SAMSUNG

MICROWAVE OVEN

BASIC MODEL : MC11H6033CT/AA
MODEL : MC11J7033CT
MODEL CODE : MC11J7033CT/AC

SERVICE Manual

MICROWAVE OVEN

CONTENTS

• Contents

PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

(a) Do not operate or allow the oven to be operated with the door open.

(b) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary:
(1) Interlock operation,
(2) proper door closing,
(3) seal and sealing surfaces (arcing, wear, and other damage),
(4) damage to or loosening of hinges and latches,
(5) evidence of dropping or abuse.

(c) Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, wave guide or transmission line, and cavity for proper alignment, integrity, and connections.

(d) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.

(e) A Microwave leakage check to verify compliance with the Federal performance standard should be performed on each oven prior to release to the owner.

1. Precaution

Follow these special safety precautions. Although the microwave oven is completely safe during ordinary use, repair work can be extremely hazardous due to possible exposure to microwave radiation, as well as potentially lethal high voltages and currents.

1-1 Safety precautions (⚠)

1. All repairs should be done in accordance with the procedures described in this manual. This product complies with Federal Performance Standard 21 CFR
2. Microwave emission check should be performed prior to servicing if the oven is operative.
3. If the oven operates with the door open :Instruct the user not to operate the oven and contact the manufacturer and the center for devices and radiological health immediately.
4. Notify the Central Service Center if the microwave leakage exceeds 5 mW/cm^2.
5. Check all grounds.
6. Do not power the MWO from a "2-prong" AC cord. Be sure that all of the built-in protective devices are replaced. Restore any missing protective shields.
7. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including: nonmetallic control knobs and compartment covers.
8. Make sure that there are no cabinet openings through which people --particularly children--might insert objects and contact dangerous voltages. Examples: Lamp hole,ventilation slots.
9. Inform the manufacturer of any oven found to have emission in excess of 5 mW/cm2 ,Make repairs to bring the unit into compliance at no cost to owner and try to determine cause. Instruct owner not to use oven until it has been brought into compliance.

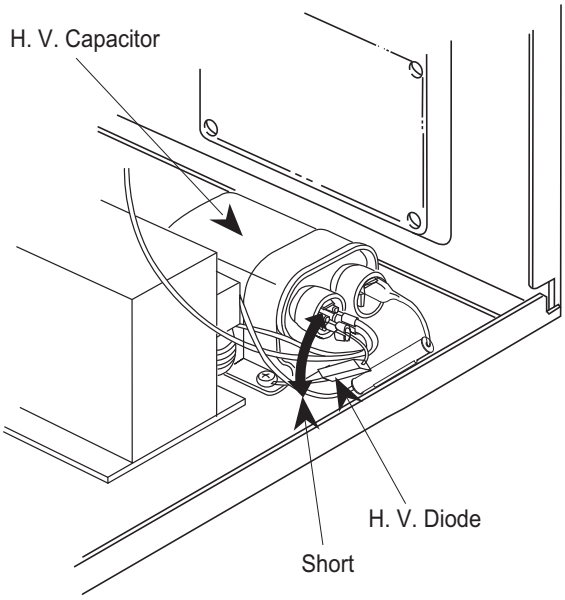
   CENTRAL SERVICE CENTER
10. Service technicians should remove their watches while repairing an MWO.
11. To avoid any possible radiation hazard,replace parts in accordance with the wiring diagram. Also, use only the exact replacements for the following parts: Primary and secondary interlock switches, interlock monitor switch.
12. If the fuse is blown by the Interlock Monitor Switch: Replace all of the following at the same time: Primary, door sensing switch and power relay, as well as the Interlock Monitor Switch. The correct adjustment of these switches is described elsewhere in this manual. Make sure that the fuse has the correct rating for the particular model being repaired.
13. Design Alteration Warning: Use exact replacement parts only, i.e.,only those that are specified in the drawings and parts lists of this manual. This is especially important for the Interlock switches, described above. Never alter or add to the mechanical or electrical design of the MWO. Any design changes or additions will void the manufacturer's warranty. Always unplug the unit's AC power cord from the AC power source before attempting to remove or reinstall any component or assembly.
14. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.
15. Some semiconductor ("solid state") devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs). Examples include integrated circuits and field-effect transistors. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground.
16. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.
17. When checking the continuity of the switches or transformer, always make sure that the power is OFF, and one of the lead wires is disconnected.
18. Components that are critical for safety are indicated in the circuit diagram by shading, ⚠ or ⚠ .
19. Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

    NOTE : Connect the oven to a 20A circuit. When connecting the oven to a 15A circuit,make sure that circuit breaker can operate.

1. Precaution

1-2 Special High Voltage Precautions

1. High Voltage Warning Do not attempt to measure any of the high voltages --this includes the filament voltage of the magnetron. High voltage is present during any cook cycle. Before touching any components or wiring, always unplug the oven and discharge the high voltage capacitor (See Figure 1-1)
2. The high-voltage capacitor remains charged about 30 seconds after disconnection. Short the negative terminal of the high-voltage capacitor to to the oven chassis. (Use a screwdriver.)
3. High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If the high voltage exceeds the specified limits, check each of the special components.



PRECAUTION

There exists HIGH VOLTAGE ELECTRICITY with high current capabilities in the circuits of the HIGH VOLTAGE TRANSFORMER secondary and filament terminals. It is extremely dangerous to work on or near these circuits with the oven energized.

DO NOT measure the voltage in the high voltage circuit including filament voltage of magnetron.

PRECAUTION

Servicemen should remove their watches whenever working close to or replacing the magnetron.

PRECAUTION

Never touch any circuit wiring with your hand nor with uninsulated tool during operation.

2. Specifications

2-1 Features

Features
■ **Real Full STS Face & Tact Control Type** The stainless Steel(STSS) exterior delivers a luxurious look to your kitchen. The design matches perfectly with your other kitchecn appliances, providing a harmonious kitchen interior.
■ **345mm Biggest Tray size 1.1 cu.ft Convection Microwave Oven** With the 1.1 cu.ft capacity, it offers enough space to cook. The big capacity combined with 900 watts of output achieves superior cooking results.
■ **Ceramic Coating Cavity** The interior is fully coated with Ceramic Enamel that offers a solid surface that never scratches and cracks. So you can enjoy the same new interior even after long use. Moreover, it prevents bacteria and the smooth surface is easy to clean as well. The significantly higher cooking temperature and animal protein can cause severe discoloration and cleaning issuse. But the Ceramic Enamel Interior prevents all of them.
■ **Drop/Down Door** It takes very little force to open the door, making it easy and convenient. The design allows the door to open softly and economize on space. Additionally, when the door is open, more of the interior is open to view.
■ **Slim Fry** You don't need to set either cooking time or power level. You can adjust the Slim Fry cook category in user manual. You will use less oil compared to frying with oil fryer. Using this function, you can feel that is much more healthy as you reduce use of oil.

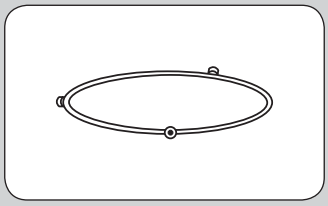
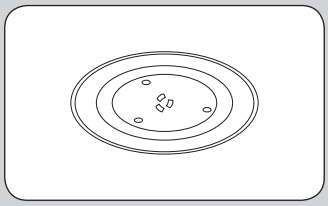
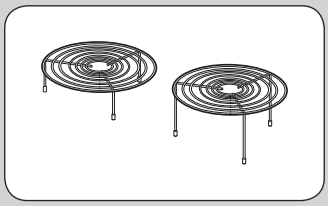
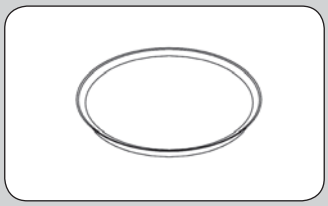
2. Specifications

2-2 Table of Specifications

Item				Basic	New
				MC11H6033CT/AA	MC11J7033CT/AC
GENERAL	Capacity			32L	32L
	Power	Power Source		120V~60Hz	120V~60Hz
		Output Power(Microwave)		1,000W	850W
		Output Power(Grill)		1,300W	850W
		Output Power(Convection)		1,750W	1,450W
		Power Consumption(MW)		1,600W	1,400W
		Max Power Consumption		1,750W	1,450W
	Output Power			100W/1,000W (IEC-705)	100W/850W (IEC-705)
	Operation Frequency			2,450MHz	2,450MHz
	Cooling Method			Cooling Fan Motor	Cooling Fan Motor
	Physical Specification	Dimension (W x H x D)	Outside	$20^{9/16}$ x $12^{3/16}$ x $19^{15/16}$	$20^{19/32}$ x $12^{21/128}$ x $19^{59/64}$
			Cavity	$14^{11/16}$ x $9^{1/8}$ x $14^{9/16}$	$14^{11/16}$ x $9^{11/64}$ x $14^{9/16}$
		Volume		1.1 Cu.ft	1.1 Cu.ft
		Weight	Net	44.1lbs	44.1 lbs
			Gross	50.7lbs	50.7 lbs
	Export Zone			USA	CANADA
	Sensor			Temperature	Temperature
	Display			LED (Ice Blue)	LED (Ice Blue)
	Contorl Method			TACT + DIAL	TACT + DIAL
	Door Open Mechanism			DROP DOWN	DROP DOWN
	MW Distribution Mechanism			SIDE FEEDING	SIDE FEEDING
Feature	MWO Mode	1. MW		YES	YES
	Grill Mode	1. GRILL		YES	YES
	Convection Mode	1. Convection		YES	YES
	Combi mode	1. MW + GRILL		YES	YES
		2. MW + CONVECTION		YES	YES
	Auto Cook Mode	1. Slim Fry		YES(9)	YES(9)
		2. Yogurt		NO	NO
		3. Auto Reheat/Cook		YES(7)	YES(30)
		4. Auto Defrost		YES(5)	YES(4)
		5. Local Recipe		NO	NO
	Other	1. Fast Preheat		YES	YES
	Convection Temperature			100˚F ~ 400˚F	100˚F ~ 400˚F
	Clock			YES	YES
	Max time Cooking	MW		99 min	99 min
		Grill		60 min	60 min
		Convection		60 min	60 min
		MW+Grill		60 min	60 min
		MW+Convection		60 min	60 min
	Power Level			YES(10)	YES(10)
	Setting	Sound Option		YES	YES
		Clock System Option (24H/12H/24H+12H)		24H+12H	12H+24H
		Child Lock		YES	YES
Material & Finishes	Outer Panel Color			Neo STSS Silver	Neo STSS Silver
	Door Color			STSS + Neo STSS Silver	STSS + Neo STSS Silver
	Cavity Interior			Ceramic Enamel	Ceramic Enamel
	Grill Heater			Sheath Heater(1,300W)	Sheath Heater(850W)
	Convection Heater			Quartz heater(600W)	Quartz heater(600W)
	Packing Case			Color Box	Color Box
Accessory	Wire rack	Low		Yes	Yes
		High		Yes	Yes
	Crusty Plate			Yes	Yes

