

# Service Manual Microwave Oven

Model : KOG-87550S

**DAEWOO**



**DAEWOO ELECTRONICS CO., LTD.  
OVERSEAS SERVICE DEPT.**

## ***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.

## ***TABLE OF CONTENTS***

PROPER USE AND SERVICE PRECAUTIONS .....	2
SPECIFICATIONS.....	4
EXTERNAL VIEWS.....	4
NAMES AND FUNCTION OF PARTS .....	5
CONTROL PANEL .....	6
HOW TO SET THE OVEN CONTROLS.....	7
INTERLOCK MECHANISM FUNCTIONS AND ADJUSTMENTS .....	10
PRECAUTIONS FOR DISASSEMBLY AND REPAIR .....	12
DISASSEMBLY AND ASSEMBLY.....	13
TROUBLE SHOOTING GUIDE .....	21
MEASUREMENT .....	25
COMPONENT TEST PROCEDURE .....	27
WIRING DIAGRAM .....	28
EXPLODED VIEW.....	29

# PROPER USE AND SERVICE PRECAUTIONS

**CAUTION** : This Device is to be Serviced Only by Properly Qualified Service Personnel. Consult the Service Manual for Proper Service Procedures to Assure Continued Safety Operation and for Precautions to be Taken to Avoid Possible Exposure to Excessive Microwave Energy.

## 1. For Safe Operation

Damage that allows the microwave energy (that cooks or heats the food) to escape will result in poor cooking and may cause serious bodily injury to the operator.

IF ANY OF THE FOLLOWING CONDITIONS EXIST, OPERATOR MUST NOT USE THE APPLIANCE.

(Only a trained service personnel should make repairs.)

- 1) A broken door hinge.
- 2) A broken door viewing screen.
- 3) A broken front panel, oven cavity.
- 4) A loosened door lock.
- 5) A broken door lock.

The door gasket plate and oven cavity surface must be kept clean.

No grease, soil or spatter should be allowed to build up on these surfaces or inside the oven.

DO NOT ATTEMPT TO OPERATE THIS APPLIANCE WITH THE DOOR OPEN. The microwave oven has concealed switches to make sure the power is turned off when the door is opened. Do not attempt to defeat them.

DO NOT ATTEMPT TO SERVICE THIS APPLIANCE UNTIL YOU HAVE READ THIS SERVICE MANUAL.

## 2. Correct Installation

- 1) This microwave oven weighs 17.6kg(38.9 lbs.) and must be placed on a horizontal base strong enough to support this weight.
- 2) The oven should be placed as far from high temperature source and vapour as possible.
- 3) The power supply cord is about 1.1m (2.6ft) long. Earthing is required when connecting the power source.
- 4) Power consumption of this oven is approximately 1.4 kw. It is suggested that the unit is operated on such power line(about 12.0 amperes) that can provide more power than this rating.
- 5) Object must not be placed on the top enclosure so as not to obstruct air flow for ventilation.

### CAUTION

#### 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 CONNECTED. ALL INPUT AND OUTPUT MICROWAVE CONNECTIONS, WAVEGUIDE, FLANGES AND GASKETS 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

---

## IMPORTANT

The wires in this mains lead coloured in accordance with the following code.

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

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked with the letter 'E' or by earth symbol or green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter 'N' or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter 'L' or coloured red.

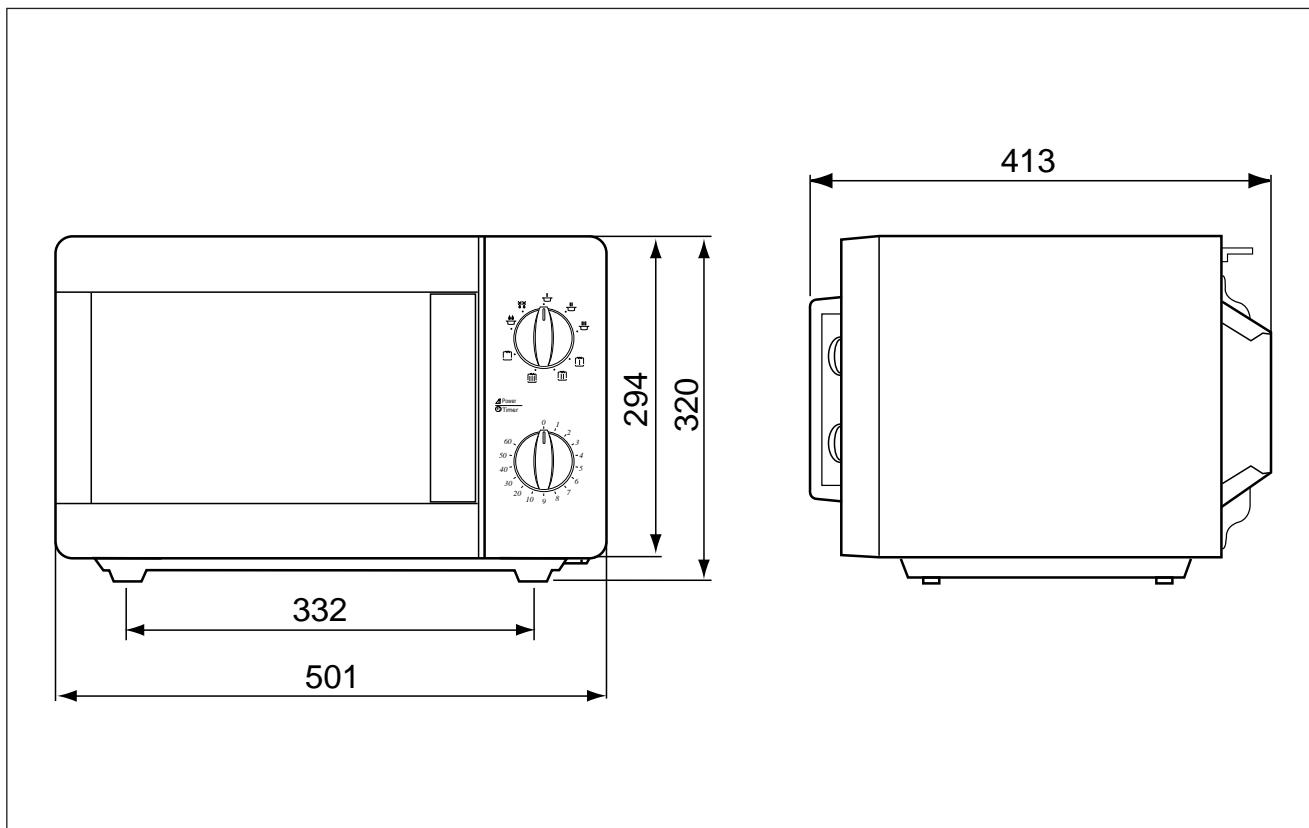
**NOTE :** This oven is designed for counter-top use only.

# SPECIFICATIONS

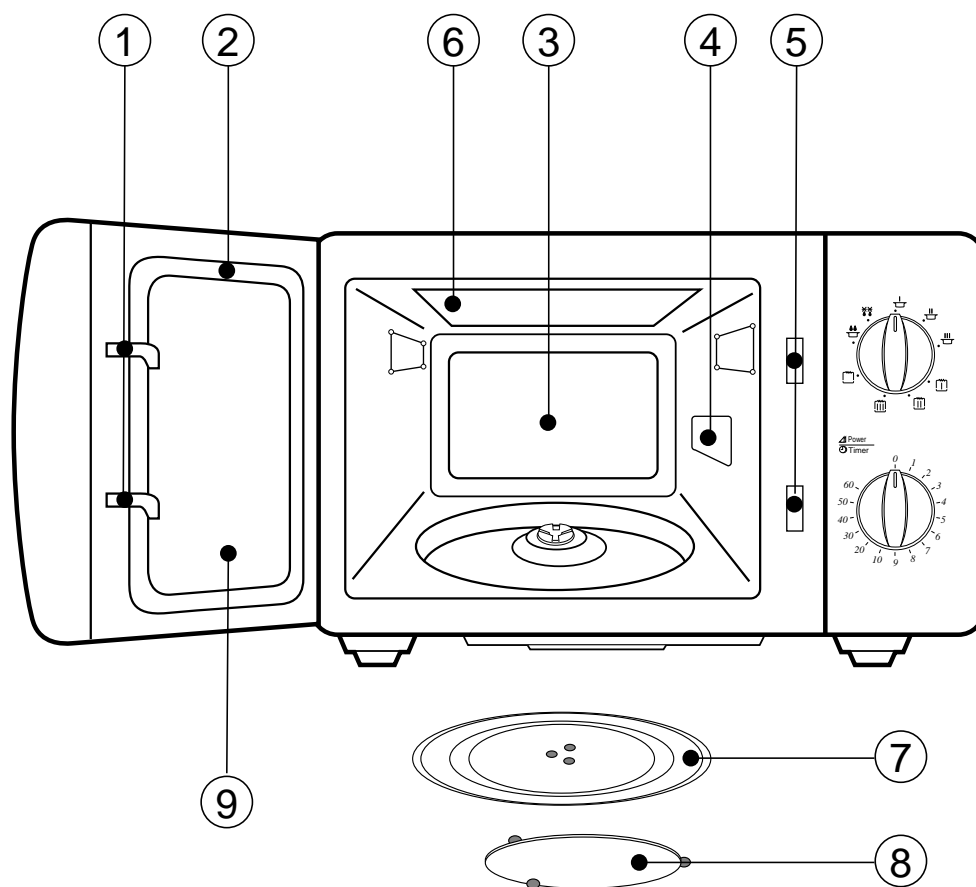
Power Supply		230V~, 50Hz, single phase with earthing
Microwave	Power Consumption	1,400 W
	Output Power	900W (IEC 705)
	Frequency	2,450 MHz
Grill power consumption		1,150 W
Combination Heating Power Consumption		2,500 W
Outside Dimensions (W X H X D)		501 X 320 X 413 mm (19.7 X 12.6 X 16.2 in.)
Cavity Dimensions (W X H X D)		310 X 229 X 320 mm (12.2 X 9.0 X 12.6 in.)
Net Weight		Approx. 17.6 kg (38.9 lbs.)
Timer		60 min. Dual
Select Function		Microwave / Grill / Combination Heating
Microwave Power Level		High / Med High / Med / Defrost / Low (900W) (695W) (495W) (290W) (150W)
Combination Heating Level		3-Level( Grill+M/W 3-Power levels)

\* Specifications subject to change without notice.

# EXTERNAL VIEWS



# NAMES AND FUNCTION OF PARTS



**① Door latch**

When the door is closed it will automatically lock shut. If the door is opened while the oven is operating. The magnetron will automatically shut off.

