



FREE STANDING RANGE

BASIC: FTQ387LWUX
MODEL: FTQ307NWGX
MODEL CODE: FTQ307NWGX/XAA

SERVICE *Manual*

ELECTRIC RANGE

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- 3. Disassembly and Reassembly
- 4. Troubleshooting
- 5. Exploded Views and Part List
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- 7. Schematic Diagrams
- 8. Wiring Diagram

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

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1. Precaution

1-1 Forward

This SAMSUNG 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.

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 an 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 warming 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 don'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.
- **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 cooktop 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.

1. Precaution

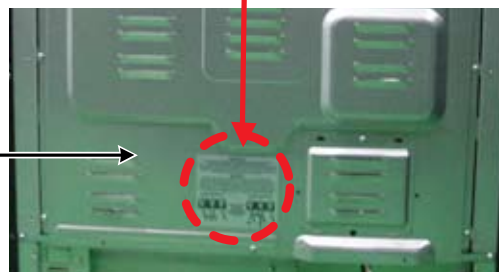
1-4 Model & Serial Number Label and Tech Sheet Locations

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

Model & Serial
Number Location



Tech Sheet Location
(On Low Rear Cover)



2. Specifications

2-1 Features

Features

Biggest Capacity

Large family food in holiday
Turkey 24lbs = 4.4 cu ft

- Samsung : 5.9 cu.ft
- Competitors
A : 5.4 cu.ft B : 5.3 cu.ft

Steam Cleaning

Casual clean without any smell
More frequently

- Samsung : Pyrolytic + Steam Clean
- Competitors : Pyrolytic



Surround Air - vection

Even cooking and energy efficiency

- Samsung : 3 fans
- Competitors : 1 fans

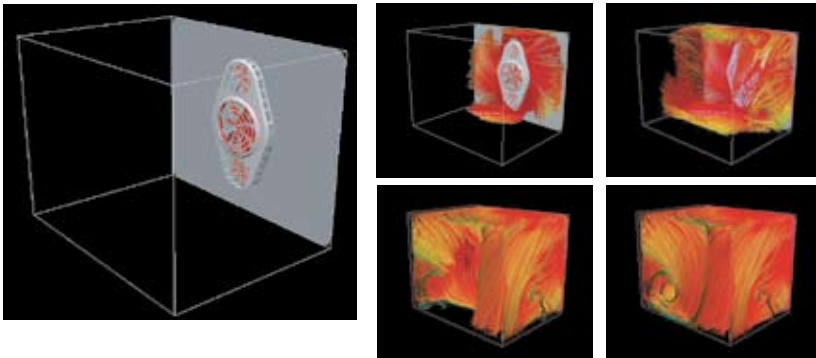
Samsung



Competitors



Surround Air-vection



- Main Convection Fan with 2-Sub.Fans makes complex small Swirl.
- Optimal Heat Distribution and Even Cook Performance.
- Updated Control Algorithm (for the Swirl Improvement of Door Front/Left/Lower)

Easy Steam Cleaning

- More Efficiency & Time Saving
- Available for Water and Oven Washing Liquid (Water + Detergent)
- Takes about 20minutes to Clean-out easily
- Steam fits Light and frequent cleaning,
(Pyrolytic Self-cleaning fits Greasy dirt cleaning)

2. Specifications

Features	
Item	Steam Clean
How to Use	<ul style="list-style-type: none"> - Pour the water 10oz (+detergent) - Push the steam cleaning button - In around half min, the oven will stop automatically. - Wipe it out with wet cloths.
Operating (Temperature)	About 70 °C
Operating Time	20 Minutes
Used Heater	Bottom Baked Heater
Smell	No smell
Tool to clean	Wet cloths



Biggest Capacity

- The biggest capacity in current US market !!!
- It benefits consumers to cook for large family food in Thanksgiving & Christmas seasons (i.e Turkey 25 lbs = 4.4 cu ft, 20 lbs = 3.5 cu ft)

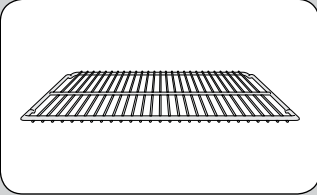
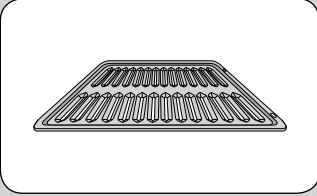
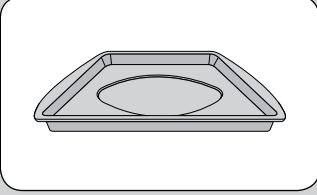
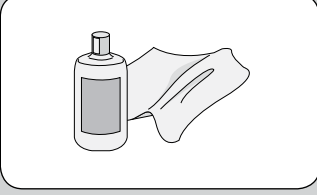
2. Specifications

2-2 Table of Specifications

Items		Model	
		BASIC MODEL	NEW MODEL
Model Name		FTQ387LWUX	FTQ307NWGX
Category		Convection	Convection
Overall	Width	30"	30"
	Installation type	Freestanding	Freestanding
	Color availability	STS	STS
Control	Oven	Touch	Touch
	Cooktop	Knob	Touch
	Display	LED	LED
	Electronic clock	Yes	Yes
	Control lock capability	Yes	Yes
	Audible preheat signal	Yes	Yes
Cooktop	Material	Ceramic glass	Ceramic glass
	# of element	5	4
Power	LR	6"-1,200W	6"-1400/2000W
	RR	6"-1,200W	7"-1800/2600W
	LF	Dual(6"/9"-1,200/2,500W)	11"-2400/3700W
	RF	Triple(6"/9"/12") (1100/2200/3000W)	6"-1400/2000W
Oven	Capacity(cu.ft)	5.7	5.9
	Broil element	3800 watts	3800 watts
	Bake element	3000 watts	3000 watts
	Convection System	Yes	Yes
	-Convection element	Yes (800W, 240V)	Yes (800W, 240V)
	# of Racks	3	3
	Interior oven light	120V, 40 watts	120V, 40 watts
	Cleaning	Pyrolytic & Steam	Pyrolytic & Steam
Drawer	Type	Warming drawer	Warming drawer
	Element	600 watts	600 watts
	Warming rack	No	No
Dimensions (inch)	Oven Interior(W x H x D)	24 1/2 x 20 1/4 x 19 3/8	24 1/2 x 20 1/4 x 19 3/8
	Exterior - Width	29 7/8	29 7/8
	Exterior - Height	36 (cooktop), 47 5/8 (backguard top)	36 (cooktop), 47 5/8 (backguard top)
	Exterior - Depth	25 11/16 (Door), 28 (with handle)	25 11/16 (Door), 28 (with handle)
	Net weight: Lbs (Kg)	181 lbs (82kg)	211lbs(96KG)
Power	Rating(240V 60Hz)	Range : 4500W Cooktop : 8000W	Range : 4500W Cooktop : 7000W

2. Specifications

2-3 Accessory

Item	Description	Code No.	Q'ty
	Rack Flat	DG75-01001A	3
	Tray Grate	DG63-00105A	1
	Tray Broil	DG63-00106A	1
	Assy-Cleaning Kit	DG97-00085A	1

3. Disassembly and Reassembly

3-1 Removing Cover-Back Main Wire, Cover-Back Guard Wire and PCB-Main


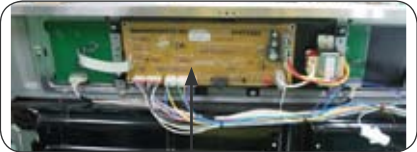
WARNING

ELECTRICAL SHOCK HAZARD

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

PRECAUTION

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
Cover-Back Main Wire, Cover-Back Guard Wire and PCB-Main		<ol style="list-style-type: none"> 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 8 screws from the Cover-Back Main Wire and remove the panel.
	 <p style="text-align: center;">PCB Main</p>	<ol style="list-style-type: none"> 4. Remove 3 screws from the Cover-Back Guard Wire and remove the cover. 5. Remove 2 screws of PCB Main and separate PCB Main.

3. Disassembly and Reassembly

3-2 Removing PCB-Sub & L.V.Trans



⚠ WARNING

ELECTRICAL SHOCK HAZARD

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⚠ PRECAUTION

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
PCB-Sub & L.V.Trans	 <p style="text-align: right;">PCB-Sub</p>	<ol style="list-style-type: none"> 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 Cover-Back Main Wire and Cover-Back Guard Wire (See step 4 on page 12) 4. There are 2 PCB's (power control board). When you check PCB, check the proper PCB in default mode and check main PCB.
	 <p style="text-align: right;">2 Screws</p>	<ol style="list-style-type: none"> 5. To remove the control power supply: <ol style="list-style-type: none"> a) Disconnect 2 connectors. b) Remove the two screws.


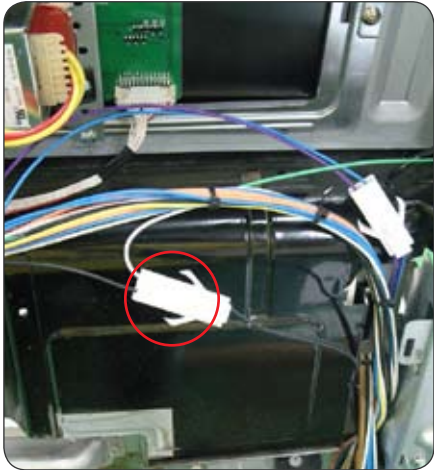
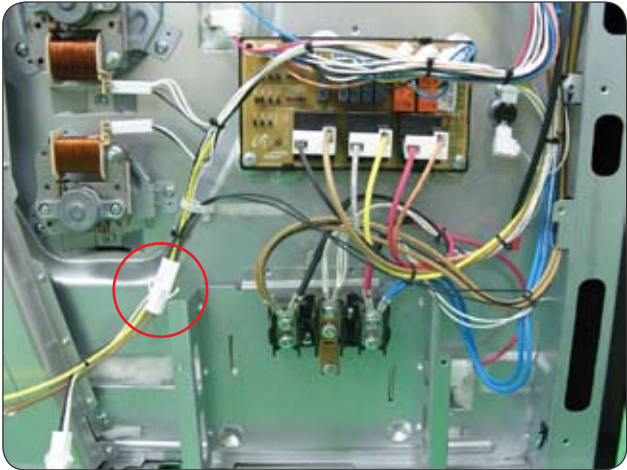
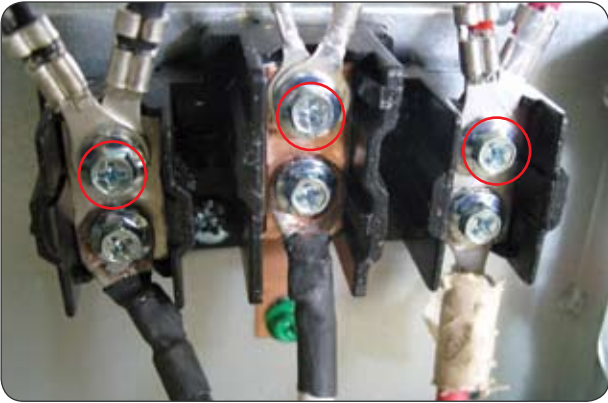
3. Disassembly and Reassembly

3-3 Removing Surface elements and The Ceramic Glass Cooktop

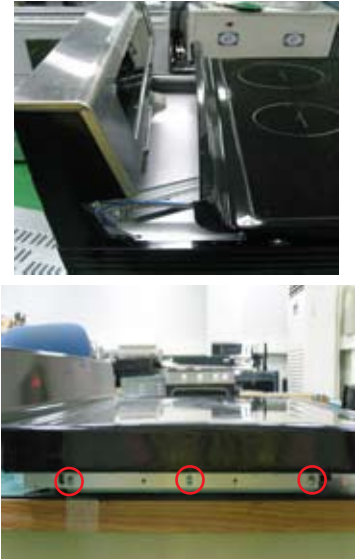
WARNING

ELECTRICAL SHOCK HAZARD

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
Surface elements and Ceramic Glass Cooktop		<ol style="list-style-type: none">1. Unplug the cord or disconnect power2. Open oven door and remove the 3 screws located at the front of the cook-top, then close the door.
		
	<ol style="list-style-type: none">3. Pull the range out of its mount location so that you can access the rear of the unit.	
		<ol style="list-style-type: none">4. Remove Cover back main wire and Cover Back-guard wire.5. Unscrew 3 points on the terminal block and disconnect 2 wires from AC fan motor and main PCB.

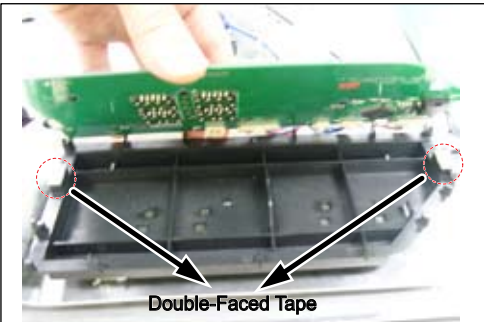
3. Disassembly and Reassembly

Parts	Explanation Photo	Explanation
Surface elements and Ceramic Glass Cooktop		<ol style="list-style-type: none"> 6. Slightly lift up and pull up the cook-top and then unplug the 2 connectors wire at the back by squeezing side tabs. 7. Remove 3 screws both side of bracket mountain.

Attention

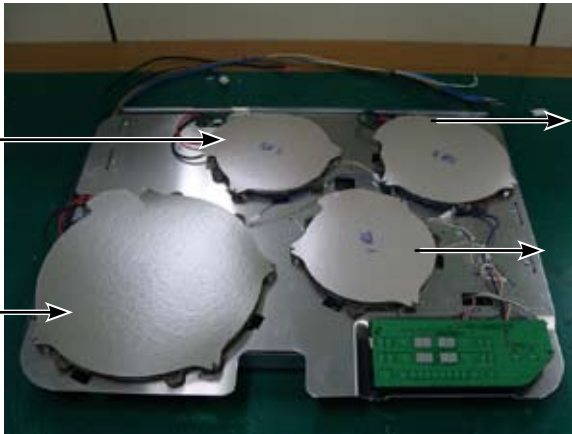
The Ceramic Glass may break if you use force especially on the edge.

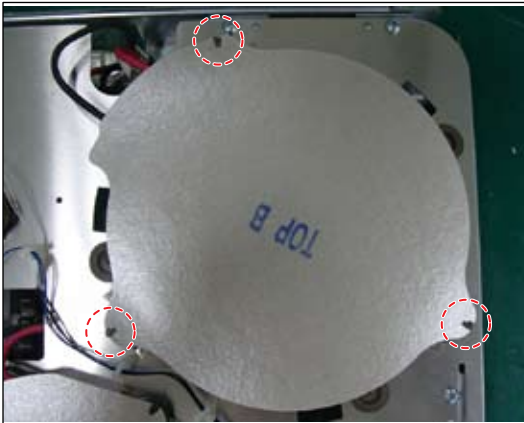

3-4 Replacement of the Assy Control Panel

Parts	Explanation Photo	Explanation
Assy Control Panel		<ol style="list-style-type: none"> 1. Lift up the Assy Touch PCB. (Assy Touch PCB is fixed by double-faced tape) 2. Disconnect all sub-wire. 3. Replace the Assy Touch PCB or Control-Panel.

3. Disassembly and Reassembly


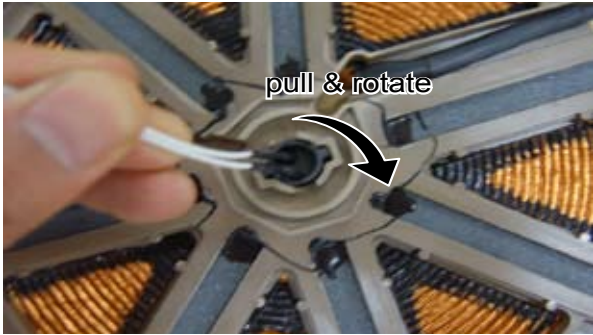

3-5 Replacement of the Assy-Working Coil

Explanation Photo	
<p>Assy-Working Coil A Cover-Coil A Adiabatic-Coil A</p> <p>Assy-Working Coil E Cover-Coil E Adiabatic-Coil E</p>	 <p>Assy-Working Coil B Cover-Coil B Adiabatic-Coil B</p> <p>Assy-Working Coil A Cover-Coil A Adiabatic-Coil A</p>

Parts	Explanation Photo	Explanation
Assy-Working Coil		<ol style="list-style-type: none"> 1. Bend the Cover-Coil a little. 2. Lift up the Cover-Coil from the hook. (3-point)
		

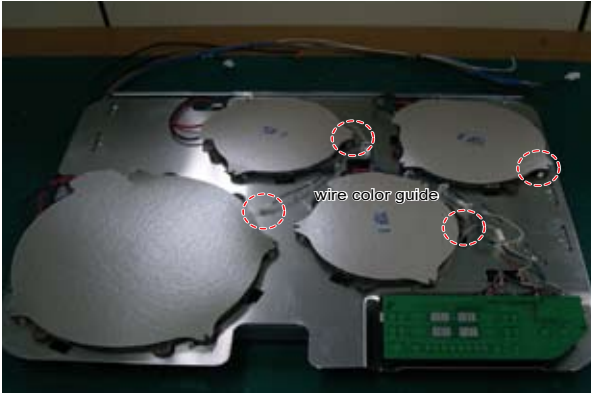
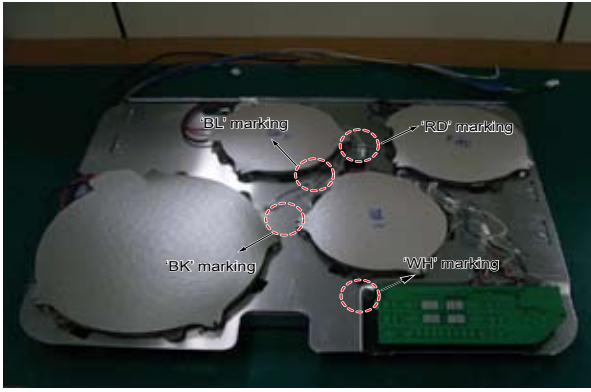
3. Disassembly and Reassembly

3-5 Replacement of the Assy-Working Coil

Parts	Explanation Photo	Explanation
Assy-Working Coil		<p>3. Remove the Adiabatic-Coil by using some tool. (Do not remove by hand. Adiabatic can be easily broken.)</p> <p>4. Disconnect all lead wires from the Assy-Working Coil.</p>
		<p>5. For the replacement of Sensor-Top, pull the Sensor-Top toward bottom side.</p> <p>6. Rotate the Sensor-Wire by 90degree until the Sensor-Top can be remove from the Coil-Working.</p>
		<p>6. Rotate the Spring ETC-Base by 90degree in order to replace.</p>

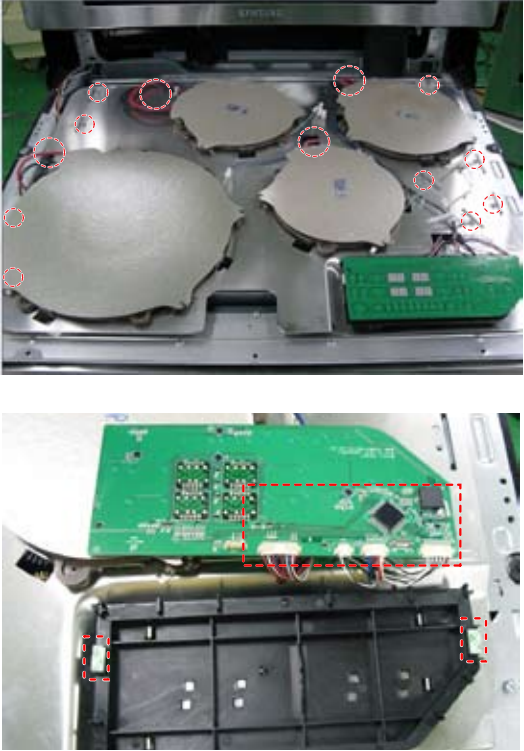
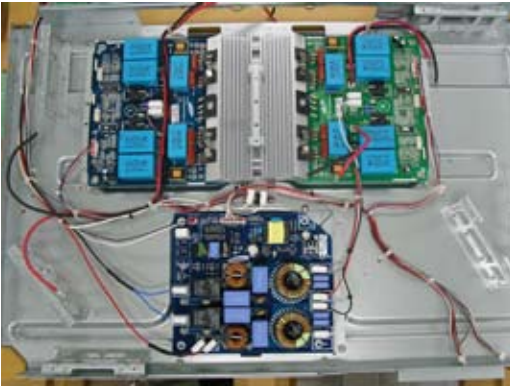
3. Disassembly and Reassembly

3-5 Replacement of the Assy-Working Coil

Parts	Explanation Photo	Explanation
Assy-Working Coil		7. After replacement, connect the Sensor-Top wire according to carved wire color guide.
		
<p style="text-align: center;">warning Wire connecting position is very important. Please keep attention.</p>		

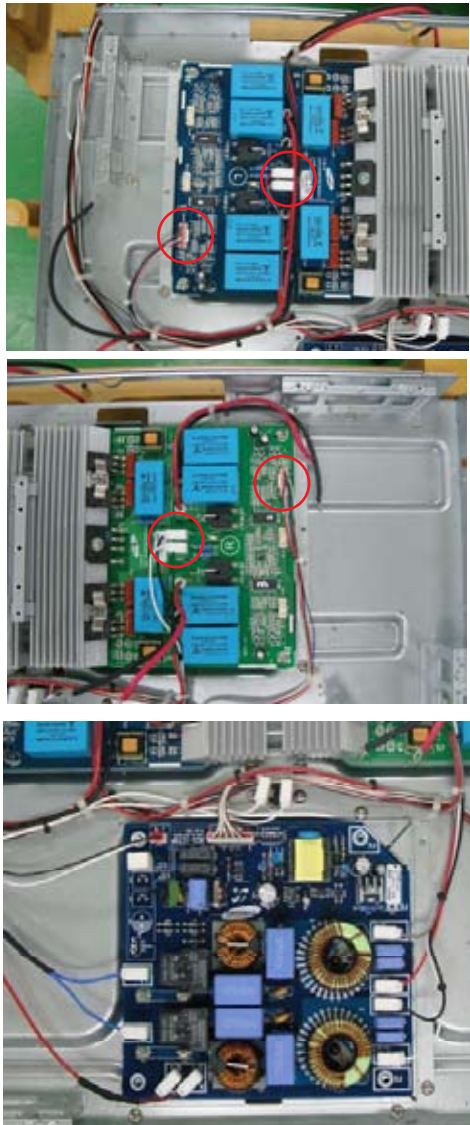
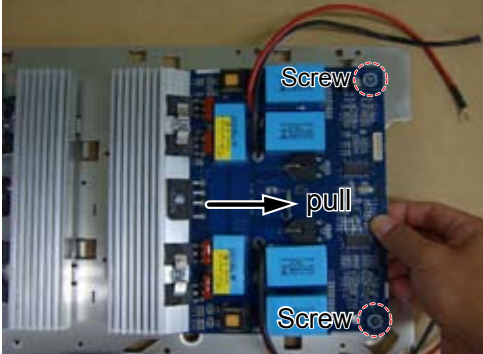
3. Disassembly and Reassembly

3-6 Replacement of the Assy-Induction Module

Parts	Explanation Photo	Explanation
Assy-Induction Module		<ol style="list-style-type: none">1. Remove 10 screws on the Case-Induction and 8 screws on 4 points of lead wires of the Working Coil.2. Lift up the Assy Touch PCB. (Assy Touch PCB is fixed by Double faced tape)3. Disconnect all sub- wire.
	<p>Warning Wire connecting position is very important. Please keep attention.</p>	
		<ol style="list-style-type: none">4. Lift up the case Induction.