2. Specifications

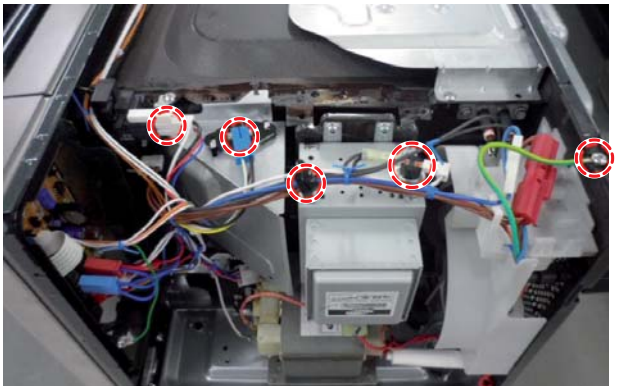
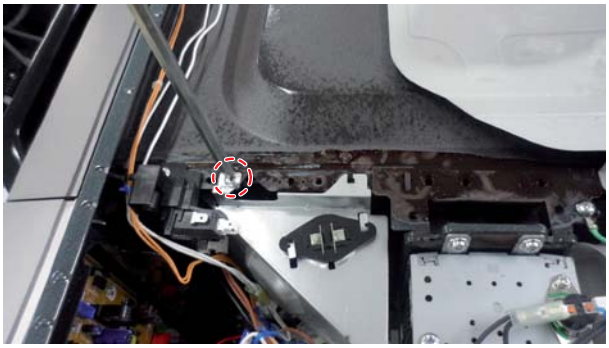
2-3 Accessory

Item	Description	Code No.	Q'ty
	Assy-Guide Roller	DE92-90189S	1
	Tray-cooking	DE74-20016A	1
	Assy-Wire Rack	Low rack : DE97-00136B High rack : DE97-00136A	1
	Tray Brolier(Crispy Plate)	DE92-90534B	1

3. Disassembly and Reassembly

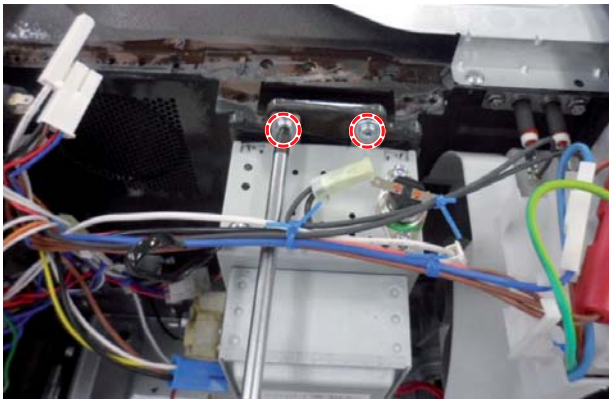
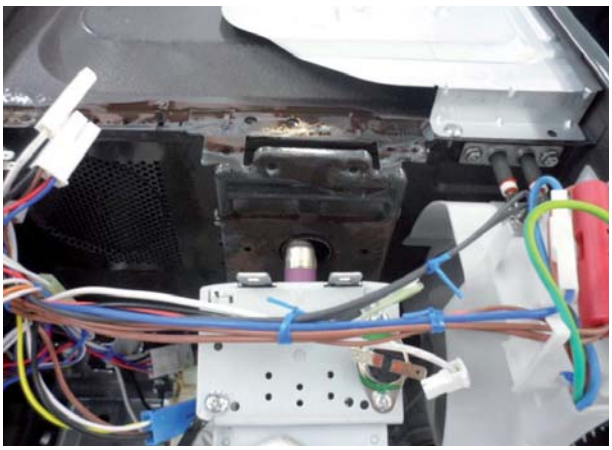
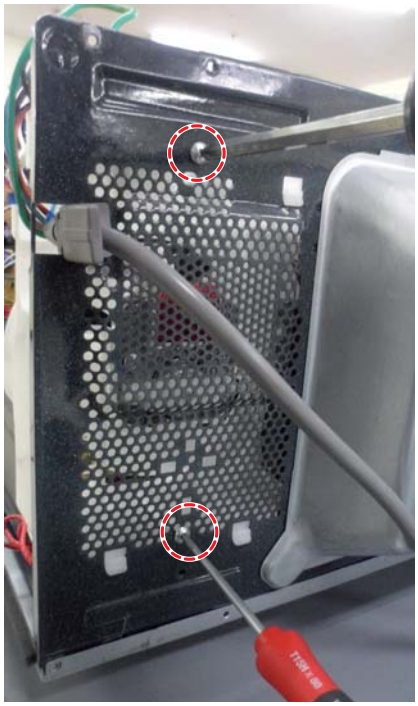
3-1 Disassembly of Magnetron, Motor Assembly and Lamp

Remove the magnetron including the shield case, permanent magnet, choke coils and capacitors (all of which are contained in one assembly)

Parts	Explanation Photo	Explanation
Magnetron, Motor Assembly and Lamp		**1.** Disconnect all lead wires from the magnetron and lamp.
		**2.** Remove the screw securing air cover.
		**3.** Remove the air cover.

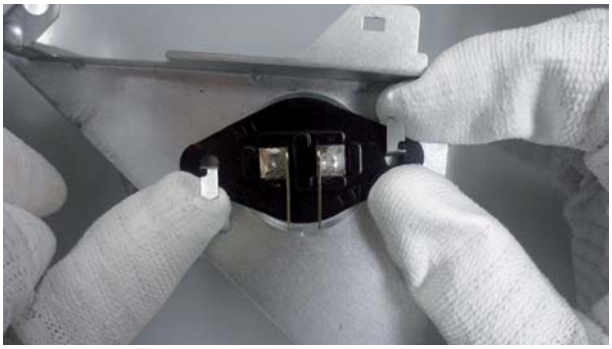
3. Disassembly and Reassembly

3-1 Disassembly of Magnetron, Motor Assembly and Lamp

Parts	Explanation Photo	Explanation
Magnetron, Motor Assembly and Lamp		**4.** Remove screws securing the magnetron to the wave guide.
		**5.** Take out the magnetron very carefully.
		**6.** Remove two screws from the back panel. **7.** Take out the fan motor.

3. Disassembly and Reassembly

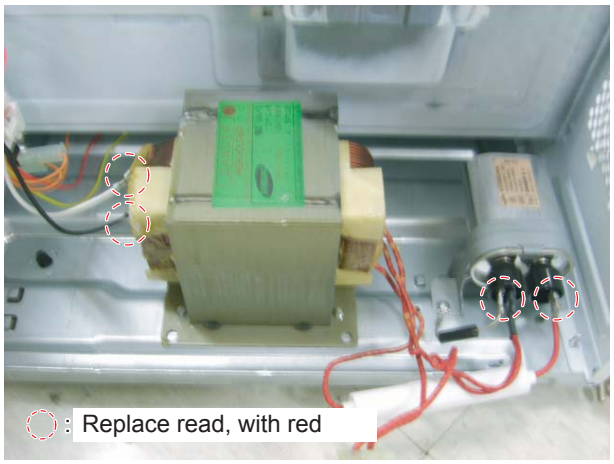
3-1 Disassembly of Magnetron, Motor Assembly and Lamp

Parts	Explanation Photo	Explanation
Magnetron, Motor Assembly and Lamp		**8.** Remove the oven lamp from hole of air cover.

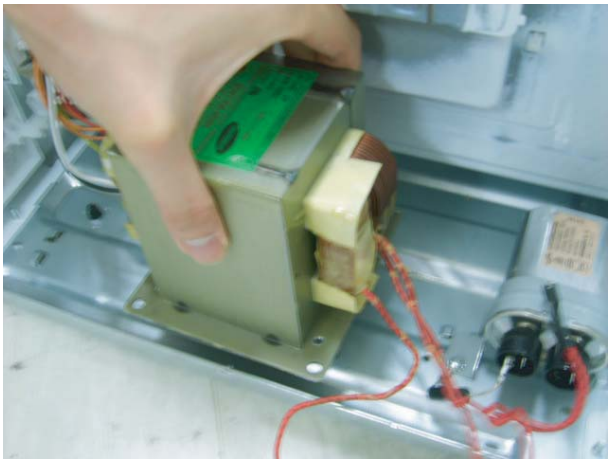
NOTE1: When removing the magnetron, make sure that its antenna does not hit any adjacent parts, or it may be damaged.

NOTE2: When replacing the magnetron, be sure to remount the magnetron gasket in the correct position and make sure the gasket is in good condition.

3-2 Replacement of High Voltage Transformer

Parts	Explanation Photo	Explanation
High Voltage Transformer		**1.** Discharge the high voltage capacitor.
		**2.** Disconnect all the leads.

3-2 Replacement of High Voltage Transformer

Parts	Explanation Photo	Explanation
High Voltage Transformer		**3.** Remove the mounting bolts.
		**4.** Replace the High Voltage Transformer **5.** After replace, reconnect the leads correctly and firmly.

