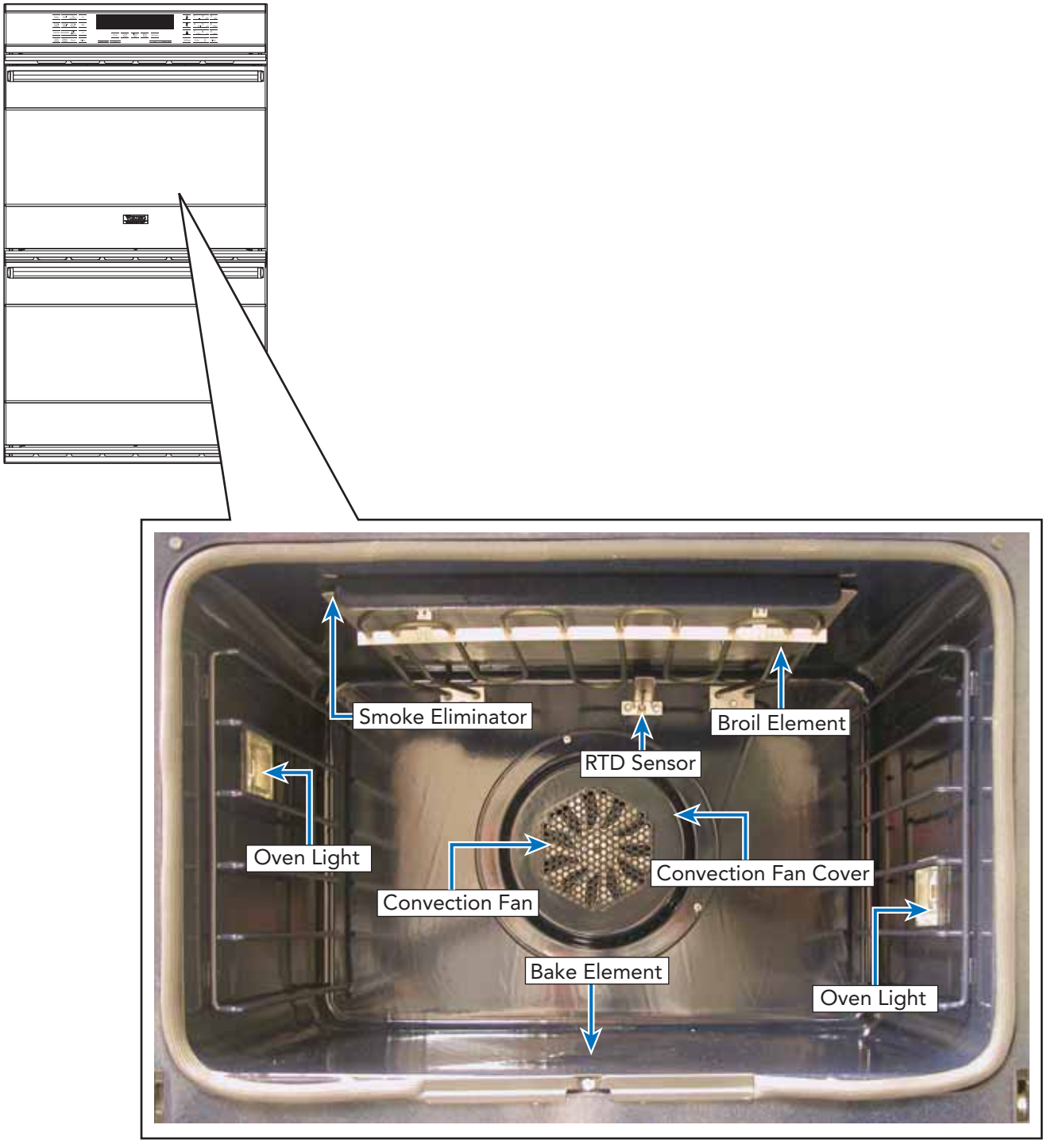
9. Reverse procedure to reinstall.

Note: *When replacing touch board, make sure that center connection "seats" before installing screws.*



