

SAMSUNG

ELECTRIC RANGE

MODEL AND

MODEL CODE : NE63A6511S*

SERVICE *Manual*

ELECTRIC RANGE



Refer to the service manual in the GSPN(see rear cover) for the more information.

1. Precaution

1-1. Forward

This SAMSUNG Service Manual, “30” Slide In Self-Cleaning Electric Range,” provides the technician with information on the operation and service of the Slide In 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.

1-2. 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 a SAMSUNG 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 storage drawer.
- The power supply of the appliance should be turned off when it is being repaired.



WARNING

- To avoid risk of severe personal injury or death, disconnect power before working/servicing on appliance to avoid electrical shock.
- When the oven operates, the interior parts will be very hot.

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

1. Precaution

1-3. 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 doesn't cover all possible conditions that may occur.

For further assistance contact your service agent or manufacturer.



WARNING

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

- 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 qualified technician.
- Always disconnect power to appliance before servicing by removing the fuse or switching off the circuit breaker



WARNING



- INJURIES CAN OCCUR IF THE RANGE TIPS



- INSTALL ANTI-TIP DEVICE PACKED WITH RANGE



- FOLLOW ALL INSTALLATION INSTRUCTIONS

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.

- Do not step, lean or sit on the doors of the range -this can cause the range to tip, resulting in burns or serious injuries.



WARNING

- **DO NOT TOUCH HEATING ELEMENTS OR INTERIOR SURFACES OF OVEN** – Heating elements 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.



CAUTION

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.

- 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

SURFACES

- **DO NOT TOUCH SURFACE UNITS OR AREAS NEAR UNITS** – Surface units may be hot even though they are dark in color. Areas near surface units may become hot enough to cause burns. During and after use, do not touch, or let clothing or other flammable materials contact surface units or areas near units until they have had sufficient time to cool. Among these areas are the cook-top and surfaces close to the cook-top.



WARNING

To avoid risk of electrical shock, personal injury, or death, make sure your range has been properly grounded and always disconnect it from main power supply before any servicing.

1. Precaution

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.
- **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.
- Be sure you know which burner switch operates 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 self-clean 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 in the front above the oven door and under the cook top. This area could become hot during oven use. Never block this vent and never place plastic or heat sensitive items near the 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.

3. Disassembly

■ Tool for assembly and disassembly

Item	How to use	Pictures
Screw driver	Use for assembly and disassembly of all screws	
Tubing Wrench	Use for assembly and disassembly of tubing to the cup	
7mm Socket wrench / Driver	Use for assembly and disassembly of injector nozzles. [cooktop/Broil/Bake burner]	
Short Screw Driver	Use for assembly and disassembly of bracket Guide on control box	

3. Disassembly

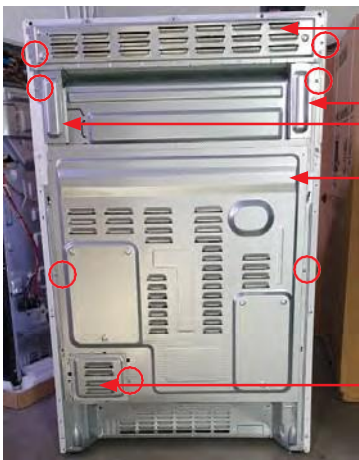
3-1. Basic Step

3-1-1. (Step A) - Cover Case-Top / Cover-Wire Lt/Rt / Cover-Back / Cover-Wire



WARNING

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

Parts	Explanation Photo	Explanation
Cover Case-Top Cover-Wire Lt/Rt/ Cover-Back / Cover-Wire		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 7 screws and CoverWire LT/RT, Cover-Back Guard Wire, Cover-Back, Cover-Wire. 4. When service is complete, replace the five cover panels on the back of the range and secure each with the appropriate screws. 5. Plug in the range and/or turn on the electrical supply to the range. 6. Push the range back in place, making sure to engage the anti-tip bracket on the left-rear leveling leg.