PRECAUTION

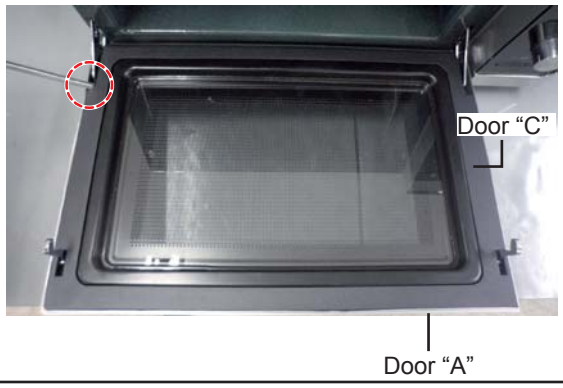
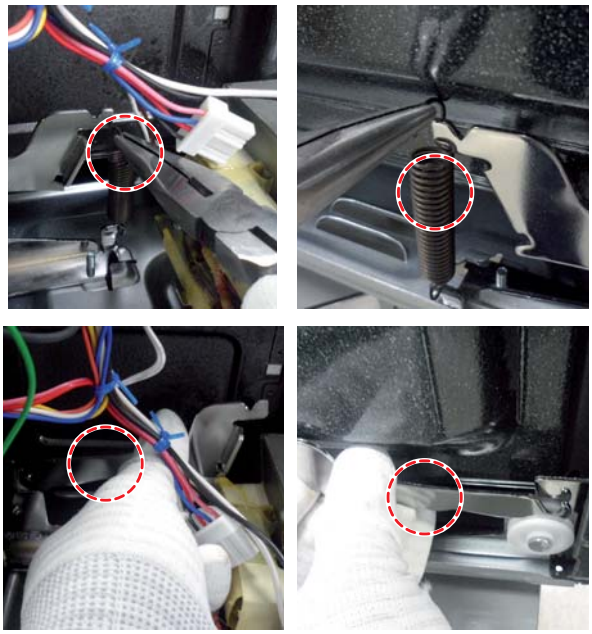
Servicemen should remove their watches whenever working close to or replacing the magnetron.

PRECAUTION

There exists HIGH VOLTAGE ELECTRICITY with high current capabilities in the circuits of the HIGHVOLTAGE TRANSFORMER secondary and filament terminals. It is extremely dangerous to work on or near these circuits with the oven energized.

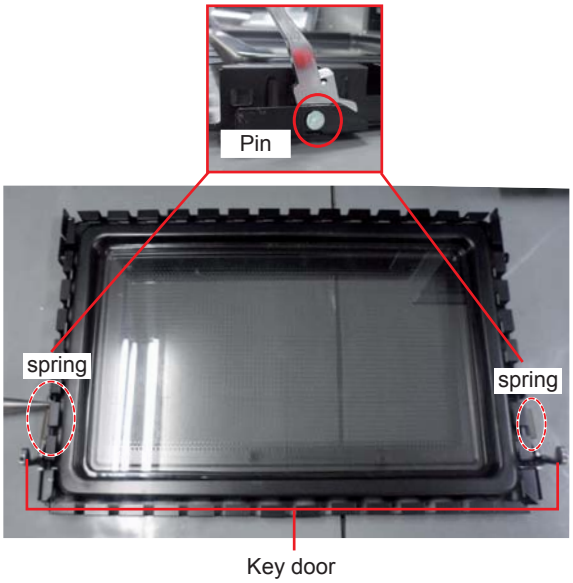
DO NOT measure the voltage in the high voltage circuit including filament voltage of magnetron.

3-3 Replacement of Door Assembly

Parts	Explanation Photo	Explanation
Removal of Door "C"		Insert flat screwdriver into the gap between Door "A" and Door "C" to remove Door "C". Be careful when handling Door "C" because it is fragile. Then remove the door assembly.
Removal of Springs and Arm Slider		Remove the springs first, and then remove the arm sliders.
Removal of Door Assembly		Open the door carefully and push the door to left side.

3. Disassembly and Reassembly

3-3 Replacement of Door Assembly

Parts	Explanation Photo	Explanation
Removal of Key Door & Spring		Following the procedure as shown in the figure, insert and bend a thin metal plate between Door "E" and Door "A" until you hear the 'tick' sound. • Insertion depth of the thin metal plate should be 0.5mm or less.
Removal of Key Doors, Springs & Pins		First, remove the springs Second, remove the pins & key door from Door E

Reassembly Test

After replacement of the defective component parts of the door, reassemble it and follow the instructions below for proper installation and adjustment so as to prevent an excessive microwave leakage.

1. When mounting the door to the oven, be sure to adjust the door parallel to the bottom line of the oven face plate by moving the upper hinge and lower hinge in the direction necessary for proper alignment.
2. Adjust so that the door has no play between the inner door surface and oven front surface. If the door assembly is not mounted properly, microwave energy may leak from the space between the door and oven.
3. Do the microwave leakage test.

3. Disassembly and Reassembly

Procedure for Measurement of Microwave Energy Leakage

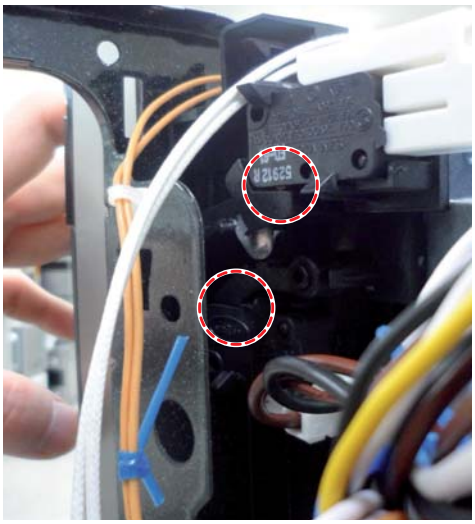
1. Pour 275±15cc of 20±5°C(68±9°F) water in a beaker which is graduated to 600cc, and place the beaker in the center of the oven.
2. Start to operate the oven and measure the leakage by using a microwave energy survey meter.
3. Set survey meter with dual ranges to 2,450MHz.
4. When measuring the leakage, always use the 2 inch spacer cone with the probe. Hold the probe perpendicular to the cabinet door. Place the spacer cone of the probe on the door and/or cabinet door seam and move along the seam, the door viewing window and the exhaust openings moving the probe in a clockwise direction at a rate of 1 inch/sec. If the leakage testing of the cabinet door seam is taken near a corner of the door, keep the probe perpendicular to the areas making sure that the probe end at the base of the cone does not get closer than 5cm to any metal. If it gets closer than 5cm, erroneous readings may result.
5. Measured leakage must be less than 4mW/cm^2 , after repair or adjustment.

Maximum allowable leakage is 5mW/cm^2 .
4mW/cm^2 is used to allow for measurement and meter accuracy

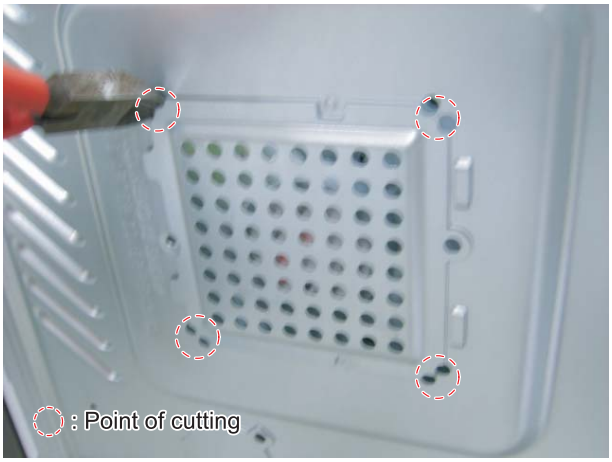
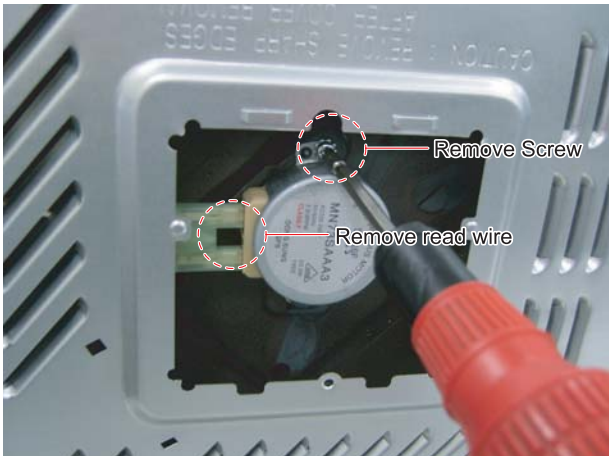
Check for Microwave Leakage

1. Remove the outer panel.
2. Pour 275±15cc of 20±5°C(68±9°F) water in a beaker which is graduated to 600cc, and place the beaker in the center of the oven.
3. Start the oven at the highest power level.
4. Set survey meter dual ranges to 2,450MHz.
5. Using the survey meter and spacer cone as described above, measure near the opening of magnetron, the surface of the air guide and the surface of the wave guide as shown in the following photo.
   (but avoid the high voltage components.)
   The reading should be less than 4mW/cm^2.