3. Disassembly and Reassembly

3-6 Replacement of the Assy-Induction Module

Parts	Explanation Photo	Explanation
Assy-Induction Module		<p>5. Remove the sub wire of Power , Communication and Inverter.</p>
	<p>Warning Wire connecting position is very important. Please keep attention.</p>	
		<p>6. Remove the 2 screws . 7. Lift up and pull the Assy_Inverter Module(L,R) toward left or right side.</p>

3. Disassembly and Reassembly

3-7 Removing The Latch-Door & Switch-Door Plunger





⚠ WARNING

ELECTRICAL SHOCK HAZARD

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
Latch-Door & Switch-Door Plunger		<ol style="list-style-type: none"> 1. Turn off the electrical supply going to the range. 2. Open the oven door. 3. Raise the cooktop (see page 14 for the procedure). 4. To remove the Latch-Door: <ol style="list-style-type: none"> a) Remove the 2 screws from the front of cavity.
		<ol style="list-style-type: none"> <li value="2">b) Remove two screw from Cover-Back Main Guard and remove latch-door
		<ol style="list-style-type: none"> <li value="3">5. To remove the Switch-Door Plunger <ol style="list-style-type: none"> a) Remove the Cover-Back Guard Wire (see page 12 for the procedure). b) Release the Connector.
		<ol style="list-style-type: none"> <li value="4">c) Remove the Switch-Door Plunger from the range. take out carefully with shaking up and down by using tool.

3. Disassembly and Reassembly


3-8 Removing Heater-Broil

WARNING

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

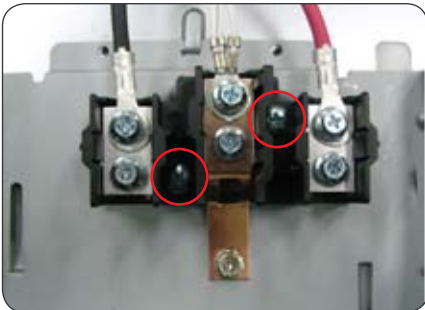

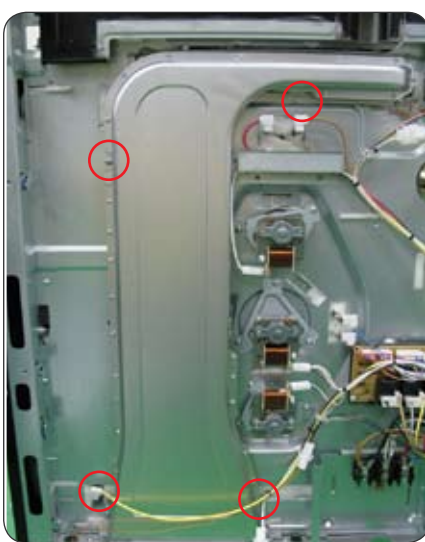

CAUTION

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
Broil	 The top photo shows the interior of an oven with the broil element and its support brackets. Red dashed circles highlight the sensor-thermistors on the front and rear brackets. The bottom photo shows a close-up of the electrical terminal block where the broil element wires are connected to the main wiring.	<ol style="list-style-type: none">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.<ol style="list-style-type: none">a) Remove the Sensor-Thermistor and 5 screws from the front and rear brackets.b) Remove Cover-Back Main Wire and disconnect 2 wires from Heater-Broil and a wire from Sensor-Thermistor.

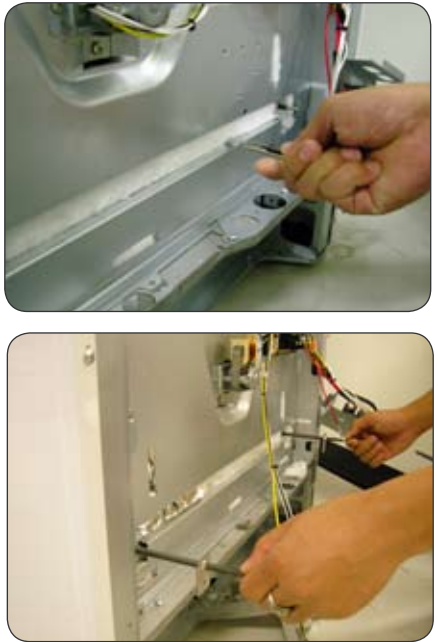
3. Disassembly and Reassembly

3-9 Removing Heater-Bake

Parts	Explanation Photo	Explanation
Heater-Bake		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 Cover-Back Main Wire.
		4. Remove Terminal-Block and Bracket-Cover Access. (with Adiabatic-Terminal) by unscrew 2 points. 5. Disconnect 2 wires of motor and warming drawer.
		6. Remove the duct By unscrew 4 points. 7. remove a screw located bake heater both side.

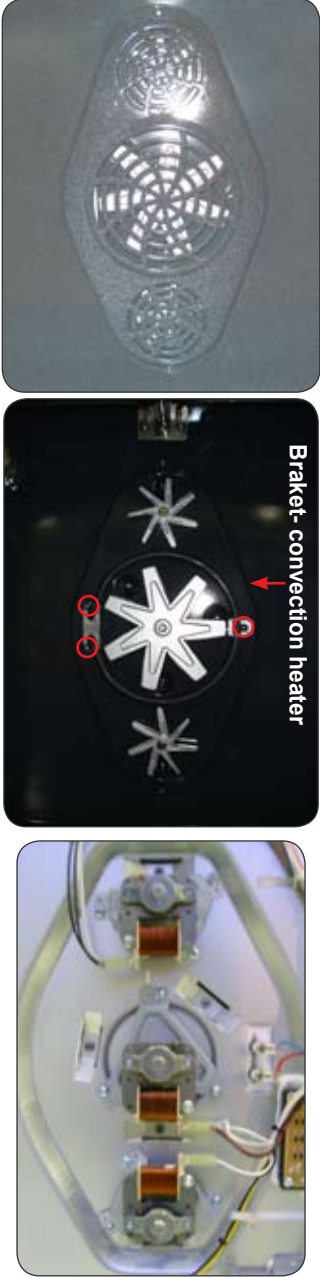
3. Disassembly and Reassembly

3-9 Removing Heater-Bake

Parts	Explanation Photo	Explanation
Heater-Bake		<p>7. Cut the Adiabatic-Rear based on the lower side.</p> <p>8. Carefully pull out Heater-Bake and replace it.</p>

3. Disassembly and Reassembly

3-10 Removing Convection Element, Fan-Convection and Motor-Convection

Parts	Explanation Photo	Explanation
<p>Convection Element, Fan-Convection , Motor-Convection</p>	 <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Bracket-convection heater</p>	<ol style="list-style-type: none"> 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 Cover-Back Main Wire from the unit. (See step 3 on page 12 for procedure) 4. Remove oven door. (See Page 32 on page for procedure) 5. Power Cover-casing 6. Unscrew 2 screws and remove Bracket-Convection Heater to remove Heater-Convection. 7. Unscrew nut of Fan-Convection Main(CW), and 2 Fan-Convection Planets(CCW). 8. Unscrew 9 points and disconnect a Motor-Convection wire and disconnect Heater-Convection wire.



CAUTION

Be careful not to bend the Fan-Convection(Blade)

3. Disassembly and Reassembly




3-11 Removing 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

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	
Lamp	<ol style="list-style-type: none"> 1. Disconnect power. 2. Remove oven door. 3. Turn the glass bulb cover in the oven counterclockwise to remove. 4. Turn bulb counterclockwise to remove from socket. 5. Replace bulb and cover by turning clockwise. 	
	<p>⚠ CAUTION</p> <p>Be careful not to scratch or chip the oven liner paint when to remove the oven light socket in the next step.</p>	
	Explanation Photo	Explanation
		<p>To replace socket assembly:</p> <ol style="list-style-type: none"> 6. Disconnect the wires from the socket terminals. 7. Use a screwdriver and bend the clips on the socket away from the edges of the liner hole (there are 6 clips on the socket), and pull the socket out of the liner. Push the socket out from the rear of the unit.

3. Disassembly and Reassembly

3-12 Removing Sensor-Thermistor

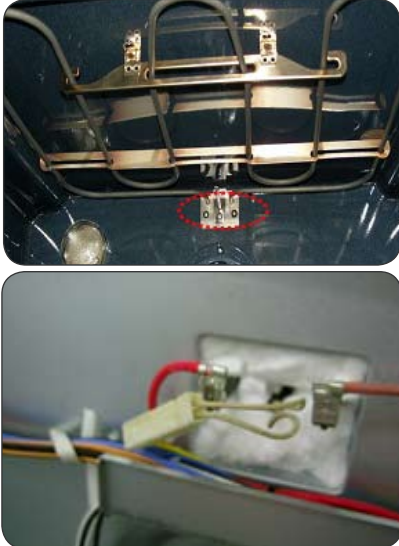
WARNING

ELECTRICAL SHOCK HAZARD

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

PRECAUTION

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
Sensor-Thermistor		<ol style="list-style-type: none">1. Turn off the electrical supply going to the range.2. Remove oven door and racks from inside the oven.3. Unscrew Sensor-Thermistor.4. Remove Cover-Back Main Wire and disconnect a wire from Sensor-Thermistor.5. Replace the Sensor-Thermistor.

3. Disassembly and Reassembly

3-13 Removing Assy-Drawer & Heater-Warming Drawer & Motor-Blower

WARNING

ELECTRICAL SHOCK HAZARD

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


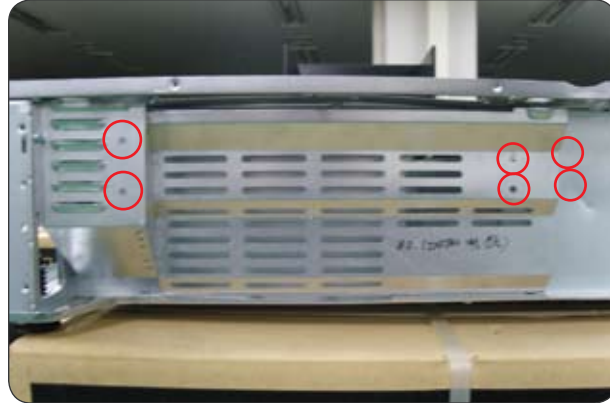

PRECAUTION

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
Assy-Drawer & Heater-Warming Drawer	
	<p data-bbox="784 1535 932 1562">Explanation</p> <p data-bbox="289 1577 586 1604">To remove Assy-Drawer:</p> <ol data-bbox="289 1614 1386 1795" style="list-style-type: none">1. CAUTION -Turn power OFF before removing the Warming Drawer.2. Open the drawer to the fully opened position.3. Locate glide lever on each side of drawer, push down on the left glide lever and pull up on the right glide lever.4. Pull out the warning drawer.

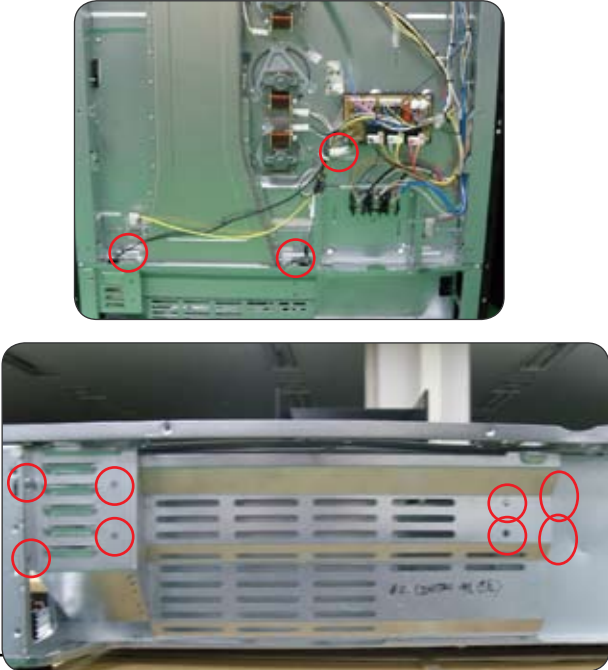
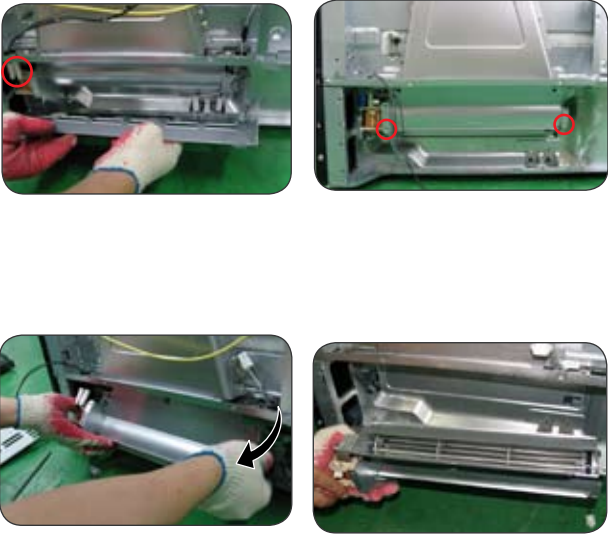
3. Disassembly and Reassembly

3-14 Removing Assy-Drawer & Heater-Warming Drawer

Parts	Explanation Photo	Explanation
Assy-Drawer & Heater- Warming Drawer		<p>To remove Heater-Warming Drawer:</p> <ol style="list-style-type: none"> 1. Remove 2 screws on the Heater -Warming Drawer. 2. Remove 6 screws from Bracket - Warming Heater. 3. Remove Braket Warming Heater and disconnect 2 wires of Wire harness-WD. 4. Pull out the Heater Warming Drawer.
		<ol style="list-style-type: none"> 2. Remove Cover-Warming Heater and disconnect 2 wires. 3. Pull out the Heater-Warming Drawer.
		

3. Disassembly and Reassembly

3-15 Removing Assy AC Fan Motor





Parts	Explanation Photo	Explanation
Assy-Drawer & Heater- Warming Drawer		<p>To remove AC Fan Motor:</p> <ol style="list-style-type: none"> 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 Cover-Back Main Wire. 4. Disconnect the hosing of motor wire and remove two screws at the upper Drawer. 5. Remove a 8 screws Bracket-Warming Heater.
		<ol style="list-style-type: none"> 6. Pull out the bracket -Warming Drawer. 7. Disconnect two wire of a motor wire harness. 8. Remove two screws at the hosing motor case. 9. Pull the motor down.

3. Disassembly and Reassembly

3-16 Removing and Replacing Oven Door

⚠ WARNING

The door is very heavy. Be careful when removing door Do not lift door up by the Handle-Door.

Parts	Explanation Photo	Explanation
Oven door		<p>To remove Oven Door:</p> <ol style="list-style-type: none"> 1. Fully open the door 2. Pull the hinge locks downward(Fig.1)
		<ol style="list-style-type: none"> 3. Firmly grasp both side of the door at the top. 4. Close door to the door removal position, which is approximately 5 degrees. (refer to the Fig.2) Lift door up and out until the hinge arm are clear of the slot.
		<p>To replace door:</p> <ol style="list-style-type: none"> 1. Firmly grasp both sides of the door at the top position.
		<ol style="list-style-type: none"> 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 and Reassembly

3-17 Removing Handle-Door and Glass-Inner



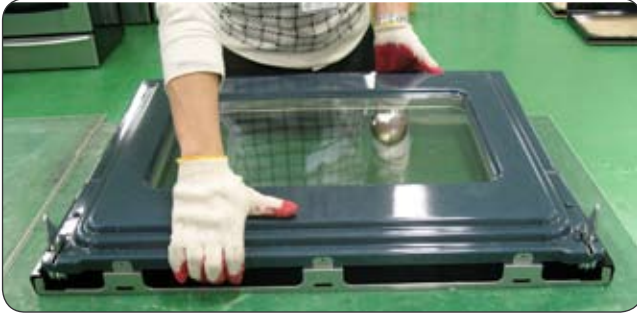

WARNING

ELECTRICAL SHOCK HAZARD

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

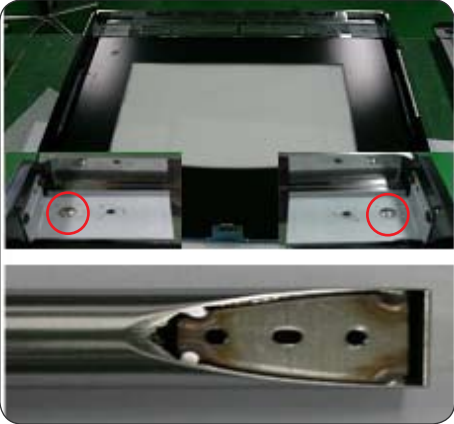


PRECAUTION

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
Door		<ol style="list-style-type: none"> 1. Remove the oven door from the range (see page 25 for the procedure.) 2. Place the oven door on a padded work surface with the front glass facing down. 3. Remove 3 bottom screws from the door.
		<ol style="list-style-type: none"> 4. Remove 2 Handle-screws from the door.
		<ol style="list-style-type: none"> 5. Lift the door rear assembly off the front assembly and set it aside
		<ol style="list-style-type: none"> 6. Remove 2 spacers and 2 screws.

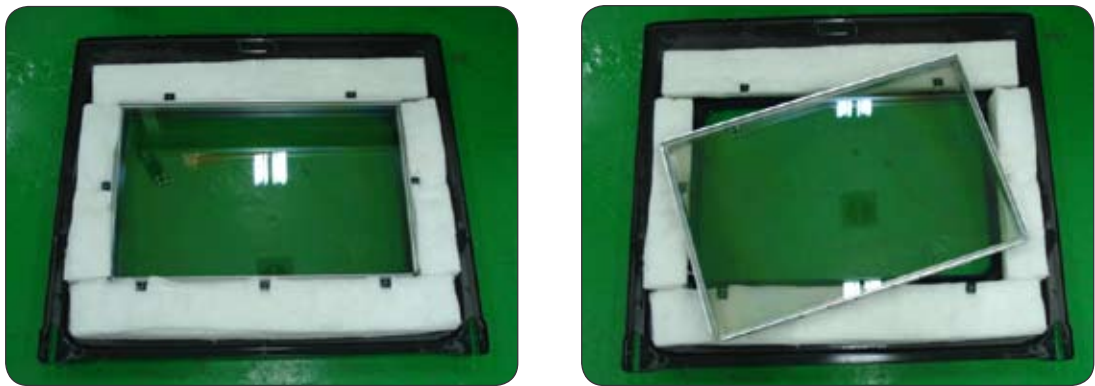
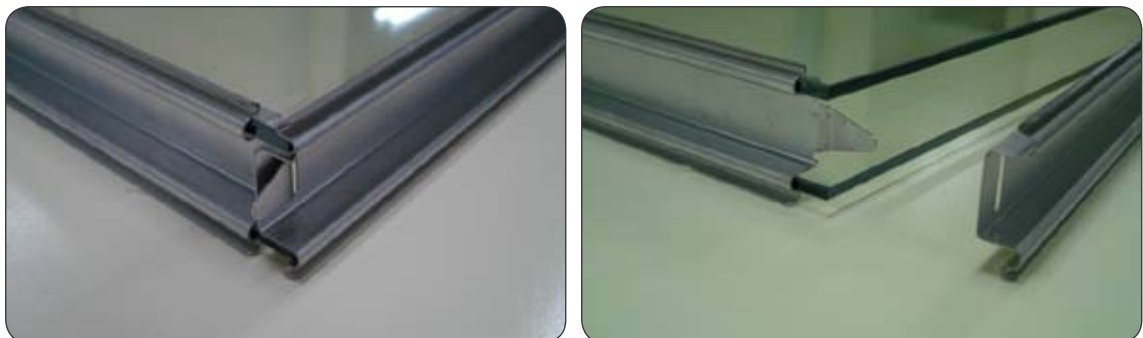
3. Disassembly and Reassembly

3-17 Removing Handle-Door and Glass-Inner

Parts	Explanation Photo	Explanation
Handle Door		<p>To remove Handle-Door</p> <ol style="list-style-type: none"> 1. Remove 2 screws to remove Handle-Door
Glass-Inner		<p>To remove Glass-Inner</p> <ol style="list-style-type: none"> 1. Remove 6 screws from rear side of door to remove 2 Hinge-Door.
		<ol style="list-style-type: none"> 2. Remove 4 screws to remove Glass-Inner Sub Assembly 3. Remove 7 screws to remove Baffle-Door

3. Disassembly and Reassembly

3-17 Removing Handle-Door and Glass-Inner

Parts	Explanation Photo
	
	Explanation
Handle Door	4. Remove Baffle-Door and take out the Glass-Inner assembly.
Door	Explanation Photo
	
	Explanation
	5. Unfold 2 flanges of Cover-Frame Inner Glass to taking out Glass-Inner

3. Disassembly and Reassembly

3-18 Removing Gasket-Door

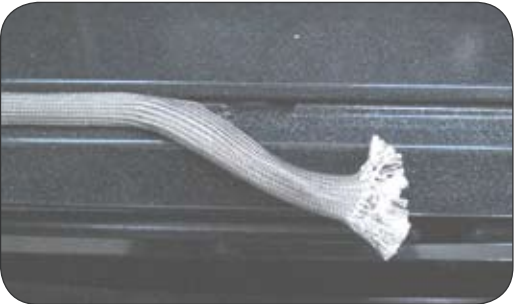

WARNING

ELECTRICAL SHOCK HAZARD

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

PRECAUTION

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	
Gasket door		
	Explanation	
	<ol style="list-style-type: none">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.	
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.		

3. Disassembly and Reassembly

3-19 Removing The Panel-Side


WARNING

ELECTRICAL SHOCK HAZARD

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

PRECAUTION

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
Panel Side		<ol style="list-style-type: none">1. Turn off the electrical supply.2. Remove the oven door from the range (see page 3-12 for the procedure).3. Pull the range away from the wall so you can access the back of the unit.4. Remove the 8 screws from the rear of Panel-Side and remove Cooktop.5. Remove the (each) 3screws from the top the Panel-Side.6. Pull the back of the side panel out from the range approximately 10°7. Push forward and remove Panel-Side.

4. Troubleshooting

4-1 Failure Display Codes

There is a error code and two kinds of error codes. Possible error codes during use can be checked before service.

1. Press CLOCK AM/PM pad.
2. Press the CLOCK AM/PM pad again to select AM.
3. Press a number 1, 2, 3, 4 pad.
4. Press the SET/START pad.
5. Press CUSTOM COOK and number 0 pads at the same time for 2 seconds. Error codes are displayed.
6. Press number 0 pad, the latest 5 error codes can be checked. But, if the oven turns off, the stored error codes are deleted.
7. Press CLEAR/OFF pad to return to normal display mode.