3. Disassembly

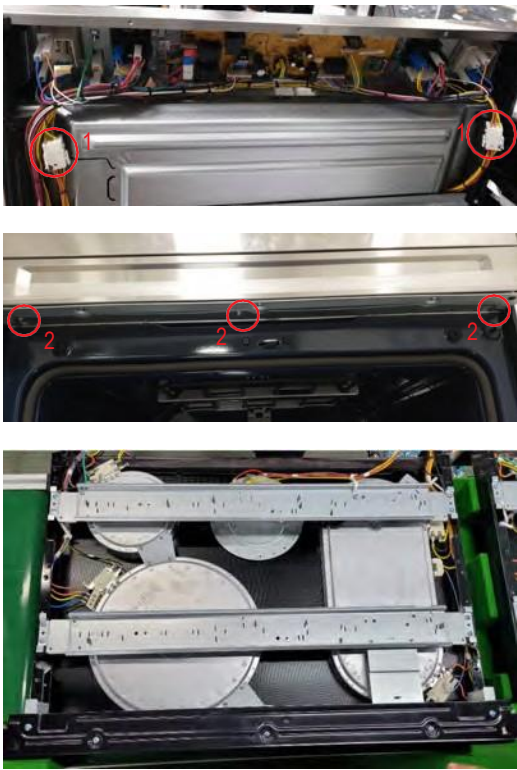
3-1-2. (Step B) - Assy Cooktop

 WARNING

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

 CAUTION

When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
Assy Cooktop		ASSY COOKTOP REMOVAL 1. Unplug the cord or disconnect power . 2. Open oven door and remove the 3 screws located at the front of the cook-top, then close the door. 3. Slightly lift up and pull up the cook-top and then unplug the 3 connectors wire at the back by squeezing side tabs and unscrew ground wire. 4. Protect the cooktop surface and turn the assembly over .

3. Disassembly

3-1-3. (Step C) - Assy Control Box



WARNING

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.



WARNING

EXPLOSION, FIRE, AND ASPHYXIATION HAZARD

Shut off gas supply to the range before servicing. Check all gas lines and fittings for leaks before operating the range. Replace all panels before operating range. Failure to do so can result in death or personal injury from explosion, fire, or asphyxiation.



CAUTION

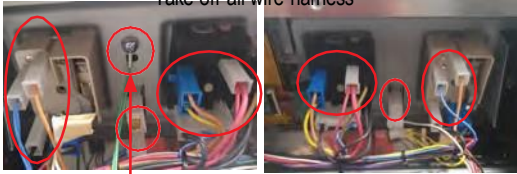
When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.



CAUTION

Check the parts code of the knob and/or Switch Ignition in case of replacement.

3. Disassembly

Parts	Explanation Photo	Explanation
Assy Control Box	  Touch Film Take off all wire harness  Remove 1 screw	1. Follow Step A,B. 2. Remove 3 screw on each Support guard L/R. 3. Take off all wire harness and remove 1 screw on cavity back. 4. Take off Assy Control Box.

3. Disassembly

3-1-4. (Step D) - Assy Drawer



WARNING

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CAUTION

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Parts	Explanation Photo	Explanation
Assy Drawer		1. Open the drawer to the fully opened position. 2. Lift Drawer front up side to take off from slider. 3. Pull out the storage drawer.

3. Disassembly

3-1-5. (Step E) - Oven Door



WARNING

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.



WARNING

The door is very heavy. Be careful when removing door. Do not lift door by the door handle.



CAUTION

When you work on the gas range, be careful when handling sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

3. Disassembly

Parts	Explanation Photo	Explanation
Oven Door	 	To remove Oven Door : 1. Fully open the door. 2. Pull the hinge locks downward. (use pliers) 3. Firmly grasp both side of the door at the top. 4. Close door to the door removal position, which is approximately 5 degrees. Lift door up and out until the hinge arm are clear of the slot.
	   	To replace door : 1. Firmly grasp both sides of the door at the top position and insert hinges into slots. 2. Fully open the door. (If the door will not fully open, it means that the indentation is not seated correctly in the bottom edge of the slot. Push the hinge locks up to the locked position.) 3. Close the oven door.

3. Disassembly

3-1-6. (Step F) - Side Panel

 WARNING

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

 CAUTION

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Parts	Explanation Photo	Explanation
Side Panel		1. Follow the Step A, B and C. 2. Remove 4 screws from top side of Side Panel. 3. Remove 4 screws from back side of Side Panel. 4. Pull forward the Side Panel from the range.

3. Disassembly

3-2. Component replacement Step

3-2-1. PCB



WARNING

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WARNING

EXPLOSION, FIRE, AND ASPHYXIATION HAZARD

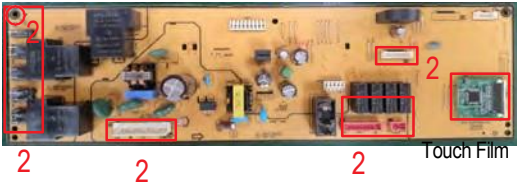
Shut off gas supply to the range before servicing. Check all gas lines and fittings for leaks before operating the range. Replace all panels before operating range. Failure to do so can result in death or personal injury from explosion, fire, or asphyxiation.



CAUTION

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3. Disassembly

Parts	Explanation Photo	Explanation
PCB	  	1. Remove 2 screw and take off Coverwire. 2. Remove wire harness on PCB and Remove 1 screw. 3. Push 3 hooks and take off PCB.

3. Disassembly

3-2-2. Holder PCB & Membrane Touch + bracket



WARNING

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.