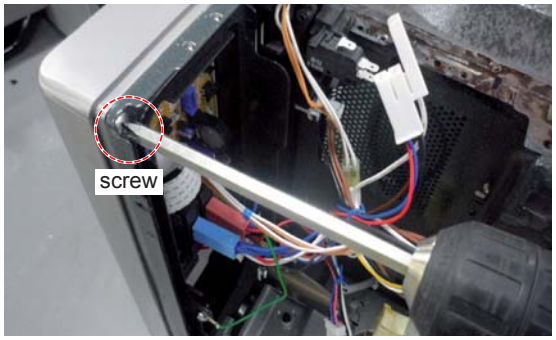
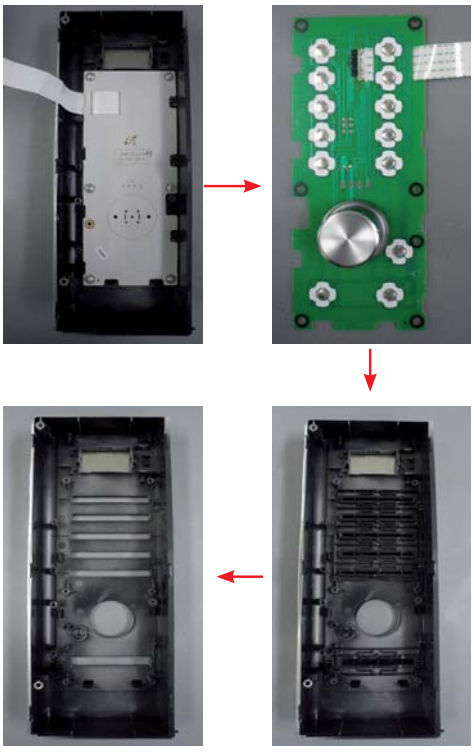
3-4 Replacement of Fuse

Parts	Explanation Photo	Explanation
Interlock Monitor Swithch	 	1. Disconnect the oven from the power source. 2. When 12A fuse blows out by the operation of interlock monitor switch failure, replace the primary interlock switch, door sensing switch, monitor switch and power relay. 3. When the above three switches operate properly, check if any other part such as the control circuit board, blower motor or high voltage transformer is defective.

3-5 Replacement of Drive Motor

Parts	Explanation Photo	Explanation
Drive Motor		**1.** Take out the glass tray, guide roller from oven cavity, disconnect power. **2.** Remove turn table motor cover from case bottom. **CAUTION :** Remove sharp edge after cover removal.
		**3.** Disconnect leads from motor. **4.** Remove the screws securing motor to bottom of oven cavity.
Drive Motor		**5.** Lift out the motor. **6.** When replacing the motor, be sure to remount it in the correct position. **NOTE :** The motor shaft should fit in the coupler.
	COVER FIXING SCREW : **MACHINE SCREW(6006-001170)**	**7.** When reassembling the draive motor cover, turn the cover 180 degrees and secure with a screw. **NOTE :** A screw for the motor cover is not supplied with the MWO. Use a spare screw from stock.

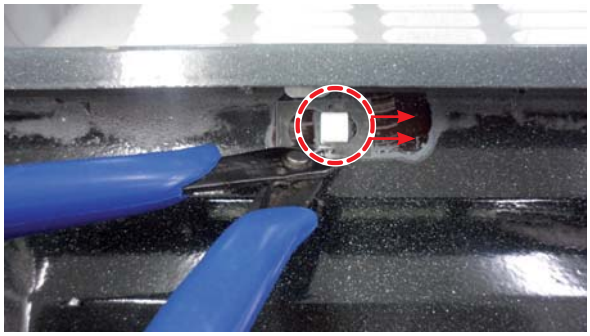
3-6 Replacement of Control Circuit Board

Parts	Explanation Photo	Explanation
Removal of Control Box Assembly		1. Be sure to ground any static electric charge in your body and never touch the control circuit. 2. Disconnect the connectors from the control circuit board. 3. Remove screws securing the control box assembly.
Removal of P.C.B Assembly		1. Remove screws securing the control circuit board. 2. Lift up the control circuit board from the Ass'y control box.
Removal of Key Module		1. First, Remove the Assy PCB. 2. Remove screw on the key Module PCB. 3. Lift out key Module PCB to the underside from the control panel. 4. Remove knob dial, button select A, Button select B on the control panel

3-7 Replacement of Heater

Parts	Explanation Photo	Explanation
Bracket Upper		**1.** Remove a screw from the Bracket upper (Right).
		**2.** Remove the latch and screw from the Bracket upper(left).

3-8 Replacement of Stopper

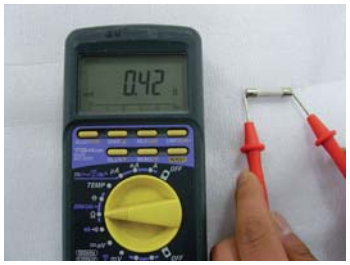
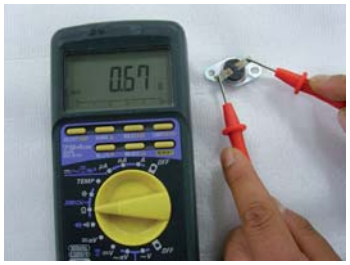
Parts	Explanation Photo	Explanation
Stopper		**1.** Press the center of stopper with tools.

3-9 Replacement of Gasket

Parts	Explanation Photo	Explanation
Gasket		**1.** Remove the Nuts to disassemble the Gasket and lead Wire.

4. Troubleshooting

4-1 Parts checking method

Parts	Photo	Good	No Good
Fuse		0.1 ~ 1 Ω	100 MΩ exceed
T.C.O		0.1 ~ 1 Ω	100 MΩ exceed
H.V Trans		1 ~ 9 Ω	100 MΩ exceed
Convection		100 ~ 990 Ω	100 MΩ exceed
Fan Motor		10 ~ 99 Ω	100 MΩ exceed
Grill Heater		10 ~ 99 Ω	100 MΩ exceed

4-2 Error Code Numbering Rule

1. Information CODE NUMBERING RULE is applied to a microwave oven and an oven. (CMO, OTR, Grill, Convection, Commercial etc.)
2. All sensors and devices have their own number. ex) Gas/Easy/PH Sensor = 1, Temp. Sensor = 2, ...
3. Of each device, No.0~2 refer to Information Option 1~3

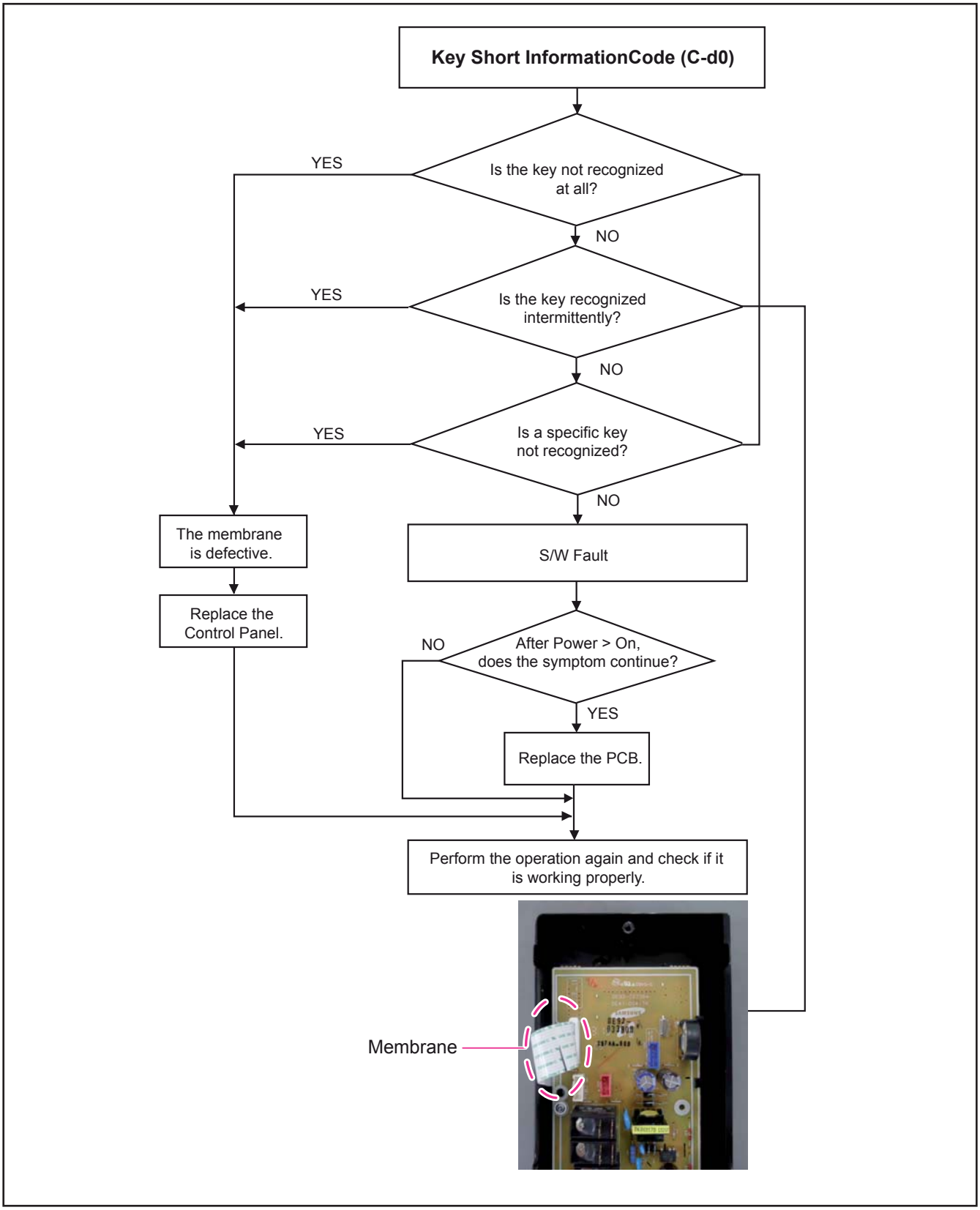
C	-	1	0
		0- Others	0 – Information option 1
		1- Gas Sensor	1 – Information option 2
		2- Temp. Sensor	2 – Information option 3
		7- Steam Sensor	•
		A - Function	•
		d - Door/Key	•
		F - Master/Slave Communication	
		X – additional Information	

