DAEWOO

Service Manual

Microwave Oven

Model : KOG-3605

DAEWOO ELECTRONICS CO., LTD.

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 connection.

(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.

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CAUTION : This Device is to be Serviced Only by Porperly Qualified Service Personnel. Consult the Service Manual for Proper Service Procedures to Assure Continued Compliance with the Federal Performance Standard for Microwave Ovens and for Precautions to be Taken to Avoid Possible Exposure to Excessive Microwave Energy.

PROPER USE AND SERVICE PRECAUTIONS

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 seal area and oven cavity surface 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. For Safe Service Procedures.

1) If the oven is operative prior to servicing, a microwave emission check should be performed prior to servicing the oven.
2) If any ascertained oven unit is found to have excessive emission level 5mW/cm^2, the service person should:
   (a) inform the manufacturer, importer or assembler,
   (b) repair the unit at no cost to the owner,
   (c) attempt to ascertain the cause of the excessive leakage,
   (d) tell the owner of the unit not to use the unit until the oven has been brought into compliance.
3) If the oven operates with the door open, the service person should tell the user not to operate the oven and contact the manufacturer immediately.

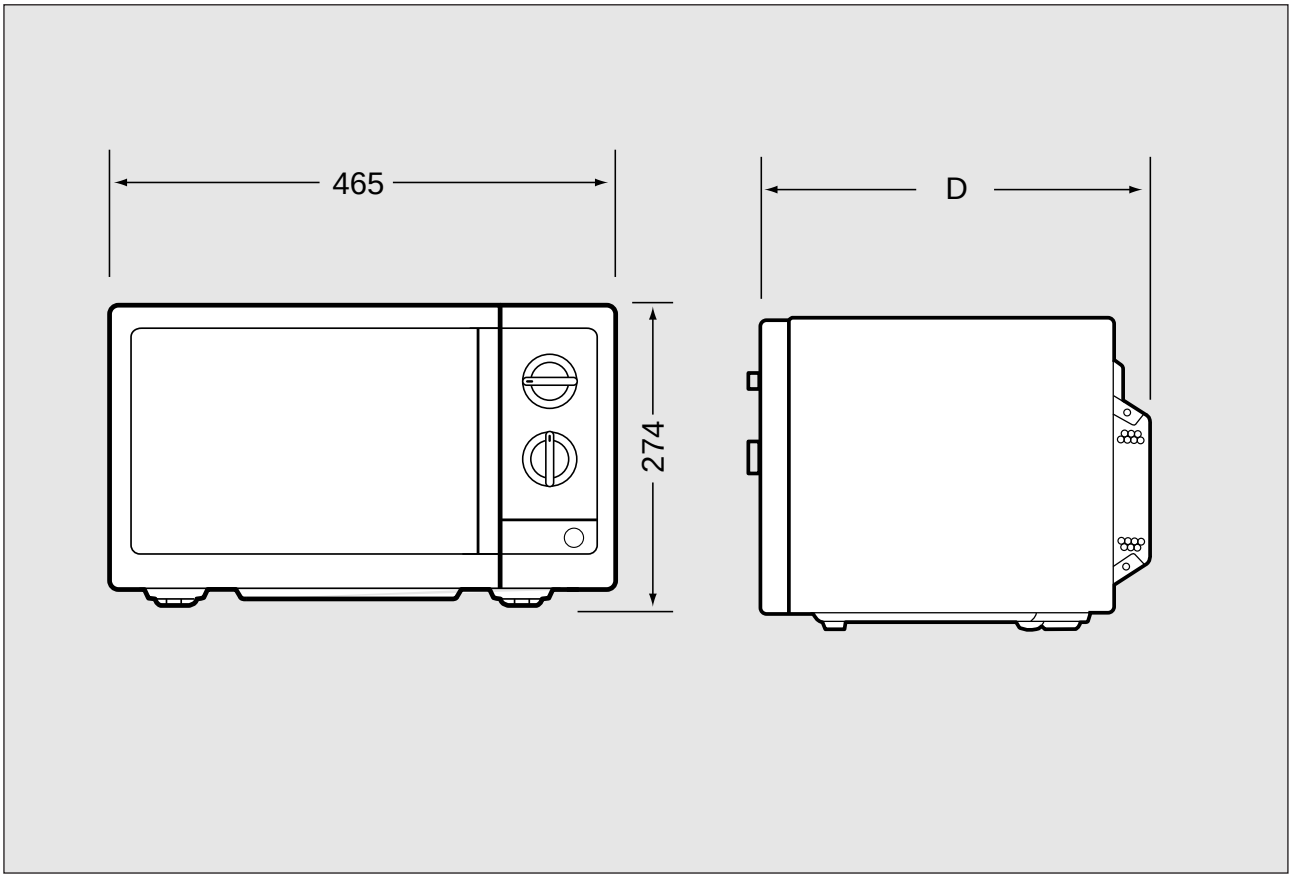
CAUTION
MICROWAVE RADIATION

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, WAVEGUIDES, 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.

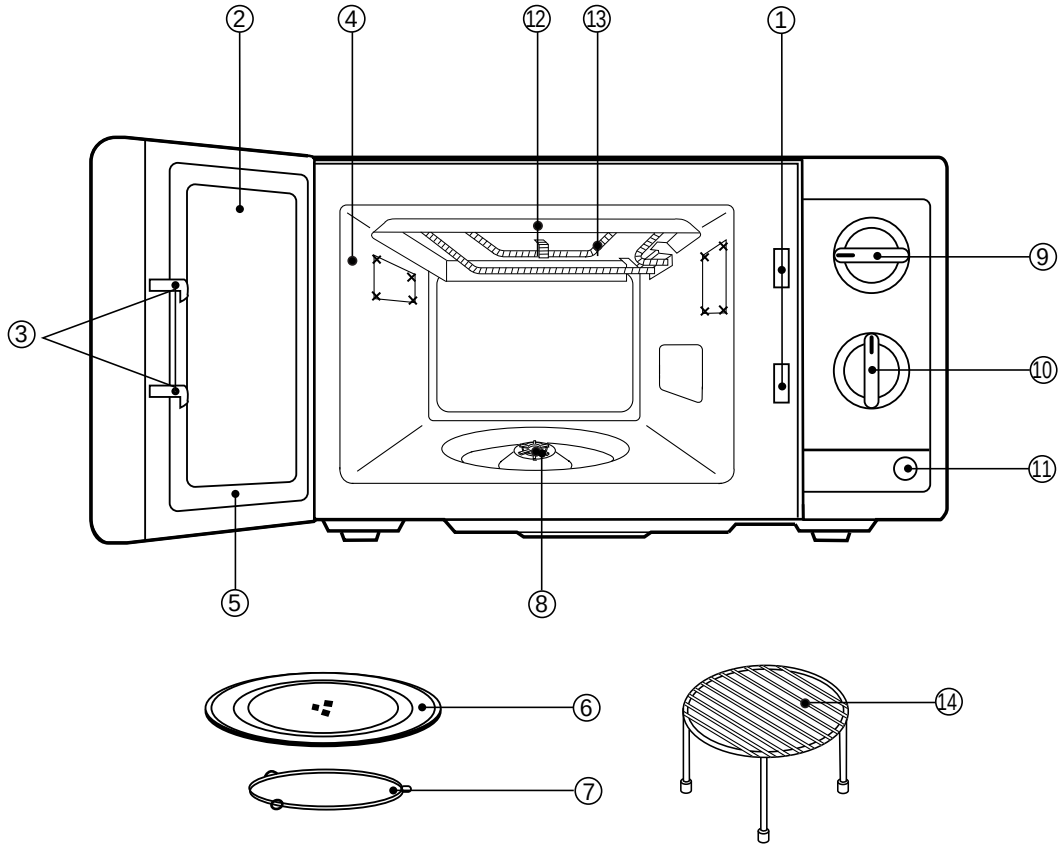
SPECIFICATIONS

Item		Specification
POWER SUPPLY		230V~50HZ, SINGLE PHASE WITH EARTHING
MICROWAVE	MICROWAVE	1200 W
	GRILL	1050 W
	COMBINATION	2200 W
MICROWAVE ENERGY OUTPUT		800 W
MICROWAVE FREQUENCY		2450 MHz
OUTSIDE DIMENSIONS (WXHXD)		465X360X274 mm
CAVITY DIMENSIONS (WXHXD)		290X290X220mm
NET WEIGHT		14.5 Kg
TIMER		35 min. DUAL SPEED
FUNCTION SELECTIONS		MICROWAVE/GRILL/COMBINATION
MICROWAVE POWER LEVELS		3 LEVELS

** Specifications subject to change without notice.*



FEATURES DIAGRAM



¤ **Saftey Interlock System.**

¤Ł **Door Viewing Screen -** Allows viewing of food, the screen is designed so that light can pass through, but not the microwave.

¤Ø **Door Hook -** When the door is closed, it will automatically shut. If the door is opened while the oven is operating, the magnetron will immediately stop operating.

¤Œ **Oven Cavity**

¤º **Door Seal -** Door seal maintains the microwave energy within the oven cavity and prevents microwave leakage.

¤ **Glass Cooking Tray -** Made of special heat resistant glass. Food in a proper receptacle is placed on this tray for cooking.

¤ **Roller Guide -** This must always be used for cooking together with the glass cooking tray.

¤ **Coupler -** this fits over the shaft in the center of the oven's cavity floor. This is to remain in the oven for all cooking.

¤ **Knob V.P.C -** Used to select a microwave power level.

¤ **Knob Timer -** Used in setting cooking time for all functions.

¤æ **Door Release Button -** By pushing this button the latch system cut off all circuits and stops the oven before the door is opened.

¤ **Reflector (Insulator Heater)**

¤ **Heating Element**

¤ **Metal Rack**

INSTALLATION

1. Steady, flat location.
This microwave oven should be set on a steady, flat surface.

2. Leave space behind and side.
All air vents should be kept a clearance. If all vents are covered during operation, the oven may overheat and, eventually, cause oven failure.

3. Away from radio, and TV sets
Poor television reception and radio interference may result if the oven is located close to a TV, Radio, or antenna, feeder and so on.

4. Away from heating appliances and water taps
Keep the oven away from hot air, steam or splash when choosing a place to position it, or the insulation might be adversely affected and breakdowns occur.

5. Power supply
- Check your local power source.
  This microwave oven requires a current of approximately 12 amperes, 230V 50Hz.
  Use a receptacle that will accept the earth prong.
- Voltage Warning
  The voltage used must be the same as specified on this Microwave Oven.
  Using a higher voltage may result in a fire or other accident causing oven damage. Using low voltage will cause slow cooking.
  We are not responsible for damage resulting from use of this Microwave Oven will a voltage or amperage fuse other than those specified.
- Power supply cord is about 1.0 meters long. Do not use an extension cord.
  If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard;

CAUTION : Do not under any circumstances cut or remove the round earthing prog from this pulg.

CAUTION : Maintenances works like the replacing of the power cable must be made by a technician qualified of the after-sales-services.

WARNING : This appliance must be earthed.

IMPORTANT

This wires in this mains lead are coloured inaccordance 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 the 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.

6. Examine the oven after unpacking for any damage such as:
Dents, A misaligned door, Broken door, A dents in cavity.
If any of the above are visable, do not install this oven.

OPERATION

1. Connect the mains lead to an electrical socket-outlet.
2. After placing the food in a suitable utensil, open the oven door and put it on the glass turntable, Glass turntable must always be in place during cooking.
   In case the oven is operated in the grill mode, use the Metal Rack and place food on the metal Rack.
3. Shut the door.
   Make sure that it is firmly closed.
4. **How to set each function.**
   To set MICROWAVE Cooking.
   • Set the variable POWER SELECTOR to desired power level.

