



Merrychef **MICRO**

This document is published to be used for after sales service only.

The content is subject to change without prior notice.

In interest of user safety the appliance should be restored to its original condition and only parts identical to those should be applied.

Service manual

Model:
microMD UK

Contents

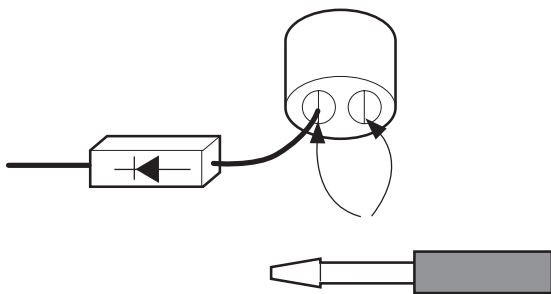
Precautions	3
Installations	4
Service information	5
Circuit description	5
Tools and measuring instruments	6
Microwave leakage test	6-7
Measurement of microwave power output	8
Disassembly and adjustment	8
Removing The Door	9
Removing The Cooling Fan	?
High Voltage Capacitor And Diode Removal	10
Magnetron Removal	10
Removing The Turn Motor	10
High Voltage Transformer Removal	11
Removing The Antenna Stirrer System	11
Pcb Assembly Removal	11
Interlock System	12
Interlock continuity test	13
Primary Interlock Switch Test	13
Secondary Interlock Switch Test	13
Monitor Switch Test	13
Component test procedure	14-17
Trouble shooting	18
Attached files list	23
Additional material tbs	XX

Precautions

Unlike other appliances, a microwave oven is a high voltage and high current piece of equipment.

In ordinary use there is no danger in it use, however extreme care should be taken during repair.

- **Do not** operate on a 2-wire extension cord during repair and use.
- **Never touch** any oven components or wiring during operation.
- **Before touching** any parts of the oven, always remove the power plug from the outlet.
- For about 30 seconds after the oven stops, an electric charge remains in the high voltage capacitor. When replacing or checking, you must discharge the high voltage capacitor by using a Merrychef discharge tool, or appropriately insulated 30M Ohm resistor.



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

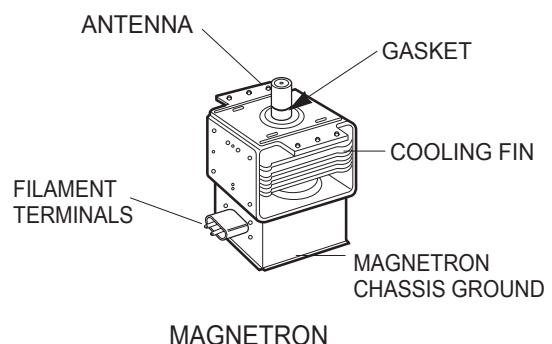
Microwave radiation

Personnel should not be exposed to the microwave energy which may radiate from the magnetron or other microwave generating device if it is improperly used or connected.

All input and output microwave connections, waveguide, flange and gasket must be secure. Never operate the device without a microwave energy absorbing load inside the oven.

Never look into an open waveguide or antenna while the device is energized.

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



The oven is to be serviced only by properly qualified service personnel.

Installations

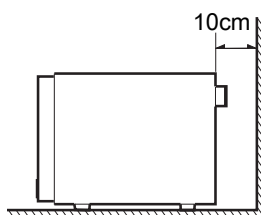
Before you begin, read the following instructions completely and carefully.

Installing

1. Empty the microwave oven and clean inside it with a soft, damp cloth. Check for damage such as misaligned door, damage around the door or dents inside the cavity or on the exterior.
2. Put the oven on a counter, table, or shelf that is strong enough to hold the oven and the food and utensils you put in it. (The control panel side of the oven is the heavy side. Use care when handling.)
3. Do not block the vent and the air intake openings. Blocking vent or air intake openings can cause damage to the oven and poor cooking results.

Make sure the microwave oven legs are in place to ensure proper air flow.
4. The oven should not be installed in any area where heat and steam are generated, because they may damage the electronic or mechanical parts of the unit.

Do not install the oven next to a conventional surface unit or above a conventional wall oven.
5. Use the microwave oven in an ambient temperature less than 104°F (40°C).
6. Place the microwave oven on a sturdy and flat surface at least 10 cm (4 inches) from the wall.
7. Place the microwave oven as far away as possible from TV, radio, computer, etc., to prevent interference.



Earthing instructions

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

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

Warning: This appliance must be earthed

Important:

The wires in this mains lead are 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 the earth symbol (X) or coloured green or green-and-yellow.
- The wire which is coloured blue must be connected to the terminal in the plug which is marked with the letter N or coloured black.
- The wire which is coloured brown must be connected to the terminal in the plug which is marked with the letter L or coloured red.

Service information

Circuit description

General details

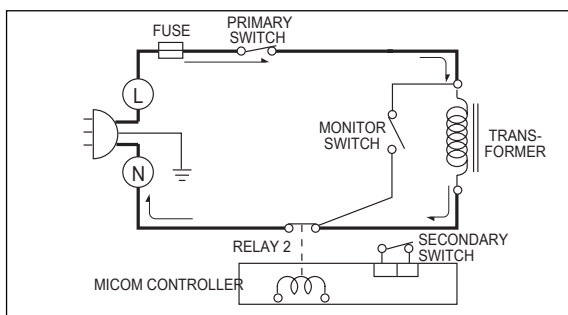
- The low voltage transformer supplies the necessary voltage to the micom controller when power cord is plugged in.
- When the door is closed, the primary switch is ON, the secondary switch is ON, and the monitor switch opens (contact COM and NO).

When selecting cooking power level and time

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

When touching the start pad

- The coil of the relay is energized by the micom controller.
- Power input is supplied to the high voltage transformer through the fuse to the primary switch and relay 2.
- Turntable rotates.



- The fan motor rotates and cools the magnetron by blowing the air (coming from the intake on the baseplate)
- The air is also directed into the oven to exhaust the vapour in the oven through the upper plate.
- Cooking time starts counting down.
- 3.2 volts AC is generated from the filament

winding of the high voltage transformer. This 3.2 volts is applied to the magnetron to heat the magnetron filament through two noise preventing choke coils.

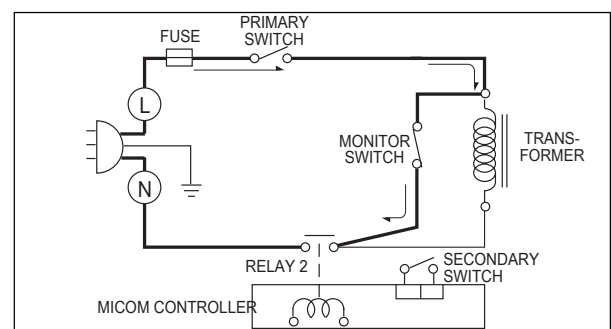
- A high voltage of approximately 2100 volts AC is generated in the secondary of the high voltage transformer which is increased by the action of the high voltage diode and charging of the high voltage capacitor.
- The negative 4,000 Volts DC is applied to the filament of the magnetron.

When the oven is set at any level except maximum

- The micom controller controls the ON-OFF time of relay 2 by the applied signal to vary the average output power of microwave oven as POWER LEVEL (refer to page **X**).

When the door is opened during cooking

- Both the primary switch and relay 2 are cut off primary winding voltage of the high voltage transformer.
- ON-OFF of relay 2 is coupled electrically with opening and closing of the secondary switch.
- When the door is opened, the secondary switch is opened and when the door is closed, the secondary switch is closed.
- The cooking time stops counting down.
- Relay stops functioning.
- As the door is opened, if the contact of primary switch and relay 2 and/or secondary switch fails to open, the fuse opens due to the large current surge caused by the monitor switch activation, which in turn stops magnetron oscillation.



