S/M No. : C8H5T7S001

Service Manual

Microwave Oven

Model: KOC-8H5T

✔ **Caution**

: In this Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service Information Center (http://svc.dwe.co.kr).

DAEWOO ELECTRONICS

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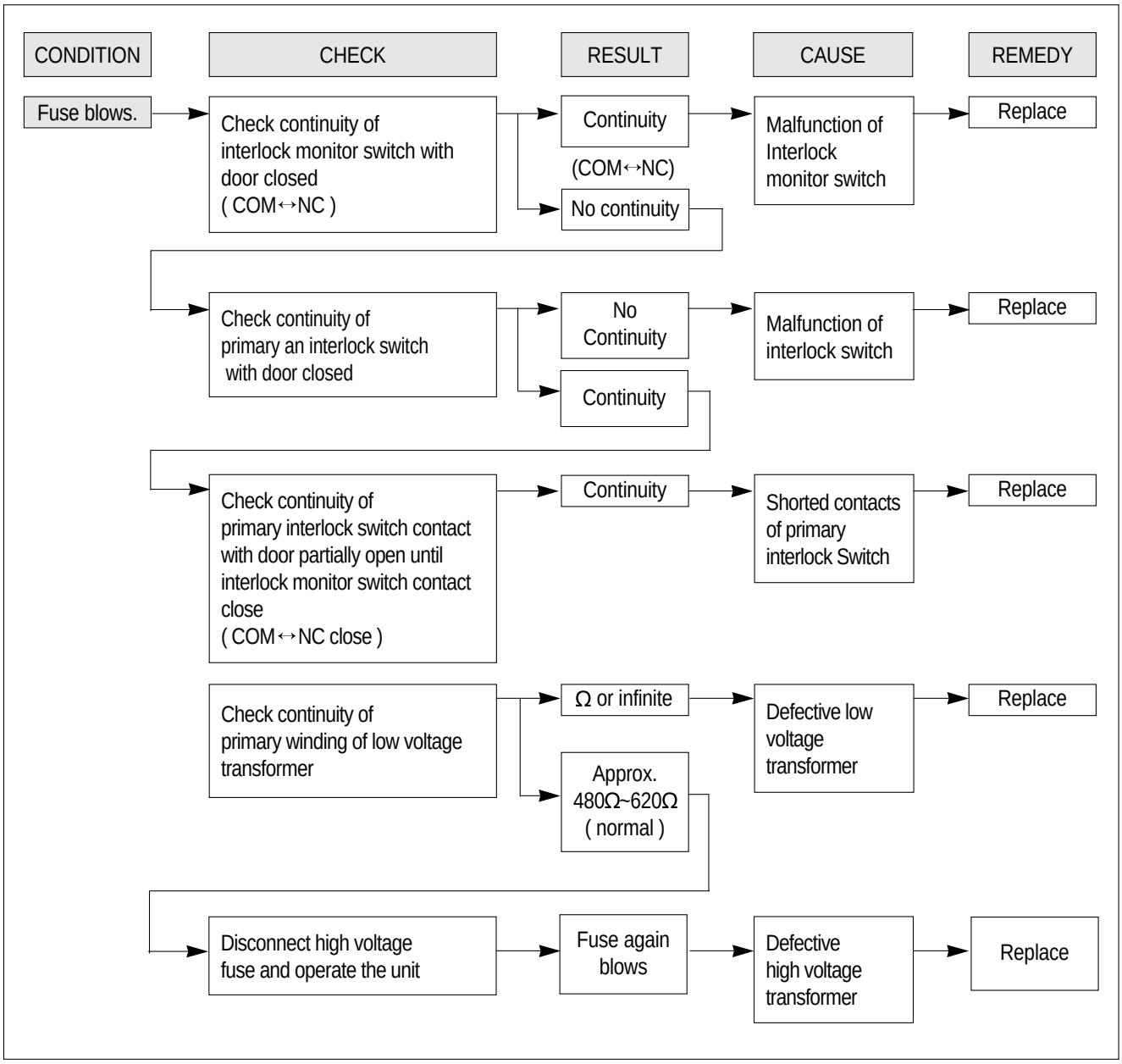
8. TROUBLE SHOOTING GUIDE

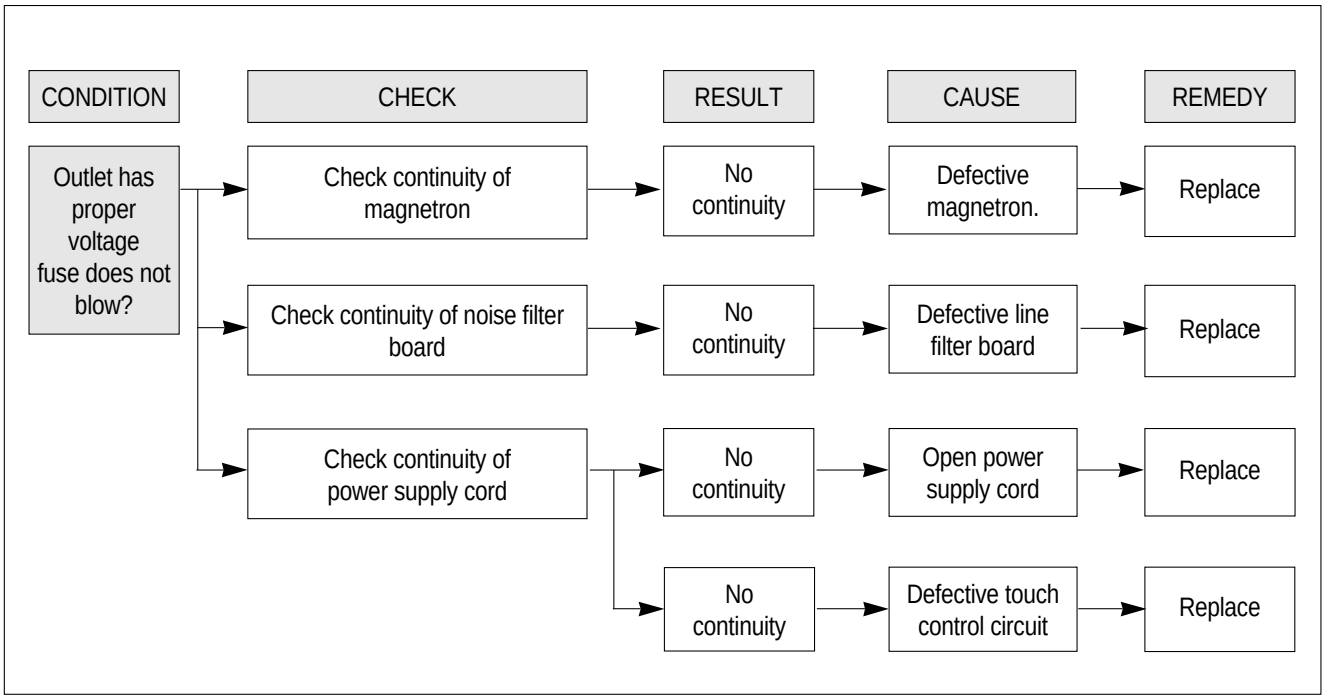
Following the procedure below to check if the oven is defective or not.