SYMBOL	POWER LEVLE	POWER
	DEFORST	33%
	MED-HIGH	77%
	HIGH	100%

   To set GRILL Cooking
   • Set the POWER SELECTOR to the (gril) position.
   To set COMBI Cooking
   • Set the POWER SELECTOR to the (combi) position.
5. Set the time control by turning the timer knob and then the oven operate inselected cooking mode.
   If turing the timer knob for less than 2 minutes, turn it past 2 minutes and then back to the desired time.
6. The oven will be turned off automatically when the timer point to “OFF”.
   Then take out foods.
   • To prevent the oven operating with the door open, your 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 auto matically stop the cooking. To continue cooking, you simply close the door.
   • If you wish to sotp the cooking during the cooking simply turn the timer knob the point “OFF” Cooking can be reset at any time during the cooking cycle by only turning the timer knob.
   • Do not let the timer continue to operate after removing food.
7. NOTE : When using the GRILL (KOG:368(9)OS) mode;
   • Do not open the door so often, the temperature inside the oven decrease and the cooking may not complete in setting time.
   • Never touch the oven window and metal interior of the oven when taking food in and out, because of the temperature inside the oven and door is very high.
   • When using these modes, be careful as the tray will be hot to touch, use oven gloves or pot holders while handling tray.

COOKING UTENSILS

Before use, the user should check that tensils are suitable for use in microwave ovens.

Material	Grill cooking	Microwave cooking
Glass (general)	NO	Yes(1)
Glass (heat resistant)	Yes	Yes
Glass-ceramic and ceramic(heat resistnat)	Yes	Yes(1)
Earthenware	Yes	Yes
China(heat resistant)	Yes	Yes
Plastic(general)	No	Yes(2)
Plastic(heat resistant)	Yes(2)	Yes(2)
Aluminium foil containers/aluminium foil	Yes	Yes(3)
Metal baking tins	Yes(4)	No
Metal (pots. pans, etc)	Yes	No
Paper	No	Yes

1. Without metal parts or metal trims.
2. Some plastics are heat-proof only to certain temperatures. Check carefully!
3. It is possible to use aluminium foil to shield delicate areas of food (this prevents over-cooking).
4. Metal tins can be used in the combination methods, however if these are very deep, they will greatly reduce the efficiency, as metal shields the microwave energy from the food.

MEASUREMENT OF THE MICROWAVE OUTPUT POWER

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. 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±5cc of potable water.

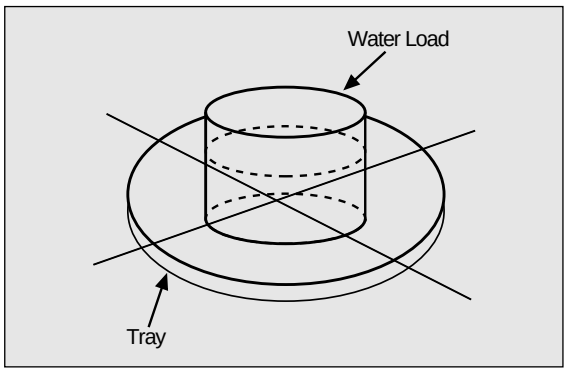
2. The water is contained in a cylindrical borosilicate glass vessel having a maximum material thickness of 3 mm and an outside diameter of approximately 190 mm.

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±2˚C(50±3.6˚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.

4. Microwave power is switched on.

5. Heating time should be exactly 52 seconds.
   Heating time is measured while the microwave generator is operating at full power.
   The filament heat-up time for magnetrons is not included.

6. The initial and final water temperatures are selected so that the maximum defference between the ambient and final water temperature is 5K.



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

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

- Δ T is actual temperature rise.
- t is the heating time.

The power measured should be 800W±10%.

CAUTION :
1. Water load should be measured exactly to 1 liters.
2. Input power voltage should be exactly 230 volts as specified.
3. Ambient temperature should be 20±2˚C (68±3.6˚F)

MICROWAVE RADIATION TEST

WARNING

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

Procedure

A) Prepare Microwave Energy Survey Meter, 600cc glass beaker, glass thermometer 100˚C or 212˚F.

B) Pour 275cc±15cc of tap water initially at 20±5˚C(68±9˚F) in the 600cc beaker with an inside diameter of approx. 9.5cm (3.5 in).

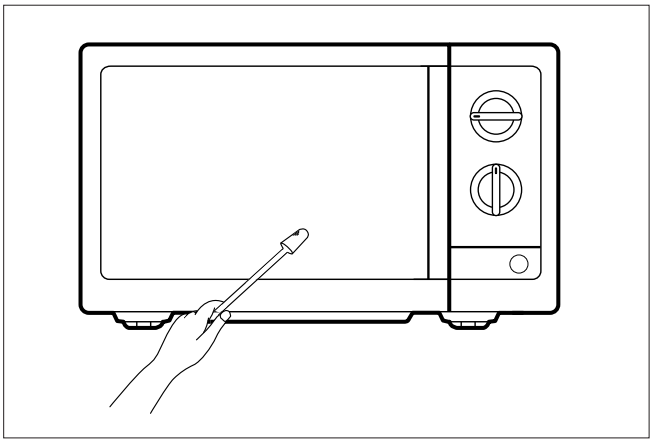
C) Place it at the center of the tray and set it in a cavity.

D) Close the door and operate the oven.

E) Measure the leakage by using microwave energy survery meter with dual ranges, set to 2450 MHz.
- Measured radiation leakage must not exceed the values prescribed below.
  - Leakage for a fully assembled oven with door normally closed must be less than 4mW/cm^2.

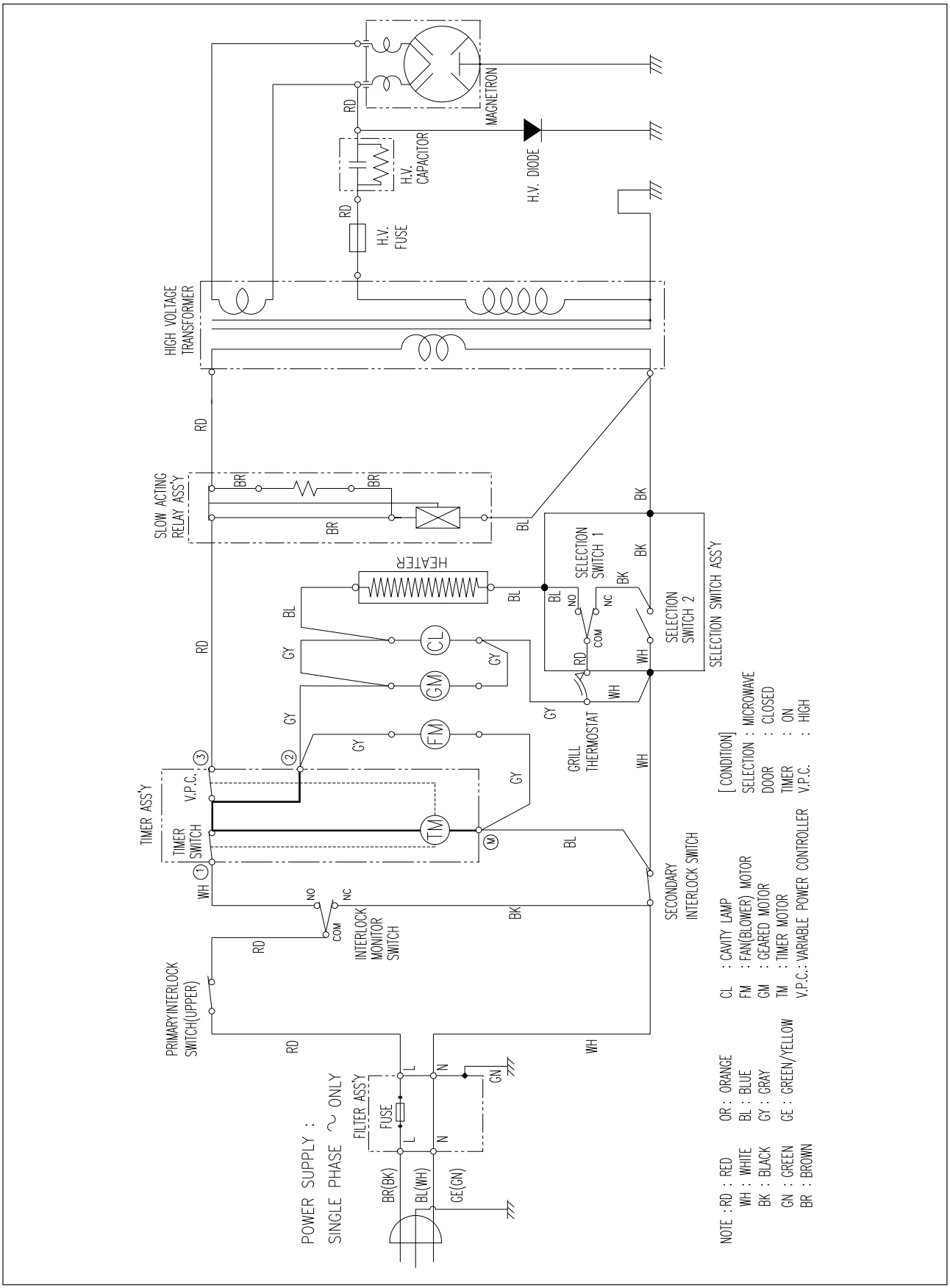
- When measuring the leakage, always use the 2 in (5cm) space cone with probe. Hold the probe perpendicular to the cabinet, door. Place the space cone of the probe on the door, cabinet, door seam, door viewing screen, the exhaust air vents and the suction air vents.

- Measuring should be in a counter-clockwise direction at a rate of 1 inch/sec. If the leakage of the cabinet door seam is unkow, move the prove more slowly.

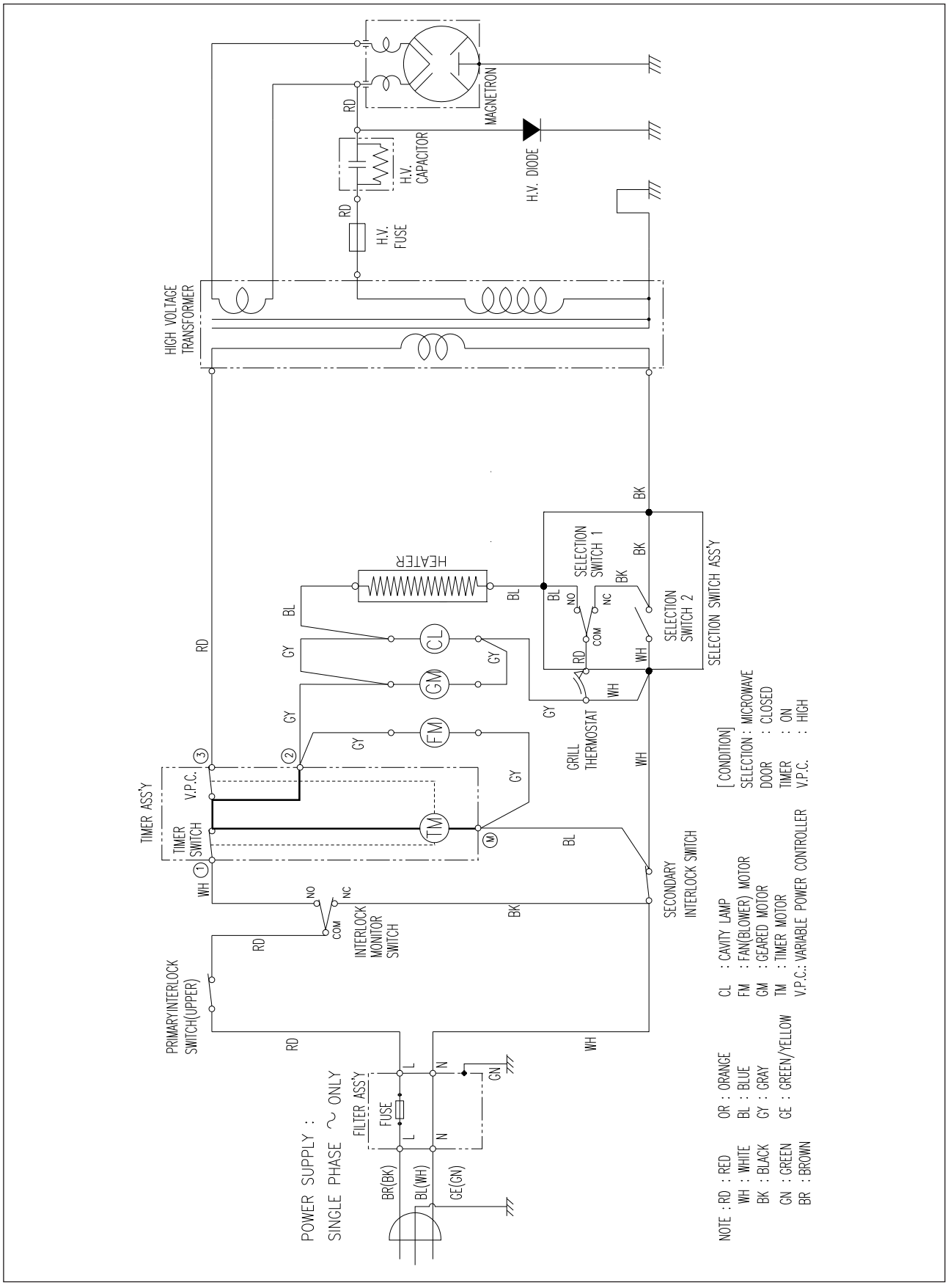


- When measuring near a corner of the door, keep the probe perpendicular to the areas making sure the probe end at the base of the cone does not get closer than 2 inches from any metal.
  If it does, erroneous reading may result.

