



Internal Use Only

Website: <http://biz.lgservice.com>

LIGHT OVEN “SolarDOM” SERVICE MANUAL

MODEL: MP-3297IXC

CAUTION

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

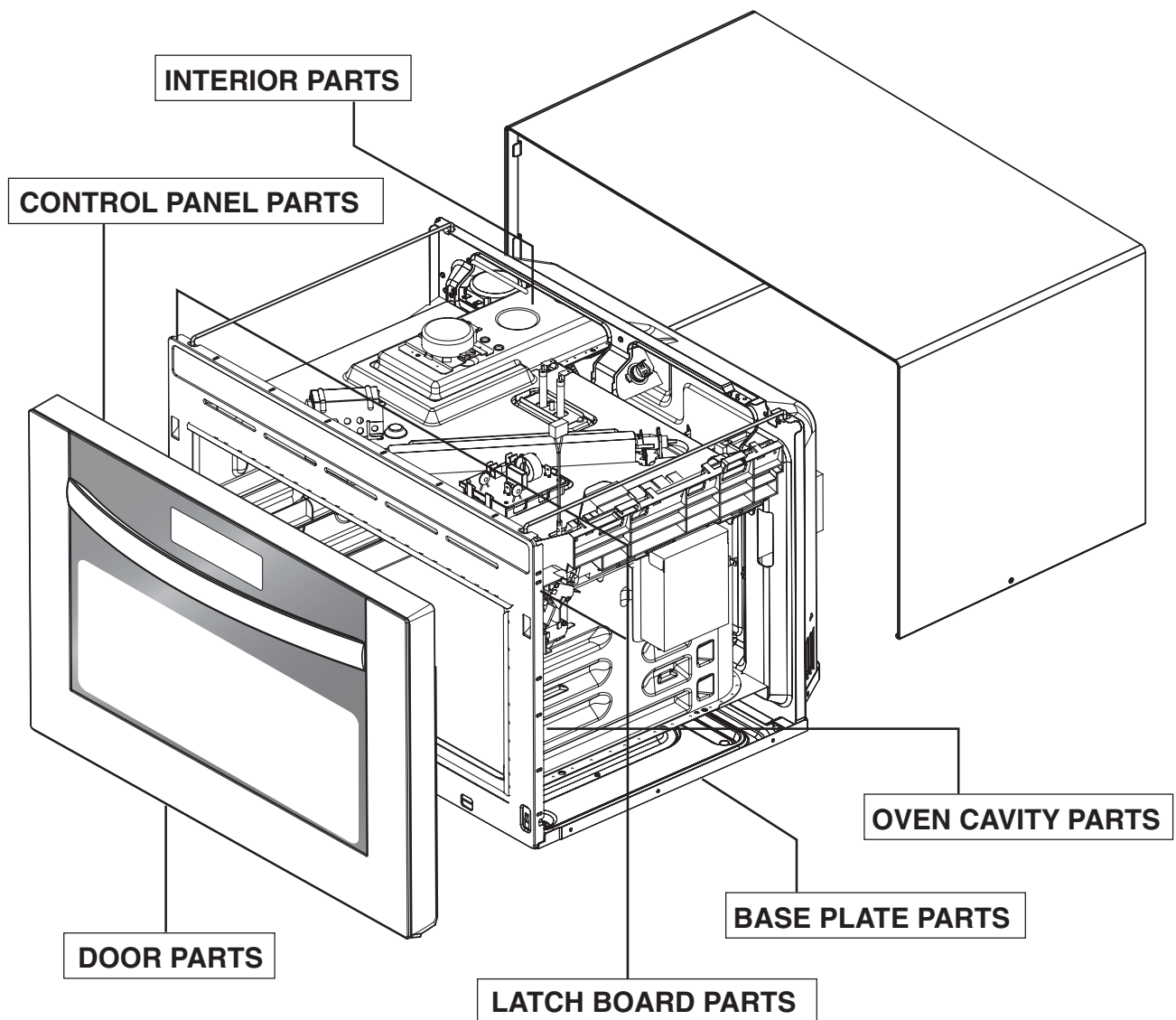
P/NO : MFL34215507

Juary, 2007
Printed in Korea

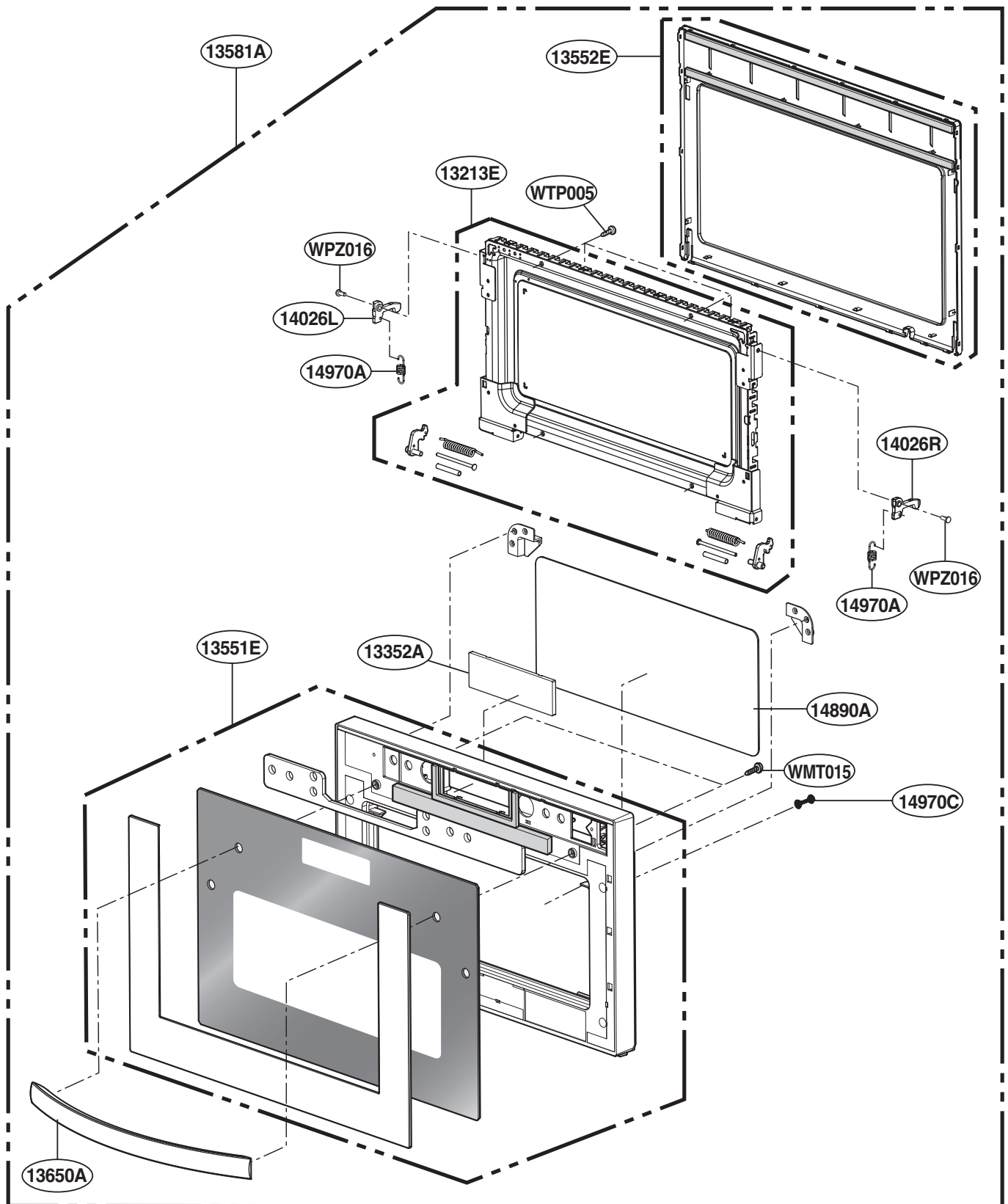
EXPLODED VIEW

INTRODUCTION

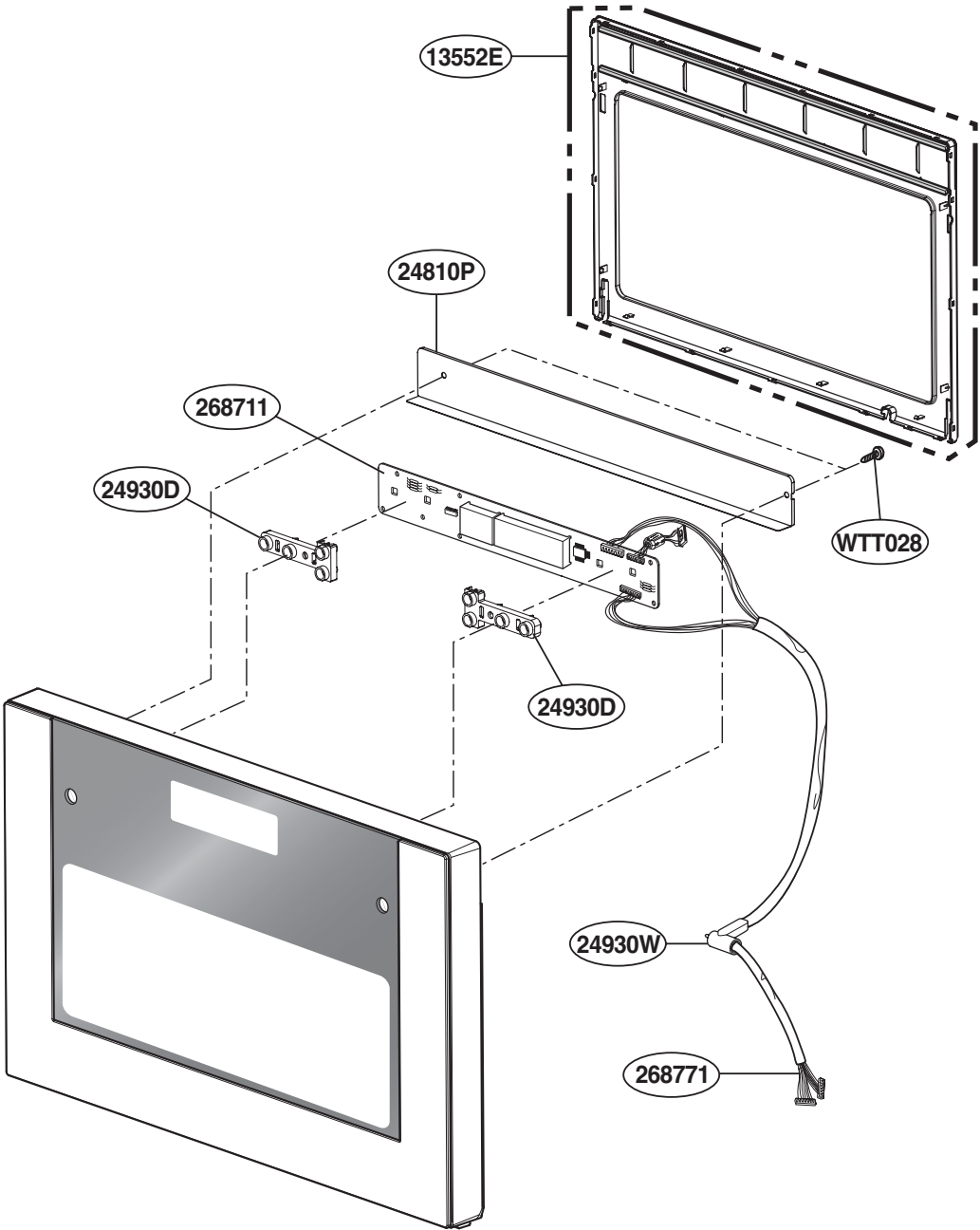
MODEL: MP-3297IXC



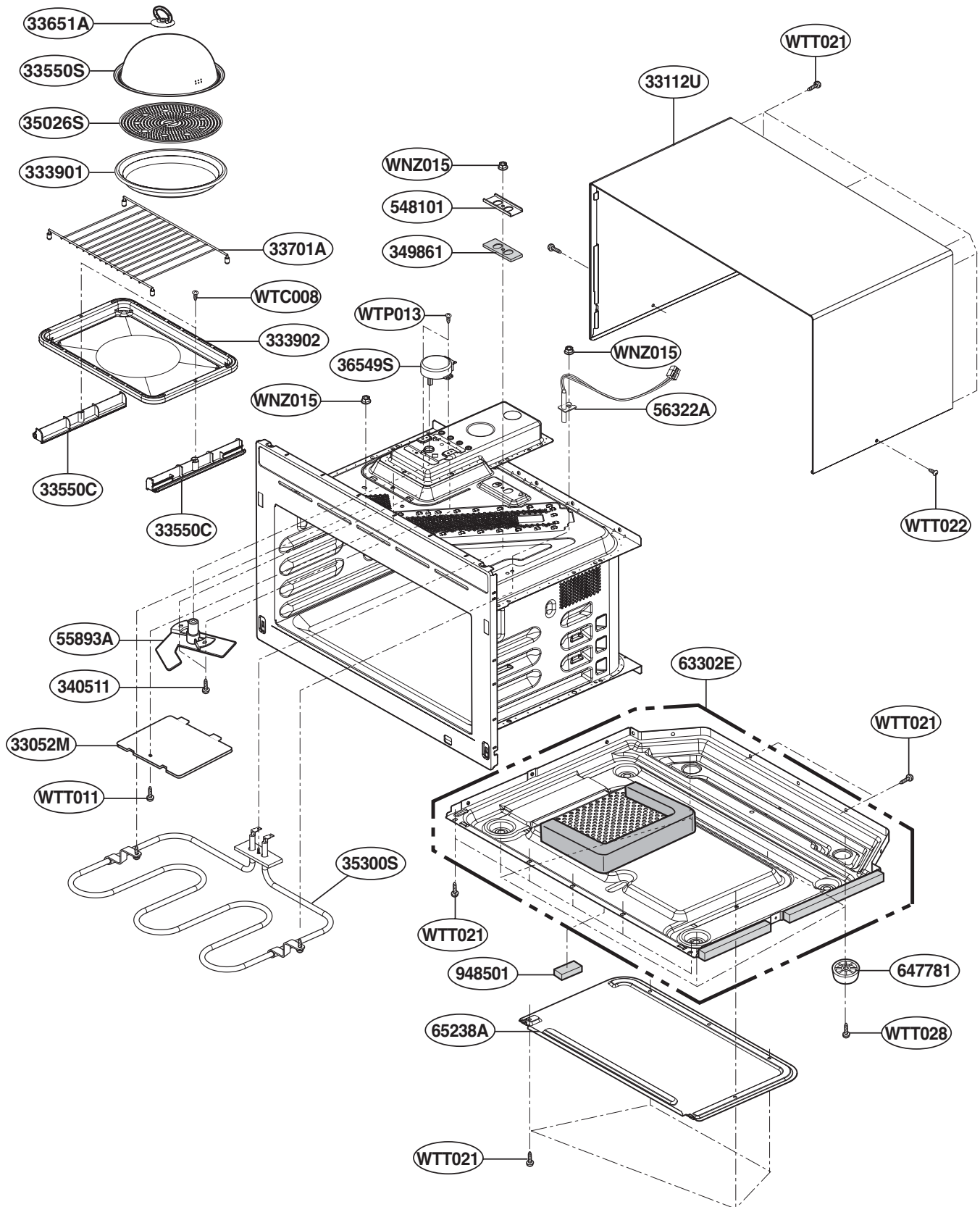
DOOR PARTS



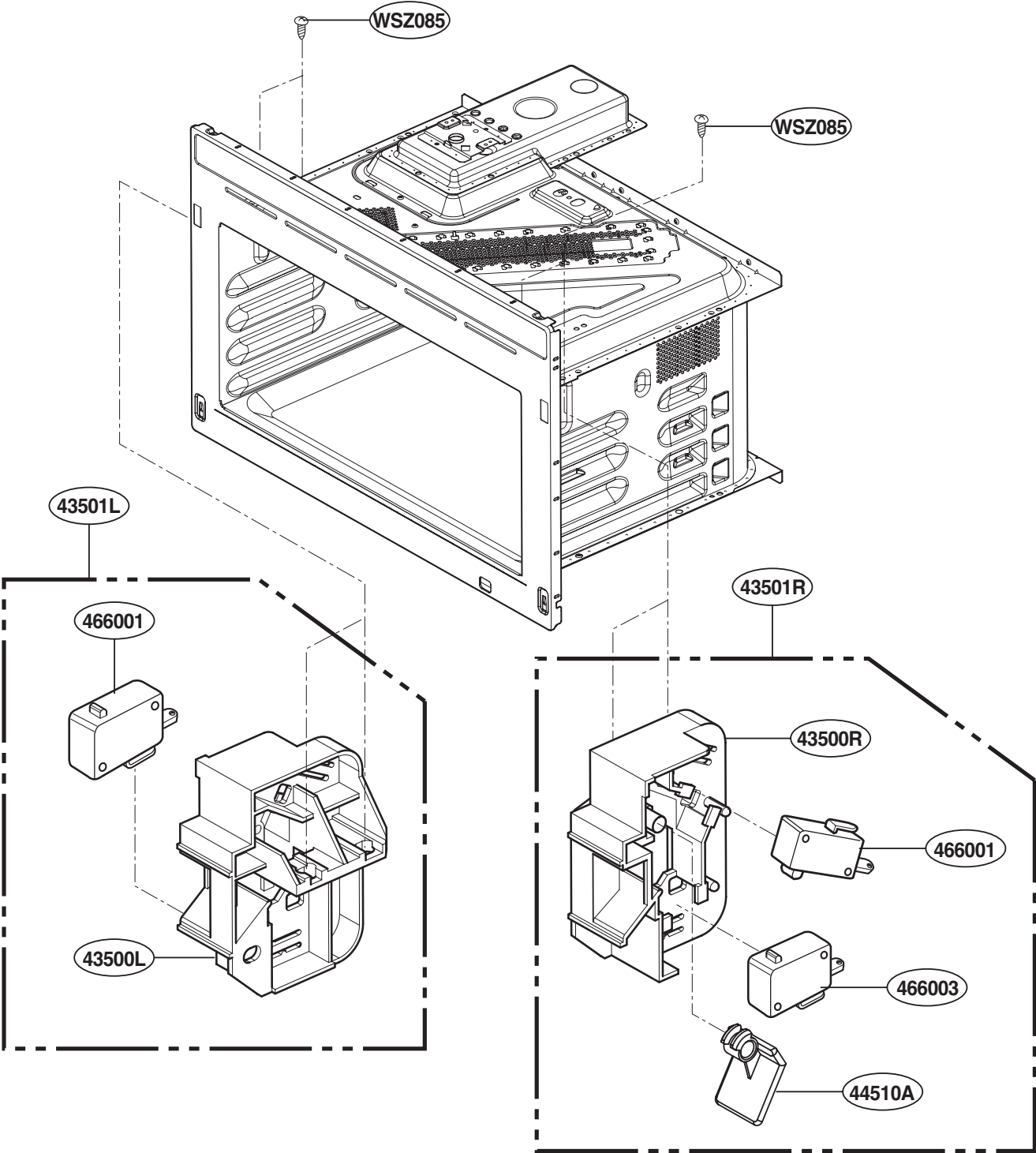
CONTROL PANEL PARTS



OVEN CAVITY PARTS



LATCH BOARD PARTS



Non	Part No	Description	Specification	Loc No
1	0CZZW1H003	Capacitor,High Voltage	0.91UF 3% 2100V H7	50CZZH
2	0CZZW1H004	Capacitor,High Voltage	CH85210912100VAC0	50CZZH
3	0CZZW1H004	Capacitor,High Voltage	0.91UF 3% 2100V H7	50CZZH
4	1MTC050261	Screw,Machine	TH + 5MM 10MM MS	WMT015
5	1NHA040003	HEXAGONE	1NHA0400032 HEX 4	WNH003
6	1PZZW1A002	PIN,DRAWING	PARALLEL 5MM 14.8M	WPZ016
7	1SBF0402418	VIS	1SBF0402418 BH + S	WSZ002
8	1SBF0402418	VIS	1SBF0402418 BH + S	WSZ002
9	1SBF0402418	VIS	1SBF0402418 BH + S	WSZ002
10	1TPL0302018			WTP002
11	1TPL0302018			WTP002
12	1TPL0302618			WTP005
13	1TPL0303118			WTP007
14	1TPL0402418	VIS	PH + 2 4MM 8MM MS	WTP013
15	1TPL0402418	VIS	PH + 2 4MM 8MM MS	WTP013
16	1TTG040263	VIS	53405011 TH + 1 4M	WTT011
17	1TTL0402418	VIS	1TTL0402418 TH + 2	WTT021
18	1TTL0402418	VIS	1TTL0402418 TH + 2	WTT021
19	1TTL0402418	VIS	1TTL0402418 TH + 2	WTT021
20	1TTL0402418	VIS	1TTL0402418 TH + 2	WTT021
21	1TTL0402418	VIS	1TTL0402418 TH + 2	WTT021
22	1TTL0402418	VIS	1TTL0402418 TH + 2	WTT021
23	1TTL0402422	VIS	1TTL0402422 TH + 2	WTT022
24	1TTL0402422	VIS	1TTL0402422 TH + 2	WTT022
25	1TTL0402818	VIS	TH + 2 4MM 12MM M	WTT028
26	1TTL0402818	VIS	TH + 2 4MM 12MM M	WTT028
27	1TTL0402818	VIS	TH + 2 4MM 12MM M	WTT028
28	1TTL0402818	VIS	TH + 2 4MM 12MM M	WTT028
29	1TTL0402818	VIS	TH + 2 4MM 12MM M	WTT028
30	1TTL0402818	VIS	TH + 2 4MM 12MM M	WTT028
31	3390W1A040	Tray,Resin	PRESS TEFLON PTFE	333901
32	3501W1A028	Holder Assembly,Locker	LGECW MP9297MLC	43501R
33	3501W1A029	Holder Assembly,Locker	LGECW MP9297MLC	43501L
34	3550W1A130	COVER,LAMP	SGCC NATURAL MP-1	53550L
35	3550W1A293	COVER,STEAM	STS 304-2B NATURAL	33550S
36	3651W1A020	HANDLE ASSEMBLY	STAINLESS COATING	33651A
37	383EW1A055	Parts Assembly	DOOR FRAME MP-92	13213E
38	3B70856K	FUSIBLE SECTEUR	65TL-100-H CERAMIC	50FZZA
39	3B72244C			948501
40	3B72561A	HELICE	PRESS AL 0.6 DIA125	55900C
41	3B73361E	COMMUTATEUR	3B73361E 1C1P 125/	466003
42	3B73361E	COMMUTATEUR	3B73361E 1C1P 125/	466003
43	3B73362F	COMMUTATEUR	3B73362F 1C1P 125/	466001
44	3B73362F	COMMUTATEUR	3B73362F 1C1P 125/	466001
45	3B74133N	FUSE,DRAWING	65TS-100-H CERAMIC	50FZZA
46	4000W4A001	Screw,Customized	4000W4A001E TH +	WSZ232
47	4026W1A032	LATCH	SPHC SILVER - 1 PCS	14026L
48	4026W1A033	LATCH	SPHC SILVER - 1 PCS	14026R
49	4051W1A001	Connector Assembly	MP-906ML WHITE W	340511
50	4510W1A006A			44510A
51	4810W1A372	BRACKET,HEATER	T0.5 SECC-P MP-948	34810H
52	4810W3C005	Bracket,Capacitor	PRESS SECC 0.6 T0.6	54810C
