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30" Freestanding Electric Range SERVICE MANUAL

MODEL: LDE3017ST LDE3017SB LDE3017SW

CAUTION

BEFORE SERVICING THE UNIT, READ THE SAFETY PRECAUTIONS IN THIS MANUAL.

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FORWARD

This LG Service Manual, "30" Freestanding Self-Cleaning Electric Range," provides the technician with information on the operation and service of the Freestanding Self-Cleaning Electric Range. It is to be used as a training Service Manual. For specific information on the model being serviced, refer to the "Owner's Manual" or "Tech Sheet" provided with the electric range.

SAFETY PRECAUTIONS

- Repairs of the appliance should be carried out by a licensed technician only. Incorrect repairs may result in dangerous situations. If you need repairs, contact an LG Service Center or your dealer.
- If the power cord is defective, it must be replaced by a qualified service agent with a UL listed range cord.
- Electrical leads and cables should not be allowed to touch the oven.
- Rating plate is located on the left side of warming drawer.
- The power supply of the appliance should be turned off when it is being repaired.

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.
- DO NOT Touch when the oven operates.
- The interior parts will be very hot.

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

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IMPORTANT SAFETY INSTRUCTIONS

Read and follow all instructions before using your oven to prevent the risk of fire, electric shock, injury to person, or damage when using the range. This guide don't cover all possible conditions that may occur. For further assistance contact your service agent or manufacturer.



This is the safety alert symbol. This symbol alerts you to potential hazards that can kill or hunt you and others. All safety messages will follow the safety alert symbol and either the word "WARNING" or "CAUTION". These word means :

WARNING

This symbol will alert you to hazards or unsafe practices which could cause serious bodily harm or death.

CAUTION

This symbol will alert you to hazards or unsafe practices which could cause bodily injury or property damage.

WARNING

- DO NOT step or sit on the door and install the Anti-Tip Bracket packed with range. - The range could be tipped and injury might result from spilled hot liquid, food, or the range itself.
- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.
- DO NOT touch heating elements or interior surfaces of oven.
- Heating element may be hot even though they are dark in color.
- Interior surfaces of an oven become hot enough to cause burns.
- During and after use, do not touch, or let clothing or other flammable materials contact heating elements or interior surfaces of oven until they have had sufficient time to cool.
- Other surfaces of the appliance may become hot enough to cause burns among these surfaces are oven vent openings and surfaces near these openings, oven doors, and windows of oven doors.
- DO NOT store items of interest to children in cabinets above a range or on the back guard of a range.
- Children climbing on the range to reach items could be seriously injured.

- Always use Pot Holders or oven mitts when removing food from the Warming Drawer. - You can be burned as cookware and plates will be hot.
- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- Be careful not to bend the fan blade
- Failure to do so can result in vibration, noise, and poor performance of convection when operating.
- Be careful not to scratch or chip the oven liner paint when you remove the oven light socket in the next step.
- Turn power OFF before removing the Warming Drawer.
- Be careful when removing and lifting the door.
- DO NOT lift the door by the handle.
- Failure to do so can result in personal injury as the door is very heavy.

IMPORTANT SAFETY INSTRUCTIONS

- Be sure your appliance is properly installed and grounded by a qualified technician.
- Do not repair or replace any part of the appliance unless specifically recommended in the manual.
 All other servicing should be referred to a gualified technician.
- Always disconnect power to appliance before servicing by removing the fuse or switching off the circuit breaker

A WARNING



• DO NOT step or sit on the door and install the Anti-Tip Bracket packed with range.

- The range could be tipped and injury might result from spilled hot liquid, food, or the range itself.

To reduce the risk of tipping of the range, the range must be secured by properly installed anti-tip devices. To check if the bracket is installed properly,

- Warming drawer : grasp the top rear edge of the Range and carefully attempt to tilt it forward.
- verify that the anti-tip devices are engaged.
- Storage drawer : Remove drawer and verify leveling leg is inserted into and fully secured by the anti-tip devices.

Refer to the installation manual for proper anti-tip bracket installation.

WARNING

- DO NOT touch heating elements or interior surfaces of oven.
- Heating element may be hot even though they are dark in color.
- Interior surfaces of an oven become hot enough to cause burns.
- During and after use, do not touch, or let clothing or other flammable materials contact heating elements or interior surfaces of oven until they have had sufficient time to cool.
- Other surfaces of the appliance may become hot enough to cause burns among these surfaces are oven vent openings and surfaces near these openings, oven doors, and windows of oven doors.

WARNING

- DO NOT store items of interest to children in cabinets above a range or on the back guard of a range.
- Children climbing on the range to reach items could be seriously injured.

IMPORTANT SAFETY INSTRUCTIONS

- Do Not Leave Children Alone Children should not be left alone or unattended in area where appliance is in use. They should never be allowed to sit or stand on any part of the appliance.
- Never Use Your Appliance for Warming or Heating the Room.
- Storage in or on Appliance Flammable materials should not be stored in an oven or near surface units. Be sure all packing materials are removed from the appliance before operating it. Keep plastics, clothes and paper away from parts of the appliance that may become hot
- Wear Proper Apparel Loose-fitting or hanging garments should never be worn while using the appliance.
- Do Not Use Water on Grease Fires Turn off oven to avoid spreading the flame. Smother the fire or flame by closing the door or use dry chemical, baking soda or foam- type extinguisher.
- Use Only Dry Potholders Moist or damp potholders on hot surfaces may result in burns from steam.

Do not let potholder touch hot heating elements. Do not use a towel or other bulky cloth.

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

SURFACE COOKING UNITS

- Use Proper Pan Size This appliance is equipped with one or more surface units of different sizes. Select utensils having flat bottoms large enough to cover the surface unit heating element. The use of undersized utensils will expose a portion of the heating element to direct contact and may result in ignition of clothing. Proper relationship of utensil to burner will also improve efficiency.
- Never Leave Surface Units Unattended at High Heat Settings Boil overs may cause smoking and greasy spillovers may ignite.
- Make Sure Reflector Pans or Drip Bowls Are in Place Absence of these pans or bowls during cooking may subject wiring or components underneath to damage.
- **Protective Liners** Do not use aluminum foil to line surface unit drip bowls or oven bottoms, except as suggested in the manual. Improper installation of these liners may result in a risk of electric shock, or fire.
- Glazed Cooking Utensils Only certain types of glass, glass/ceramic, ceramic, earthenware, or other glazed utensils are suitable for range-top service without breaking due to the sudden change in temperature.
- Utensil Handles Should Be Turned Inward and Not Extend Over Adjacent Surface Units – To reduce the risk of burns, ignition of flammable materials, and spillage due to unintentional contact with the utensil, the handle of a utensil should be positioned so that it is turned inward, and does not extend over adjacent surface units.
- Do Not Soak Removable Heating Elements Heating elements should never be immersed in water.
- Be sure you know which control pads operate each surface unit. Make sure you turned on the correct surface unit.

SELF-CLEAN OVENS

- 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 No commercial oven cleaner or oven liner protective coating of any kind should be used in or around any part of the oven.
- Clean in the self-clean cycle only parts listed in this manual. Before self-cleaning the oven, remove the broiler pan and any utensils from the oven.
- Never keep pet birds in the kitchen the health of birds is extremely sensitive to the fumes released during an oven selfclean cycle. Fumes may be harmful or fatal to birds. Move birds to well-ventilated room.
- Important Instruction In the event the self-clean mode "F" code goes on, or three long beeps sound, oven is malfunctioning in the self-clean mode. Turn off or disconnect appliance from power supply and have serviced by a qualified technician.

VENTILATING HOODS:

- Clean Ventilating Hoods Frequently Grease should not be allowed to accumulate on hood or filter.
- When flaming foods under the hood, turn the fan on.