**② Door seal**

The door seal maintains the microwave within the oven cavity and prevents microwave leakage.

**③ Oven cavity**

**④ Spatter shield**

Protects the microwave outlet from splashes of cooking foods.

**⑤ Safety interlock system**

Prevents the oven from operating while the door is opened.

**⑥ Heater**

Grill or Combi Mode has need for the heater.

**⑦ Glass cooking tray**

Made of special heat resistant glass. The tray must always be in proper position before operating. Do not cook food directly on the tray.

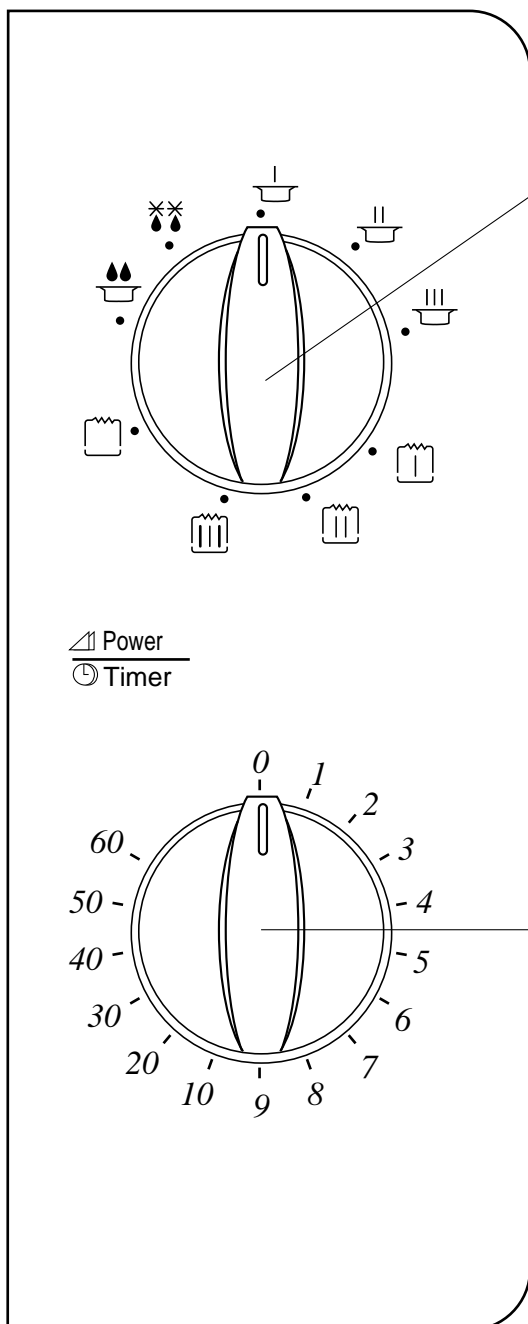
**⑧ Roller guide**

Supports the glass cooking tray.

**⑨ Door screen**

Allows viewing of food. The screen is designed so that light can pass through, but not the microwaves.

# CONTROL PANEL



## POWER OR FUNCTION SELECT KNOB

- Used to select a microwave power level in M/W, GRILL or SIMUL. cooking.
- Used to select a function before the cooking.
  - 1) M/W OVEN-used to heat food with microwave.
  - 2) GRILL-Used to browning food with grill heater.
  - 3) COMBINATION-used to simultaneous cooking with microwave and grill heater.

## TIMER KNOB

- Used in setting cooking time for all functions.

### NOTE :

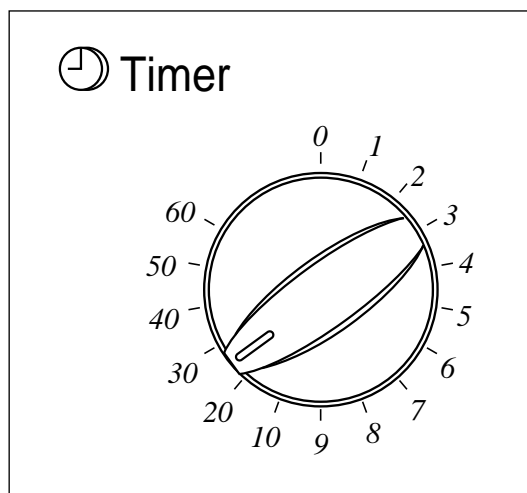
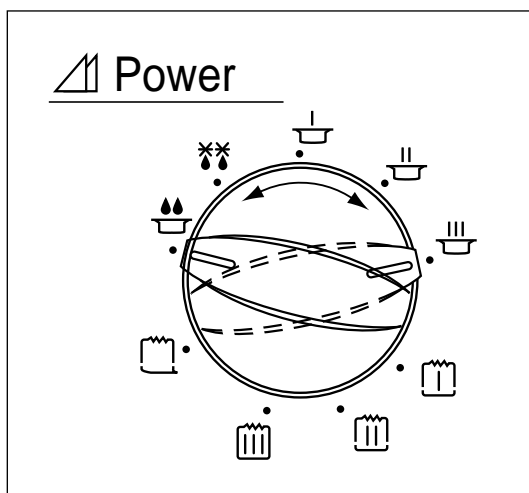
When setting TIMER for less than 1 minute, turn the TIMER past 1 minute and then return to correct timing.

# HOW TO SET THE OVEN CONTROLS

- NOTE :**
- Be sure to read the cookbook's introduction before operating the oven.
  - Also remember to read this operating instruction for proper safety information and instruction before using the oven.
  - See the cookbook for specific recipes.
  - Prior to setting the controls, place one cup of water in the oven, in a heat-proof glass measuring cup, for testing purposes.
  - You may open the door while the oven is operating.
  - As soon as the door is opened, the safety mechanisms stop power.
  - To continue cooking, close door, then the oven is operated.
  - If you wish to change the time during cooking, simply adjust the TIMER to desired minutes.
  - When time has elapsed, a bell will ring and the oven will turn off.

## 1. MICROWAVE DEFROST

- This oven has 5-power levels in microwave cooking.
  - You can select these levels by POWER knob.
1. Place food inside oven.
  2. Set POWER knob to appropriate M/W power level position.
  3. Set TIMER knob to the cooking time.



SYMBOL	M/W POWER LEVEL	OUTPUT POWER
	LOW	150W
	DEFROST	290W
	MEDIUM	495W
	MED. HIGH	695W
	HIGH	900W

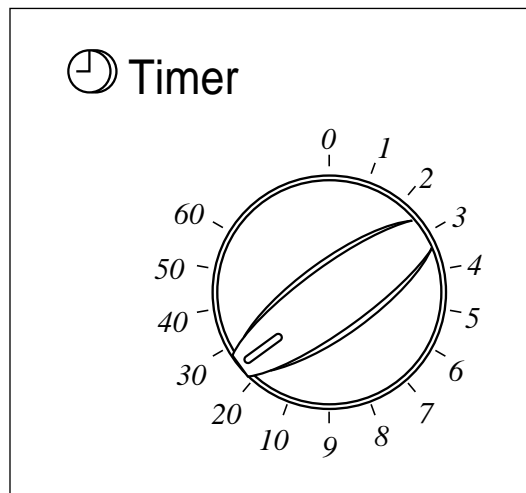
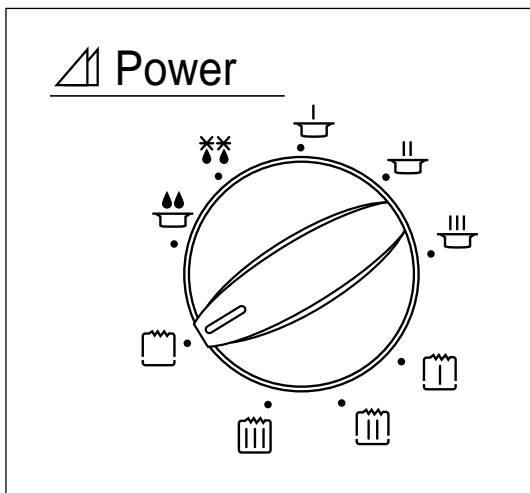
**NOTE :** Output power refer to a value of reference.



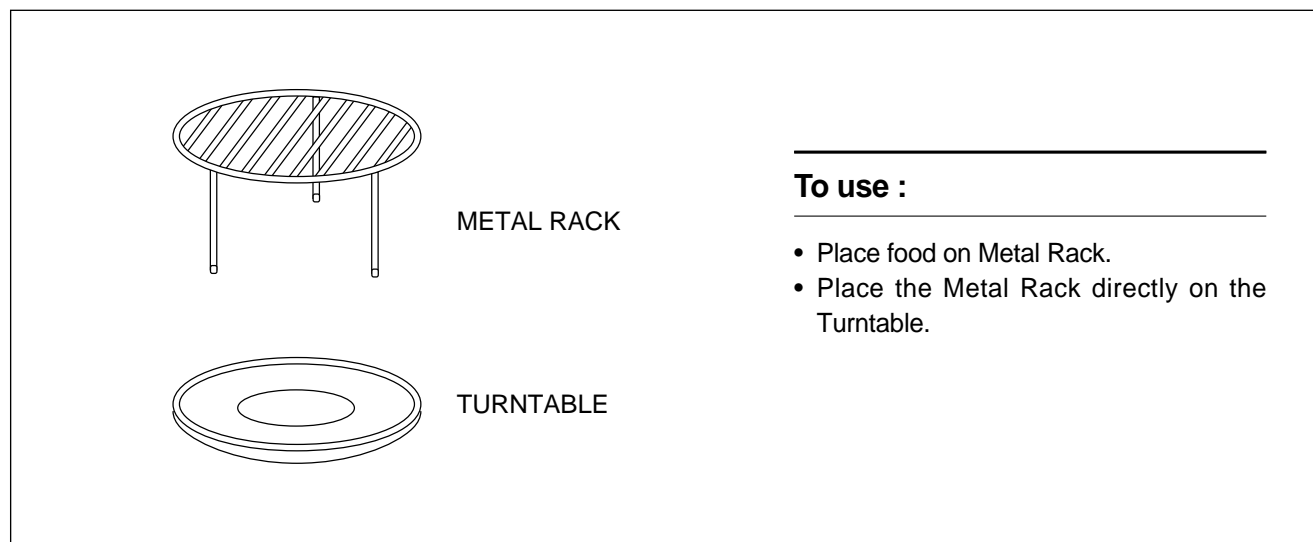
## 2. GRILL COOKING

- Grilling in this oven is similar to conventional broiling.
- There is no need to preheat the oven for griling.

1. Place food on the Metal Rack, and set it on the Tray.
2. Set POWER knob to GRILL position.
3. Set TIMER knob to the cooking time.