Oven sensor error

Failure code	CAUSE	SOLUTION
E-27	oven sensor opened (over 2950Ω)	<ol style="list-style-type: none"> 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. If there is not any problem with oven sensor, Please check whether there is a damaged terminal or wire on harness. 3. Check resistance of oven sensor connector on main PCB (Normal:2850Ω)
E-28	Oven sensor shorted. (Under 930Ω)	

4. Troubleshooting

4-1 Failure Display Codes

Safety error

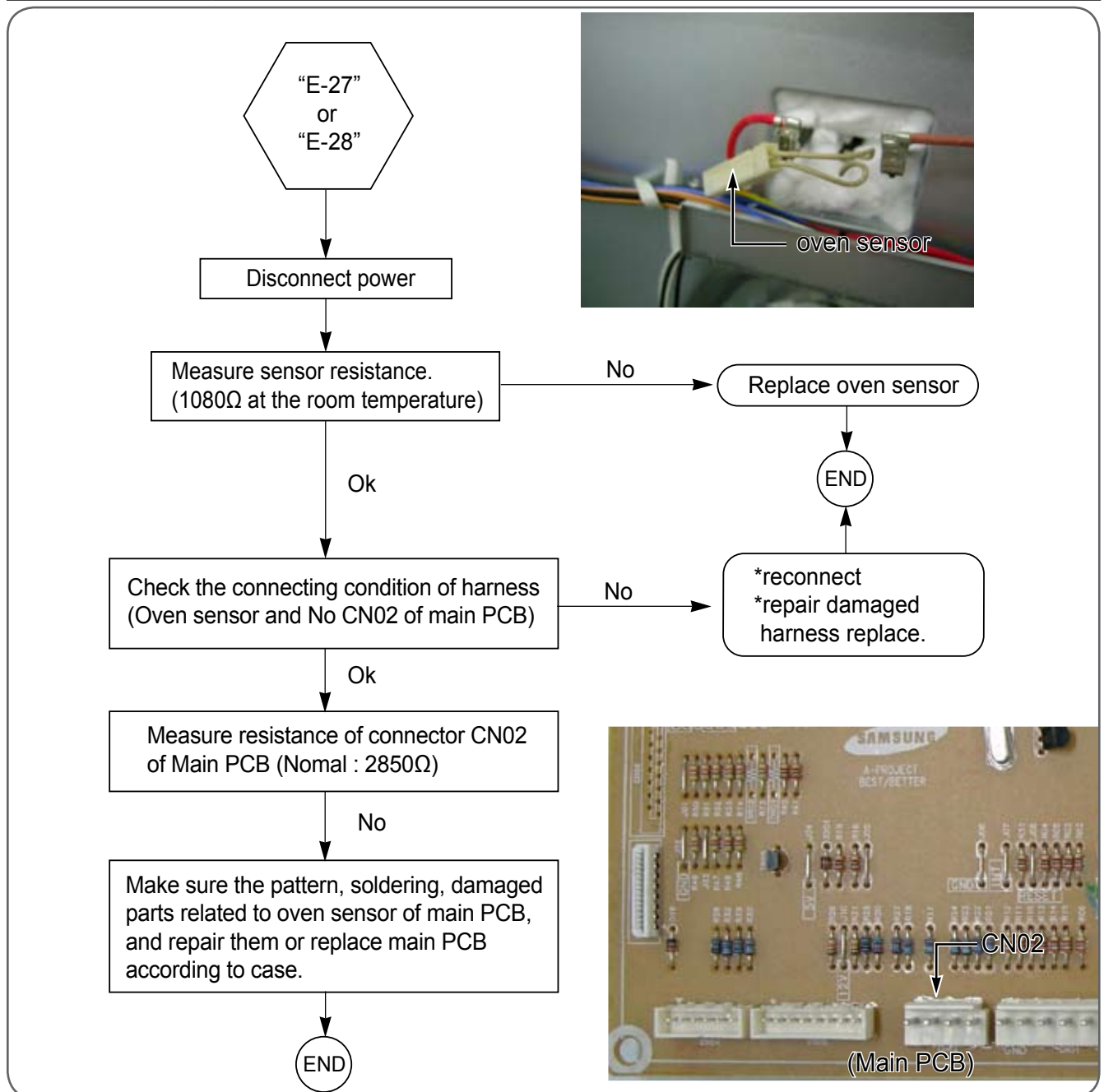
Failure code	CAUSE	SOLUTION
E-08	Oven heating error	<ol style="list-style-type: none"> 1. Disconnect power. Open the back cover. Disconnect sensor harness from control. Measure sensor resistance :1080Ω at the room temperature → If there are any problems, replace oven sensor. 2. Check the broil, bake and convection heater. Check the resistance of the each heater.
E-0A	Oven heating over	<ol style="list-style-type: none"> 3. Check whether DLB of sub PCB, Broil, Bake and Convection heater relay are being worked normally. 4. Check whether there is any disconnection of harness which is linked with main PCB on sub PCB. 5. Check the resistance of oven sensor connector on main PCB. (Normal : 2850Ω)
- SE -	Shorted key	<ol style="list-style-type: none"> 1. Check whether cable of keypad has been inserted into connector of main PCB. 2. Check whether between main PCB and connector or keypad and cable have a short circuit. 3. If there is not a problem occurred with connector on main PCB and cable of keypad, replace the main PCB.
E-0E	Door locking error	<ol style="list-style-type: none"> 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 to be normal one or not. 3. With operating door lockout, 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 being worked normally.

4. Troubleshooting

4-1 Failure Display Codes

Safety error

Failure code	CAUSE	SOLUTION
E-27	oven sensor opened (over 2950Ω)	1) After 20 seconds from starting to work of oven, buzzer is beeping 10 times long and then finally it displays “E-27” or “E-28” as Error message. 2) If a series of function for error is not performed at all, please make sure through the method of 4-1 on 31 page.
E-28	Oven sensor shorted. (Under 940Ω)	



4. Troubleshooting

4-1 Failure Display Codes

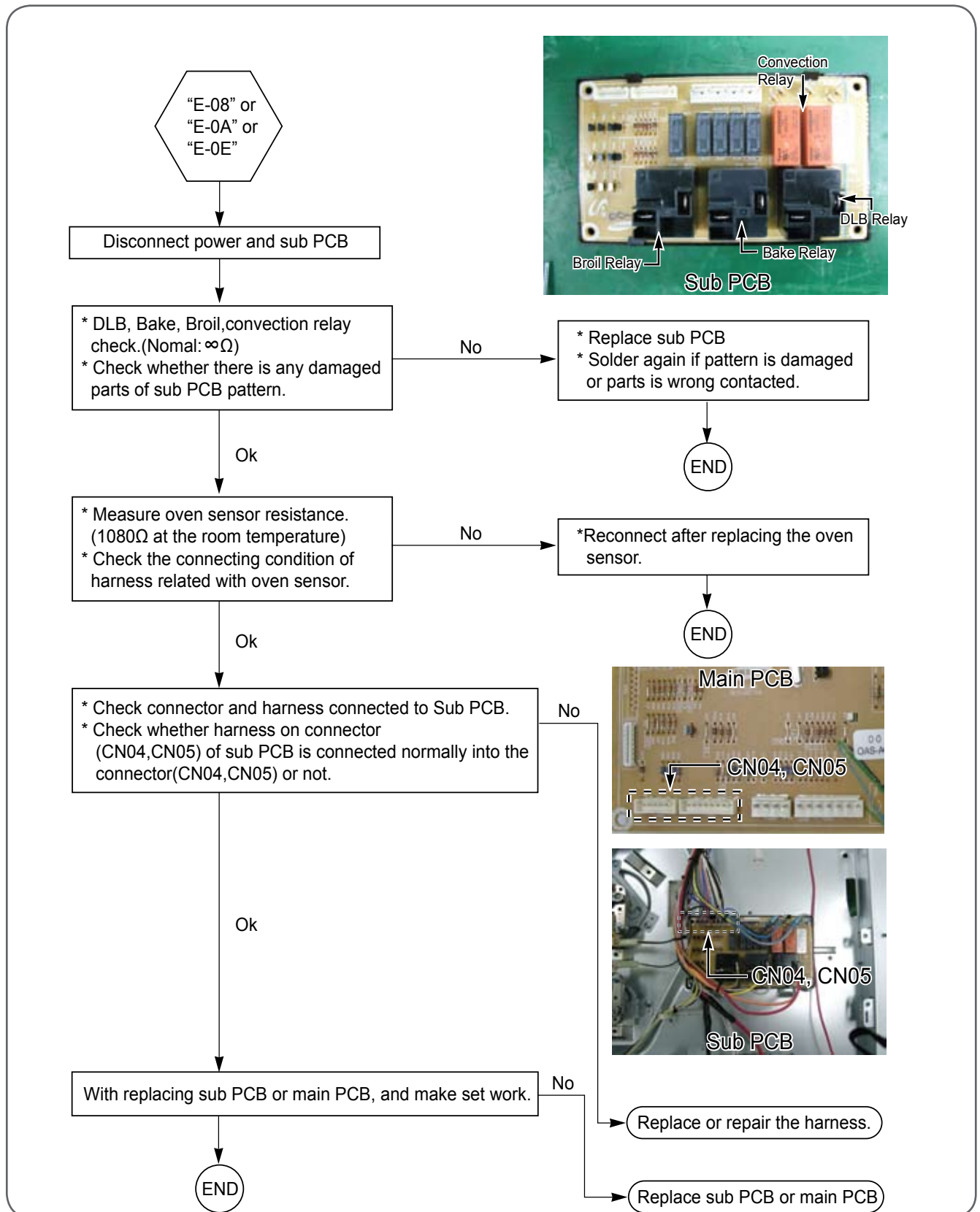
Safety error

Failure code	CAUSE	SOLUTION
E-08	oven heating error	<ol style="list-style-type: none">1) It will display "E-08" after buzzer is beeping 10 times long if it could not reach 100°F(38°C) within 10 minutes during oven is working.2) Please make sure through the method of 4-1 on 31 page, if if those series of working for informing error take long time or not functioned.
E-0A	Oven heating over	<ol style="list-style-type: none">1) It will display "E-0A" after beeping 10 times Bz long, if temperature is more than 600°F(316°C) during oven is working excluding the case of self-cleaning.2) Please make sure through the method of 4-1 on 31 page, if those series of working for informing error take long time or not functioned.

4. Troubleshooting

4-1 Failure Display Codes

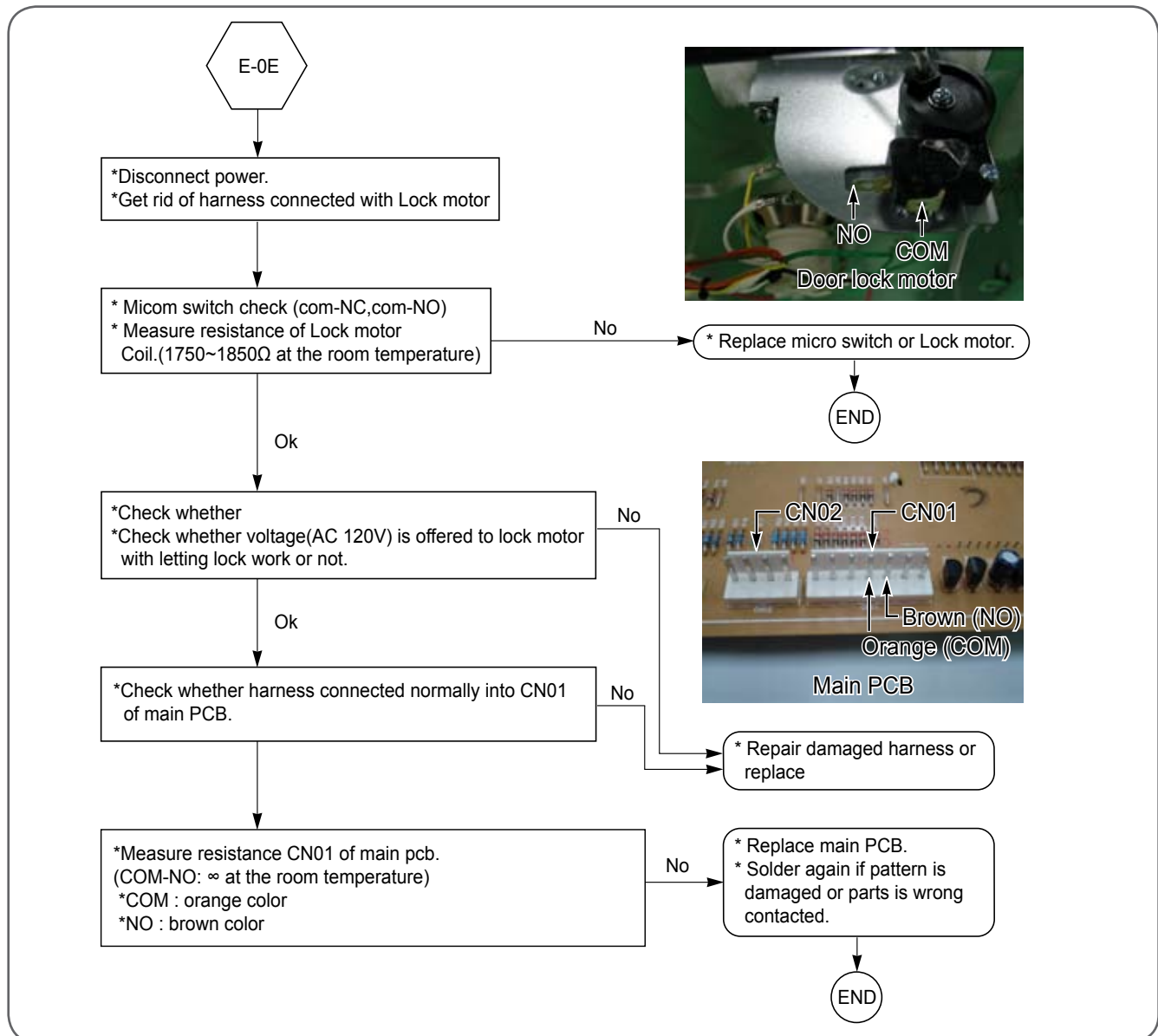
Safety error



4. Troubleshooting

4-1 Failure Display Codes

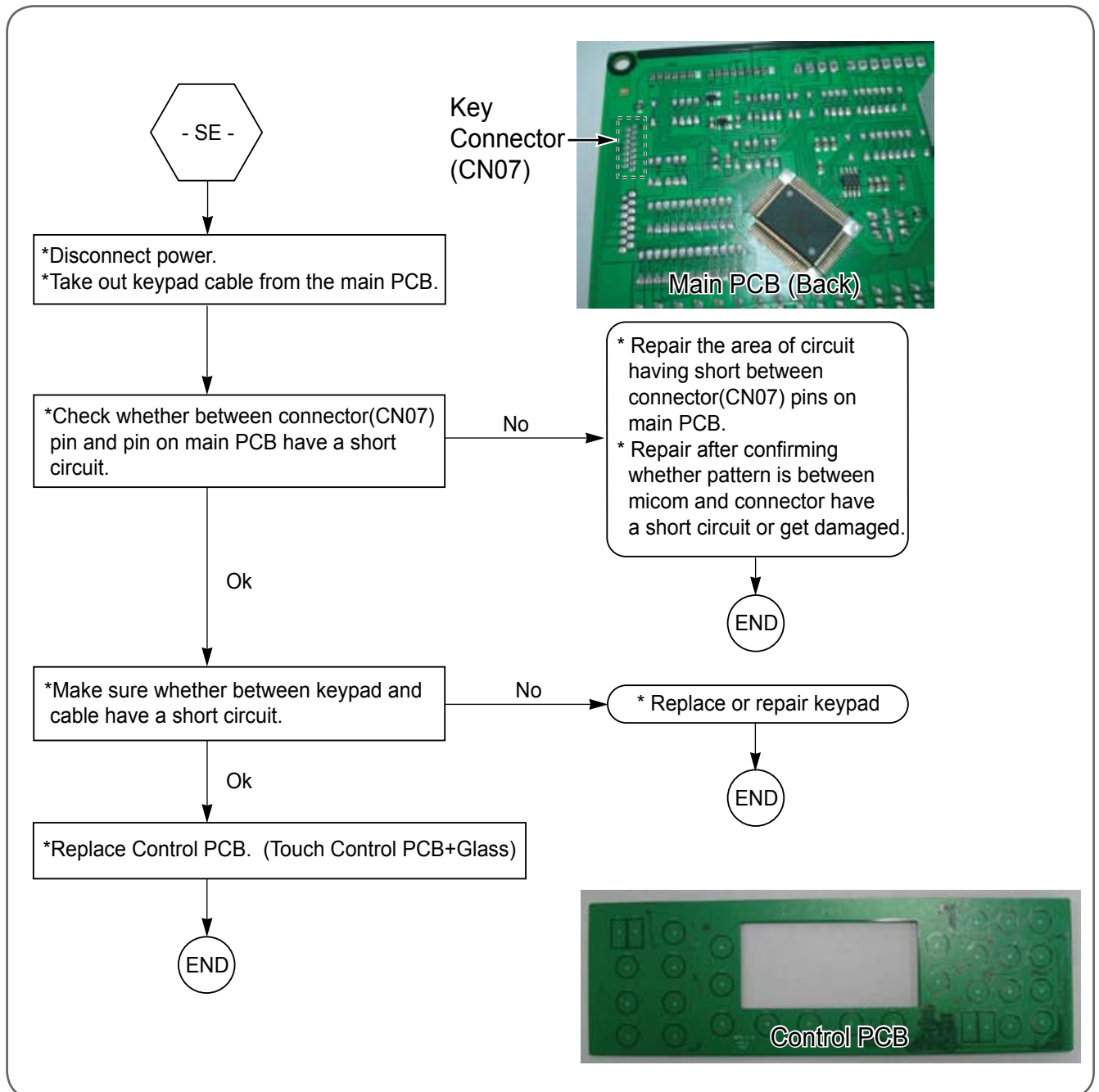
Failure code	CAUSE	SOLUTION
E-0E	Door locking error	<p>*Control lockout(press cooking time and Delay start pads at the same time for 3 seconds.)</p> <p>When 1 minute elapsed, It will display “E-0E” after buzzer is beeping 10 times long, if locking is occurred continually, or door locking is not working during self-cleaning or steam is being operated.</p> <p>Please make sure through the method of 4-1 on 31 page if those series of working for informing error take long time or not functioned.</p>



4. Troubleshooting

4-1 Failure Display Codes

Failure code	CAUSE	SOLUTION
-SE-	short key	<p>When 10 seconds elapses, It will display “-SE-” after buzzer is beeping 10 times long if between main PCB and cable connector or keypad and cable have a short circuit.</p> <p>Please make sure through the method of 4-1 on 31 page if those series of working for informing error take long time or not functioned.</p>



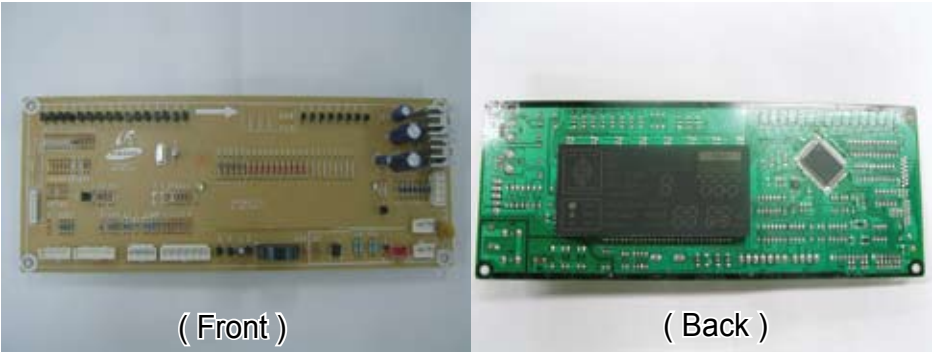
4. Troubleshooting

4-1 Failure Display Codes

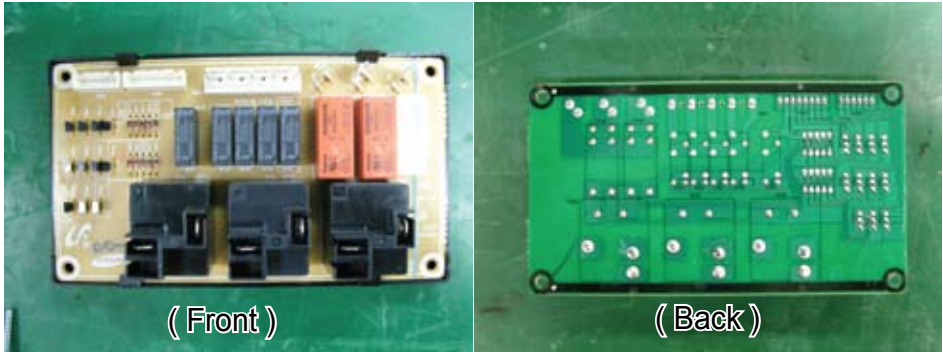
Control PCB Operation

Sort of Control PCB

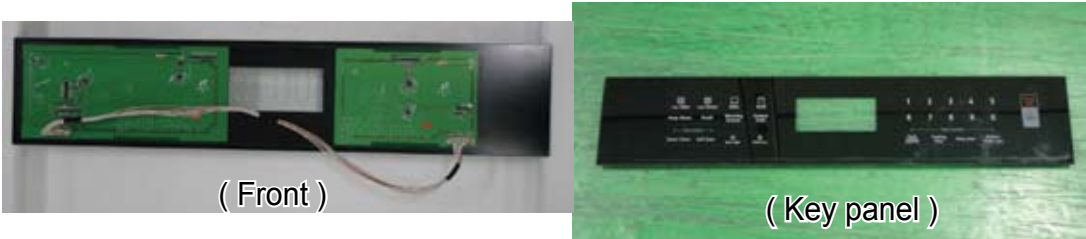
Main PCB



Sub PCB



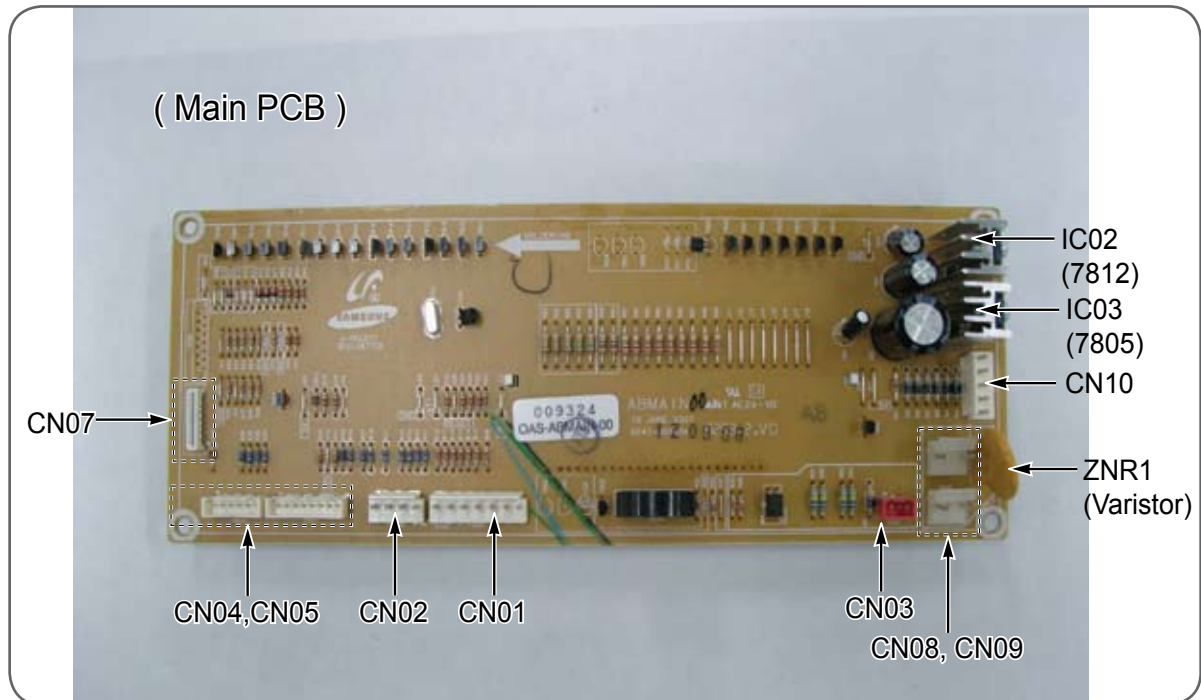
Touch control PCB



4. Troubleshooting

4-1 Failure Display Codes

* Explain of primary parts of Main PCB



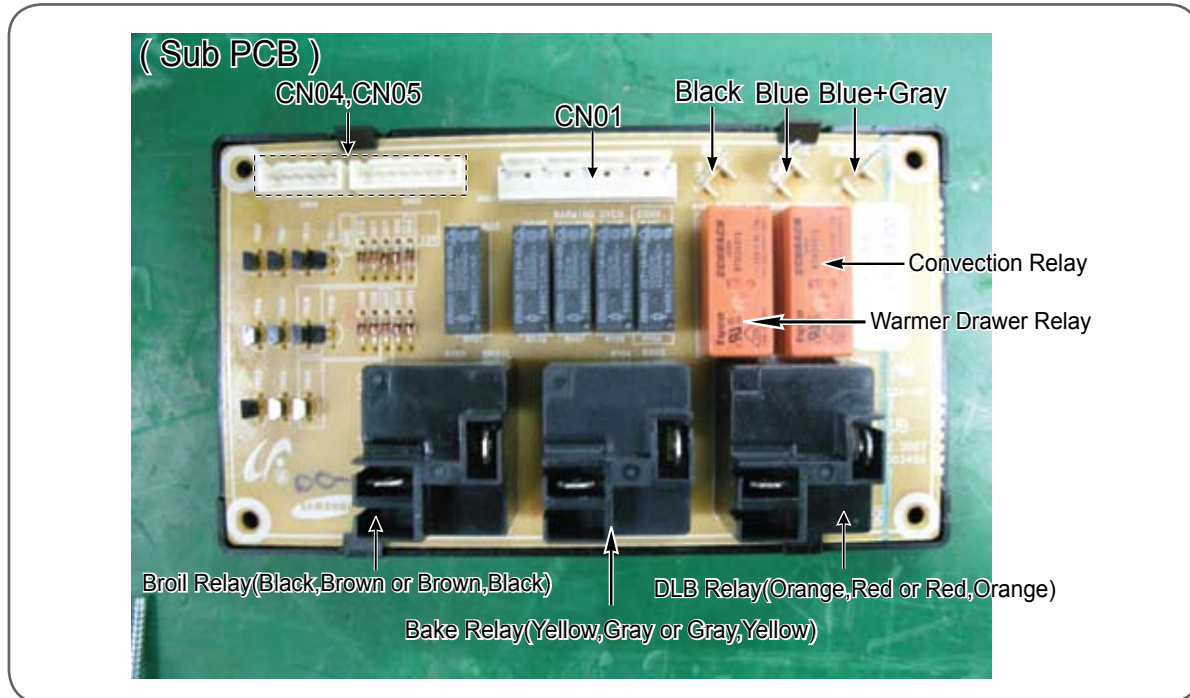
Explain of the function of primary parts.