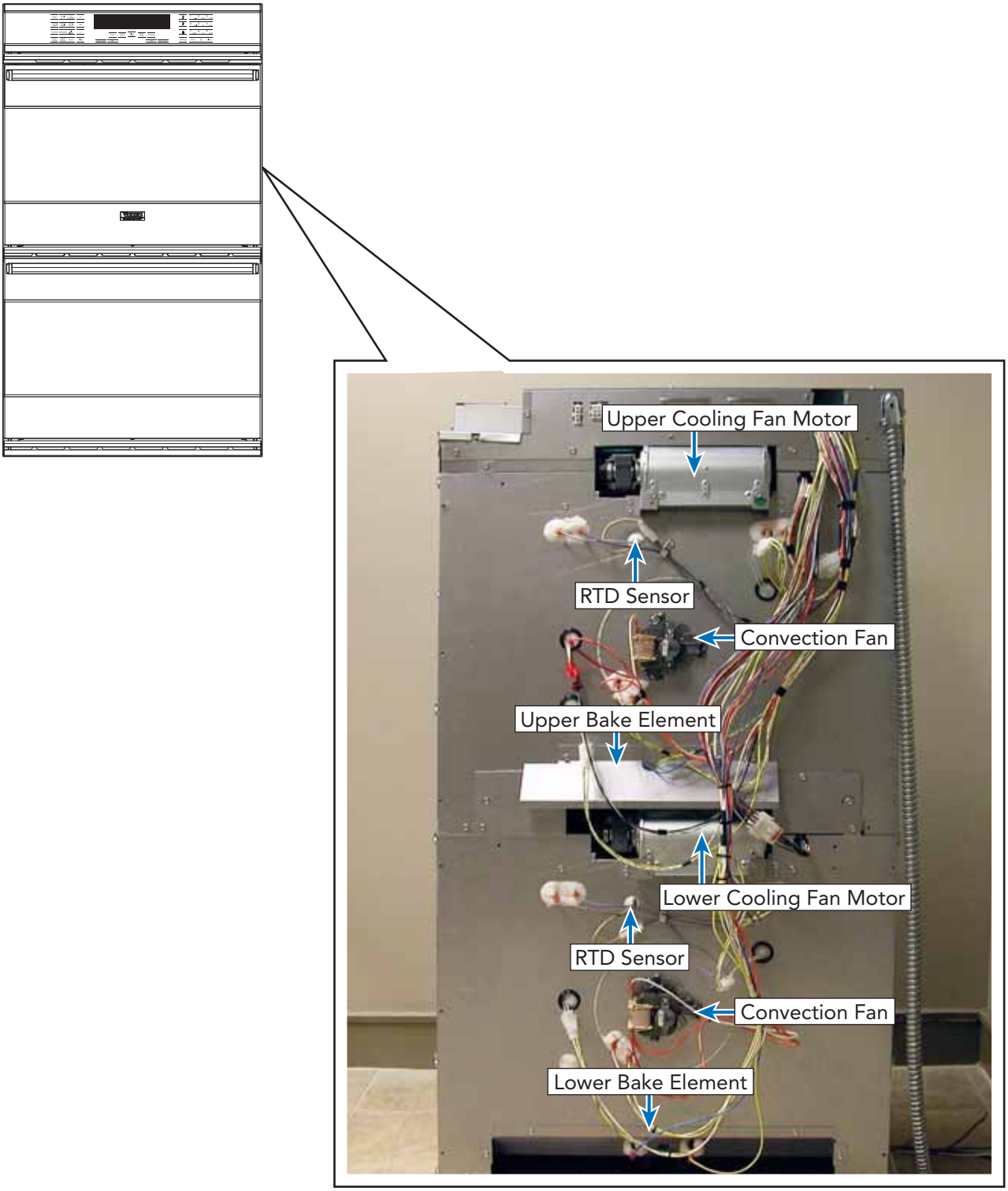
Note: *DDOE305T model shown.*

Parts Location–Oven



Note: *DDOE305T model shown.*

Parts Location–Back



Note: *DDOE305T model shown.*

WARNING

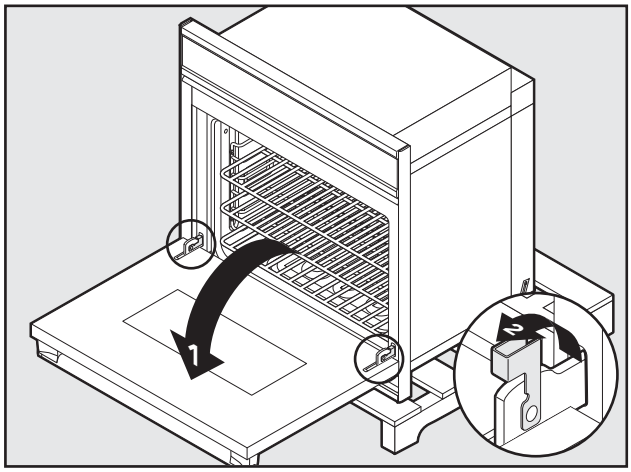
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power.

Door Removal

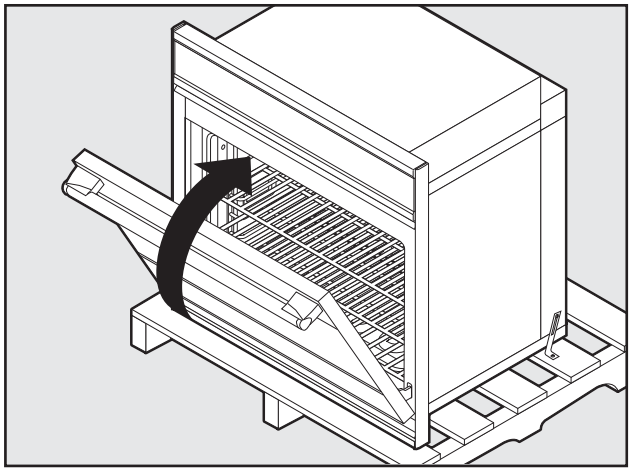
To remove oven door:

1. Open door completely.

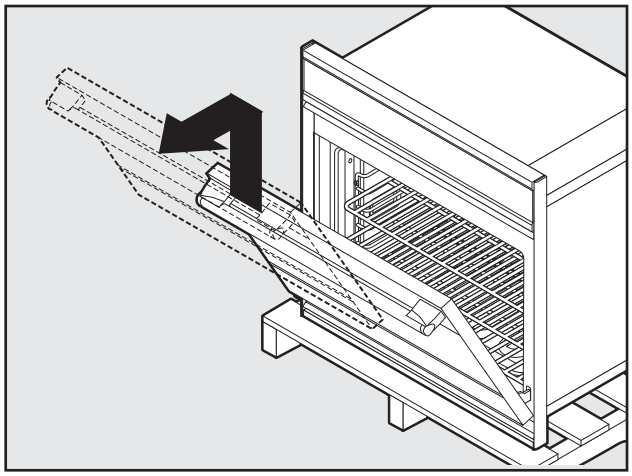
2. Slide locking tabs, located on left and right side of door hinge, down completely to disengage hinge from receiver.



3. Close oven door to the broil stop position.



4. Lift door up and out.



5. Reverse procedure to reinstall.

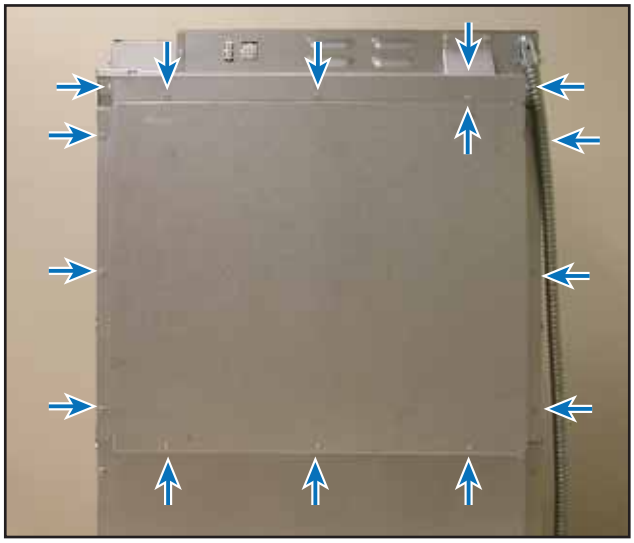
Note: *DSOE305T model shown.*

WARNING

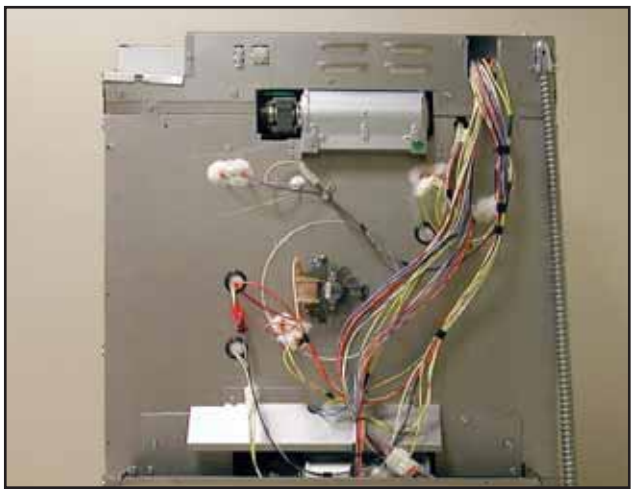
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power.