OVEN

- Use Care When Opening Door Let hot air or steam escape before you remove or replace food in the oven
- Do Not Heat Unopened Food Containers Build-up of pressure may cause container to burst and result in injury.
- Keep Oven Vent Ducts Unobstructed the oven vent is located above the left rear surface unit. this area could become hot during oven use. Never block this vent and never place plastic or heatsensitive items on vent
- Placement of Oven Racks Always place oven racks in desired location while oven is cool. If rack must be moved while oven is hot, do not let potholder contact hot heating element in oven.
- **Do Not** allow aluminum foil or meat probe to contact heating elements.

GLASS/CERAMIC COOKING SURFACES

- Do Not Cook on Broken Cook-Top If cook-top should break, cleaning solutions and spillovers may penetrate the broken cook-top and create a risk of electric shock. Contact a qualified technician immediately.
- Clean Cook-Top With Caution If a wet sponge or cloth is used to wipe spills on a hot cooking area, be careful to avoid steam burn. Some cleaners can produce noxious fumes if applied to a hot surface.

DEEP FAT FRYERS:

• Use extreme caution when moving the grease kettle or disposing of hot grease.

MODEL & SERIAL NUMBER LABEL AND TECH SHEET LOCATIONS

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



SPECIFICATIONS

Model Number		LDE3017ST / LDE3017SB / LDE3017SW
Category		Double oven range
Overall	Width	30"
	Installation type	Freestanding
	Color availability	STS
Control	Oven	Keypad(Membrane)
	Cooktop	Keypad (Membrane)
	Display	Scroll VFD
	Electronic clock & timer	Yes
	Control lock capability	Yes
	Audible preheat signal	Yes
	Special function	Setting(7 categories)
		1. Convection auto conversion On/Off
		2. Thermostat Adjustment
		3. Select Language
		4. Preheating alarm light ON/OFF
		5. Adjust beeper volume
		6. Select fahrenheit or celsius temperature
		7. Change hour mode on Clock
Cooktop	Material	Ceramic glass
•	# of element	5
Power	LR	6"-1200W
	RR	6"-1200W
	CR	7"-100W
	LF	9"/6"-3000W/1400W
	RF	12"/9"-2700W/1700W
Oven	Capacity(cu.ft)	2.32(Upper)/4.38(Lower)
	Broil element	3200W(1600W*2, Upper)/3800W(Lower)
	Bake element	2100W(Upper)/2500W(Lower)
	Convection system	No(Upper)/Yes(Lower)
	Convection element	2000W(Lower)
	# of Racks	1(upper)/2(Lower)
	Interior oven light	1(upper)/2(Lower)
	Proof	Yes(Lower)
	Warm	Yes(Upper)/Yes(Lower)
	Favorites	Yes(Lower)
		1.Bread 2.Meat 3.Chicken
	Broiler pan	No
	Kids meal	Yes(upper)/No(Lower)
	Sabbath mode	Yes
Dimensions	Upper oven Interior(WxHxD)	24 1/2 x 8 11/16 x 18 15/16
(inch)	Lower oven Interior(WxHxD)	24 ¹ / ₂ x 16 ⁵ / ₁₆ x 18 ¹⁵ / ₁₆
	Exterior-Width	29 7/8
	Exterior-Height	36 (cooktop), 47 7/16 (Back Guard)
	Exterior-Depth	25 ¹³ / ₁₆ (Door), 28 ³ / ₁₆ (Handle)
	Net weight:Lbs(kg)	219.8(99.7)
Power	Rating	15.3KW(120/240V AC)/11.4KW(120/240V AC)

GENERAL INFORMATION

Upper oven

Rating Label

Model numbers are recorded on the rating label. Rating label is located on the upper front left corner of the upper oven frame. It can be seen by opening the upper oven door. Before ordering parts, write down the correct model and serial number from rating label. This avoids incorrect shipments and delays. Please refer to parts reference material when ordering replacement parts.

Functional Operation

Bake Mode (For both the Upper & Lower oven)

Top and hidden bottom elements operate during bake. Bake can be used to cook foods which are normally baked. Oven must be preheated.

Upper oven



Broil element

Open bake element

Low oven



Broil Mode (For both the Upper & Lower oven)

Top element operates during broil. Broil can be used to cook foods which are normally broiled. Preheating is not required when using broil. All foods should be turned at least once except fish, which does not need to be turned.

Broil element 6 Bers Open bake element Low oven **Broil element**

> Hidden bake element

Convection Bake / Roast Mode (For the Lower oven only)

Here Marthe Contraction Martin

Upper element, lower element, Rear element and fan operate during convection bake. Convection bake should be used for cooking casseroles and roasting meats. Oven should be preheated for best results when using convection bake. Pans do not need to be staggered. Cooks approximately 25% quicker than bake.



Cooking Guide

Refer to the owners manual for recommendations of times and temperatures. Times, rack position, and temperatures may vary depending on conditions and food type. For best results, always check food at minimum time. When roasting, choose rack position based on size of food item.

CONTROL PANEL FEATURES



UPPER OVEN

- **BAKE** : Use to select the Bake function of the upper oven.
- **②** SPEED BROIL : Use to select the Speed Broil function of the upper oven.
- **3 WARM :** Use to select the Warm function of the upper oven.
- **4 KIDS MEAL :** Use to select the Kids meal function of the upper oven.
- **OUPPER CLEAR OFF :** Use to stop cooking, cancel settings of the upper oven.
- **OUPPER LIGHT :** Use to turn the Oven lights of the upper oven on and off.
- UPPER SELF CLEAN: Use to select the Self Clean of the upper oven.
- **③ UPPER TIMER ON/OFF:** Use to set or cancel the timer of the upper oven.

LOWER OVEN

- **BAKE :** Use to select the Bake function of the lower oven.
- **BROIL**: Use to select the Broil function of the lower oven.
- CONV. BAKE : Use to select the Conv. bake function of the lower oven.
- CONV. ROAST : Use to select the Conv. roast function of the lower oven.
- WARM/PROOF : Use to select the Warm/Proof function of the lower oven.
- FAVORITE : Use to select the Favorite function of the lower oven.
- **LOWER CLEAR OFF**: Use to stop cooking, cancel settings of the lower oven.
- COVER LIGHT : Use to turn the Oven lights of the lower oven on and off.
- **WER SELF CLEAN**: Use to select the Self Clean of the lower oven.
- **LOWER TIMER ON/OFF**: Use to set or cancel the timer of the lower oven.

CONTROL PANEL FEATURES

COMMON FUNCTION

- **© CLOCK** : Use to set the time of day.
- SETTING : Use to set the time of day.
- START TIME : Use to set delay time. (Bake, Conv. Bake/Roast, Self clean only)
- COOK TIME : Use to set the length of the cook time. (Bake, Conv. Bake/Roast only)
- START : Use to START all functions in the oven. To activate LOCKOUT press and hold for 3 seconds.
- NUMER PADS : Use to enter a temperature and all times.

- A Single element : Left Rear, Right Rear Indicator
- B Double element : Left Front, Right Front Indicator
- C Warming Zone : Center Rear

A To turn on a SINGLE surface unit (Left Rear, Right Rear)



- 1. Press ON/OFF pad for the desired element position.
- Use (⊜/⊕) pad to choose the desired power setting. (⊜/⊕) is continuously accessible.
- B To turn on a DOUBLE surface unit (Left Front, Right Front)
- 1. Press ON/OFF pad for the desired element position.
- 2. Press SELECT for double or single element function.
- Use (⊖/⊕) pad to choose the desired power setting. (⊖/⊕) is continuously accessible.