WIRING DIAGRAM(SLOW ACTING RELAY)



WIRING DIAGRAM



CIRCUIT DESCRIPTION

1. When the food is placed in the oven cavity and door is closed.

- The contact of the interlock monitor switch open (NO).
- The contacts of the primary interlock switch and secondary interlock switch close.

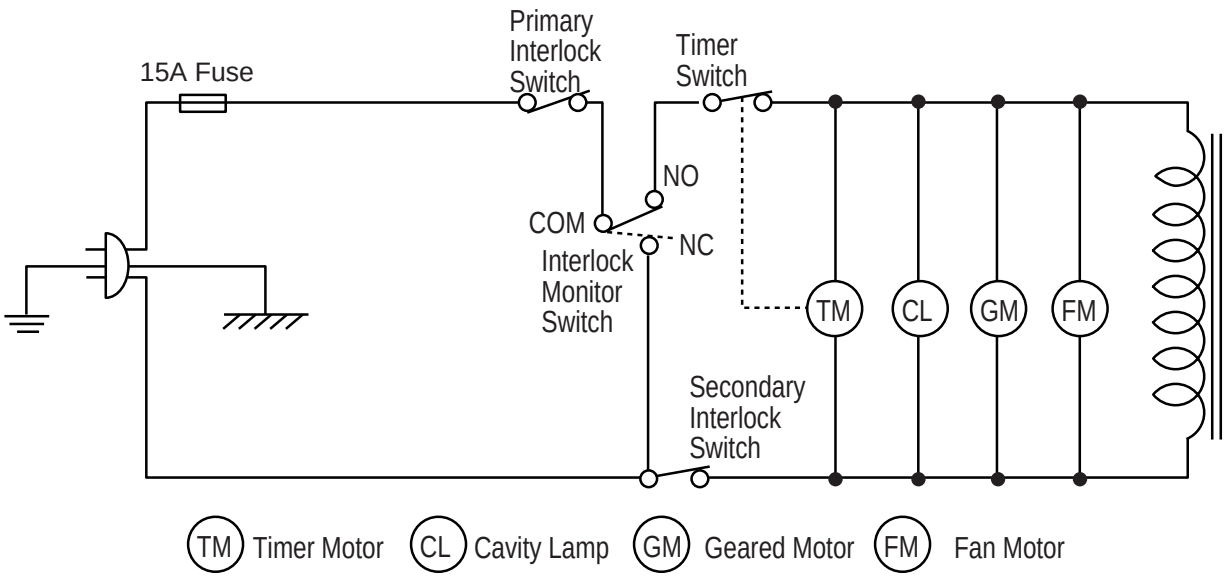


Fig. 1

2. When the timer is set to the time desired.

- The contact of the timer switch close.
- Oven lamp turn on.
- 230V AC is applied to the high voltage transformer.
- Turntable motor start rotating and glass tray rotating.
- Fan motor rotating and cools the magnetron by blowing air.
- Timer motor operating and point to passing cooking time.
- 3.3 Volts AC is generated from the filamente winding of the high voltage transformer. This filament voltage is applied to the magnetron to heat the magnetron filament through two noise preventing choke coils.
- A high voltage of 2000 Volts AC is generated in the secondary of high voltae transformer and this secondary voltage is increased by the action of the diode and the charging of the high voltage capacitor. This resultant D.C voltage is then applied to the anode of the magnetron. As shown in Fig. 2 the first half cycle of the high voltage produces in the high voltage transformer secondary charges the high voltage capacitor. Current flow is in the direction of the dotted-line during the second half cycle, the voltage produced by the transformer secondary, and the charge of the high voltage capacitor are combined and applied to the magnetron as shown by the solid line so that oscillations begins.

  The disturbance wave generated by the magnetron is prevented by the choke coils of 1.5µH, filter capacitors of 500pF and the magnetron's shielded case so that TV and radio programs are not impired by noise.

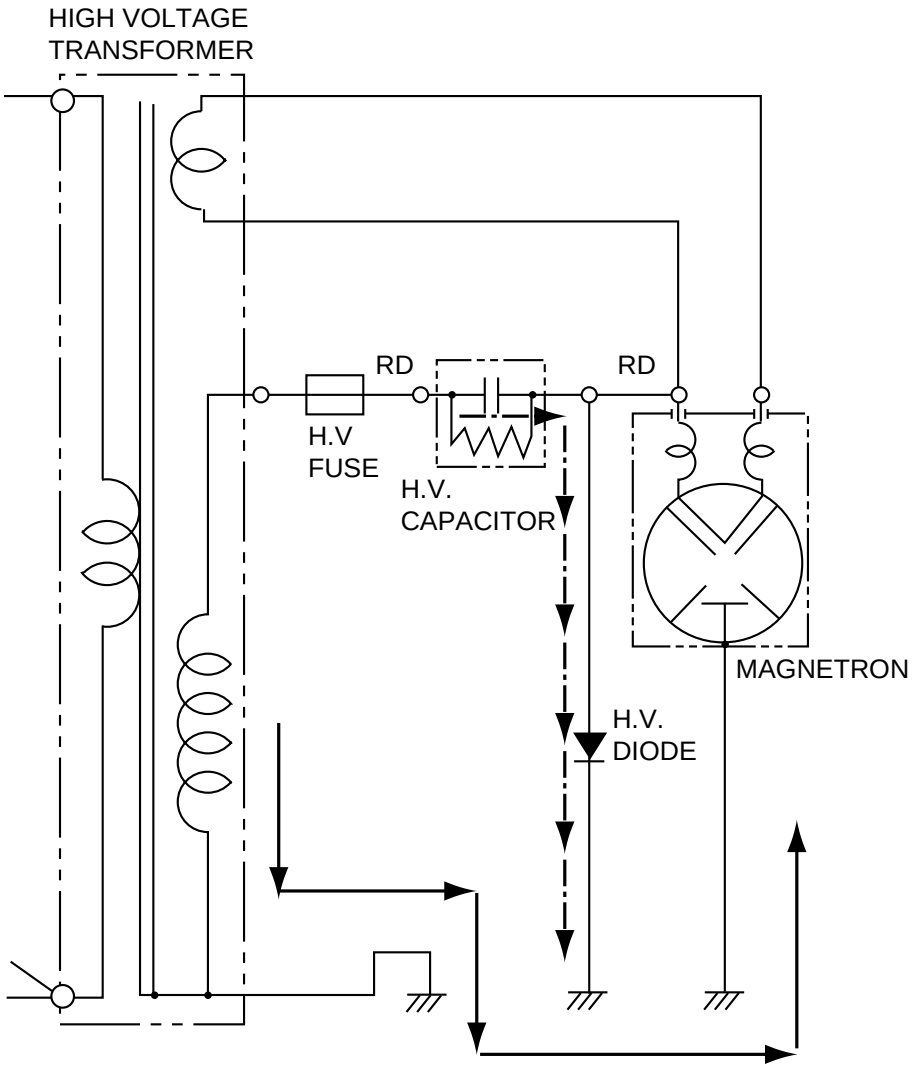


Fig.2

3. When the door is opened during cooking.

- Primary interlock switch and secondary interlock switch open to cut off the primary voltage to the high voltage transformer to stop microwave oscillation.
- Fan motor, timer motor and turntable motor stop rotating.
- Oven lamp turn off.
- As soon as the door is opened, monitor switch close(NC) to create the short circuit.
  If the contacts of primary interlock switch and secondary interlock switch are both malfunction, the 15A fuse blows open due to the large current surge caused by monitor switch activation.

PRECAUTIONS FOR DISASSEMBLY AND REPAIR

– Cautions to be observed when trouble shooting.

Unlike many other appliances, the microwave oven is a high-voltage, high-current equipment. It is completely safety 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.

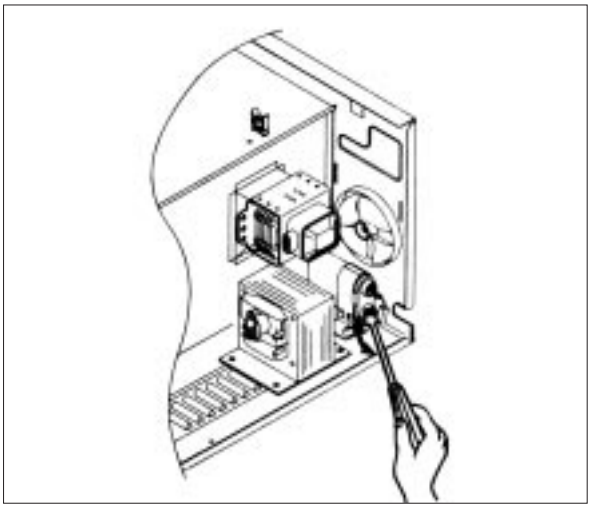
(1) Always remove the power plug from the outlet before servicing.

(2) Use an insulated screwdriver and ware rubber gloves when servicing the high voltage side.

(3) Discharge the high voltage capacitor before touching any oven components or wiring.

1. Check the earthed.
Do not operate on a two wire extension cord. The microwave oven is designed to be used with earthed. It is imperative, therefore, to makes sure it is earthed properly before begining repair work.

2. Warning about the electric charge in the high voltage capacitor.
For about 30 seconds after the operation stopped, and 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 insulted screw driver to discharge.



(4) When the 15A fuse is blown out due to the operation of the monitor switch; replace primary, secondary interlock switch and monitor switch.
Refer to next 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.

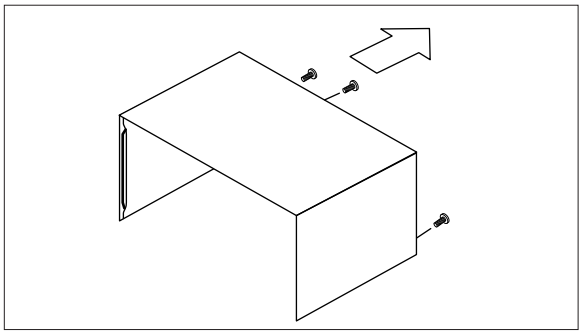
CAUTION : Service personnel should remove their watches whenever working close to or repairing the magnetron.

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

DISASSEMBLY AND ASSEMBLY

1. To remove cabinet.

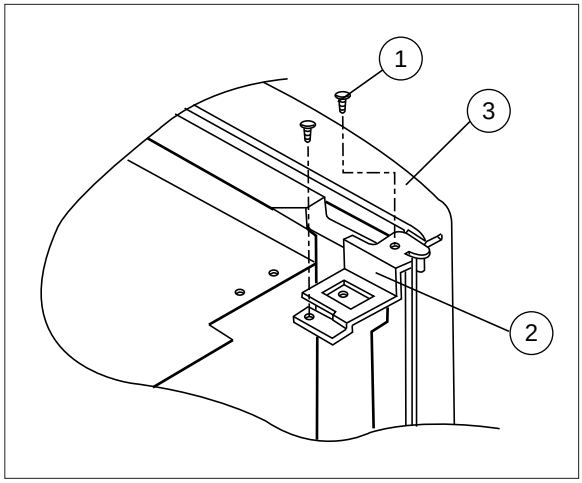
Remove three screws on cabinet back.