1) Check grounding before trouble checking.
2) Be careful of the high voltage circuit.
3) Discharge the high voltage capacitor.
4) When checking the continuity of the switches, fuse or high voltage tranformer, disconnect one load wire from these parts and check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.

NOTE : When electric parts are checked, be sure the power cord is not inserted the wall outlet.
Check wire harness, wiring and connection of the terminals and power cord before check the parts listed below.

(TROUBLE 1) Oven does not operate at all : any inputs can not be accepted.

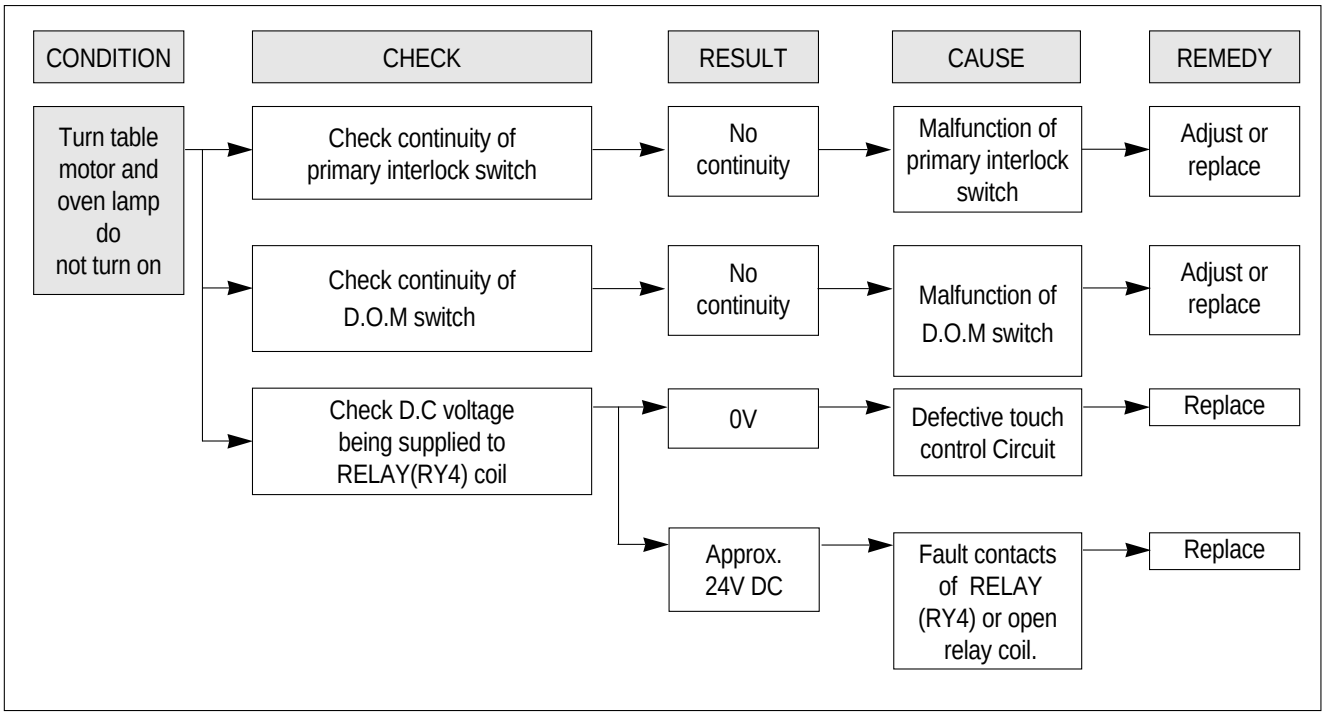




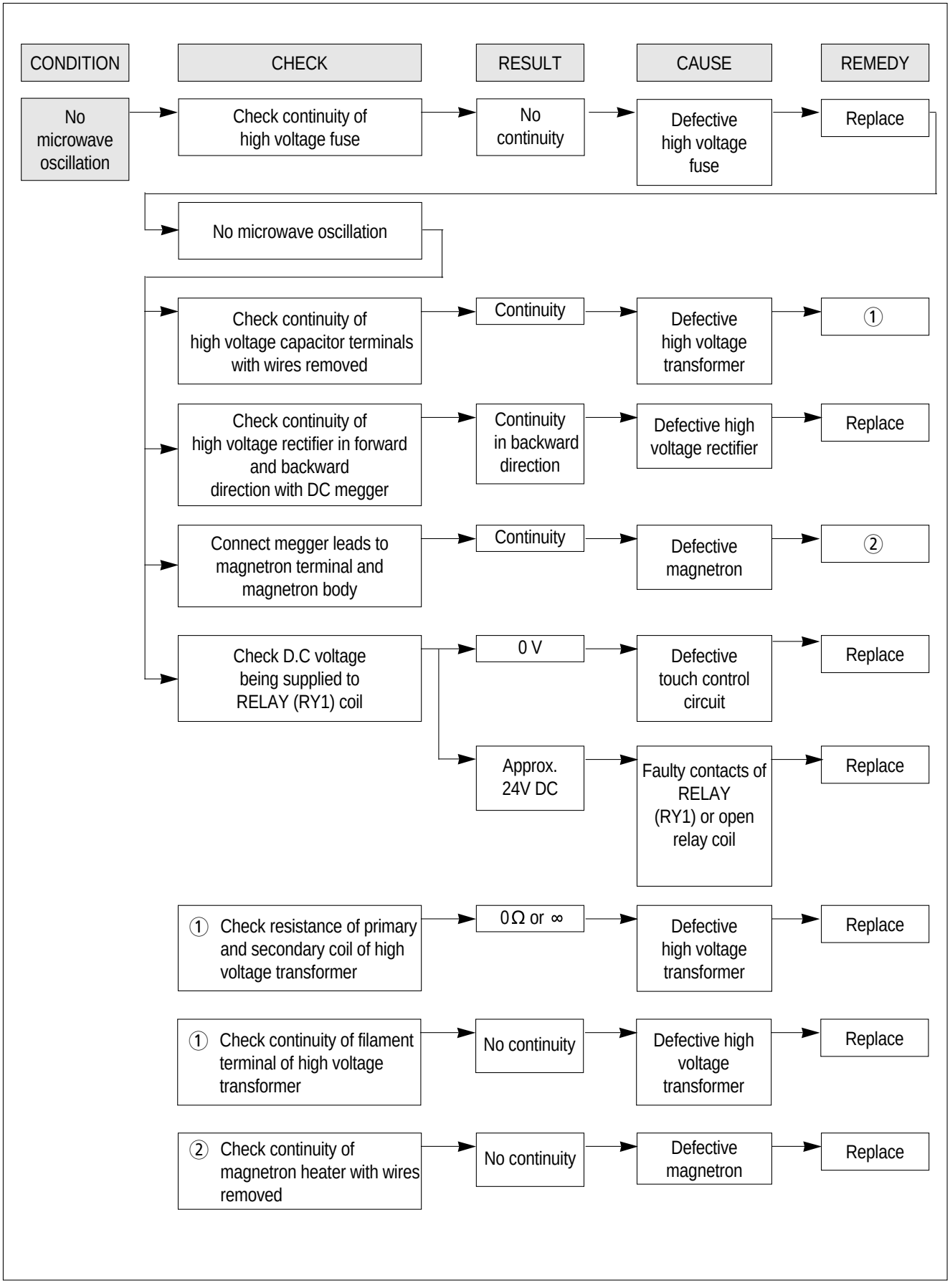
NOTE : All these switches must be replaced at the same time, please refer to (7.Interlock mechanism and adjust) for adjustment instructions

(TROUBLE 2)

Display shows all figures selected, but oven does not start cooking, even though desired program and time are set and start button is tapped.