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.



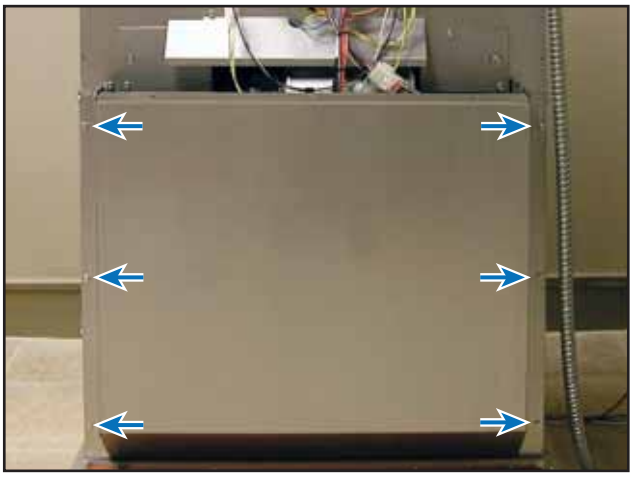
4. Remove panel.



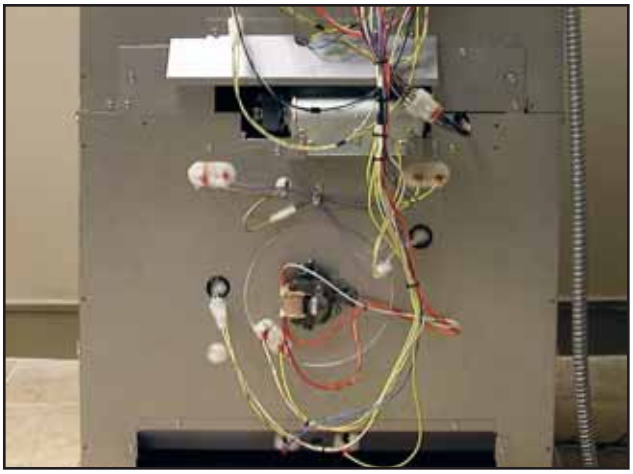
5. Reverse to reassemble.

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: *DDOE305T model shown.*

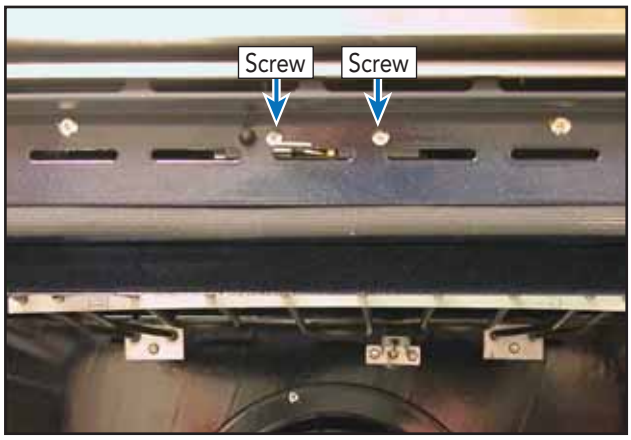
WARNING

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.

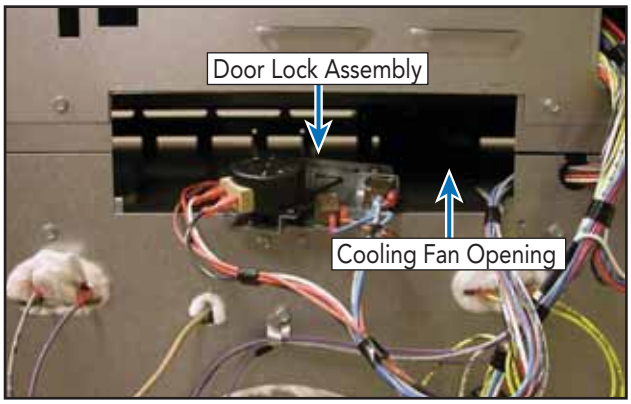
Door Lock Assembly

To access door lock assembly:

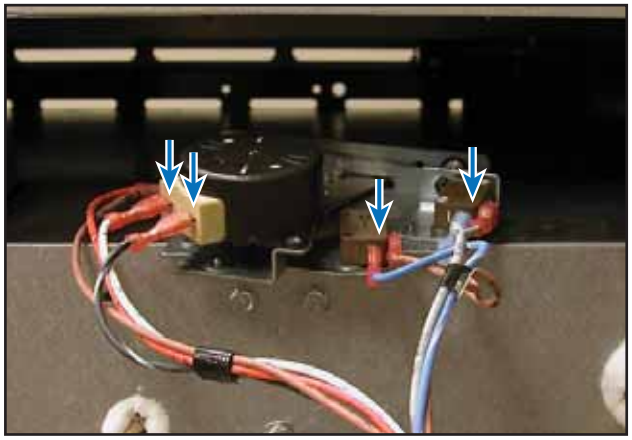
1. Remove unit from installation.
2. Open oven door.
3. Remove screws securing door lock assembly to front frame.



4. Remove rear cover *(see Upper Rear/Rear Cover Disassembly, page 55)*.
5. Remove cooling fan. *(see Oven Cooling Fan Disassembly, page 62)*.
6. Slide door lock assembly through cooling fan opening at rear of unit.



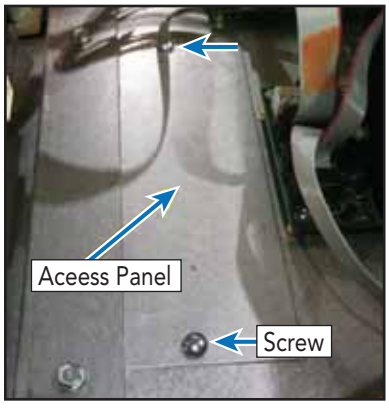
7. Disconnect wiring.



