MICROWAVE OVEN
SERVICE MANUAL

Model: S9N29R

CAUTION: BEFORE SERVICING THE UNIT,
READ SAFETY PRECAUTIONS IN THIS MANUAL

amazonbasics

SAFETY PRECAUTIONS

This device is to be serviced only by properly qualified service personnel. Consult this service manual for proper service procedures to ensure continued safe operation and for precautions to be taken to avoid possible exposure to excessive microwave energy.

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.

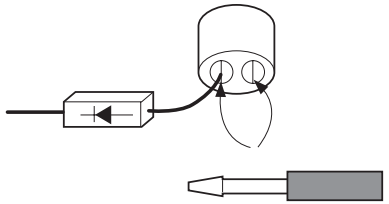
e) A microwave leakage check to verify compliance with the Federal Performance Standard should be performed on each oven prior to release to the owner.

CONTENTS

CAUTION

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

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



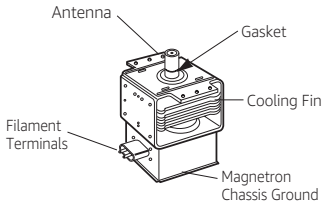
- Remove your watch whenever working close to or replacing the magnetron.
- NEVER operate the oven with no load inside.
- NEVER injure the door seal and front plate of the oven cavity.
- NEVER put iron tools on the magnetron.
- NEVER put anything into the latch hole and the interlock switches area.

MICROWAVE RADIATION

Personnel should NOT be exposed to microwave energy that may radiate from the magnetron or other microwave generating device, if it is properly 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 attached.

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

- Proper operation of the microwave oven requires that the magnetron be attached 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.**



Magnetron

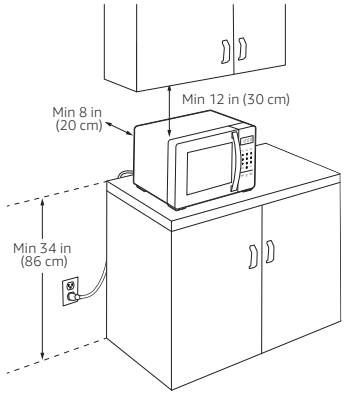
THE OVEN IS TO BE SERVICED ONLY BY PROPERLY QUALIFIED SERVICE PERSONNEL.

INSTALLATION

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

INSTALLING

- Empty the microwave oven and clean inside it with a soft, damp cloth. Check for damage such as misaligned door, damage around the door, and dents inside the cavity or on the exterior.
- Put the oven on a counter, table, or shelf that is strong enough to hold the oven as well as the food and utensils you put in it. (The control panel side of the oven is the heavy side. Use care when handling.)
- 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.
- 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.
- Use microwave oven in an ambient temperature less than 104°F (40°C).
- The minimum installation height is 34 in (86 cm). The back of the appliance should be placed against a wall, allowing for any necessary clearance. Leave a minimum clearance of 12 in (30 cm) above the microwave oven. A minimum clearance of 8 in (20 cm) is required between the microwave oven and any adjacent walls.
- Place the microwave oven as far away as possible from a TV, RADIO, COMPUTER, etc., to prevent interference.



GROUNDING INSTRUCTIONS

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

Therefore it is imperative to make sure it is properly grounded before servicing.

⚠ WARNING–THIS APPLIANCE MUST BE PROPERLY CONNECTED TO EARTH GROUND.

IMPORTANT

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

Green: Ground
White: Neutral
Black: Live

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

The **green** wire must be connected to the terminal in the plug marked with the letter **E** or by the **earth symbol** ⏚.

The **white** wire must be connected to the terminal in the plug marked with the letter **N**.

The **black** wire must be connected to the terminal in the plug marked with the letter **L**.

SERVICE INFORMATION

CIRCUIT DESCRIPTION

GENERAL DETAILS

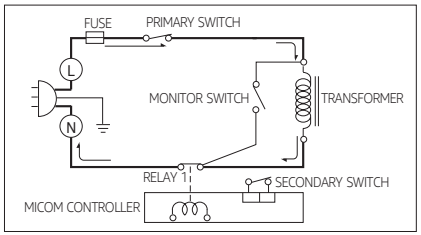
- The low voltage transformer supplies the necessary voltage to the micom controller when the power cord is plugged in.
- When the door is closed, the primary and secondary switches are ON and the monitor switch opens (contact COM and NO).