53	4890W3A008	Window,Glass	CUTTING GLASS W4	14890A
54	4890W3A010	GLASS	DONGSIN TEUGSUYU	34890C
55	4970W1A003	SPRING	EXTENSION HSW3 D	14970A

56	4B70188C			WSZ085
57	4B70770A			647781
58	4B71028B	ECROU	4B71028B HEX 4MM	WNZ015
59	4B72510F	SUPPORT	EXTRUSION PVC MB-	34930W
60	5026W1A075	SHELF	COMPLEX CIRC. NOT	35026S
61	5300W1H003	HEATER,HALOGEN	230V 50/60HZ 450W	35300H
62	6021W3B001	CABLE ASSEMBLY	HVR-1X-02 12505HP	56851D
63	6021W3B001	CABLE ASSEMBLY	H.V.DIODE HVR-1X-0	56851D
64	6201W2A021	PLATINE FILTRE SECTEUR	NFO-31MH 0.6mH 25	56201A
65	6201W2A021	PLATINE FILTRE SECTEUR	6201W2A021D 0.6mH	56201A
66	6322W2A001	THERMISTOR,NTC	MMT-0.1CD 95OHM 1	56322A
67	6324W1A001	Magnetron	2M246-21GT 1.1KW 2	56324A
68	6411W2C002	Power Cord Assembly	DTII-2P-05/H05VV-F	56411A
69	6549W1S002	Motor, AC Synchronous	6549W1S002L 220/24	36549S
70	6549W1S011	moteur de plateau M,O,	SSM-16HR 220/240V	56549B
71	6600W1K001D			466001
72	6600W1K001D			466001
73	6877W1A619	Harness,Single	6877W1A619G 35023	268771
74	6901W1A001	Fuse Assembly	:LG PART NUMBER 0	56901A
75	6912W3B002	LAMPE 240V 25WATT	6912W3B002D 25W 2	56912B
76	6912W3B002	LAMPE	24025W-25 25W 240	56912B
77	6930W1A003	THERMOSTAT	6930W1A003G 160C	56930V
78	6930W1A003	THERMOSTAT	6930W1A003K 145C	56930M
79	ADC3024460	Door Assembly	SILVER LGEFS MP929	13581A
80	ADP3023780	Fan Assembly	STIRRER 220-240V/5	55893A
81	AGM3386060	Parts Assembly	DOOR SEALING+CON	13551E
82	AGM3425460	Parts Assembly	CHOKE COVER MP92	13552E
83	AGM3425480	Parts Assembly	AIR DUCT ASSEMBLY	55262E
84	AGM3425540	Parts Assembly	HVT+RUBBER MP929	56170E
85	AGM3425560	Parts Assembly	VENT MOUNT+CUSH	34810E
86	AGM3425590	Parts Assembly	BASE PLATE+CUSHIO	63302E
87	AGM3425600	Parts Assembly	INSULATOR UPPER+	55013E
88	AGM3688280	Parts Assembly	PCB Assembly,Main+	26871E
89	AHT3019140	Shelf Assembly	NEW BEETLE SHELF	33701A
90	EAD3496000	Harness,Single	..LG PART NUMBER Y	568771
91	EAU3552500	Motor, AC Circulation	EAU35525003 230V 4	36549V
92	EAU3564670	Motor, AC Circulation	EAU35646702 230V 3	36549C
93	EBR3590260	PCB Assembly,Power	New Beetle Power PC	568711
94	FAB3010310	Screw,Tapping	1TCL0402816 FH + 2	WTC008
95	MAX3988450	Book,Cook	PRINTING B5 MP 929	MAX171
96	MAY4047340	Box	BOX DW2 607 425 56	MAY000
97	MAZ3033970	Bracket,Control Panel	PRESS SECC T0.5 TO	24810P
98	MAZ3243340	Bracket,Heater	PRESS STS 304 T0.6	55810H
99	MAZ3439020	Bracket,Damper	PRESS SGCC T 1.0 T	54810U
100	MAZ3575670	Bracket	PRESS SGCC 0.6T TO	548101
101	MBN3033370	Case,Flat	PRESS SECC T0.6 PC	33112U
102	MBR3032560	Chamber	PRESS ALSTAR T0.5	535041
103	MBR3032570	Chamber	PRESS SECC T0.6 MP	535042
104	MCK3032550	Cover,Insulator	CUTTING MICA MICA	33052M
105	MCK3045660	Cover,Tray	MOLD PPS MP-906ML	33550C
106	MCK3059120	Cover,Rear	PRESS SECE-AF t0.6	33808A
107	MDS3250050	Gasket	MOLD BSS Base Asse	349861
108	MEA3032750	Guide,Air	PRESS SECC T0.5 1.0	550123
109	MEA3033880	Guide,Air	PRESS SECC T0.5 1.0	35012A
110	MEA3243300	Guide,Air	PRESS SECC T0.5 1.1	65238A
111	MEA3249810	Guide,Air	PRESS SECC 0.5T 1.1	55238A