Service information

Tools and measuring instruments

Necessary tools

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

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

Necessary measuring instruments

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

Microwave leakage test

Cautions

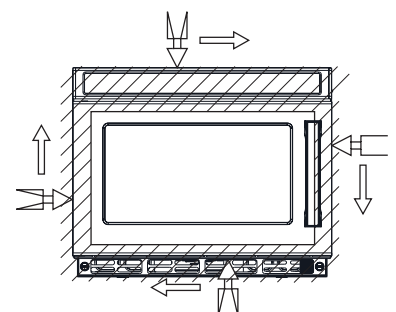
- Be sure to check microwave leakage prior to servicing the oven if the oven is operative prior to servicing.
- The service personnel should inform the manufacture importer, or assembler of any certified oven unit found to have a microwave emission level in excess of 5 mW/cm² and should repair any unit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

Measuring microwave energy leakage

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

Move probe along shaded area

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



Measurement with outer case removed

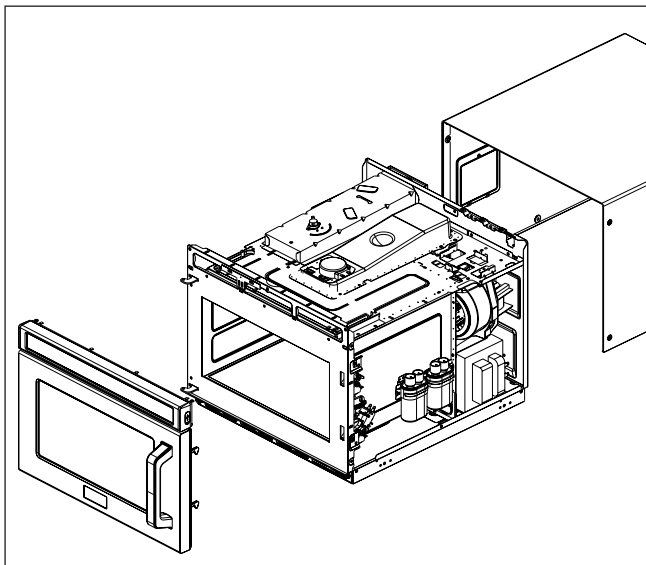
- When you replace the magnetron, measure for microwave energy leakage before the outer case is installed and after all necessary components are replaced or adjusted.

Special care should be taken in measuring the following parts.

(Circled area of below Fig.)

- Around the magnetron
- The waveguide

Warning: Avoid contacting any high voltage parts



Measurement with a fully assembled oven

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

Note: Leakage with the outer case removed less than 5 mW/cm².sq. Leakage for a fully assembled oven (Before the latch switch (primary) is interrupted) with the door in a slightly opened position-less than 2 mW/cm².sq.

Notes when measuring

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

Record keeping and notification after measurement

After adjustment and repair of any microwave energy interruption or microwave energy blocking device, record the measured values for future reference. Also enter the information on the service invoice.

The microwave energy leakage should not be more than 4 mW/cm after determining that all parts are in good condition, functioning properly and genuine replacement parts which are listed in this manual have been used.

At least once a year, have the electromagnetic energy leakage monitor checked for calibration by its manufacturer.

Measurement of microwave power output

- Microwave power output measurement is made with the microwave oven supplied at its rated voltage and operated at its maximum microwave power setting with a load of (1000±5) g of potable water.
- The water is contained in a cylindrical borosilicate glass vessel having a maximum material thickness of 3mm and an outside diameter of approximately 190mm.
- The oven and the empty vessel are at ambient temperature prior to the start of the test.
- The initial temperature (T₁) of the water is (10±2)°C. It is measured immediately before the water is added to the vessel. After addition of the water to the vessel, the load is immediately placed on the centre of the turntable which is in the lowest position and the microwave power switched on.
- The time T for the temperature of the water to rise by a value ΔT of (10±2)°K is measured, where T is the time in seconds and ΔT is the temperature rise. The initial and final water temperatures are selected so that the maximum difference between the final water temperature and the ambient temperature is 5°K.
- The microwave power output P in watts is calculated from the following formula:

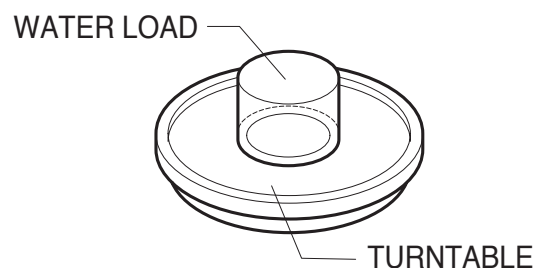
$$P = \frac{4187 \times (\Delta T) + 0.55 \times (T_2 - T_0) \times M}{T}$$

- T₂: Temperature after heating
- T₀: Temperature of bowl
- M: Weight of bowl

(I think there is some copy missing here!)

is measured while the microwave generator is operating at full power. Magnetron filament heat-up time is not included (about 3 sec).

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



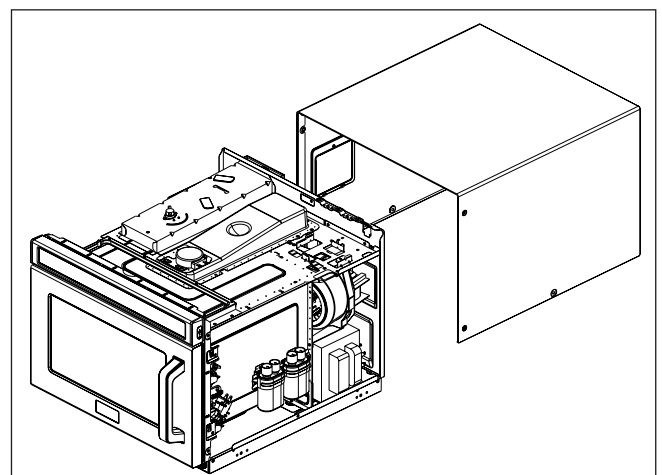
Notes: For simple tests of microwave power output, conduct it by heating one litre of water for one minute, minimum temperature rise should be 6°C

Disassembly and adjustment

1. Outer case removal

- 1) Disconnect the power supply cord from the outlet.
- 2) Remove the screws from the rear and along side edges of the case.

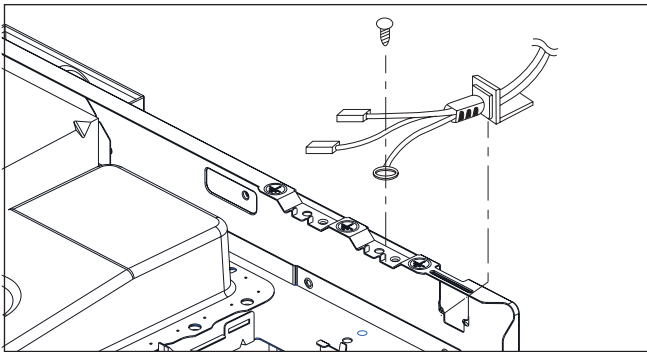
The outer case must be moved backward to be lifted off.



2. Power supply cord

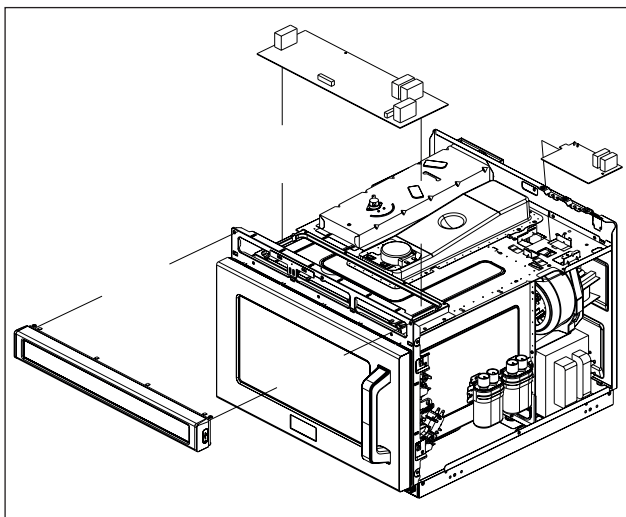
- 1) Remove the outer case.
- 2) Disconnect two terminals, and remove one screw of the earth terminal.