CN01	This is connector which is connected with Door plunger switch and Door lock switch. (COM-NO)
CN02	This is connector which is connected with oven sensor.
CN03	This is to stop operating self-cleaning and steam mode if hot indicator lamp on cooktop is lighted with being supplied with AC120V(L1, N).
CN04,CN05	This connector is to get all operating of relay on sub PCB to be connected.
CN07	This is consisted of 15 pin and take a role of getting a cable on keypad to connect with touch PCB.
CN08,CN09	This is to supply power with primary on Low voltage transformer, and AC120V with main PCB through harness. It won't be problem even though CN08 and CN09 has been changed when you insert housing.
CN10	This is connector which take a role of supplying secondary voltage of Low voltage transformer with main PCB.
ZNR1	This is the element to protect main PCB, getting varistor to work if over voltage is supplied with varistor.
IC02	This is to supply DC12V with main PCB by voltage regulator.
IC03	This is to supply DC5V with main PCB by voltage regulator.

4. Troubleshooting

4-1 Failure Display Codes

Explain primary parts of Sub PCB



Explain of the function of primary parts.

CN01	This is connector which have Door plunger switch, cooktop warming center, oven lamp and relay of convection fan connected.
CN04, CN05	Connector(CN04, CN05) on sub PCB take a role of getting all of the operation of relay on sub PCB to connect with main PCB(CN04, CN05).
DLB relay(Ry02)	Circuit is designed to have broil relay or convection relay worked after DLB relay is being worked by Double line break. (It will not be problem with reversing the order in insering Orange and Red)
Broil relay(Ry03), Bake relay(Ry04), convection relay(Ry05)	Broil relay(Ry03), Bake relay(Ry04), convection relay(Ry05) will be on-off working by micom signal after DLB relay is worked. (Broil relay : It will not be problem with reversing the order in insering Black and Brown) (Bake relay : It will not be problem with reversing the order in insering Yellow and Gray)
Ry-source relay(Ry01)	This is consisted of 15 pin and take a role of getting a cable on keypad to connect with touch PCB.
W/Drawer Relay(Ry06) and T03 terminal	This is terminal to connect harness with relay to get heater on warming drawer work.
T02 terminal	This is the terminal to connect convection heater with convection relay.
T01 terminal	This is the terminal to supply L1 voltage(120V) with warming drawer relay(Ry06), convection relay(Ry05).

4. Troubleshooting

4-1 Failure Display Codes

* Explain primary parts of Touch Control PCB



1. Touch control PCB : This is circuit PCB to have keypad worked.

If touch control PCB become inferior you should replace all of the PCB assembly of touch control (Glass + touch control PCB).

2. keypad cable : keypad cable is to connect main PCB with touch control PCB.

3. Touch glass : Touch glass is to guide keypad by touching this. The user can make oven work.

4. Troubleshooting

SYMPTOM	DIAGNOSIS	REMEDY
oven not operating (No power, No display)	<ul style="list-style-type: none"> * Measure an input voltage. (240/120V or 208/120V) * Measure an input voltage of terminal block. 	<ul style="list-style-type: none"> * check circuit breaker. * Make sure that the state of wire is connected with Terminal block.
	<ul style="list-style-type: none"> * Measure voltage of connector(CN08,CN09) on main PCB L1~N : 120V * Measure secondary voltage of Low Voltage Transformer. Red + Red color : 13.5V Yellow + Yellow color : 8V 	<ul style="list-style-type: none"> * Replace or repair if harness has been loosen or disconnected. * Replace if resistance of Low voltage transformer primary coil is over MΩ. (Thermal Fuse out)
	<ul style="list-style-type: none"> * Make sure that the relay on sub PCB is being worked normally. * Make sure whether harness between connector (CN04,CN05) on sub PCB and connector (CN04,CN05) on main PCB has been loosen or disconnected. 	<ul style="list-style-type: none"> * Replace sub PCB if relay has been damaged or there is any cracking on the sub PCB. * Repair harness is connected main PCB with sub PCB. * After confirming whether harness has been inserted into relay on sub PCB or not, take action follow as; - Replace or repair harness. - Replace or repair sub PCB.
	<ul style="list-style-type: none"> * Measure resistance both ends of terminal on thermostat. (normal : 0 ohms) * Check whether harness is connected terminal on thermostat has been loosen or disconnected. * Measure voltage regulator (IC02,IC03) on main PCB. - IC02 : 7812(DC 12V) - IC03 : 7805(DC 5V) 	<ul style="list-style-type: none"> * Replace the thermostat. * Replace or repair harness. * Replace or repair after confirming the state of working of main PCB.
Oven temperature is risen slowly.	<ul style="list-style-type: none"> * It will display "E-08" if it fail to reach 100°F(38°C) within 10 minute in a state of room temperature. 	<ul style="list-style-type: none"> * Replace after checking whether there is any problem with oven sensor. (1080Ω at the Room temperature)
	<ul style="list-style-type: none"> * Make sure whether harness is connected with Broil, Bake and convection heater has been loosen or disconnected. 	<ul style="list-style-type: none"> * Repair and replace harness.
	<ul style="list-style-type: none"> * Make sure whether Broil, Bake, and convection heater has been disconnected. 	<ul style="list-style-type: none"> * After taking out terminal from each heater, measure resistance of heater and then replace that if it is not a normal resistance value.
	<ul style="list-style-type: none"> * Make sure that heater relay and pattern on sub PCB. 	<ul style="list-style-type: none"> * Replace or repair relay. * Replace or repair sub PCB.

4. Troubleshooting

SYMPTOM	DIAGNOSIS	REMEDY
Oven temperature is risen fast.	* Check whether temperature is risen over 400°F(202°C) within 10 minutes in a state of room temperature.	* Replace or repair it if relay on sub PCB or main have a short circuit.
	* Check whether harness has been misconnected or have a short circuit.	* Replace or repair harness.
	* Measure resistance values of each heater are within a normal extent or not.	* Replace heater is in a abnormal state.
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.
Keypad is not worked normally in partially or entirely.	Make sure that keypad cable on touch PCB is in normal state.	Replace after confirming whether it has been loosen or disconnected.
	Make sure connector (CN07) on main PCB or PCB pattern.	Replace or repair after confirming whether keypad cable has been loosen or disconncted.
	Check whether touch control PCB has been damaged.	Replace assembly of touch control pcb. (PCB + Glass touch)
Warmer drawer heating is not working.	* Check warmer drawer relay (Ry06) on sub PCB and terminal(T03).	* Replace terminal(T03) or relay(Ry06). * Replace sub PCB.
	* Measure whether resistance value of warmer drawer heater is in normal extent or not.	* Replace warmer drawer heater.
Oven lamp is not working.	* Check the oven lamp relay (Ry09) on sub PCB and connector (CN01).	* Replace or repair if harness has been loosen or disconnected. * Replace oven lamp relay(Ry09) or Ry-source relay.(Ry01) * Replace Sub PCB.
	Measure the resistance value of both ends of lamp terminal.	* Replace lamp if it has been disconnected.(120V / 40W)





4. Troubleshooting

SYMPTOM	DIAGNOSIS	REMEDY
Convection fan is not rotated.	Check whether Convection fan relay (Ry08) on sub PCB and connector(CN01) is in normal.	<ul style="list-style-type: none"> * Replace or repair Relay. * Replace or repair connector.
	Make sure whether harness between connector(CN04, CN05) on sub PCB and connector(CN04, CN05) on main PCB has been connected normally.	<ul style="list-style-type: none"> * Replace or repair harness. * Replace or repair connector. * Replace sub PCB.
It has smell or smoke when oven has been started initially.	This is in normal state.	<ul style="list-style-type: none"> * 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 display is a little bit dim partially or invisible entirely.	<ul style="list-style-type: none"> * LED display is inferior. 	<ul style="list-style-type: none"> * Replace main PCB.
There is not buzzer beep sound when keypad is being worked.	Check the state of buzzer on main PCB and whether PCB pattern have a short circuit or has been open.	<ul style="list-style-type: none"> * Replace or repair main PCB.





4. Troubleshooting

4-1 Failure Display Codes

4-1-1 Temp Sensor Error

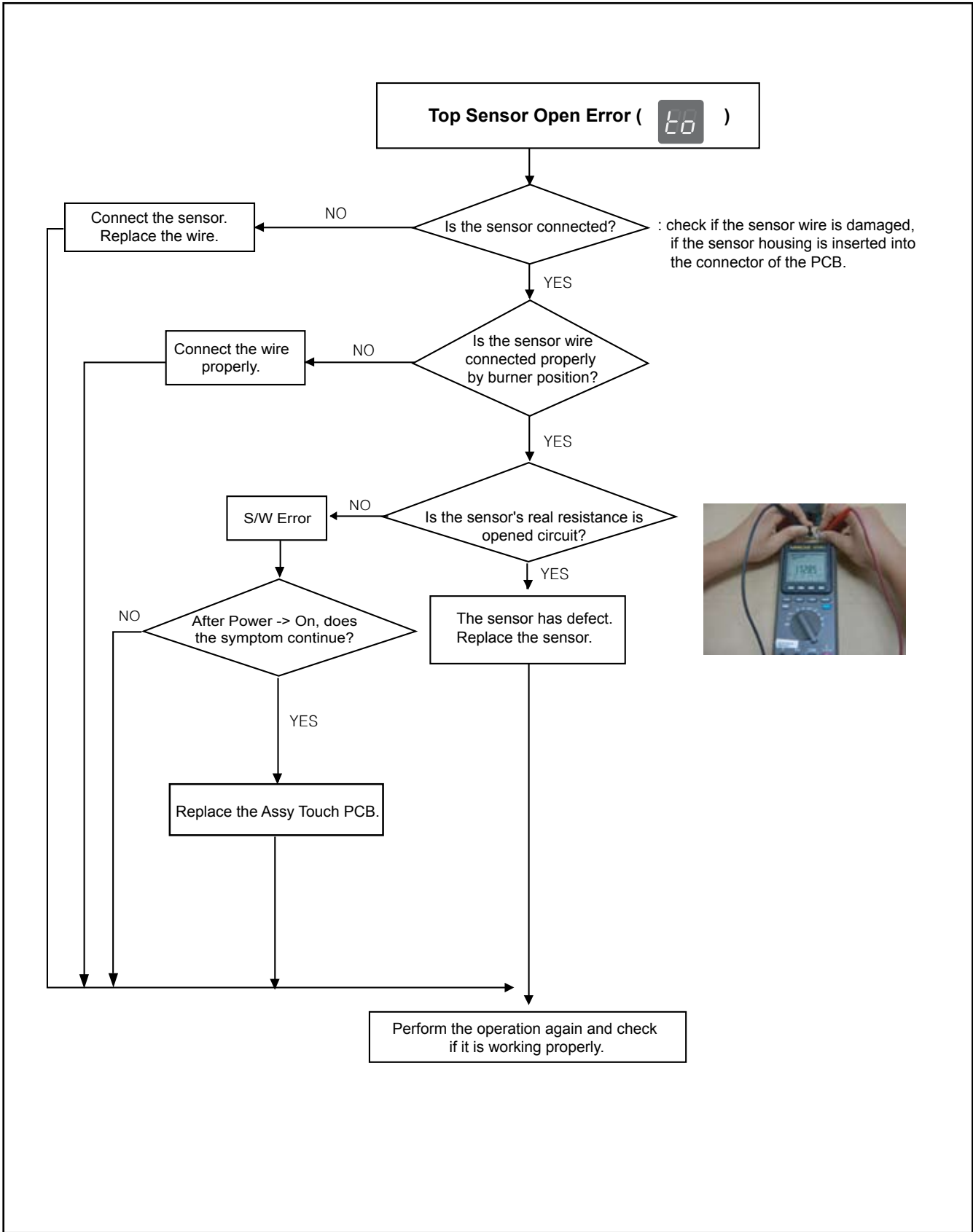
Error Code	Solution	Page
	Top Sensor Open Error (Sensor-Top) It occurs due to a defective sensor, misplaced wires, a defective PCB and when A/D value that MICOM senses rises over 252. Also, it may occur when the ambient temperature falls under -10°C.	52 Page
	Top Sensor Short Error (Sensor-Top) It occurs due to a defective sensor, misplaced wires, a defective PCB and when A/D value that MICOM senses falls under 10.	53 Page
	IGBT Sensor Open Error (Assy-Inverter Module) It occurs due to a defective sensor, misplaced wires, a defective PCB and when A/D value that MICOM senses rises over 239. Also, it may occur when the ambient temperature falls under -10°C.	54 Page
	IGBT Sensor Short Error (Assy-Inverter Module) It occurs due to a defective sensor, misplaced wires, a defective PCB and when A/D value that MICOM senses falls under 10.	55 Page

4-1-2 Safety Error

Error Code	General Function	Solution	Page
	Touch Button Short Error	It occurs when the control panel's sensor field is shorted more than 10 seconds. ex: No.1 Place a damp cloth on the control panel. No.2 Liquid boils over and lands on the control panel. No.3 More than one key is pressed more than 10 seconds. No.4 Defective Assy-Touch PCB	56 Page
	Low Voltage Error	It occurs when the DC 12V is dropped under 9V. It may occurs due to defects of PCB or wiring.	57 Page
	Over Temperature Error	It occurs when the temperature of the Top Sensor rises very highly. (Estimated temperature of ceramic glass's surface is more than 250°C.) ex: Place a empty cookware on the burner and operate the hob.	58 Page
	Pan Detection Error	It occurs when the cookware is unsuitable or too small or no cookware has been placed on the cooking zone. If the suitable cookware is placed again, the hob will operate normally.	59 Page