WARNING

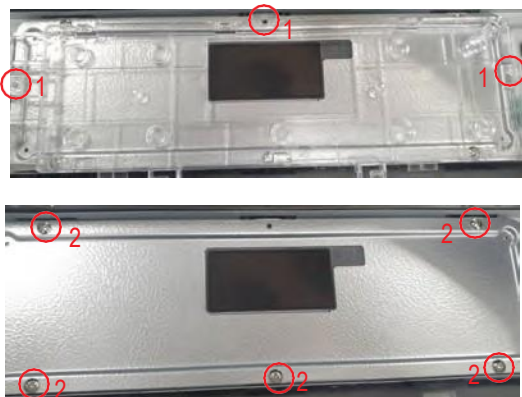
EXPLOSION, FIRE, AND ASPHYXIATION HAZARD

Shut off gas supply to the range before servicing. Check all gas lines and fittings for leaks before operating the range. Replace all panels before operating range. Failure to do so can result in death or personal injury from explosion, fire, or asphyxiation.



CAUTION

When you work on the gas range, be careful when handling sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
Holder PCB & Membrane Touch + bracket		1. Remove 3 screw on PCB and disassemble holder pcb. 2. Remove 5 screw and disassemble membrane + bracket.

3. Disassembly

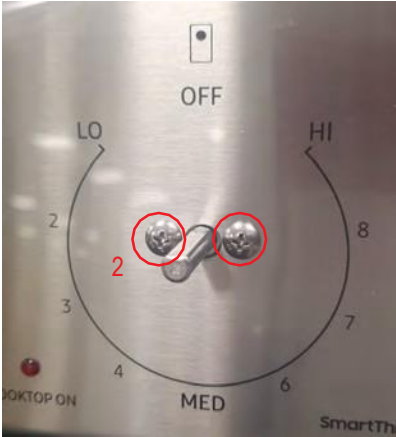
3-2-3. Regulator

 WARNING

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

 CAUTION

When you work on the gas range, be careful when handling sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
Regulator	 	1. Remove Knob. 2. Remove 2 screw each 4 Regulator (Total 8 pcs) 3. Remove Coverwire back side and remove wire harness on the regulator.

3. Disassembly

3-2-4. Bracket PCB



WARNING

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WARNING

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CAUTION

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Parts	Explanation Photo	Explanation
Bracket PCB		1. Remove 2 screw on Bracket PCB. (Need short screw driver) 2. Slide out and disassemble bracket pcb.

3. Disassembly

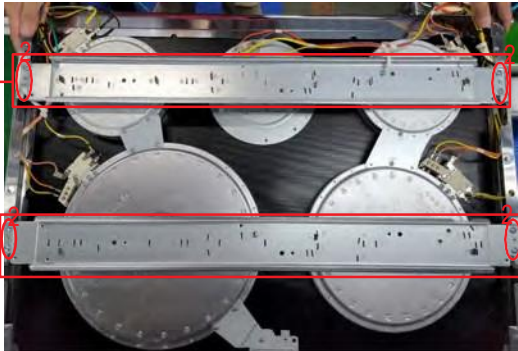
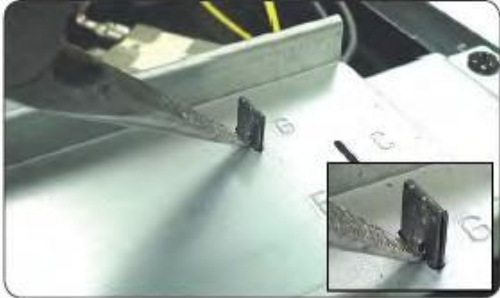
3-2-5. Cooktop Heater

 WARNING

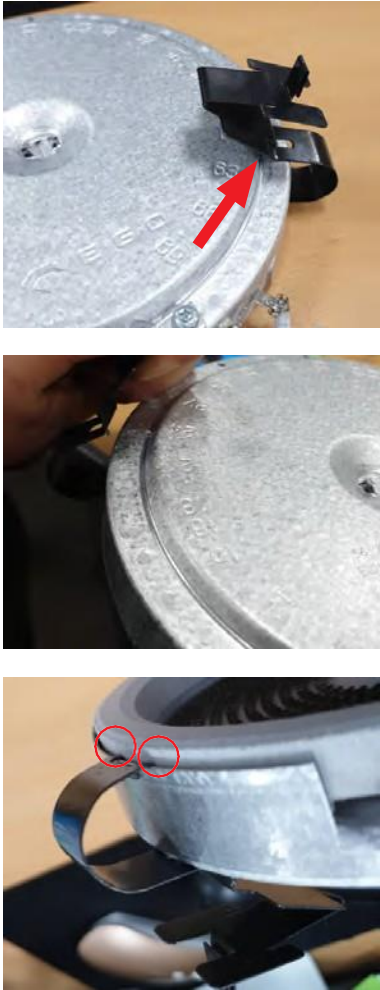
Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

 CAUTION

When you work on the gas range, be careful when handling sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
Cooktop Heater		1. After Flip cooktop, Remove 8 screws from top side.
		2. Remove BRACKET HEATER from the cooktop.
		3. 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. c) Carefully lift the bottom of the bracket just far enough to remove the element. d) Use sharp tool to remove the heating element.
		 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.