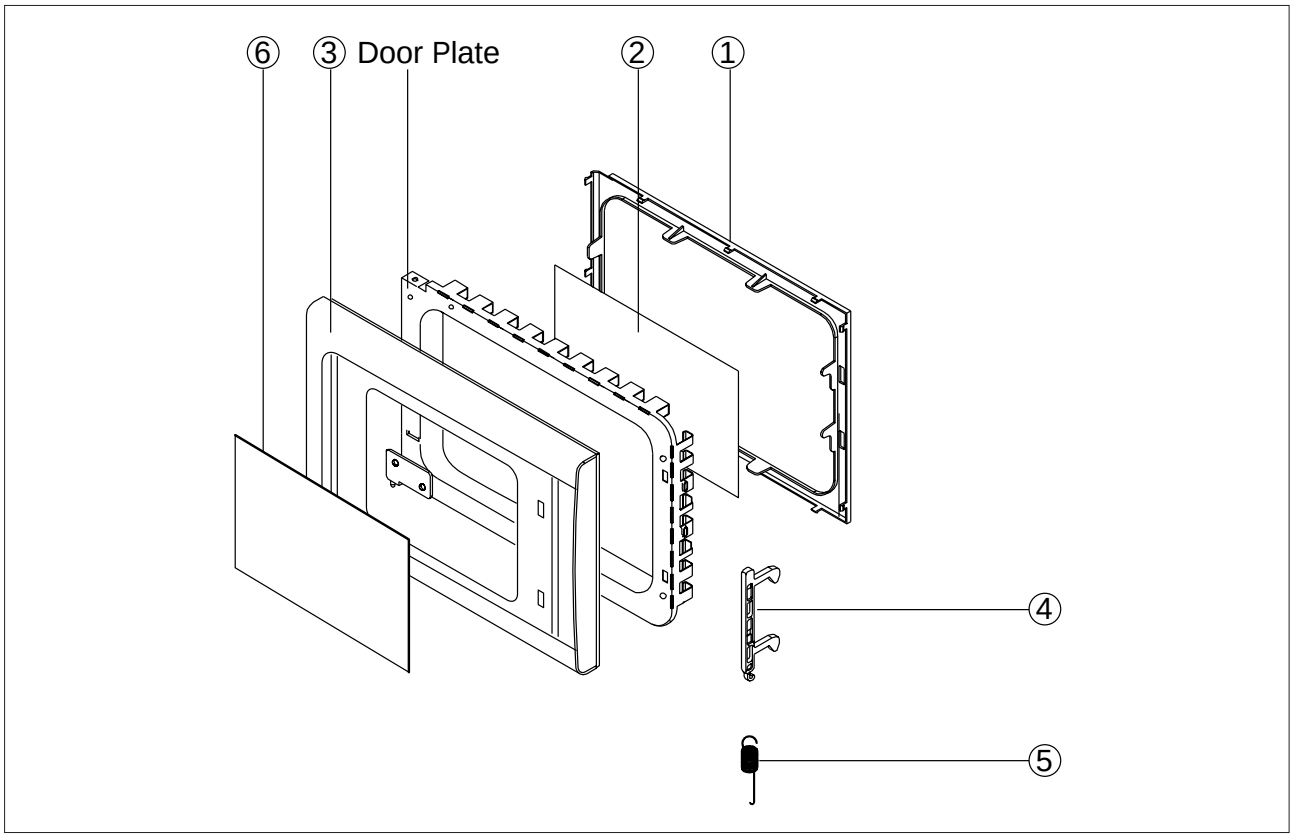
2. To remove door assembly.

1) Remove two screws ¤ which secure the stopper hinge top.
2) Remove the stopper hinge top ¤Ł and door assembly ¤Ø from top plate of cavity.
3) Remove the stopper hinge top ¤Ł from door assembly.
4) Reverse the above for reassembly taking care to replace fixing glue.

NOTE : After replacing the door preform a check of correct alignment with the hinge and cavity front face.



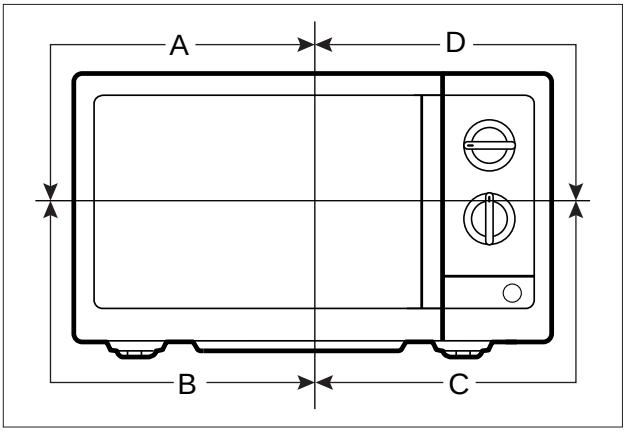
3. To remove door parts.



(1) Remove the gasket door ¤ from door plate.
(2) Remove the barrier screen inner ¤Ł from door plate.
(3) Remove the door frame ¤Ø from door plate.
(4) Remove the spring ¤º and the hook ¤Œ
(5) Remove the barrier screen outer ¤ from door frame ¤Ø
(6) Reverse the above steps for reassembly.

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

(1) To reduce gap located on part 'A'
1) Loosen two screws on stopper hinge top, and then push the door to contact the door seal to oven front surface.
2) Tighten two screws.



(2) To reduce gap located on part 'B'.
1) Loosen three screws on bottom hinge, and then the door to contact the door seal to oven front surface.
2) Tighten three screws.
(3) To reduce gap locatated on part 'C'. (See Fig. A)
1) Loosen a screw on the interlock switch assembly located at the bottom of the oven body.
2) Draw the interlock switch assembly inward as possible to engage with hook on the door bottom.
3) Tighten a screw.
(4) To reduce gap located on part 'D'. (See Fig. B)
1) Loosen a screw on the interlock switch assembly located at the top of the oven body.
2) Follow step (3) 2) and 3).

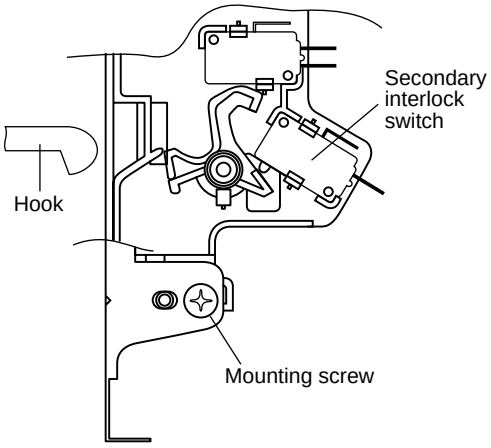


Fig. A

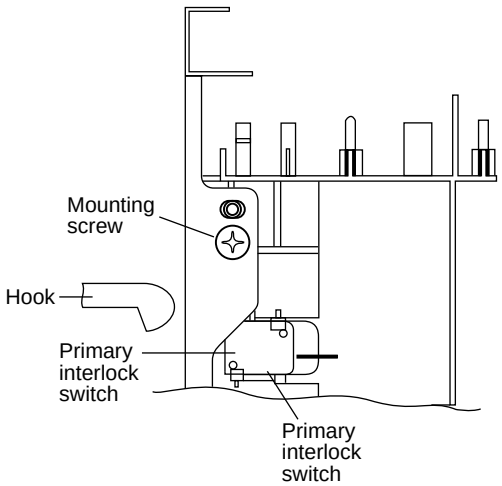
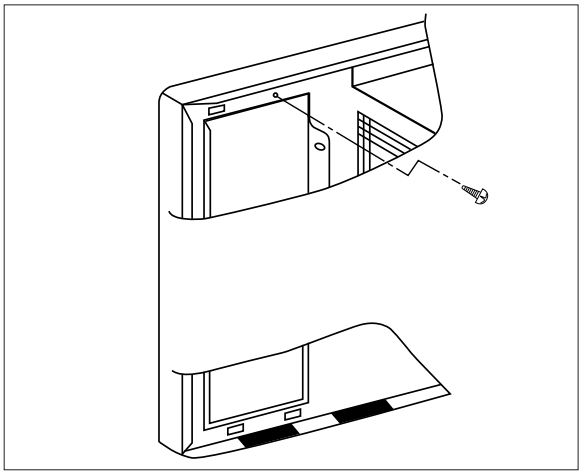


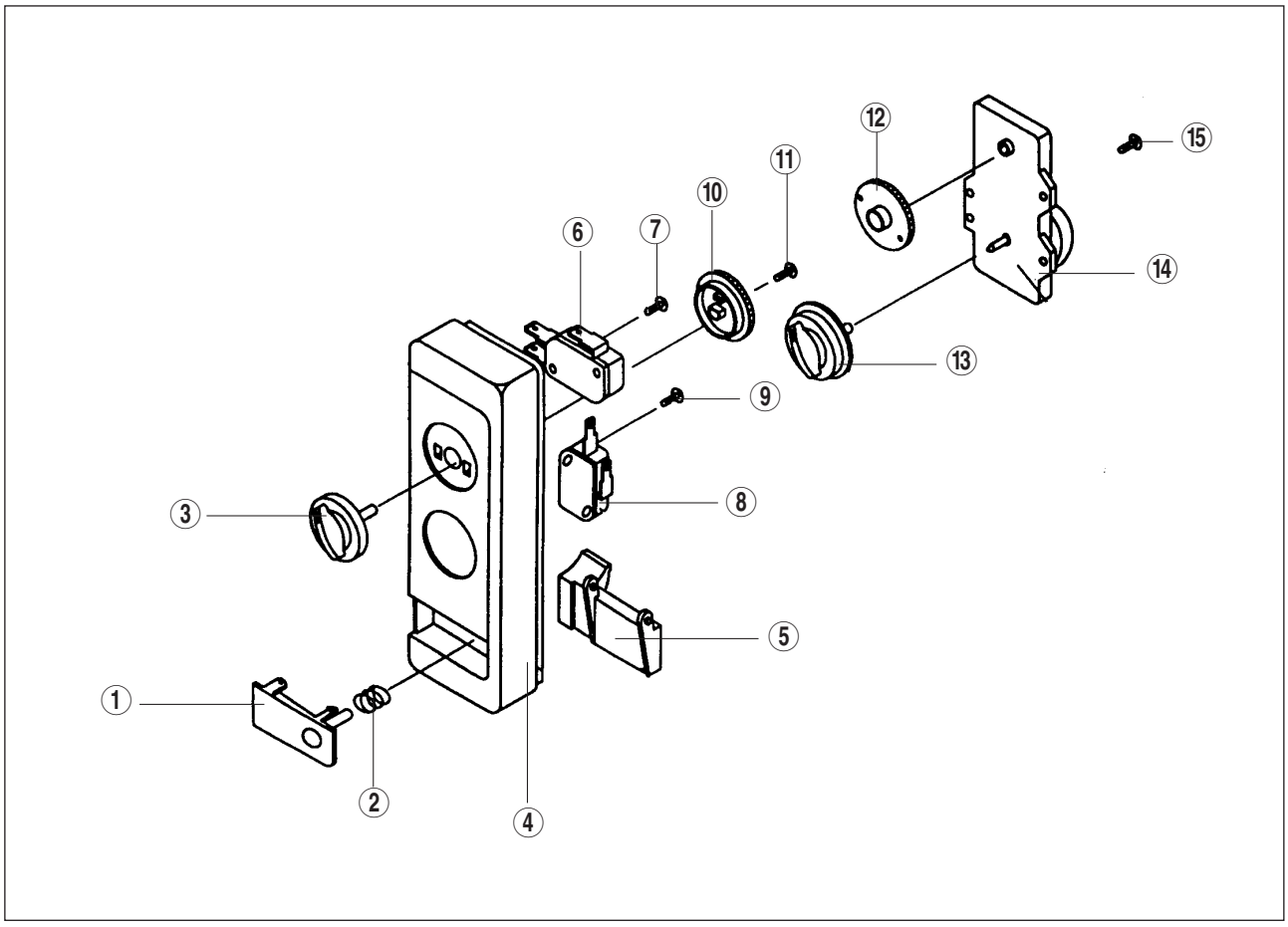
Fig. B

NOTE: A small gap may be acceptable if the microwave leakage does not exceed 4m W/cm^2.