Caution: Discharge the high voltage capacitor before servicing



3. Control panel assembly

- 1) Disconnect the wire and move out the filter ASS'Y.
- 2) Disconnect the wire and take out the power board.
- 3) Loose screws on both sides and take out the control panel ASS'Y.



4. Door assembly removal

- 1) Open the door.
- 2) Remove the gasket.

Caution: Be careful not to break the gasket

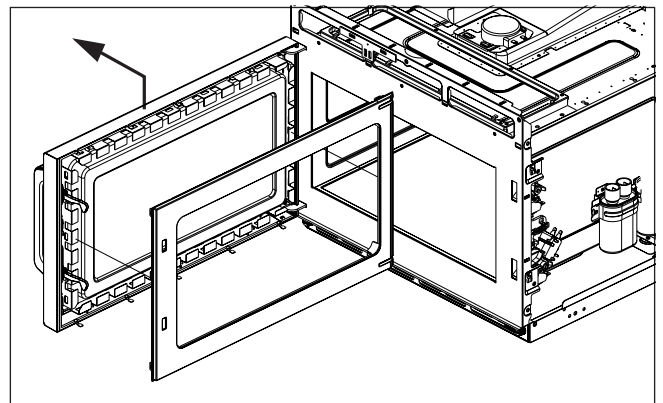
- 3) Lift up and take out the door.

Notes:

1. After replacing the door, be sure to check

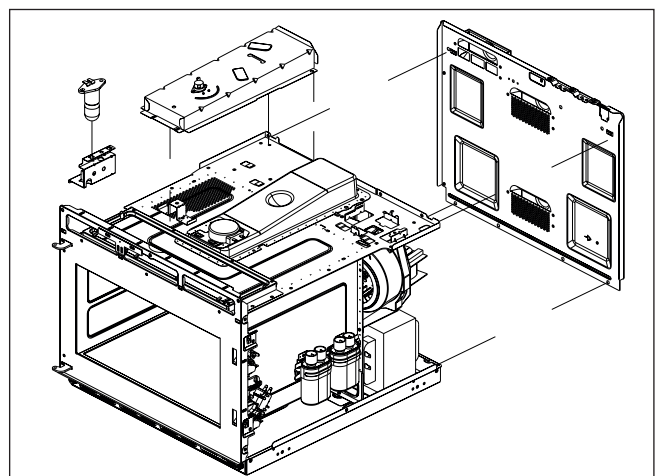
that the primary switch, monitor switch, and secondary switch operate normally.

2. After replacing the door, check for microwave energy leakage with a survey meter. Microwave energy must be below the limit of $5\text{mW}/\text{cm}^2$ (with a 275ml water load)
3. When mounting the door assembly to the oven assembly, be sure to adjust the door assembly parallel to the chassis. Also adjust so the door has no play between the inner door surface and oven frame assembly. If the door assembly is not mounted properly, microwaves may leak from the clearance between the door and the oven.



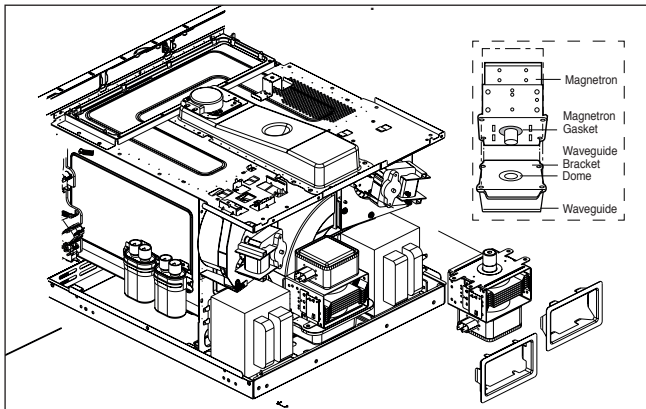
5. Air guide assembly removal

- 1) Disconnect the wire from lamp, release the screws fixed between air guides and magnetron.
- 2) Take out the lamp and the air guides.



6. Magnetron removal

- 1) Disconnect the leadwire from the high voltage transformer and high voltage capacitor.
- 2) Remove the air guide.
- 3) Carefully remove the mounting screws holding the magnetron and the waveguide.
- 4) Remove the magnetron until the tube is clear from the waveguide.

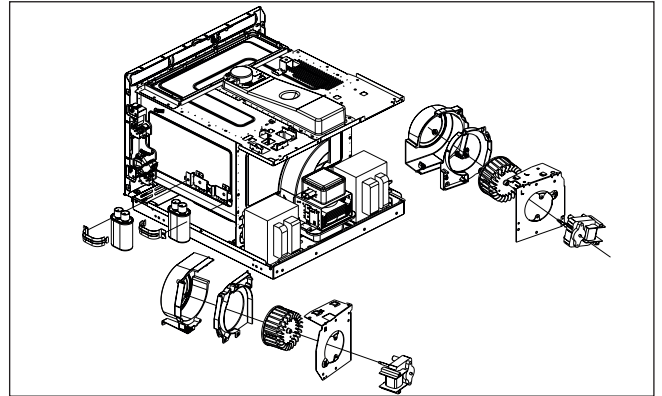


Note:

- 1) When removing the magnetron, make sure its dome does not hit any adjacent parts, or it may be damaged.
- 2) When replacing the magnetron, be sure to install the magnetron gasket in the correct position and be sure that the gasket is in good condition.
- 3) After replacing the magnetron, check for microwave leakage with a survey meter around the magnetron. Microwave energy must be below the limit of $5\text{mW}/\text{cm}^2$. (With a 275ml. water load). **Make sure that gasket is rigidly attached to the magnetron.** To prevent microwave leakage, tighten the mounting screws properly, making sure there is no gap between the waveguide and the magnetron.

7. Fan assembly removal

- 1) Release the screws and take out the fan assembly.
- 2) Separate the fan motor, fan guide and fan.

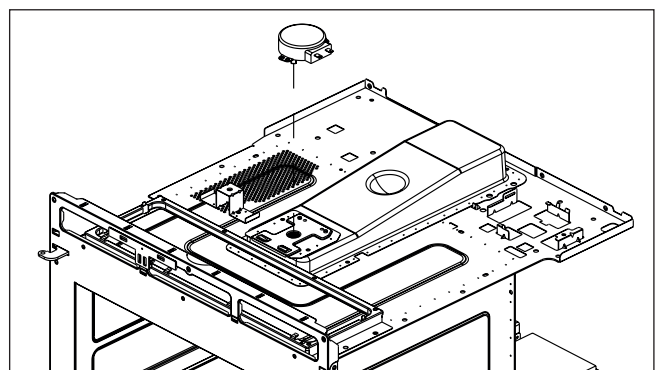


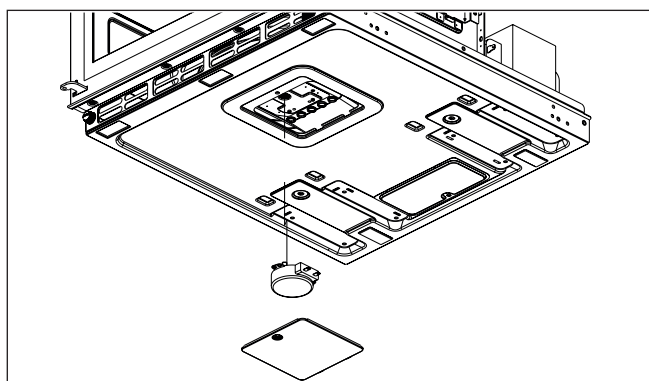
8. High voltage capacitor and diode removal

- 1) Discharge the high voltage capacitor.
- 2) Disconnect the leadwire from fan motor, noise filter and high voltage capacitor.
- 3) Remove the screw holding the Orifice ASS'Y to the oven cavity and remove the high voltage diode earth screw.
- 3) Remove the screw holding the capacitor bracket.