3. Disassembly

Parts	Explanation Photo	Explanation
Cooktop Heater		1. Pull the Spring upward. 2. Detach hook of the spring and remove the spring from the heater.

3. Disassembly

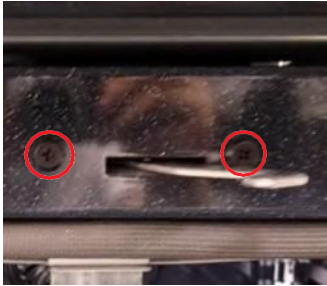
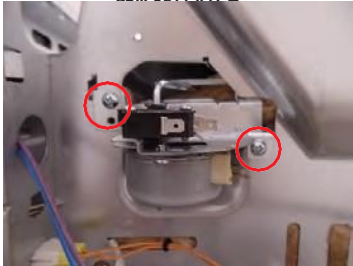
3-2-6. Assy Door Latch

 WARNING

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

 CAUTION

When you work on the gas range, be careful when handling sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
Assy Door Latch	CAVITY FRONT 	1. Follow the Step C & F. 2. Remove 2 screws from the Cavity Front. 3. Remove 1 screw from the Bracket-Latch sub at the rear of the range. 4. Disconnect wires of the door latch to the rear of the range and remove it. 5. Remove 2 screws holding the Assy bracket-latch rear to the rear of the range. 6. Replace the Assy Bracket Latch. 7. Test the Assy Door Latch to make sure it is latching and unlatching properly.
	BRACKET LATCH SUB 	
	BRACKET LATCH 	
		

3. Disassembly

3-2-7. Switch-Door Plunger



WARNING

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.



CAUTION

When you work on the gas range, be careful when handling sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
Switch-Door Plunger	 Switch Door Plunger 	1. Turn off the electrical supply going to the range. 2. Turn off power at the breaker or disconnect power supply line to the range. 3. Open the oven door. 4. Carefully pull out the switch door plunger switch from the upper left corner of the cavity front. Gently grasp the plunger with pliers and work from side to side while pulling. Pull out far enough to expose the wires. 5. Note the location and mark the wires; then disconnect the wire to the switch door plunger. 6. Replace with the switch-door plunger, reconnect the wires in their original positions, and reinstall switch in the oven frame.

3. Disassembly

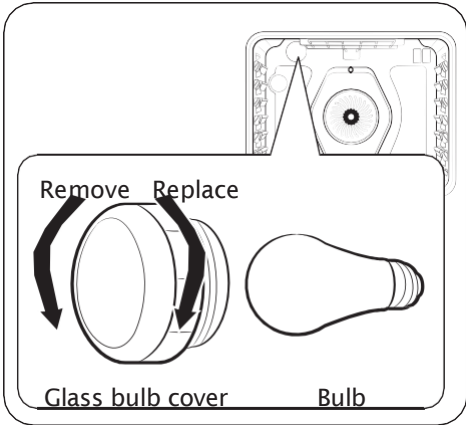
3-2-8. Assy Lamp

 WARNING

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

 CAUTION

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Parts	Explanation Photo	Explanation
Assy Lamp	 	1. Open the oven door and remove the racks from inside the oven. 2. There is 1 Lamp which located in Left-Upper side and Left-Lower side. Turn oven lamp cover counterclockwise to loosen and remove the cover. 3. Remove the oven light bulb. 4. After replacement, Install Oven light cover by turning clockwise.

3. Disassembly

3-2-9. Sensor-Thermister



WARNING

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.



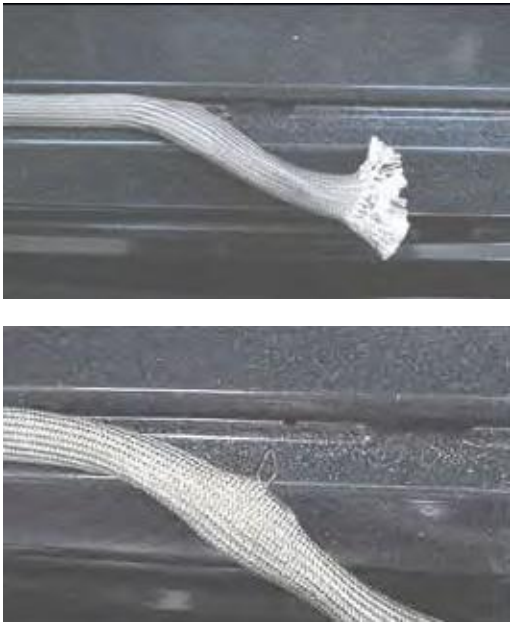
CAUTION

When you work on the gas range, be careful when handling sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
Sensor-Thermister	 SENSOR THERMOSTER SCREW TAPPING SENSOR THERMOSTER CONNECTOR	1. Follow the Step A. 2. Open the oven door and remove the racks from inside the oven. 3. Disconnect connector of the sensor thermistor to the rear of the range. 4. The oven sensor thermistor is in the upper right-hand corner of the oven cavity. Remove 2 screws and carefully pull the sensor wire leads until the wire connectors appear. 5. Reverse the order to install the oven temperature sensor.  Note • If you can't access the wire connectors from inside the oven, remove the rear cover panel. Mark and disconnect the two wires going to the oven sensor thermistor.