5. To remove control panel parts.

(1) Remove the screw which secure the control panel, push up two snap fits and draw forward the control panel assembly.

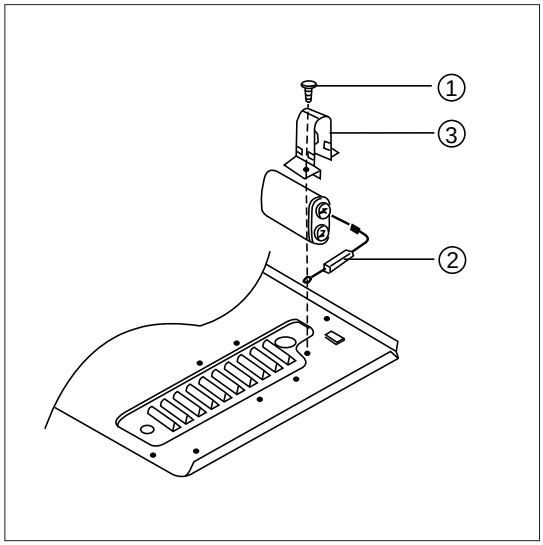




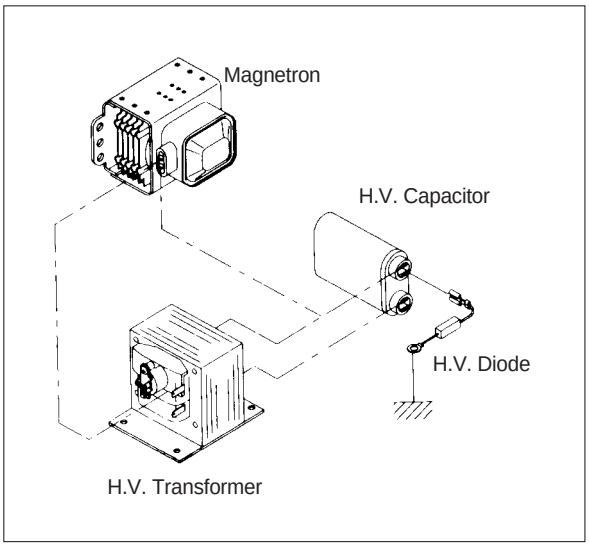
(2) Remove the door open lever ¤º from the control panel ¤Œ
(3) Remove two screws ¤1which secure the timer assembly ¤ .
(4) Remove the timer assembly ¤ .
(5) Pull out the timer knob ¤ from the timer assembly ¤ .
(6) Pull out the timer coupler ¤ from the timer assembly ¤ .
(7) Remove the screw ¤ pull out the switch micro ¤ .
(8) Remove the screw ¤æwhich secure the V.P.C. coupler ¤ .
(9) Pull out the V.P.C couple ¤ and V.P.C knob ¤Ø from the control panel ¤Œ
(10) Remove the screw ¤ pull out the switch micro ¤ .
(11) Remove the door open button ¤ and button spring ¤Ł from the control panel ¤Œ
(12) Reverse the above steps for reassembly.

6. To remove high voltage capacitor.

(1) Remove a screw ¤ which secure the grounding ring terminal of the H.V. diode ¤Ł and the capacitor holder ¤Ø
(2) Remove the H.V. diode ¤Ł from the capacitor holder ¤Ø
(3) Reverse the above steps for reassembly.

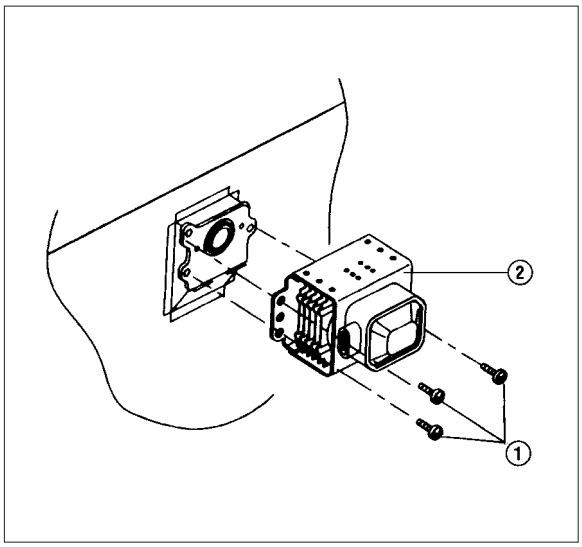


High voltage circuit wiring

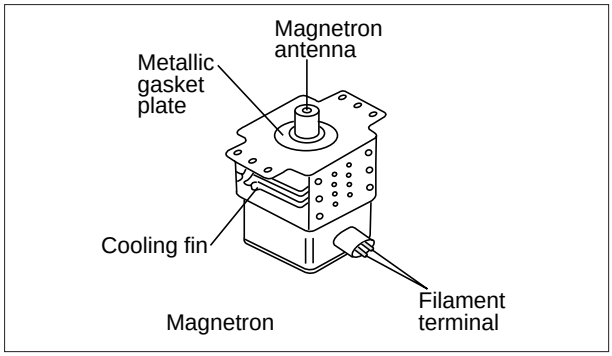


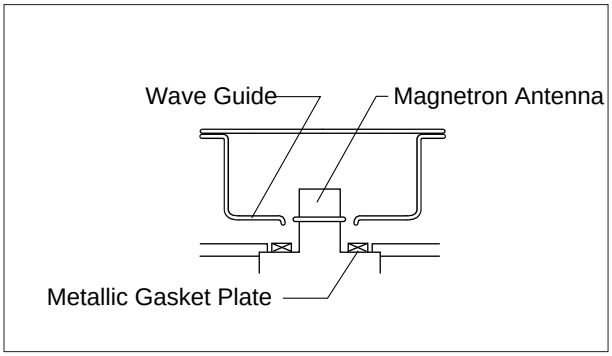
7. To remove magnetron.

(1) Remove three screws ¤ which secure the magnetron ¤Ł
(2) Remove the magnetron ¤Ł
(3) Reverse the above steps for reassembly.



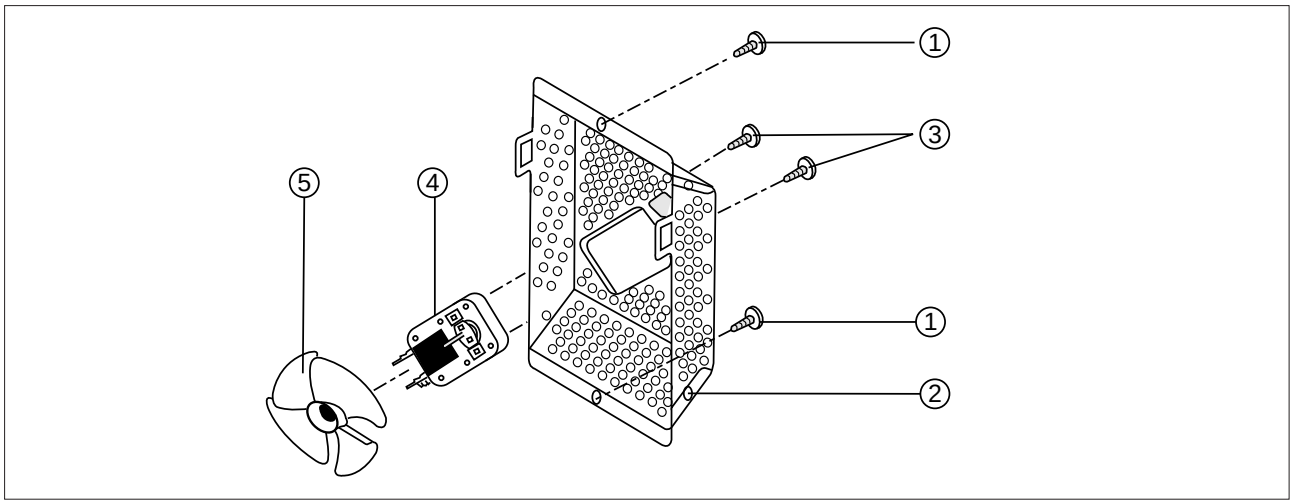
CAUTION : Never install the magnetron without the metallic gasket plate which is packed with each magnetron to prevent microwave leakage.
Whenever repair work is carried out on magnetron, check the microwave leakage.
It shall not exceed 4mW/cm2 for a fully assembled oven with door normally cosed.





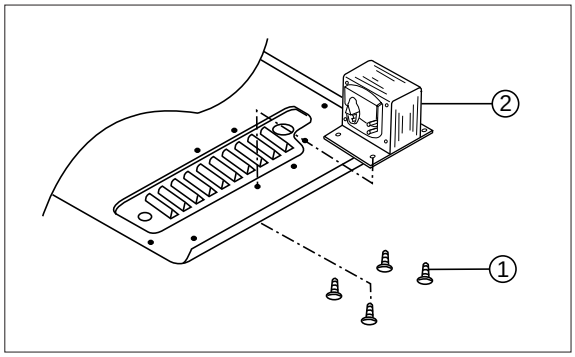
8. To remove fan motor assembly.

(1) Remove two screws ¤ which secure the back cover ¤Ł from the cavity outer.
(2) Remove two screws ¤Øwhich secure the fan motor ¤Œfrom the back cover ¤Ł.
(3) Pull out the fan ¤º from the motor ¤Œ
(4) Reverse the above steps for reassembly.



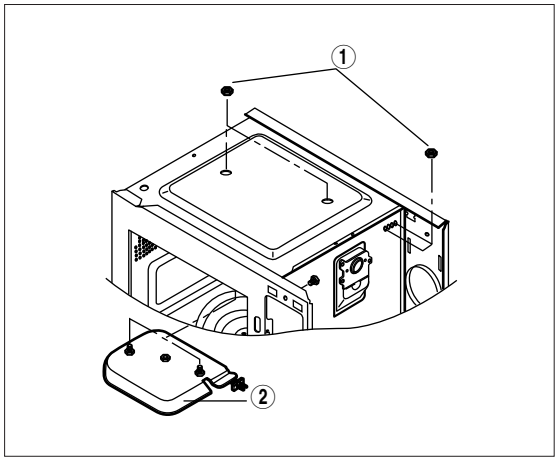
9. To remove transformer.

(1) Remove the four screws ¤ holding the H.V. transformer ¤Ł.
(2) Remove the transformer ¤Ł.
(3) Reverse the above steps for reassembly.