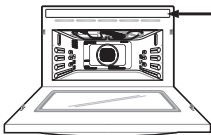
112	MEB3033980	Handle,Door	EXTRUSION AL ALUM	13650A
113	MEE3133650	Heater,Sheath	COMPLEX 230V 50HZ	35300S
114	MEE3133660	Heater,Sheath	COMPLEX 230V 50HZ	55300S
115	MEG3059170	Holder,Display	MOLD PP MP-906ML	24930D
116	MEG3228000	Holder,Wire	MOLD PC MP-906ML	24930W
117	MEG3966570	Holder,Locker	MOLD PBT PBT PULL	43500R
118	MEG3966580	Holder,Locker	MOLD PBT PBT PULL	43500L
119	MEV3032600	Insulator	PRESS SECD T0.8 SE	35012B
120	MEV3032700	Insulator	CUTTING GLASS FIB	550121
121	MFL3421370	Manual,Owners	PRINTING MP9297MI	MFL552
122	MFL3421550	Manual,Service	PRINTING MC9291MI	*02
123	MGJ3863930	Plate,Bridge	CUTTING MSWR MSV	53300B
124	MGW3032780	Reflector	PRESS STS 430-4 T0	33034A
125	MHY3251650	Spring,Coil	EXTRUSION STS 304	14970C
126	MJH3032740	Supporter,PCB	MOLD PP MP-906ML	54980P
127	MJH3122410	Supporter	MOLD PP MP-906ML	54980A
128	MJS3033570	Tray,Metal	PRESS SPE T0.6 REC	333902
129	MKC3438770	Window,Screen	MOLD ABS ABS T2.0	13352A

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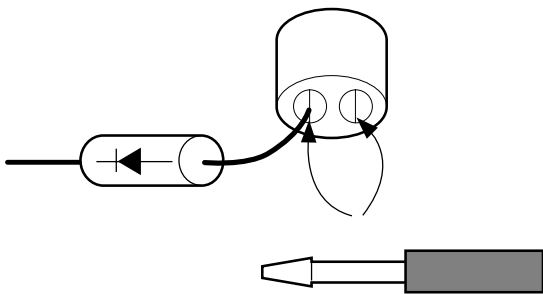
SPECIFICATIONS

ITEM	DESCRIPTION
MODEL	MP-3297IXC
Power Requirement	230 Volts AC 50 Hz Single phase, 3 wire grounded max. 2700W Microwave 1300W Grill 1900W Combination max. 2200W Convection 2200W
Power Output	700 Watts full microwave power (IEC60705)
Microwave Frequency	2450 MHz
Magnetron	2M246
Timer	0 ~ 90 min.
Outside Dimensions	527 (W) x 366 (H) x 472 (D) mm
Cavity Dimensions	440 (W) x 235 (H) x 310 (D) mm
Net Weight	23 kg
Shipping weight	28 kg
Control Complement	1. Microwave Power level: max. (700W), 450W, 300W, 180W, 90W 2. GRILL Upper Sheath Heater(1350W) + Upper Halogen Heater(450W) 3. Convection: 40°C, 100~230°C Back Sheath Heater(750W) + Upper Sheath Heater(1350W) 4. Grill Combi: Grill + MW(90W, 180W, 300W, 450W) 5. Convection Combi: Upper Sheath Heater(1350W) + Upper Halogen Heater(450W) 6. Convection Combi: Convection + MW(90W, 180W, 300W, 450W) 7. Auto Cook <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> SC 1 : Frozen Pizza SC 4 : Chicken Pieces SC 7 : Roast Beef SC 10 : Fresh Vegetables SC 2 : French Fries SC 5 : Beef Steaks SC 8 : Jacket Potatoes SC 11 : Frozen Vegetables SC 3 : Whole Chicken SC 6 : Roast Pork SC 9 : Frozen Dinners SC 12 : Rice / Pasta </div> 8. Steam Cook <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> St 1 : Crustacea St 4 : Frozen Carrot St 7 : Spinach St 10 : Apple St 2 : Shellfish St 5 : Broccoli St 8 : Cauliflower St 11 : Chicken Breasts St 3 : Fish Fillet St 6 : Frozen Green Beans St 9 : Potato St 12 : Sausage </div>
Rating Label Location	 Rating Label
Accessories	Owner's manual & Cook book Metal tray, Rack, Steamer
This oven is designed for household use only. It is not recommended for commercial purposes.	

CAUTIONS

Unlike other appliances, the microwave oven is high-voltage and high-current equipment. Though it is free from danger in ordinary use, extreme care should be taken during repair.

- DO NOT operate on a 2-wire extension cord during repair and use.
- NEVER TOUCH any oven components or wiring during operation.
- BEFORE TOUCHING any parts of the oven, always remove the power plug from the outlet.
- For about 30 seconds after the oven stops, an electric charge remains in the high voltage capacitor. When replacing or checking, you must discharge the high voltage capacitor by shorting across the two terminals with an insulated screwdriver.

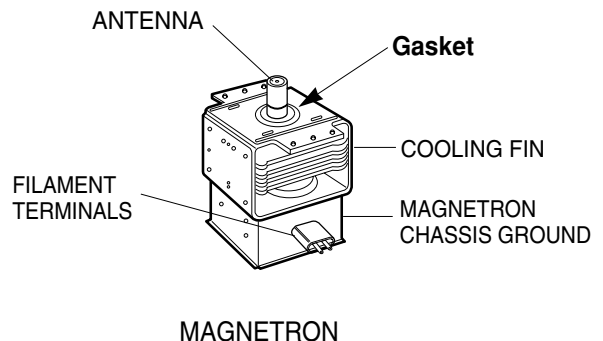


- Remove your watches whenever working close to or replacing the Magnetron.
- NEVER operate the oven with no load.
- NEVER injure the door seal and front plate of the oven cavity.
- NEVER put iron tools on the magnetron.
- NEVER put anything into the latch hole and the interlock switches area.

MICROWAVE RADIATION

Personnel should not be exposed to the microwave energy which may radiate from the magnetron or other microwave generating device if it is improperly used or connection. All input and output microwave connections, waveguide, flange and gasket must be secure never operate the device without a microwave energy absorbing load attached. Never look into an open waveguide or antenna while the device is energized.

- Proper operation of the microwave oven requires that the magnetron be assembled to the waveguide and cavity. Never operate the magnetron unless it is properly installed.
- **Be sure that the magnetron gasket is properly installed around the dome of the tube whenever installing the magnetron.**



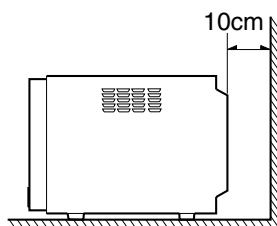
THE OVEN IS TO BE SERVICED ONLY BY PROPERLY QUALIFIED SERVICE PERSONNEL.

INSTALLATIONS

BEFORE YOU BEGIN, READ THE FOLLOWING INSTRUCTIONS COMPLETELY AND CAREFULLY.

INSTALLING

1. Empty the oven and clean inside it with a soft, damp cloth. Check for damage such as misaligned door, damage around the door or dents inside the cavity or on the exterior.
2. Put the oven on a counter, table, or shelf that is strong enough to hold the oven and the food and utensils you put in it. (Use care when handling.)
3. Do not block the vent and the air intake openings. Blocking vent or air intake openings can cause damage to the oven and poor cooking results. Make sure that the microwave oven legs are in place to ensure proper air flow.
4. The oven should not be installed in any area where heat and steam are generated, because they may damage the electronic or mechanical parts of the unit.
Do not install the oven next to a conventional surface unit or above a conventional wall oven.
5. Use the oven in an ambient temperature less than 104°F(40°C).
6. Place the oven on a sturdy and flat surface at least 10 cm(4 inches) from the wall.
7. Place the oven as far away as possible from TV, RADIO, COMPUTER, etc., to prevent interference.
8. Do not touch the front glass during or after cooking of the Grill and convection and Combination mode. This glass is very hot during heater operating.
9. Do not operate the oven at microwave and combination mode with Grill rack placed in the cavity when the oven is empty.



EARTHING INSTRUCTIONS

This oven is designed to be used in a fully earthed condition.

It is imperative, therefore, to make sure it is properly earthed before servicing

WARNING- THIS APPLIANCE MUST BE EARTHED

IMPORTANT

The wires in this mains lead are colored in accordance with the following code:

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colors of the wires in the mains lead of this appliance may not correspond with the colored markings identifying the terminals in your plug, proceed as follows.

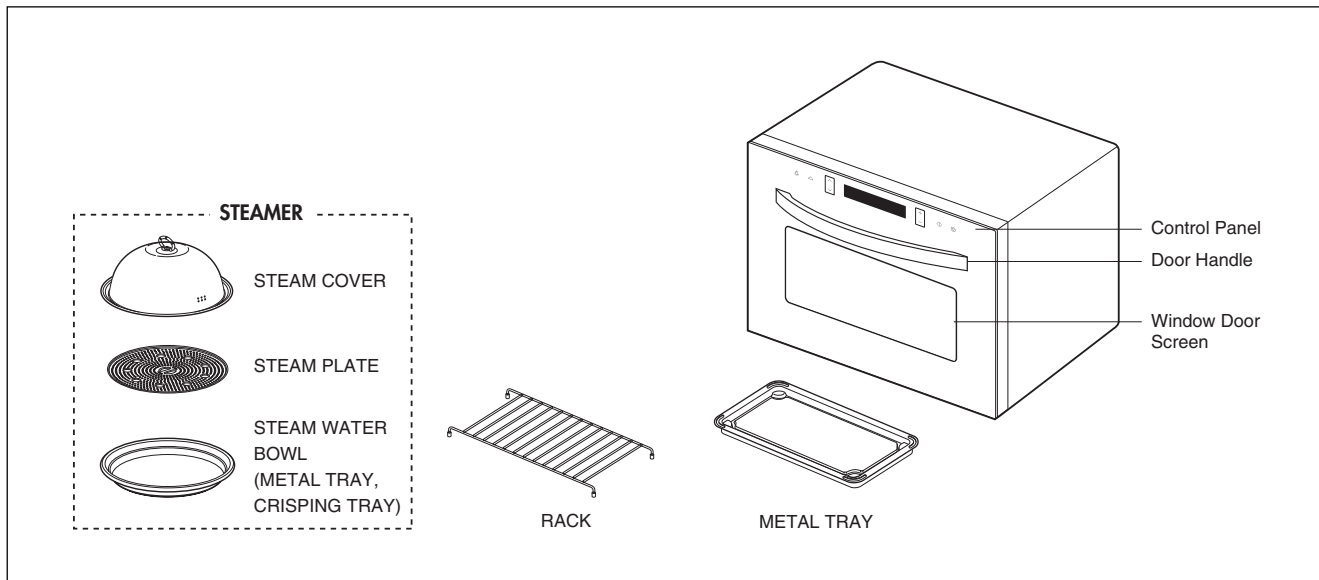
The wire which is colored **green-and-yellow** must be connected to the terminal in the plug which is marked with the letter **E** or by the **earth symbol** (\perp) or colored **green** or **green-and-yellow**.

The wire which is colored **blue** must be connected to the terminal in the plug which is marked with the letter **N** or colored **black**.

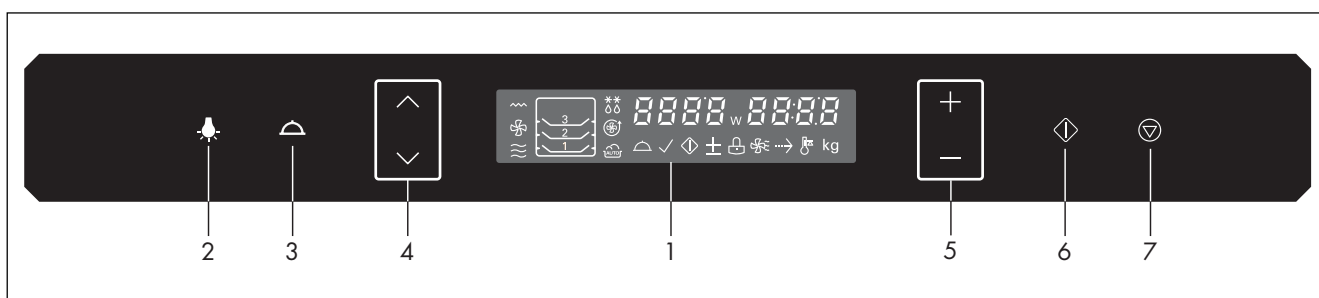
The wire which is colored **brown** must be connected to the terminal in the plug which is marked with the letter **L** or colored **red**.

OPERATING INSTRUCTIONS

FEATURES



CONTROL PANEL



1. Display Window: You can show time of day, cooking time, power level and cooking categories.

2. Clock/Lamp:

- Clock: You can set the time of day.
- Lamp: You can see the foods while cooking by pressing this button.

3. Steam chef: Steam chef allows you to cook your favorite food by selecting the steam chef categories.

4. Function Select: You can select cooking categories.

5. Control:

- You can set cooking times, temperature, weight and cooking categories.
- While cooking with auto and manual function, you can lengthen or shorten the cooking time at any point by pressing the button (except defrost mode).