NOTE:

- Each time a pad is touch a beep will sound.
- The power level decreases or increases by **0.5**
- from **9.0** through **3.0.** (by **0.2** from **3.0** through **1.0**)
- Lo is the lowest power level available.
- "HS" will appear when the unit is hot to touch





- 1. Press ON/OFF pad at the Warming zone control position.
- Use (⊖/⊕) pad to choose the desired power setting. (⊖/⊕) is continuously accessible.

NOTE:

- Each time a pad is touch a beep will sound.
- The controls for the warming zone allow for 5 different heat settings : Lo~Hi
- "HS" will appear when the unit is hot to touch.

1. SETTING THE CLOCK



2. START, CLEAN OFF AND ON/OFF PAD (FOR BOTH THE UPPER & LOWER OVEN)

- 1. Touch START pad to start oven.
- 2. Touch **UPPER or LOWER CLEAR OFF** pad to cancel a program during cooking or Erase during programming.
- Touch ON/OFF pad to start or cancel the surface unit.

3. TO TURN ON/OFF THE OVEN LIGHT (For both the Upper & Lower oven)

The oven light automatically turns ON when the door is opened. The oven light may also be manually turned ON or OFF by pressing the **UPPER or LOWER LIGHT** pad

NOTE: The oven light cannot be turned on if self-clean feature is activated.

4. TIMER ON/OFF (FOR BOTH THE UPPER & LOWER OVEN)



To cancel timer at any time, touch **UPPER or LOWER TIMER ON/OFF** pad.

NOTE:

- 1. If you press **UPPER or LOWER TIMER ON/OFF** pad once, this allows you to select "seconds" (for example: if you press "5" and "6", it means 56 seconds)
- If you press UPPER or LOWER TIMER ON/OFF pad twice, this allows you to select "minutes" (for example: if you press "5" and "6", it means 56 minutes)

5. SETTING PAD: 6 types of category 1) CONVECTION AUTO CONVERSION

- 1. Press SETTING pad once
- 2. Press "1" pad for ENABLE
- or "2" pad for DISABLE
- 3. Press START pad.

2) THERMOSTAT ADJUSTMENT

The oven temperature can be adjusted from $-35^{\circ}F$ (-19°C) to $35^{\circ}F$ (19°C).

NOTE: The thermostat adjustments made with this feature will just change Bake, Convection Bake and Convection Roast temperature.

To increase the oven temperature

For the Lower oven temperature adjustment.

- 1. Press **SETTING** pad 2 times for the lower oven, "L-Aj" will appear in the display.
- 2. Press the desired temperature.
- 3. Press START pad.

For the Upper oven temperature adjustment.

- 1. Press **SETTING** pad 3 times for the upper oven, "U-Aj" will appear in the display.
- 2. Press the desired temperature.
- 3. Press START pad.

To decrease the oven temperature

For the Lower oven temperature adjustment.

- 1. Press SETTING pad 2 times for the lower oven, "L-Aj" will appear in the display.
- 2. Press the desired temperature.
- 3. Press SETTING pad once to change the temperature into (–) value.
- 4. Press START pad.

For the Upper oven temperature adjustment.

- 1. Press **SETTING** pad 3 times for the upper oven, "U-Aj" will appear in the display.
- 2. Press the desired temperature.
- 3. Press **SETTING** pad once to change the temperature into (-) value.
- 4. Press START pad.

3) LANGUAGE SELECTION

(English, Spanish, French)

- 1. Press SETTING pad 4 times
- 2. Press "2" pad for SPANISH
- Press "3" pad for **FRENCH**
- 3. Press START pad

4) PREHEATING ALARM LIGHT ON/OFF

- 1. Press SETTING pad 5 times
- 2. Press "1" pad for ON or "2" pad for OFF
- 3. Press **START** pad

5) BEEPER VOLUME

- 1. Press **SETTING** pad **6 times**
- 2. Press "1" pad for loud level,
 - "2" pad for normal level,
 - "3" pad for low level,
 - "4" pad for mute level,
- 3. Press START pad

6) TEMPERATURE UNIT (°F or °C)

- 1. Press SETTING pad 7 times
- 2. Press "1" pad for °F
- or "2" pad for °C
- 3. Press START pad

7) HOUR MODE ON CLOCK(12HR or 24HR)

- 1. Press SETTING pad 8 times.
- 2. Press "1" pad for 12 Hr or "2" pad for 24 Hr.
- 3. Press **START** pad.

6. TIMED COOK, DELAYED TIMED COOK (For the Upper & Lower Bake, Lower CONV. Bake & Roast)



7. BROIL (For both the Upper & Lower oven)



8. CONVECTION BAKE

(For the Lower oven only)



9. CONVECTION ROAST (For the Lower oven only)



10. FAVORITES (For the Lower oven only)



11.WARM(For both the Upper & Lower oven)



Lower oven

12. PROOF(For the Lower oven only)



13. KIDS MEAL(For the Upper oven only)



14 SABBATH MODE (For both the Upper & Lower oven)

Press and hold the **START** pad 3 seconds (In order to activate or deactivate SABBATH MODE)

15. LOCKOUT

(For the Upper & Lower Door lock, Oven & Cooktop control lock)

Press and hold the **START** pad 3 seconds (In order to activate or deactivate LOCKOUT)

16. SELF CLEAN (For the Upper & Lower oven)



This section instructs you on how to service each component inside the range. The components and their locations are shown below.

COMPONENT LOCATIONS



REMOVING THE BACK, CONTROL COVER AND KEY MEMBRANE ASSEMBLY

For Model : LDE3017ST, LDE3017SB, LDE3017SW

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- 1. Turn off the electrical supply going to the range.
- 2. Pull the range away from the wall so that you can access the rear panel.
- 3. Remove the 3 screws from the rear control cover and remove the cover.
- 4. Remove the 18 screws from the rear back cover and remove the cover.



5. Remove 6 screws from Cooktop system PCB and SMPS PCB after unpluging connectors.



6. Remove 12 screws and unplug 2 membrane keytails from other PCBs.



7. Remove 8 screws from PCB Supporter and then you can separate a membrane assembly from the controller





8. For servicing the Key Membrane, the controller sub assembly should be separated in whole.



REMOVING THE BACK, CONTROL COVER AND KEY MEMBRANE ASSEMBLY

For Model : LDE3017ST / 01, LDE3017SB / 01, LDE3017SW / 01

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

A CAUTION

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- 1. Turn off the electrical supply going to the range.
- 2. Pull the range away from the wall so that you can access the rear panel.
- 3. Remove the 3 screws from the rear control cover and remove the cover.
- 4. Remove the 18 screws from the rear back cover and remove the cover.



5. Remove 6 screws from Cooktop system PCB and SMPS PCB after unpluging connectors.



6. Remove 12 screws and unplug 2 membrane keytails from other PCBs.



7. Remove 8 screws from PCB Supporter and then you can separate a membrane assembly from the controller





8. For servicing the Key Membrane, the controller sub assembly should be separated in whole.



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REMOVING THE CONTROL POWER SUPPLY AND POWER CONTROL BOARD (PCB)

For Model : LDE3017ST, LDE3017SB, LDE3017SW

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

CAUTION

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- 1. Turn off the electrical supply going to the range.
- 2. Pull the range away from the wall so that you can access the rear panel.
- 3. Remove back cover & control cover (See step 3~4 on page 3-2)

4. There are 3 PCB's (power control board). When you check PCB, check the proper pcb in default mode and check main pcb.

NOTE: Refer to the page 5-1~5-4 for composition of control board

Cook-top Relay PCB Main PCB



Oven — Relay PCB

5. To remove the control power supply:

- a) Disconnect 1 connector.
- b) Remove the 2 screws.