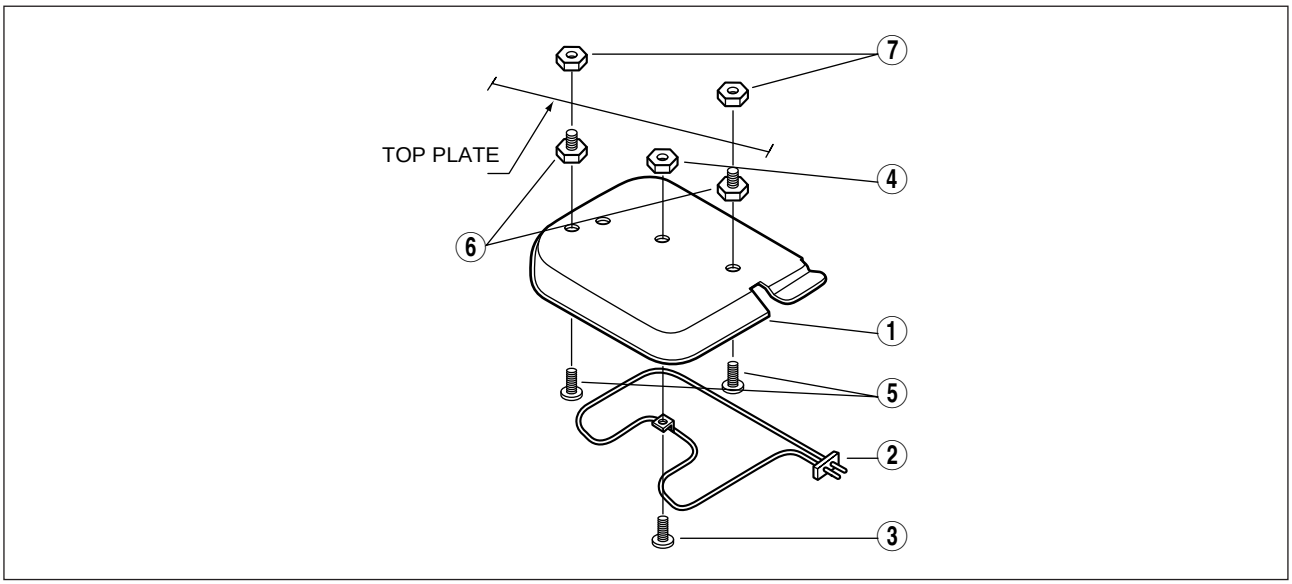


10. To remove insulator Heater assembly.

(1) Remove the four HEX Nuts ¤ .
(2) Remove the Insulator Heater assembly ¤Ł
(3) Reverse the above steps for reassembly.



11. To remove Heater Part.



NO	PART NAME	PART CODE	Q'TY	DESCRIPTION	REMARK
1	INSULATOR HEATER	3513301100	1	SPP T0.8	
2	HEATER	3512801700	1	230V 1000W	
3	SCREW MACHINE	7002500613	1	TRS 5X6 MFCR	
4	NUT HEX	7392500008	1	6N-2-5 SUS	
5	SCREW MACHINE	7002400413	2	TRS 4X4 MFCR	
6	SPACER INSULATOR*I	3515000700	2	C3771BD	
7	NUT HEX	7S627W50X1	2	FLG NUT M5X0.8P MFZN	

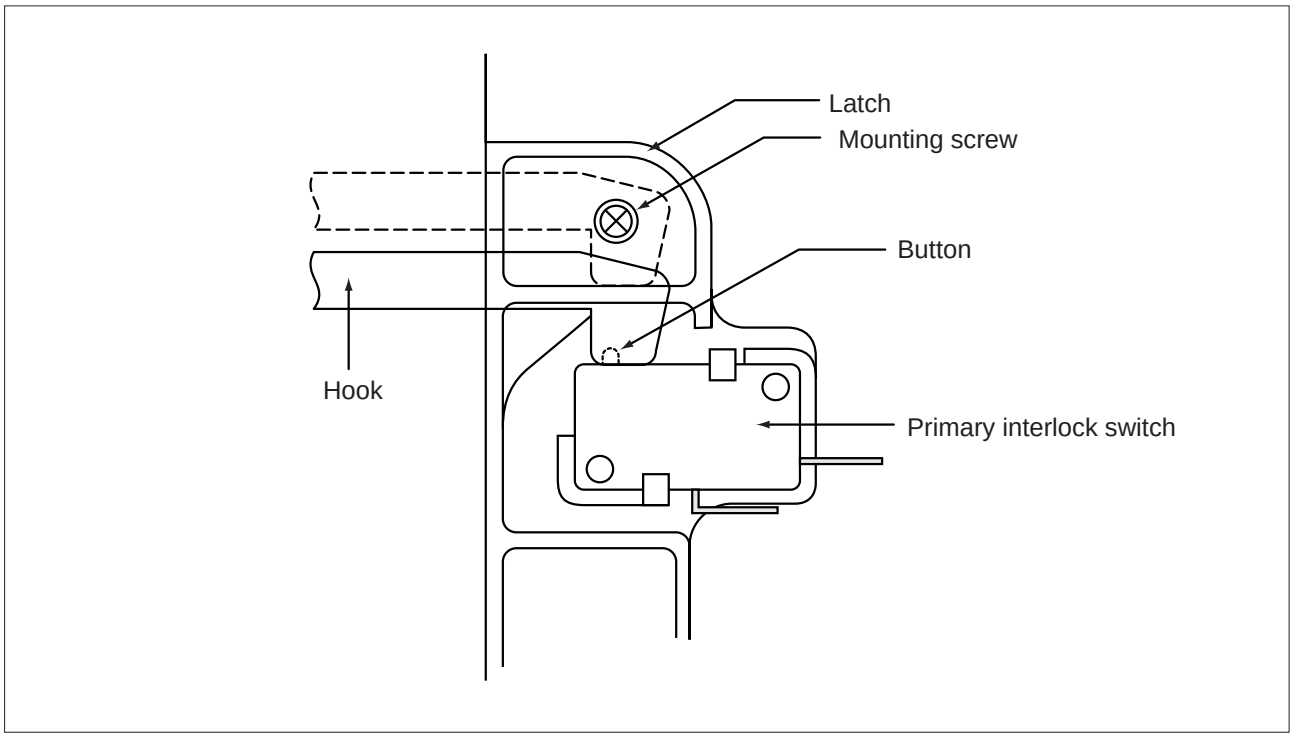
(1) Remove the HEX Nut ¤Œ
(2) Remove the Insulator Heater ¤ and Heater ¤Ł
(3) Remove the two screws ¤º.
(4) Reverse the above steps for reassembly.

INTERLOCK MECHANISM

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.

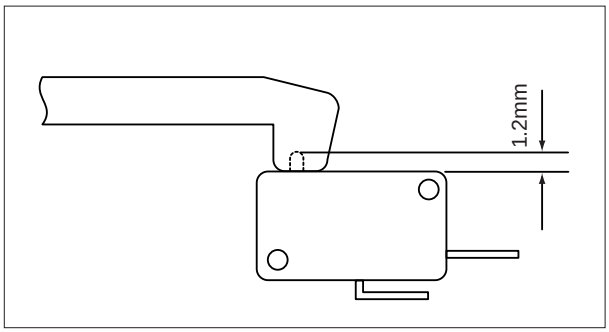
(1) Primary interlock switch

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 button of the micro switch. Then the button of the primary interlock switch bring it under on condition.



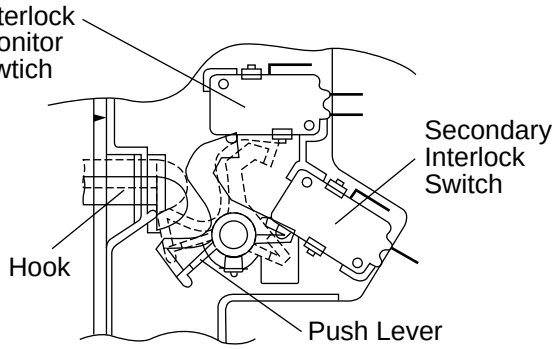
ADJUSTMENT 1.

When the door is closed, the switch button is pushed by the hook.
The movement of the switch button should exceed 1.2mm measured at the top of the button.



(2) Secondary interlock switch and interlock monitor switch

When the door is closed, the hook pushes the push lever down ward, the push lever presse the button of the monitor interlock switch to bring it under “off”, condition and presses the button of the secondary interlock switch to biring it under “on”, condition.



ADJUSTMENT 2.

Interlock monitor switch

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

Secondary interlock switch

The movement of the switch button should exceed 1.2mm measured at the top of the button.

(3) Adjustment steps

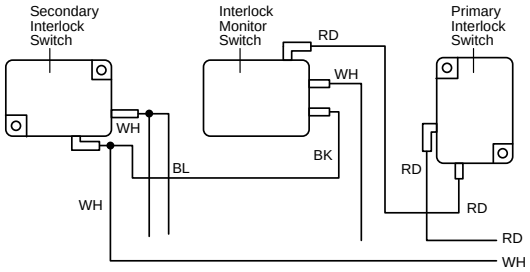
a) Loosen the two mounting screws.
b) Adjust interlock switch assembly position.
c) Confirm the gap(1.2mm) described above.
d) Make sure that push lever moves smoothly after adjustments is completed.
e) Completely tighten the two mounting screws.

NOTE : Microwave emission test should be performed after adjusting interlock machanism. If the microwave emission exceed 4mW/cm2, readjust interlock mechanism.

(4) Interlock switch resplacement

Whenever safety interlock switch are replaced :

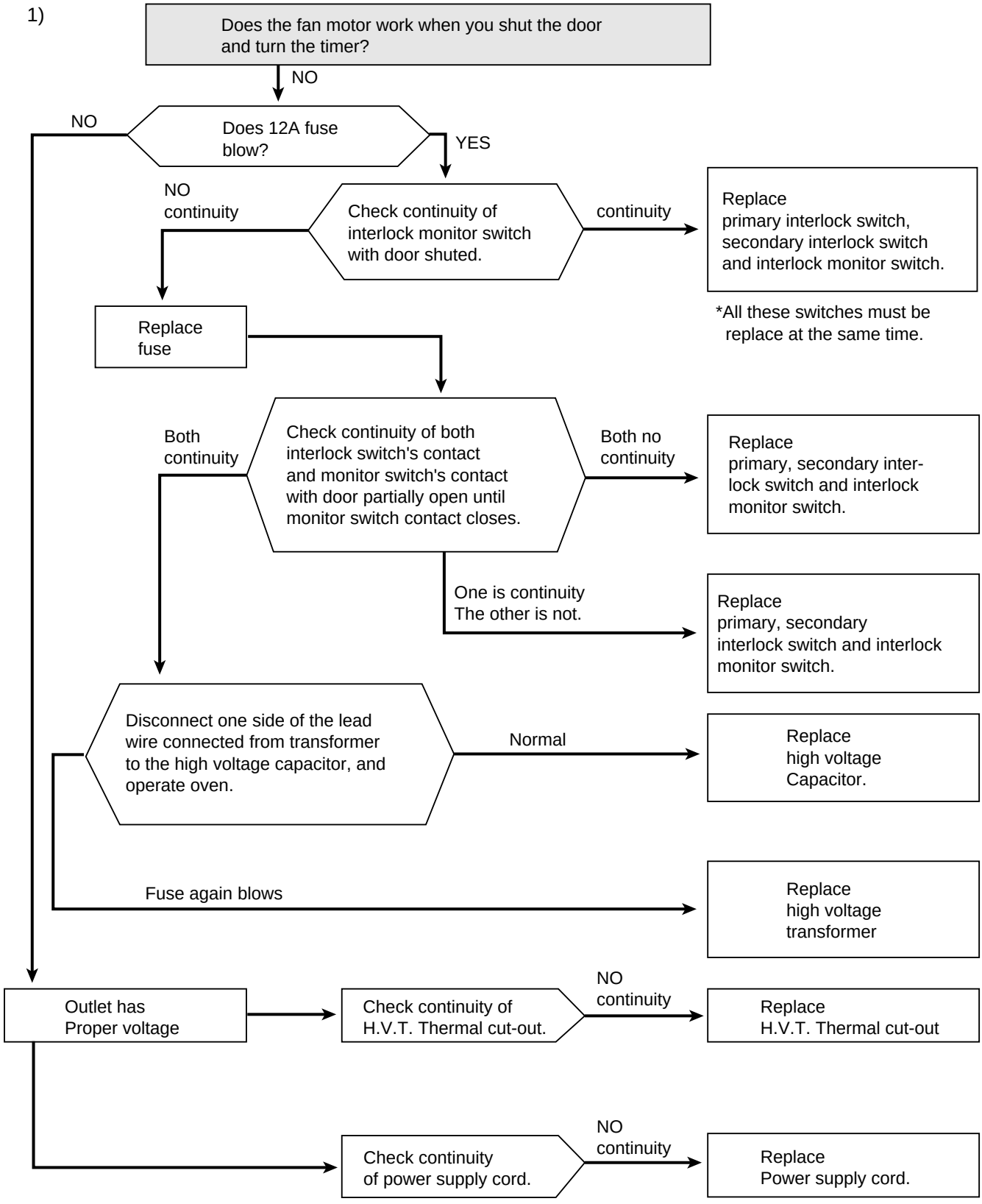
1) Refer to the following diagram.
2) Check the connection of monitor switch after replacement.
3) Perform the electrical continuity check of interlock switches and microwave emission test mentioned in this manual.