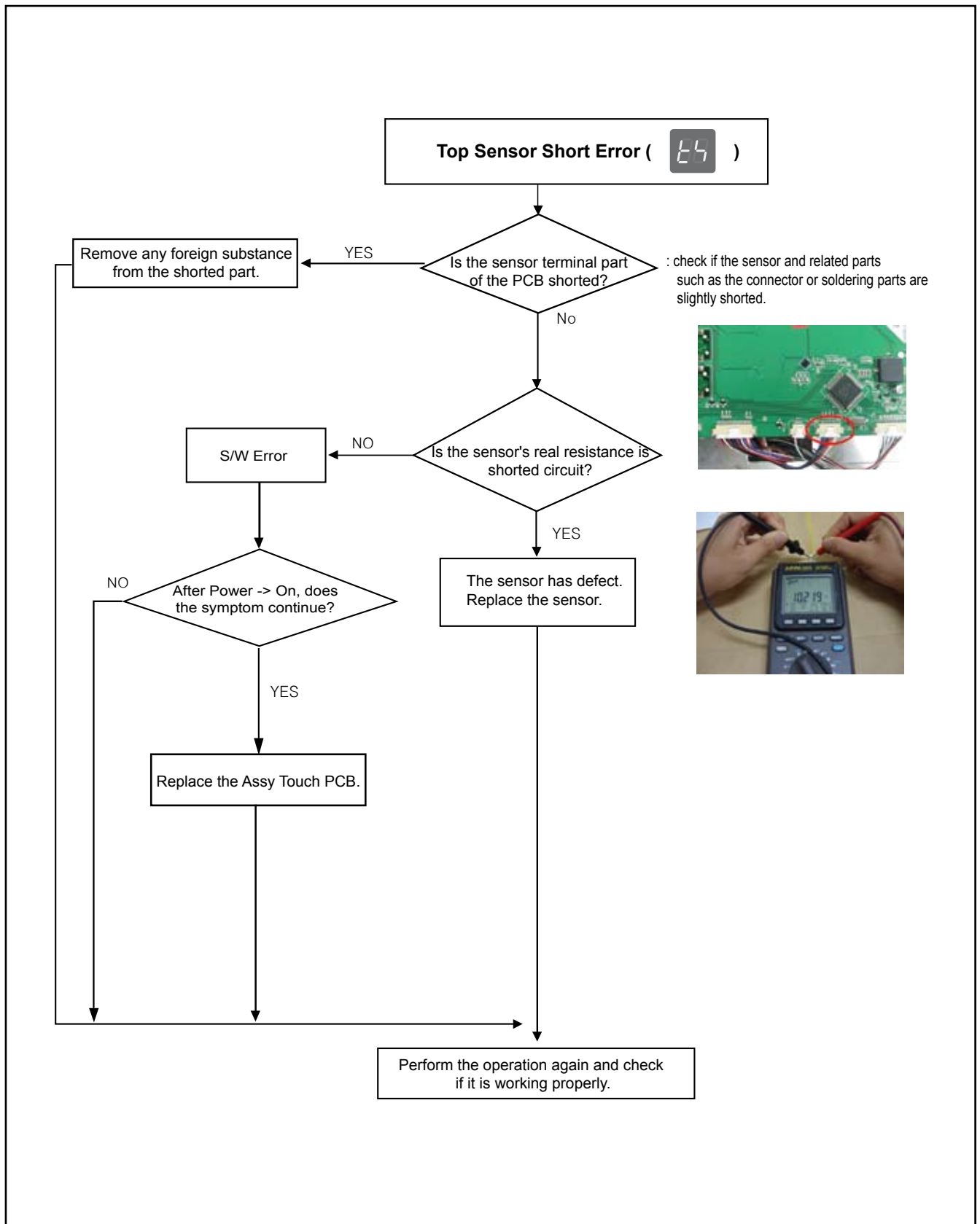
4. Troubleshooting

4-1-3



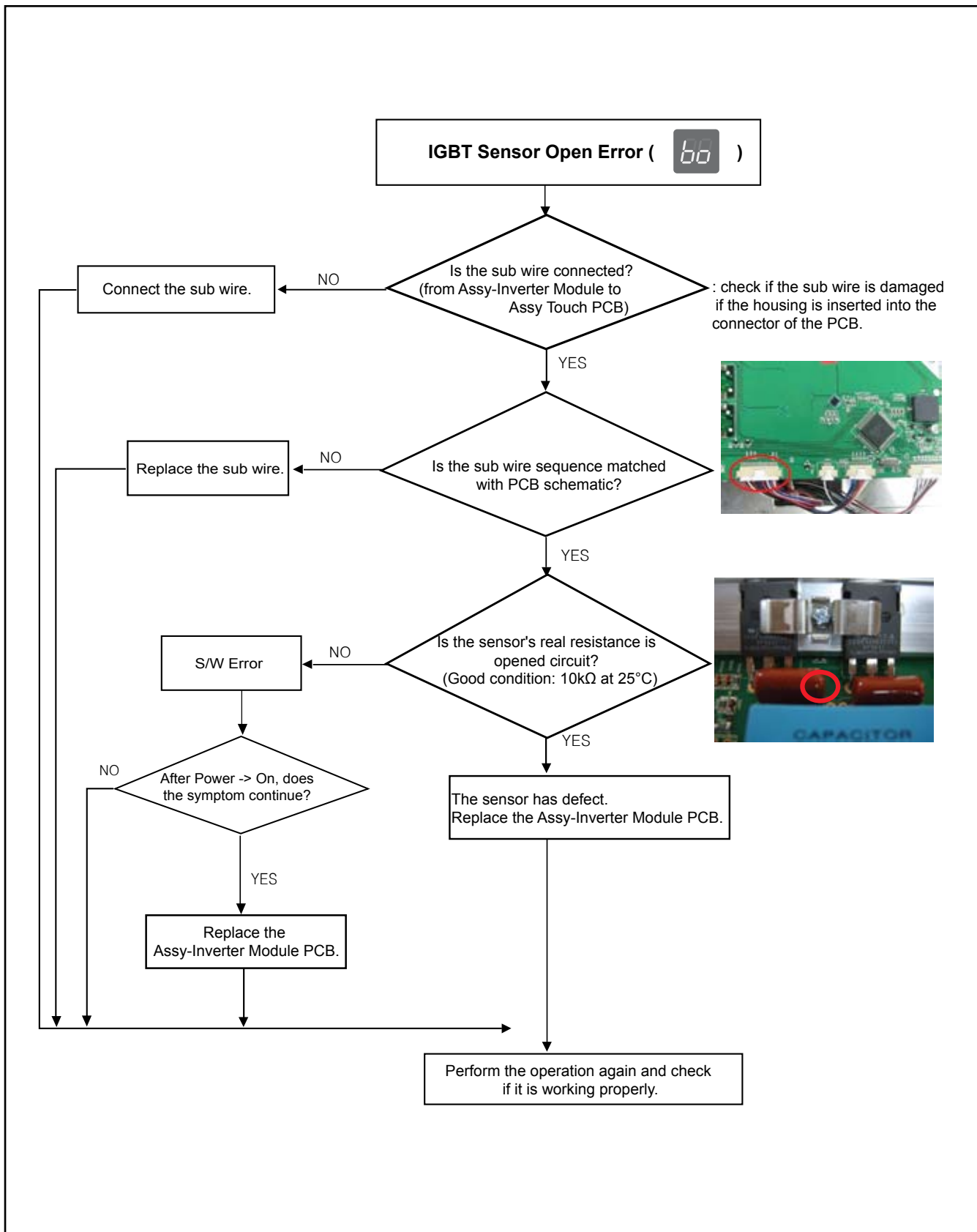
4. Troubleshooting

4-1-4 



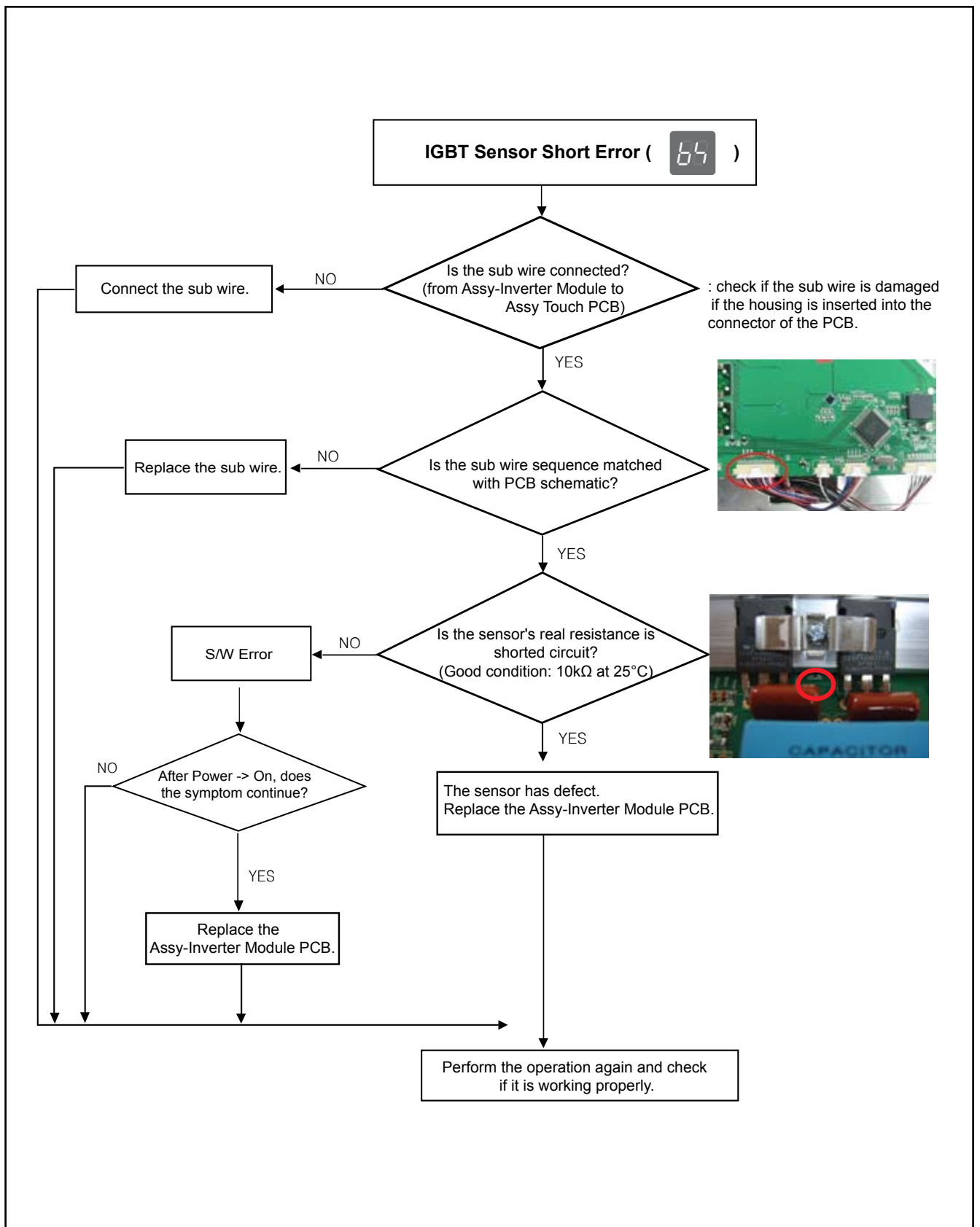
4. Troubleshooting

4-1-5 



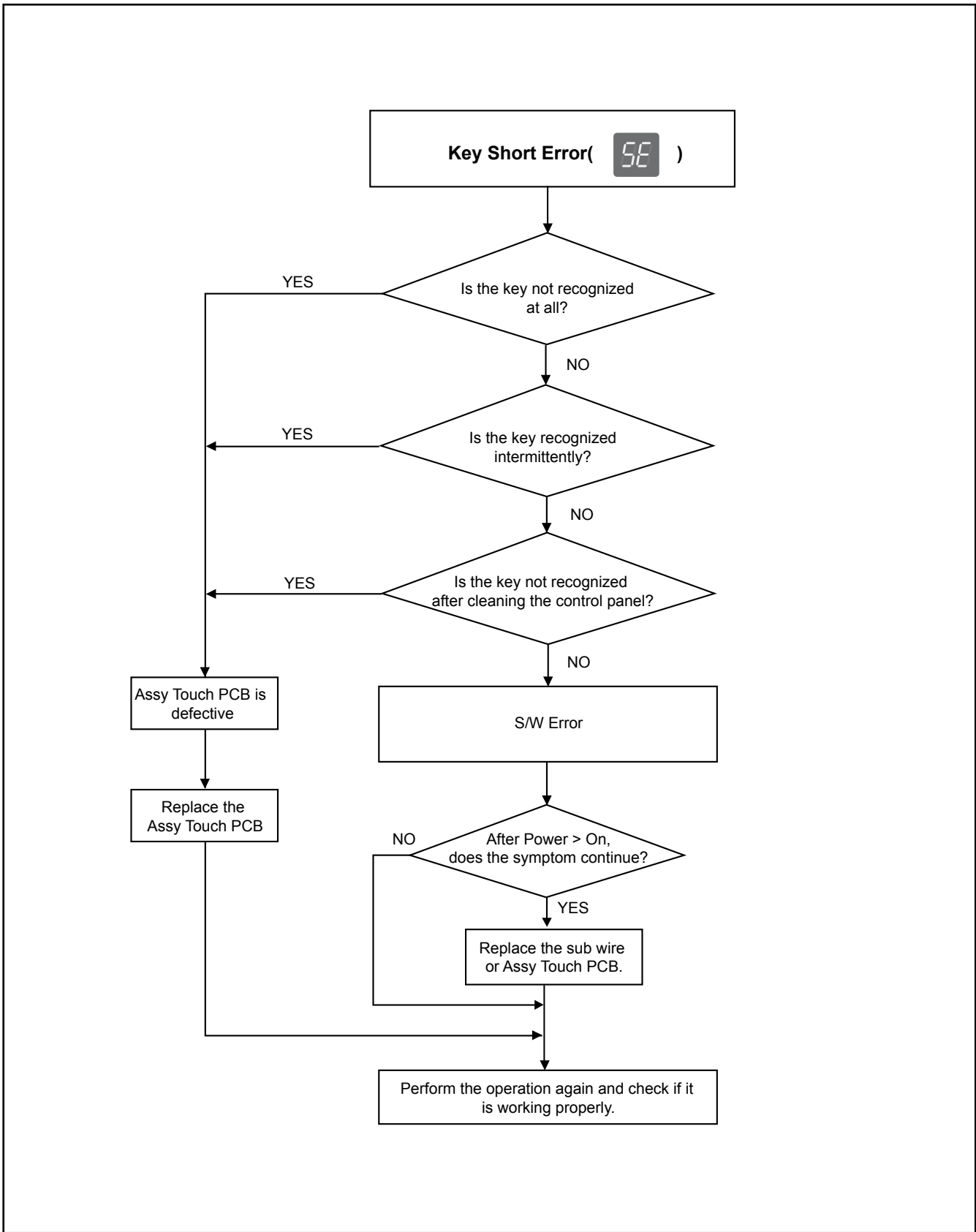
4. Troubleshooting

4-1-6 **64**



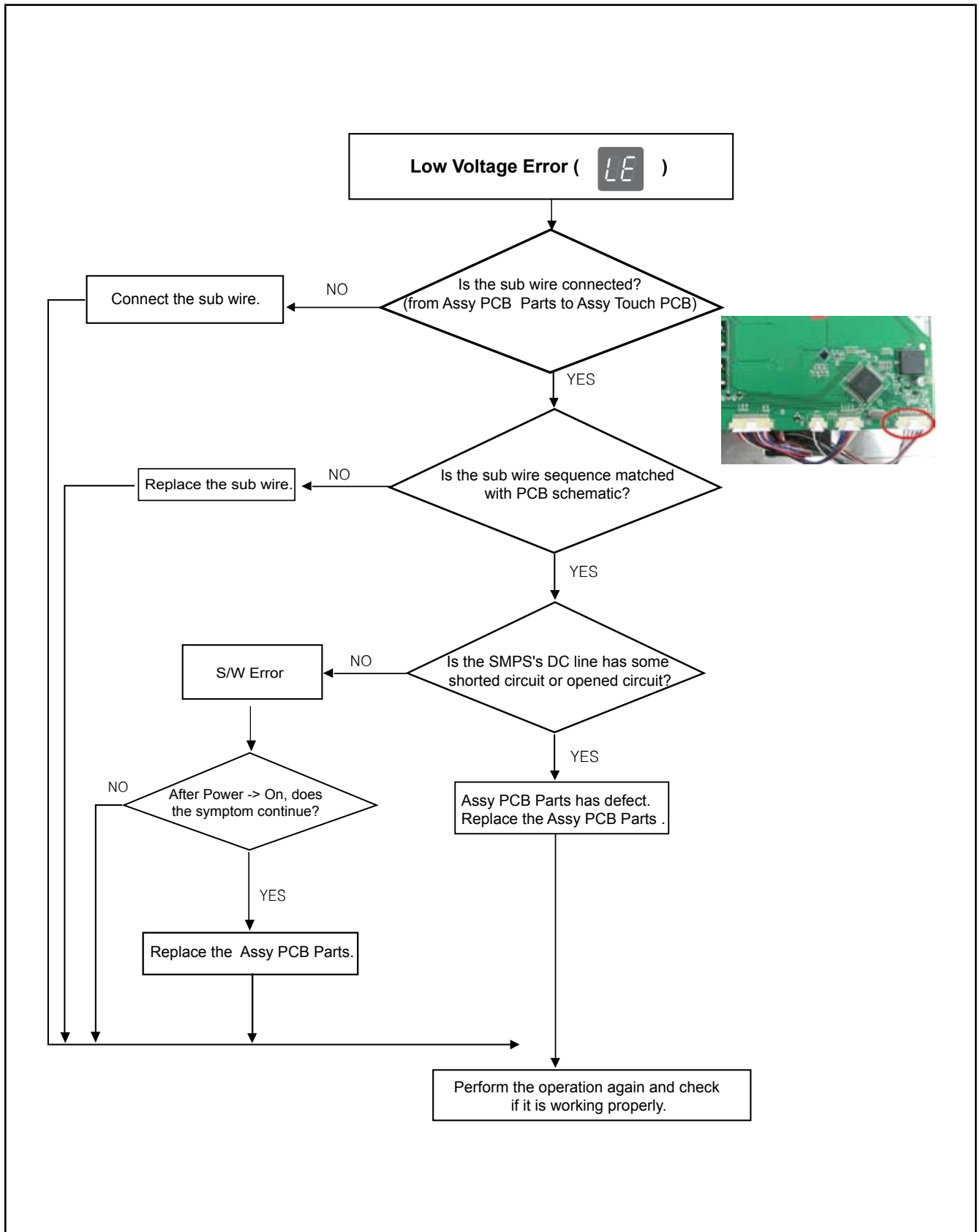
4. Troubleshooting

4-1-7 



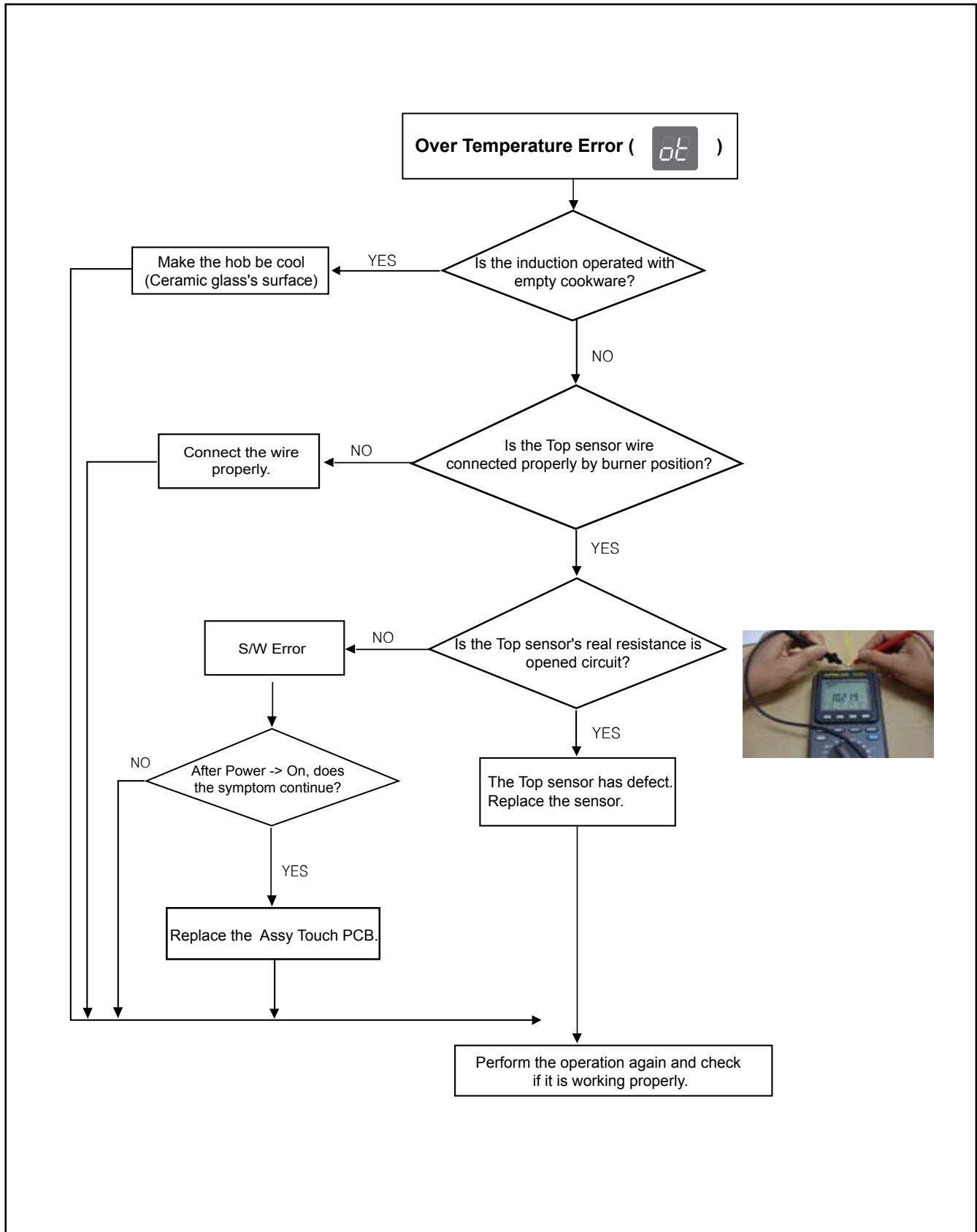
4. Troubleshooting

4-1-8 **LE**



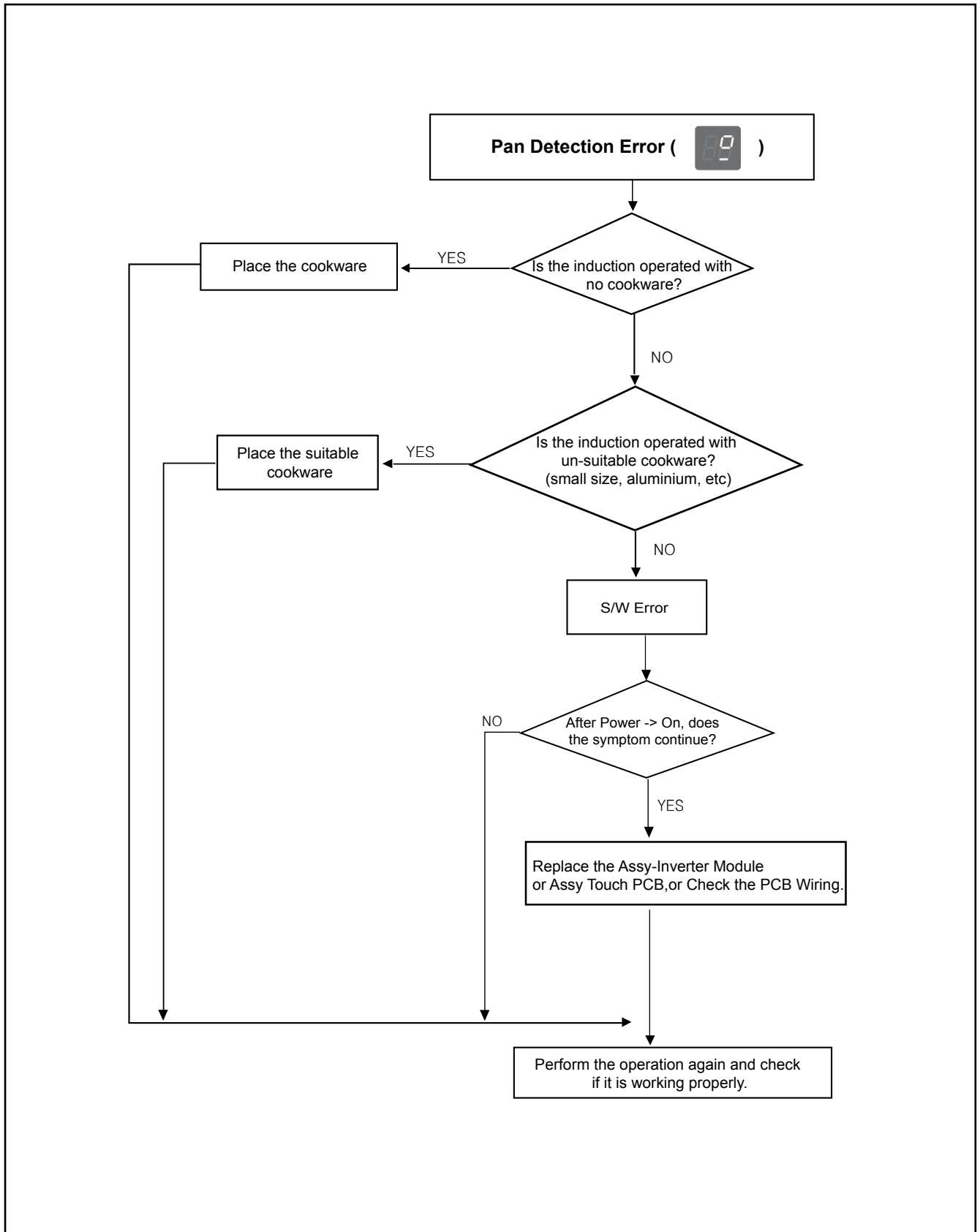
4. Troubleshooting

4-1-9 **ot**



4. Troubleshooting

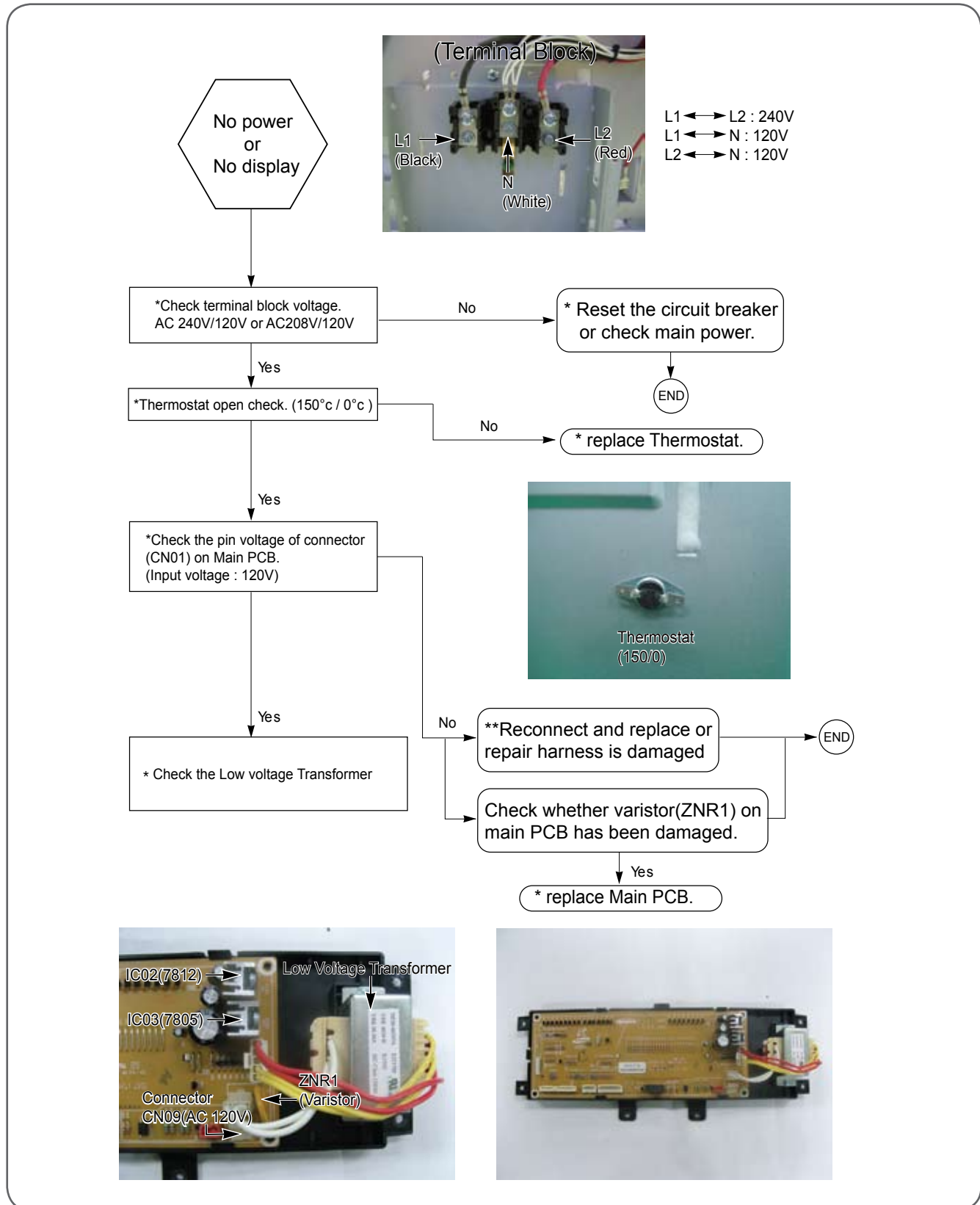
4-1-10



4. Troubleshooting

4-2 Electrical Malfunction

Safety error



4. Troubleshooting

4-2 Electrical Malfunction

* Measure resistance and voltage of Low voltage Transformer (please refer to Fig.1)

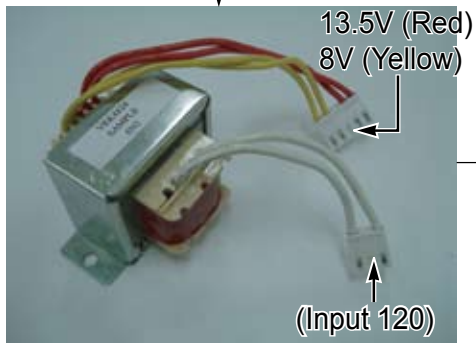


Fig.1 : Low voltage Transformer

No	color	voltage	resistance
Primary	white	120V (input)	75 ~ 80Ω
Secondary 1	red	13.5V	1.5 ~ 2.5Ω
Secondary 2	yellow	8V	0.8V ~ 1.5Ω

*Check whether primary resistance of Low voltage Transformer is in normal.