4-3 Error Code List

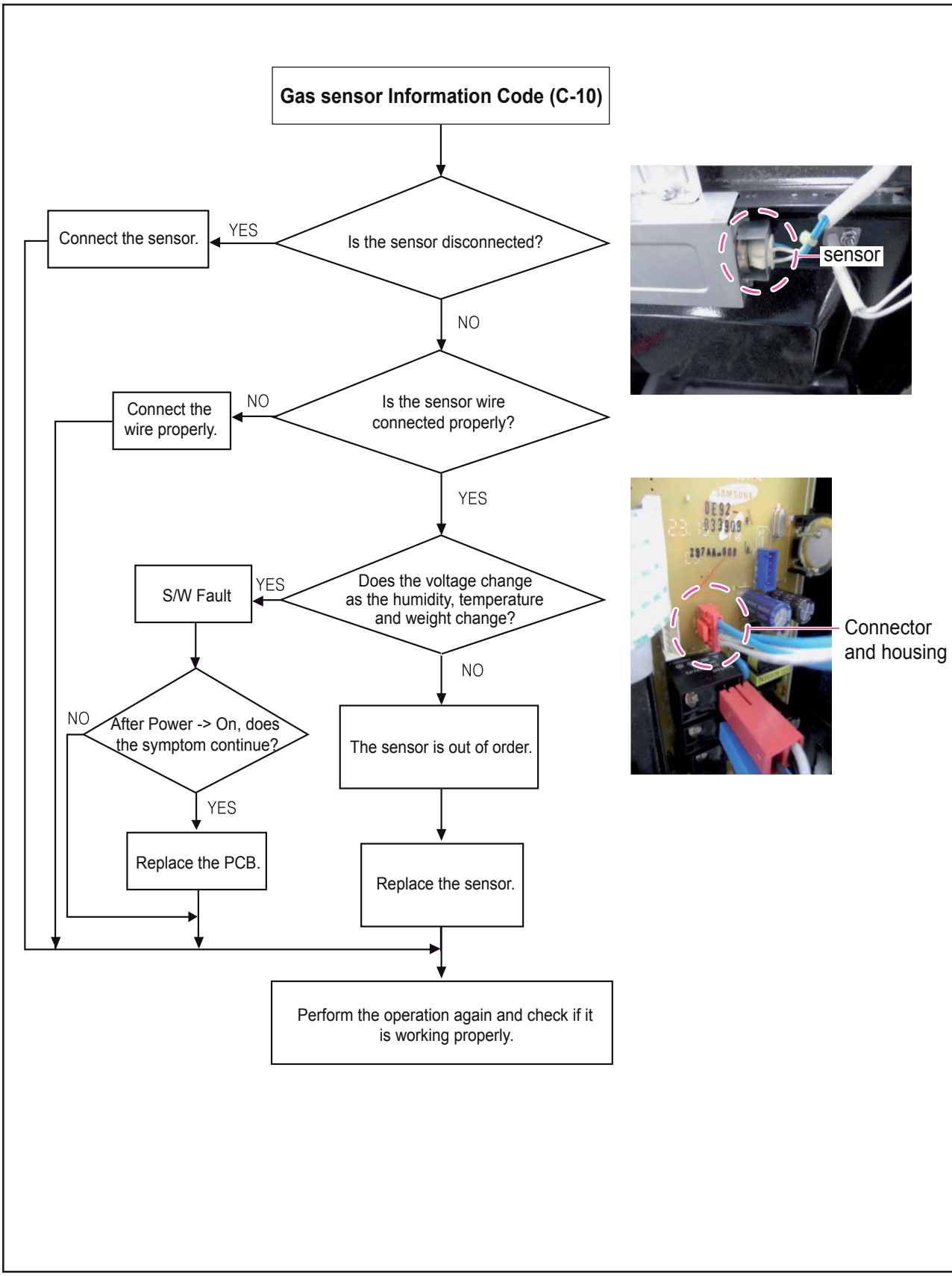
Device	Error Code	Symptom	Solution	Page
Door/Key	**C-d0**	Key Short information Code (10 seconds) If KEY input is successive more than 10 seconds, marks C-d0 and converts to cancel mode.	Turn off set and restart.	Page 24
Temp Sensor	**C-20**	Temperature Sensor Open or Short information Code . When temperature sensor value is below 5 or more than 250. marks C-20 and converts to cancel mode.	Check sensor part and connection of sensor housing and PCB's connector.	Page 26
	C-21	Over temperature information Code.	Check Sensor and Heater.	Page 27