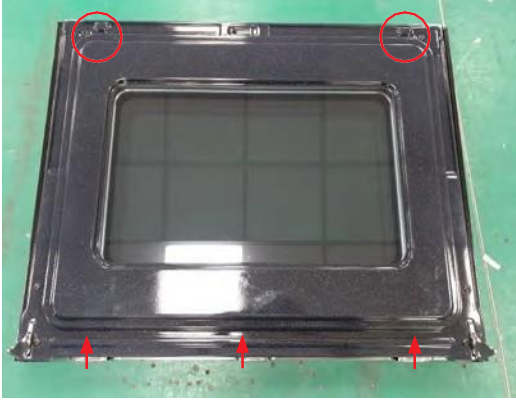
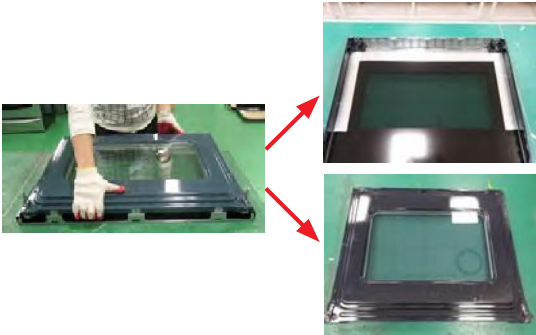
3. Disassembly

3-2-10. Gasket Door

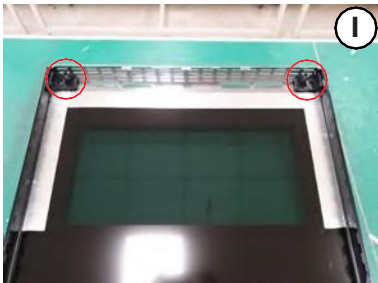
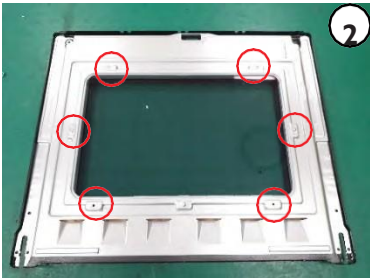
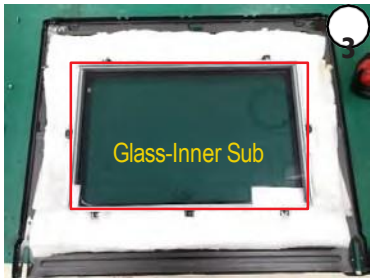
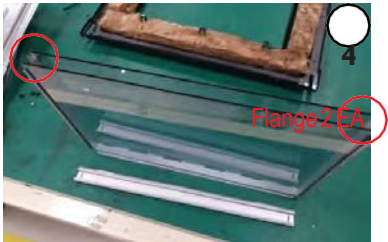
Parts	Explanation Photo	Explanation
Gasket Door		1. Open the oven door to its fully down position. 2. Pull the ends of the gasket out of the liner holes. 3. Pull the oven door gasket clips out of the holes until all of the clips are removed. 4. When the service is complete, Insert gasket clips in each mounting hole. Push the ends of gasket in end holes in the bottom of the front oven frame. 5. Close the oven door. 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.

3. Disassembly

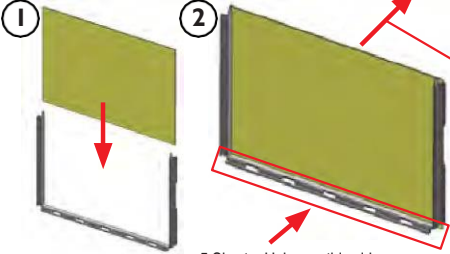
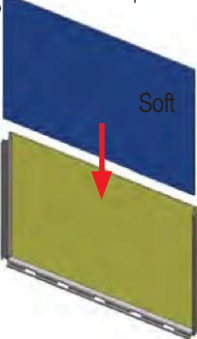
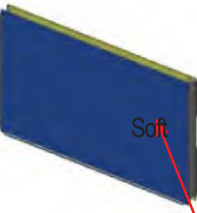
3-2-11. Handle-Door, Glass Inner

Parts	Explanation Photo	Explanation
Handle-Door, Glass Inner	 	1. Remove Door from the oven. 2. Remove two handle screws (top) and 3 screw-tapping (bottom), then separate Assy Door Sub. Put door down gently on padded surface as to not damage Chassis / Handle