No

*Thermal Fuse with built-in Low voltage Transformer will be open if resistance is more than MΩ.

Yes

* Replace Low Voltage Transformer

END

Ok

*Measure voltage of voltage Regulator on main PCB.
IC02(7812) : DC 12V
IC03(7805) : DC 5V

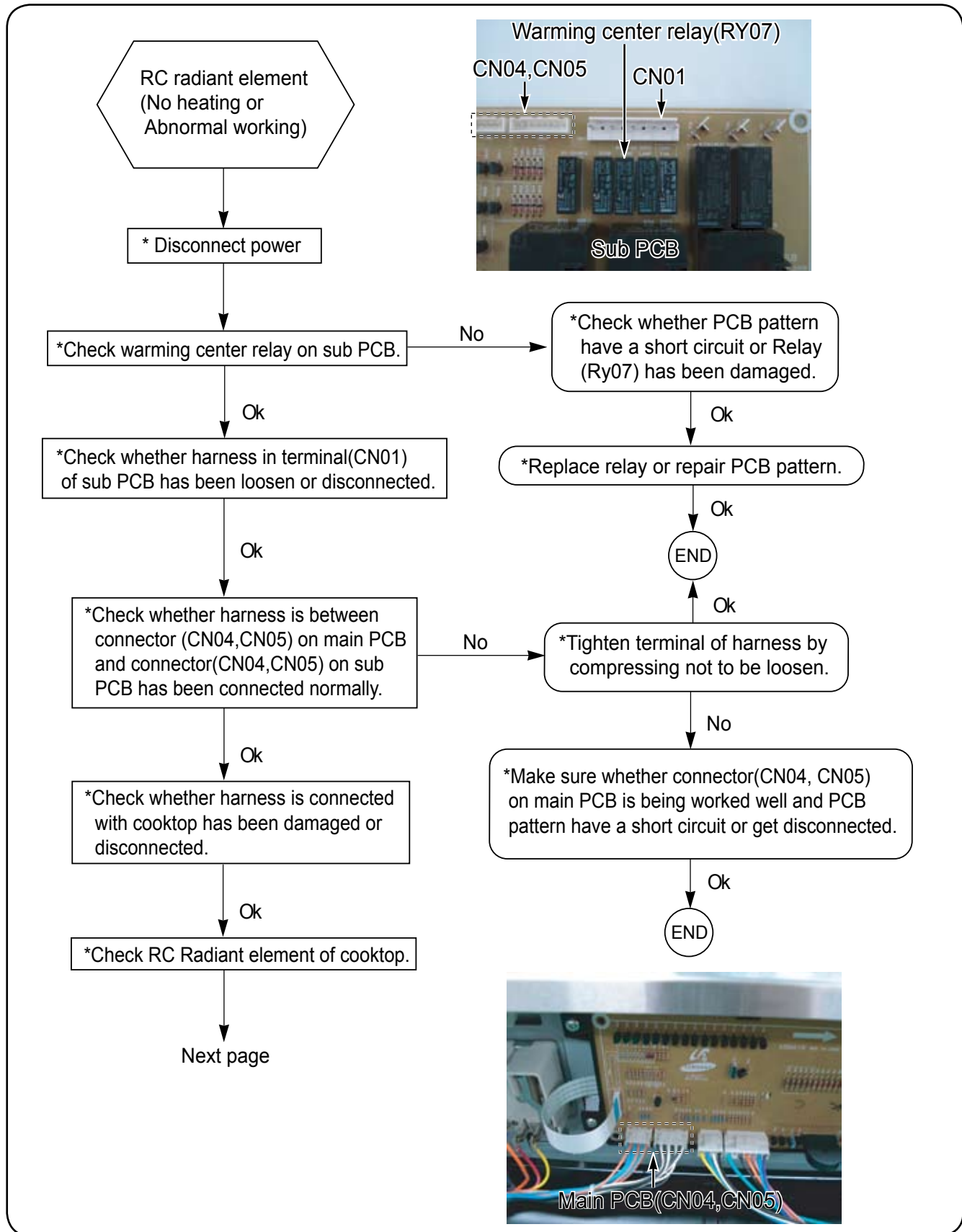
Ok

* Replace Main PCB.

END

4. Troubleshooting

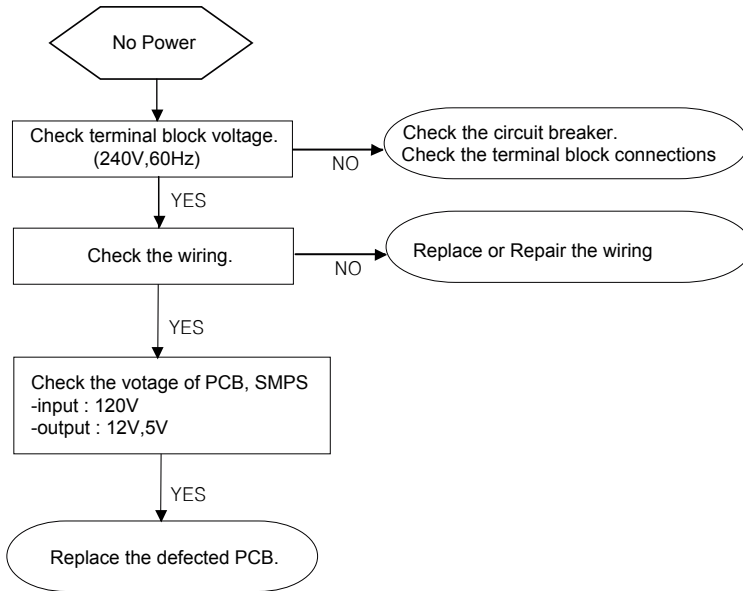
4-2 Electrical Malfunction



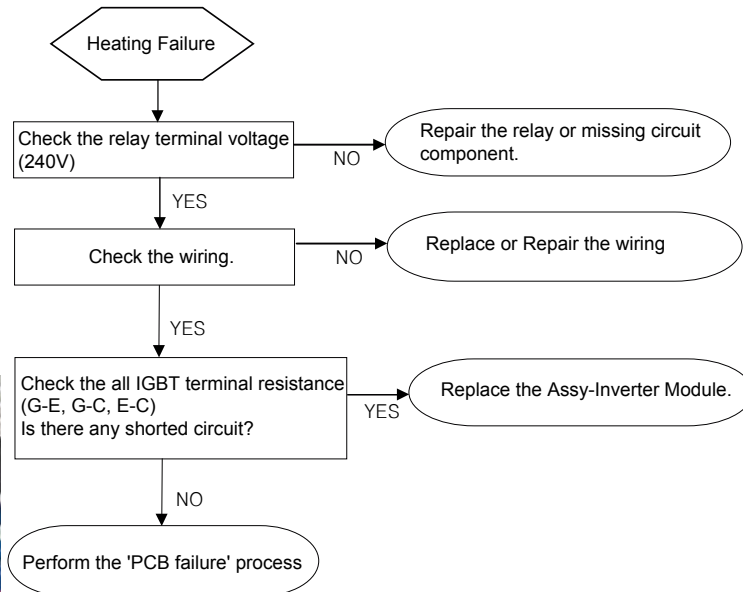
4. Troubleshooting

4-2 Electrical Malfunction

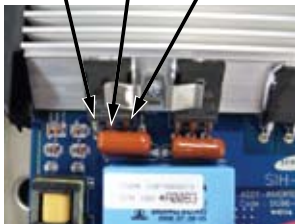
Troubleshooting (Power)



Troubleshooting (Heating)

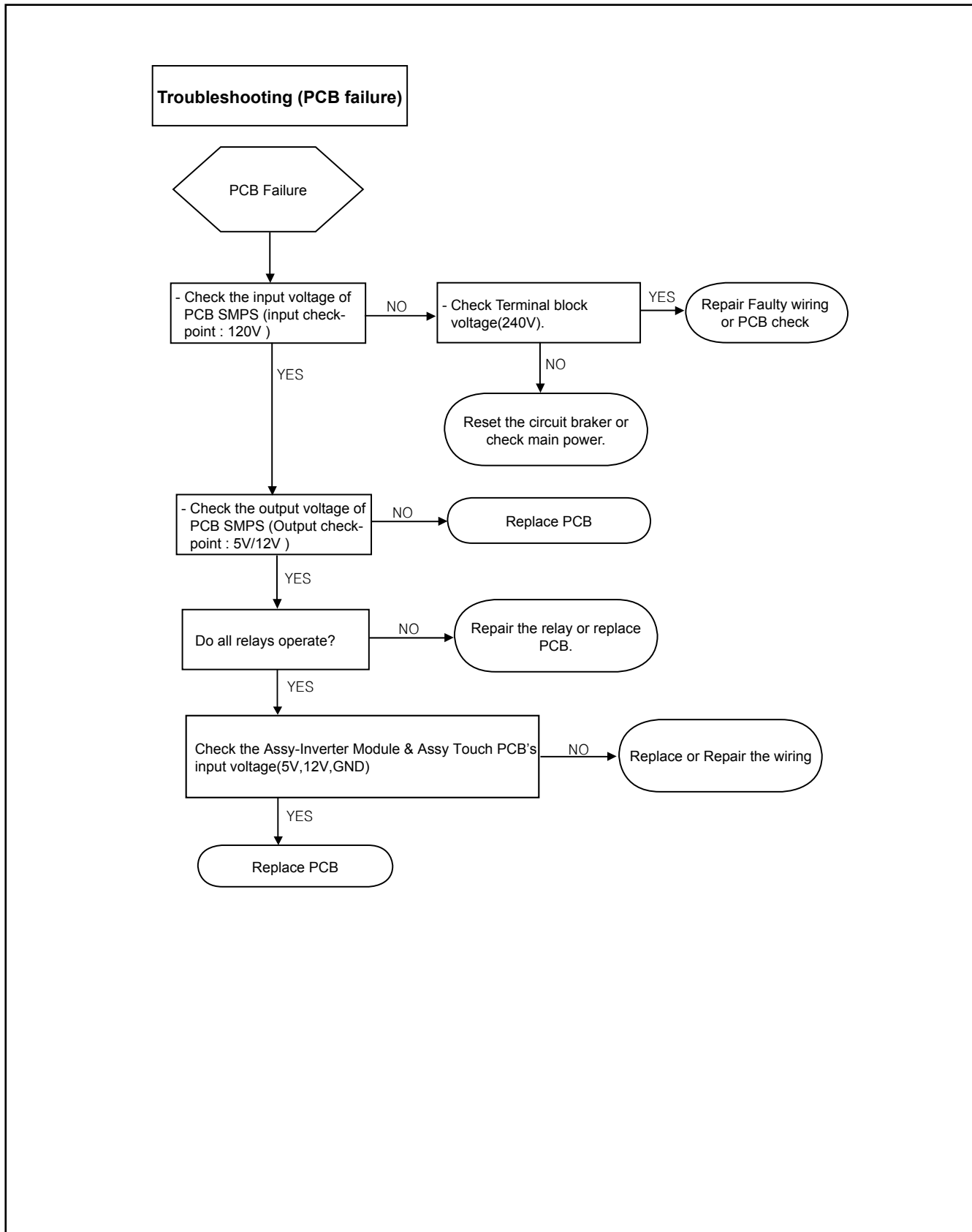


Gate Collector Emitter



4. Troubleshooting

4-2 Electrical Malfunction



4. Troubleshooting

4-2 Electrical Malfunction


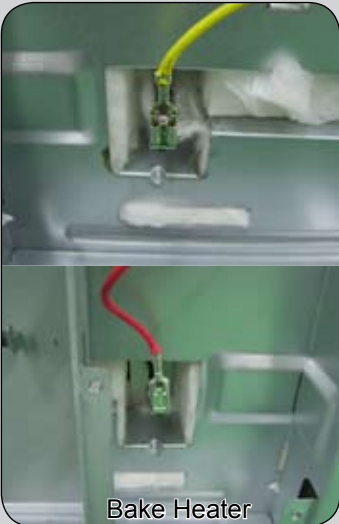

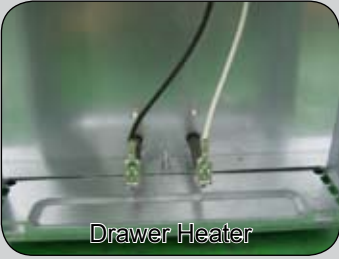
Component testing procedures



WARNING






ELECTRICAL SHOCK HAZARD

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

FIGURE	TESTS MEASURE	RESULTS
 <p>Broil Heater</p>	<ul style="list-style-type: none"> * Measure resistance values of heater's terminal after taking off harness from heater. * Measure voltage of heater's terminal after making oven work by pressing broil keypad. 	<ul style="list-style-type: none"> * Approx : 13 ~ 16Ω (at the room temperature) * Terminal voltage of Broil heater : AC 240V * Replace or repair harness * Replace or repair sub PCB
 <p>Bake Heater</p>	<ul style="list-style-type: none"> * Measure resistance values of heater's terminal after taking off harness from heater. * Measure voltage of heater's terminal after making oven work by pressing bake keypad. (Make sure that voltage has to be measured for more than 1 minute because heater is supposed to on-off cycling work.) 	<ul style="list-style-type: none"> * Approx : 26 ~ 30Ω (at the room temperature) * Terminal voltage of bake heater : AC 240V * Replace or repair harness * Replace or repair sub PCB
 <p>Convection Heater</p>	<ul style="list-style-type: none"> * Measure the resistance values of heater's terminal after taking off harness from heater. * Measure the voltage of heater's terminal after having oven worked, by pressing convection bake keypad. (Make sure that voltage has to be measured for more than 1 minute because heater is supposed to on-off cycling work.) 	<ul style="list-style-type: none"> * Approx : 70 ~ 73Ω(at the room temperature) * Terminal voltage of convection heater : AC 240V * Replace or repair harness * Replace or repair sub PCB
 <p>Drawer Heater</p>	<ul style="list-style-type: none"> * Measure the resistance of values of heater, after taking off harness from heater. * Measure the terminal voltage of heater after making oven work by pressing warming drawer keypad. 	<ul style="list-style-type: none"> * Approx : 22 ~ 25Ω (at the room temperature) * Terminal voltage of Drawer heater : AC 120V * Replace or repair harness * Replace or repair sub PCB



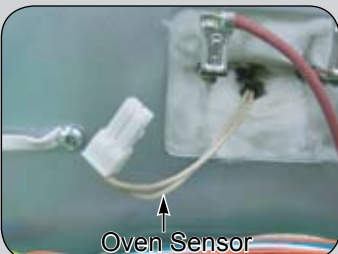
4. Troubleshooting

4-2 Electrical Malfunction

FIGURE	TESTS MEASURE	RESULTS
 <p>Door Lock</p>	<ul style="list-style-type: none"> * Measure the state of micro switch and motor after taking off harness from the heater. * Check whether lock work normally by pressing cooking time button and delay start keypad at the same time for 3 seconds. 	<ul style="list-style-type: none"> * Lock motor Resistance : 1750 ~ 1850Ω (at the room temperature) voltage : 120V * Micro switch COM-NO * Replace or repair if harness has been loosen or disconnected.
 <p>Oven Lamp Socket</p>	<ul style="list-style-type: none"> * First of all, make sure that lamp filament is disconnected or not. * Measure resistance socket's terminal after separating harness from heater and removing lamp. * Measure the voltage of socket's terminal after having lamp worked by pressing oven light keypad. 	<ul style="list-style-type: none"> * Approx : ∞ Ω * Terminal voltage of lamp socket : 120V * Replace or repair harness. * Replace or repair sub PCB
 <p>Convection Fan</p>	<ul style="list-style-type: none"> * Measure resistance value of Motor terminal after taking off harness from Motor. * Measure Voltage of Motor's terminal after making oven work by pressing bake keypad. (Make sure that voltage has to be measured for more than 1 minute because Fan is supposed to on-off Cycling work.) 	<p>Approx</p> <ul style="list-style-type: none"> * Convection Fan : 20 ~ 30Ω * Sub Fan : 85 ~ 100Ω* (Upper, Lower) * Terminal Voltage of Convection Fan and Sub Fan : 120V * Replace or repair harness * Replace or repair Sub PCB
 <p>Sub Fan(Upper)</p>		
 <p>Sub Fan(Lower)</p>		

4. Troubleshooting

4-2 Electrical Malfunction

FIGURE	TESTS MEASURE	RESULTS
 <p>Low Voltage Transformer</p>	<ul style="list-style-type: none"> * Measure resistance of Primary and secondary coil. * Measure secondary voltage. * Make sure whether connector or wire of low voltage transformer has been damaged or not. 	<p>Approx Primary coil(white) : 75 ~ 80Ω secondary coil : Red : 1.8~2.2Ω, AC 13.5V yellow: 0.8~1.2V, AC 8V</p> <ul style="list-style-type: none"> * Replace or repair if wire of connetor has been damaged.
 <p>Door plunger switch</p>	<ul style="list-style-type: none"> * Check the state of working of switch. * Make sure whether wire, housing and terminal is connected with switch has been damaged or not. 	<p>Normal open : 0Ω Normal close : ∞Ω</p> <ul style="list-style-type: none"> * Replace or repair if wire or terminal has been damaged.
 <p>Oven Sensor</p>	<ul style="list-style-type: none"> * Check whether the resistance values of oven sensor is same with a chart's one. * Check whether wire or housing has been loosen or disconnected. 	<p>Approx. at the room temperature :1080Ω</p>




Oven sensor resistance (Temperature vs. Sensor resistance)

$R_0 = 1000 \text{ Ohms (0}^\circ\text{C)}$, $R_P = 2757 \text{ Ohms}$, $U_p = 5V$, $a = 0.00375$

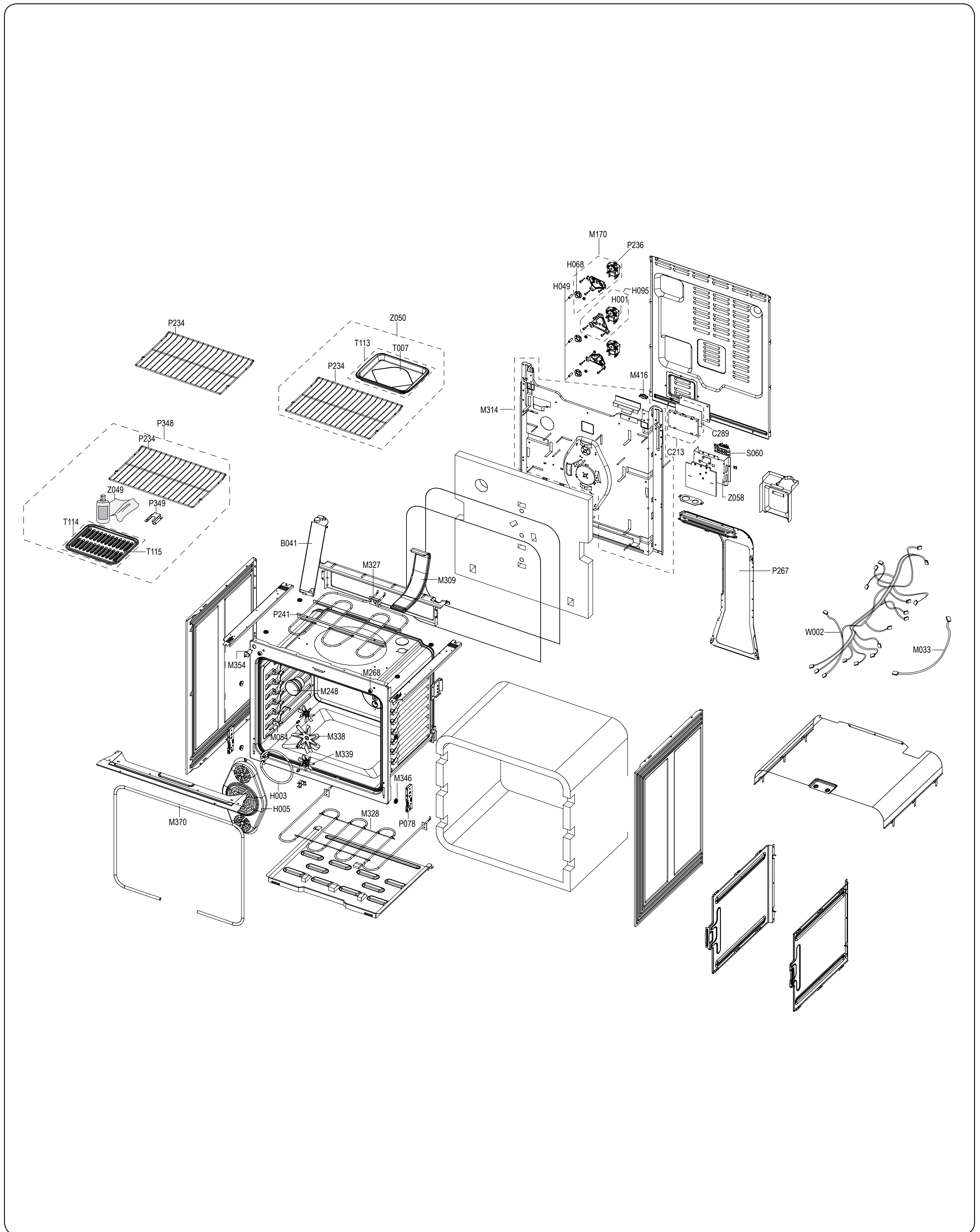
degree F	degree C	ohms	degree F	degree C	ohms
0	-17.8	932.12	113	45	1170.17
14	-10	961.86	122	50	1188.93
23	-5	980.95	212	100	1374.93
32	0	1000.00	302	150	1558.01
41	5	1019.02	392	200	1738.06
50	10	1038.02	482	250	1915.39
59	15	1056.99	572	300	2089.69
68	20	1075.92	662	350	2261.07
77	25	1094.83	752	400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

4. Troubleshooting

4-2 Electrical Malfunction

FIGURE	TESTS MEASURE	RESULTS
 <p>Sensor-Top</p>	<ul style="list-style-type: none"> * Check whether the resistance values of sensor is correct. * Check whether wire or housing has been loosen or disconnected. 	<p>Approx</p> <ul style="list-style-type: none"> * at the room temperature :7.65KΩ ~ 9.34KΩ
 <p>AC Motor</p>	<ul style="list-style-type: none"> * Measure resistance value of Motor terminal after taking off harness from Motor. * Measure Voltage of Motor's terminal after making cooktop operation. 	<p>Approx</p> <ul style="list-style-type: none"> * at the room temperature :29.7Ω
 <p>Coil-Working</p>	<ul style="list-style-type: none"> * Check whether the resistance values is correct. 	<p>Approx</p> <ul style="list-style-type: none"> * at the room temperature :0.01~1Ω