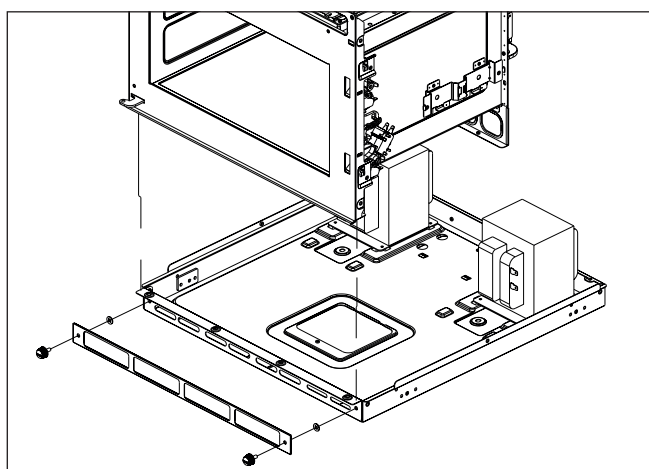
9. Removing the turntable motor

- 1) Disconnect the wire and remove the turntable motor on the top of the cavity.
- 2) Turn the whole unit over 90 degrees. Loose screw and remove the bottom cover.
- 3) Disconnect the wire and take out the turntable motor.
- 4) After replacing the motor, fix the cover back to the base plate.



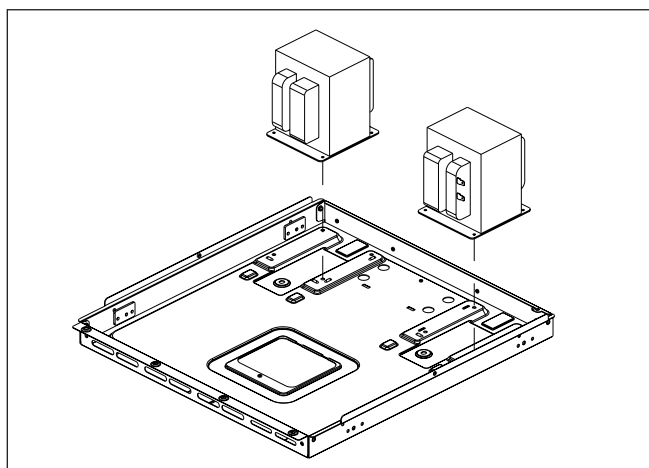


Remove the screws on both side. Take out the whole baseplate assemble.



10. High voltage transformer removal

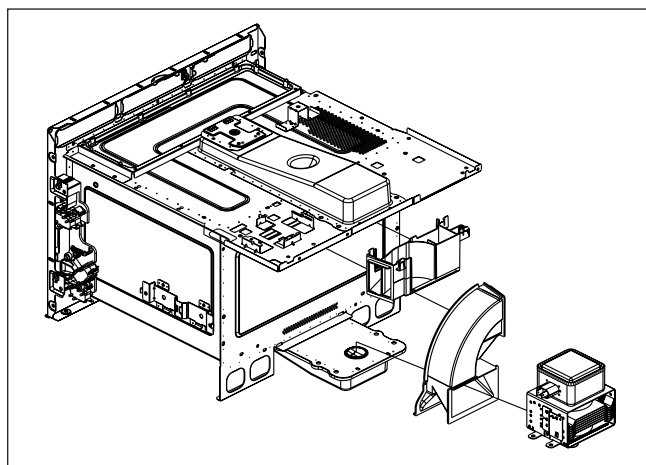
- 1) Discharge the high voltage capacitor.
- 2) Disconnect the leadwire from magnetron, high voltage transformer, and capacitor.
- 3) Remove the screw holding the high voltage transformer to the baseplate.



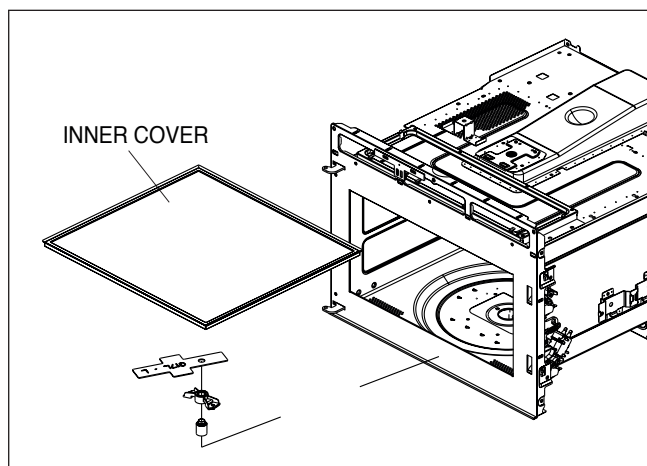
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12. Stirrer assembly removal

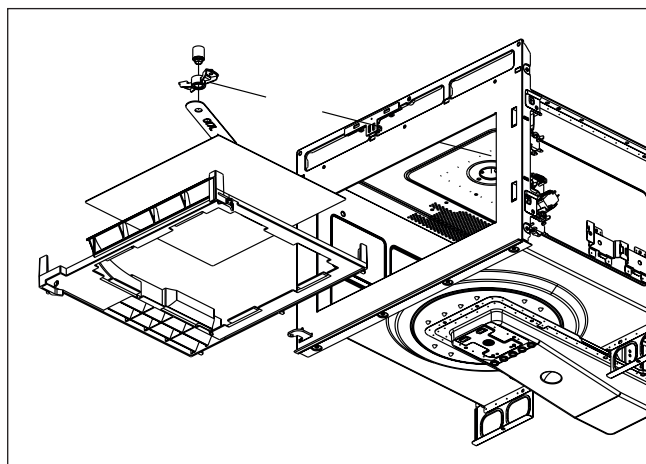
Remove the second magnetron first.



- 1) The inner cover needs to be removed to repair the bottom stirrer assembly.
- 2) The inner cover is fixed in the cavity by glue. Once it was removed, it needs to be glued again. (It is not recommend to do this).



- 3) Take out the top cover inside the cavity to repair the top stirrer assembly.

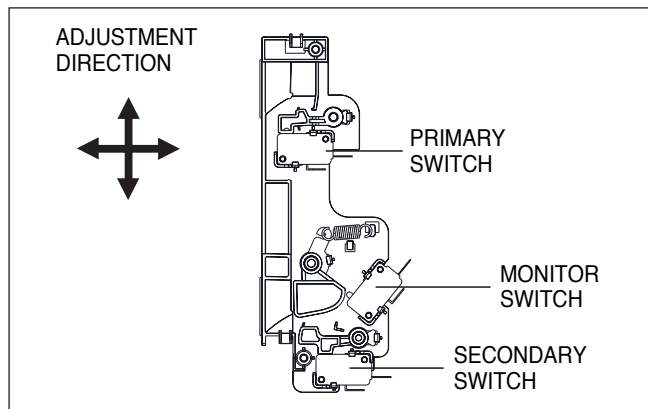


13. Interlock system

1) Interlock mechanism

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

2) Mounting of the primary / monitor / secondary switches to the latch board



3) Installation and adjustment of the latch board to the oven assembly

- Mount the latch board to the oven assembly.
- Adjust the latch board in the arrow direction so that oven door will not have any play in it when the door is closed.
- Tighten the mounting screw.
- **Check for play in the door by pushing the door release button. Door movement should be less than 0.5mm (1/64 inch).**

Don't push the door release button while making adjustments. Make sure that the latch moves smoothly after adjustments are completed and that the screws are tight. Make sure the primary, monitor, and secondary switches operate properly by following the continuity test procedure.