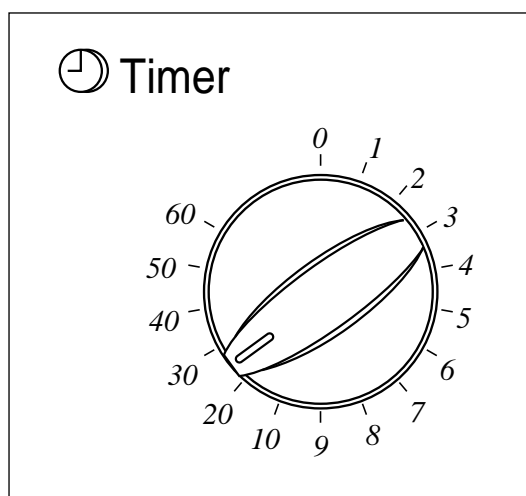


**EXAMPLE : To Grill hamburgers, steaks, kabobs, etc. use the trays this way:**



- This oven has 3-cooking levels in COMBINATION-COOKING.
- You can select these levels by POWER knob.

1. Place food on the Metal Rack or Tray.
2. Set POWER knob to COMBINATION position.
3. Set TIMER knob to the cooking time.



- To prevent the oven operating with the door open, this oven is fitted with safety door interlock switches. If you wish to inspect the food during the cooking time, simply open the door. The oven will automatically stop the cooking.
- To continue cooking, close the door.
- If you wish to stop the cook during the cooking, simply turn the timer knob to the point “OFF”. Cooking time can be reset at any time during cycle by turning the timer knob.
- Do not let the timer continue to operate after removing food.
- Never touch the oven window and metal interior of the oven when taking food in and out. The temperature inside the oven and door is quite high.
- When using these modes, be careful as the trays will be hot to touch, use oven mitts or pot holders while handling trays.

1. When cook a roast with an excess amount of drippings, it is helpful to remove the drippings at turnover time to prevent spattering.
2. Prick the meats, fish or poultry with a fork to prevent bursting. Steam builds up pressure in meats, fish or poultry which are tightly covered by a skin or membrane.
3. Reduce suggested cooking times. It is always better to undercook foods rather than to overcook them. If a range of times is stated in a recipe, cook the minimum suggested time, check for doneness, and then cook slightly longer if necessary.

# ***INTERLOCK MECHANISM FUNCTIONS AND ADJUSTMENTS***

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

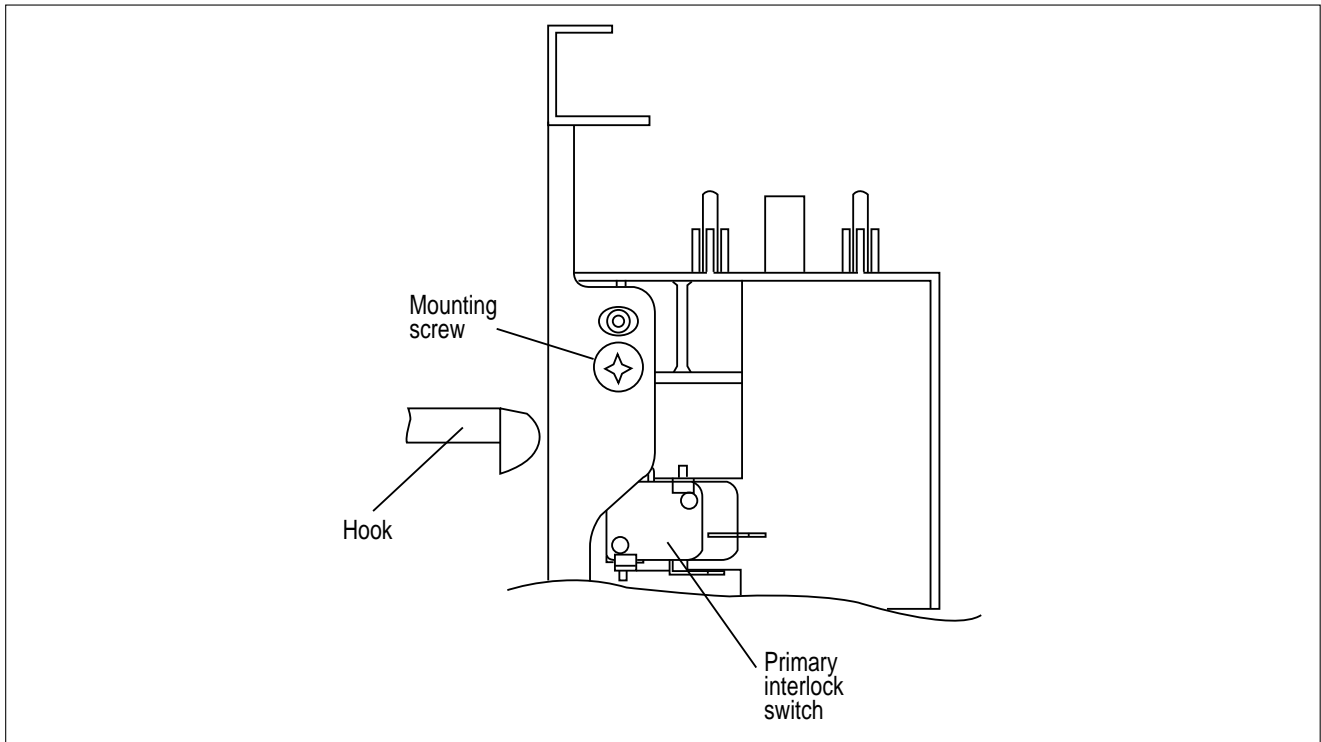
## **(1) Primary interlock switch**

When the door is closed, the hook locks the oven door.

If the door is not closed properly, the oven will not operate.

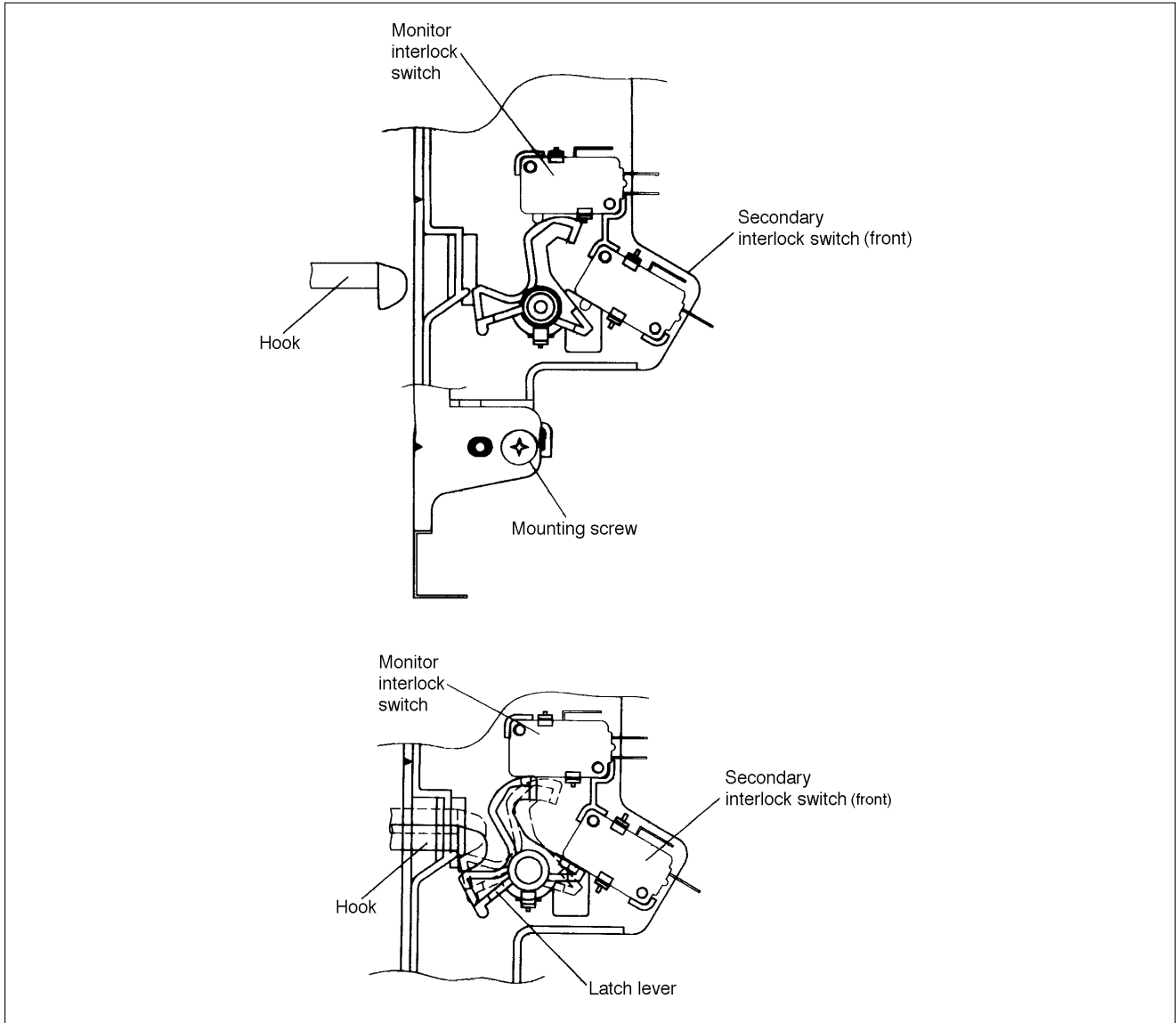
When the door is closed, the hook pushes the lever downward.

The lever press the button of the primary interlock switch to bring it under 'ON' condition.



## (2) Monitor interlock switch

When the door is closed, the hook pushes the lever forward, and pushes the Latch Lever downward the lever press the button of the interlock monitor switch to bring it under 'OFF' condition. The latch Lever press the button on the secondary interlock switch to bring it under 'ON' condition.



### - Adjustment

#### Interlock monitor switch

When the door is closed, the monitor switch should be opened before other switches close.  
When the door is opened, the monitor switch should be closed after other switches open.

#### Adjustment steps :

- Loosen the two mounting screws.
- Adjust the interlock switch assembly position.
- Make sure that the latch lever moves smoothly after adjustment is completed.
- Completely tighten the two mounting screws.

# PRECAUTIONS FOR DISASSEMBLY AND REPAIR

– Cautions to be observed when trouble shooting.

Unlike many other appliances, the microwave oven is high-voltage, high-current equipment. It is completely safe during normal operation. However, carelessness in servicing the oven can result in an electric shock or possible danger from a short circuit.

You are asked to observe the following precautions carefully.