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 1.
- Turntable rotates.



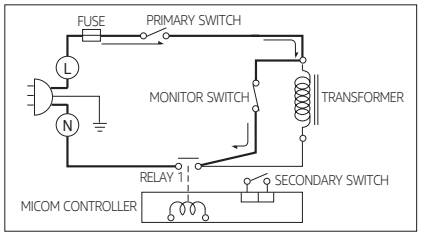
- The fan motor rotates and cools the magnetron by blowing air from the intake on the baseplate.
- Air is also directed into the oven to exhaust the vapor in the oven through the upper plate.
- Cooking time starts counting down.
- 3.2 VAC is generated from the filament winding of the high-voltage transformer. This 3.2 VAC is applied to the magnetron to heat the magnetron filament through two noise-preventing choke coils.
- A high voltage of approximately 2100 VAC 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 VDC 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 1 by the applied signal to vary the average output power of the microwave oven as POWER LEVEL.

WHEN THE DOOR IS OPENED DURING COOKING

- Both the primary switch and Relay 1 are cut off from the primary winding voltage of the high-voltage transformer.
- ON-OFF of Relay 1 is coupled electrically with opening and closing of the secondary switch.
- When the door is opened, the secondary switch is opened. 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 1 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.



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 5 mm)
- Nutdriver (size 5 mm)
- Adjustable wrench
- Soldering iron
- Solder
- Vinyl insulation tape
- Polishing cloth

NECESSARY MEASURING INSTRUMENTS

- TESTER (VDC, VAC, ohmmeter)
- Microwave survey meter
  - Holaday HI-1500
    HI-1501
  - Narda 8100
    8200
- Inch scale
- 600 cc beaker made of non-conductive material (glass or plastic) with inside diameter approximately 8.5 cm (3.5 in)
- Cylindrical vessel made of borosilicate glass, within the following specifications:
  - max. thickness: 3 mm
  - outside diameter: approximately 190 mm
  - height: approximately 90 mm
- Glass thermometer: 100°C or 212°F (1 degree scale)

MICROWAVE LEAKAGE TEST

CAUTION

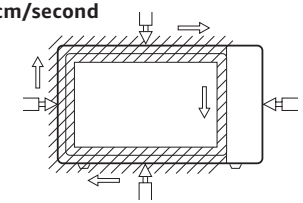
- **Be sure to check microwave leakage before servicing the oven if the oven is operative prior to servicing.**
- **Service personnel should inform the manufacturer, importer, or assembler of any certified oven unit found to have a microwave emission level in excess of 5 mW/cm²** and should repair any unit found to have an excessive emission level at no cost to the owner. Service personnel should also ascertain the cause of the excessive leakage and instruct the owner not to use the oven until it is working properly and its emission level is compliant with this standard.
- 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 service. The power density of the microwave radiation leakage emitted by the microwave oven should not exceed 4 mW/cm². Always measure an unknown field to ensure the safety of operating personnel from radiation leakage.

MEASURING MICROWAVE ENERGY LEAKAGE

- **Pour 275 ± 15 cc of 20 ± 5°C (68 ± 9°F) water in a beaker graduated to 600 cc and place the beaker on the center of the turntable.**
- **Set the energy leakage monitor to 2450 MHz and test energy leakage, following the test procedures recommended by the manufacturer.**
- **When measuring the leakage, always use the 2 in (5 cm) 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/second (1 in/second)



MEASUREMENT WITH OUTER CASE REMOVED

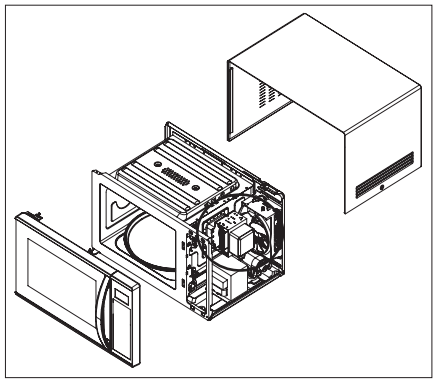
- When you replace the magnetron, measure for microwave energy leakage before the outer case is installed and after all necessary components are replaced or adjusted.