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.*



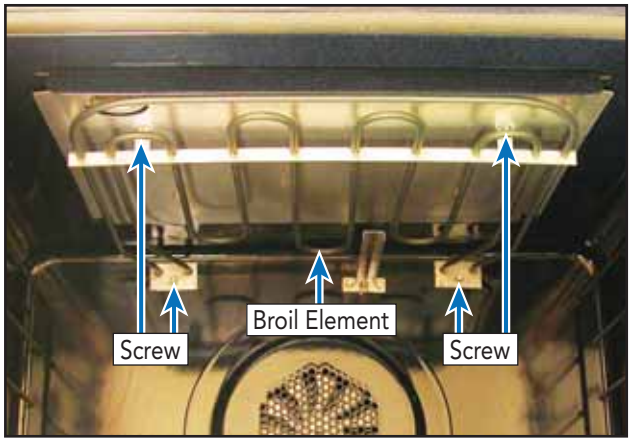
The image to the left shows the access panel. Access to the lower latch will still require removal of the oven for service.

WARNING

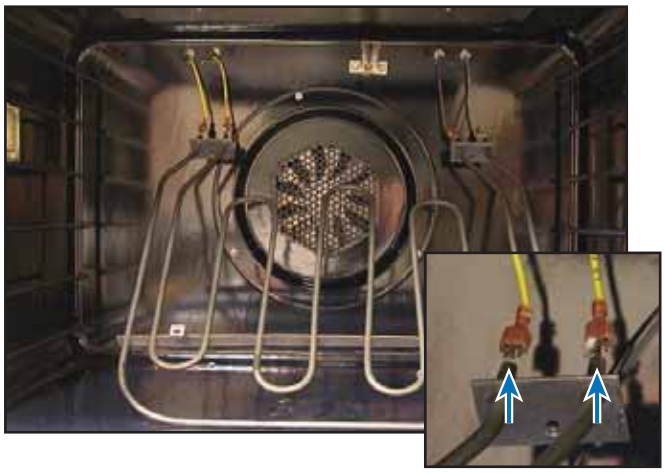
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power.

Broil Element

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



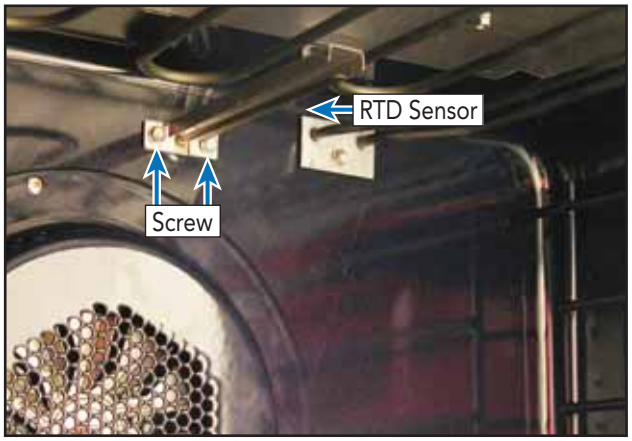
3. Slide broil element into cavity and disconnect wiring.



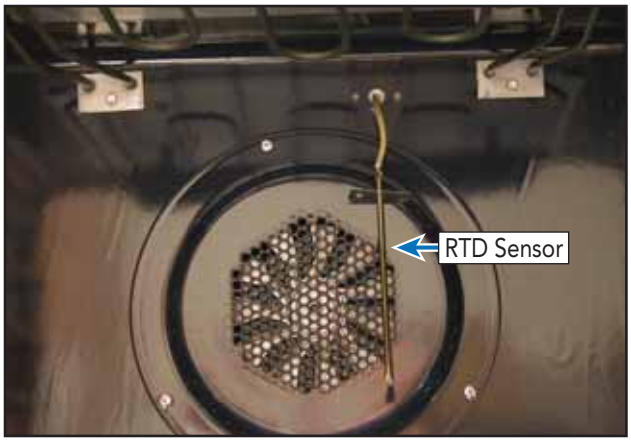
4. Repair or replace broil element as necessary.
5. Reverse procedure to reinstall.

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

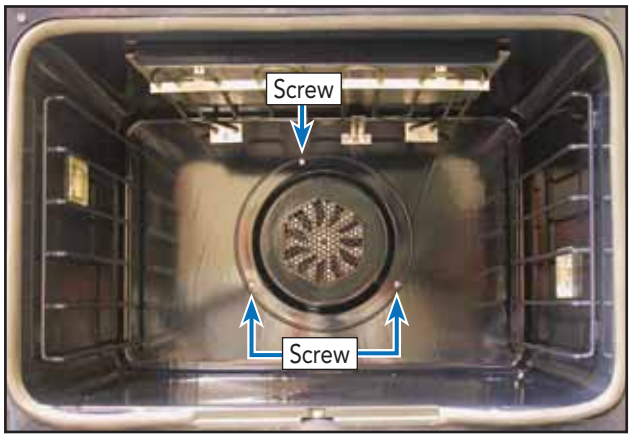
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power.

Convection Element

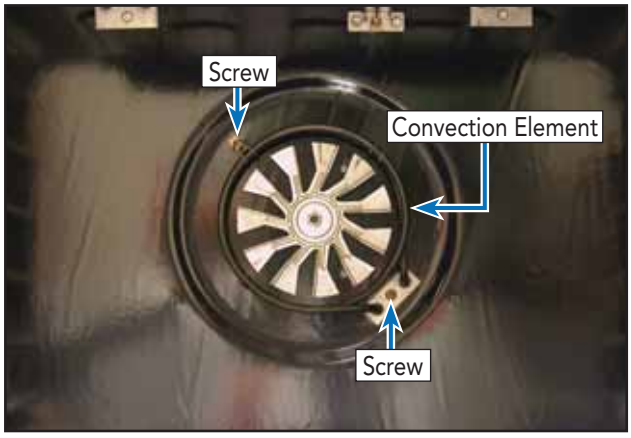
To access convection element:

1. Open oven door.

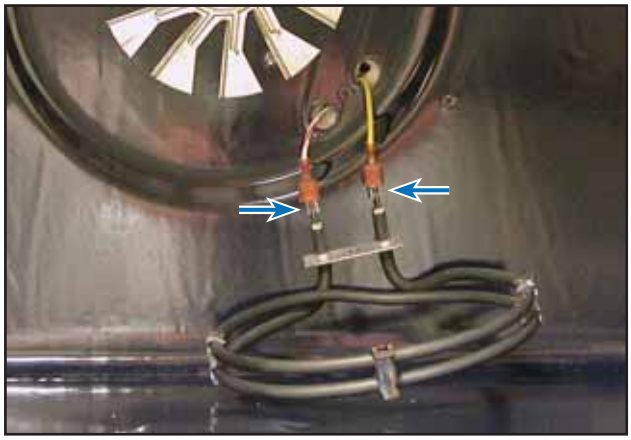
2. Remove screws securing convection fan cover.