4-4 Electrical Malfunction

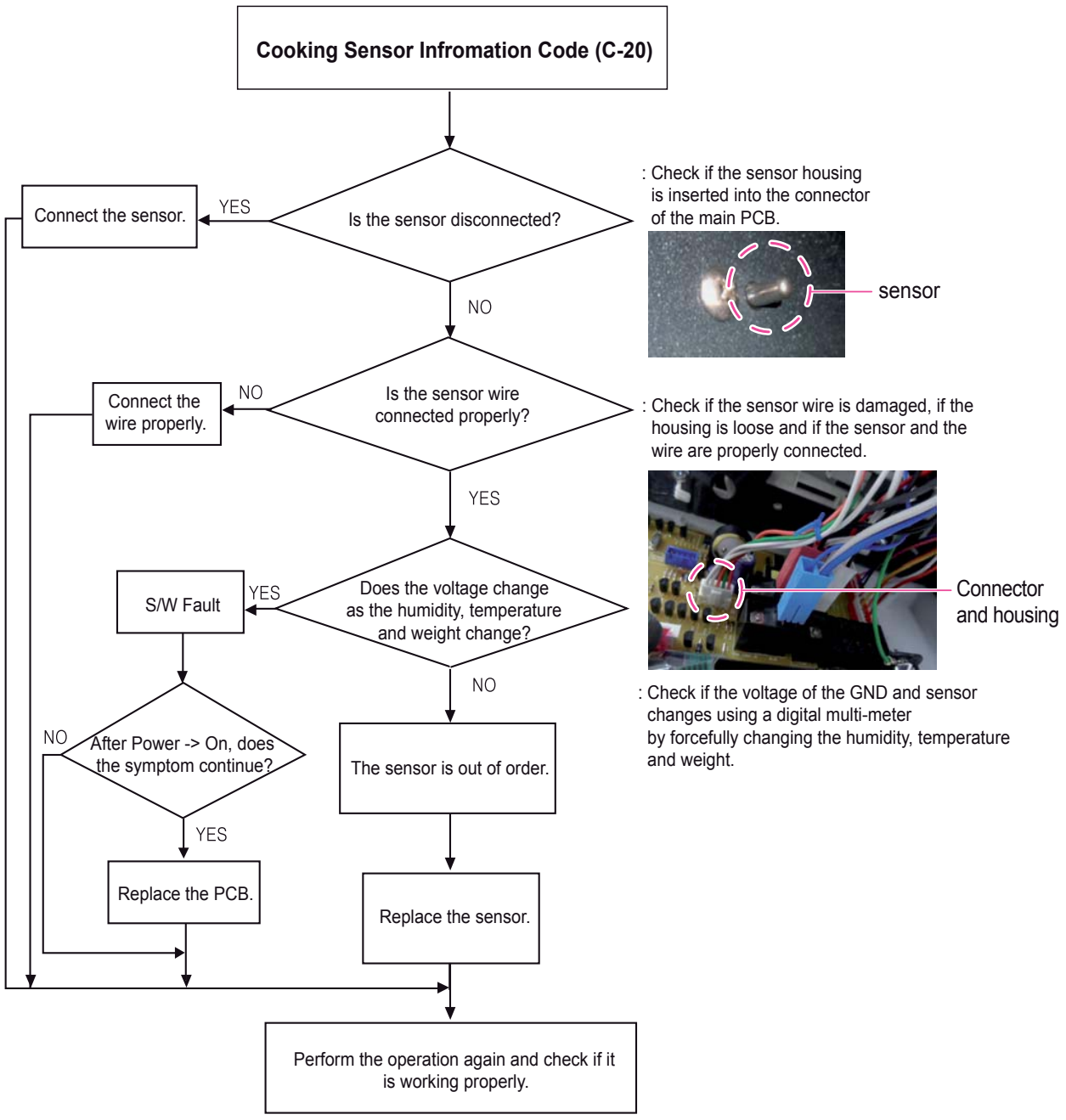
4-4-1 C-d0



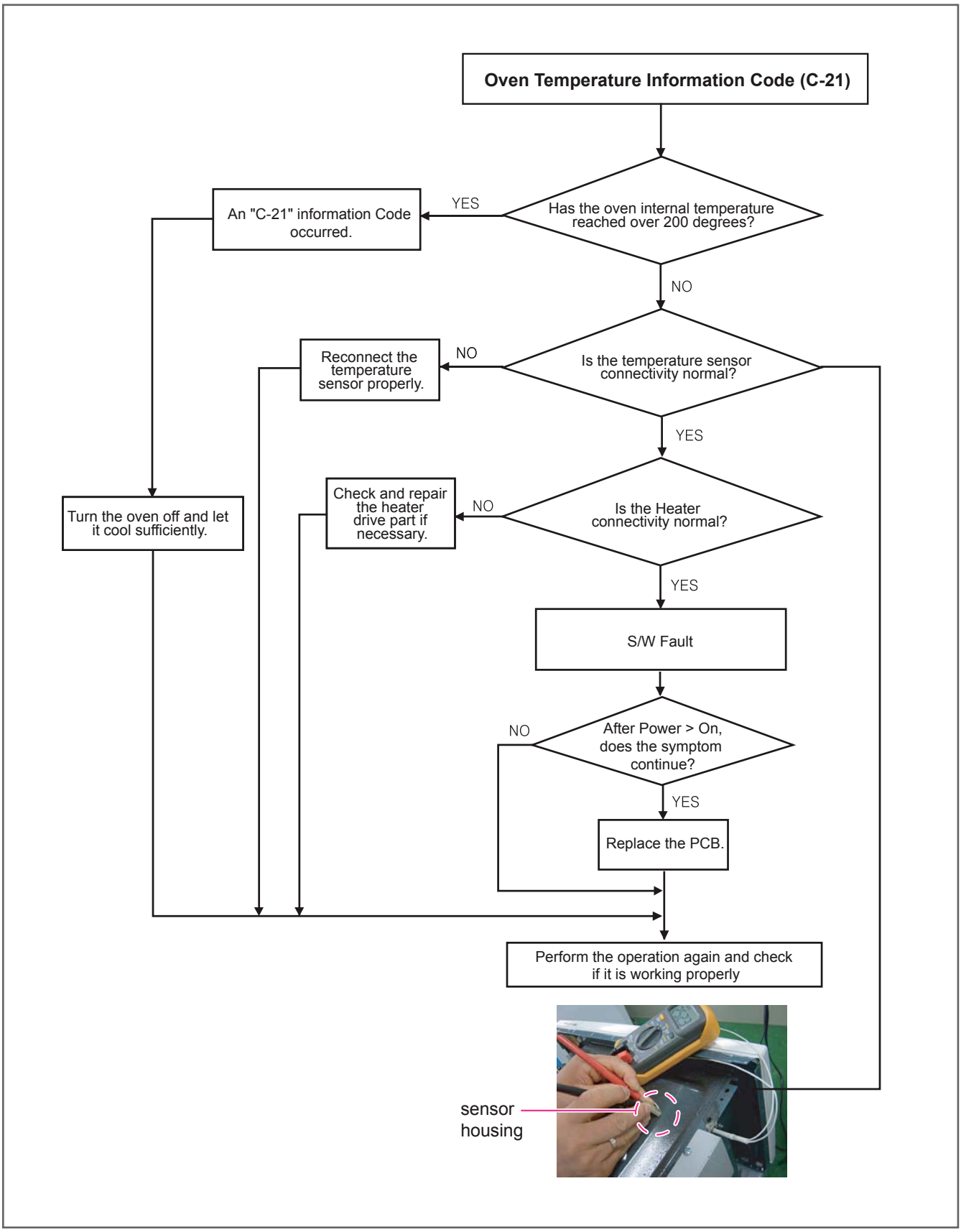
4-4-2 C-10



4-4-3 C-20



4-4-4 C-21



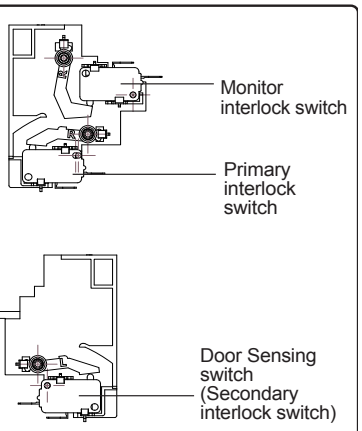
4-4-5 If oven malfunction

Oven does not operate.

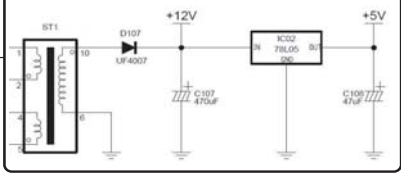
***Inspection method**

Caution
1. Be careful of high voltage circuits.
2. Discharge high voltage capacitor.

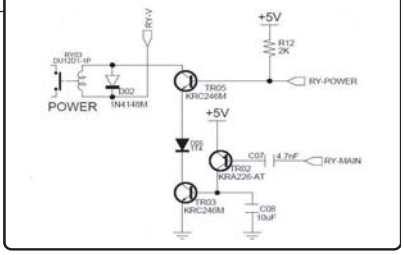
Is Fuse OK?
- NO → Is Primary interlock switch normal?
  - NO → Monitor interlock switch / Primary interlock switch
  - YES → Is Power Relay (Secondary interlock Relay) normal?
    - NO → Replace Relay
    - YES → Door Sensing switch (Secondary interlock switch)
- YES → **Is the magnetron temperature switch normal?**
  - NO → Replace switch
    - NO → Check a fan motor after replacing switch
  - YES → **Is SMPS power supply circuit normal?**
    - NO → Check power supply circuit
      - NO → Power supply circuit check point
    - YES → **Is the IC01 output of PCB normal?**
      - NO → Check Relay control circuit
        - NO → Relay control circuit check point
      - YES → Is high voltage diode normal?
        - **Checking high voltagecircuts** → Is high voltage diode normal?
          - NO → In case any of high voltage parts is damaged, check all parts related to high votlage.
          - YES → Is high voltage capacitor normal?
            - NO → In case any of high voltage parts is damaged, check all parts related to high votlage.
            - YES → Is magnetron normal?
              - NO → In case any of high voltage parts is damaged, check all parts related to high votlage.



Power supply circuit check point



Relay control circuit check point

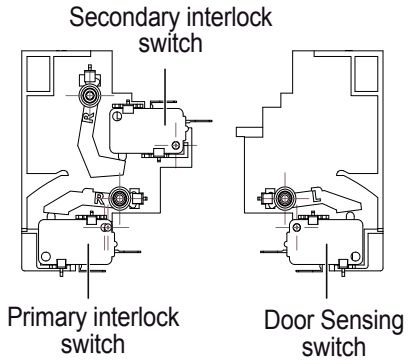


PRECAUTION

For continued protection against radiation hazard, replace parts in accordance with the wiring diagram and be sure to use the correct part number for the following switches: Primary and secondary interlock switches, and the monitor interlock switch (replace all together). Then follow the adjustment procedures below. After repair and adjustment, be sure to check the continuity of all interlock switches and the monitor interlock switch.

Adjustment of Primary interlock switch, Door sensing switch(Secondary interlock switch), and Monitor interlock switch

1. When mounting Primary interlock switch and Monitor interlock switch to Latch Body, consult the figure.
2. No specific adjustment during installation of Primary interlock switch and Monitor interlock switch to the latch body is necessary.
3. When mounting the Latch Body to the oven assembly, adjust the Latch Body by moving it so that the oven door will not have any play in it. Check for play in the door by pulling the door assembly. Make sure that the latch keys move smoothly after adjustment is completed. Completely tighten the screws holding the Latch Body to the oven assembly.
4. Reconnect to Monitor interlock switch and check the continuity of the monitor circuit and all latch switches again by following the components test procedures.
5. Confirm that the gap between the switch housing and the switch actuator is no more than 0.5mm when door is closed.
6. Interlock Switch Replacement - When replacing faulty switches, be sure switch mounting tabs are not bent, broken or otherwise deficient in their ability to secure the switches in place.



	Door Open	Door Closed
Primary Interlock switch	∞	0
Monitor interlock switch(COM-NC)	0	∞
Monitor interlock switch(COM-NO)	∞	0
Door Sensingswitch (Secondary Interlock switch)	∞	0

4-4-6 If button malfunction

Buttons of the control panel do not work.

***Inspection method**

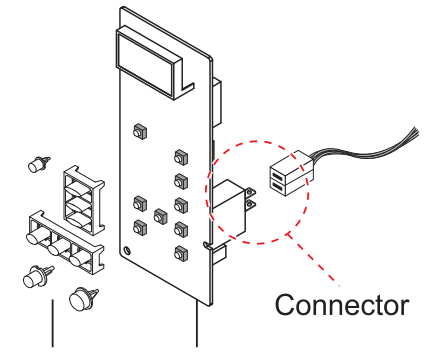
Are button pressed in the correct order?

NO → Refer to User Manual

YES

Is the connector of the control panel normal?

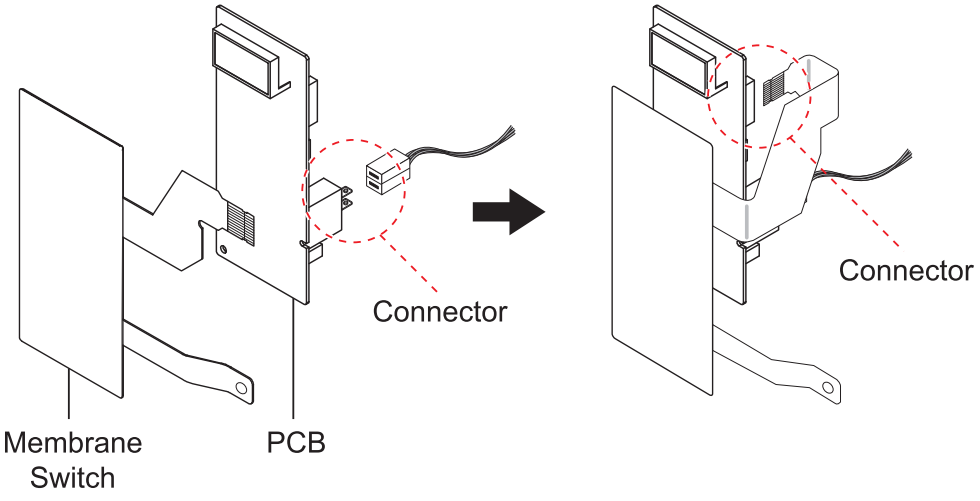
NO → Tact type



YES

Replace PCB.

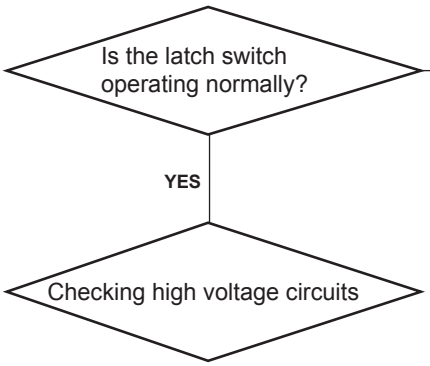
Menbrane type



4-4-7 If food is not heated even though the oven works

Food is not heated even though the oven works.