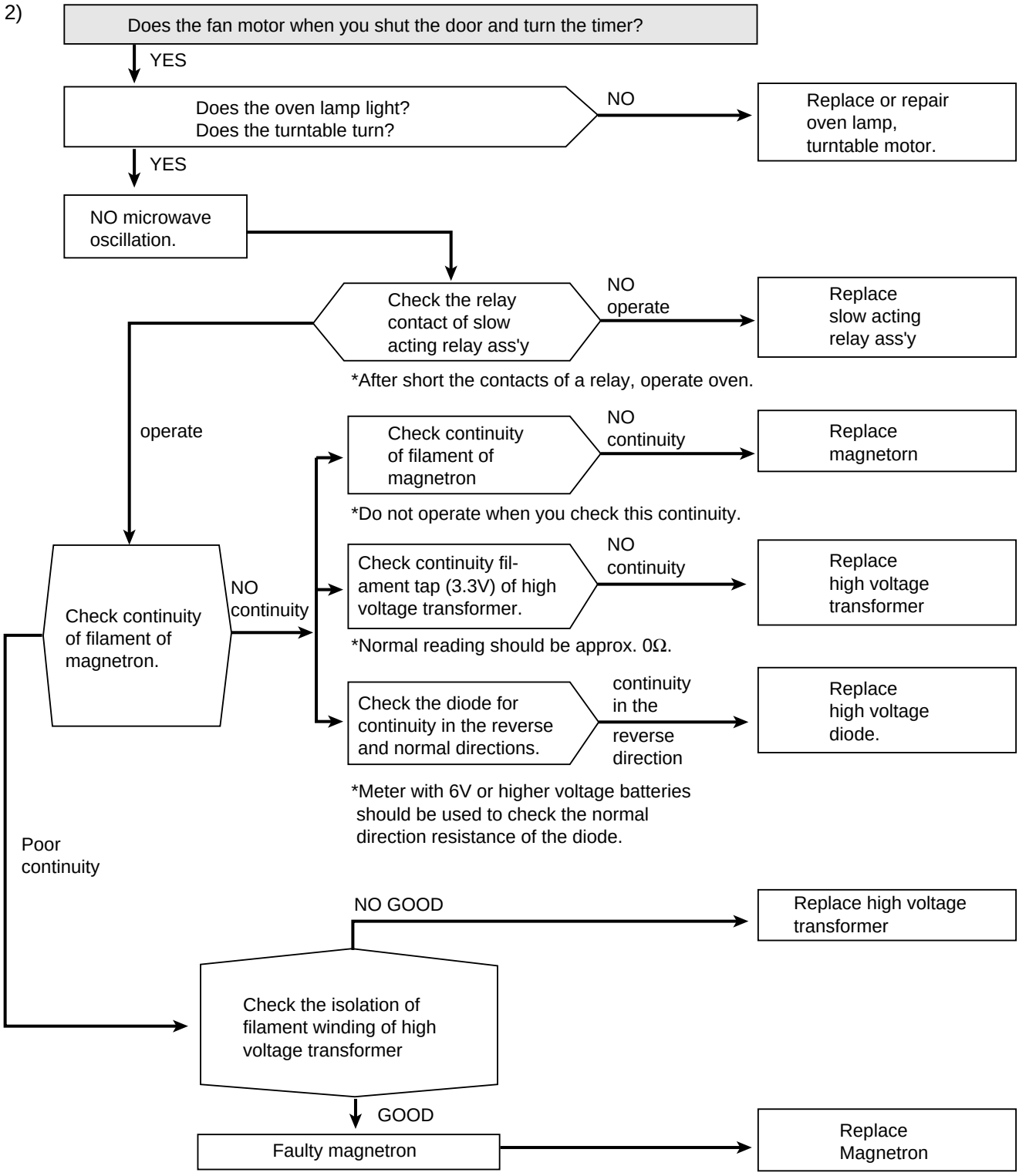
SYMBOL	COLOR
RD	RED
WH	WHITE
BK	BLACK
BL	BLUE

TROUBLE SHOOTING GUIDE

Trouble
Door shut, timer set but no cooking takes place.



2)


Does the fan motor when you shut the door and turn the timer?
YES
Does the oven lamp light?
Does the turntable turn?
NO
Replace or repair oven lamp, turntable motor.
YES
NO microwave oscillation.
Check the relay contact of slow acting relay ass'y
NO operate
Replace slow acting relay ass'y
*After short the contacts of a relay, operate oven.
operate
Check continuity of filament of magnetron
NO continuity
Replace magnetorn
*Do not operate when you check this continuity.
Check continuity of filament of magnetron.
NO continuity
Check continuity fil-ament tap (3.3V) of high voltage transformer.
NO continuity
Replace high voltage transformer
*Normal reading should be approx. 0Ω.
Check the diode for continuity in the reverse and normal directions.
continuity in the reverse direction
Replace high voltage diode.
*Meter with 6V or higher voltage batteries should be used to check the normal direction resistance of the diode.
Poor continuity
NO GOOD
Replace high voltage transformer
Check the isolation of filament winding of high voltage transformer
GOOD
Faulty magnetron
Replace Magnetron

COMPONENT TEST PROCEDURE

1. High voltage is present at the high voltage terminal of the high voltage transformer during any cooking 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 14).

1. High voltage transformer

(A) Remove connections from the transformer terminals and check continuity.
(B) Normal readings should be as follows:
Secondary winding.....Approx. 120Ω ¡ 10%
Filament winding .....Approx. 0Ω
Primary winding.....Approx. 0Ω

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 9MΩ once the capacitor is charged.
(C) A shorted capacitor will show continuous continuity.
(D) An open capacitor will show constant 9MΩ.
(E) Resistance between each terminal and chassis should be infinite.

3. High voltage diode

(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-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 KΩ in the other direction.

4. Magnetron

For complete magnetron diagnosis, refer to "Measurement of the Microwave Output Power". (Page 7) Continuity checks can only indicate and open filament or a shorted magnetron. To diagnose for an open filament or shorted magnetron.

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

5. Interlock monitor switch

The interlock switch can be checked with an ohmmeter. Isolate the switch and then connect the meter leads to the common (COM) and normally close (NC) terminals of the switch. The meter should indicate an open circuit with the door closed and a closed circuit with the door opened.
In case improper operation is indicated, make the necessary switch adjustment or replacement.

6. Primary and secondary interlock switch

The primary and secondary interlock switch can be checked with an ohmmeter. Isolate the switch and connect the meter leads to the common (COM) and normally open (NO) terminals of the switch.
The meter should indicate an open circuit with the door opened and a closed circuit with the door closed. In case improper operation is indicated, make the necessary switch adjustment or replacement.

SAFETY INTERLOCK CONTINUITY TEST

¥ Disconnect the oven from the power supply.

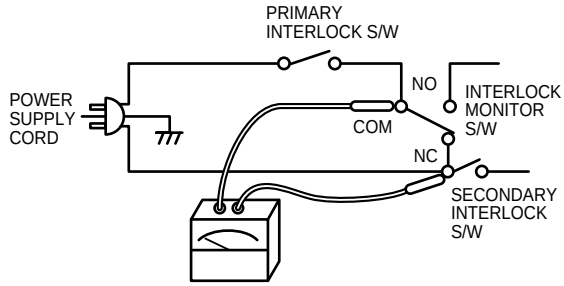
¥ You can test continuity of safety interlocks and monitor switch by using switch tester or ohmmeter.

¥ The switch operation is checked by the lamp on/off of resistance zero/unlimited.

¥ The sequence of check is interlock monitor switch; primary and secondary interlock switches check.

¥ Make circuits like Fig. a, Fig. b, Fig. c for tests.

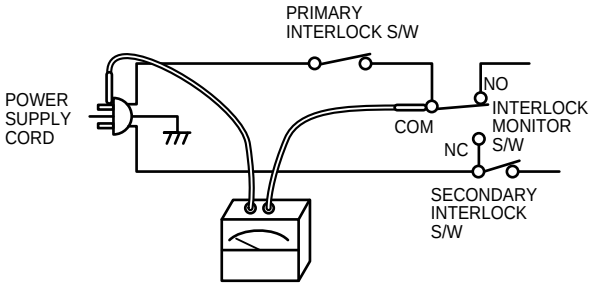
1) In case of interlock monitor check.
(Lamp on or zero resistance)



(ohmmeter)
– Fig. a –

Condition: 1) Door is opened.
2) Common terminal of the monitor switch disconnected.

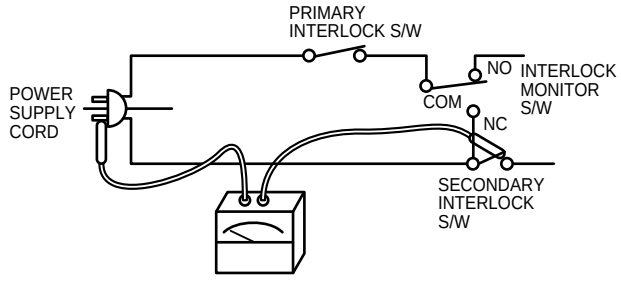
2) In case of primary interlock check.
(Lamp on or zero resistance)



(ohmmeter)
– Fig. b –

Condition: 1) Door is closed.

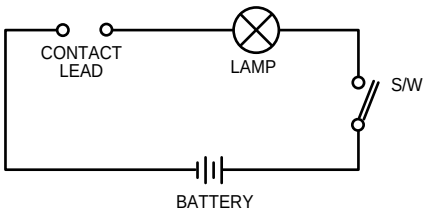
3) In case of secondary interlock switch.
(Lamp on or zero resistance)



(ohmmeter)
– Fig. c –

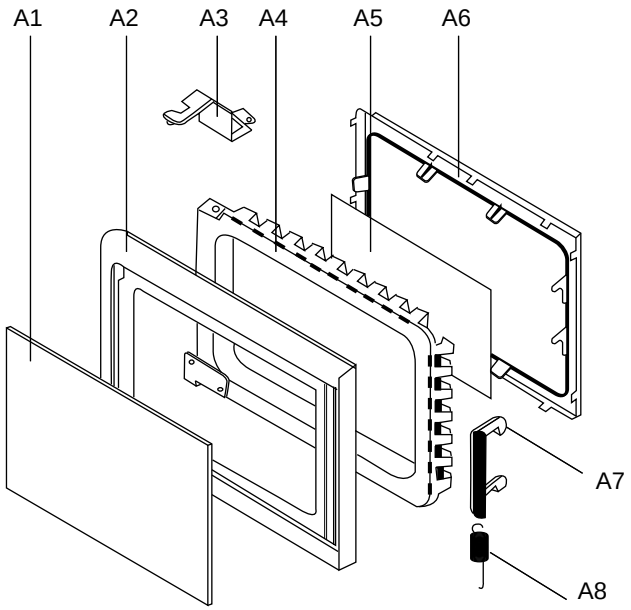
Condition : 1) Door is closed.