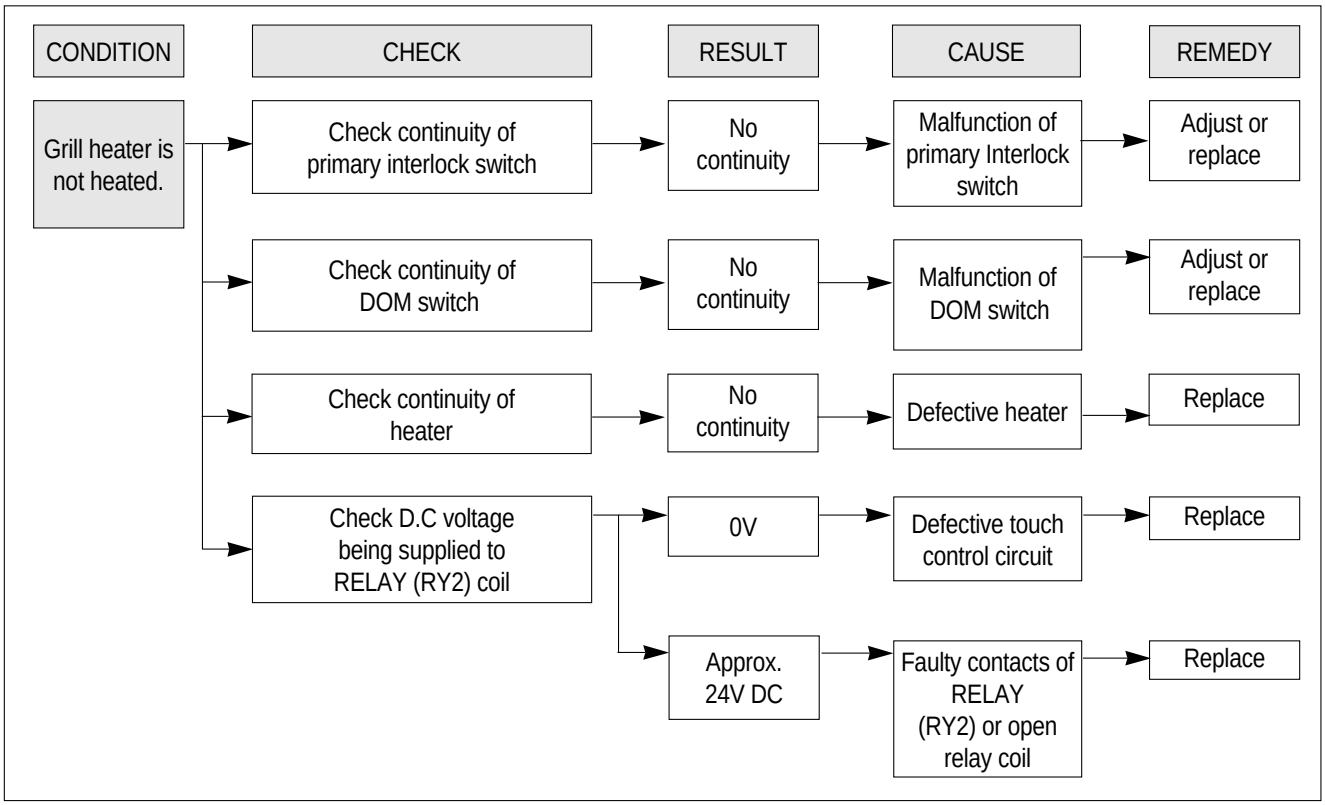


TROUBLE 3) No microwave oscillation even though fan motor rotates.



(TROUBLE 4)

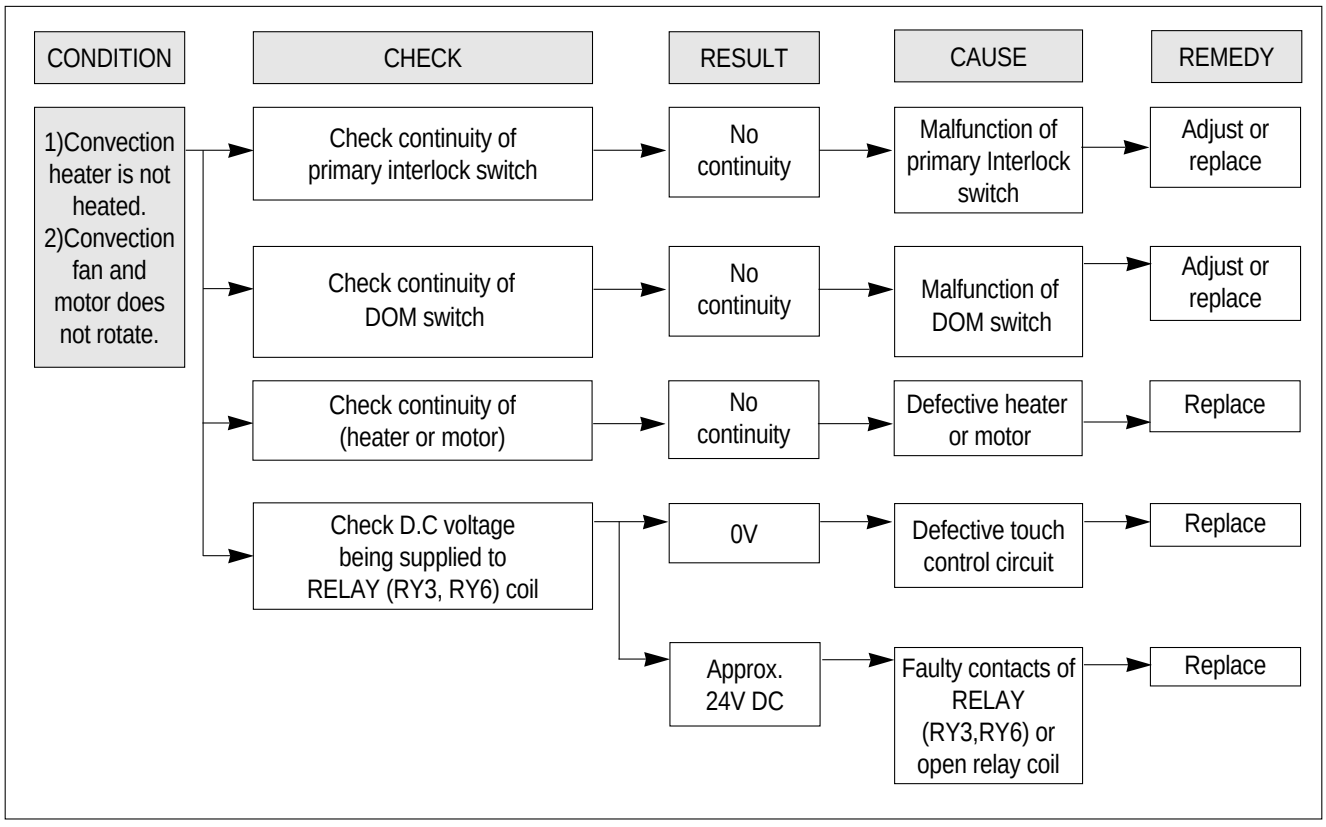
Grill heater (upper heater) is not heated; food will not become hot.



(TROUBLE 5)

1) Convection heater is not heated; food will not become hot.

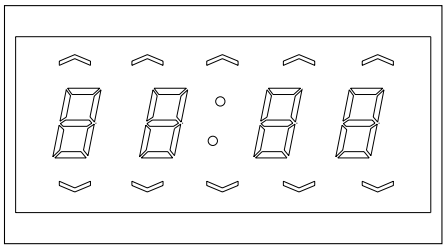
2) Convection fan motor does no rotate.



(TROUBLE 6)

The following visual conditions inditions indicate a probable defective touch control Circuit or button P.C.B. assembly

1. Incomplete segments.
   1) segment missing
   2) partial segments missing
   3) digit flickering other than normal fluorescent slight flickering
2. A distinct change in the brightness of one or more numbers exists in the display.
3. One or more digits in the display are not on when they should be.
4. Display does not count down or up with time cooking or clock operation.
5. Oven is programmable and cooks normally but no display shows.
6. Display obviously jumps in time while counting down.
7. Display counts down noticeably too fast while cooking.
8. Display does not show the time of day when clear button is touched.
9. Oven lamp and turn table motor do not stop although cooking is finished.
   Check if the RELAY(RY4) contacts close and if they are close, replace touch control circuit.