1 Connector



2 Screws

REMOVING THE CONTROL POWER SUPPLY AND POWER CONTROL BOARD (PCB)

For Model : LDE3017ST / 01, LDE3017SB / 01, LDE3017SW / 01

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

A CAUTION

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- 1. Turn off the electrical supply going to the range.
- 2. Pull the range away from the wall so that you can access the rear panel.
- 3. Remove back cover & control cover (See step 3~4 on page 3-2)

4. There are 3 PCB's (power control board). When you check PCB, check the proper pcb in default mode and check main pcb.

NOTE: Refer to the page 5-1~5-4 for composition of control board

Oven System PCB Cooktop System PCB



Oven – Relay PCB

- 5. To remove the control power supply:
 - a) Remove a wiring of main harness from the control board
 - b) Disconnect 1 connector.
 - C) Remove 2 screws.
 - 1 Connector



2 Screws

REMOVING THE SURFACE ELEMENTS AND THE CERAMIC GLASS COOKTOP

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

CERAMIC GLASS COOKTOP REMOVAL

Step. 1

Unplug the cord or disconnect power

Step. 2

Open oven door and remove the 3screws located at the front of the cook-top, then close the door.





Step. 3

Lift up the cooktop front and Remove the ground screw securing ground wire



Ground Screws

Step. 4

Slightly lift up and pull up the cook-top and then unplug the 2 connectors at the back by squeezing side tabs



2 Connectors

Step. 5

Protect the cooktop surface and turn the assembly over.



Bracket screws

Step. 6

To remove the surface elements

- a) Remove the wires from the element and limiter terminals.
- b) Remove the element bracket screw (shown above) for the element you are servicing.



d) Carefully lift the bottom of the bracket just far enough to remove the element.

REASSEMBLY NOTE: When you reinstall the element make sure that the wires are inserted into the correct tap then reinstall the bracket screw to secure it to the cooktop.

REMOVING THE DOOR LATCH & UPPER DOOR SWITCH (For the Upper oven only)

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

CAUTION

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- 1. Turn off the electrical supply going to the range.
- 2. Open the upper oven door.
- 3. Raise the cooktop (see page 3-4 for the procedure).
- 4. To remove the upper door latch:
 - a) Remove the two screws from the upper door latch and remove the latch.



2 Screws

b) Remove the door latch from the burner box and unhook the actuating rod.



- 5. To remove the upper door switch:
 - a) If not already done, raise the cooktop (see page 3-4 for the procedure).
 - b) Remove the Upper side brackets by losening the screws.



Upper side bracket

c) Remove the upper door switch from the range. To do this, squeeze tabs and use a ratchet extension or a small socket, and tap it out of the hole with a hammer.



d) Disconnect the wires from the terminals.



REMOVING THE DOOR LATCH & LOWER DOOR SWITCH (For the Lower oven only)

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

CAUTION

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- 1. Turn off the electrical supply going to the range.
- 2. Remove the Upper & Lower door. (See page 3-17, 3-18 for the procedure).
- 3. Remove the Side panaels. (See page 3-21 for the procedure.)
- 4. To remove the Lower door latch.
 - a) Remove the Lower side brackets(left&right) by loosening up the screws.



b) Remove 4 screws to detach 2 hinge suppoters.



4 screws

c) Remove 2 screws to widen the space between Upper & Lower cavities.





2 screws

- d) Tilt the Upper cavity cautiously, make sure that the controller does not fall down the floor.
- e) Remove 2 screws to replace the lower latch.



2 screws

f) Pull out the Lower latch from the bar.



- 5. To remove the lower door switch:
 - a) If not already done, raise the cooktop (see page 3-4 for the procedure).
 - b) Remove the lower door switch from the range. To do this, squeeze tabs and use a ratchet extension or a small socket, and tap it out of the hole with a hammer.



c) Disconnect the wires from the terminals.



REMOVING THE BROIL ELEMENT

A WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

CAUTION

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- 1. Turn off the electrical supply going to the range.
- 2. Remove the cooktop (See page 3-4 for the procedure).
- 3. Remove 12 screws to detach the Insulator cover & Ceramic fiber.





Ceramic fiber

4. Remove 6 screws.

Pull the Upper broil element assembly forward so that you can access connectors and disconect wires.





5. Remove 6 screws to detach the holder assembly.



6. Remove the glass tube holder by pushing aside both side tabs.



7. Remove the holder bracket, glass fiber & brass sheet in order.



Holder bracket

Ceramic fiber & Brass sheet

8. Turn the element assemblly upside down. Remove 2 screws to detach the mesh.



Mesh



9. Pull up the broil elements and remove from the assembly.



REMOVING THE BROIL ELEMENT (For the Lower oven)

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

CAUTION

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- 1. Turn off the electrical supply going to the range.
- 2. Open the oven door and remove the racks from inside the oven.
- 3. To remove the broil element:
 - a) Remove the 4 screws from the front and rear brackets.



2 Rear bracket screws

b) Pull the element forward so that you can access the terminals and disconnect the wires.



REMOVING THE EXPOSED BAKE ELEMENT (For the Upper oven only)

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

CAUTION

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- 1. Turn off the electrical supply going to the range.
- 2. Open the oven door and remove the racks from inside the oven.
- 3. To remove the Upper bake element:
 - a) Remove the 2 screws from the rear bracket.



b) Pull the element forward so that you can access the terminals and disconnect the wires.



REMOVING THE HIDDEN BAKE ELEMENT (For the Lower oven only)

- 1. Unplug range or disconnect power.
- 2. Pull the range out of its mounting location so that you can access the rear of the unit.
- 3. Remove the rear panel from the unit. (See step 3 on page 3-2 for procedure)
- 4. Remove the 4 screws to detach the Powercord protection cover from the body.



Powercord protection cover



Remove the 4 screw to detach the bake heater cover and barrier

- 5. Set the Powercord protection cover aside.
- 6. Cut the 9 points of flange and remove the bake heater cover.





7. Bend the insulation glass fiber up.



8. Remove one screws



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



REPLACING THE MOUNTING BRACKET



1. Drive the two screws

LGE Internal Use Only

REMOVING THE CONVECTION ELEMENT, FAN BLADE AND FAN MOTOR (For the Lower oven only)

- 1. Disconnect power and remove oven racks.
- 2. Pull the range out of its mounting location so that you can access the rear of the unit.
- 3. Remove the rear panel from the unit. (See step 3~4 on page 3-2 for procedure)
- 4. Disconnect the wire connection.



5. Remove the four Fan cover screws and set the fan cover aside.



6. Remove the two convection element screws and pull the element forward.



7. **To remove Fan blade,** remove Nut by screwing clockwise. Fan blade can be replaced from inside oven.

CAUTION

- Be careful not to bend the fan blade
- Failure to do so can result in vibration, noise, and poor performance of convection when operating.
- 8. **To remove Fan motor assembly**, disconnect wire connection and remove the three bracket screws
- 9. Pull the fan motor assembly forward.







REMOVING THE OVEN LIGHT & SOCKET ASSEMBLY (For both the Upper & Lower oven)

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

CAUTION

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.

To replace:

- 1. Unplug range or disconnect power.
- 2. Turn the glass bulb cover in the back of the oven counterclockwise to remove.
- 3. Turn bulb counterclockwise to remove from socket.
- 4. Replace bulb and bulb cover by turning clockwise.



- Be careful not to scratch or chip the oven liner paint when you remove the oven light socket in the next step.
- 5. Use a screwdriver and bend the clips on the oven light socket away from the edges of the liner hole, and pull the socket out of the liner.
 NOTE: If it is too difficult to remove the socket from the front of the oven, you will have to push the socket out from the back of the unit.