ƒN(Schematic diagram of S/W tester)



EXPLODED AND PARTS LIST

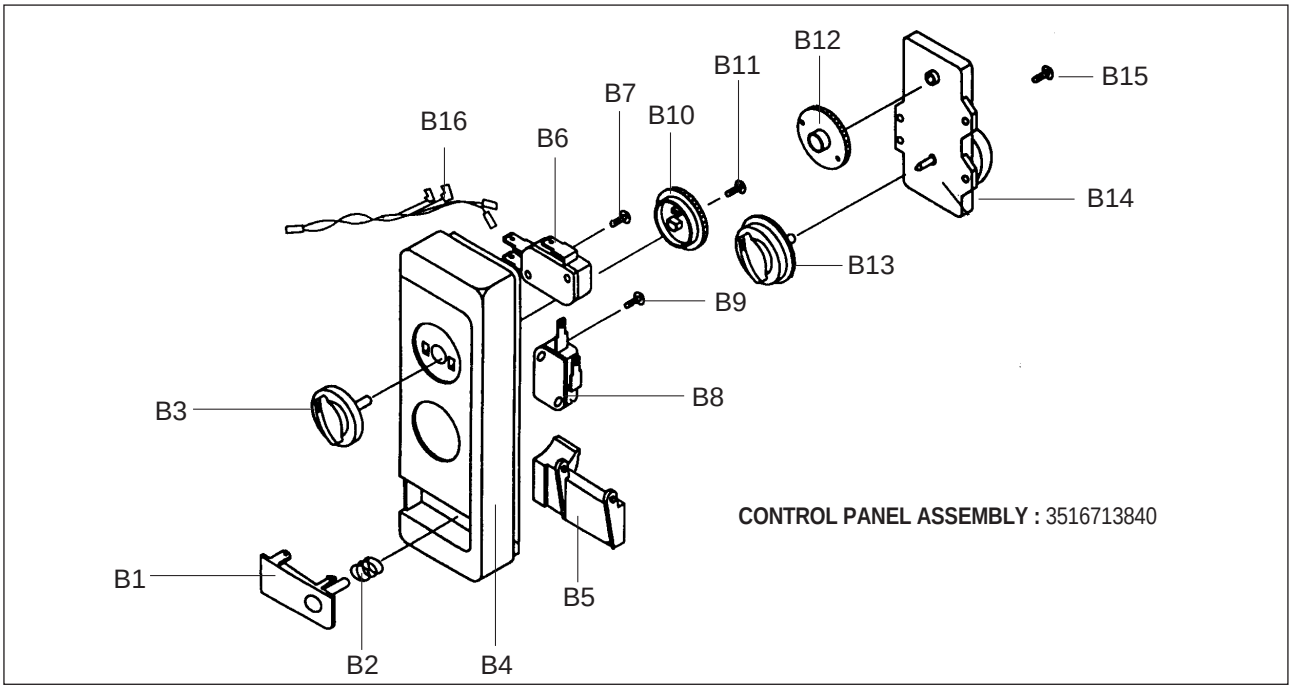
1. Door Assembly



DOOR ASSEMBLY : 3511706000

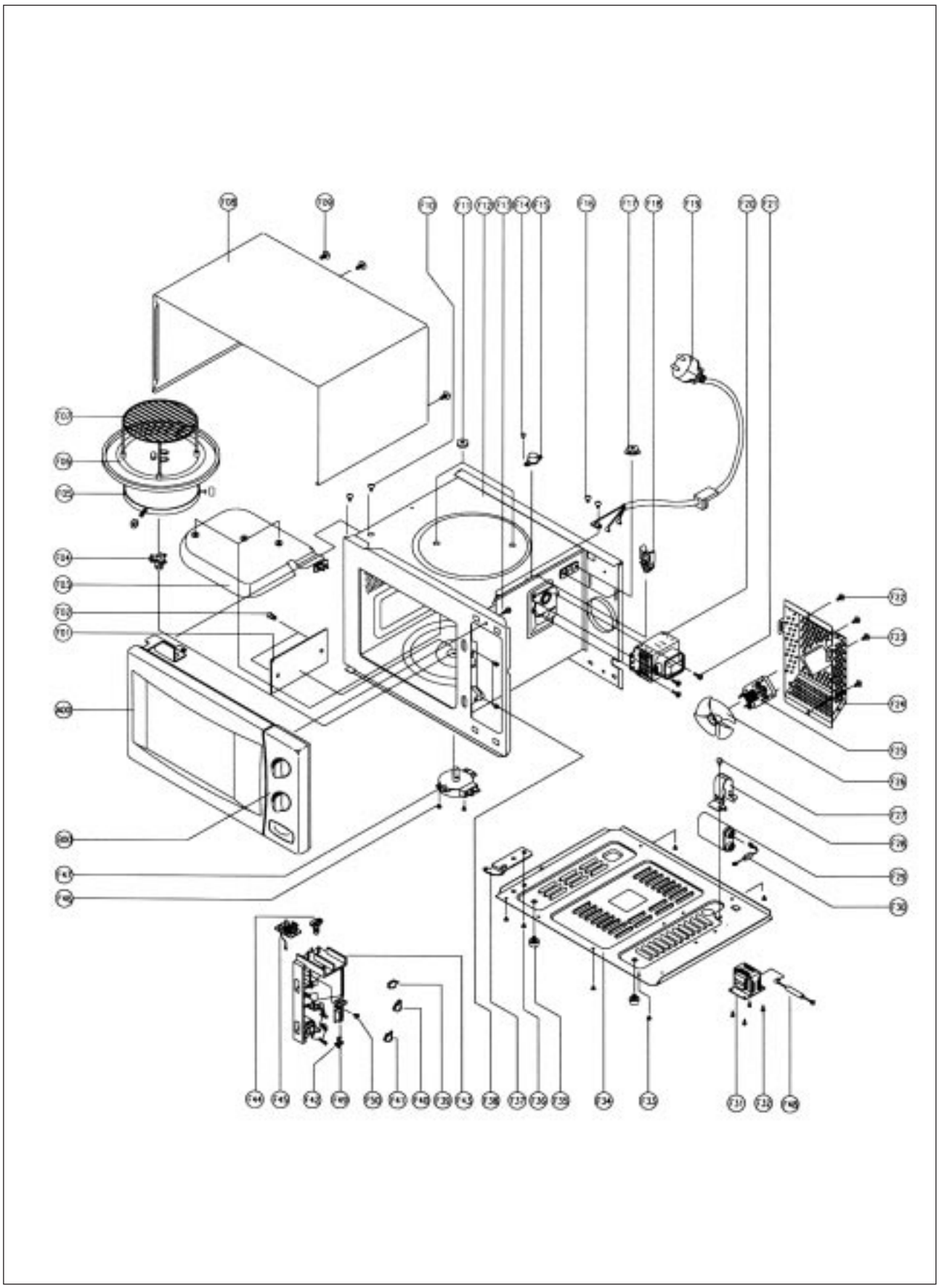
REF NO	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
A1	3517003010	BARRIER SCREEN *O	PMMA T1.5	1	KOG-3605
A2	3512202500	FRAME DOOR	ABS	1	KOG-3605
A3	3515201500	STOPPER HINGE *T AS	KOR-61150S	1	
A4	3511705500	DOOR WELD AS	KOR-61150S	1	
A5	3517002800	BARRIER-SCREEN*¥	POLYESTER T0.1	1	
A6	3512300200	GASKET DOOR	PP	1	
A7	3513100700	HOOK	POM	1	
A8	3515101300	SPRING HOOK	PW1	1	

2. Control Panel Ass'y



REF NO	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
B1	3516903610	BUTTON DOOR OPEN	ABS	1	KOG-3605
B2	4416D55061	BUTTON SPRING	SWPA	1	KOG-3605
B3	3513402610	KNOB VPC	ABS	1	KOG-3605
B4	3516711400	CONTRON-PANEL	ABS	1	KOG-3605
B5	3513701400	LEVER DOOR OPEN	POM	1	KOG-3605
B6	4415A66910	SW MICRO	VP-531A-OF	1	
B7	7121301511	SCREW TAPPING	T2S PAN 3X15 MFZN	1	
B8	4415A17352	SW MICRO	VP-533A-OF	1	
B9	7121301511	SCREW TAPPING	T2S PAN 3X15 MFZN	1	
B10	3517400500	COUPLER VPC KNOB	POM	1	
B11	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN	1	
B12	3517400400	COUPLER TIMER	POM	1	
B13	3513402510	KNOB	ABS	1	KOG-3605
B14	3518203800	TIMER	KN35MKD 24E-P	1	
B15	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN	1	
B16	3512764200	HARNESS TIMER	KOG-36150S	1	

3. Main Unit



PARTS LIST

REF NO.	PART NAME	PART CODE	DESCRIPTION	Q'TY	REMARKS
A00	DOOR ASS'Y		EXPLODED AND PART LIST	1	
B00	C/PANEL ASS'Y			1	
F01	COVER WAVE GUIDE	3511403500	MICA T0.5	1	
F02	BUTTON LOCKING	4078502031	PP	2	
F03	INSULATOR HEATER AS	3513301400	KOG-36150S	1	
F04	COUPLER	3517400600	PPS	1	
F05	GUIDE ROLLER AS	3512510600	KOR-61150S	1	
F06	TRAY	3517203600	GLASS	1	
F07	TRAY RACK AS	3517204410	KOG-361Q0S 99MM	1	
F08	CABINET	3510801300	PCM T0.6	1	
F09	SCREW TAPPING	7S312X40A1	T1 TRS 4X10 SE MFZN	3	
F10	SCREW SPECIAL	3516003700	TT3 FLG HEX 4X8 MFZN	2	
F11	NUT HEX	7S627W50X1	FLG NUT M5X0.8P MFZN	2	
F12	CAVITY AS	3516104810	KOG-36150S	1	
F13	SCREW TAPPING	7122401211	T2S TRS 4X12 MFZN	1	
F14	SCREW TAPPING	7121300611	T2S PAN 3X6 MFZN	1	
F15	THERMOSTAT	3513902200	OFF:130 ON:115	1	
F16	SCREW TAPPING	7112401011	T1 TRS 4X10 MFZN	3	
F17	NUT HEX	7S627W50X1	FLG NUT M5X0.8P MFZN	2	
F18	CLAMP POWER CORD	4413A90012	NYLON 66	1	
F19	CORD POWER AS	35113AAQ95	3X0.75 60X60 120-RTML	1	
F20	MAGNETRON	3518002200	2M 218H(MF) I	1	
F21	SCREW SPECIAL	3516002700	T2S FLG HEX 4X13 SE MFZN	3	
F22	SCREW TAPPING	7S312X40A1	T1 TRS 4X10 SE MFZN	2	
F23	SCREW MATCHINE	7601400811	PAN 4X8 PW MFZN	2	
F24	COVER *B	3511402500	SBHG T0.8	1	
F25	MOTOR SHADED POLE	3963512100	MW10CA-R01	1	
F26	FAN	3511800300	PP+30% GLASS	1	
F27	SCREW TAPTITE	7272400811	TT3 TRS 4X8 PW MFZN	1	
F28	HOLDER HV CAPACITOR	3513001900	SECC T0.8	1	
F29	CAPACITOR H.V	441U667020	2100VAC 0.95uF	1	
F30	DIODE H.V.	4416V24000	HVR-1X-32B	1	
F31	TRANS H.V.	3518106210	JY-N80S0-61T	1	
F32	SCREW SPECIAL	3516003700	TT3 TRS 4X8 MFZN	4	
F33	SCREW TAPPING	7112401011	T1 TRS 4X10 MFZN	5	
F34	BASE	3510308700	SBHG T0.8	1	
F35	FOOT	3512100900	PP DASF-130	2	
F36	SCREW TAPTITE	7272400811	TT3 TRS 4X8 MFZN	2	
F37	STOPPER HINGE *U	3515201101	SCP-1 T2.5	1	
F38	SCREW TAPPING	7122401211	T2S TRS 4X12 MFZN	2	
F39	SW MICRO	4415A17352	VP-533A-OF	1	
F40	SW MICRO	4415A66910	VP-531A-OF	1	
F41	SW MICRO	4415A17352	VP-533A-OF	1	
F42	LEVER LOCK	3513701300	POM	1	
F43	LOCK	3513805700	POM	1	
F44	LAMP	3513601600	BL 240V 25W T25	1	
F45	NOISE FILTER	3518603700	DWLF-M	1	
F46	SCREW TAPPING	7121400611	T2S TRS 4X6 MFZN	2	
F47	MOTOR SYNCRO	3966310100	GM-16-24FD12	1	
F48	FUSE H.V	3518700900	HV-41A 5KV 0.55A #250	1	
F49	SLOW ACTING RELAY	3518570400	DWSR-1	1	for Germany
F50	SCREW TAPPING	7122401211	T2S TRS 4X12 MFZN	1	