- (1) Always remove the power plug from the outlet before servicing.
- (2) Use an insulated screwdriver and wear rubber gloves when servicing the high voltage side.
- (3) Warning about the electric charge in the high voltage capacitor. When inspecting and repairing the high voltage side, always short the capacitor terminals and make sure of discharge.

## 1. Check the earthing.

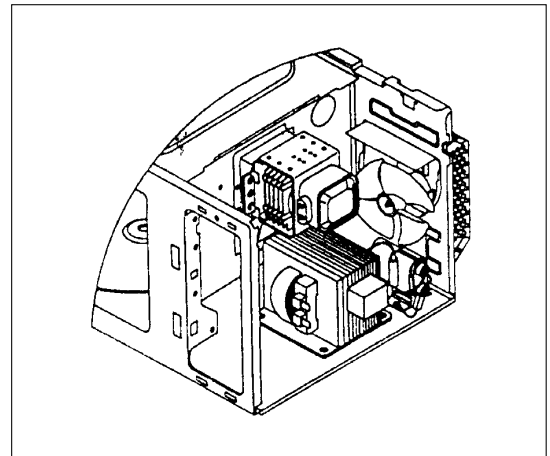
Do not operate on a 2-wire extension cord.

The microwave oven is designed to be used when earthed.

It is imperative, therefore, to make sure it is earthed properly before beginning repair work.

## 2. Warning about the electric charge in the high voltage capacitor.

For about 30 seconds after the operation stops, electric charge remains in the high voltage capacitor. When replacing or checking parts, short between oven chassis and the negative high terminal of the high voltage capacitor by using a properly insulated screw driver to discharge.



- (4) When the 15 Amp fuse (normal blow type) is blown due to the operation of the monitor switch; replace primary, secondary interlock switch and monitor switch. Refer to 11 page for the necessary adjustment.
- (5) After repair or replacement of parts, make sure that the screws are properly tightened and all electrical connections are tightened.
- (6) Do not operate without cabinet.

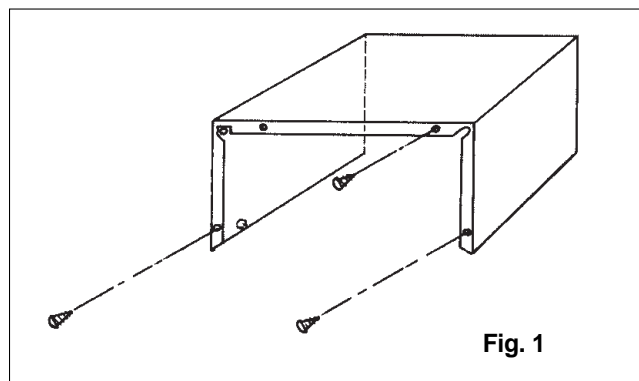
**CAUTION :** Service personnel should remove their watches whenever working close to or repairing the magnetron.

**WARNING :** When servicing the appliance, take a care when touching or replacing high potential parts because of electrical shock or exposing microwave. These parts are as follows - H.V. Transformer, magnetron, H.V. Diode, H.V. Capacitor.

# DISASSEMBLY AND ASSEMBLY

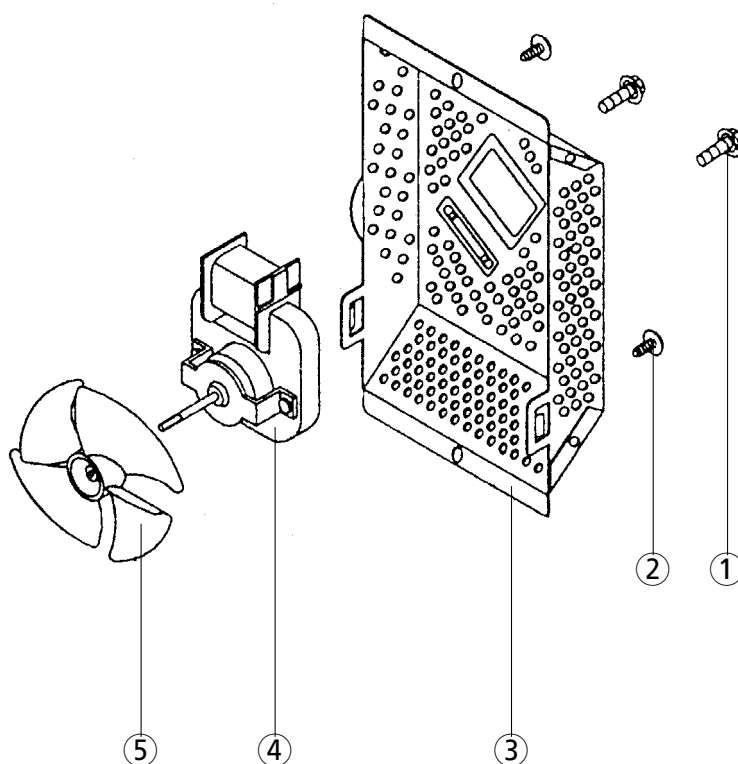
## 1. To remove cabinet. (Refer to Fig. 1)

- 1) Remove three screws on cabinet back.
- 2) Push the cabinet backward.



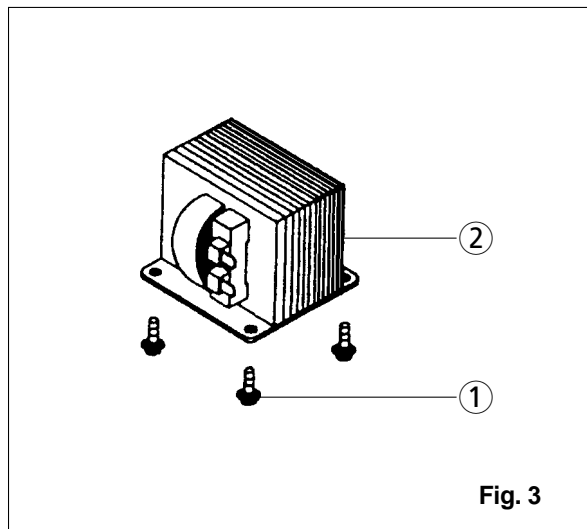
## 2. To remove guide wind assembly. (Refer to Fig. 2)

- 1) Release an two screws ②.
- 2) Remove back-cover ③.
- 3) Pull the fan ⑤ to the motor shaft.
- 4) Release two screws ① which secure the motor shaded pole ④.
- 5) Reverse the above steps for reassembly.

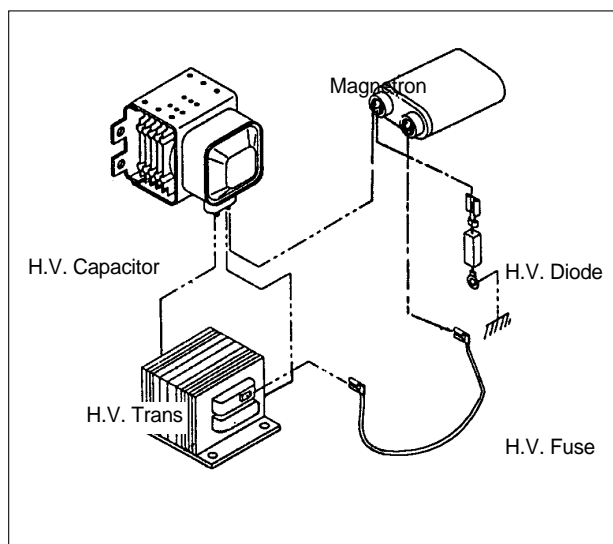


### 3. To remove H.V. transformer. (Refer to Fig. 3)

- 1) Remove four screws ① which secure the H.V. Transformer bracket to the base plate.
- 2) Remove the H.V. Transformer ②.



### High voltage circuit wiring



#### 4. To remove magnetron. (Refer to Fig. 4)

- 1) Remove one screw ② which secure the magnetron ①.
- 2) Remove the magnetron.
- 3) Reverse the above steps for reassembly.

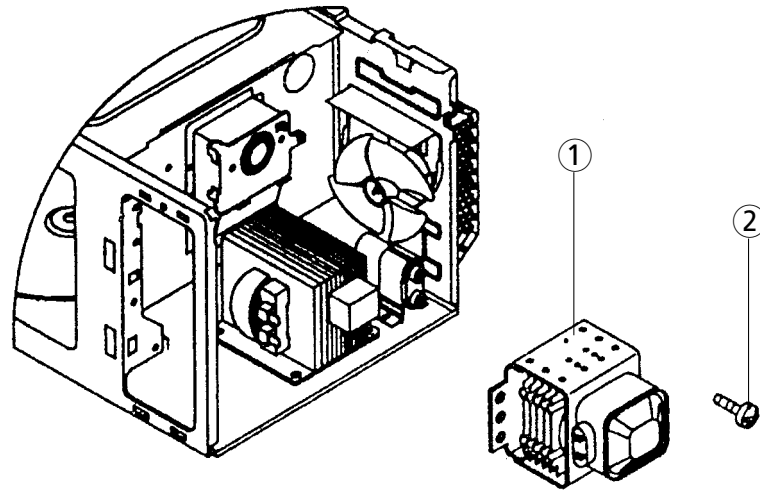
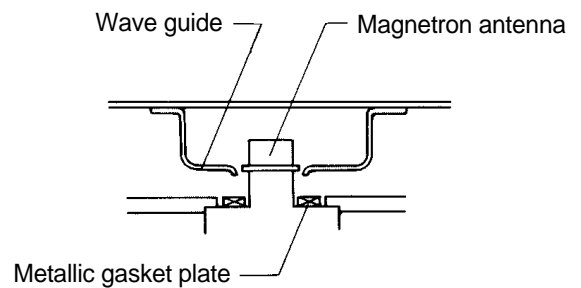
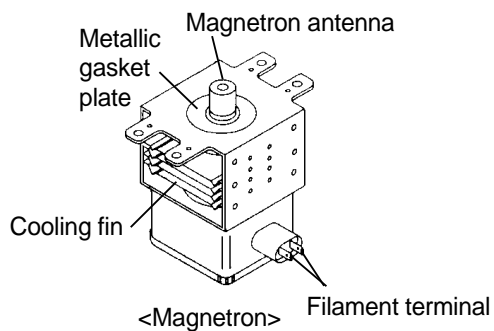