5. Disconnect the wires from the socket terminals.



<Viewed From Rear Panel>

REMOVING THE LATCH DRIVE ASSEMBLY (For both the Upper & Lower oven)

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

CAUTION

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- 1. Turn off the electrical supply going to the range.
- 2. Pull the range away from the wall so that you can access the rear panel.
- 3. Remove the back cover & control cover (see step 3~4 on page 3-2).
- 4. Disconnect the wires from the latch drive motor and switch.
- 5. Remove the 3 mounting screws from the latch drive.



6. Unhook the Latch rod from the cam.

DOOR LOCKING MECHANISM

The door lock assembly is located at the back side of range.

The structural elements are as below.

1. When the oven control is programmed and started for the Self clean and Lock out mode, PCB (Power control board) chip operates the motor.



- 2. The cam moves the door hook connected to latch rod from unlocked position to locked position (from locked Position to unlocked position)
- 3. The cam activates the micro switch that causes the motor to stop.
- 4. The locked status remains until the range temperature drops to approximately 500F after end of the self clean or lock out feature is reactivated. The motor operates to unlock door at that time.

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REMOVING THE OVEN TEMPERATURE SENSORS (For both the Upper & Lower oven temperature sensor)

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

CAUTION

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- 1. Turn off the electrical supply going to the range.
- 2. Open the oven door and remove the racks from the oven.
- 3. Pull the range away from the wall so that you can access the rear panel.
- 4. Remove the 18 screws from the rear panel and remove the panel (see step 3 on page 3-2).



5. To remove an oven temperature sensor, disconnect the connector from the main harness and remove the two mounting screws in oven cavity.



Main oven Sensor

REMOVING & REPLACING THE LIFT-OFF OVEN DOOR (For the Upper door)

A CAUTION

- Be careful when removing and lifting the door.
- DO NOT lift the door by the handle.
- The door is very heavy.

UPPER OVEN

To remove the door:

Step. 1

Fully open the door.

Step. 2

Lift up on the hinge lock toward the oven frame until they stop.

Step. 3

Close the door to 30 degrees (you will feel the door stop). The hinge lock will contact the oven frame.

Step. 4

On both sides of the door, press down on the release buttons on each hinge.

Step. 5

Lift door up until it is clear of the hinge.



about 30°





about 30°



To replace the door:

Step. 1

Be sure both hinges are in a 30 degree position.

Step. 2

Slide the door back onto the hinges until you hear a solid click and the release buttons have engaged.

Step. 3

Fully open the door.

Step. 4

Push the hinge locks down onto the hinge.

Step. 5

Close the oven door.







about 30°





REMOVING & REPLACING THE LIFT-OFF OVEN DOOR (For the Lower door)

A CAUTION

- Be careful when removing and lifting the door.
- DO NOT lift the door by the handle.
- Failure to do so can result in personal injury as the door is very heavy.

Slot

Hinge

lock

LOWER OVEN

To remove the door:

Step. 1

Fully open the door.

Step. 2

Pull the hinge locks up toward the door frame to the unlocked position.

Step. 3

Firmly grasp both sides of the door at the top.

Step. 4

Close door to the door removal position, which is approximately 5 degrees.

Step. 5

Lift door up and out until the hinge arm is clear of the slot.



Lock

Unlock

To replace the door:

Step. 1

Firmly grasp both sides of the door at the top.

Step. 2

With the door at the same angle as the removal position, seat the indentation of the hinge arm into the bottom edge of the hinge slot. The notch in the hinge arm must be fully seated into the bottom edge of the slot.



Step. 3

Open the door fully. If the door will not open fully, the indentation is not seated correctly in the bottom edge of the slot.

Step. 4

Push the hinge locks down against the front frame of the oven cavity to the locked position.

Step. 5 Close the oven door.



REMOVING THE UPPER OVEN DOOR HANDLE & GLASS (For the Upper door)

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- 1. Remove the oven door from the range (see page 3-17 for the procedure).
- 2. Place the upper oven door on a padded work surface with the front glass facing down.
- 3. Remove the 2 top door screws.



4. Remove the three bottom screws from the door liner.



3 Bottom liner screws

5. Lift the liner assembly off the front glass and set it aside.

6. To remove the door handle & trim (for Stainless model)a) Remove the 4 door handle screws and lift the door handle off door trim and slide up the door trim.



6. To remove the door handle trim & glass (for White / Black model)

a) Remove the handle and glass trim screws



b) Lift the door handle off door trim



c) Slide up the door trim and pull the glass trim forward
7. To remove a hinge receptacle assembly:

- a) Remove the 4 top liner screws (See step 3 on page 3-19)
- b) Place the door liner assembly on a padded work surface with the hinge receptacles over the edge.
- c) Lift the hinge receptacle out of the door liner slot.





8. To remove the oven door glass assembly:

- a) Remove the 8 screws.
- b) Lift the insulation cover off the door liner.



Insulation cover

c) Lift the inner oven door glass and bracket assembly out of the door liner.



REASSEMBLY NOTE: When you reinstall the insulation around the oven door glass, make sure that the insulation is not visible in the glass after the door is reassembled.

REMOVING THE OVEN DOOR HANDLE & GLASS (For the Lower door)

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- 1. Remove the oven door from the range (see page 3-17 for the procedure).
- 2. Place the oven door on a padded work surface with the front glass facing down.
- 3. Remove the 4 top door screws.



4. Remove the three bottom screws from the door liner.



3 bottom liner screws

5. Lift the liner assembly off the front glass and set it aside.

6. To remove the door handle & trim (for Stainless model)a) Remove the 4 door handle screws and lift the door handle off door trim and slide up the door trim.



6. To remove the door handle trim & glass (for White / Black model)

a) Remove the handle and glass trim screws



b) Lift the door handle off door trim



c) Slide up the door trim and pull the glass trim forward

7. To remove a hinge hanger assembly:

- a) Remove the 4 top liner screws (See step 3 on page 3-14)
- b) Place the door liner assembly on a padded work surface with the hinge hangers over the edge.
- c) Remove the two bottom screws.
- d) Lift the hinge hanger out of the door liner slot.



8. To remove the oven door glass assembly:

- a) Remove both hinge hangers (see step 7).
- b) Remove the 8 screws.
- c) Lift the insulation cover off the door liner.



d) Lift the inner oven door glass and bracket assembly out of the door liner.



REASSEMBLY NOTE: When you reinstall the insulation around the oven door glass, make sure that the insulation is not visible in the glass after the door is reassembled.

REMOVING THE OVEN DOOR GASKET (For the Upper &Lower door gaskets)

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

CAUTION

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- 1. Open the oven door to its fully down position.
- 2. Pull the oven door gasket clips out of the liner holes until all of the clips are removed.



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

Liner Hole



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

REMOVING A SIDE PANEL

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

- Be careful when you work on the electric range handling the sheet metal part.
- Sharp edge may be present and you can cut yourself.
- 1. Turn off the electrical supply going to the range.
- 2. Remove the oven door from the range (see page 3-17 for the procedure).
- 3. Pull the range away from the wall so you can access the back of the unit.
- 4. Remove the 18 screws from the rear panel and remove the panel (see step 3~4 on page 3-2).
- 5. Raise the cooktop (see page 3-4 for the procedure). **NOTE:** Position the side of the cooktop so that it does not rest on the side panel that you are removing.
- 6. Remove the two screws from the top rear of the side panel.