6. Enter/Start/Quick Start:

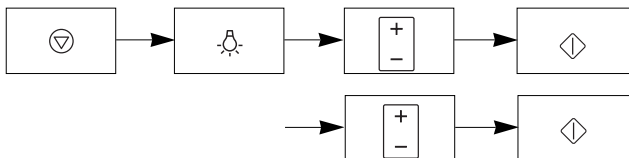
- In order to start cooking which is selected, press button one time.
- The quick start feature allows you to set 30 seconds intervals of HIGH power cooking with a touch of the quick start button.

7. Stop/Clear: You can stop over and clear all entries except time of day.

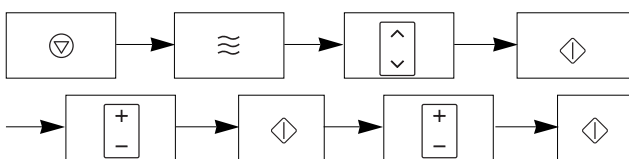
OPERATING SEQUENCE

The following is a description of component functions during oven operation.

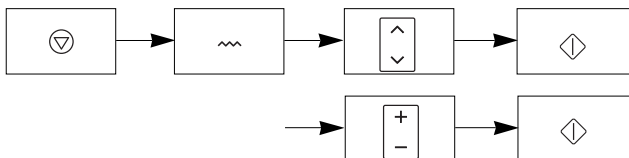
1. SETTING THE CLOCK



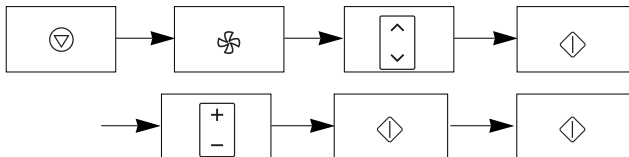
2. MICROWAVE COOKING



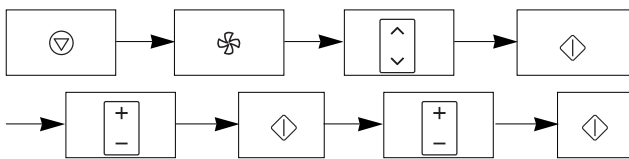
3. GRILL COOKING



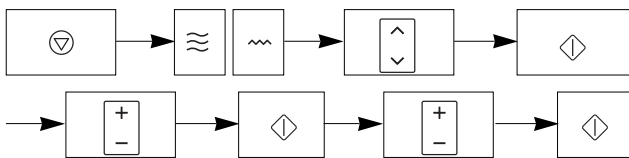
4. CONVECTION PREHEAT



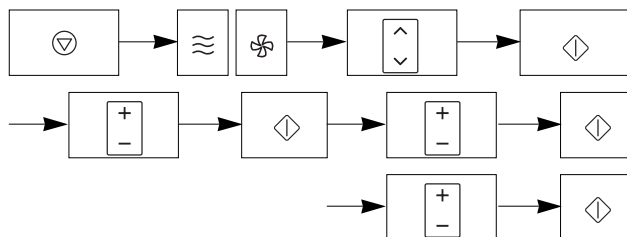
5. CONVECTION COOKING



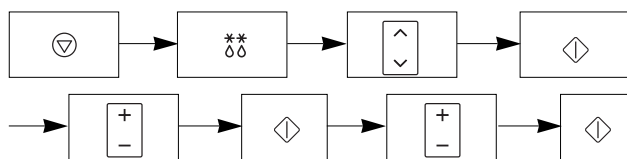
6. GRILL COMBI COOKING



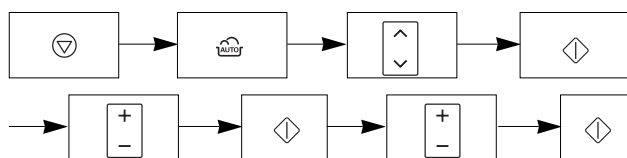
8. CONVECTION COMBI COOKING



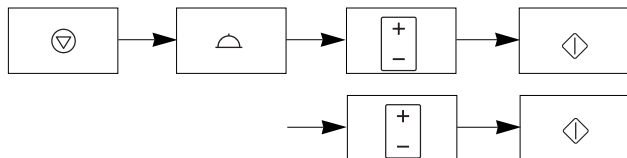
7. DEFROST



8. AUTO COOK



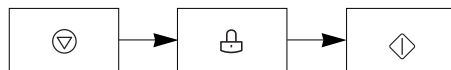
9. STEAM COOK



10. CHILD LOCK

This oven has a CHILD LOCK feature.

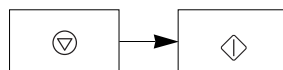
To Set CHILD LOCK



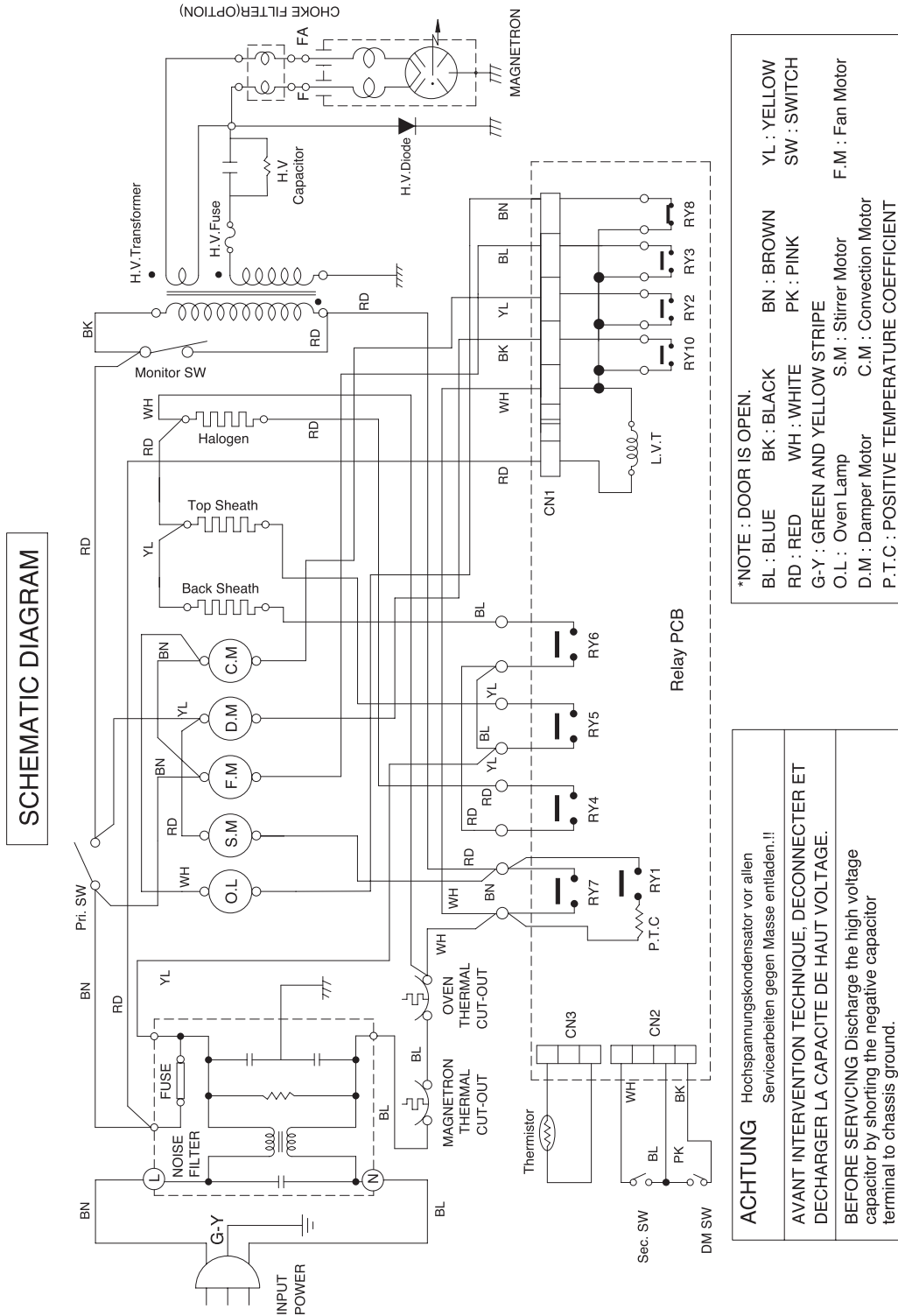
To Cancel CHILD LOCK



11. QUICK START



SCHEMATIC DIAGRAM



CIRCUIT DESCRIPTION

GENERAL DETAILS

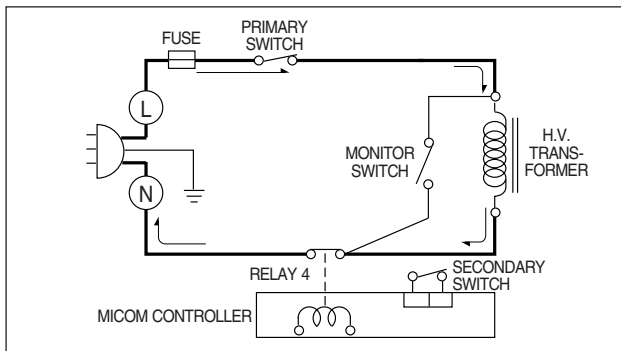
- The low voltage transformer supplies the necessary voltage to the micom controller when power cord is plugged in.
- When the door is closed, the primary switch is ON, the secondary switch is ON, and the monitor switch opens (contact COM and NO).

WHEN SELECTING COOKING POWER LEVEL AND TIME

- The micom controller memorizes the function you set.
- The time you set appears in the display window.
- Each indicator light turns on to indicate that the stage has been set.

WHEN TOUCHING THE START BUTTON

- The coil of the relay is energized by the micom controller.
- Power input is supplied to the high voltage transformer through the fuse to the primary switch and relay 4.
- Turntable rotates.



- The fan motor rotates and cools the magnetron by blowing the air (coming from the intake on the back cover).
- The air is also directed into the oven to exhaust the vapor in the oven through the upper plate.
- Cooking time starts counting down.
- 3.3 volts AC is generated from the filament winding of the high voltage transformer. This 3.3 volts is applied to the magnetron to heat the magnetron filament through two noise-preventing choke coils.
- A high voltage of approximately 2100 volts AC is generated in the secondary of the high voltage transformer which is increased by the action of the high voltage diode and charging of the high voltage capacitor.
- The negative 4000 Volts DC is applied to the filament of the magnetron.

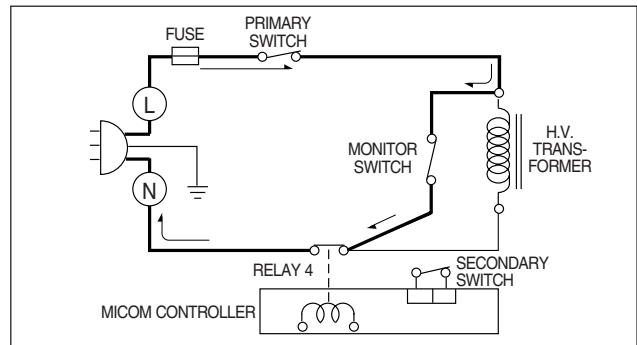
WHEN THE OVEN IS SET AT ANY LEVEL EXCEPT MAXIMUM.

- The micom controller controls the ON-OFF time of relay 4 by the applied signal to vary the average output

- power of oven as POWER LEVEL. (refer to page 1-1)
- One complete cycle of relay 4 is 32 seconds.

WHEN THE DOOR IS OPENED DURING COOKING

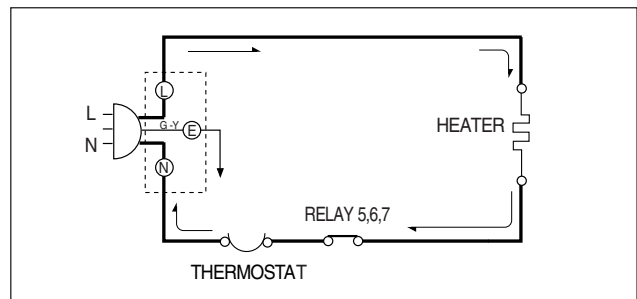
- Both the primary switch and relay 4 are cut off primary winding voltage of the high voltage transformer.
- ON-OFF of relay 4 is coupled electrically with opening and closing of the secondary switch.
- When the door is opened, the secondary switch is opened and when the door is closed, the secondary switch is closed.
- The cooking time stops counting down.
- Relay stops functioning.
- As the door is opened, if the contact of primary switch and relay 4 and/or secondary switch fails to open, the fuse opens due to the large current surge caused by the monitor switch activation, which in turn stops



magnetron oscillation.

WHEN TOUCHING THE START BUTTON WITH THE HEATER COOKING FUNCTION SELECTED

- The contacts of the primary switch and the secondary switch close the circuit.
- A.C. voltage is applied to the heater through thermostat as shown by the solid line.



- Turntable rotates.
- The fan motor rotates.
- The air is also directed into the oven to exhaust the vapor in the oven through the base plate and back plate.

SERVICE INFORMATION

TOOLS AND MEASURING INSTRUMENTS

NECESSARY TOOLS

Tools normally used for TV servicing are sufficient.
Standard tools are listed below.