CONDITION	CHECK	RESULT	CAUSE	REMEDY
Display does not show programming at all, even if keyboard is touched.	Check each button for continuity of the button	Normal	Malfunction of sub pcb assembly	Replace control box sub-assembly

(TROUBLE 7)

When "ERROR 2 ERROR 3" come on display.

CONDITION	CHECK	RESULT	CAUSE	REMEDY
"ERROR 2 & ERROR 3" come on display	Check continuity of thermistor (resistance of thermistor)	0Ω or infinite	Replace	Replace
		Approx 200~300kΩ (room temperature)		
	Check continuity of heater (convection, upper)	No continuty	Defective heater	Replace
		continuity	Defective touch control circuit	Replace

9. MEASUREMENT AND TEST

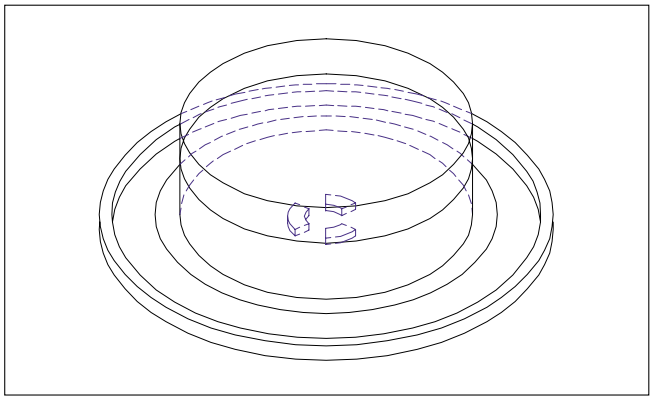
1. MEASUREMENT OF THE MICROWAVE POWER OUTPUT

Microwave output power can be checked by indirectly measuring the temperature rise of a certain amount of water exposed to the microwave as directed below.

PROCEDURE

1. A cylindrical container of borosilicate glass is used for the test. It has a maximum thickness of 3mm, an external diameter of approximately 190mm and a height of approximately 90mm.
   The mass of the container is determined.
2. At the start of the test, the oven and the empty container are at ambient temperature. Water having an initial temperature of 10˚C ± 1˚C is used for the test. The water temperature is measured immediately before it is poured into the container.
3. A quantity of 1000g ± 5g of water is added to the container and its actual mass obtained.
   The container is then immediately placed in the centre of the oven shelf, which is in its lowest normal position. The oven is operated and the time for the water temperature to attain 20˚C ± 2˚C is measured. The oven is then switched off and the final water temperature is measured within 60s.

   NOTE 1 - The water stirred is before its temperature is measured.
   NOTE 2 - Stirring and measuring devices are to have a low heat capacity.



4. The microwave power output is calculated from the formula

$$P = 4{,}187 \cdot m_W (T_2 - T_1) + 0.55 \cdot m_C (T_2 - T_0)/t$$

where
P is the microwave power output, in watts ;
m_W is the mass of the water, in grams ;
m_c is the mass of the container, in grams ;
T_0 is ambient temperature, in degrees Celsius ;
T_1 is the initial temperature of the water, in degree Celsius ;
T_2 is the final temperature of the water, in degrees Celsius ;
t is the heating time, in seconds, excluding the magnetron filament heating-up time.

✻ The microwave power output is stated in watts, rounded off to the nearest 50W

CAUTION
1. Water load should be measured exactly to 1 liter.
2. Input power voltage should be exactly specified voltage (Refer to SPECIFICATIONS).
3. Ambient temperature should be 20 ± 2°C (68 ± 3.6°F)

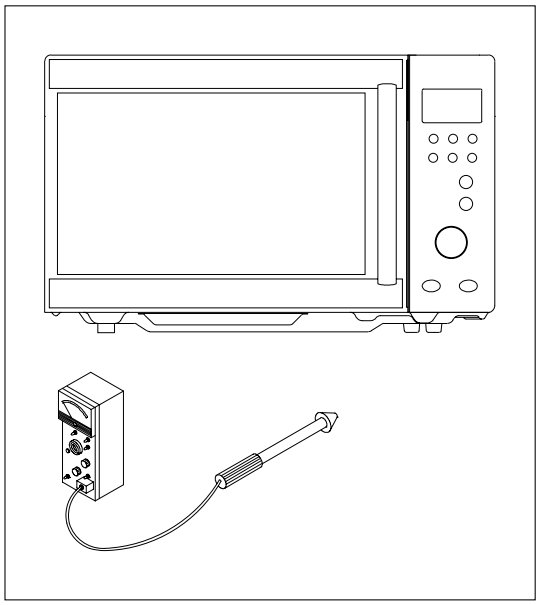
✻ **Heating time for power output: ($T_2 = T_0$)**

A (second)	70	64	60	56	52	49	47	44	42	40	38
B (W)	600	650	700	750	800	850	900	950	1000	1050	1100

2. MICROWAVE RADIATION TEST

WARNING
1. Make sure to check the microwave leakage before and after repair of adjustment.
2. Always start measuring of an unknown field to assure safety for operating personnel from microwave energy.
3. Do not place your hands into any suspected microwave radiation field unless the safe density level is known.
4. Care should be taken not to place the eyes in direct line with the source of microwave energy.
5. Slowly approach the unit under test until the radiometer reads an appreciable microwave leakage from the unit under the test.

PROCEDURE



1. Prepare Microwave Energy Survey Meter, 600cc glass beaker, and glass thermometer 100°C (212°F).

2. Pour 275cc ± 15cc of tap water initially at 20 ± 5°C (68 ± 9°F) in the 600 cc glass beaker with an inside diameter of approx. 95 mm(3.5 in.).