7. Remove the two screws from the left or right side panel.



8. Pull the back of the side panel out from the range approximately 10°.



9. Push forward and remove the side panel.

COMPONENT TEST

Before testing any of components, perform the following checks:

NOTE:

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

WARNING

- Disconnect power supply cord from the outlet before servicing
- Replace all panels and parts before operating
- Reconnect all grounding devices after servicing
- Failure to do so can result in death or electrical shock

NOTE: Below Ω value were tested at room temperature (77F/25°C)

Components	Test procedures	Results
Convection Motor	 Refer to page 3-13 for the servicing procedure Measure the resistance (Multiple meter scale: R x 1) 	Normal: Approximately 17 Ω If not replace Abnormal: Infinite (open) below 5Ω (shorted)

Components	Test procedures	Results
Door locking Motor	 1. Refer to page 3-15 for the servicing procedure 2. Measure the resistance (Multiple meter scale: R x 1000) 	Normal: Approximately 2.6 kΩ ± 10% If not replace Abnormal: Infinite(open) below 5Ω (shorted)
Micro Switch	ON position (Unlock position) OFF position (Lock position)
	$ \begin{array}{c} & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & $	Normal : Infinite
	NOTE: The Micro switch will be held for 13 seconds	during lock or unlock.
Oven Sensor	 Refer to page 3-16 for the servicing procedure Measure the resistance after cooling down (Multiple meter scale: R x 1000) 	Normal: Approximately 1.09 k $\Omega \pm 10\%$ If not replace
		NOTE: Ω Value was tested at room temperature (77F/25°C)

Components	Test procedures	Re	sults
Door switch	 Refer to page 3-5 for the servicing procedure Measure the resistance after cooling down (Multiple meter scale: R x 1) 	Door open	Door closed
		Continuity	Infinite
Oven lamp	 Measure the resistance after cooling down (Multiple meter scale: R x1) 	Normal: Below If not r	5 Ω. eplace
Upper oven Broil heater	 Remove wire leads Measure resistance after cooling down 	Normal : Appro Abnomal : Infin	-
		NOTE: Ω Val at room temp (77F/25°C) Be careful the sensitive to te	e element is

Components	Test procedures	Results
Upper oven Bake heater	 Remove wire leads Measure resistance after cooling down 	Normal : Approximately 26.6Ω Abnomal : Infinite(opened)
	The second secon	NOTE: Ω Value was tested at room temperature (77F/25°C) Be careful the element is sensitive to temperature.
Lower oven Broil heater	 Remove wire leads Measure resistance after cooling down 	Normal : Approximately 14.7Ω Abnomal : Infinite(opened)
		NOTE: Ω Value was tested at room temperature (77F/25°C) Be careful the element is sensitive to temperature.
Lower oven Conv. heater	 Remove wire leads Measure resistance after cooling down 	Normal : Approximately 27.9Ω Abnomal : Infinite(opened)
		NOTE: Ω Value was tested at room temperature (77F/25°C) Be careful the element is sensitive to temperature.
Lower oven Bake heater	 Remove wire leads Measure resistance after cooling down 	Normal : Approximately 22.5Ω Abnomal : Infinite(opened)
		NOTE: Ω Value was tested at room temperature (77F/25°C) Be careful the element is sensitive to temperature.

Components	Test procedures	Results
Appliance outlet	1. Test for voltage	Normal: Approximately 120V
	 If no voltage is present at outlet, Press the switch of located on the control console 	
	NOTE: The circuit breaker for the appliance outlet is a That may trip if the appliance plugged into it e To reset the circuit breaker, press the circuit b	xceeds 15amps.
Appliance outlet circuit breaker	 If no voltage is present at outlet, Unplug the cord or disconnect power Remove the back cover (refer to the page 3-2) Test the circuit breaker resistance 	
		Normal: Below 1 Ω. If not replace

Components	Test procedures	Results
Single surface units: Left Rear(LR) Right Rear(RR) Element	 Refer to page 3-4 for the servicing procedure Set the Multiple meter scale to the R x 1 Disconnect wires from cook-top elements Touch the ohmmeter test leads to the element terminal and 1A. The meter should indicate 46 Ω ± 10% 	
	Element terminal	Normal: Approximately 46 Ω, If not replace
	5. Touch the ohmmeter test leads to limiter terminals 1A and 2A. The meter should indicate continuity. (0Ω)	
		Normal: continuity (below 0.5 Ω) If not replace
	 6. Touch the ohmmeter test leads to limiter terminals 1B and 2B. With the temperature below 150°F, the meter should indicate an open circuit(infinite). With the temperature above 150°F, the meter should indicate continuity (0Ω). 	Below 150°F \rightarrow open circuit(infinite). Above 150°F \rightarrow continuity (0 Ω)

Components	Test procedures	Results
Dual surface unit: Left Front(LF) Element	1. Refer to page 3-4 for the servicing procedure2. Set the Multiple meter scale to the R x13. Disconnect wires from cook-top elements4. Touch the ohmmeter test leads to the (E1 & 1A) and (E2 & 1A) the meter should indicate : $- (E1 & 1A) \rightarrow 40 \Omega \pm 10\%$ $- (E2 & 1A) \rightarrow 35 \Omega \pm 10\%$	
		Normal: Approximately 40 Ω
		Normal: Approximately 35 Ω
	 5. Touch the ohmmeter test leads to limiter terminals 1A and 2A.the meter should indicate continuity (0 Ω) 	Normal: continuity (below 0.5 Ω) If not replace
	 6. Touch the ohmmeter test leads to limiter terminals 1B and 2B. With the temperature below 150°F, the meter should indicate an open circuit(infinite). With the temperature above 150°F, the meter should indicate continuity (0 Ω). 	Below 150°F \rightarrow open circuit(infinite). Above 150°F \rightarrow continuity (0 Ω)

Components	Test procedures	Results
Dual surface unit: Right Front(RF) Element	 Refer to page 3-4 for the servicing procedure Set the Multiple meter scale to the R x1 Disconnect wires from cook-top elements Touch the ohmmeter test leads to the (E1 & 1A) and (E2 & 1A) the meter should indicate : (E1 & 1A) → 32 Ω ± 10% (E1 & 1A) → 55 Ω ± 10% 	
		Normal: Approximately 32 Ω
		Normal: Approximately 55 Ω
	 5. Touch the ohmmeter test leads to limiter terminals 1A and 2A.the meter should indicate continuity (0 Ω) 	Normal: continuity (below 0.5 Ω) If not replace
	 6. Touch the ohmmeter test leads to limiter terminals 1B and 2B. With the temperature below 150°F, the meter should indicate an open circuit(infinite). With the temperature above 150°F, the meter should indicate continuity (0 Ω). 	Below 150°F \rightarrow open circuit(infinite). Above 150°F \rightarrow continuity (0 Ω)

Components	Test procedures	Results
Center Rear(CR) Element : Warming Zone (Plane Heater)	 Refer to page 3-4 for the servicing procedure Set the Multiple meter scale to the R x 1 Disconnect wires from CR elements Touch the ohmmeter test leads to the between element terminal. The meter should indicate 571 Ω ± 10% 	
	Element terminal	Normal: Approximately 571 Ω, If not replace

COMPOSITION OF CONTROL

Oven system PCB



Cooktop system PCB



COMPOSITION OF CONTROL

Oven relay PCB



SMPS PCB



COMPOSITION OF CONTROL

Cooktop display



Oven display (VFD)



DIAGNOSIS THROUGH SCHEMATIC

For Model : LDE3017ST, LDE3017SB, LDE3017SW



DIAGNOSIS THROUGH SCHEMATIC

For Model : LDE3017ST / 01, LDE3017SB / 01, LDE3017SW / 01



CHECK THE FAILURE CODE (F-code)

When the oven has some failure on cooking

- Oven may stop operating and F-code will display in display window.
- Some F-codes display immediately(F-3,F-9,F-19), but other codes will store in EEPROM memory and not displayed

F-codes can only be viewed by following the below Step

- 1. press the "clear" key
- 2. Press and Hold "LOWER BAKE" and "LOWER BROIL" key for 3 seconds

If the oven has some failure, the oven will show the failure code, like FIG. 1 It shows the type of F-code and times of occurred failure



< FIG. 1 >

If the oven does not have any failure, the oven will display like FIG. 2



< FIG. 1 >

NOTE: After checking the failure code, press the "CLEAR" key

SAFETY CAUTION & ERROR CODE SUMMARY

1.1 Safety Caution

• Unless SVC manual indicate that 'power is on', normal state is power off.