Interlock continuity test

Warning: For continued protection against excessive radiation emission, replace only with identical replacement parts. Type No. KW3A for switches

1. Primary interlock switch test

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

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

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

2. Secondary interlock switch test

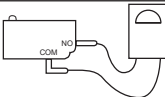


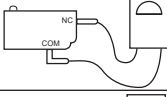





Disconnect the wire lead from the secondary switch.

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

3. Monitor switch test

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

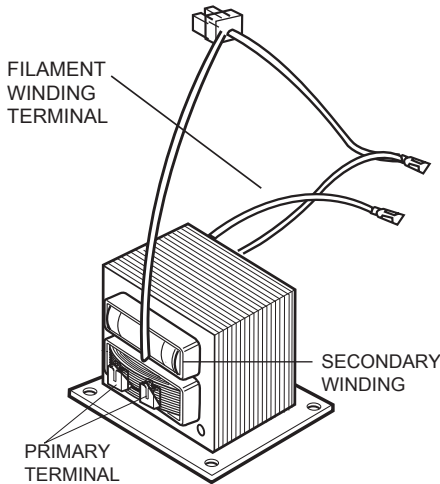
Note: After repairing the door or the interlock system, it is necessary to do this continuity test before operating the oven.

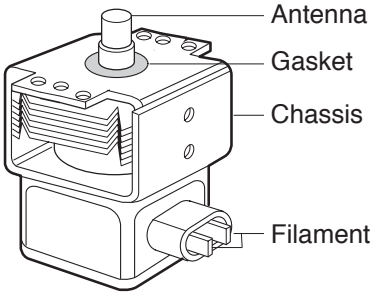
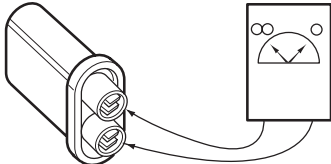
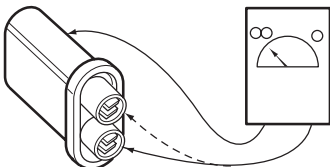
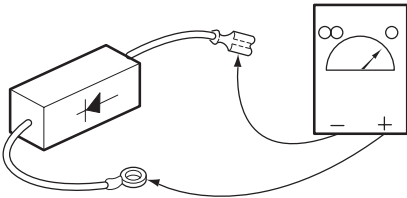
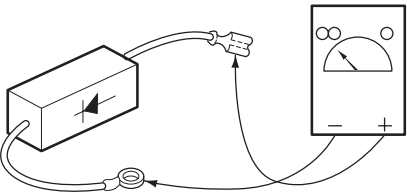
Components	Test procedure		Results	
Switches (Wire leads removed)	Check for continuity of the switch with an Ohm-meter		Door open	Door closed
	Primary switch Type no.KW3A			
	Monitor switch Type no.KW3A			
	Secondary switch Type no.KW3A			
	Note: After checking for the continuity of switches, make sure that are correctly connected.			

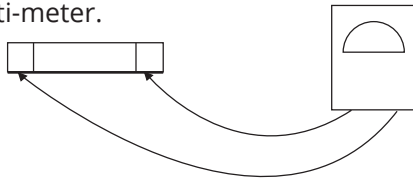
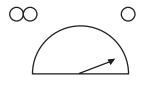
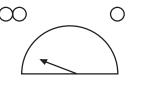
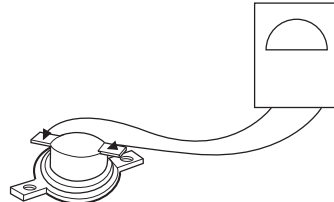


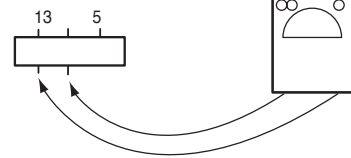


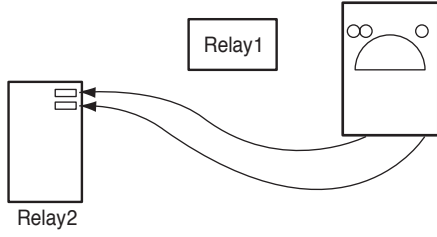


Components test procedure

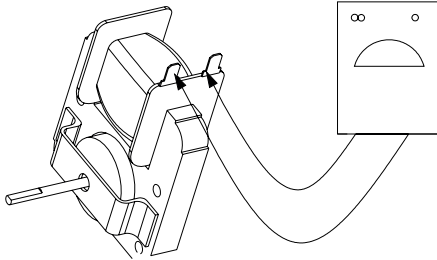
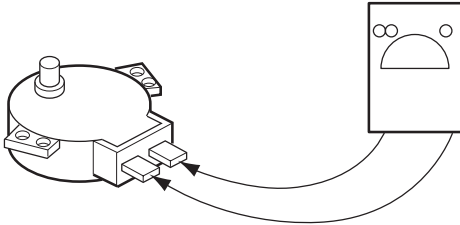
Cautions:

1. Disconnect the power supply cord from the outlet whenever removing the outer case from the unit. Proceed with the test only after discharging the high voltage capacitor and removing the wire leads from the primary winding of the high voltage transformer. (See page x-x)
2. All operational checks with microwave energy must be done with a load (1 litre of water in container) in the oven.

Components	Test procedure	Results
High voltage transformer (Wire leads removed)	 <ol style="list-style-type: none"> 1. Measure the resistance. (Ohm-meter scale: Rx1) <ul style="list-style-type: none"> • Primary winding • Secondary • Filament winding 2. Measure the resistance. (Ohm-meter scale: Rx1000) <ul style="list-style-type: none"> • Primary winding to ground • Filament winding to ground 	<p>Approx: 1.4 ohm Approx: 90 ohm Less than: 1 ohm</p> <p>Normal: Infinite Normal: Infinite</p>
Magnetron (Wire leads removed)	<ol style="list-style-type: none"> 1. Measure the resistance. (Ohm-meter scale: Rx1) <ul style="list-style-type: none"> • Filament terminal 2. Measure the resistance. (Ohm-meter scale: Rx1000) <ul style="list-style-type: none"> • Filament to chassis 	<p>Normal: Less than 1 ohm</p> <p>Normal: Infinite</p>

Components	Test procedure	Results
		
	Note: When testing the magnetron, be sure to install the magnetron gasket in the correct position and be sure that the gasket is in good condition.	
High voltage capacitor	Measure the resistance. (Ohm-meter scale: Rx1000) • Terminal to terminal 	Normal: Momentarily indicates several ohms, and then gradually returns to 10M ohms
	Measure the resistance. (Ohm-meter scale: Rx1000) • Terminal to case 	Normal: ∞
High voltage diode Note: Some inexpensive meters may indicate infinite resistance in both direction.	Measure the continuity (Forward) (Ohm-meter scale: Rx10000) 	Normal: Continuity Abnormal: ∞ *
	Measure the continuity (Reverse) (Ohm-meter scale: Rx10000) 	Normal: ∞ Abnormal: Continuity