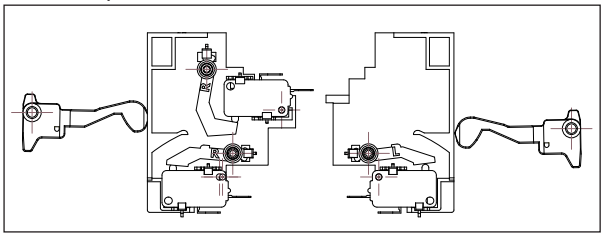
***Inspection method**



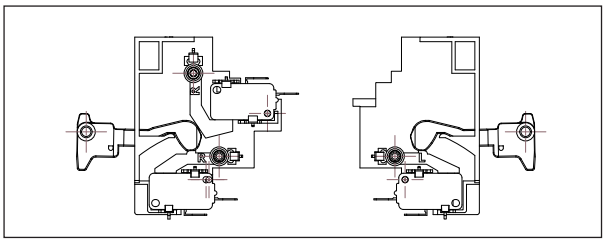
Method to control latch switch

Refer to "Checking high voltage circuits" on the previous page.

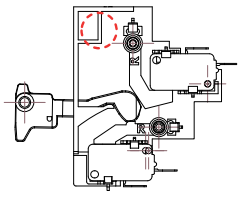
■ Door open



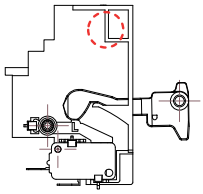
■ Door Close



Method to control latch switch



1. Loosen the screw to check whether the primary interlock switch and secondary interlock switch works by slightly moving latches to right and left. Then firmly tighten nuts.



2. Loosen the screw to check whether the Door sensing interlock switch works by slightly moving latches to right and left. Then firmly tighten nuts.

5. PCB Diagrams

5-1 PCB Diagrams

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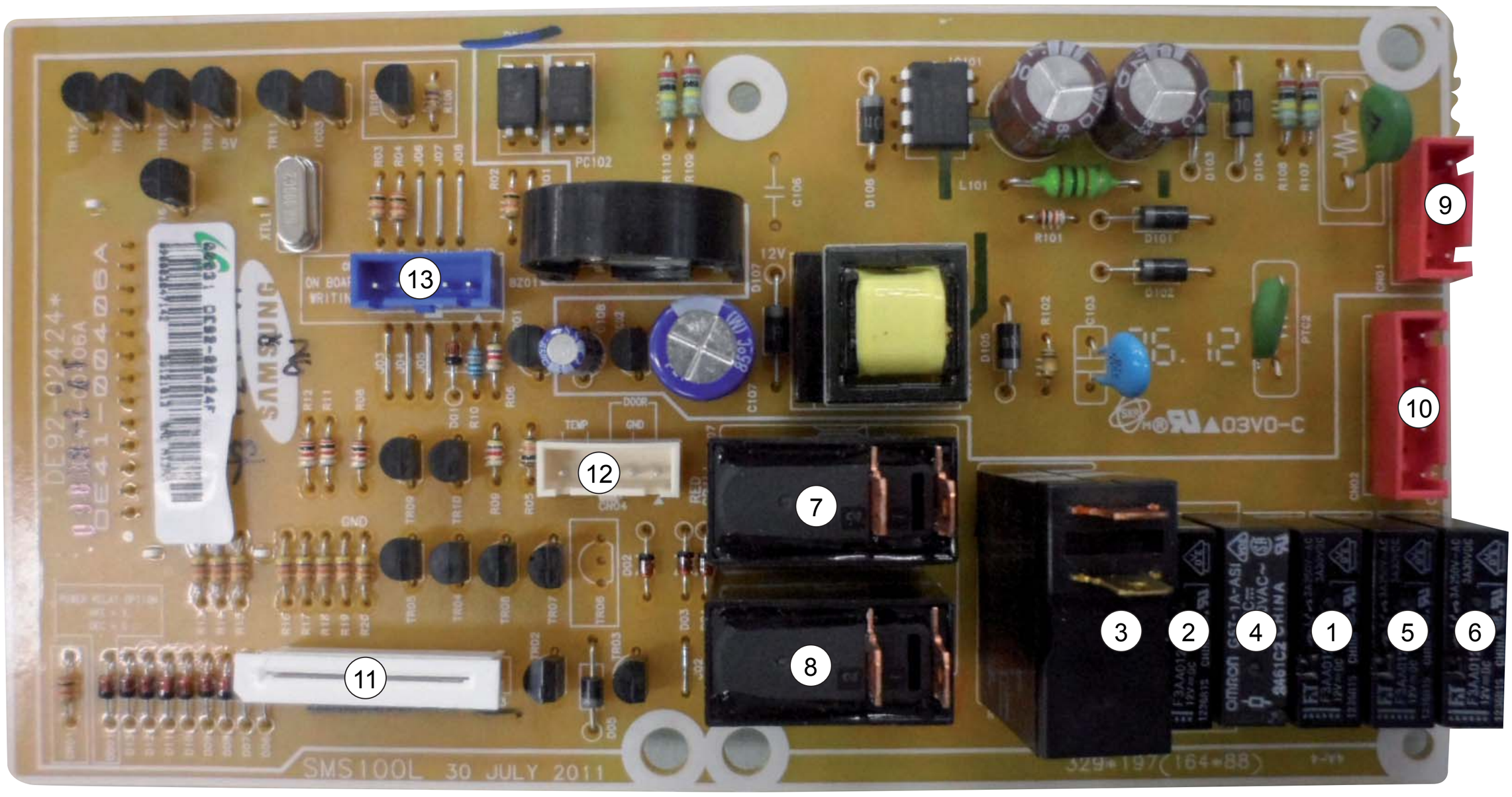


No.	Parts Number	Part Name	Function and Rule
1	RY01	Main Relay	Fan, Lamp, T/T Control
2	RY02	Inrush Relay	Inrush Electric Current Decrease
3	RY03	Power Relay	MW Power Control
4	RY04	T/T Relay	Turn Table Motor Control (model option)
5	RY05	Fan Relay	Fan Motor Control
6	RY06	Conv. Motor Relay	Conv. Motor Control
7	RY07	Grill Heater Relay	Grill Heater Control
8	RY08	Conv. Heater Relay	Conv. Heater Control
9	CN01	Power Connector	A Terminal for Connecting with Power supply
10	CN02	Relay Connector	A Terminal for Connecting with Relay Contact (Load Control)
11	CN03	Membrane switch Connector	A Terminal for Connecting with Membrane Switch
12	CN04	Gas Sensing Connector	A Terminal for Connecting with Gas Sensor
13	CN05	On board witing connector	This is for on board writing micom program

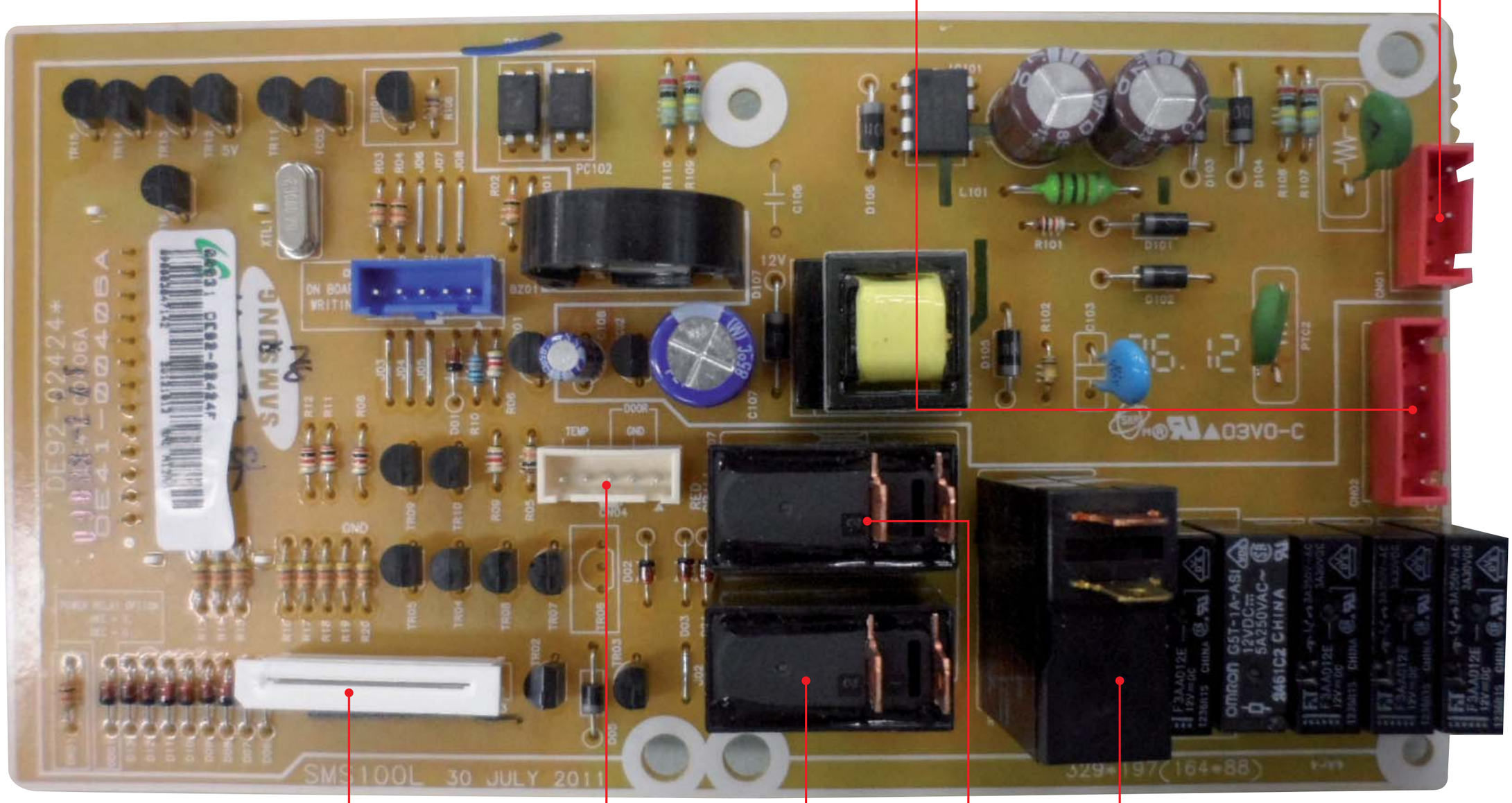
5. PCB Diagrams

5-1 PCB Diagrams

(This Document can not be used without Samsung's authorization)