3. Place it at the center of the tray and set it in a cavity.

4. Close the door and operate the oven.

5. Measure the leakage by using Microwave Energy Survey Meter with dual ranges, set to 2450MHz.
   1) Measured radiation leakage must not exceed the value prescribed below. Leakage for a fully assembled oven with door normally closed must be less than 4mW/Cm^2.
   2) When measuring the leakage, always use the 5 cm (2 in.) space cone with probe. Hold the probe perpendicular to the cabinet and door. Place the space cone of the probe on the door, cabinet, door seem, door viewing screen, the exhaust air vents and the suction air vents.
   3) Measuring should be in a counter-clockwise direction at a rate of 1 in./sec. If the leakage of the cabinet door seem is unknown, move the probe more slowly.
   4) When measuring near a corner of the door, keep the probe perpendicular to the areas making sure the probe end at the base of the cone does not get closer than 2 in. from any metal. If it does not, erroneous reading may result.

3. COMPONENT TEST PROCEDURE

- High voltage is present at the high voltage terminal of the high voltage transformer during any cooking cycle.
- It is neither necessary nor advisable to attempt measurement of the high voltage.
- Before touching any oven components or wiring, always unplug the oven from its power source and discharge the capacitor.

1. High voltage transformer

1) Remove connections from the transformer terminals and check continuity.
2) Normal readings should be as follows :
   Secondary winding ... Approx. 146Ω±10%
   Filament winding ... Approx. 0Ω
   Primary winding ... Approx. 2Ω

2. High voltage capacitor

1) Check continuity of capacitor with meter on the highest OHM scale.
2) A normal capacitor will show continuity for a short time, and then indicate 10MΩ once the capacitor charged.
3) A shorted capacitor will show continuous continuity.
4) An open capacitor will show constant 10MΩ.
5) Resistance between each terminal and chassis should be infinite.

3. High voltage diode

1) Isolate the diode from the circuit by disconnecting the leads.
2) With the ohmmeter set on the highest resistance scale measure the resistance across the diode terminals. Reverse the meter leads and again observe the resistance reading. Meter with 6V, 9V or higher voltage batteries should be used to check the front-back resistance of the diode, otherwise an infinite resistance may be read in both directions. A normal diode's resistance will be infinite in one direction and several hundred k in the other direction.

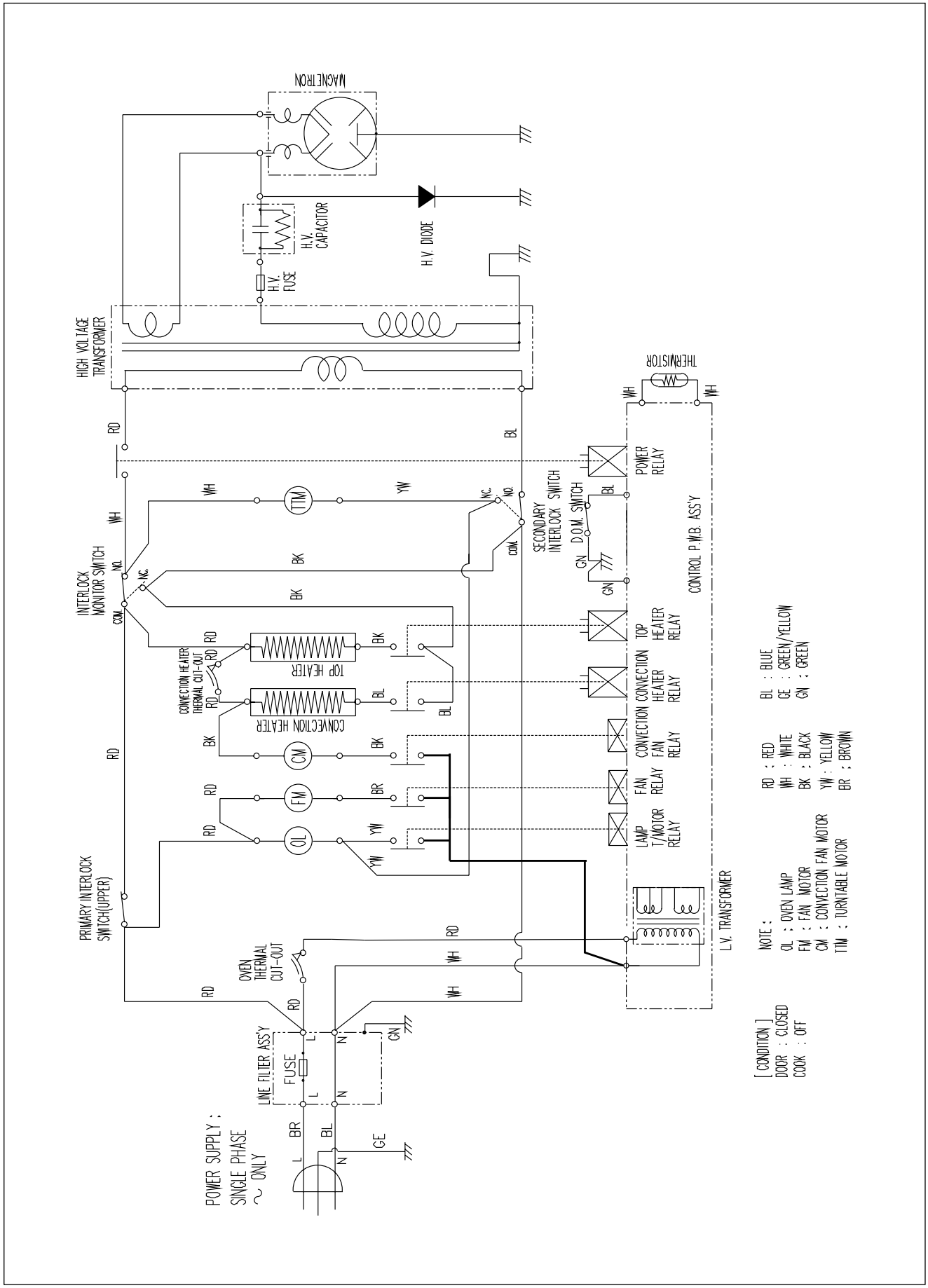
4. Magnetron

For complete magnetron diagnosis, refer to "Measurement of the Microwave Power Output." Continuity checks can only indicate and open filament or a shorted magnetron. To diagnose for an open filament or a shorted magnetron,
1) Isolate magnetron from the circuit by disconnecting the leads.
2) A continuity check across magnetron filament terminals should indicate 0.1Ω or less.
3) A continuity check between each filament terminal and magnetron case should read open.