Components	Test procedure	Results	
Fuse	<div>Check for continuity of the fuse with a multi-meter.</div> <div></div>	Normal	Abnormal
		<div></div>	<div></div>
<div>Note: If the fuse is blown, check the primary, the secondary, and the monitor switches, H.V.D. and H.V.C. before replacing the fuse. If the fuse is blown by improper switch operation replace the defective switch and the fuse at the same time. Replace just the fuse if the switches operate normally.</div>			
Thermal cut-out	<div></div> <div></div>	Below specified temperature	Above specified temperature
		<div></div>	<div></div>
L.V.Transformor of P.C.B (Refer to schematic diagram)	<div>Check for P.C.B. connector. * Disconnect the 3 pin connector from P.C.B.</div> <div></div>	Normal	Abnormal
		<div></div>	<div></div>
<div>Relay 2, relay 3 of P.C.B. (Wire leads removed) Note: Relay Relay 1: Fan motor Turntable motor Oven lamp Relay 2: Microwave</div>	<div></div>	Cooking Start	OFF
		<div></div>	<div></div>

Components	Test procedure	Results
Fan motor (Wire leads removed)	Measure the resistance. (Ohm-meter scale: Rx1) 	Normal: 100 ~ 500 Ω Abnormal: ∞ or several Ω
Turntable motor (Wire leads removed)	Measure the resistance. (Ohm-meter scale: Rx1000) 	Normal: Approx. 100 ~ 200K Ω Abnormal: ∞ or several Ω
Notes: <ul style="list-style-type: none">• A microwave leakage test must always be performed when the unit is serviced for any reason.• Make sure the wire leads are in the correct position.• When removing the wire leads from the parts, be sure to grasp the connector, not the wires.		

Trouble shooting

If you receive a complaint from your customer, evaluate the complaint carefully. If the following symptoms apply, please instruct the customer in the proper use of the microwave oven. This can eliminate an unnecessary service call.

Cautions:

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

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

(Trouble 1)

The following visual conditions indicate a probable defective control circuit.

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

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

(Trouble 2)

Oven does not operate at all; display window does not display any figures and no input is accepted.

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

Note: All these switches must be replaced at the same time. Refer to page X-X, X-X

1. Fuse is not tipping.	Check latch and hook when door closed.	OK.	Main PCB defective.	Replace PCB.
		Not OK.	Latch board back off.	Forward latch board.

(Trouble 3)

Display shows all figures set, but oven does not start cooking while desired programme times are set and START pad is touched.

Condition	Check	Result	Cause	Remedy
1. Setting time does not count down when touching START pad.	Check continuity of secondary switch (with door closed).	No continuity.	Defective secondary switch.	Replace secondary switch.
		Continuity.		
	Check the connection between connector and P.C.B assembly.	No continuity.	Defective P.C.B assembly.	Replace P.C.B assembly.
		Continuity.	Loose connection.	Connection then tightly.
2. Fan motor or oven lamp do not turn on.	Check fan motor.	Abnormal.	Defective fan motor.	Replace fan motor.
	Check oven lamp.	Abnormal.	Defective oven lamp.	Replace oven lamp.
		Normal.		

(Trouble 4)

Oven seems to be operation but output power is low.

Condition	Check	Result	Cause	Remedy
Output is low.	Check the power source voltage.	Lower than 90% of rating voltage.	Decrease in power source voltage with load.	Suggest customer contact local electric power utility co. or qualified electrician.
		Normal.		
	Disconnect the wire leads from relay 2 and check on and off time with multi-tester.	Abnormal.	Defective P.C.B assembly.	Replace P.C.B assembly.
		Normal.		
	Measure the output power.	Abnormal.	Defective magnetron.	Replace magnetron.

Note: Refer to page X-X, for measuring of microwave power output.

(Trouble 5)

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

Condition	Check	Result	Cause	Remedy
No microwave oscillation.	Disconnect the wire leads from relay 2 and check continuity of relay 2. (Operate the unit)	No continuity.	Defective P.C.B assembly	Replace P.C.B assembly.
		Continuity.		
	Check H.V. transformer.	Abnormal.	Defective high voltage transformer.	Replace high voltage transformer.
		Normal.		
	Check H.V. capacitor.	Abnormal.	Defective high voltage capacitor.	Replace high voltage capacitor.
		Normal.		
	Check H.V. diode.	Abnormal.	Defective high voltage diode.	Replace high voltage diode.
		Normal.		
	Check magnetron.	Abnormal.	Defective magnetron.	Replace magnetron.
		Normal.		

(Trouble 6)

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

Condition	Check	Result	Cause	Remedy
Output is full when you set lower power level.	Disconnect the wire leads from relay 2 and check continuity relay 2.(Operate the unit)	Abnormal.	Defective P.C.B assembly	Replace P.C.B assembly.

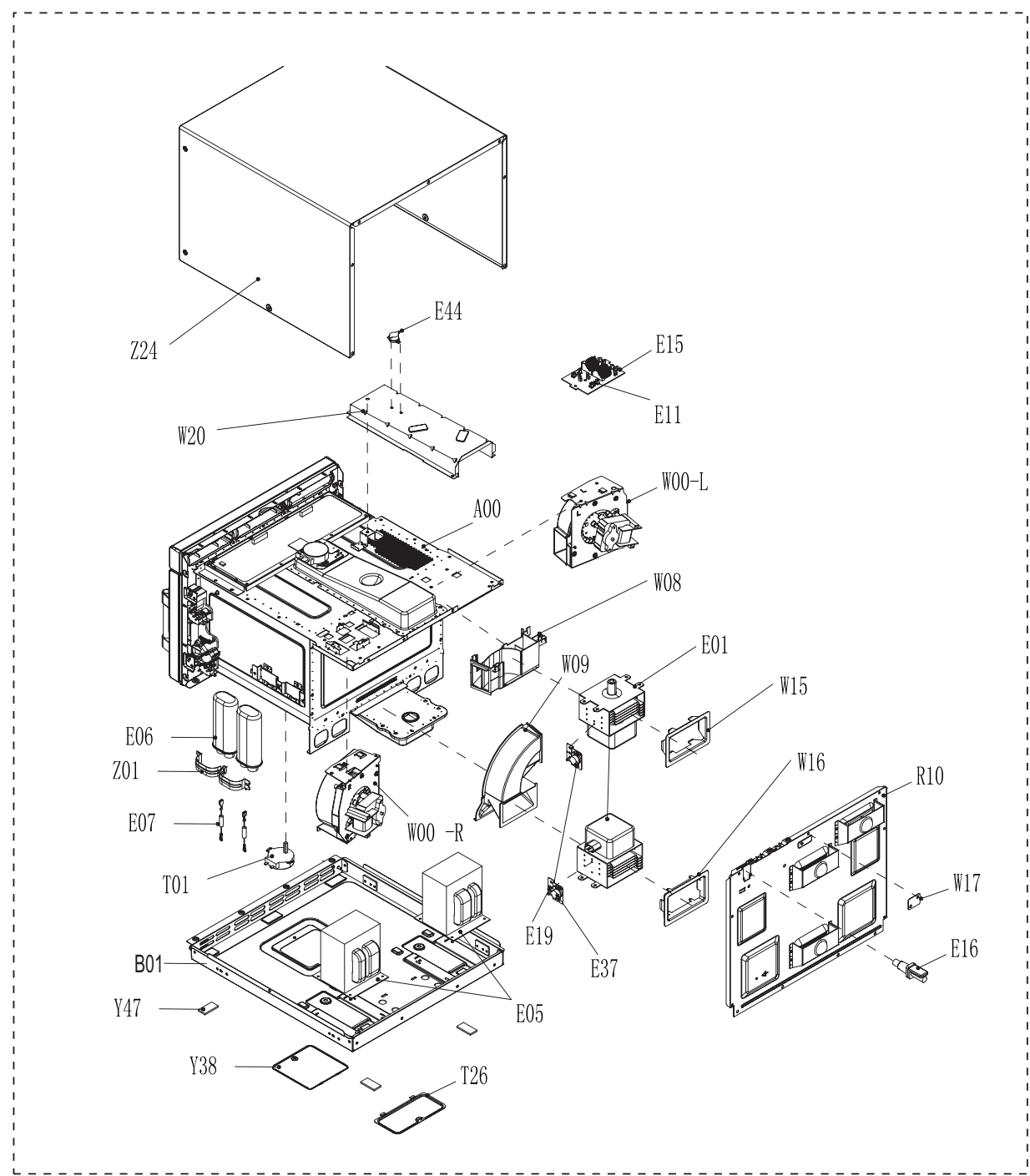
Note: * Make sure the wire leads correct position.
 * When removing the wire leads from parts be sure to grasp the connector not the wires.
 * When removing the magnetron, be sure to install magnetron gasket in the correct position and in good condition.