1.2 Error Code Summary

Code	Description	Operation
F-1	Opened Sensor	Upper Oven Thermistor remains open for over 1 min, after cook starts during cooking.
F-2	Shorted Sensor	Upper Oven Thermistor is short for over 1 min after cook starts during cooking.
F-3	Key short Error	When some key is continuously short for \geq 60 seconds. (except oven temp \geq 500)
F-4	Opened Sensor	Lower Oven Thermistor remains open for over 1 min, after cook starts during cooking.
F-5	Shorted Sensor	Lower Oven Thermistor is short for over 1 min after cook starts during cooking.
F-6	Oven hot	Upper oven temperature is over 650°F continuously during 2 minutes on cooking except self cleaning.
F-8	Shorted Sensor	Upper Temp Probe Thermistor is shorted over 1 minute after cook starts.
F-9	No heating	If current upper oven temperature does not exceed 150°F or is lower than the start temperature over 5 minutes after preheating where door is closed. (EXCEPT PROOF and WARM)
F-10	Door Lock Fail	In case of upper oven Door Lock Failure in operating Lock motor
F-11	Comm Error	The communication error happened between Cook Top PCB and Oven PCB over 10 seconds in the self clean mode.
F-16	Oven hot	Lower oven temperature is over 650°F continuously during 2 minutes on cooking.
F-18	Probe shorted sensor	Probe Thermistor is short for over 1 min after cook starts during cooking.
F-19	No heating	If current lower oven temperature does not exceed 150°F or is lower than start temperature over 5 minutes on preheating where door is closed. (EXCEPT PROOF and WARM)
F-20	Door Lock Fail	In case of Lower Door Lock Failure in operating Lock motor

Symptom	Check Point
1. Power Failure (Dead) 2. No Display	 Check Electric Wiring Check the thermostat Check the SMPS PCB









Symptom	Check Point
1. No heating 2. F-9 3. F-19	 Check Electric Wiring The Heater's Resistance. Check the Sensor (thermistor).



Heater resistor



Oven does not heat (including F-9, F-19 Error)



Check the electric wiring

- 1. Harness of Relay connection.
- 2. Each heater's connection.
- 3. System and Relay PCB connection(CN11, CN12)

UPPER



LOWER







Harness connection check



Oven does not heat (including F-9, F-19 Error)

Measure the Resistor of each heater Between the DLB Relay's L2 and each heater Relay's Harness point of Figure 1

(1, 2, 3 and 5)

(measure the resistance after cooling down) Normal

Resistor	Min	Max
upper Bake	22.0	29.0
upper broil	45.0	55.0
lower conv.	25.0	32.0
lower bake	20.0	25.0
lower broil	12.0	17.0

UPPER



Bake



LOWER



Bake













Broil

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LGE Internal Use Only

Oven does not heat (including F-9, F-19 Error)



Check the value of thermistor by using the test mode

- To enter the testmode, follow these steps:
 - 1. press the "clear" key
 - 2. press the "LOWER BAKE", "LOWER BROIL" key at the same time for one second



3. press the "LOWER BAKE", "LOWER BROIL" key at the same time again.





Symptom

Check Point

1. Cooktop Not working

1. Check Electric Wiring 2. Check the Heater resistance









Ν



Cook-top does not heat

For Model : LDE3017ST, LDE3017SB, LDE3017SW



<u>Check the cook-top heaters</u> (measure the resistance between CN10, CN11, CN12, TAB11, TAB09 and SMPS CN1 pin 3)



Cook-top does not heat

For Model : LDE3017ST /01, LDE3017SB /01, LDE3017SW /01



Check the cook-top heaters (measure the resistance between CN10, CN11, CN12, TAB11, TAB09 and SMPS CN1 pin 3)





Symptom	Check Point	
1. Door Lock System Failure 2. F-10, F-20	 Check the Electric wiring Check the Motor's Resistance 	


Door lock system error \rightarrow F-10, F-20 Error

Just after self-clean start, the door lock motor starts to rotate. During that time if the door lock switch does not operate properly after rotating twice, then supervising circuit detects a Door Lock failure and the F-10, F-20 error code appears.



Door lock system error \rightarrow F-10, F-20 Error Check the door locking motor (measure the resistance) normal: approximately 2.6 k Ω abnormal: infinite or below 5 Ω No Normal? Yes Replace the door locking motor Check the looseness of CN08 CNO4 END No Normal? Yes Reconnect END

Door lock system error \rightarrow F-10, F-20 Error



Symptom	Check Point
1. Sensing Fail 2. F-1 3. F-2 4. F-4 5. F-5	1.Check the electric wiring 2.Check the test Mode 3.Check the sensor(thermistor) resistance (approximately 1.06 k Ω at 65°F ~ 1.12 k Ω at 85°F.)



Oven sensing error \rightarrow F-1, F-2, F-4, F-5 error





3. press the "LOWER BAKE"," LOWER BROIL" key at the same time again.





Symptom	Check Point
1. Oven hot 2. F-6 3. F-16	1. Check the Resistance of the Relay.



Check the resistance of relays





No key input Or F-3

Key does not input(including F-3)

If the key error occurred in the oven VFD, check the oven system. If the problem happened the cooktop LED, Check the cooktop system.

Check the connection between Oven system PCB'S CN03, cooktop systme PCB's CN21









F-11 error



Reset failure log and Check the F-code.

- 1. press the "clear" key
- 2. Press and Hold "LOWER BAKE" and "LOWER BROIL" key for 3 seconds



3. In Order to reset failure log, press CLEAR pad

4. Press and Hold "LOWER BAKE" and "LOWER BROIL" key for 3 seconds again.



TROUBLE SHOOTING

PROBLEMS	POSSIBLE CAUSES & FAULTS	SOLUTIONS	
Oven not operating.	Bad power control board (PCB)	 Test and/or replace PCB → Refer to the page 6-1~6-4 	
	Power outage	 Verify power is present at unit. Verify that the circuit breaker is not tripped Replace household fuse capacity 	
Oven element does not heat.	 No line voltage Loose or bad wiring. Defective element. Bad Power control board(PCB) 	 Check circuit breaker. Repair or replace wiring (see wiring diagrams). Test and/or replace element. Test and/or replace PCB → Refer to the page 6-5~6-7 	
Surface element will not heat Higher than low-mediumelement or terminal block. • Defective Surface units control PCB • Defective Surface element. • Low line voltagereplace broken wires • Test and/or replace cook 		 Verify all connections are clean and tight, replace broken wires Test and/or replace cook-top PCB → Refer to the page 6-8~6-9 Test and/or replace element. Line voltage should be minimum 240-volts. Of necessary, electrician should repair cause for low line voltage 	
Frequent cycling of surface Element or warming zone	• This is normal	 The element will cycle on and off to maintain the heat setting 	
"HS" (Hot surface)Warning message does not light up	Defective cook-top control PCB	Test and/or replace cook-top PCB	
Oven light fails to operate. (Refer to the page 6-10)	 Failed oven lamp. Circuit breaker or fuse is open Loose or bad wiring Defective light socket. Defective door switch 	 Check lamp and Replace is necessary Check circuit breaker or replace fuse. Repair or replace wiring Check light socket for continuity. Test and/or replace door switch 	
Oven does not begin clean cycle Oven stop for Self clean	 Bad wiring Bad latch system Programming error Defective a point of contact with 	 Repair or replace wiring Check door locking motor and micro switch Shut off power to oven for five minutes by switching off circuit breaker. Reset circuit breaker and try oven again. Test door switch and check the point of 	
cycle	door switch	contact between door and door switch	