Fig. 4

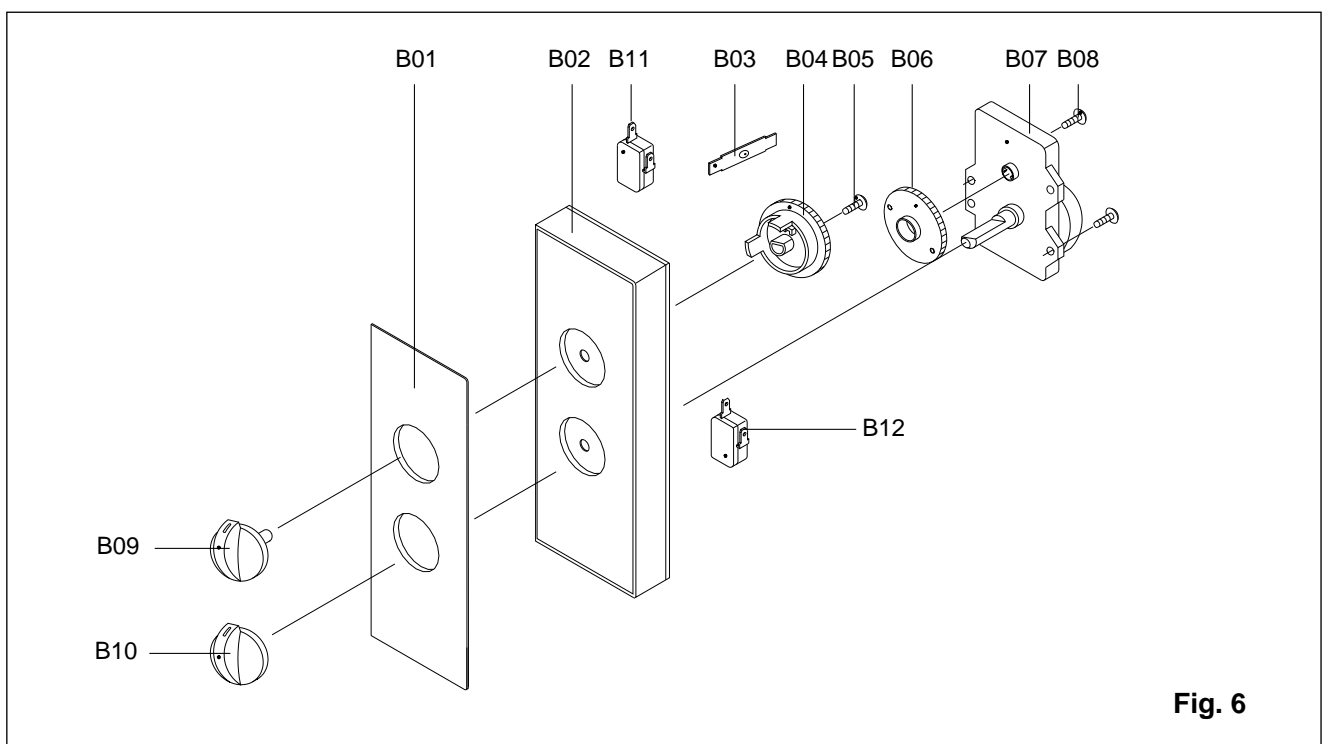
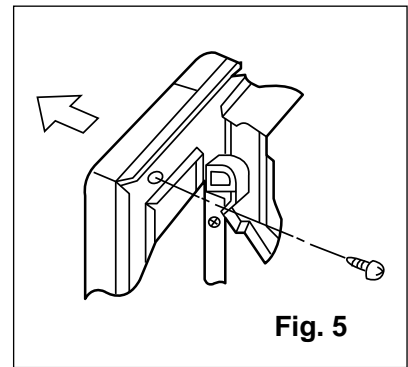
**CAUTION :** Never install the magnetron without the metallic gasket plate which is packed with each magnetron to prevent microwave leakage. Whenever repair work is carried out on magnetron, check the microwave leakage. It shall not exceed  $4\text{mW}/\text{cm}^2$  for a fully assembled oven with door normally closed.





## 5. To remove parts of control panel assembly (Refer to Fig. 5, 6)

- 1) Remove a screw holding control panel assembly to the oven front plate.  
At the same time, draw forward the control panel assembly from oven front plate.
- 2) Remove two screws which secure the timer assembly.
- 3) Remove the timer assmebly.
- 4) Pull out the knob from the timer assembly.
- 5) Pull out the coupler timer from the timer assembly.
- 6) Pull out the sw MICRO from the control panel.
- 7) Remove a screw which secure the coupler VPC knob.
- 8) Pull out the coupler VPC knob and knob VPC from the control panel.
- 9) Remove the spring flat.
- 10) Pull out the sw MICRO from the control panel.
- 11) Reverse the above steps for reassembly.



REF. NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
B01	3511602610	DECIRATOR C-PANEL	STS 304 T0.6 H/L	1	
B02	3516717950	C-PANEL	ABS XR-401	1	
B03	3515101600	SPRING FLAT	SUS301 T0.5	1	
B04	3517401200	COUPLER VPC KNOB	POM	1	
B05	7112401211	SCREW TAPPING	T1 TRS 4X12 MFZN	1	
B06	3517401100	COUPLER TIMER	POM	1	
B07	3518204900	TIMER	KN35MKD	1	
B08	7112401211	SCREW TAPPING	T1 TRS 4X12 MFZN	2	
B09	3513402650	KNOB VPC	ABS XR-401	1	
B10	3513402550	KNOB	ABS XR-401	1	
B11	4415A66600	SW MICRO	VP-532A-OF SPNC #187	1	
B12	4415A17352	SW MICRO	VP-533A-OF SPNO #187	1	

## 6. To remove door assembly. (Refer to Fig. 7)

- 1) Remove two screws ① which secure to hinge.
- 2) Remove door assembly ②.
- 3) Remove door above for reassembly taking case to replace fixing glue.

## 7. To remove door part. (Refer to Fig. 8)

- (1) Remove the Gasket door.
- (2) Remove the Door seal Ass'y.
- (3) Remove the Hook and Spring.
- (4) Remove the Barrier Screen.
- (5) Remove a screw holding the handle.
- (6) Remove the Handle form the Frame door.

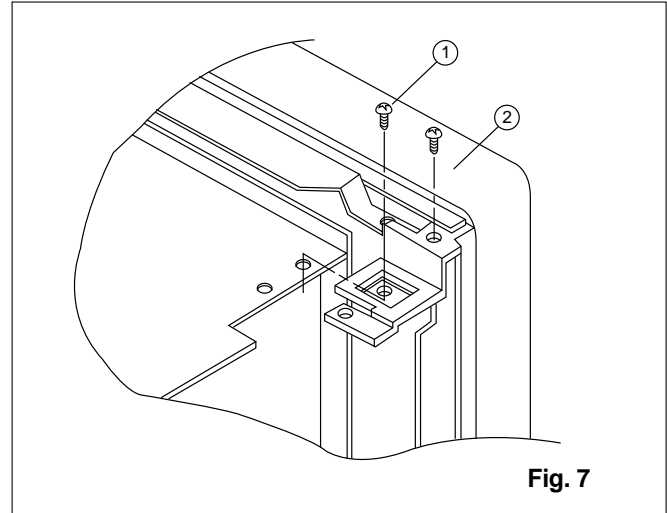


Fig. 7

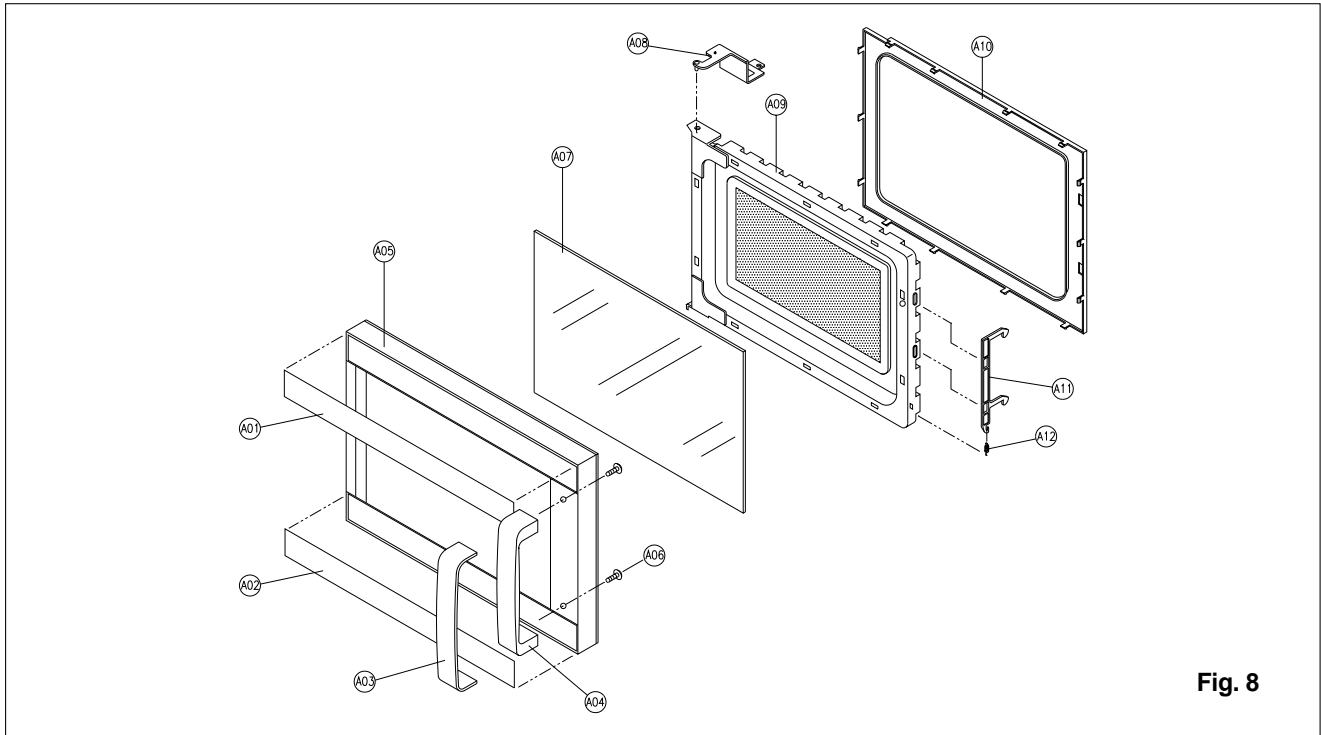
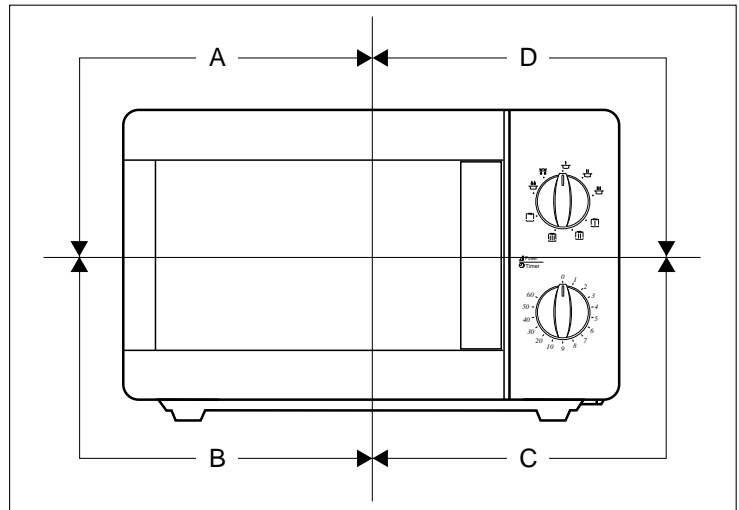