5. Fuse

If the fuse in the primary and monitor switch circuit is blown when the door is opened, check the primary and monitor switch before replacing the blown fuse. In case the fuse is blown by an improper switch operation, replace the defective switch and fuse at the same time. Replace just the fuse if the switches operate normally.

10. WIRING DIAGRAM



11. EXPLODED VIEW AND PARTS LIST

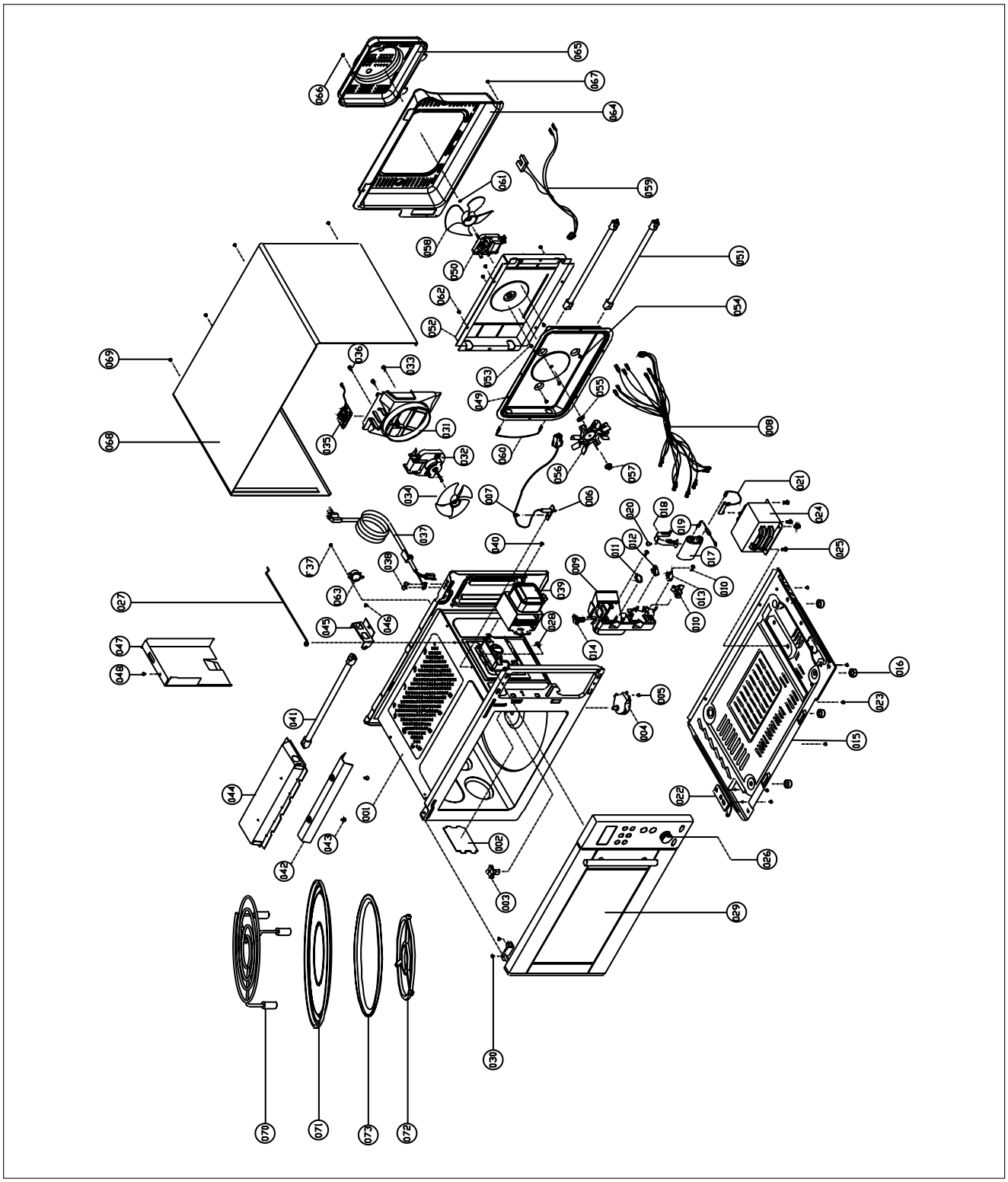
1. DOOR ASSEMBLY

Refer to 6. Disassembly and assembly.

2. CONTROL PANEL ASSEMBLY

Refer to 6. Disassembly and assembly.