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.

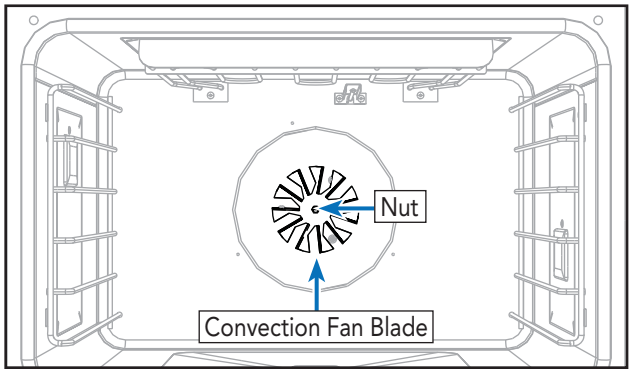
WARNING

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.

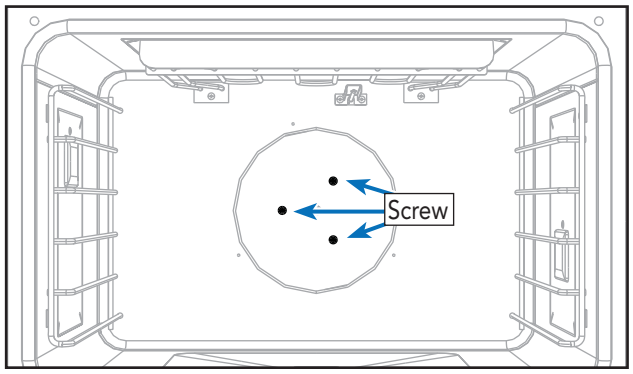
Convection Fan

To access convection fan:

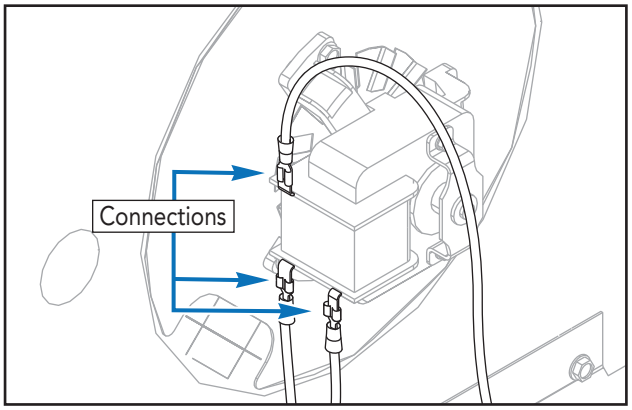
1. Remove unit from installation (in order to replace the convection motor, the oven has to be completely removed from the cabinet).
2. Remove oven door *(see Door Removal, page 54)*.
3. Remove rear cover *(see Upper Rear/Rear Cover Disassembly, page 55)*.
4. Remove convection element *(see Convection Element, page 58)*.
5. Remove nut securing fan blade to convection fan motor shaft.



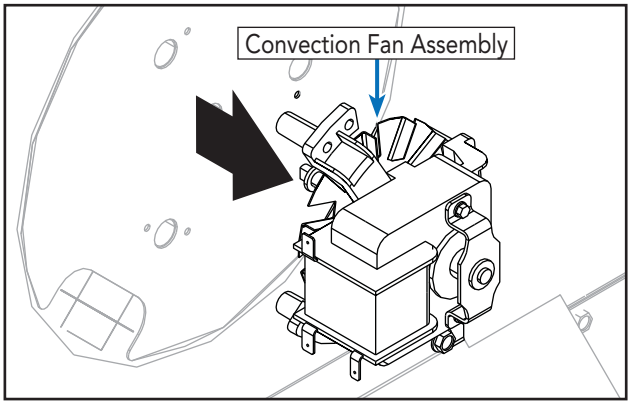
6. Remove screws securing convection fan assembly to oven cavity.



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.*

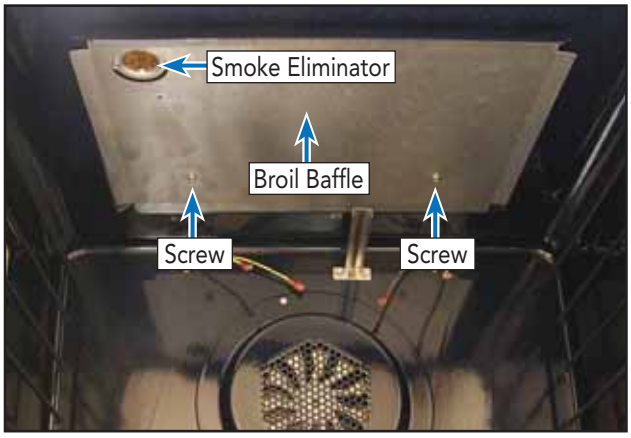
WARNING

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.

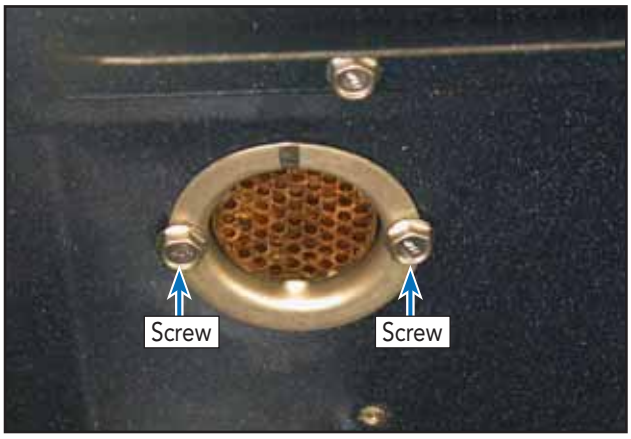
Smoke Eliminator

To access smoke eliminator:

1. Open oven door.
2. Remove broil element *(see Broil Element Disassembly, page 57).*
3. Remove screws securing broil baffle and remove baffle.