Fig. 8

REF NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
A01	3511604200	DECORATOR DOOR *T	STS304 T0.6 H/L	1	
A02	3511604300	DECORATOR DOOR *U	STS304 T0.6 H/L	1	
A03	3512602600	HANDLE DOOR *T	STS304 T0.6 H/L	1	
A04	3512602700	HANDLE DOOR *U	ABS XR-401	1	
A05	3512203590	FRAME DOOR	ABS XR-401	1	
A06	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN	2	
A07	3517004580	BARRIER-SCREEN *O	TEMPERED GLASS T3.2	1	
A08	3515203600	STOPPER HING *T AS	KOC-970T1S	1	
A09	3511709000	DOOR SEAL AS	KOC-871C0S	1	
A10	3512301310	GASKET DOOR	PP	1	
A11	3513101300	HOOK	POM	1	
A12	3515101300	SPRING HOOK	PW1	1	

## 8. Method to reduce the gap between the door seal and the oven front surface.

- (1) To reduce gap located on part 'A'.  
1) Remove the cabinet.  
2) Loosen a screw on top door hinge, then push the door to contact the door seal to oven front surface.  
3) Tighten a screw.



- (2) To reduce gap located on part 'B'.  
1) Loosen a screw on bottom hinge, then push the door to contact the door seal to oven front surface.  
2) Tighten a screw.
- (3) To reduce gap located on part 'C'.  
1) Remove the cabinet.  
2) Loosen a screw on interlock switch assembly located bottom of oven body.  
3) Draw the interlock switch assembly inward as possible to engage with hook on the door bottom.  
4) Tighten a screw.
- (4) To reduce gap located on part 'D'.  
1) Remove the cabinet.  
2) Loosen a screw on interlock switch assembly located top of oven body.  
3) and 4) are same as step (3).

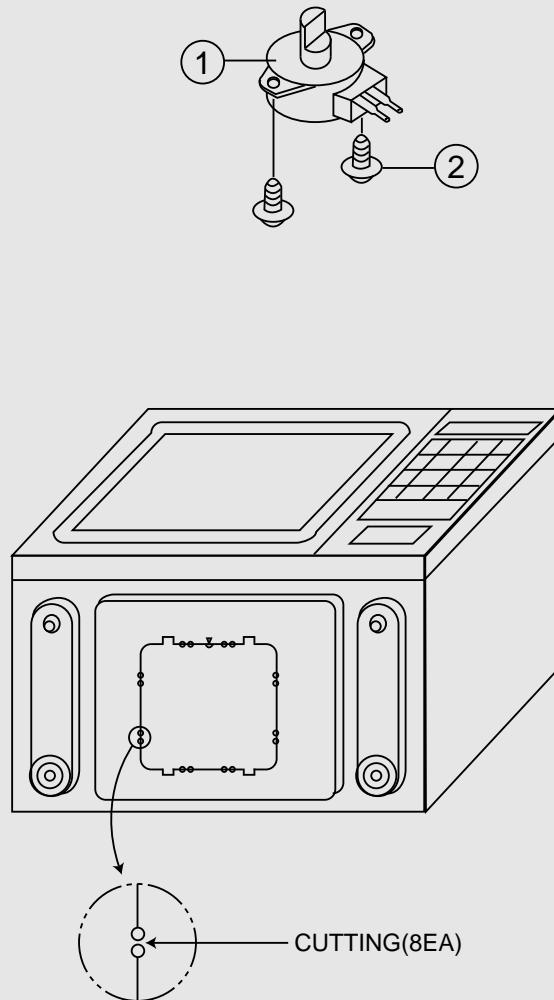
**NOTE :** Small gap may be acceptable if the microwave leakage does not exceed  $1\text{mW}/\text{cm}^2$ .

**NOTE :** The door on a microwave oven is designed to act as an electronic seal preventing the leakage of microwave energy from the oven cavity during the cook cycle. This function does not require that the door be air-tight, moisture (condensation) - Tight or light-tight. Therefore, the occasional appearance of moisture, light or the sensing of gentle warm air movement around the oven door is not abnormal and do not of themselves, indicate a leakage of microwave energy from the oven cavity. If such were the case, your oven could not be equipped with a vent, the very purpose of which is to exhaust the vapor-laden air from the oven cavity.

---

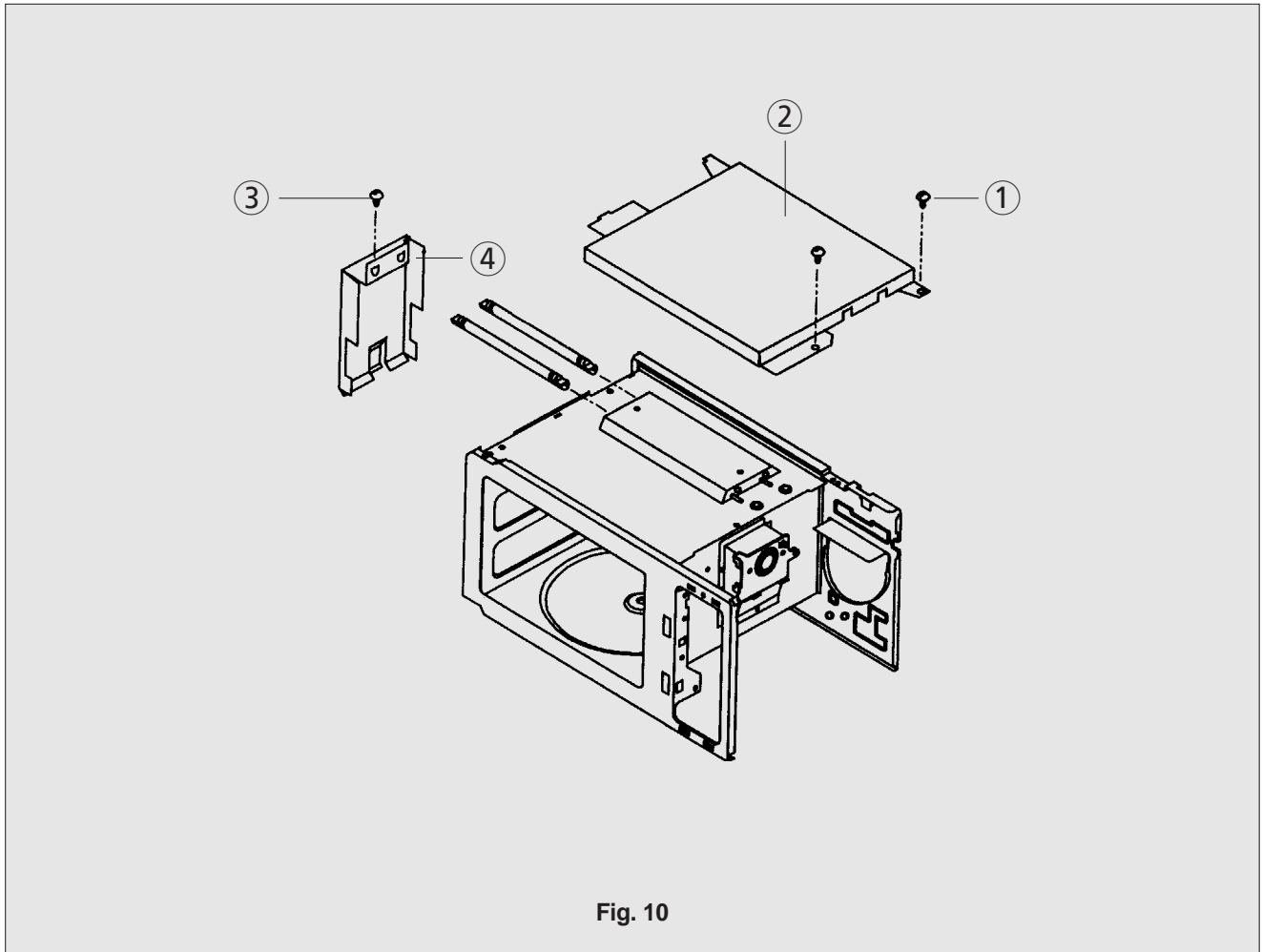
**9. To remove tray motor and under Heater. (Refer to Fig. 9)**

- 1) Cut the tray motor cover parts from the base plate (Refer to Fig. 9).
- 2) Remove two screws ② which secure the tray motor ①.



**Fig. 9**

**10. To remove grill heater assembly. (Refer to Fig. 10)**



- 1) Remove the cabinet.
- 2) Release two screws ① , and remove the Top cover ②.
- 3) Release a screws ③ , and remove Air Guide outlet ④.
- 4) Release grill Heaters Bracket ⑤.
- 5) Release the above steps for reassembly.

# ***TROUBLE SHOOTING GUIDE***

---

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

1. Check earthing before fault finding.
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 transformer, disconnect one lead 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 or replaced, be sure the power cord is not inserted in 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**

Condition	Check	Result	Cause	Remedy
Fuse blows	Check continuity of interlock monitor switch with door closed (COM↔NC)	(COM↔NC) Continuity	Malfunction of interlock monitor switch	Replace Note 1.
		No Continuity		
	Check continuity of both primary and secondary interlock switch with door closed	No Continuity	Malfunction of interlock switch	Replace Note 1.
		Continuity		
	Check continuity of primary interlock switch contact with door partially open until interlock monitor switch contact close (COM↔ NC close)	Continuity	Shorted contacts of primary interlock switch	Replace Note 1.
Outlet has proper voltage. Fuse does not blow	Check continuity both magnetron and heater thermostat	No Continuity	Defective magnetron and heater thermostat	Replace
	check continuity of noise filter board	No Continuity	Defective line filter board	Replace
	Check continuity of power supply cord	No Continuity	Open power supply cord	Replace

**NOTE 1 :** All these switches must be replaced at the same time, please refer to page 11 and 12 for adjustment instructions.