► **CN02**
1) T/TABLE RELAY (MODEL OPTION)
2) NO PIN
3) MAIN RELAY (Connect Lamp, T/Table)
4) NO PIN
5) Fan Motor
6) NO PIN
7) CONV. MOTOR

► **CN01**
1) AC POWER LIVE (110-120VAC)
2) NO PIN
3) MONITOR S/W
4) NO PIN
5) INRUSH CIRCUIT



► **CN03**
1) KEY OUTPUT1
2) KEY OUTPUT2
3) KEY OUTPUT3
4) KEY OUTPUT4
5) KEY OUTPUT5
6) KEY OUTPUT6
7) KEY OUTPUT7
8) KEY OUTPUT8
ENCODER COMMON
(ENCODER S/W MODEL)
9) KEY INPUT1
10) KEY INPUT2
11) KEY INPUT3
12) KEY INPUT4
13) KEY INPUT5
14) KEY INPUT6
15) KEY INPUT7
16) KEY INPUT8

► **CN04**
1) DOOR SWITCH .+12V
2) GND
3) DOOR SWITCH RY_12V
4) TEMP. SENSOR 1
5) TEMP. SENSOR 2. GND

► **RY07**
1) GRILL HEATER RELAY CONTACT1
2) GRILL HEATER RELAY CONTACT2

► **RY08**
1) CONV. HEATER RELAY CONTACT1
2) CONV. HEATER RELAY CONTACT2

► **RY03**
1) POWER RELAY CONTACT1
(HVT POWER1)
AC POWER NEUTAL
(110-120VAC))
2) POWER RELAY CONTACT2
(HVT POWER2)

6. Wiring Diagrams

6-1 Wiring Diagrams

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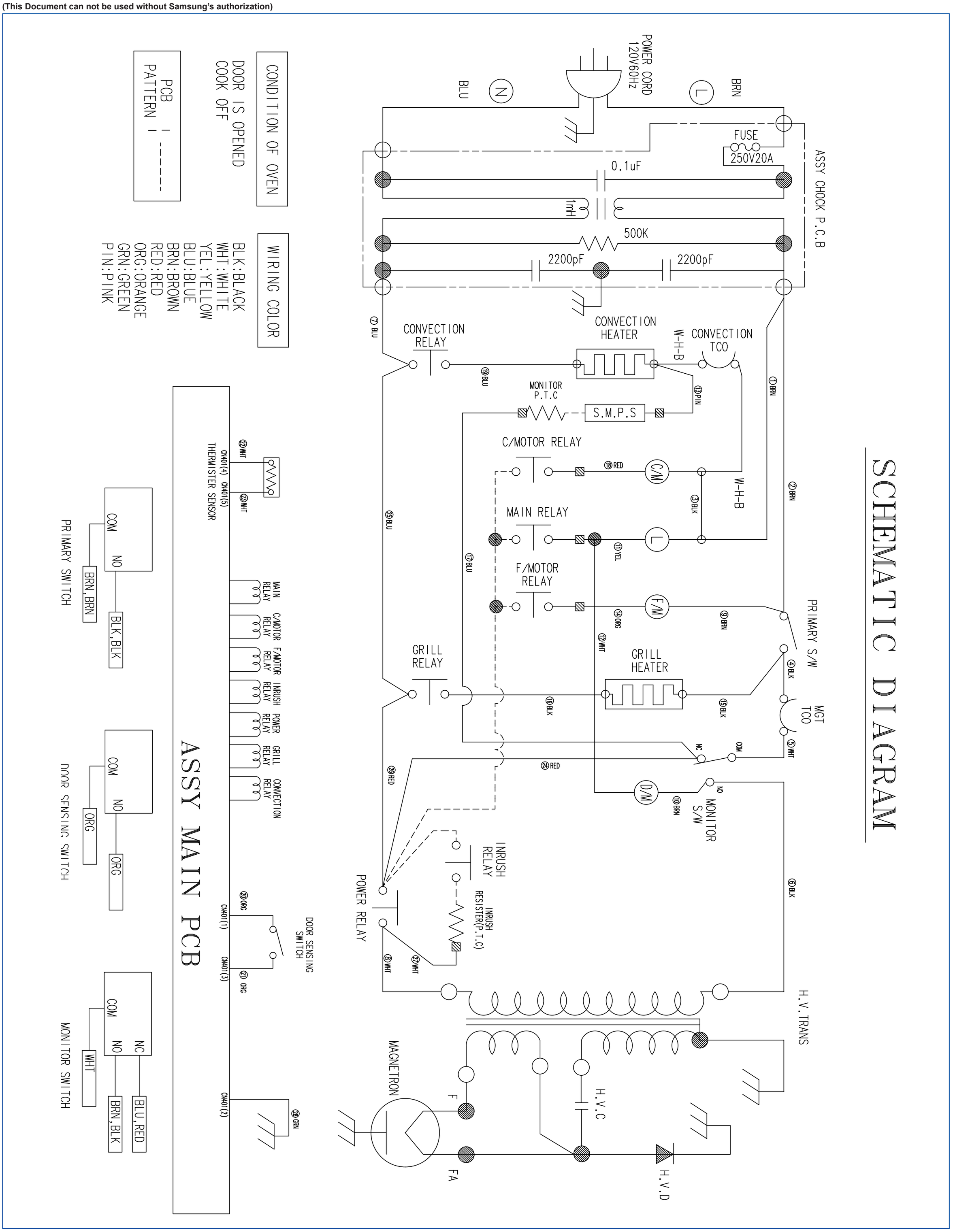

6-1 Wiring Diagrams

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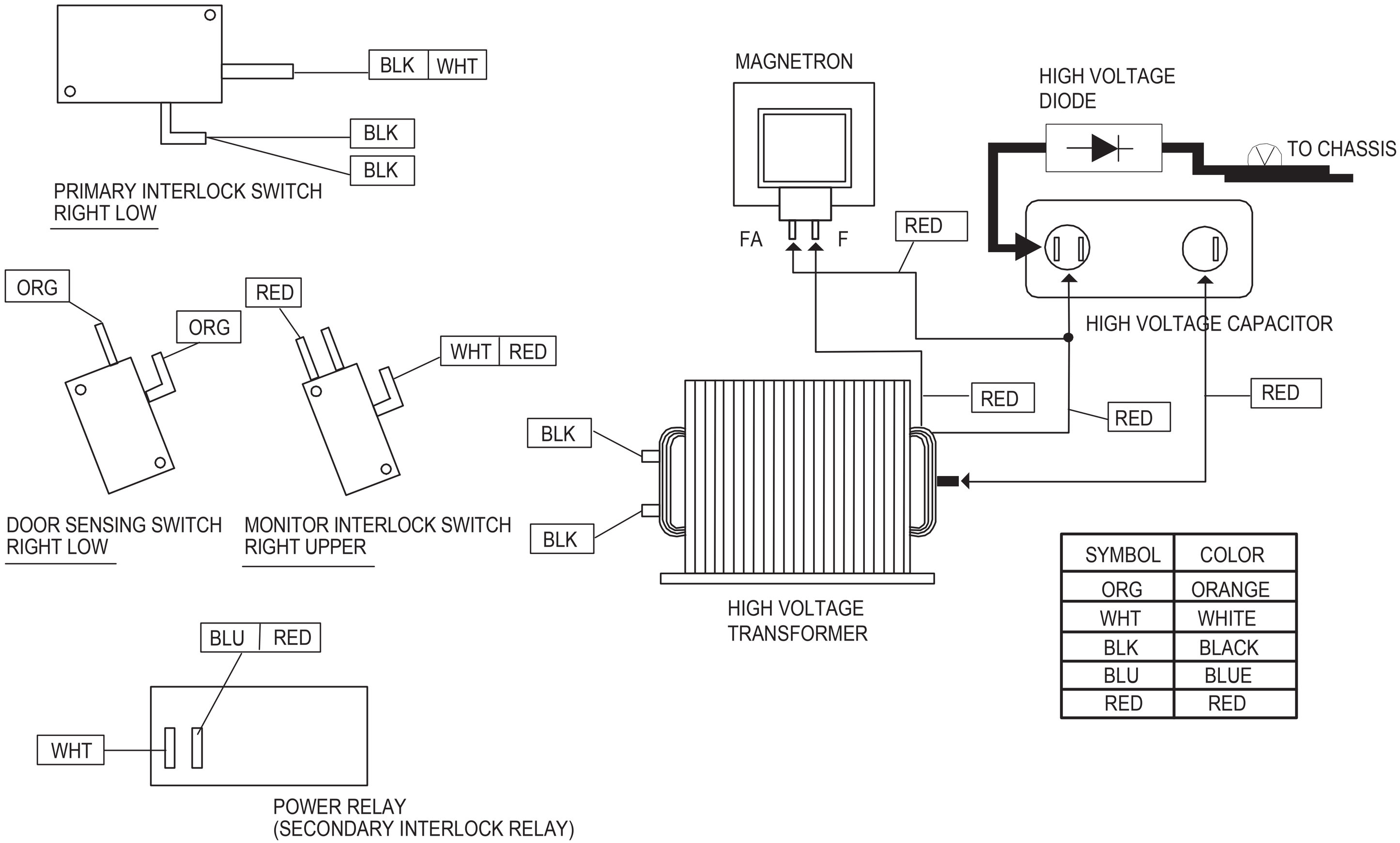

SYMBOL	COLOR
ORG	ORANGE
WHT	WHITE
BLK	BLACK
BLU	BLUE
RED	RED

SAMSUNG ELECTRONICS

GSPN (GLOBAL SERVICE PARTNER NETWORK)

Area	Web Site
Europe, CIS, Mideast & Africa	gspn1.samsungcsportal.com
Asia	gspn2.samsungcsportal.com
North & Latin America	gspn3.samsungcsportal.com
China	china.samsungportal.com