5-1 Exploded Views



5. Exploded Views and Parts List

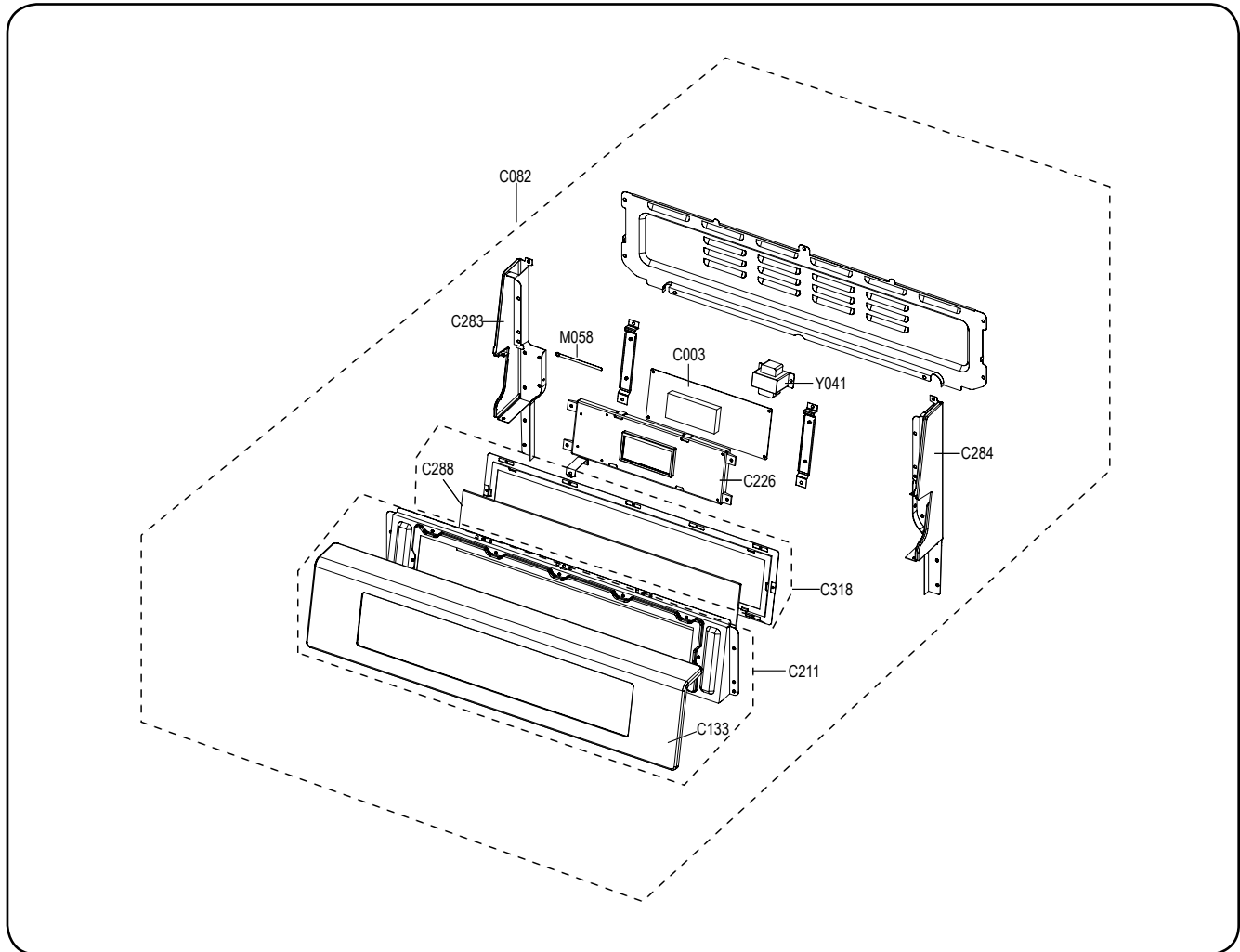
5-2 Main Parts List

(S.N.A : SERVICE NOT AVAILABLE)

Level	Code No.	Description	Specification	Q'ty	SA/ SNA	Remark
B041	DG66-00017B	LATCH-DOOR	FTQ307NWGX,SGCC,T0.8,W325.88,	1	SNA	-
C213	DG97-00121C	ASSY HOLDER PCB SUB	FTQ386**,VE	1	SNA	-
C289	OAS-ASUB-00	ASSY PCB PARTS	FTQ386LWUX/XAA, A-BEST S	1	SA	-
H001	DG31-00005A	MOTOR CONVECTION	SMC-U386A,60Hz,120V,130	1	SNA	-
H003	DG47-00017A	HEATER-CONVECTION	FTQ386LWUX,Incoly840,8	1	SA	-
H005	DG97-00086A	ASSY COVER CASING	FTQ386LWUX,-,-,5.7cu.f	1	SA	-
H049	DG60-00001A	SPACER-FAN CONVECTION	BT63BSST,STKM11A,L	3	SA	-
H068	DG67-00028A	CAP-MOTOR CONVECTION	BT62FQBPST,GI,T0.6,	3	SA	-
H068	DG67-00028A	CAP-MOTOR CONVECTION	BT62FQBPST,GI,T0.6,	1	SA	-
H068	DG67-00028A	CAP-MOTOR CONVECTION	BT62FQBPST,GI,T0.6,	2	SA	-
H095	DG96-00110A	ASSY MOTOR CONVECTION	FTQ**, FCQ**,ASSY	1	SA	-
M033	DG39-00019A	WIRE HARNESS-SUB	FTQ386, FTQ352,BEST, BE	1	SA	-
M054	DG32-00002B	SENSOR-THERMISTOR	FTQ386LWUX,Platium Sen	1	SA	-
M170	DG96-00111A	ASSY MOTOR CONVECTION-SUB	FTQ**, FCQ**,A	2	SA	-
M248	DG97-00083A	ASSY LAMP BULB	-,LH-01,120V,40W,-,422-89	1	SA	-
M268	DG73-00003A	RUBBER-CUSHION	FTQ386LWUX,SILICON,-,50,-	1	SA	CAVITY-FRONT
M309	DG97-00058B	ASSY-VENT	FCQ321HSUX/XAA,-,A-2 PROJECT	1	SA	-
M314	DG97-00123G	ASSY COVER BACK-MAIN	FTQ307**,SGCC,T0.6	1	SA	-
M327	DG47-00019A	HEATER-BROIL	FTQ386LWUX,Incoly840,3800Wa	1	SA	-
M328	DG47-00020A	HEATER-BAKE	FTQ386LWUX,Incoly840,3000Wat	1	SA	-
M338	DG67-00018A	FAN-CONVECTION MAIN	FSE1310AST,ALCOAT,15	1	SA	-
M339	DG67-00019A	FAN-CONVECTION PLANET	FSE1310AST,ALCOAT,	2	SA	-
M346	DG60-00007B	SPACER-SIDE PANEL	FTQ386**, FTQ352**, FC	4	SA	-
M354	DG34-00006A	SWITCH-DOOR PLUNGER	120/240 VAC,BLACK,FT	1	SA	-
M370	DG63-00093A	GASKET-DOOR	FTQ386LWUX,STSS WOVEN WOOL,0	1	SA	-
M416	DE47-20037A	THERMOSTAT	-,NT-101,250V 10A/125V 15A,-,	1	SA	-
P078	DG61-00188A	SUPPORT-HINGE	FTQ386LWUX,ALCOT,1.4,-,209	2	SA	-
P234	DG75-01001A	RACK-FLAT	FTQ386LWUX,MSWR, Ni-Cr,-,630,4	1	SA	-
P234	DG75-01001A	RACK-FLAT	FTQ386LWUX,MSWR, Ni-Cr,-,630,4	1	SA	-
P234	DG75-01001A	RACK-FLAT	FTQ386LWUX,MSWR, Ni-Cr,-,630,4	1	SA	-
P236	DG31-00007A	MOTOR CONVECTION-SUB	SMC-U386B,60Hz,120V	2	SNA	-
P241	DG94-00218A	ASSY BRACKET-BROIL HEATER	FTQ387**,FTQ35	1	SA	-
P267	DG94-00285A	ASSY DUCT-AIR	FTQ307NWGX,ALCOAT,T0.5	1	SA	-
P348	DG97-00118G	ASSY ACCESSORY-A	FTQ386**, FTQ352**,-,US	1	SA	-
P349	DG97-00120A	ASSY BRACKET-ANTI TIP	FTQ386LWUX,-,-,A-1	1	SA	-
S060	DG65-00003A	TERMINAL-BLOCK	C-8500018,Polycarbonate,B	1	SA	-
T007	DG63-00067A	TRAY-BROIL	FTQ386LWUX,SPP,0.8,404,320,-,	1	SA	-
T113	DG63-00106A	TRAY-BROIL COATING	FTQ386LWUX,SPP,400,48	1	SA	-
T114	DG63-00105A	TRAY-GRATE COATING	FTQ386LWUX,SPP,365,44	1	SA	-
T115	DG63-00068A	TRAY-GRATE	FTQ386LWUX,SPP,1.0,365,440,-,	1	SA	-
W002	DG96-00130A	ASSY WIRE HARNESS-A	FTQ307NWGX,240V60Hz,	1	SA	-
Z049	DG97-00085A	ASSY-CLEANING KIT	-,FTQ386LWUX,-	1	SA	-
Z050	DG97-00119B	ASSY ACCESSORY-B	FTQ386**, FTQ352**,-,TR	1	SA	-
Z058	DG61-00168B	BRACKET-COVER ACCESS	FCQ321HSUX,SECC,0.6	1	SA	-

5. Exploded Views and Parts List

5-4 Control Parts List

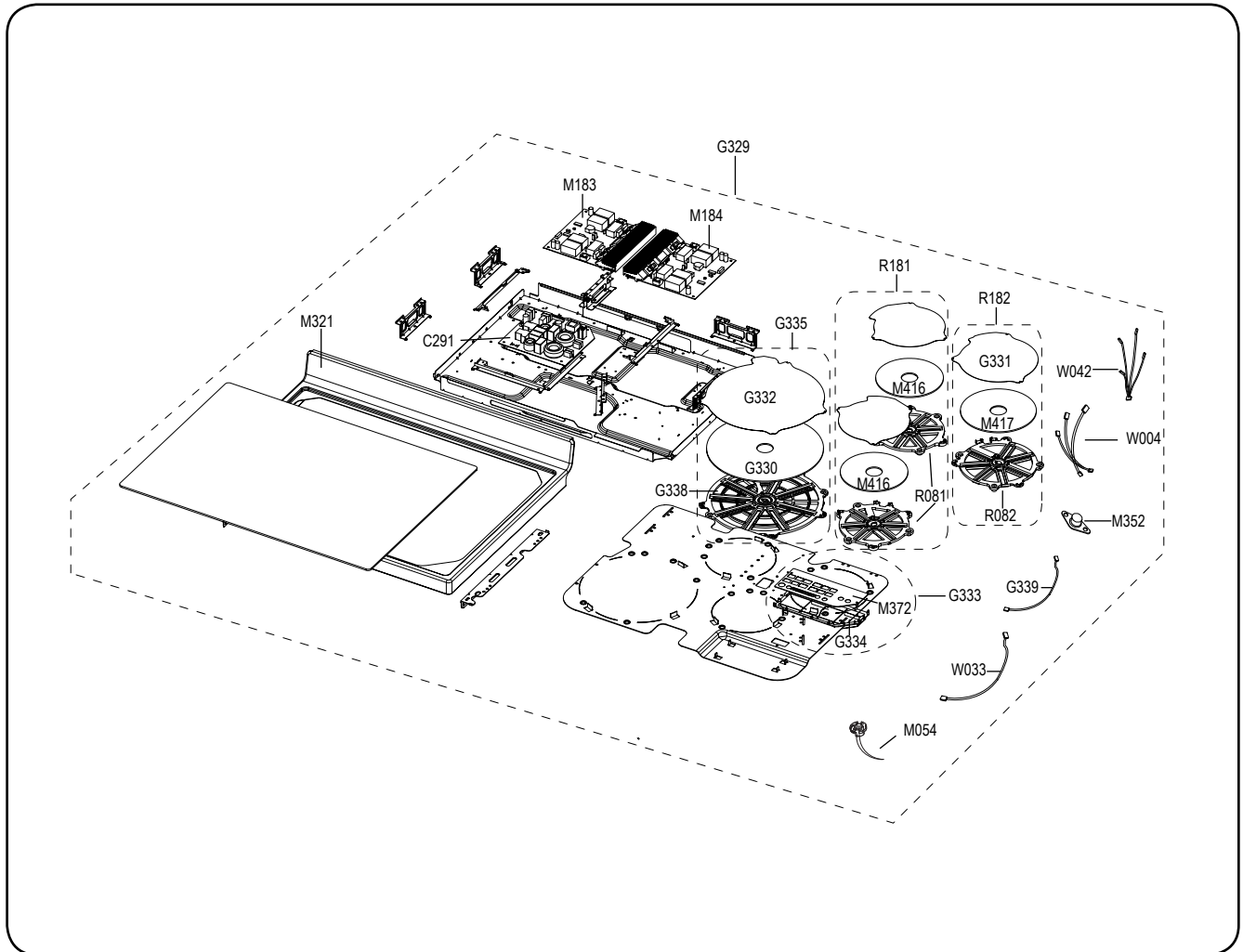


(S.N.A : SERVICE NOT AVAILABLE)

No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C003	OAS-ABMAIN-04	ASSY PCB PARTS	,FTQ307NWGX	1	SA	-
C082	DG94-00245A	ASSY CONTROL BOX	FTQ307**,STSS,STS430,Ha	1	SNA	-
C133	DG64-00266A	CHASSIS-PANEL	FTQ307NWGX,STS#4 430,T0.6,	1	SNA	-
C211	DG94-00246A	ASSY CONTROL SUB	FTQ307**,STSS,STS430,Ha	1	SA	-
C226	DG61-00131B	HOLDER-DISPLAY	FTQ386**,PBT,T2,W342.6,L1	1	SNA	-
C283	DG94-00123C	ASSY SUPPORT-BACK GUARD L	FTQ387**, FTQ	1	SA	-
C284	DG94-00124C	ASSY SUPPORT-BACK GUARD R	FTQ387**, FTQ	1	SA	-
C288	DG64-00249A	GLASS-TOUCH	FTQ307**,GLASS,T4.0,W567.4,L	1	SNA	-
C318	DG94-00247A	ASSY-GLASS TOUCH(PREMIUM)	FTQ307**,TEMPE	1	SA	-
M058	6502-001117	CABLE CLAMP	DALF-94-2,EGI STEEL, SILICON	2	SA	HOLDER- DISPLAY,SUPPORT- BACK GUARD
Y041	DE26-00147B	TRANS L.V	VRK4824-C,120V,60Hz,12V/7V,Bes	1	SA	-

5. Exploded Views and Parts List

5-5 Cooktop Parts List



(S.N.A : SERVICE NOT AVAILABLE)

No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C291	RAS-ICTOP-04	ASSY PCB PARTS	FTQ307NWX,120V60HZ,INDUC	1	SA	-
G329	DG94-00248A	ASSY COOKTOP-INDUCTION	FTQ307**,BLACK	1	SA	-
G330	DG62-00032A	ADIABATIC-COIL E	FTQ307**,S-F-INSULATION	1	SA	-
G331	DG63-00136A	COVER-COIL B	CTI613EHST,MICA SHEET,T0.25	1	SA	-
G332	DG63-00161A	COVER-COIL E	FTQ307**,MICA SHEET,T0.25,W	1	SA	-
G333	DG94-00279A	ASSY CONTROL-PCB(INDUCTIO	FTQ307NWX,B	1	SA	-
G334	DG94-00281A	ASSY HOLDER-CONTROL	FTQ307NWX,INDUCTION	1	SA	-
G335	DG96-00109A	ASSY-WORKING COIL E	FTQ307**,3700W	1	SA	-
G338	DG27-01007A	COIL-WORKING E	280pi, 2400W,67uH,#10%,Ba	1	SA	-
G339	DG96-00125A	ASSY WIRE HARNESS-I	FTQ307NWX,240V60Hz,	1	SA	-
M054	DG32-00005A	SENSOR-TOP	CTI613EHST,INDUCTION	1	SA	-
M054	DG32-00005B	SENSOR-TOP	CTI613EHST,-40~350,SPECIAL TE	2	SA	-
M054	DG32-00005A	SENSOR-TOP	CTI613EHST,INDUCTION	1	SA	-

5. Exploded Views and Parts List

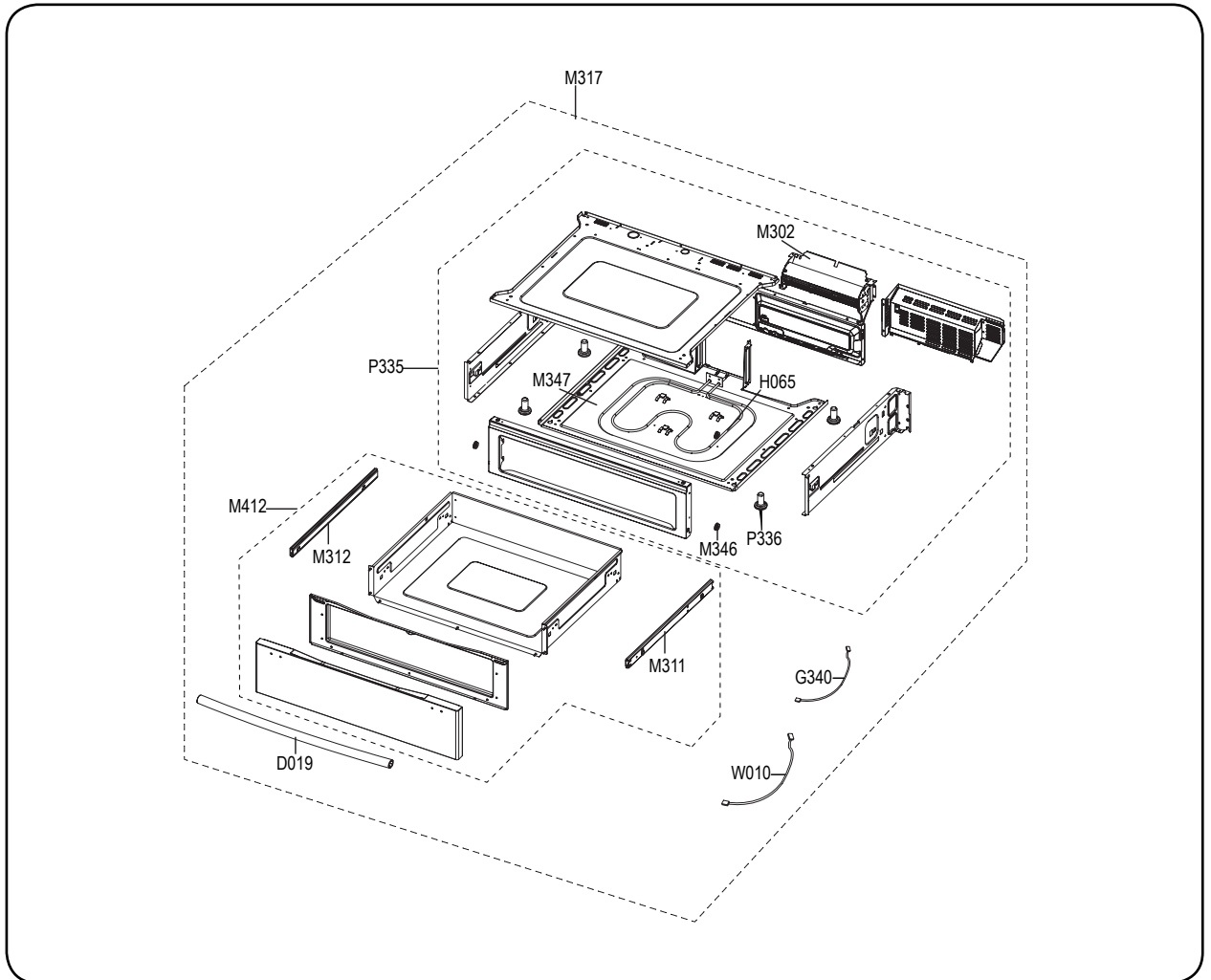
5-5 Cooktop Parts List (Continued)

(S.N.A : SERVICE NOT AVAILABLE)

No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
M183	DG96-00116B	ASSY-INVERTER MODULE L	FTQ307NWGX,blue,1	1	SA	-
M184	DG96-00117B	ASSY-INVERTER MODULE R	FTQ307NWGX,GREEN,	1	SA	-
M321	DG97-00074J	ASSY-FRAME COOKTOP	FTQ307**,SEALING	1	SA	-
M352	DE47-20033B	THERMOSTAT	KSD1,250V 10A/125V 15A,80/70,	1	SA	-
M372	DE96-00802A	ASSY TOUCH	FTQ307NWGX,CT7000-1230,Amber,	1	SA	-
M416	DG62-00028A	ADIABATIC-COIL A	CTI613EHST,S-F-INSULATI	2	SA	-
M417	DG62-00029A	ADIABATIC-COIL B	CTI613EHST,S-F-INSULATI	1	SA	-
R081	DG27-01003C	COIL-WORKING A	160pi, 1400W,63uH,#10%,Ba	2	SA	-
R082	DG27-01004C	COIL-WORKING B	180pi, 1800W,63uH,#10%,Ba	1	SA	-
R181	DG96-00088C	ASSY-WORKING COIL A	FTQ307**,160PI,UEW 0	2	SA	-
R182	DG96-00087C	ASSY-WORKING COIL B	FTQ307**,180PI,UEW 0	1	SA	-
U036	DG97-00057A	ASSY COOKTOP SUB- (COATING)	FSE1310AST,BE	1	SA	-
W004	DG96-00127A	ASSY WIRE HARNESS-C	FTQ307NWGX,240V60Hz,	1	SA	-
W033	DG96-00126A	ASSY WIRE HARNESS-P	FTQ307NWGX,240V60Hz,	1	SA	-
W042	DG96-00128A	ASSY WIRE HARNESS-S	FTQ307NWGX,240V60Hz,	1	SA	-
R181	DG96-00088B	ASSY-WORKING COIL A	GOOD,160PI,1400W	2	SA	-
R182	DG96-00087B	ASSY-WORKING COIL B	GOOD,180PI,1800W	1	SA	-
U036	DG97-00057A	ASSY COOKTOP SUB- (COATING)	FSE1310AST,BE	1	SA	-
W004	DG96-00127A	ASSY WIRE HARNESS-C	FTQ307NWGX,240V60Hz,	1	SA	-
W033	DG96-00126A	ASSY WIRE HARNESS-P	FTQ307NWGX,240V60Hz,	1	SA	-
W042	DG96-00128A	ASSY WIRE HARNESS-S	FTQ307NWGX,240V60Hz,	1	SA	-

5. Exploded Views and Parts List

5-6 Drawer Parts List



(S.N.A : SERVICE NOT AVAILABLE)