**(TROUBLE 2) Heater does not heat (Food will not become hot).**

Condition	Check	Result	Cause	Remedy
Grill heater does not heat	Check continuity of primary interlock switch	No Continuity	Malfunction of primary interlock switch	Adjust or replace
	Check continuity of heater select switch and timer switch	No Continuity	Defective timer ass'y	Replace the timer ass'y
	Check continuity of heater thermostat	No Continuity	Defective heater thermostat	Replace the heater thermostat
	Check continuity of secondary interlock switch	No continuity	Malfunction of secondary interlock switch	Adjust or replace
	Check continuity of heater	No continuity	Defective heater	Replace the heater



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

Condition	Check	Result	Cause	Remedy
No microwave oscillation	Check continuity of high voltage fuse	No Continuity		
	Replace high voltage fuse			
	Check continuity of high voltage capacitor terminals with wires removed	Continuity	Defective high voltage transformer	Replace
	Check continuity of high voltage rectifier in forward and backward direction with DC megger	Continuity in backward direction	Defective high voltage rectifier	Replace
	Connect megger leads to magnetron terminal and magnetron body	Continuity	Defective magnetron	Replace
	Check resistance of primary and secondary coil of high voltage transformer	0 $\Omega$ or $\infty$	Defective high voltage transformer	Replace
	Check continuity of magnetron heater with wires removed	No Continuity	Defective magnetron	Replace
	Check continuity of filament terminal of high voltage transformer	No Continuity	Defective high voltage transformer	Replace
	Check continuity of microwave select switch	No Continuity	Defective timer ass'y	Replace

# MEASUREMENT

## 1. Microwave Output Power

### 1-1. Standard Method

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.

- 1) Microwave power output measurement is made with the microwave oven supplied at rated voltage and operated at its maximum microwave power setting with a load of  $1,000 \pm 5$  cc of potable water.
- 2) 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.
- 3) The oven and the empty vessel are at ambient temperature prior to the start of the test. The initial temperature of the water is  $10 \pm 2^\circ\text{C}$  ( $50 \pm 3.6^\circ\text{F}$ ). 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 normal position. (Fig. 11).
- 4) Microwave power is switched on.
- 5) Heating time should be exactly 46 seconds. Heating time is measured while the microwave generator is operating at full power. The filament heat-up time magnetrons is not included.
- 6) The initial and final water temperatures are selected so that the maximum difference between the ambient and final water temperatures is 5K.
- 7) The microwave power output P in watts is calculated from the following formula:

$$P = 4187X\Delta T/t$$

- $\Delta T$  is actual temperature rise.
- $t$  is the heating time.

The power measured should be  $900\text{W} \pm 10\%$ .

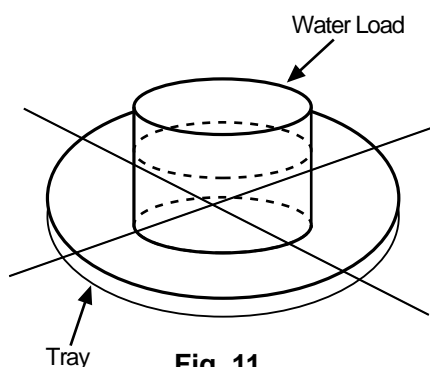


Fig. 11

### CAUTION :

1. Water load should be measured exactly to 1 litre.
2. Input power voltage should be exactly volts as specified.
3. Ambient temperature should be  $20 \pm 2^\circ\text{C}$  ( $68 \pm 3.6^\circ\text{F}$ )

## 2. Electrical Continuity Check of Interlock Switch

### 2-1. Procedure

**NOTE :** Remove the power plug from the wall receptacle before testing.

### 1. Primary Interlock Switch

- 1) Disconnect two connectors from Primary Interlock Switch.
- 2) Connect the ohmmeter leads between the terminals of the primary interlock switch.
- 3) Read the value of resistance between the terminals of the switch, when the door is opened, and when the door is closed.

### 2. Secondary Interlock Switch

- 1) Disconnect two connectors from secondary interlock switch.
- 2) Connect the ohmmeter leads between the terminals of the secondary interlock switch.
- 3) Read the value of resistance between the terminals of the switch, when the door is opened, and when the oven door is closed.

### 3. Interlock Monitor Switch

- 1) Disconnect the lead wire connecting the primary interlock switch and interlock monitor switch from primary interlock switch terminal.
- 2) Connect the ohmmeter leads between the lead wire connector disconnected as item '1' and the power supply neutral plug pin.
- 3) Read the value of resistance between the lead wire connector and the power supply neutral plug pin, when the oven door is opened, and when the oven door is closed.

## 2-2 Judgement

The value of resistance should be applied to the value specified below.

Door	Open	Closed
Primary Interlock Switch	$\infty$	0
Secondary Interlock Switch	$\infty$	0
Interlock Monitor Circuit	0	$\infty$

When value obtained is not acceptable, the switch should be replaced or adjusted again.

## 3. Microwave Leakage Test

### 3-1. Warning

- 1) DO NOT place your hands into any suspected microwave leakage field unless the safe density level is known.
- 2) Always start measuring of an unknown field to assure safety for operating personnel from microwave energy.
- 3) Slowly approach the unit under test until the radiometer reads an appreciable leakage from the unit under test.
- 4) Care should be taken not to place the eyes in direct line with the source of microwave energy.

### 3-2 Method

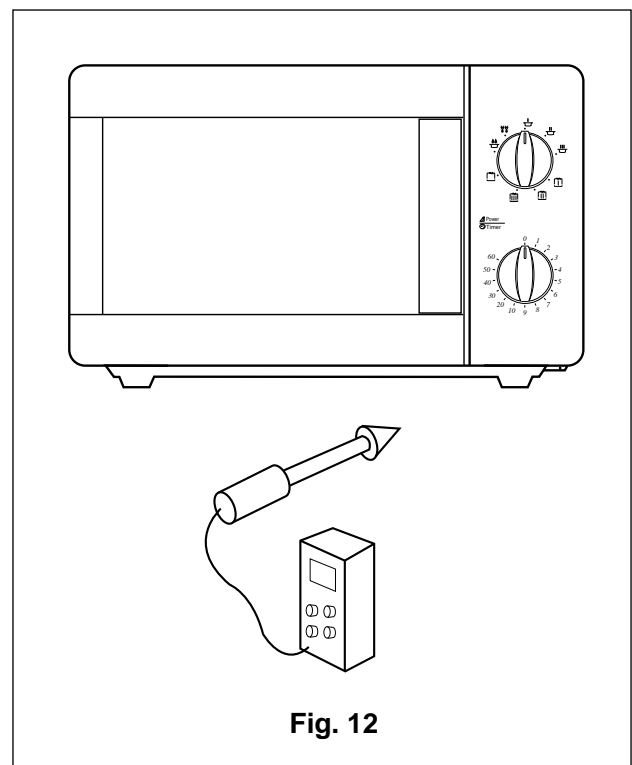
The power density of the microwave leakage emitted by the microwave oven should not exceed  $1\text{mW}/\text{cm}^2$  at any point 50mm (2 in.) or more away from the external surface of the oven as measured prior to acquisition by a purchaser and thereafter once the oven is in use,  $4\text{mW}/\text{cm}^2$  at any point 50mm(2 in.) or more away from the external surface of the oven, checks to be made around the whole of the door seal and on each of the main unit surface.

Measurements should be made with the oven operating at its maximum output and containing a load of  $275\pm 15$  millilitres of tap water initially at  $68\pm 9^\circ\text{F}$  ( $20\pm 5^\circ\text{C}$ ) placed within the cavity at the center of the load carrying surface provided by the manufacture. The water container should be a low form 600 milliliters beaker having an inside diameter of approximately 85mm (3-11/32 in.) and made of an electrically nonconductive material such as glass or plastic.

### 3-3. Procedures

- 1) Prepare 600cc glass or plastic container.
- 2) Pour  $275\pm 5$  millilitres of tap water initially at  $68\pm 9^\circ\text{F}$  ( $20\pm 5^\circ\text{C}$ ) in the container.
- 3) Place it at the centre of the tray.
- 4) Operate oven.
- 5) measure the microwave leakage using an approved microwave leakage meter after a few minutes of operation.

**NOTE :** The scan rate should not exceed 1 inch/sec.



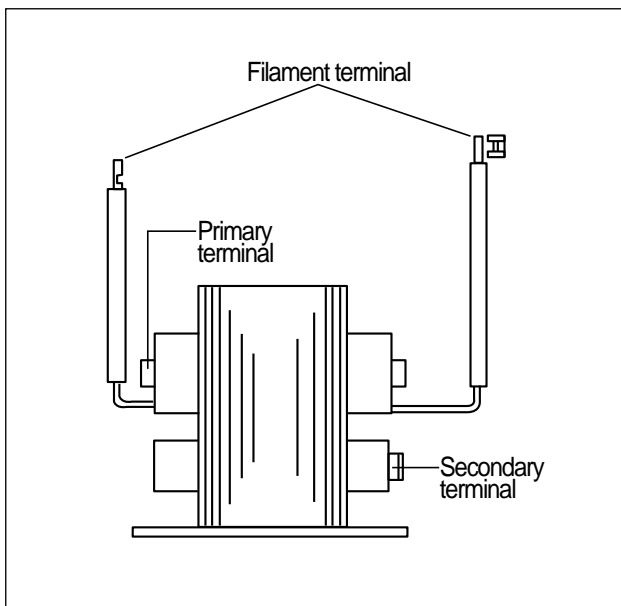
**Fig. 12**

# COMPONENT TEST PROCEDURE

1. High voltage is present at the high voltage terminal of the high voltage transformer during any cook cycle.
2. It is neither necessary nor advisable to attempt measurement of the high voltage.
3. Before touching any oven components or wiring, always unplug the oven from its power source and discharge the capacitor (see page 13).

## 1. High voltage transformer

- (A) Remove connections from the transformer terminals and check continuity.
- (B) Normal readings should be as follows:  
Secondary winding..... Approx.  $90.0\Omega \pm 10\%$   
Filament winding..... Approx.  $0\Omega$   
Primary winding..... Approx.  $0\Omega$



## 2. High voltage capacitor

- (A) Check continuity of capacitor with meter on the highest OHM scale.
- (B) A normal capacitor will show continuity for a short time, and then indicate  $9M\Omega$  once the capacitor is charged.
- (C) A shorted capacitor will show continuous continuity.
- (D) An open capacitor will show constant  $9M\Omega$ .
- (E) Resistance between each terminal and chassis should be infinite.

## 3. High voltage diode

The high voltage diode is located on the base near the transformer.

- (A) Isolate the diode from the circuit by disconnecting the leads.
- (B) With the ohmmeter set on the highest resistance scale, measure the resistance across the diode terminals.