- Diagonal pliers
- Long nose pliers
- Phillips screwdriver
- Flat blade screwdriver
- Wrench (size 5mm)
- Nutdriver (size 5mm)
- Adjustable wrench
- Soldering iron
- Solder
- Vinyl insulation tape
- Polishing cloth

NECESSARY MEASURING INSTRUMENTS

- TESTER(VOLTS-DC, AC., Ohmmeter)
- Microwave survey meter
 - Holaday HI-1500
 - HI-1501
 - Narda 8100
 - 8200
- Inch scale
- 600 cc non conductive material beaker (glass or plastic),
inside diameter: approx. 8.5 cm(3¹/₂ in.)
- Cylindrical and made of borosilicate glass vessel.
max. thickness: 3 mm
outside diameter: approx. 190mm
height: approx. 90mm
- Glass thermometer: 100°C or 212°F (1 deg scale)

MICROWAVE LEAKAGE TEST

CAUTIONS

- Be sure to check microwave leakage prior to servicing the oven if the oven is operative prior to servicing.
- The service personnel should inform the manufacture importer, or assembler of any certified oven unit found to have a microwave emission level in excess of 5 mW/cm² and should repair any unit found to have excessive emission levels at no cost to the owner and should ascertain the cause of the excessive leakage. The service personnel should instruct the owner not to use the unit until the oven has been brought into compliance.
- If the oven operates with the door open, the service personnel should:
 - Tell the user not to operate the oven.
 - Contact the manufacturer.
- The service personnel should check all surface and vent openings for microwave leakage.
- Check for microwave leakage after every servicing.
The power density of the microwave radiation leakage emitted by the oven should not exceed 4 mW/cm².
Always start measuring of an unknown field to assure safety for operating personnel from radiation leakage.

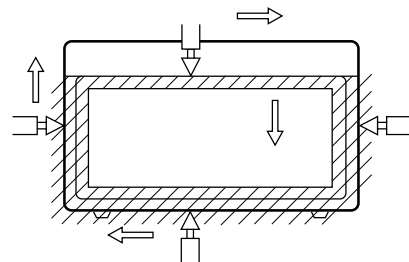
MEASURING MICROWAVE ENERGY LEAKAGE

- Pour 275±15cc of 20±5°C(68±9°F) water in a beaker which is graduated to 600 cc, and place the beaker on the center of the turntable.
- Set the energy leakage monitor to 2450 MHz and use it following the manufacturer's recommended test procedure to assure correct result.
- When measuring the leakage, always use the 2-inch (5cm) spacer supplied with the probe.
- Operate the oven at its maximum output.
- Measure the microwave radiation using and electromagnetic radiation monitor by holding the probe perpendicular to the surface being measured

Move probe along shaded area

////////////////////

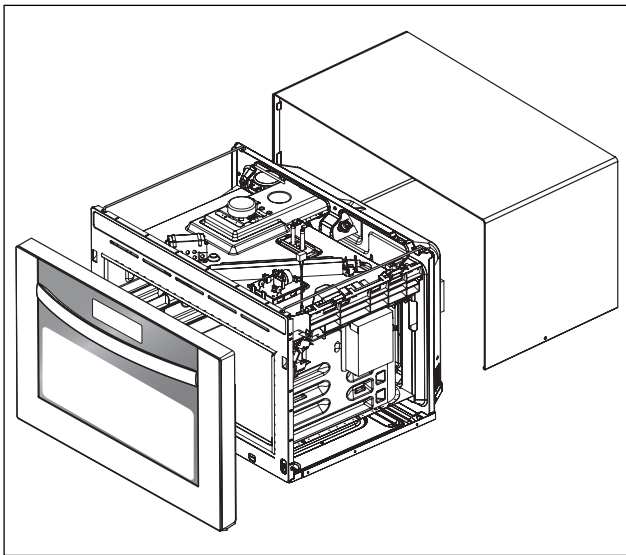
Probe scanning speed
Less than 2.5 cm/sec
(1in/sec)



MEASUREMENT WITH OUTER CASE REMOVED

- When you replace the magnetron, measure for microwave energy leakage before the outer case is installed and after all necessary components are replaced or adjusted.
Special care should be taken in measuring the following parts. (Circled area of below Fig.)
 - Around the magnetron
 - The waveguide

WARNING : AVOID CONTACTING ANY HIGH VOLTAGE PARTS



MEASUREMENT WITH A FULLY ASSEMBLED OVEN

- After all components, including the outer case, are fully assembled, measure for microwave energy leakage around the door viewing window, the exhaust opening, and air inlet openings.
- Microwave energy leakage must not exceed the values prescribed below.

NOTE: Leakage with the outer case removed less than 5 mW/cm.sq. Leakage for a fully assembled oven (Before the latch switch (primary) is interrupted) with the door in a slightly opened position-less than 2 mW/cm.sq.

NOTES WHEN MEASURING

- Do not exceed meter full scale deflection.
- The test probe must be removed no faster than 1 inch/sec (2.5 cm/sec) along the shaded area, otherwise a false reading may result.
- The test probe must be held with the grip portion of the handle.
A false reading may result if the operator's hand is between the handle and the probe.
- When testing near a corner of the door, keep the probe perpendicular to the surface making sure the probe horizontally along the oven surface, this may possibly cause probe damage.

RECORD KEEPING AND NOTIFICATION AFTER MEASUREMENT

- After adjustment and repair of any microwave energy interruption or microwave energy blocking device, record the measured values for future reference. Also enter the information on the service invoice.
- The microwave energy leakage should not be more than 4 mW/cm.sq. after determining that all parts are in good condition, functioning properly and genuine replacement parts which are listed in this manual have been used.
- At least once a year, have the electromagnetic energy leakage monitor checked for calibration by its manufacturer.

MEASUREMENT OF MICROWAVE POWER OUTPUT

- Microwave power output measurement is made with the oven supplied at its rated voltage and operated at its maximum microwave power setting with a load of (1000 ± 5) g potable water.
- The water is contained in a cylindrical borosilicate glass vessel having a maximum material thickness of 3 mm and an outside diameter of approximately 190 mm.
- The oven and the empty vessel are at ambient temperature prior to the start of the test.
- The initial temperature (± 1) of the water is $(10 \pm 2)^{\circ}\text{C}$. It is measured immediately before the water is added to the vessel. After addition of the water to the vessel, the load is immediately placed on the center of the shelf which is in the lowest position and the microwave power switched on.
- The time T for the temperature of the water to rise by a value ΔT of $(10 \pm 2)^{\circ}\text{K}$ is measured, where T is the time in seconds and ΔT is the temperature rise. The initial and final water temperatures are selected so that the maximum difference between the final water temperature and the ambient temperature is 5°K .

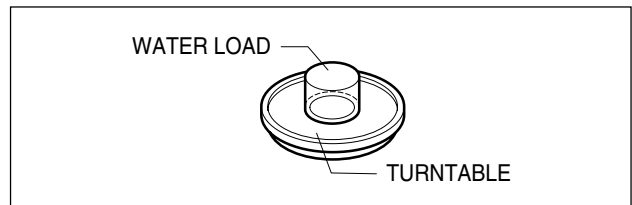
- The microwave power output P in watts is calculated from the following formula :

$$P = \frac{4187 \times (\Delta T) + 0.55 \times (T_2 - T_0) \times M}{T}$$

- T_2 : Temperature after heating
- T_0 : Temperature of bowl
- M : Weight of bowl

is measured while the microwave generator is operating at full power. Magnetron filament heat-up time is not included.

- The water is stirred, to equalize temperature throughout the vessel, prior to measuring the final water temperature.
- Stirring devices and measuring instruments are selected in order to minimize addition or removal of heat.



DISASSEMBLY AND ADJUSTMENT

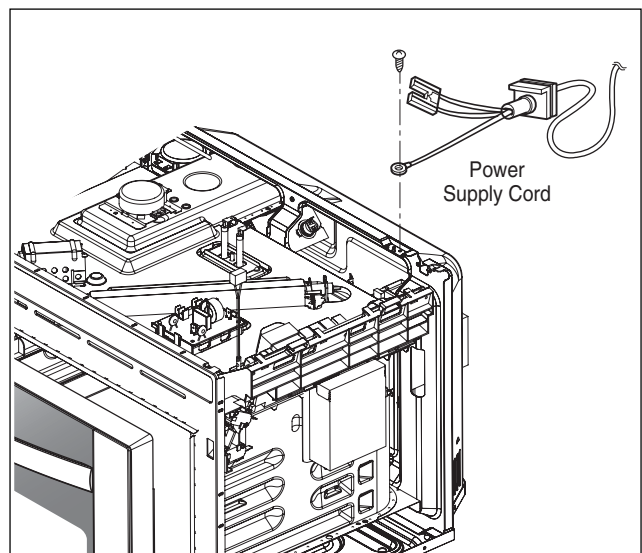
A. OUTER CASE REMOVAL

- 1) Disconnect the power supply cord from the outlet.
- 2) Remove the screws from the rear and along side edges of the case.
The outer case must be moved backward to be lifted off.

B. POWER SUPPLY CORD

- 1) Remove the outer case.
- 2) Disconnect two terminals, and remove one screw of the earth terminal.

CAUTION: DISCHARGE THE HIGH VOLTAGE CAPACITOR BEFORE SERVICING
(refer to page 2-1)

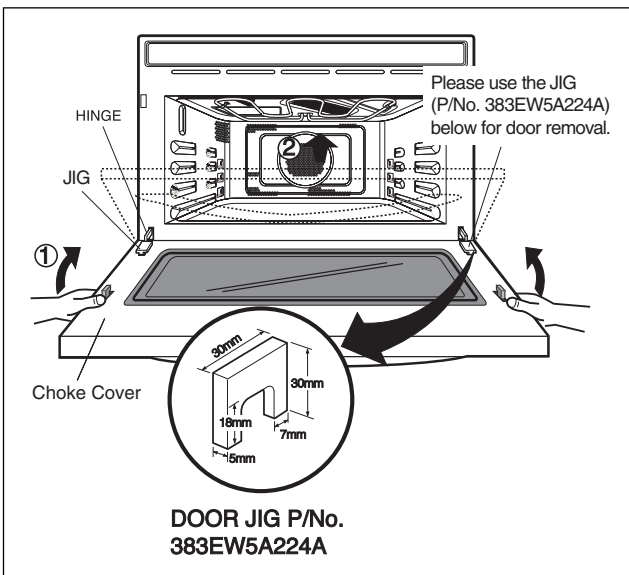


C. DOOR GROSS ASSEMBLY REMOVAL

- 1) Disconnect the power cord.
- 2) Remove the outer case.
- 3) Disconnect the leadwire from the relay PCB.
- 4) Open the door from oven. insert "JIG" into the choke cover hole of door.
- 5) Lift the door from front cavity.

NOTE:

1. After replacing the door, be sure to check that the primary switch, monitor switch, and secondary switch operate normally.
2. After replacing the door, check for microwave energy leakage with a survey meter. Microwave energy must be below the limit of 5 mW/cm². (with a 275 ml water load)
3. When mounting the door assembly to the oven assembly, be sure to adjust the door assembly parallel to the chassis. Also adjust so the door has no play between the inner door surface and oven frame assembly. If the door assembly is not mounted properly, microwaves may leak from the clearance between the door and the oven.

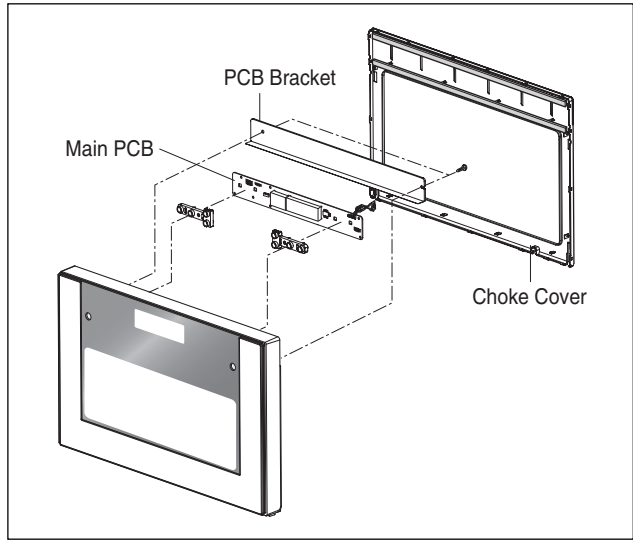


D. MAIN PCB ASSEMBLY

- 1) Remove choke cover for door assembly.
- 2) Remove the two screws holding PCB bracket.
- 3) Remove PCB bracket.
- 4) Disconnect two leadwires from Main PCB.
- 5) Remove the seven screws holding Main PCB.
- 6) Remove the Main PCB from door assembly.

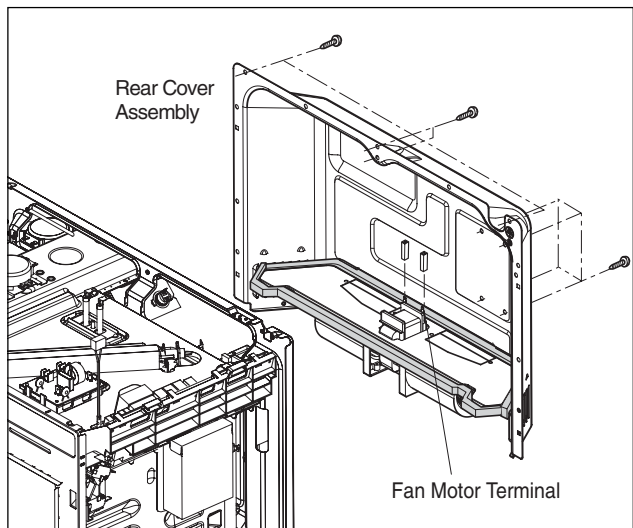
NOTE:

1. Be sure to use new choke cover assembly when you reassembly PCB assembly.



E. REAR COVER ASSEMBLY REMOVAL

- 1) Remove screws on the rear cover assembly.
- 2) Disconnect the leadwire from Fan Motor and lift out the rear cover assembly.