No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
D019	DG64-00242A	HANDLE DOOR	FTQ387LWGX,FTQ353IWUX,STS430	1	SA	-
G340	DG96-00134A	ASSY WIRE HARNESS- WD	FTQ307NWGX,120V60Hz	1	SA	-
H065	DG47-00018A	HEATER-WARMING DRAWER	FTQ386LWUX,Incoly8	1	SA	-
M302	DG31-00012A	MOTOR BLOWER	SMB-U307A,BT63FDST/XAP,60HZ	1	SA	-
M311	DG97-00091B	ASSY-SLIDER RIGHT	FTQ386**, FTQ352**,-,V	1	SA	-
M312	DG97-00092B	ASSY-SLIDER LEFT	FTQ386**, FTQ352**,-,VE	1	SA	-
M317	DG94-00277A	ASSY DRAWER-MAIN	FTQ307NWGX,STSS	1	SA	-
M346	DG60-00007B	SPACER-SIDE PANEL	FTQ386**, FTQ352**, FC	2	SA	-
M347	DG61-00125A	BASE-WARMER DRAWER	FTQ386**, FTQ352**, F	1	SNA	-
M412	DG94-00210A	ASSY DRAWER	FTQ387**,STSS,-	1	SA	-
P335	DG94-00278A	ASSY PEDESTAL	FTQ307NWGX,STS	1	SA	-
P336	DG61-00152A	LEG-LEVELING	FSE1310AST,NYLON,58,G/F, M1	4	SA	-
W010	DG96-00135A	ASSY WIRE HARNESS-M	FTQ307NWGX,120V60Hz,	1	SA	-

5. Exploded Views and Parts List

5-7 Standard Parts List

(S.N.A : SERVICE NOT AVAILABLE)

Level	Code No.	Description	Specification	Q'ty	SA/ SNA	Remark
1-1	6001-000033	SCREW-MACHINE	TH,+,-,M4,L10,PASS,STS304,	1	SNA	SENSOR-TH
1-1	6002-000432	SCREW-TAPPING	TH,+,-,B,M4,L10,ZPC(WHT),S	5	SNA	CAVITY-B_COVER-B-M
1-1	6003-001622	SCREW-TAPTYPE	HEX,+ ,TH,S,M5,L10,ZPC(WHT)	1	SNA	B-GROUND
1-1	6006-001170	SCREW-TAPPING	TH,+ ,WT,TC,M4,L10,ZPC(WHT)	2	SNA	A-C-B-GROUND,C-B-M-LAMP BULB
1-1	6006-001174	SCREW-ASSY TAPP	WE,TH,+ ,M4,L12,ZPC(YEL)	73	SNA	A-C-B-MAIN,A-COOKTOP,B-M-CONNECTOR,B-M-TOP,C-ACCESS,C-B-G-W,C-B-M-WIRE,C-FRONT,DUCT,G-COOKTOP,H-BAKE
1-1	6009-001395	SCREW-SPECIAL	TH,+ ,WP,M5,L10,PASS,STS XM	4	SNA	S-HINGE
1-1	6021-001208	NUT-HEXAGON CAP	M4,NI PLT,SWRCH10A	2	SNA	F-C-PLANET
1-1	6021-001211	NUT-HEXAGON CAP	M4,NI PLT,SWRCH10A,LEFT	1	SNA	F-C-MAIN
1-1	DE60-10059A	SCREW-TAPPING	TH,+ ,2,M4,L8,NI PLT,SUS410	11	SNA	A-C-CASING,A-VENT,A-VENT_C-B-MAIN,BRACKET-H-C,H-BROIL,H-CONVENTION
1-1	DE60-10189A	SCREW MACHINE	+ ,WS(FIBER),M4,L10,ZPC(BLK)	2	SNA	L-DOOR
1-1	DE60-10193A	SCREW-TAPPING	- ,YEL,MSWR18,FEFZY,TH,M4,-	5	SNA	H-P-SUB,T-BLOCK
1-1	DE60-10199A	SCREW-MACHINE	HEX,+ ,WT,M5,L10,CR PLT,SWR	6	SNA	A-T-BLOCK
1-2	6009-001395	SCREW-SPECIAL	TH,+ ,WP,M5,L10,PASS,STS XM	8	SNA	A-HINGE,-
1-2	6006-001174	SCREW-ASSY TAPP	WE,TH,+ ,M4,L12,ZPC(YEL)	14	SNA	A-B-DOOR,A-D-E,B-I-GLASS
1-2	6001-002267	SCREW-MACHINE	TH,+ ,WP,M5,L60,ZPC(BLK),SW	2	SNA	-
1-2	6002-000217	SCREW-TAPPING	TH,+ ,-,1,M4,L8,ZPC(WHT),SW	16	SNA	B-C-P-SUB,H-DISPLAY
1-2	6006-001174	SCREW-ASSY TAPP	WE,TH,+ ,M4,L12,ZPC(YEL)	7	SNA	A-C-BOX,B-C-PANEL
1-2	6002-001237	SCREW-TAPPING	PWH,+ ,2,M3,L12,ZPC(WHT),SW	4	SA	A-P-MAIN,L-V-TRANS
1-2	6002-000630	SCREW-TAPPING	PH,+ ,2S,M3,L8,ZPC(YEL),SWR	4	SNA	A-P-MAIN,L-V-TRANS
1-2	6002-000217	SCREW-TAPPING	TH,+ ,-,1,M4,L8,ZPC(WHT),SW	19	SNA	A-I-MODULE L,A-I-MODULE R,A-P-PART,B-HEATSINK,SUPPORT-I-CASE
1-2	6006-001174	SCREW-ASSY TAPP	WE,TH,+ ,M4,L12,ZPC(YEL)	6	SNA	B-MOUNTING L/R
1-2	6006-001170	SCREW-TAPPING	TH,+ ,WT,TC,M4,L10,ZPC(WHT)	1	SNA	-
1-2	6001-000547	SCREW-MACHINE	TH,+ ,M4,L25,ZPC(WHT),SWRCH	1	SNA	-
1-2	6006-001170	SCREW-TAPPING	TH,+ ,WT,TC,M4,L10,ZPC(WHT)	2	SNA	-
1-2	DE60-30016A	NUT-FLANGE	M4,MSWR10,-,-,-,-,-,-,-	1	SNA	-
1-2	6001-000547	SCREW-MACHINE	TH,+ ,M4,L25,ZPC(WHT),SWRCH	2	SNA	-
1-2	6006-001170	SCREW-TAPPING	TH,+ ,WT,TC,M4,L10,ZPC(WHT)	4	SNA	-
1-2	DE60-30016A	NUT-FLANGE	M4,MSWR10,-,-,-,-,-,-,-	2	SNA	-
1-3	DE60-10062A	SCREW-TAPPING	TH,M4,FEFZB	6	SNA	T-DOOR
1-3	6002-000630	SCREW-TAPPING	PH,+ ,2S,M3,L8,ZPC(YEL),SWR	2	SNA	NULL10
1-3	6002-000217	SCREW-TAPPING	TH,+ ,-,1,M4,L8,ZPC(WHT),SW	16	SNA	B-HEATSINK,B-INVERTER PCB,B-POWER PCB,SUPPORT-I-CASE,THERMOSTAT
1-3	6001-000592	SCREW-MACHINE	TH,+ ,-,M4,L8,ZPC(WHT),SWRC	2	SNA	ASSY-WORKING COIL E
1-3	6002-000231	SCREW-TAPPING	TH,+ ,NO,2S,M4,L12,ZPC(WHT)	8	SNA	B-MOUNTING L/R
1-3	6002-000630	SCREW-TAPPING	PH,+ ,2S,M3,L8,ZPC(YEL),SWR	1	SNA	NULL4
1-3	6001-000592	SCREW-MACHINE	TH,+ ,-,M4,L8,ZPC(WHT),SWRC	4	SNA	ASSY-WORKING COILA
1-3	6001-000592	SCREW-MACHINE	TH,+ ,-,M4,L8,ZPC(WHT),SWRC	2	SNA	ASSY-WORKING COIL B
1-3	DE60-10034A	SCREW MACHINE	TH,+ ,M4,L4,STS410	4	SNA	SLIDER
1-3	DE60-10059A	SCREW-TAPPING	TH,+ ,2,M4,L8,NI PLT,SUS410	7	SNA	P-W-DRAWER
1-3	6009-001395	SCREW-SPECIAL	TH,+ ,WP,M5,L10,PASS,STS XM	4	SNA	A-H-DRAWER
1-3	6006-001176	SCREW-ASSY TAPT	WT,PH,+ ,M4,L8,ZPC(YEL)	3	SNA	B-W-HEATER
1-3	6006-001174	SCREW-ASSY TAPP	WE,TH,+ ,M4,L12,ZPC(YEL)	34	SNA	A-B-WARMING HEATER,ASSY-MOTOR,B-W-DRAWER,H-W-DRAWER,S-S-DRAWER,S-U-DRAWER

5. Exploded Views and Parts List

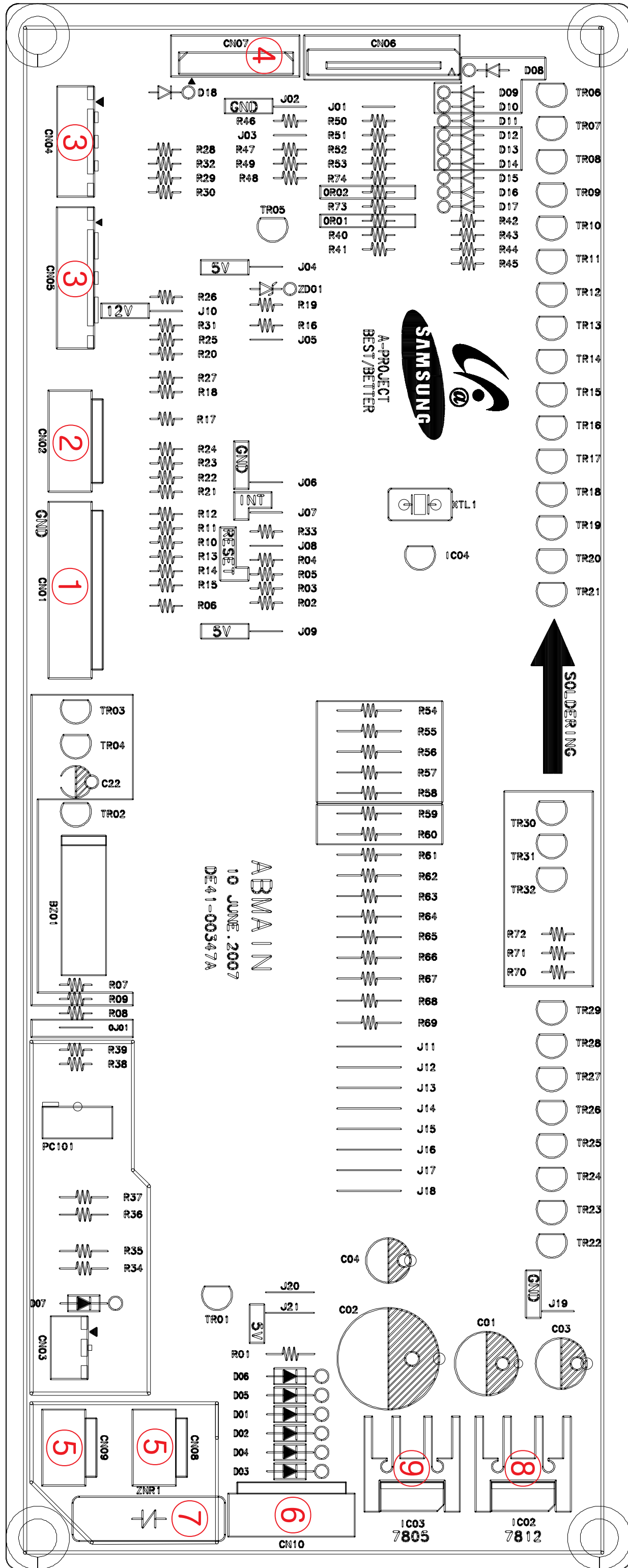
5-7 Standard Parts List

(S.N.A : SERVICE NOT AVAILABLE)

Level	Code No.	Description	Specification	Q'ty	SA/ SNA	Remark
1-3	DE60-10059A	SCREW-TAPPING	TH,+,2,M4,L8,NI PLT,SUS410	2	SNA	SLIDER
1-3	DE60-10062A	SCREW-TAPPING	TH,M4,FEFZB	10	SNA	T-P-FRONT
1-3	6002-001309	SCREW-TAPPING	TH,+,-,1,M5,L25,ZPC(WHT),S	2	SNA	-
1-4	DE60-10027A	SCREW-TAPPING	TH,+,WP(Fiber),Tapping 2S,	5	SNA	A-C-DRAWER

6-1 PCB Diagrams (Main)

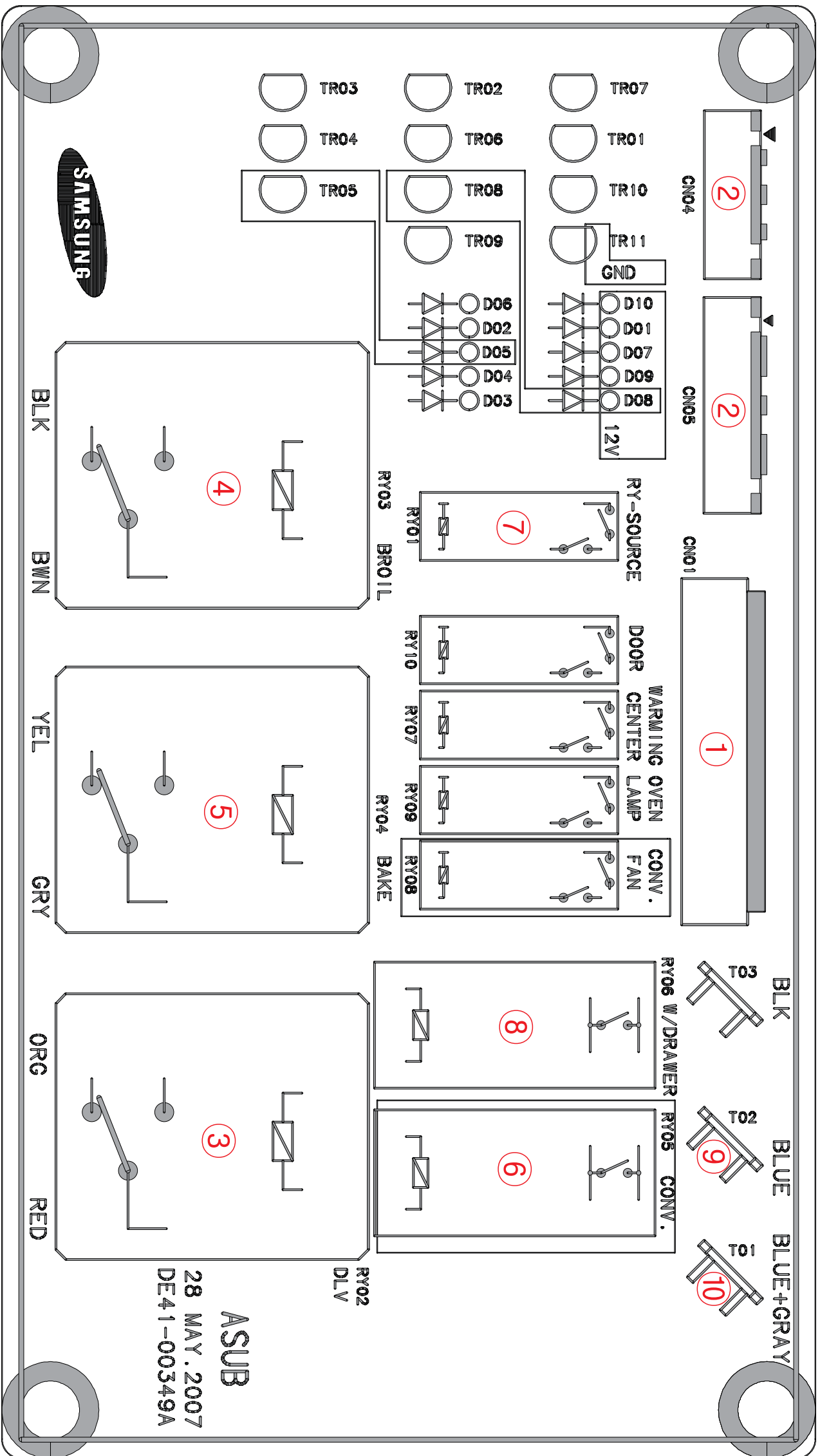
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No.	Parts Number	Part Name	Function and Rule
1	CN01	Door plunger switch, cooktop warning center, oven lamp and relay of connection fan connector	This is connector which is connected with Door plunger switch and Door lock switch. (COM-NO, COM-NC)
2	CN02	Oven sensor Connector	This is connector which is connected with oven sensor.
3	CN04, CN05	Relay connector	This connector is to get all operating of relay on sub PCB to be connected.
4	CN07	Keypad Connector	This is consisted of 15 pin and take a role of getting a cable on keypad to connect with touch PCB.
5	CN08, CN09	A Terminal for connecting with SMPS Power Supply	This is to supply power with primary on Low voltage transformer, and AC120V with main PCB through harness. It won't be problem even though CN08 and CN09 has been changed when you insert housing.
6	CN10	A Terminal for connecting with a small-sized RELAY Power Supply	This is connector which take a role of supplying secondary voltage of Low voltage transformer with main PCB.
7	ZNR1	Varistor	This is the element to protect main PCB, getting varistor to work if over voltage is supplied with varistor.
8	IC02	DC 12V IC	This is to supply DC12V with main PCB by voltage regulator.
9	IC03	DC 5V IC	This is to supply DC5V with main PCB by voltage regulator.

6-2 PCB Diagrams (Sub)

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No.	Parts Number	Part Name	Function and Rule
1	CN01	Door plunger switch, cooktop warming center, oven lamp and relay of convection fan connector	This is connector which is connected with Door plunger switch and Door lock switch. (COM-NO, COM-NC)
2	CN04, CN05	Relay connector	Connector(CN04,CN05) on sub PCB take a role of getting all of the operation of relay on sub PCB to connect with main PCB(CN04,CN05).
3	DLB relay(Ry02)	DLB Relay	Circuit is designed to have broil relay or convection relay worked after DLB relay is being worked by Double line break. (It will not be problem with reversing the order in inserting Orange and Red)
4	Broil relay(Ry03)	Broil relay	Broil relay(Ry03), Bake relay(Ry04), convection relay(Ry05) will be on-off working by micom signal after DLB relay is worked.
5	Bake relay(Ry04)	Bake relay	(Broil relay : It will not be problem with reversing the order in inserting Black and Brown) (Bake relay : It will not be problem with reversing the order in inserting Yellow and Gray)
6	Convection relay(Ry05)	Convection relay	This is consisted of 15 pin and take a role of getting a cable on keypad to connect with touch PCB.
7	RY-source relay(Ry01)	Source relay	This is terminal to connect harness with relay to get heater on warming drawer work.
8	W/Drawer Relay(Ry06) and T03 terminal	Warmer drawer terminal & Warmer drawer relay	This is terminal to connect convection heater with convection relay.
9	T02 terminal	Convection terminal	This is the terminal to supply L1 voltage(120V) with warming drawer relay(Ry06).convection relay(Ry05).
10	T01 terminal	Live 1 Terminal	This is the terminal to supply L1 voltage(120V) with warming drawer relay(Ry06).convection relay(Ry05).

7-1 Schematic Diagrams

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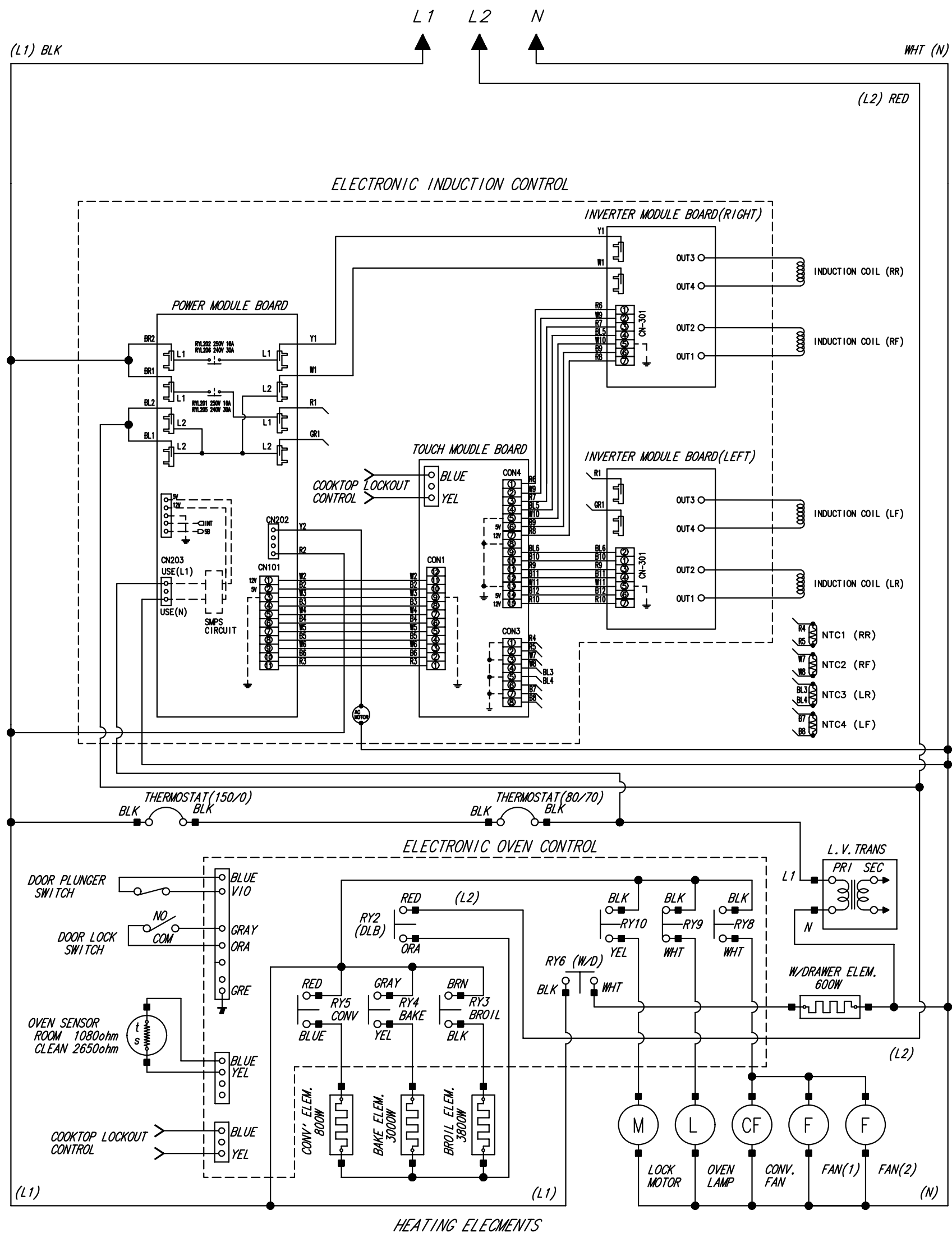
SCHEMATIC DIAGRAM

MODEL NO.: FTQ307NWGX

COLOR		COLOR		COLOR	
RED	RED	SKY	SKY	BLK	BLACK
WHT	WHITE	BRN	BROWN	GRAY	GRAY
BLUE	BLUE	ORA	ORANGE	GRE	GREEN
YEL	YELLOW	VIO	VIOLET		

NOTE

1. Input power : AC240V 60Hz, 11500W, 47.6A
 - Oven heater : MAX-4500W, 18.5A
 - Induction : MAX-7000W, 29.1A
2. Oven door opened and unlocked



INDUCTION ELEMENTS			OVEN HEATING ELEMENTS		
COMPONENTS	INPUT	WATTAGE	COMPONENTS	INPUT	WATTAGE
RF ELEMENT	240V	1400 / 2000	BAKE	240V	3000W
LF ELEMENT	240V	2400 / 3700	BROIL	240V	3800W
RR ELEMENT	240V	1800 / 2600	CONVECTION	240V	800W
LR ELEMENT	240V	1400 / 2600	WARM DRAWER	120V	600W



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