4. Remove screws securing smoke eliminator to oven cavity.

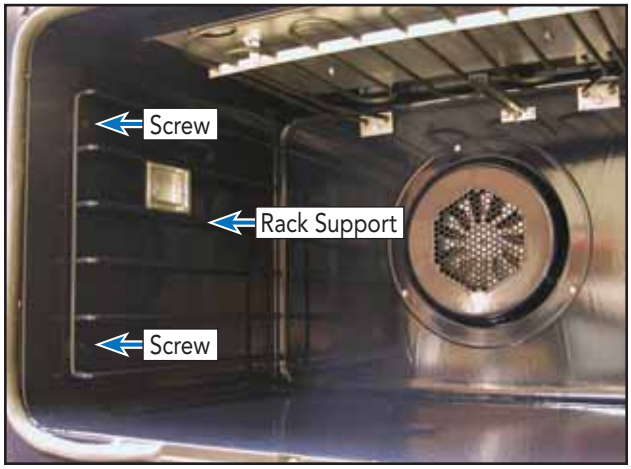


5. Repair or replace smoke eliminator.
6. Reverse procedure to reinstall.

Rack Support

To access rack support:

1. Remove oven door *(see Door Removal, page 54).*
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.

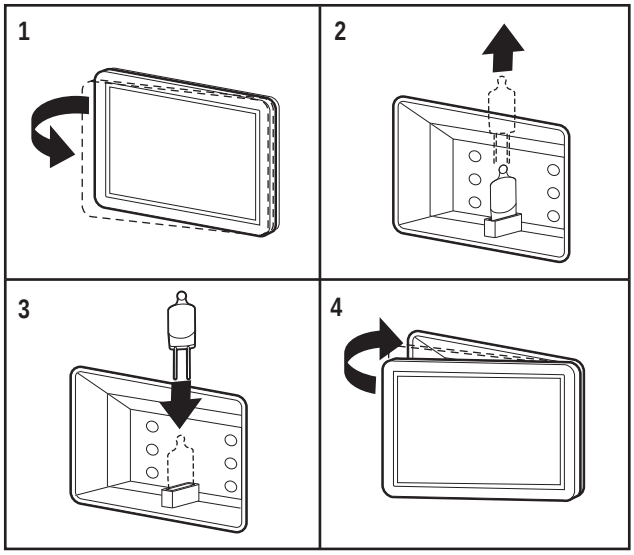
Oven Light

⚠ 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:

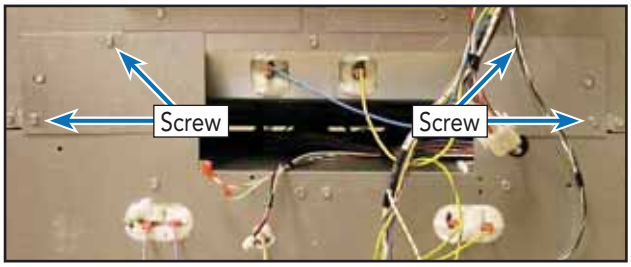
1. Unsnap oven light cover.
2. Firmly grasp light bulb an pull out of socket.
3. Replace with new halogen bulb following wattage and voltage rating on old halogen bulb.
4. Reinstall light cover.

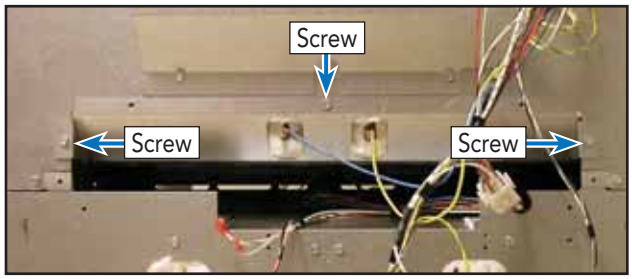


Bake Element

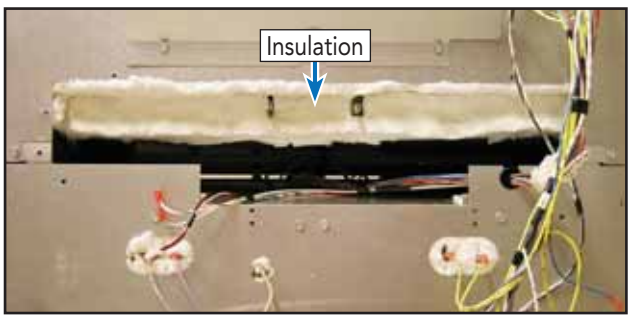
To access bake element:

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 55)*.
3. Remove oven cooling fan *(see Oven Cooling Fan, page 62)*.
4. Disconnect wiring, remove screws securing rear trim pieces and remove trim.





5. Carefully remove insulation covering bake element.

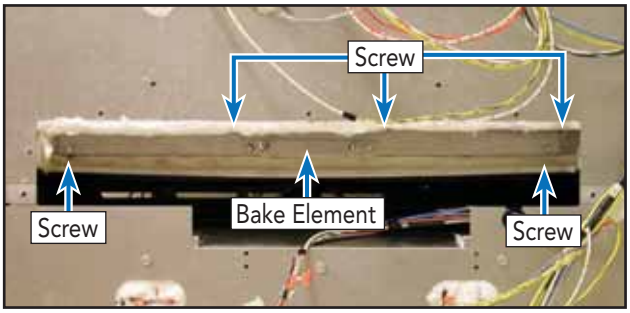


WARNING

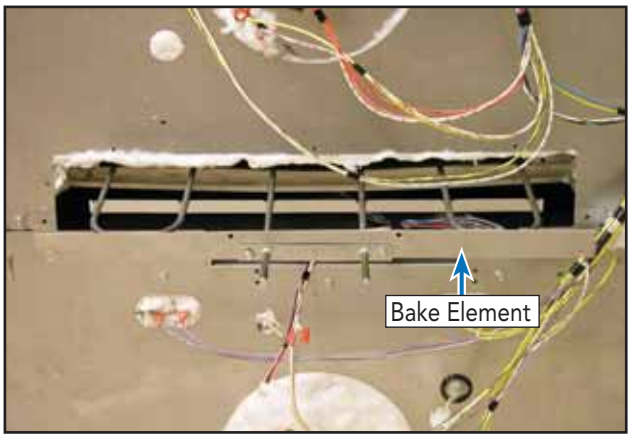
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power.