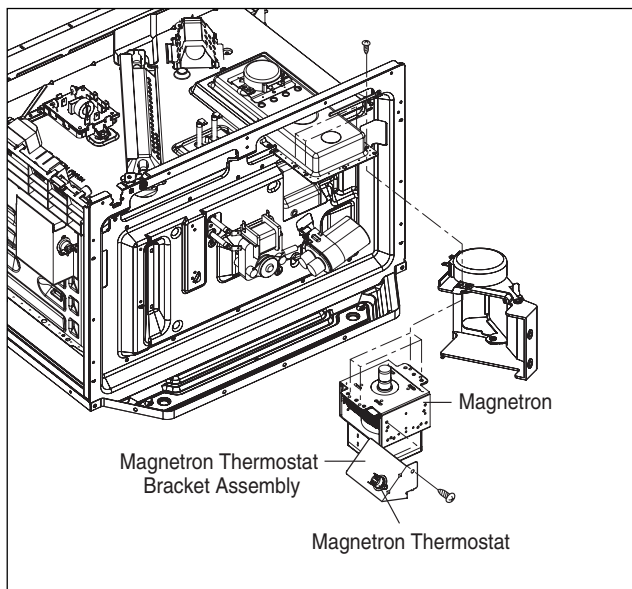
F. MAGNETRON REMOVAL

- 1) Remove rear cover assembly.
- 2) Disconnect the leadwire from damper motor, damper motor switch, MGT thermostat.
- 3) Disconnect the leadwire from the high voltage transformer and magnetron.
- 4) Remove the screw holding the damper assembly.
- 5) Remove the damper assembly.
- 6) Carefully remove the mounting screws holding the magnetron and the wave guide.
- 7) Remove the magnetron until its dome is clear from the wave guide.

NOTE:

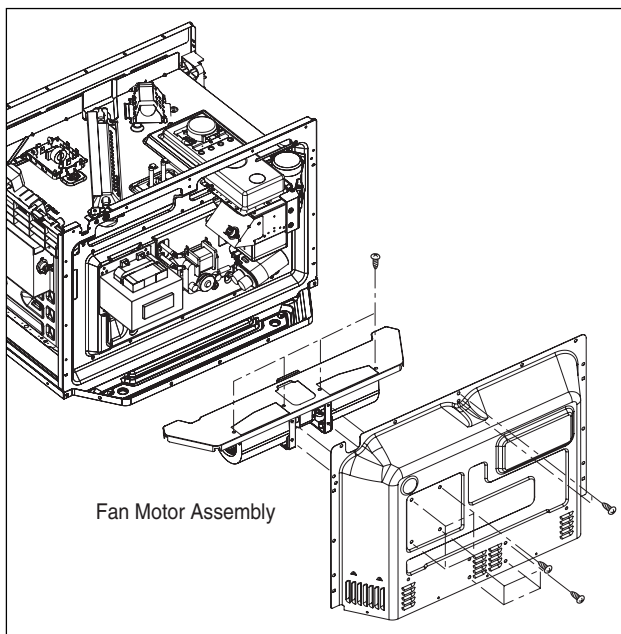
1. When removing the magnetron, make sure its dome does not hit any adjacent parts, or it may be damaged.
2. When replacing the magnetron, be sure to install the magnetron gasket in the correct position and be sure that the gasket is in good condition.
3. After replacing the magnetron, check for microwave leakage with a survey meter around the magnetron. Microwave energy must be below the limit of 5 mW/cm². (With a 275 ml. water load).

Make sure that gasket is rigidly attached to the magnetron. To prevent microwave leakage, tighten the mounting screws properly, making sure there is no gap between the waveguide and the magnetron.



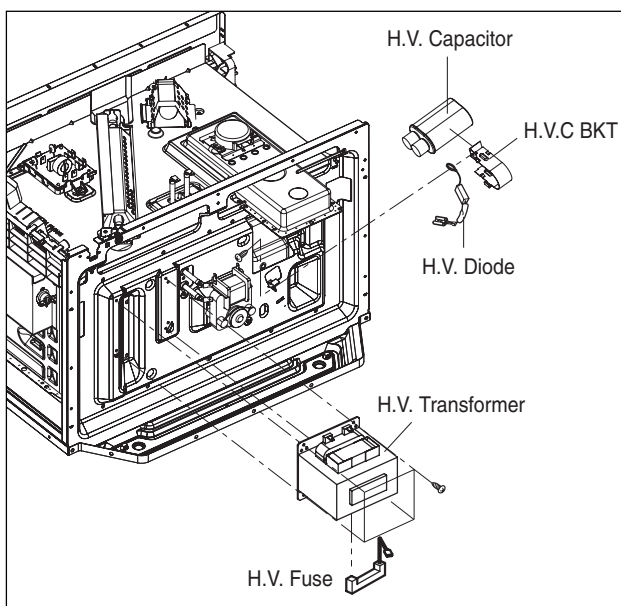
G. FAN MOTOR ASSEMBLY REMOVAL

- 1) Remove rear cover assembly.
- 2) Remove the three screws holding the fan motor assembly.
- 3) Remove the fan motor assembly to the rear cover assembly.



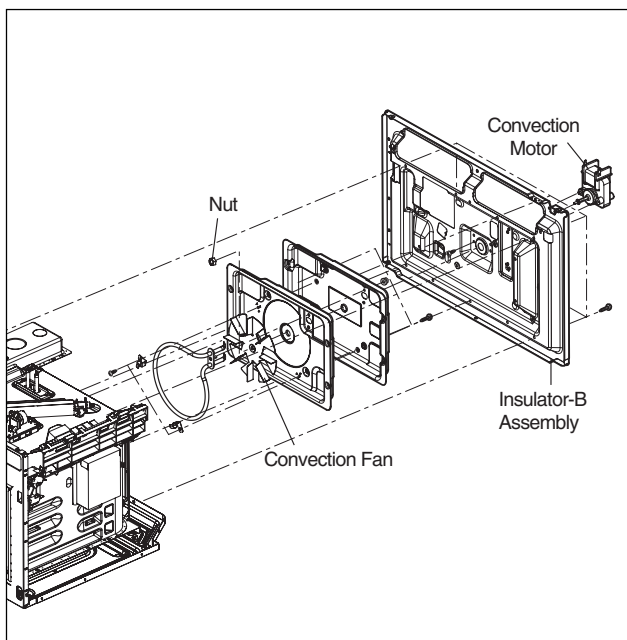
H. HIGH VOLTAGE CAPACITOR, FUSE, TRANSFORMER AND DIODE REMOVAL

- 1) Remove rear cover assembly.
- 2) Discharge the high voltage capacitor.
- 3) Disconnect the leadwire from transformer, magnetron, Fuse and capacitor.
- 4) Remove the screw holding the transformer and remove the high voltage diode earth screw.



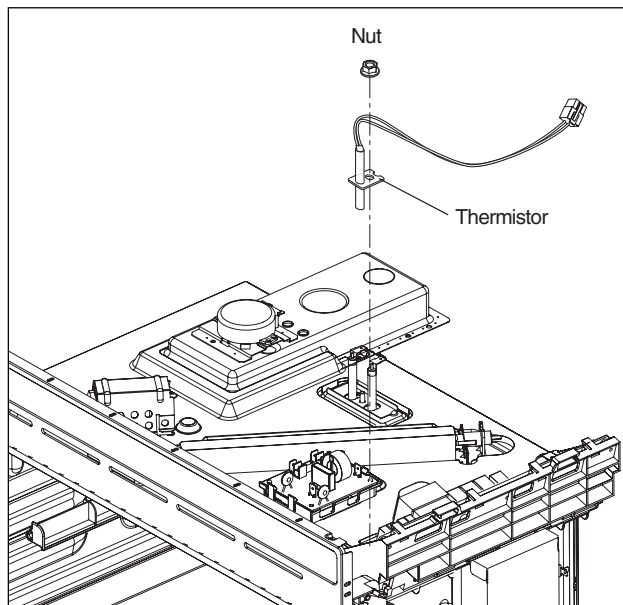
I. CONVECTION MOTOR, HEATER REMOVAL

- 1) Remove rear cover assembly.
- 2) Disconnect the leadwire from powercord, HVT convection heater, MGT thermostat, MGT damper assembly.
- 3) Remove damper assembly.
- 4) Remove MGT assembly.
- 5) Remove the six screws holding the insulator-B assembly.
- 6) Remove the insulator-B assembly.
- 7) Remove the nut holding the convection fan.
- 8) Remove the convection fan.
- 9) Remove the two screws holding the convection motor.
- 10) Remove the convection motor.
- 11) Remove the three screws holding heater sreeket.
- 12) Remove thhe convection heater from bracket.



J. THERMISTOR REMOVAL

- 1) Disconnect the leadwire from the relely PCB (CN3).
- 2) Remove the nut holding thermistors.
- 3) Remove the screws of the thermister.

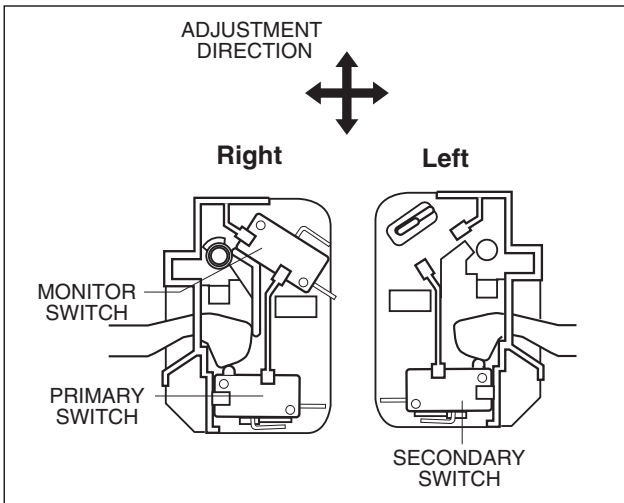


K. INTERLOCK SYSTEM

1) INTERLOCK MECHANISM

The door lock mechanism is a device which has been specially designed to eliminate completely microwave activity when the door is opened during cooking and thus to prevent the danger resulting from the microwave leakage.

2) MOUNTING OF THE PRIMARY/MONITOR/SECONDARY SWITCHES TO THE LATCH BOARD

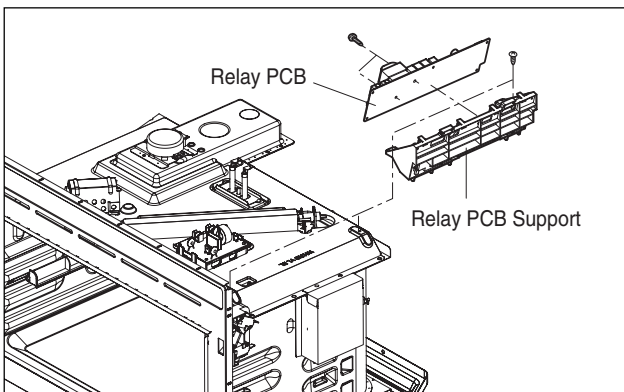


3) INSTALLATION AND ADJUSTMENT OF THE LATCH BOARD TO THE OVEN ASSEMBLY

- Mount the latch board to the oven assembly.
- Adjust the latch board in the arrow direction so that oven door will not have any play in it when the door is closed.
- Tighten the mounting screw.

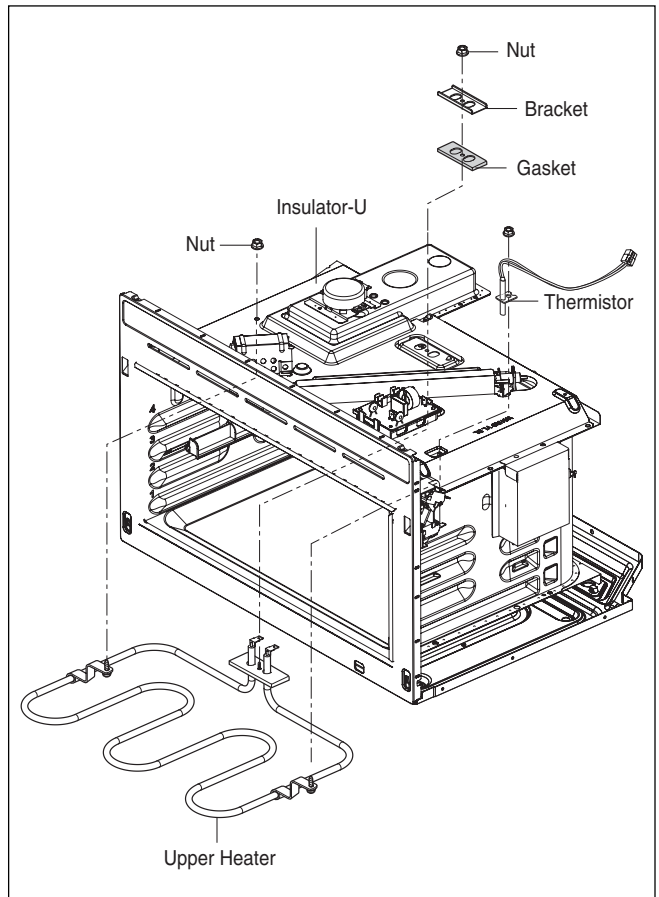
L. RELAY PCB ASSEMBLY

- 1) Disconnect the leadwire from relay PCB.
- 2) Remove the two screws holding relay PCB assembly.
- 3) Remove the relay PCB assembly from cavity assembly.
- 4) Remove two screws holding relay PCB.
- 5) Remove the relay PCB from relay PCB support.



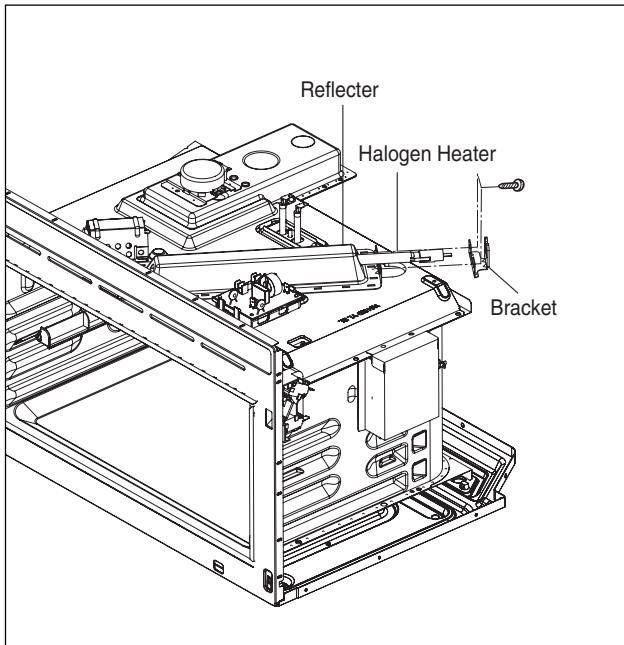
M. UPPER SHEATH HEATER REMOVAL

- 1) Remove three hex nuts holding the sheath heater.
- 2) Remove gasket and bracket holding heater.
- 3) Remove the thermistor.
- 4) Remove the sheath heater from the oven cavity.