  Special care should be taken in measuring the following parts (circled area of figure below):

  - Around the magnetron

  - The waveguide

⚠ WARNING: AVOID CONTACTING ANY HIGH VOLTAGE PARTS



MEASUREMENT WITH A FULLY ASSEMBLED OVEN

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

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

NOTES WHEN MEASURING

- Do not exceed the meter's full-scale deflection.
- The test probe must be moved no faster than 1 in/second (2.5 cm/second) 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 to avoid damaging the probe.

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 and enter the information on the service invoice.
- The microwave energy leakage should not be more than 4 mW/cm^2 after determining that all parts are in good condition and functioning properly, and that proper replacements parts have been used.
- Have the electromagnetic energy leakage monitor checked for calibration by its manufacturer at least once a year.

DISASSEMBLY AND ADJUSTMENT

1. OUTER CASE REMOVAL

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

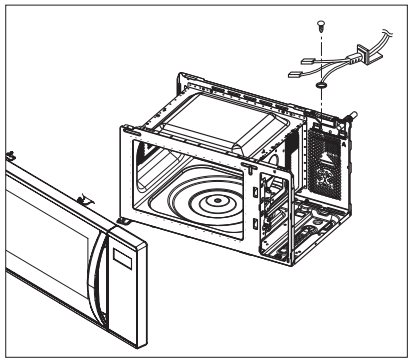
2. POWER SUPPLY CORD

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

CAUTION: DISCHARGE THE HIGH-VOLTAGE CAPACITOR BEFORE SERVICING (refer to Page 2).

3. CONTROL PANEL ASSEMBLY

- Disconnect the leadwire from the PCB SUB ASSEMBLY.
- Remove the screws for the earth terminal and secure the control panel.
- Lift control panel assembly from the oven by the unhooked tab.



4. DOOR ASSEMBLY REMOVAL

- Open the door.
- Remove the two screws holding the hinge to the cavity assembly.

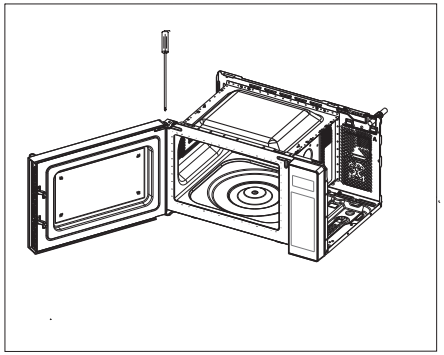
CAUTION: Be careful not to damage the door with the screwdriver.

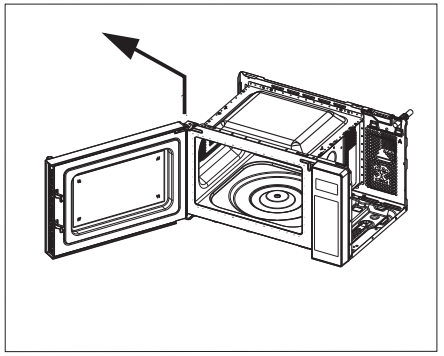
- Lift up and pull the door.

NOTE:

- After replacing the door, be sure to check that the primary switch, monitor switch, and secondary switch operate normally.
- After replacing the door, check for microwave energy leakage with a survey meter. Microwave energy must be below the limit of 5 mW/cm^2 (with a 275 ml water load).
- When mounting the door assembly to the oven assembly, be sure to adjust the door assembly parallel to the chassis and in such a way that 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.