Attached files list

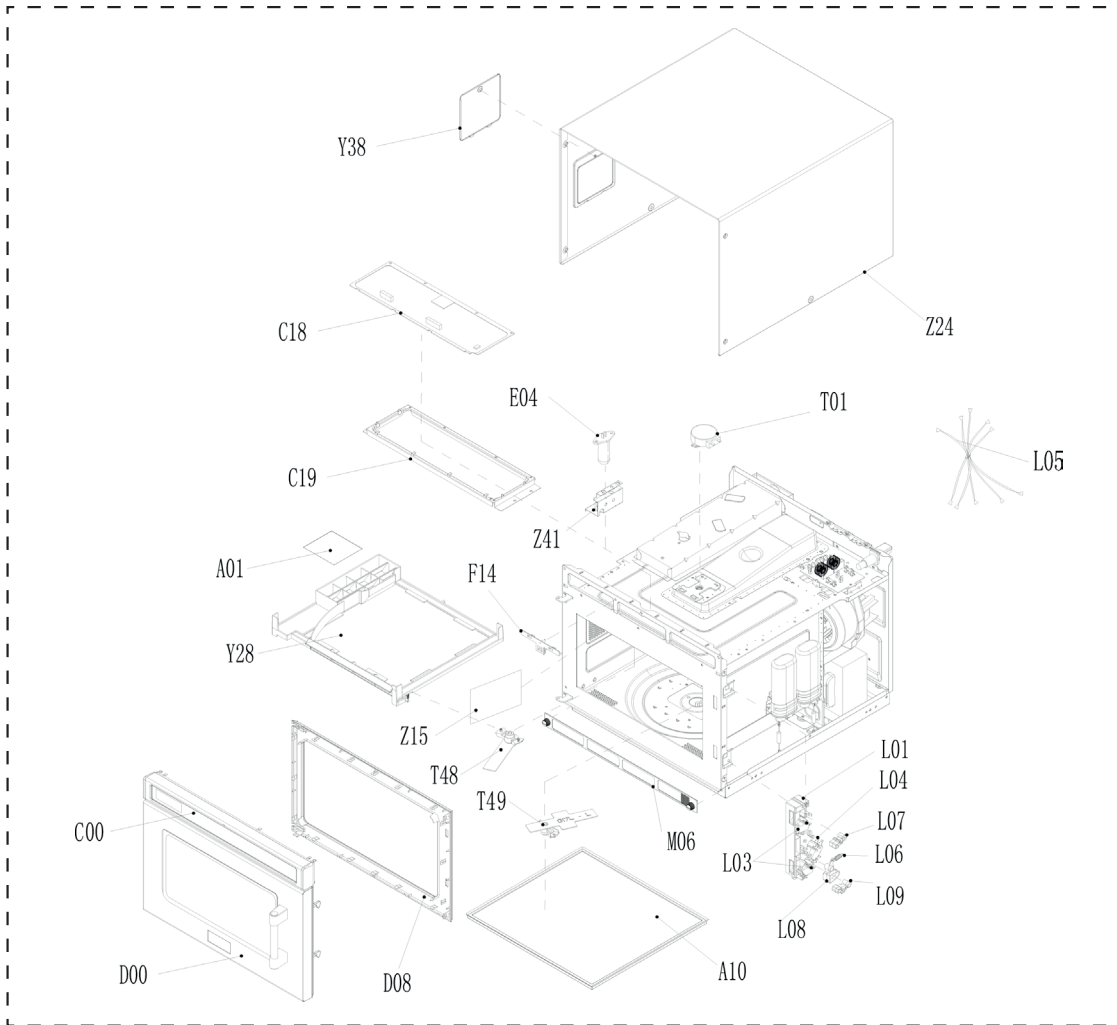
1. Exploded view
2. Spare parts list
3. Wiring diagram

Note: The manual may update without prior notice.
Please download the latest version on website: <https://tsp.midea.com>.