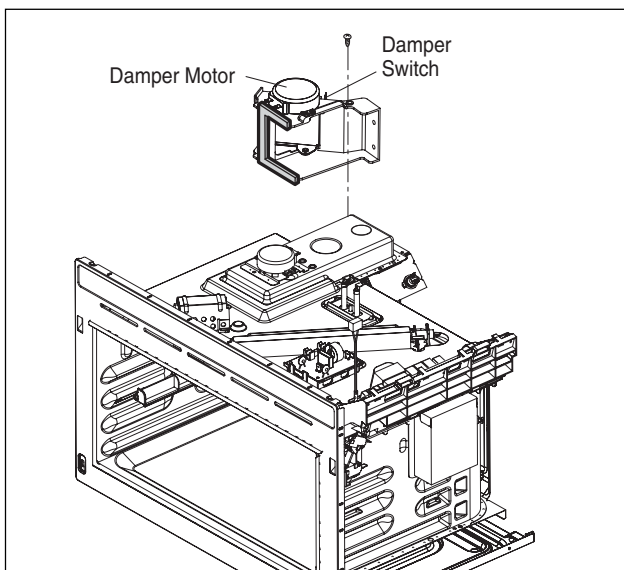
N. UPPER HALOGEN HEATER REMOVAL

- 1) Disconnect the leadwire from halogen heater.
- 2) Remove the screw holding bracket.
- 3) Remove two bracket.
- 4) Remove the halogen heater from reflector.



O. DAMPER MOTOR, SWITCH REMOVAL

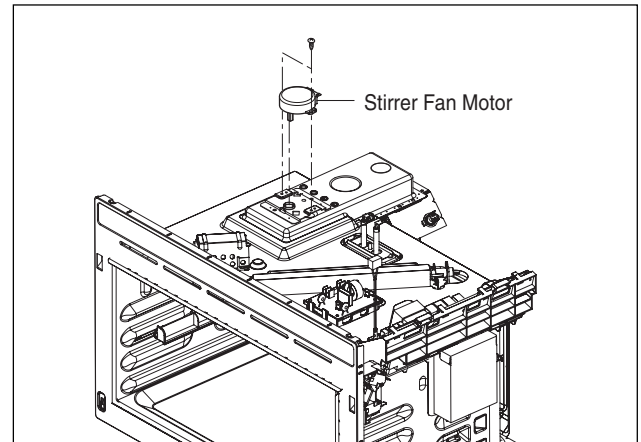
- 1) Disconnect the leadwire from damper motor, damper switch.
- 2) Remove the screw holding damper motor assembly.
- 3) Remove the screw holding damper motor.
- 4) Remove the damper motor.
- 5) Remove the screw holding damper switch.



- 6) Remove the damper switch.

P. STIRRER FAN MOTOR REMOVAL

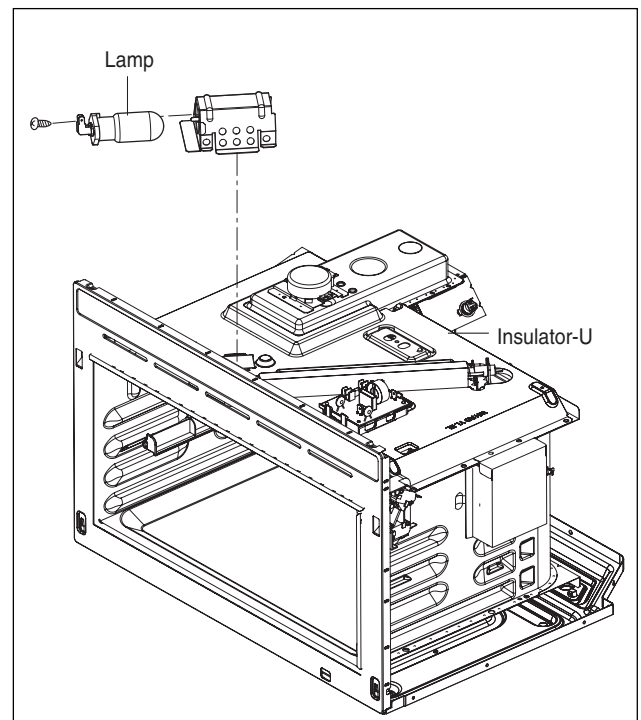
- 1) Remove the two screws holding stirrer fan motor.



- 2) Remove the stirrer fan motor.

Q. LAMP REMOVAL

- 1) Disconnect the leadwire from lamp.
- 2) Remove the lamp assembly fan insulator-U.



- 3) Remove the lamp from lamp assembly.

INTERLOCK CONTINUITY TEST

WARNING : FOR CONTINUED PROTECTION AGAINST EXCESSIVE RADIATION EMISSION, REPLACE ONLY WITH IDENTICAL REPLACEMENT PARTS.

TYPE NO. SZM-V 16-FA-63 FOR PRIMARY SWITCH
TYPE NO. SZM-V 16-FA-62 FOR MONITOR SWITCH
TYPE NO. SZM-V 16-FA-63 FOR SECONDARY SWITCH

A. PRIMARY INTERLOCK SWITCH TEST

When the door is closed slowly an audible **click** should be heard at the same time or successively at intervals. When the door is opened slowly, the latches should activate the switches with an audible **click**.

If the latches do not activate the switches when the door is closed, the switches should be adjusted in accordance with the adjustment procedure. Disconnect the wire lead from the primary switch. Connect the ohmmeter leads to the common (COM) and normally open (NO) terminal of the switch. The meter should indicate an open circuit in the door open condition.

When the door is closed, the meter should indicate a closed circuit.

When the primary switch operation is abnormal, make the necessary adjustment or replace the switch only with the same type of switch.

B. SECONDARY INTERLOCK SWITCH TEST

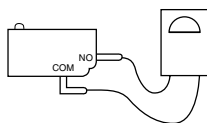


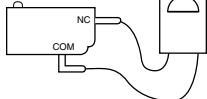


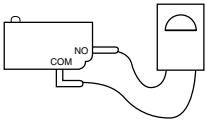


Disconnect the wire lead from the secondary switch.

Connect the ohmmeter leads to the common (COM) and normally open (NO) terminals of the switch. The meter should indicate a open circuit in the door open condition. When the door is closed, meter should indicate an closed circuit. When the secondary switch operation is abnormal, make the necessary adjustment or replace the switch only with the same type of switch.

C. MONITOR SWITCH TEST

Disconnect the wire lead from the monitor switch. Connect the ohmmeter leads to the common (COM) and normally closed (NC) terminals of the switch. The meter should indicate closed circuit in the door open condition. When the door is closed, meter should indicate an open circuit. When the monitor switch operation is abnormal, replace with the same type of switch.

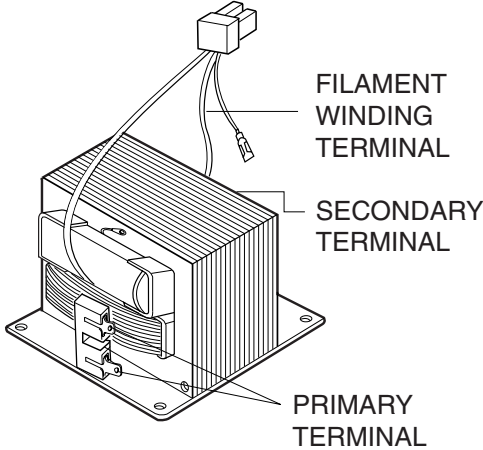
NOTE: After repairing the door or the interlock system, it is necessary to do this continuity test before operating the oven.

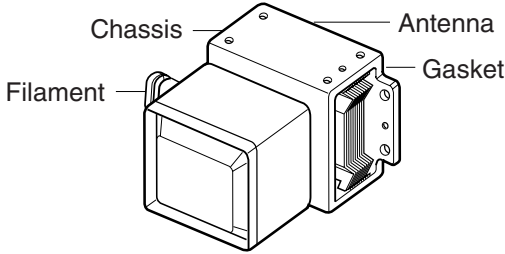
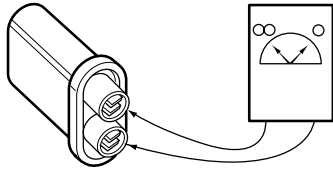
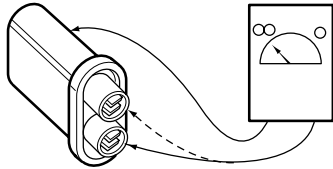
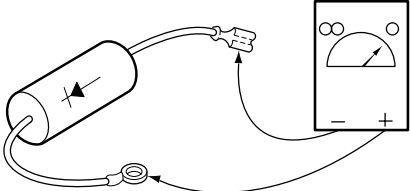
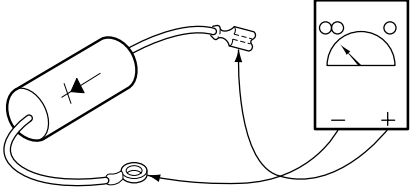
COMPONENTS	TEST PROCEDURE		RESULTS	
SWITCHES (Wire leads removed)	Check for continuity of the switch with a Multi-meter		Door open	Door close
	Primary Switch			
	Monitor Switch			
	Secondary Switch			
NOTE : After checking for the continuity of switches, make sure that are correctly connected.				

COMPONENT TEST PROCEDURE

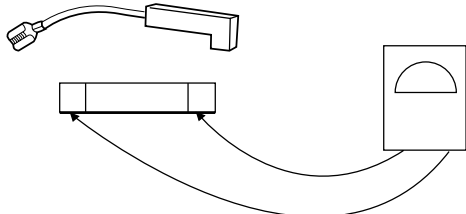


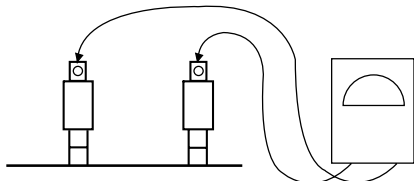
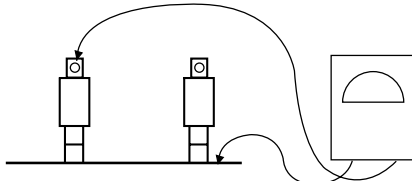
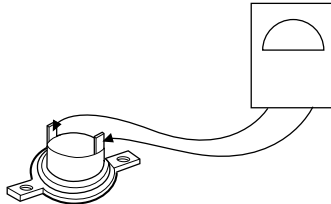
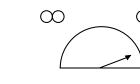
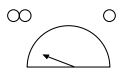
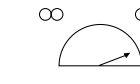
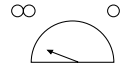
CAUTIONS

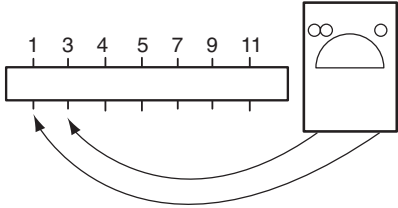


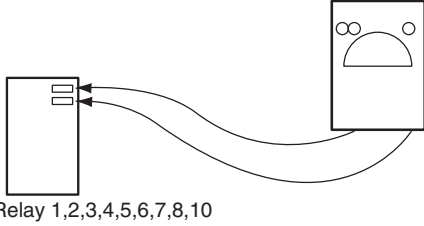
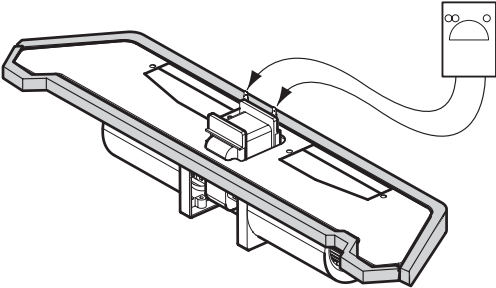
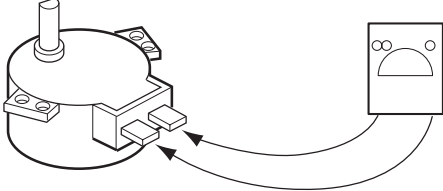
1. DISCONNECT THE POWER SUPPLY CORD FROM THE OUTLET WHENEVER REMOVING THE OUTER CASE FROM THE UNIT. PROCEED WITH THE TEST ONLY AFTER DISCHARGING THE HIGH VOLTAGE CAPACITOR AND REMOVING THE WIRE LEADS FROM THE PRIMARY WINDING OF THE HIGH VOLTAGE TRANSFORMER. (SEE PAGE 2-1)
2. ALL OPERATIONAL CHECKS WITH MICROWAVE ENERGY MUST BE DONE WITH A LOAD (1 LITER OF WATER IN CONTAINER) IN THE OVEN.