3. Disassembly

Parts	Explanation Photo	Explanation
Handle-Door, Glass Inner		To remove Handle-Door 1. Remove 2 screws to remove Handle- Door.
		To remove Glass-Inner (Up) 1. Remove 6 screws to remove each Assy Hinge. 2. Remove 6 screws to remove Baffle Door 3. Remove Glass Inner. 4. Disassemble Glass Inner by unfolding flanges, then remove Glass Inner. See next page for Glass Inner direction
		
		
		

3. Disassembly

Parts	Explanation Photo	Explanation
Handle-Door, Glass Inner	CAVITY SIDE GLASS: NO "SOFT" PRINT ① ② 5 Shorter Holes on this side (Away from coating side)  < Coating side this way > Check with multimeter: Coating side: resistance <100Ω Non coating side: no value 	GLASS INNER COATING DIRECTION: How to reassemble *When reassembling, make sure to clean adiabatic / stain on Glass Inner.
	CHASSIS SIDE GLASS: "SOFT" PRINT Check with print. Do not check with multimeter ③ Soft  ④ Soft  ⑤ Soft  Top right corner	

3. Disassembly

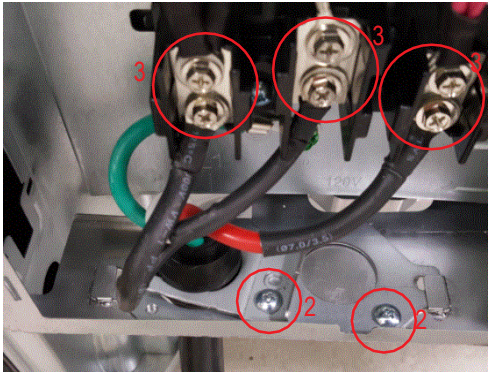
3-2-12. Assy Power Cord

 WARNING

Disconnect power before servicing the range. Replace all panels before operating range. Failure to do so can result in death or electrical shock.

 CAUTION

When you work on the gas range, be careful when handling sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

Parts	Explanation Photo	Explanation
Assy Power Cord		1. Turn off the electrical supply going to the range. 2. Remove a screw from conduit connection plate then remove brackets. 3. Remove a screw from terminal block. 4. Pull on the power cord wire.

3. Disassembly

3-2-13. Heater-Broil



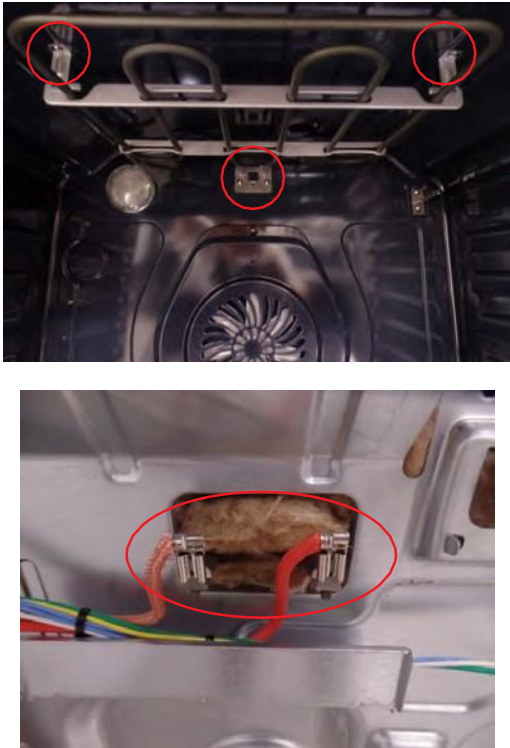
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Parts	Explanation Photo	Explanation
Heater-Broil		1. Follow Step A. 2. Open the oven door and remove the Accessories from inside the oven. 3. Remove the 2 connectors from the broil element. 4. Remove the 4 screws which securing the broil element to the cavity. Then remove the broil element.

3. Disassembly

3-2-14. Heater-Bake



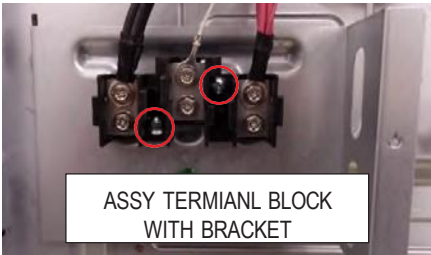
WARNING

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Parts	Explanation Photo	Explanation
Heater-Bake	 ASSY TERMINAL BLOCK WITH BRACKET   Cutting 14points  Screw assembly point (6points)	1. Follow Step A. 2. Remove the 2 screws from ASSY TERMINAL BLOCK and remove it with Terminal block bracket. 3. Remove 2 connectors from Heater. 4. Cutting the COVER BACK MAIN Bracket using nipper. (14points) 5. Remove the 1 screw from Heater and pull forward to remove. 6. Change Heater and fix it using 1 screw. 7. Turn over the bracket which cut in step 4 and assembly with COVER BACK MAIN using 6 screws.