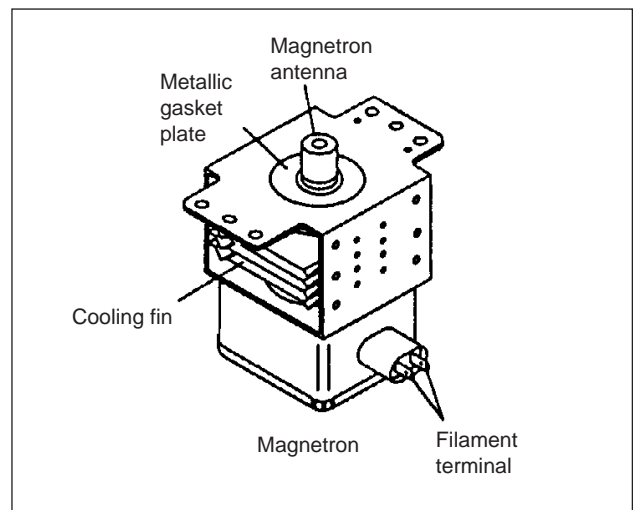
Reverse the meter leads and again observe the resistance reading. Meter with 6V, 9V or higher voltage batteries should be used to check the front-to-back resistance of the diode, otherwise an infinite resistance may be read in both directions. A normal diodes resistance will be infinite in one direction and several hundred  $K\Omega$  in the other direction.

## 4. Magnetron

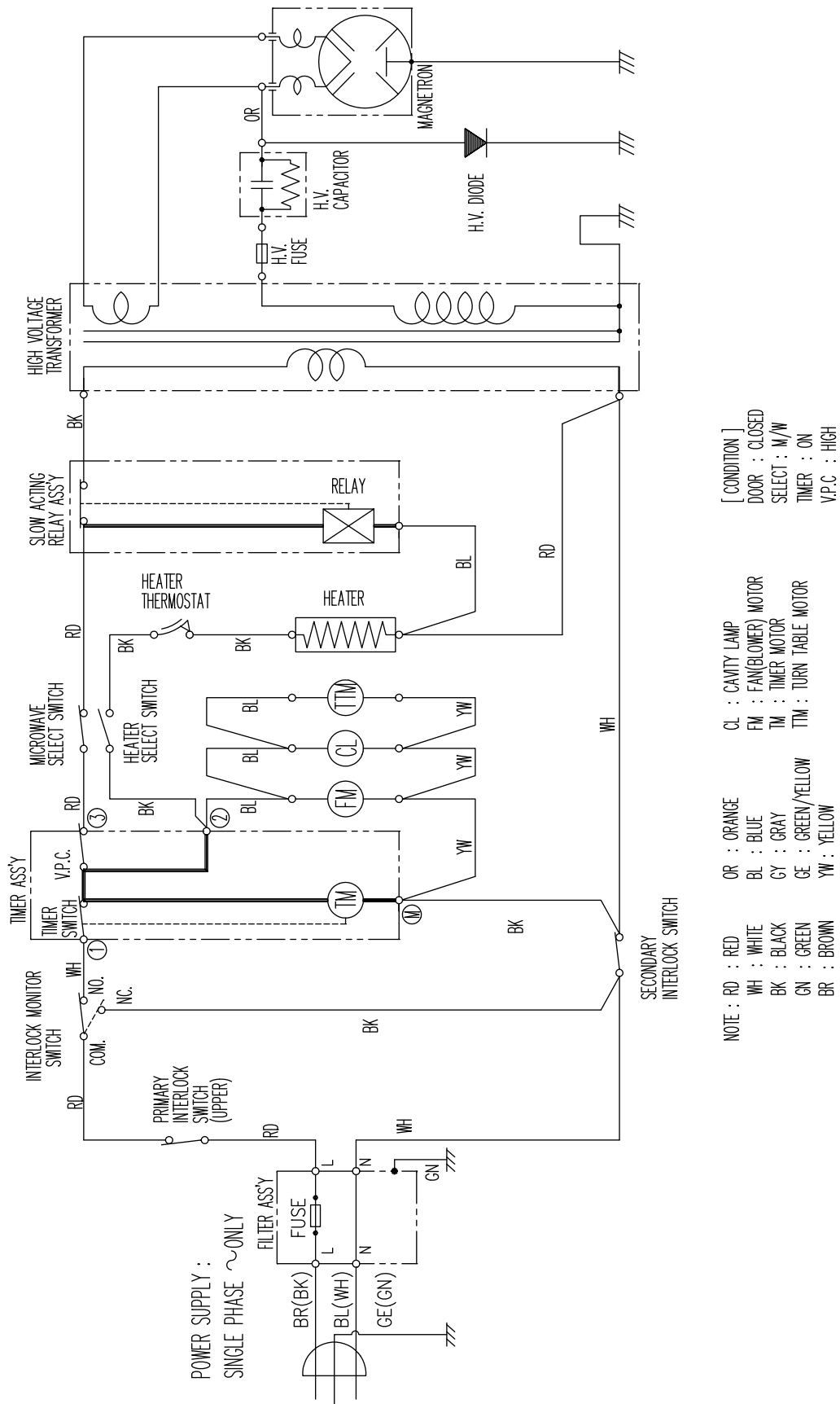
For complete magnetron diagnosis, refer to "Measurement of the Microwave Output Power".

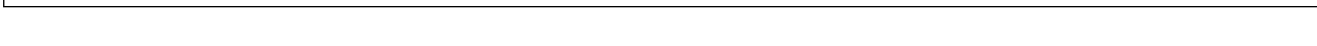
Continuity checks can only indicate an open filament or a shorted magnetron. To diagnose for an open filament or shorted magnetron.

- (A) Isolate magnetron from the circuit by disconnecting the leads.
- (B) A continuity check across magnetron filament terminals should indicate one ohm or less.
- (C) A continuity check between each filament terminal and magnetron case should read open.



# WIRING DIAGRAM





NO.	PART NAME	SPEC	PART CODE	Q'TY
A00	DOOR AS	KOG-875T0S	3511710030	1
B00	CONTROL-PANEL AS	KOG-87550S	3516718430	1
1	CAVITY AS	KOG-87050S	3516108660	1
2	REAR PLATE *0	SBHG-1 T0.6	3516503900	1
3	COVER WAVE GUIDE	KOR-121M0A	3511403800	1
4	SCREW TAPPING	TT3 TRS 4X8 MFNI	7113400814	1
5	TRAY RACK AS	KOG-84150S 104MM	3517203201	1
6	COUPLER	TEFLON	3517400610	1
7	MOTOR SYNCRO	220/240V 4W GM-16-24FD16	3966030500	1
8	SCREW TAPPING	T2S PAN 4*6 MFZN	7121400611	2
9	BASE	SBHG-1 T0.8	3510311000	1
10	STOPPER HINGE *U AS	KOR-121M0A	3515202800	1
11	SCREW TAPTITE	TT3 TRS 4*8 MFZN	7272400811	1
12	FOOT	DASF-310	3512101400	4
13	CAPACITOR HV	2100VAC 1.1μF	4416W67820	1
14	HOLDER HV CAPACITOR	SECC T0.8	3513001900	1
15	SCREW TAPTITE	TT3 TRS 4*8 MFZN	7272400811	1
16	DIODE HV	SANKEN HVR-1X-32B(D5.3)	4416V24000	1
17	NOISE-FILTER	DWLF-M05	3518605001	1
18	FUSE HV	5KV 0.7A	3518700211	1
19	SWITCH S/A RELAY	DWSR-1	3518570400	1
20	SCREW TAPPING	T1 TRS 4*10 MFZN	7112401011	1
21	CLAMP WIRE	SBHG	3511200400	1
22	SCREW TAPPING	T1 TRS 4X10 MFZN	7112401011	1
23	TRANS HV	JY-N90S1-87T	3518112400	1
24	SCREW SPECIAL	T2 FLANGE 5X8 MFZN	3516003800	4
25	SCREW SPECIAL	T1 TRS 4X10 MFZN	7112401011	5
26	LOCK	POM	3513805710	1
27	LAMP	BL 240V 25W T25 C7A H187	3513601600	1
28	SW MICRO	VP-531A-0F / SZM-V16-FA-61	4415A66910	1
29	SW MICRO	VP-533A-0F SPNO #187 200G	4415A17352	2
30	LEVER LOCK	POM	3513701300	1
31	SCREW TAPPING	T2S TRS 4*12 MFZN	7122401211	2
32	SCREW TAPPING	T2S TRS 4*12 MFZN	7122401211	1
33	COVER INSULATOR *T	SECC T0.5	3511405000	1
34	HEATER MIRACLON	115V 550W	3512803000	1
35	SCREW TAPPING	T1 TRS 4X10 MFZN	7112401011	2
36	MAGNETRON	2M218H(MF) I	3518002200	1
37	SPECIAL SCREW	T2 BOLT FLANGE 4*10 MFZN	3516004000	1
38	FAN	P.P GF20	3511800100	1
39	COVER *B	SBHG T0.8	3511402500	1
40	MOTOR SHADED POLE	230V 17W MW15CA-K02	3963513900	1
41	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	7S312X40A1	2
42	SCREW MACHINE	PAN FLANGE 4X8 MFZN	7S101W4081	2
43	GUIDE AIR OUTLET	SA1D T0.5	3512515500	1
44	SCREW SPECIAL	TT2 HEX FG 4X10 SE MFZN	7S427W40A1	2
45	CORD POWER AS	3X1.5 40X40 120-RTML	35113ACSJ5	1
46	SCREW TAPPING	T2S TRS 4*10 MFZN	7122401011	2
47	THERMOSTAT	OFF:100 ON:90 V #187	3518905000	1
48	SCREW TAPPING	T2S PAN 3X6 MFZN	7121300611	1
49	CABINET	PCM 0.6T	3510800800	1
50	SCREW TAPPING	T1 TRS 4X10 MFZN	7112401011	3
51	GUIDE ROLLER AS	KOR-121Q3A	3512512910	1
52	TRAY	BORO-SI 810G	3517200401	1
53	SCREW TAPPING	T1 TRS 4X10 MFZN	7112401011	1
54	PROTECTOR WIRE	STS430 DIA:4	3517503000	3
55	PROTECTOR HEATER	MICA MT56 T1.0	3517503100	2

S/M NO. : G87550S001

**DAEWOO**

**DAEWOO ELECTRONICS CO., LTD.**

686, AHYEON-DONG MAPO-GU SEOUL, KOREA

C.P.O. BOX 8003 SEOUL, KOREA

TELEX: DWELEC K28177-8

CABLE: "DAEWOOELEC"

FAX: 02) 82-32-510-7630

TEL: 02) 82-32-510-7628

<http://www.dwe.daewoo.co.kr>

PRINTED DATE: NOV. 1999