TROUBLE SHOOTING

PROBLEMS	POSSIBLE CAUSES & FAULTS	SOLUTIONS	
Electronic timer will not accept Programming.	Failed main power control board	Replace power control board(PCB)	
Electronic timer will not accept Programming.	Failed main power control board	Replace power control board(PCB)	
Clock and timer not working	• Power outage	 Verify power is present at unit. Verify that the circuit breaker is not tripped Replace household fuse, but do not fuse capacity Refer to Owner's manual instructions 	
Oven does not bake (Selection is set for to BAKE or TIMED BAKE)	 Loose or bad wiring Defective BAKE element Defective electronic clock Door switch sensing error 	 Verity all connections are clean and tight, replace broken wire Test and/or replace BAKE element. Replace power control board(PCB) Test door switch and check the point of contact between door and door switch 	
Oven does not Broil	 Loose or bad wiring Defective BROIL element Defective Power Control Board 	 Verity all connections are clean and tight, replace broken wire Test and/or replace BAKE element. Replace power control board(PCB) 	
Overheating or "runaway" oven	 Loose or bad wiring to latch system Defective Oven Sensor Bad Power Control Board(PCB) 	 Repair or replace wiring Test and/or replace Oven Sensor Test and/or replace PCB 	
Oven door will not open or latch.	 Defective latch mechanism. Defective(bent)door latch lever. Oven is still hot. Cool-down period after self-clean cycle not complete 	 Replace door latch system. Replace latch lever This is normal. Wait until LOCK icon goes out. 	
Premature burnout of bake element	 Improper use of oven(e.g. being used to heat the home) 	Use oven for baking only	
Oven door difficult to open	• Worn or broken broil stop roller.	Replace oven door hinge	

TROUBLE SHOOTING

PROBLEMS	POSSIBLE CAUSES & FAULTS	SOLUTIONS	
Oven door sagging on one side	Hinge loose or out of position to oven liner	Adjust hinges or replace hinges	
Door does not close completely at top	 Broken or misadjusted door spring Door fits too tight at bottom. 	 Adjust or replace hinges Adjust hinges outward. 	
Door glass breaks.	Oven racks covered with foil.Glass installed backward.	Do not cover racks with foil.Install tempered glass toward the heat.	
Damaged oven door gasket.	Improper Self clean	 Do not use harsh abrasives or scouring pads. See Owner's manual intructions 	
Oven racks fit too tight.	 Racks were cleaned in self clean cycle Tolerance buildup in oven liner. 	 Apply a small amount of vegetable oil to a paper towel and wipe the edges of the oven racks with the paper towel. Do not spray with pam or other lubricant sprays. Notify customer Assurance department. 	
Oven smokes/odor first few times of usage	• This is normal	 Minor smoking or odor is normal for the first few tikes of oven usage Ventilate area well and perform self clean cycle 	
Excessive smoking during a Self clean cycle	• Excessive soil	• Press the CLEAR/OFF pad. Open the windows to rid the room of smoke. Wait until the Self Clean cycle is cancelled Wife up the excess soil and reset the clean	
Convection fan make a noise	 A convection fan may automatically turn on and off. Low level noise is normal Loose nut of convection fan Deformed convection fan 	 Low level noise is normal Re-fasten the nut Replace the convection fan. 	
Failures Codes	Electronically controlled	Refer to "Failure codes" parts (page 7-0~7-10)	
Oven temperature too hot or too cold	Oven sensor needs to be adjusted	• See "the adjusting your oven temperature" in owners manual	

SCHEMATIC DIAGRAM

For Model : LDE3017ST / 00, LDE3017SB / 00. LDE3017SW / 00

WARNING

- DISCONNECT power supply cord from the outlet before servicing.
- Replace all panels and parts before operating.
- RECONNECT all grounding devices.
- Failure to do so can result in severe personal injury, death or electrical shock.

*** RADIANT COOK-TOP**

Wattage	
RR:1200W	approx.46
LR:1200W	approx.46
RF: 1700W(inner) 2700W(Dual)	approx.32 approx.56
LF 1400W(inner) 3000W(Dual)	approx.41 approx.19
CR:100W	approx.570

WIRE COLORS

SYMBOL	COLOR
WH	WHITE
BK	BLACK
RD	RED
YL	YELLOW
PK	PINK
BL	BLUE
BN	BROWN
GN	GREEN
GY	GRAY



SCHEMATIC DIAGRAM

For Model : LDE3017ST / 01, LDE3017SB / 01. LDE3017SW / 01

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WIRE COLORS

SYMBOL	COLOR
WH	WHITE
BK	BLACK
RD	RED
YL	YELLOW
PK	PINK
BL	BLUE
BN	BROWN
GN	GREEN
GY	GRAY



STRIP CIRCUITS

Complete the following steps before checking electric oven circuit :

1. Check the line voltage, household fuse or circuit breaker.

2.Check for loose wiring or mis-wiring within electric range.

NOTE: The following individual circuits are for use in diagnosis, and are shown in the ON position.

UPPER BAKE/WARM



LOWER BAKE/CONV BAKE/CONV ROAST



LOWER WARM/PROOF



UPPER BROIL



LOWER BROIL



UPPER SELFCLEAN



LOWER SELFCLEAN



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OVEN LAMP



For Model : LDE3017ST / 00, LDE3017SB / 00. LDE3017SW / 00

CR (Cooktop element)



LR (Cooktop element)



RR (Cooktop element)



LF (Cooktop element)



RF (Cooktop element)



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For Model : LDE3017ST / 01, LDE3017SB / 01. LDE3017SW / 01

CR (Cooktop element)



LR (Cooktop element)



RR (Cooktop element)



For Model : LDE3017ST / 01, LDE3017SB / 01. LDE3017SW / 01

LF (Cooktop element)



RF (Cooktop element)



INTRODUCTION (II)

MODEL:	Customer Model	Product Code	SVC Model
	LDE3017SB	FD1544TB.FBKLLGA	LDE3017SB / 00
	LDE3017SW	FD1544TW.FWHLLGA	LDE3017SW / 00
	LDE3017SB	FD1544TB.FB1LLGA	LDE3017SB / 01
	LDE3017SW	FD1544TW.FW1LLGA	LDE3017SW / 01



UPPER DOOR PARTS (II)

MODEL:	Customer Model	Product Code	SVC Model
	LDE3017SB	FD1544TB.FBKLLGA	LDE3017SB / 00
	LDE3017SW	FD1544TW.FWHLLGA	LDE3017SW / 00
	LDE3017SB	FD1544TB.FB1LLGA	LDE3017SB / 01
	LDE3017SW	FD1544TW.FW1LLGA	LDE3017SW / 01



LOWER DOOR PARTS (II)

MODEL:	Customer Model	Product Code	SVC Model
	LDE3017SB	FD1544TB.FBKLLGA	LDE3017SB / 00
	LDE3017SW	FD1544TW.FWHLLGA	LDE3017SW / 00
	LDE3017SB	FD1544TB.FB1LLGA	LDE3017SB / 01
	LDE3017SW	FD1544TW.FW1LLGA	LDE3017SW / 01



CONTROLLER PARTS



COOKTOP PARTS (II)

MODEL:	Customer Model	Product Code	SVC Model
	LDE3017ST	FD1544TS.FS1LLGA	LDE3017ST / 01
	LDE3017SB	FD1544TB.FB1LLGA	LDE3017SB / 01
	LDE3017SW	FD1544TW.FW1LLGA	LDE3017SW / 01



UPPER CAVITY PARTS



LOWER CAVITY PARTS



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