Bake Element (cont.)

6. Remove screws securing bake element to unit.



7. Slide bake element out.



8. Repair or replace bake element as necessary.

9. Reverse procedure to reinstall.

Oven Cooling Fan

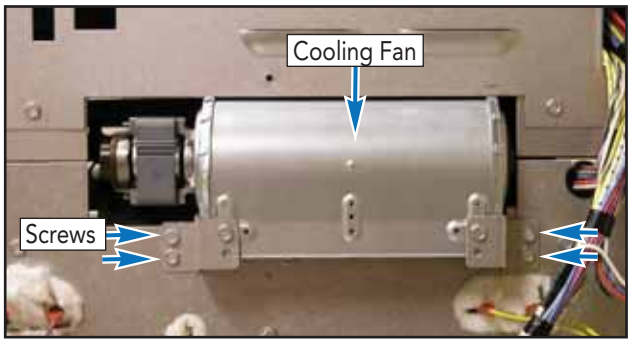
The DDOE is designed to circulate air around the control box area whenever the oven is switched on. The cooling fan has a Hall Effect Sensor that monitors the fan and communicates information to the relay board.

To access the cooling fan:

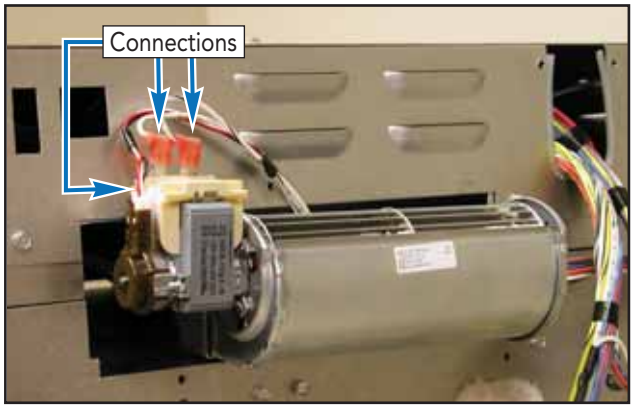
1. Slide unit out of installation.

2. Remove rear cover *(see Upper Rear/Rear Cover Disassembly, page 55)*.

3. Remove screws securing cooling fan.



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



5. Repair or replace cooling fan as necessary.

6. Reverse procedure to reinstall.

WARNING

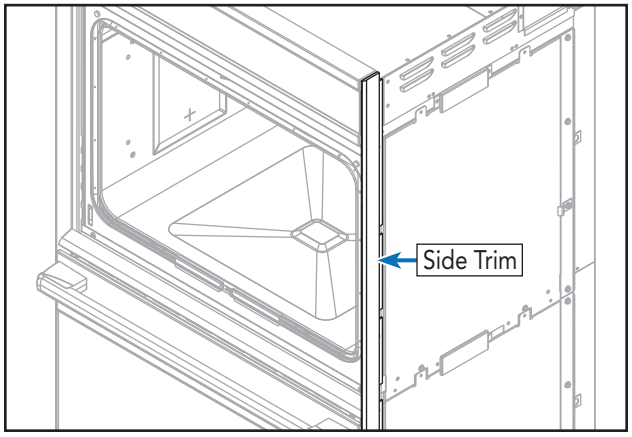
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect electrical power.

Meat Probe Socket

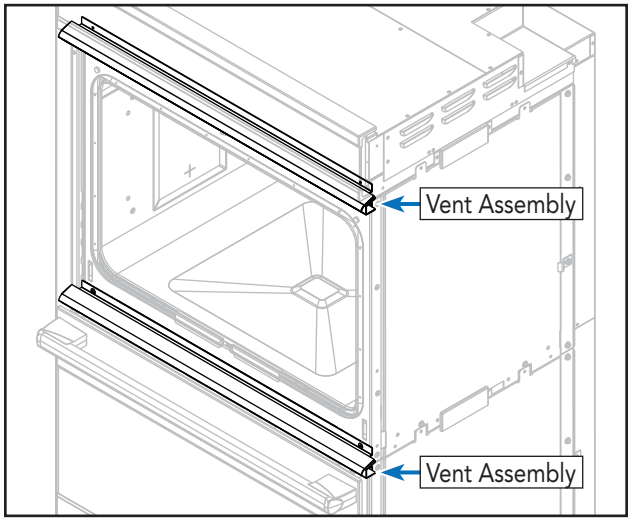
1. Slide unit out of installation (in order to replace the meat probe socket, the side cover has to be removed from the cabinet).

2. Remove door *(see Door Removal, page 54)* oven racks and rack supports *(see Rack Support, page 60)*.

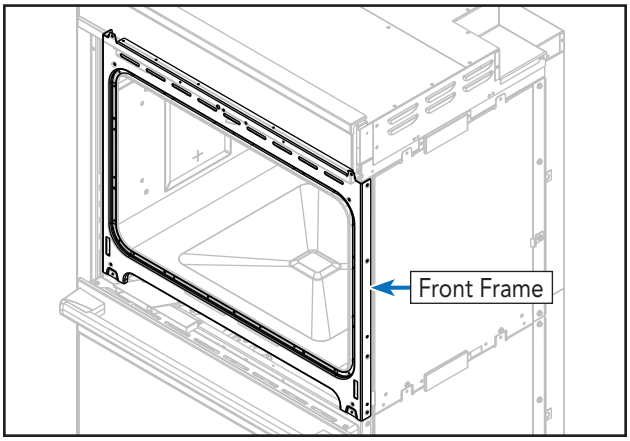
3. Remove screws and right side trim.



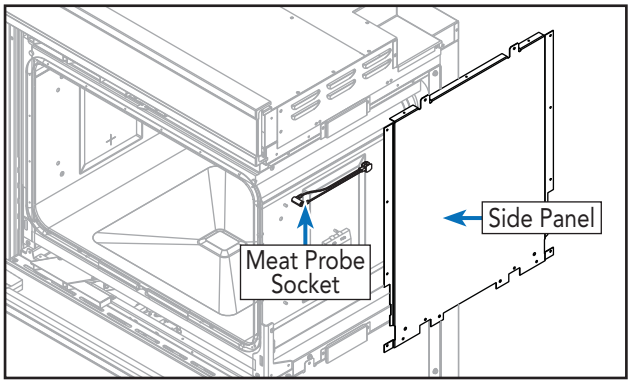
4. Remove screws and vent assemblies.