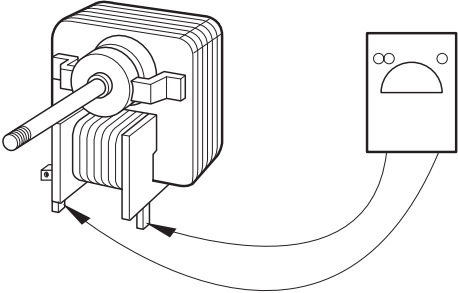
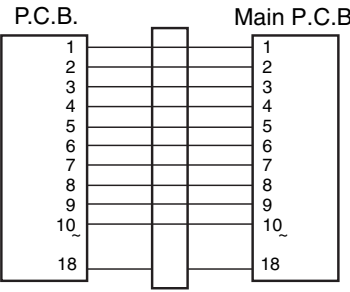
COMPONENTS	TEST PROCEDURE	RESULTS
HIGH VOLTAGE TRANSFORMER (Wire leads removed)	 <ol style="list-style-type: none"> 1. Measure the resistance. (Ohm-meter scale: Rx1 and Rx100) <ul style="list-style-type: none"> • Primary winding • Secondary winding • Filament winding 2. Measure the resistance. (Ohm-meter scale: Rx1000) <ul style="list-style-type: none"> • Primary winding to ground • Filament winding to ground 	<p>Approx.: 2.5 ohm Approx.: 190 ohm Less than: 1 ohm</p> <p>Normal: Infinite Normal: Infinite</p>
MAGNETRON (Wire leads removed)	<ol style="list-style-type: none"> 1. Measure the resistance. (Ohm-meter scale: Rx1) <ul style="list-style-type: none"> • Filament terminal 2. Measure the resistance. (Ohm-meter scale: Rx1000) <ul style="list-style-type: none"> • Filament to chassis 	<p>Normal: Less than 1 ohm</p> <p>Normal: Infinite</p>

COMPONENTS	TEST PROCEDURE	RESULTS
	 <p>NOTE: When testing the magnetron, be sure to install the magnetron gasket in the correct position and be sure that the gasket is in good condition.</p>	
HIGH VOLTAGE CAPACITOR	<p>Measure the resistance. (Ohm-meter scale: Rx1000)</p> <ul style="list-style-type: none"> Terminal to terminal. 	Normal: Momentarily indicates several ohms, and then gradually returns to infinite.
	<p>Measure the resistance. (Ohm-meter scale: Rx1000)</p> <ul style="list-style-type: none"> Terminal to case. 	Normal: Infinite.
HIGH VOLTAGE DIODE	<p>Measure the continuity (Forward). (Ohm-meter scale: Rx10000)</p> 	Normal: Continuity. Abnormal: Infinite.
	<p>Measure the continuity (Reverse). (Ohm-meter scale: Rx10000)</p> 	Normal: Infinite. Abnormal: Continuity.

NOTE :
Some inexpensive meters may indicate infinite resistance in both direction.

COMPONENTS	TEST PROCEDURE		RESULTS	
FUSE H.V. FUSE	Check for continuity of the fuse with an multi-meter.		Normal	Abnormal
				
NOTE: If the fuse is blown, check the primary, the secondary, and the monitor switches, H.V.D. and H.V.C. before replacing the fuse. If the fuse is blown by improper switch operation replace the defective switch and the fuse at the same time. Replace just the fuse if the switches operate normally.				
HEATER ELEMENT (Wire leads removed.)	Measure the resistance. (Multi-meter scale: Rx1)		Normal: • Upper sheath heater: Approx. 37 ohm (230V, 1350W) • Back sheath heater: Approx. 77 ohm (230V, 750W) • Upper Halogen heater: Approx. 15 ohm (230V, 450W) (at 20 ~30°C)	
	Measure the resistance with 500V-100M ohm insulation resistance meter.		Normal: more than 0.5 Mohm	
NOTE: Make sure heater is fully cooled when tested.				
MAGNETRON and OVEN THERMOSTAT		OVEN Thermostat	0°C~160°C	160°C
				
		M.G.T Thermostat	60°C~Approx.145°C	Over 145°C
				

COMPONENTS	TEST PROCEDURE	RESULTS	
Disconnect the 11 pin connector from P.C.B. (Refer to schematic diagram)	Check for P.C.B.connector. 	Cooking Start	OFF
			
RELAY OF P.C.B. (Wire leads removed.) Note: Relay Relay 1: P.T.C Relay (Positive Temperature Coefficient) Relay 2: Convection Motor Relay 3: Fan motor Relay 4: Halogen Heater Relay 5: Up. sheath heater Relay 6: Back. sheath heater Relay 7: Microwave Relay 8: Oven lamp Relay 10: Damper Motor		Cooking Start	OFF
FAN MOTOR (Wire leads removed)	Measure the resistance. (Ohm-meter scale: R x 1) 	Normal: Approx. 60 ohm Abnormal: Infinite or several ohm.	
STIRRER MOTOR (Wire leads removed)	Measure the resistance. (Ohm-meter scale: R x 1000) 	Normal: Approx. 10~20 kohm Abnormal: Infinite or several ohm.	

COMPONENTS	TEST PROCEDURE	RESULTS
CIRCULATION MOTOR (Wire leads removed)	Measure the resistance. (Multi-meter scale: R x 1) 	Normal : Approx. 250 ohm. Abnormal : Infinite or several ohm.
KEY PCB		Check continuity between switch terminals, by pressing an appropriate pad on key board. The contacts assignment of the respective pads on the key board is as shown left figures.
NOTE : A MICROWAVE ENERGY LEAKAGE TEST MUST ALWAYS BE PERFORMED WHEN THE UNIT IS SERVICED FOR ANY REASON. MAKE SURE THE WIRE LEADS ARE CORRECT POSITION. WHEN REMOVING THE WIRE LEAD FROM THE PARTS, BE SURE TO GRASP THE CONNECTOR, NOT THE WIRES.		

TROUBLE SHOOTING

WHEN YOU GET A COMPLAINT FROM YOUR CUSTOMER, EVALUATE THE COMPLAINT CAREFULLY. IF THE FOLLOWING SYMPTOMS APPLY, PLEASE INSTRUCT THE CUSTOMER IN THE PROPER USE OF THE OVEN. THIS CAN ELIMINATE AN UNNECESSARY SERVICE CALL.

CAUTIONS

1. Check grounding before checking for trouble.
2. Be careful of the high voltage circuit.
3. Discharge the high voltage capacitor. (See page 2-1)
4. When checking the continuity of the switches or of the high voltage transformer, disconnect one lead wire from these parts and then check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.
5. Do not touch any part of the circuitry on the digital programmer circuit since static electric discharge may damage this control panel.
Always touch yourself ground while working on this panel to discharge any static charge built up in your body.

CONDITION	CAUSE	REMEDY
The oven does not work.	Inserting many plug into one plug outlet and using them at the same time (causes overloading).	Avoid using other electrical appliances when you use the oven.
	The oven plug is not inserted tightly.	Insert the oven plug securely.
Output power is too low.	Low AC input voltage.	Use the oven at adequate line voltage.
	Food temperature is too low.	This may not be a defect. It is possible that the food should be cooked for a longer time period.
Sparks occurring.	Using metallic ware and allowing it to touch the oven wall.	Do not use metallic ware for cooking except where noted in the cooking guide.
	Ceramic ware trimmed in gold or silver powder is used.	Do not use any type of cookware with metallic trimming.
Uneven cooking.	Inconsistent intensity of microwave by their characteristics.	<ol style="list-style-type: none"> 1. Wrap the thinner part with aluminum foil. 2. Use plastic wrap or lid. 3. Stir once or twice while cooking soup, cocoa or milk, etc.

(TROUBLE 1) The following visual conditions indicate a probable defective control circuit.

1. Incomplete segments.
 - Segment missing.
 - Partial segment missing.
 - Digit flickering (NOTE: Slight flickering is normal.)
2. Colon does not turn on or blink.
3. A distinct change in the brightness of one or more numbers in display.
4. One or more digits in the display are not lighting.
5. Display does not count down with time blinking or up with clock operation.
6. Display obviously jumps in time while counting down.
7. Display counts down too fast while cooking.
8. Each indicator light does not turn on after setting cooking cycle.
9. Display time of day does not reappear when cooking is finished.
10. Beep sound is not heard when correct key is touched.

CONDITION	CHECK	RESULT	CAUSE	REMEDY
1. No input can be programmed.	Check the connection between key assembly and PCB assembly.	Continuity.	Defective PCB assembly.	Replace PCB assembly.
		No continuity.	Loose connection.	Connect them tightly.
2. Some inputs cannot be programmed.	Replace key assembly and check operation.	Everything works as specified.	Defective key assembly.	Replace key assembly.
3. Display shows a number or figure different from one touched.		Still have trouble.	Defective PCB assembly.	Replace PCB assembly.
4. Random programming when touching other pads.				
5. Display is fixed at some figure and can not accept any input.				

(TROUBLE 2) Oven does not operate at all ; Display window does not display any figures and no input is accepted.

CONDITION	CHECK	RESULT	CAUSE	REMEDY
1. Fuse blows.	Check continuity of monitor switch (with door closed).	Continuity.	Malfunction of the monitor switch.	Replace primary and monitor switches.
		No continuity.		
	Replace fuse			
	Check continuity of primary switch (with door opened).	Continuity.	Shorted contact at the primary switch.	Replace primary and monitor switches.
		No continuity.		
	Disconnect one side of the wire lead connected from transformer to the high voltage capacitor and operate the unit.	Normal.	Defective high voltage capacitor.	Replace high voltage capacitor.
		Fuse blows again	Defective high voltage transformer.	Replace high voltage transformer.

NOTE : All these switches must be replaced at the same time. Refer to page 5-6, 5-8

2. Fuse does not blow.	Check continuity of magnetron thermostat.	No continuity.	Defective magnetron thermostat, oven thermostat and Lower voltage transformer.	Replace magnetron thermostat, oven thermostat and Lower voltage transformer.
		Continuity.		
	Check continuity of power supply cord.	No continuity.	Defective power supply cord.	Replace power supply cord.

(TROUBLE 3) Display shows all figures set, but oven does not start cooking while desired program times are set and START button is touched.

CONDITION	CHECK	RESULT	CAUSE	REMEDY
1.Setting time does not count down when touching START button.	Check continuity of secondary switch (with door closed).	No continuity.	Defective secondary switch and secondary switch wire connector.	Replace secondary switch and secondary switch wire connector.
		Continuity.		
	Check the connection between connector and P.C.B assembly.	No continuity.	Defective P.C.B assembly.	Replace P.C.B assembly.
		Continuity.	Loose connection.	Connection then tightly.
2. Fan motor, c-motor or oven lamp, stirrer motor do not turn on.	Stirrer motor damper motor.	Abnormal	Defective oven lamp, turntable motor..	Replace oven lamp, turntable motor.
		Normal.		

(TROUBLE 4) Oven seems to be operation but little heat is produced in oven load.

CONDITION	CHECK	RESULT	CAUSE	REMEDY
Output is low.	Check the power source voltage.	Lower than 90% of rating voltage.	Decrease in power source voltage with load.	Suggest customer contact local electric power utility co. or qualified electrician.
		Normal.		
	Disconnect the wire leads from relay 7 and check on and off time with multimeter.	Abnormal.	Defective P.C.B assembly.	Replace P.C.B assembly.
		Normal.		
	Measure the output power.	Abnormal.	Defective magnetron.	Replace magnetron.
		Normal.		

**NOTE: Simple test of power output-conducted by heating one liter water for one min. if available.
Minimum 8.5°C temperature rise is normal condition.**

**(TROUBLE 5) No microwave oscillation even though oven lamp and fan motor run.
(Display operates properly)**

CONDITION	CHECK	RESULT	CAUSE	REMEDY
No microwave oscillation.	Disconnect the wire leads from relay 7 and check continuity of relay 7. (Operate the unit)	No continuity.	Defective P.C.B assembly.	Replace P.C.B assembly.
		Continuity.		
	Check H.V. transformer and H.V. Fuse.	Abnormal	Defective high voltage transformer and H.V. Fuse.	Replace high voltage transformer and H.V. Fuse.
		normal		
	Check H.V. capacitor.	Abnormal	Defective high voltage capacitor.	Replace high voltage capacitor.
		normal		
	Check H.V. diode.	Abnormal	Defective high voltage Diode.	Replace high voltage Diode.
		normal		
	Check Magnetron.	Abnormal	Defective magnetron.	Replace magnetron.

**(TROUBLE 6) Oven does not cook properly when programmed for the set power level
(Operates properly on HIGH)**

CONDITION	CHECK	RESULT	CAUSE	REMEDY
Output is full when you set lower power level.	Disconnect the wire leads from relay 7 and check continuity relay 7. (Operate the unit)	Abnormal.	Defective P.C.B assembly.	Replace P.C.B assembly.

**(TROUBLE 7) Heater → Relay 4- Halogen Heater
Relay 5- Up. sheath Heater
Relay 6- Back. sheath Heater**

CONDITION	CHECK	RESULT	CAUSE	REMEDY
1. Heater is not operating.	Heater.	Abnormal.	Malfunction of the heater.	Replace.
		Normal.		
	Thermostat and relay 4, 5, 6.	Abnormal	Malfunction of the thermostat and relay 4, 5, 6	Replace.
		Normal.		
	Wire connection.	No continuity.	Open or loosen.	Replace or connect tightly.
2. Lower temperature the oven.	Heater.	Abnormal.	Malfunction of the heater.	Replace.
		Normal.		
	Thermostat and relay 4, 5, 6.	Abnormal	Malfunction of the thermostat and relay 4, 5, 6	Replace.

NOTE: * Make sure the wire leads correct position.

* When removing the wire leads from parts, Be sure to grasp the connector not the wires.

* When removing the magnetron, be sure to install the magnetron gasket in the correct position and in good condition.

(TROUBLE 8) Display shows all figures set, but oven does not operate the all keys.

CONDITION	CHECK	RESULT	CAUSE	REMEDY
No operation of All Keys.	Check continuity Of secondary Switch (with Door Closed).	No continuity.	Defective Secondary switch And secondary switch Connector.	Replace Secondary switch And secondary Switch wire connector.
		continuity.		
	Check the connection Between connector and P.C.B Assembly.	No continuity.	Defective P.C.B Assembly.	Replace P.C.B Assembly.
		continuity.	Loose connection.	Connection then tightly.