Exploded view

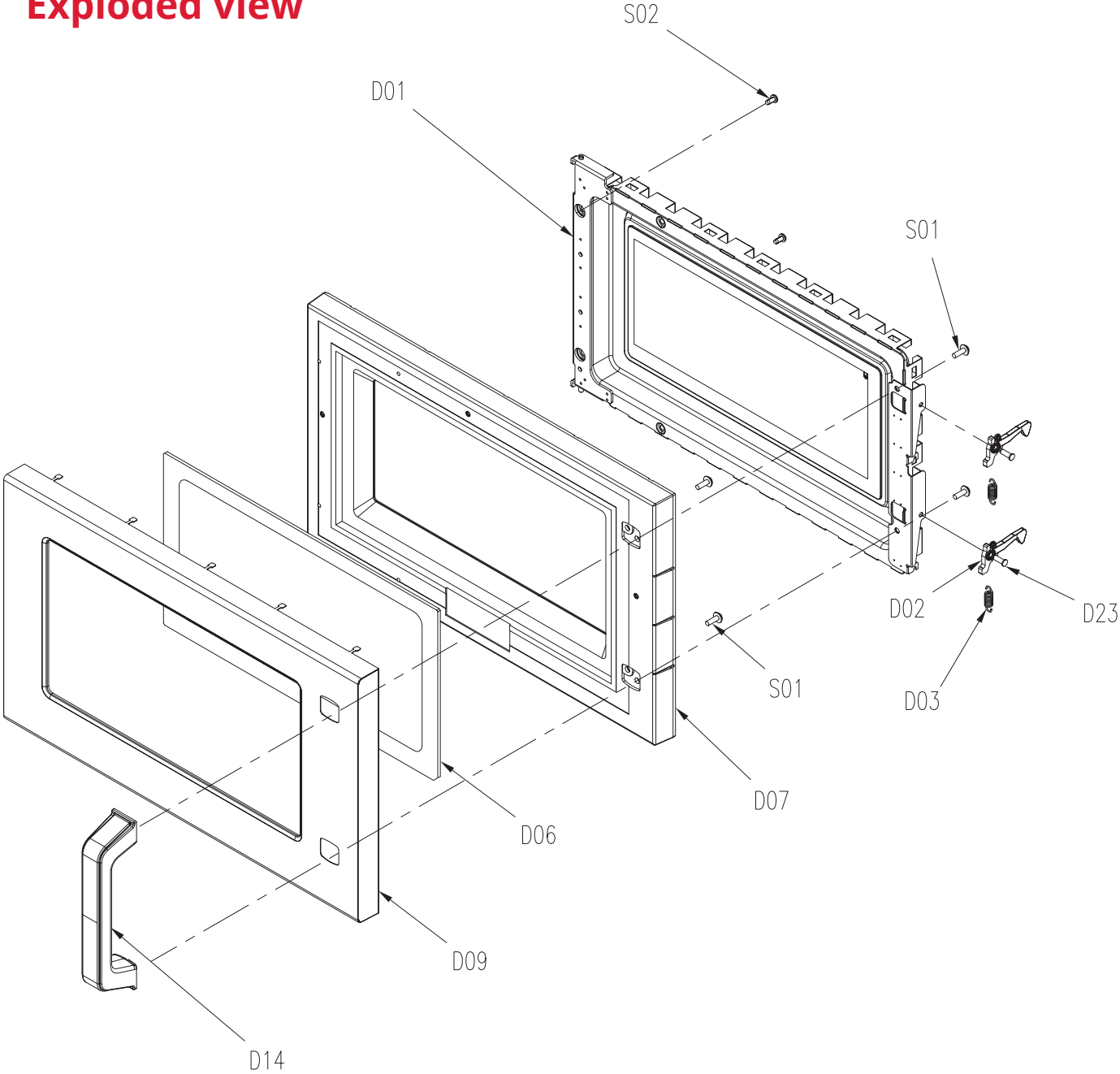


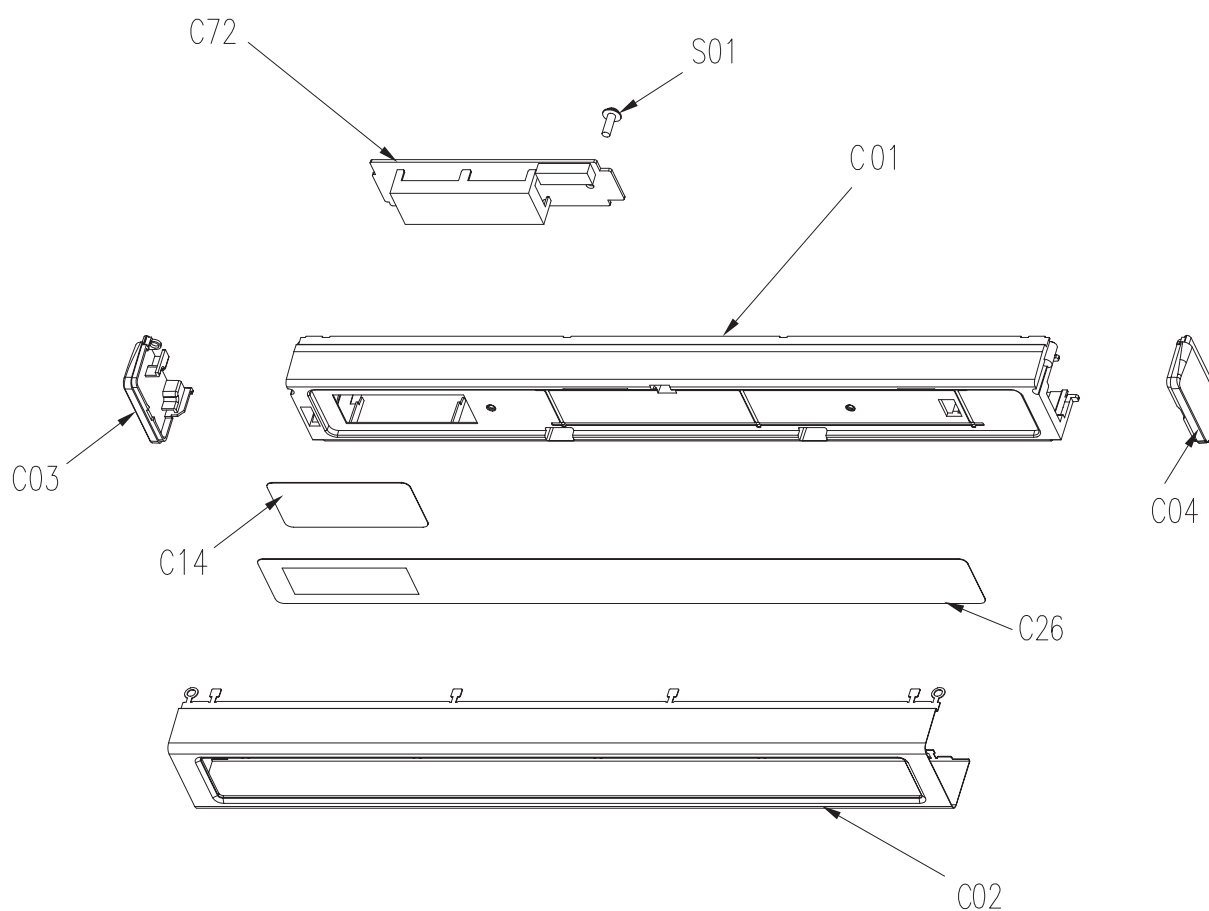
T49	搅拌片组件	STIRRER ASSY	1
L03	微动开关	MICRO SWITCH	3
B01	底板	Baseplate	1
No.	零部件名称	Part Name	Qty



Z01	电容器夹	HVC-HOLDER	2	Z41	炉灯支架	LAMP BRACKET	1
Y47	橡胶垫	RUBBER	4	Z24	外罩	OUT COVER	1
W20	金属导风罩	METAL AIR GUIDE	1	Z15	炉灯盖板	CAVITY LAMP COVER	1
W17	安装板	MOUNTING PLATE	1	Y38	电机盖	MOTOR COVER	2
W16	金属导风罩下	METAL AIR GUIDE-L	1	Y28	塑料支撑	PLASTIC SUPPORT	1
W15	金属导风罩上	METAL AIR GUIDE-U	1	T48	搅拌片组件	STIRRER ASSY	1
W09	塑料导风罩下	PLASTIC AIR GUIDE-L	1	T01	转盘电机	TURN MOTOR	2
W08	塑料导风罩上	PLASTIC AIR GUIDE-U	1	M06	滤网	FILTER	1
W00-R	风扇组件-右	RIGHT FAN ASSY	1	L09	杠杆c	LEVER C	1
W00-L	风扇组件-左	LEFT FAN ASSY	1	L08	杠杆B	LEVER B	1
T26	密封盖	SEALING COVER	1	L07	杠杆A	LEVER A	1
R10	后背板组件	REAR BACK ASSY	1	L06	联锁弹簧	SPRING	1
E44	温控器 120℃	TCO	1	L05	线束	WIRE HARNESS	1
E37	温控器 150℃	TCO	2	L04	微动开关	MICRO SWITCH	2
A16	温控器支架	TCO BRACKET	2	L01	联锁支架	LATCH BOARD	1
E16	电源线	POWER CORD	1	F14	塑料支架	PLASTIC BRACKET	1
E15	滤波板	NOISE FILTER	1	E04	炉灯	LAMP	1
E11	保险管	FUSE	2	D08	门封	DOOR GASKET	1
E07	高压二极管	HIGH VOLT DIODE	2	D00	炉门组件	DOOR ASSY	1
E06	高压电容	HIGH VOLT CAPACITOR	2	C19	PCB 支架	PCB BRACKET	1
E05	高压变压器	HIGH VOLT TRANSFORMER	2	C18	电路板	MAIN PCB	1
E01	磁控管	MAGETRON	2	C00	控盒组件	CONTROL ASSY	1
A00	腔体组件	CAVITY ASSY	1	A10	内隔板组件	INNER PLATE ASSY	1
				A01	防溅板	Splash Cover	1
No.	零部件名称	Part Name	Qty.	No.	零部件名称	Part Name	Qty.

Exploded view





S03	螺钉	SCREW ST3*8	1
C72	显示屏	DISPLAY	1
C26	薄膜开关	Switch Circuit	1
C04	控制面板镶件—右	PLASTIC DECO. C/PANEL *RIGHT	1
C03	控制面板镶件—左	PLASTIC DECO. C/PANEL *LEFT	1
C02	控制面板装饰件	METAL C/PANEL DECO.	1
C01	控制面板	CONTROL PANEL	1
S02	螺钉	SCREW ST4*8	2
S01	螺钉	SCREW M4*14-F	4
D23	门钩轴	LATCH PIN	2
D14	金属拉手	METAL HANDLE	1
D09	金属门面装饰件	METAL DOOR DECO.	1
D07	门面	DOOR PANEL	1
D06	门窗	DOOR SCREEN	1
D03	门钩弹簧	LATCH SPRING	2
D02	门钩	LATCH	2
D01	门体组件	ASS'Y DOOR FRAME	1
No.	零部件名称	Part Name	Qty.



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