5. Remove screws and front frame.

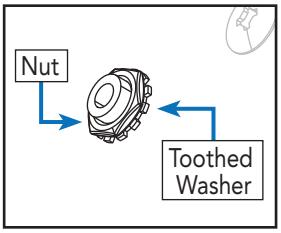


6. Remove side cover screws, slide out side cover and remove insulation.



7. Meat probe socket is now accessible.

8. From inside the oven cavity, remove nut and toothed washer to repair or replace meat probe socket.



9. Reverse procedure to reinstall.

Troubleshooting Guide

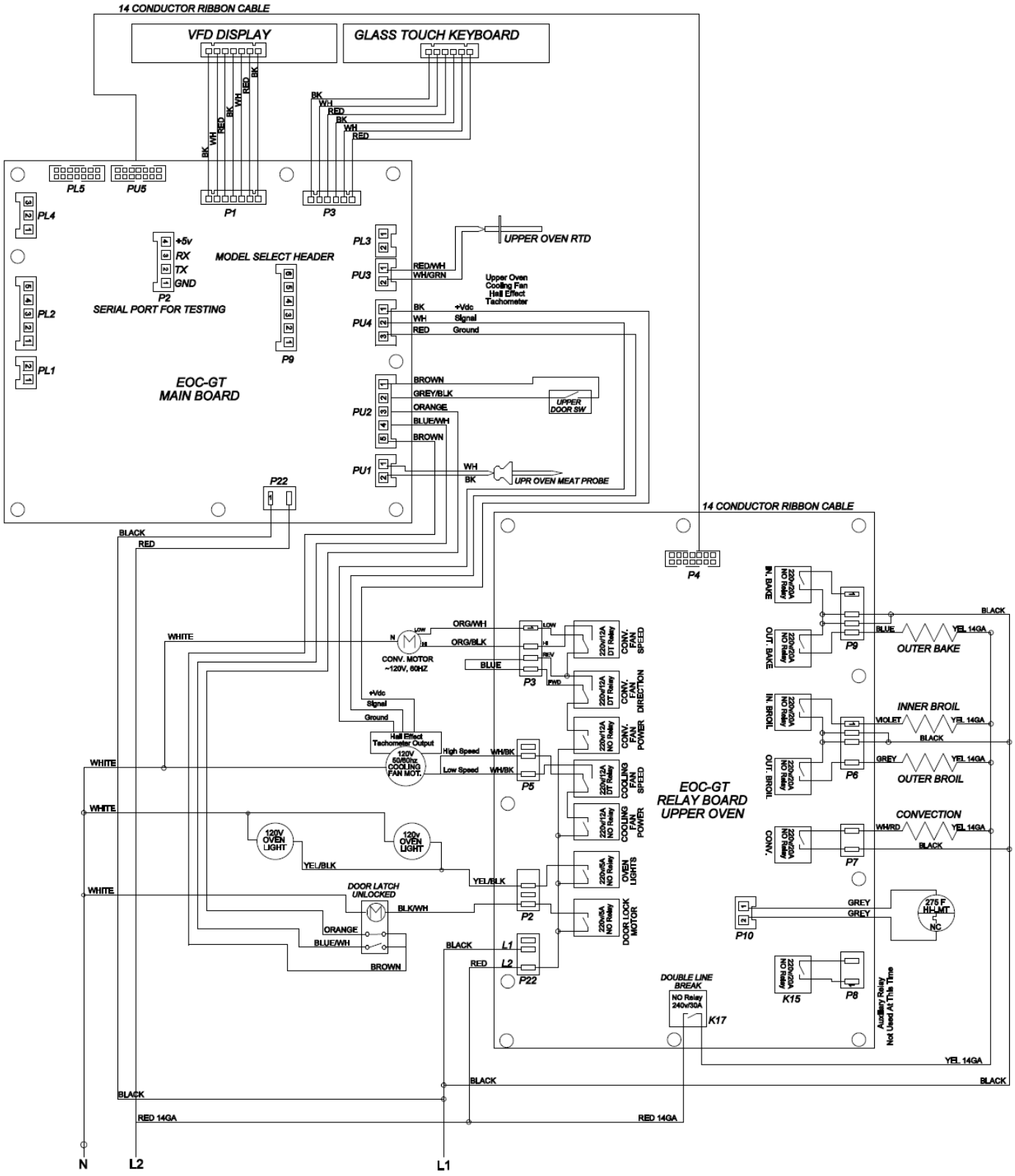
Below and on the following page are some general guides should a problem be detected. Please refer to the test procedures in this manual to determine the defective component.

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 Relay 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 relay board	Repair/replace defective wiring Test convection element Verify relay operation, wiring, and inputs
Oven lights inoperable	Defective oven wiring Light bulb Light switch Door switch	Repair/replace wiring Replace light bulb Test light switch Test door switch
No bake, broil, or oven lights, power to relay 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, or oven lights, 120 VAC at relay board (P1 white to black)	Defective oven wiring (shorted, open, or burned) Open Relay board	Repair/replace defective wiring Replace relay board (check operation of blower motor)
Bake element inoperable	Defective oven wiring Bake element Relay board	Repair/replace wiring Test bake element Verify relay operation, wiring, and inputs
Broil element inoperable	Defective oven wiring Broil element Relay 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 Open relay	Confirm resistance Replace selector Replace thermostat Replace relay board
No self-clean, bake and broil operate normally, oven lights operate, door will lock, no clean indicator light	Open door latch switch Open relay board Defective oven wiring (shorted, open, or burned)	Replace door latch assembly Replace relay 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 Relay board Defective oven wiring (shorted, open, or burned)	Replace door latch assembly Replace selector Replace relay 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	Replace door latch motor
	Oven sensor out of calibration	Ohm oven sensor
	Relay board	Replace relay board
	Open relay	Repair or replace defective relay
	Defective oven wiring (shorted, open, or burned)	Repair or replace defective wiring
Oven lights inoperable (bulbs OK)	Relay board	Replace relay board
	Open relay	Replace relay board
	Defective oven wiring (shorted, open, or burned)	Repair or replace defective wiring
Oven light will not work	Light bulb is burned out	Check bulb and replace if defective
	Supply voltage	Verify source voltage
Blower motor inoperable	Open blower motor	Check blower resistance
	Oven sensor	Ohm oven sensor
	Open relay	Replace relay board

Wiring Diagram – DSOE305T



Wiring Diagram – DDOE305T