3. TOTAL ASSEMBLY



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NO	PART CORD	PART NAME	DESCRIPTION	Q'TY
1	NO DISPONIBLE	CAVITY AS	KOC-8H5T7S	1
2	3511403800	COVER WAVE GUIDE	MICA T0.35	1
3	3517400610	COUPLER	TEFLON	1
4	3966031700	MOTOR SYNCRO	220/240V 50/60HZ SM16 HK36M6F6	1
5	'NO DISPONIBLE	SCREW TAPPING	T2S PAN 4X6 MFZN	1
6	NO DISPONIBLE	SENSOR TEMPERATURE	MWS-DWM-0010-0	1
7	NO DISPONIBLE	SCREW SPECIAL	TT3 TRS 4X8 SE MFZN	1
8	NO DISPONIBLE	HARNESS MAIN	KOC-8H5T7S	1
9	NO DISPONIBLE	LOCK	CHEIL(FH-44N)	1
10	NO DISPONIBLE	LEVER LOCK	POM	1
11	4415A17352	SW MICRO	VP-533A-OF SPNO #187 200G	1
12	4415A66910	SW MICRO	VP-531A-OF/SZM-V16-FA-61	1
13	4415A17352	SWITCH PUSH	MP101C	1
14	3513601600	LAMP	BL 240V 25W T25 C7A H187	1
15	NO DISPONIBLE	BASE	SBHG-1 T0.7	1
16	NO DISPONIBLE	FOOT	DASF-310	4
17	3518303401	CAPACITOR HV	2100VAC 1.05UF #187	1
18	NO DISPONIBLE	HOLDER HV CAPACITOR	SECC T0.8	1
19	3518400900	DIODE HV	CL01-12	1
20	NO DISPONIBLE	SCREW TAPTITE	TT3 TRS 4X8 MFZN	1
21	3518700200	FUSE HV	5KV 0.7A	1
22	NO DISPONIBLE	STOPPER HINGE *U AS	KOR-121M0A	1
23	NO DISPONIBLE	SCREW TAPPING	T1 TRS 4*10 MFZN	5
24	3518122830	TRANS HV	R1S592 ES00	1
25	NO DISPONIBLE	SPECIAL SCREW	TT3 HEX 4X8 FLG MFZN	4
26	PKCPSWGE00	CONTROL-PANEL AS	KOC-8H5T7S	1
27	NO DISPONIBLE	SUPPORTER WIRE	SWRH MFZN	1
28	NO DISPONIBLE	SCREW TAPPING	T2S TRS 4X12 MFZN	1
29	3511726400	DOOR AS	KOC-8H5T7S	1
30	NO DISPONIBLE	SPECIAL SCREW	TT3 HEX 4X8 FLG MFZN	2
31	NO DISPONIBLE	GUIDE WIND	PP GP-3152F FH44N NC	1
32	3963512310	MOTOR SHADED POLE	230V 20W MW10CA-M03	1
33	NO DISPONIBLE	SCREW TAPPING	T2S PAN 4X25 MFZN	2
34	3511800300	FAN	PP+30%GLASS	1
35	3518606100	NOISE-FILTER	DWLF-M13	1
36	NO DISPONIBLE	SCREW TAPPING	T2S TRS 4X12 MFZN	1
37	NO DISPONIBLE	CORD POWER AS	3X1.5 80X80 120-RTML 1.4M	1

NO	PART CORD	PART NAME	DESCRIPTION	Q'TY
38	NO DISPONIBLE	SCREW TAPPING	T1 TRS 4*10 MFZN	2
39	3518002400	MAGNETRON	2M218JFL 6CF	1
40	NO DISPONIBLE	SPECIAL SCREW	T2 BOLT FLANGE 5X12 DACRO	1
41	3512805800	HEATER MIRACLON	230V 800W 270MM	1
42	NO DISPONIBLE	HEATER REFLECTOR	STS430 T0.5	1
43	NO DISPONIBLE	SCREW TAPPING	T1 BIN 4X8 MFNI	2
44	NO DISPONIBLE	COVER HEATER *T	SA1D-80 T0.4	1
45	NO DISPONIBLE	BRACKET COVER HEATER	SECC T0.5	1
46	NO DISPONIBLE	SCREW TAPPING	T1 TRS 4*10 MFZN	1
47	NO DISPONIBLE	GUIDE AIR OUTLET	SBHG T0.5	1
48	NO DISPONIBLE	SCREW TAPPING	T1 TRS 4*10 MFZN	1
49	NO DISPONIBLE	COVER HEATER *B	SA1D-80 T0.5	1
50	3963514330	MOTOR SHADED POLE	230V 50HZ MW10CA-T03	1
51	3512807310	HEATER QUARTZ	115V 500W 240MM A	2
52	NO DISPONIBLE	INSULATOR HEATER *B	SBHG-1 T0.6	1
53	NO DISPONIBLE	SCREW MACHINE	PAN 4X8 PW MFZN	2
54	NO DISPONIBLE	SCREW TAPPING	T1 BIN 4X8 MFNI	3
55	NO DISPONIBLE	WASHER PLAIN	PW-1-4 MFZN	1
56	3511800700	FAN CONVECTION	SA1D-80 T0.5	1
57	NO DISPONIBLE	SPECIAL SCREW	NUT FLANGE M4 MFZN	1
58	3511800900	FAN	PBT	1
59	NO DISPONIBLE	HARNESS CONVECTION *A	KOC-8H5T7S	1
60	NO DISPONIBLE	HARNESS CONVECTION *B	KOC-8H5T7S	1
61	NO DISPONIBLE	RING C	CR-5 SK5	1
62	NO DISPONIBLE	SCREW TAPPING	T2S TRS 4X6 MFZN	4
63	NO DISPONIBLE	THERMOSTAT	OFF:160 ON:0 V #187	1
64	NO DISPONIBLE	COVER *B	SBHG-3 T0.4	1
65	NO DISPONIBLE	COVER MOTOR *B	SA1D-80 T0.5	1
66	NO DISPONIBLE	SCREW TAPTITE	TT3 TRS 4X8 MFZN	1
67	NO DISPONIBLE	SCREW TAPPING	T1 TRS 4*10 MFZN	1
68	NO DISPONIBLE	CABINET AS	KOC-871C0S	1
69	NO DISPONIBLE	SCREW TAPPING	T1 TRS 4*10 MFZN	4
70	3517201951	TRAY RACK AS	KOR-17551S 30MM	1
71	3517210900	TRAY METAL AS	KOC-624S0J	COMPATIBLE: 3517205500
72	3512517100	GUIDE ROLLER AS	KOG-62150S	1
73	3517203610	TRAY	BORO-SI GLASS(NEG)	1