4. Troubleshooting

4-1. Failure Display Codes

There are two kinds of error codes. One denotes an oven temperature sensor error and the other denotes a safety error. Possible error codes during use can be checked before service.

1. Touch Clock pad.



2. Touch the number pads 1,2,3 and 4. Make sure the Timer is turned OFF.

1 2 3 4



3. Touch the Start/Set pad.



4. Touch the 'Clock' and the '1' from number pads at the same time for 3 seconds. Error codes are displayed.



5. Press the 0 number pad, to display the latest 5 error codes.

0



6. Press the Off/Clear pad to return to normal display mode.



4. Troubleshooting

Information Codes

Displayed Code	Possible cause	Solution
C-d0	There is a short in the control key.	Press OFF/CLEAR , and then restart the oven. If the problem persists, disconnect all power to the range for at least 30 seconds and then reconnect the power. If this does not solve the problem, call for service.
C-d1	The door lock is misaligned.	
C-F2	This code occurs if communication between the Main and Touch is interrupted.	
C-20	The oven sensor is open when the oven is operating.	Press OFF/CLEAR , and then restart the oven. If the problem persists, disconnect all power to the range for at least 30 seconds and then reconnect the power. If this does not solve the problem, call for service.
	There is a short in the Oven sensor.	
C-21	This code occurs if the internal temperature rises abnormally high.	
C-30	The main PCB sensor is open when the oven is operating.	
	There is a short in the main PCB sensor.	
C-31	This code occurs if the PCB temperature rises abnormally high.	Call for service.
bAd LinE	This error message appears if the power cord is installed improperly.	If the power connection is plugged in improperly, "bAd LinE" appears on the display. Reconnect the power connection properly, and the message disappears.

Oven Sensor information

Informaion code	Meaning	SOLUTION
C-20	Oven sensor opened (over 2950Ω)	1. Disconnect power. Open the back cover. Disconnect sensor harness from control Measure sensor resistance :1080Ω at the room temperatur →If there are any problems, replace oven sensor.
	Oven sensor shorted. (Under 930Ω)	2. If there is not any problem with oven sensor, Please check whether there is a damaged terminal or wire harness

Oven sensor resistance (Temperature vs. Sensor resistance), Ro = 1000 Ohms (0°C), RP = 2757 Ohms, Up = 5 V, a = 0.00375

degree F	0	14	23	32	41	50	59	68	77	86	95	104
degree C	-17.8	-10	-5	0	5	10	15	20	25	30	35	40
ohms	932.12	961.86	980.95	1000.00	1019.02	1038.02	1056.99	1075.92	1094.83	1113.71	1132.56	1151.38
degree F	113	122	212	302	392	482	572	662	752	842	932	1000
degree C	45	50	100	150	200	250	300	350	400	450	500	538
ohms	1170.17	1188.93	1374.93	1558.01	1738.06	1915.39	2089.69	2261.07	2429.52	2595.05	2757.65	2878.57

4. Troubleshooting

Information code	Meaning	SOLUTION
C-21	Oven heating over	1. Disconnect power. Open the back cover. Disconnect sensor harness from control. Measure sensor resistance :1080Ω at the room temperature →If there are any problems, replace oven sensor. 2. Check the broil, bake and convection heater. Check the resistance of the each heater. 3. Check whether DLB, Broil, Bake and Convection heater relay are working normally. 4. Check for any damage to wire harness connected to the Main PCB.

4. Troubleshooting

Information code	Meaning	SOLUTION
C-d1	Doorlocking information	1. Disconnect power . Open the back cover .Check whether harness has been connected with door lock switch and motor. 2. Confirm whether resistance value of door lock motor is normal. (Normal Resistance : 1.75kΩ ~ 1.95kΩ) 3. While operating door lock, measure a voltage of connector on harness which is linked with door lock motor. (Normal Voltage : AC 120V) 4. Check whether door locking switch is working.

4. Troubleshooting

Information code	Meaning	SOLUTION
C-F2	Main↔Touch communication information	1. Check it touch film tail is connected fully. 2. Replace Main PCB. 3. Replace Assy Control Box.

4. Troubleshooting

Information code	Meaning	SOLUTION
bAd LInE	This error code displays if power connection is installed improperly.	Make sure the terminal block L1, L2, N is installed properly.

4. Troubleshooting

4-3. Oven parts

Wi-Fi Connection is not working

Step.1

- Check whether Wi-Fi icon showed.
- If the Wi-Fi icon is not displayed, register the range to SmartThings app by referring to the following instructions.
 - Make sure that the mobile phone is connected to 2.4GHz Wi-Fi network.
 - Do not use the hidden AP in the wireless router settings during the device registration.
 - Use a unique SSID consisting of the alphabetic letters and the numeric digits without any blank.
 - For Wi-Fi security protocols, WPA2-PSK_AES is recommended.

Step.2

- Check communication between Wi-Fi module and Main PCB.
 - A) Press Keep warm and Num_3 at same time. (double key) Display will show Project Name, Panel Version, Touch Version and Network PCB version.
 - If network version is ordinarily showed, try to use SMART CONTROL feature again.
 - If network version is abnormal, Check to Wi-Fi module. (2-B)
 - B) Check input voltage on Wi-Fi module. (12V)
 - If input Voltage have problem, Check to connector of Wifi Module. (CNS700)
 - If connection of module have problem, re-connect and try SMART CONTROL feature again.
 - If input Voltage is ok, replace Main PCB.

※Wi-Fi Module is within LED Display



Pin 1 : 12VDC
Pin 2 : GND

5. Reference

5-1. Checkpoints before service request

SYMPTOM	DIAGNOSIS	REMEDY
Oven not operating (No power, No display)	• Measure an input voltage. (240/120V or 208/120V) (L1 : BLK, N : WHT, L2 : RED) * Measure an input voltage of terminal block.	* check circuit breaker. * Make sure that the state of wire is connected with Terminal block.
	* Measure voltage of connector on main PCB (CNP100) - L1~N : 120V	* Replace if harness has been loosen or disconnected.
	* Measure resistance both ends of terminal on thermostat. (on backside) (normal approximately 0 ohms) * Check whether harness connected to the thermostat has been loosen or disconnected.	* Replace the thermostat. * Replace or repair harness.
	* Make sure connector on sub PCB and connector on main PCB has not been loosen or disconnected.	* Replace or repair harness.
	* Make sure that the relay on main PCB is working normally.	* Replace or repair Main PCB.
	* Make sure that the control panel is working normally.	* If the touch key is working, replace LCD display. * If the touch key is not working, replace Sub PCB.
Oven temperature is risen slowly	* Make sure whether harness is connected with the heater has been loosen or disconnected.	* Repair and replace harness.
	* Make sure whether heater is working normally.	* After taking out terminal from each heater, measure resistance of heater and replace if it's abnormal.
	* Make sure heater relay and the main PCB is not damage	* Replace or repair main PCB.
Oven temperature is risen fast.	* Check whether temperature is risen over 400°F(204°C) within 10 minutes in room temperature.	* Replace or repair Main PCB, if relay on main PCB have a short circuit.
	* Check whether harness has been disconnected or shorted.	* Replace or repair harness.
	* Measure resistance values of each heater are within a normal range.	* After disconnect power, replace heater.
The self-cleaning feature will not operate when warming center or warming drawer is on.	* This is in normal state.	* The self-cleaning feature will not operate when warming center or warming drawer is on.

5. Reference

SYMPTOM	DIAGNOSIS	REMEDY
Keypad is not working normally in partially or entirely.	* Make sure that keypad cable on Sub PCB is not damaged.	* Replace after confirming whether it has been loosen or disconnected.
	* Make sure connector on Sub PCB or PCB is not damaged.	* Replace or repair after confirming whether keypad cable has not been loosen or disconnected.
	* Check whether sub PCB has not been damaged.	* Replace assembly of sub PCB
Oven lamp is not working.	* Measure the resistance value of both ends of lamp terminal.	* Replace lamp if it has been disconnected.(120V / 40W)
	* Check the oven lamp relay on Main PCB (RY207).	* Replace or repair if harness has not been loosen or disconnected. * Replace Main PCB.
Cooktop is not working or working abnormally.	* Make sure that Radiant element or Infinite switch corresponded RR(Right Rear), RF(Right Front), LR(Left Rear), LF(Left Front).	* Replace Infinite switch or Radiant element.
	* Check whether harness is connected with radiant element or Infinite switch has not been loosen or disconnected.	* Replace or repair harness
	* Check whether there is any crack or the area of being disconnected of harness.	
	* Measure whether RC(Rear Center) Heater has been connected with warming center relay(RY209) on main PCB normally or not.	* Replace or repair Warming Center. * Replace or repair if harness has been loosen or disconnected. * Replace main PCB.
Convection fan is not spinning.	* After taking out terminal from Conv. Motor, measure resistance both ends of terminal on conv. motor. (normal approximately 30 ohms)	* Replace or repair Convection fan motor.
	* Check whether Convection fan relay (RY208) on Main PCB and connector(CNP202) is connected normally.	* Replace or repair connector.
It has smell or smoke when oven has been started initially.	* This is in normal state.	* It has smell or smoke with burning dirt in oven or a foreign substance when oven has been working initially. * Ventilate after getting self cleaning mode to work.
LED or LCD Display is a little bit dim partially or invisible entirely.	* LED or LCD display is inferior.	* Replace LCD or LED or sub PCB.
There is not buzzer beep sound when keypad is working.	* Check the state of buzzer on sub PCB and whether PCB pattern have a short circuit or has been open.	* Replace or repair sub PCB.