Remove door assembly:





5. HIGH-VOLTAGE TRANSFORMER REMOVAL

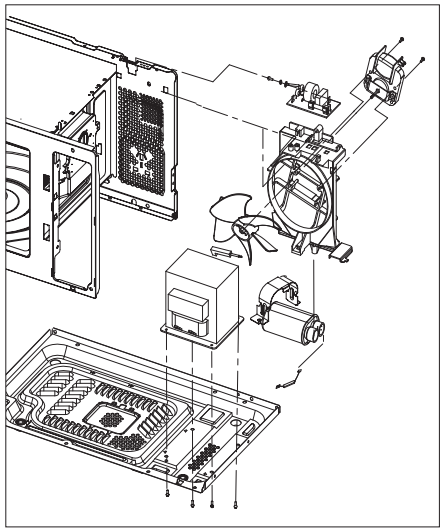
- Discharge the high-voltage capacitor.
- Disconnect the leadwire from magnetron, high-voltage transformer, and capacitor.
- Remove the screw holding the high-voltage transformer to the baseplate.
- Remove the high-voltage fuse.

6. ORIFICE ASSEMBLY REMOVAL

- Discharge the high-voltage capacitor.
- Disconnect the leadwire from fan motor, noise filter and high-voltage capacitor.
- Remove the two screws holding the orifice assembly to the oven cavity and remove the high-voltage diode earth screw.
- Remove the screw of the capacitor bracket.
- Remove the two screws holding the fan motor assembly to the orifice assembly.

7. HIGH-VOLTAGE CAPACITOR AND DIODE REMOVAL

- Discharge the high-voltage capacitor.
- Disconnect the leadwire from fan motor, noise filter and high-voltage capacitor.
- Remove the screw holding the orifice assembly to the oven cavity and remove the high-voltage diode earth screw.
- Remove the screw holding the high-voltage capacitor bracket.

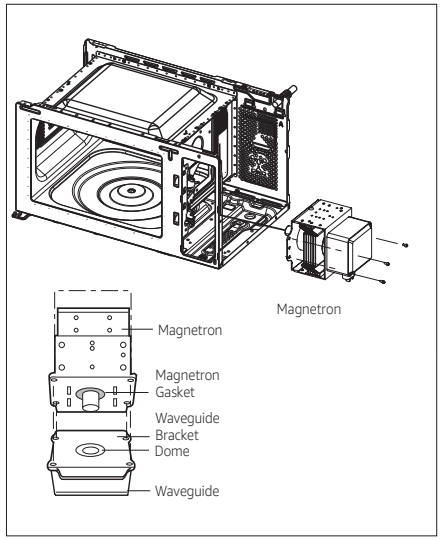


8. MAGNETRON REMOVAL

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

NOTE:

- When removing the magnetron, make sure its dome does not hit any adjacent parts to avoid damage.
- When replacing the magnetron, be sure to install the magnetron gasket in the correct position and in good condition.
- After replacing the magnetron, check for microwave leakage with a survey meter around the magnetron. Microwave energy must be below the limit of 5 mW/cm² (with a 275 ml. water load).
- **Make sure that the 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.



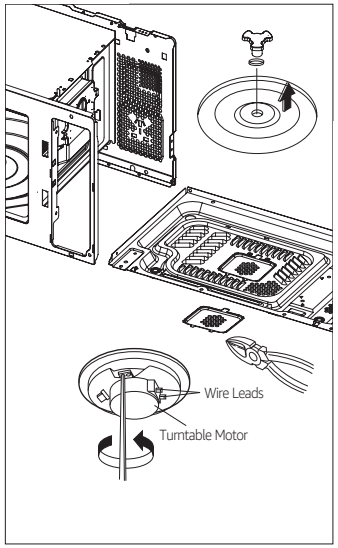
9. REMOVING THE TURNTABLE MOTOR

- Remove the glass tray.
- Remove the pulley shaft VERY CAREFULLY.
- Lay the unit down on its back.
- Remove the turntable motor cover.
- The turntable base cover is easily removed by pinching the six parts with a wire cutting.
- Disconnect the leadwire from the turntable motor terminals.
- Remove the screw securing the turntable motor to the oven cavity assembly.
- After replacing the motor, rotate the removed turntable motor cover.
- Fit the turntable motor cover's projecting part to the base plate slit.

NOTE:

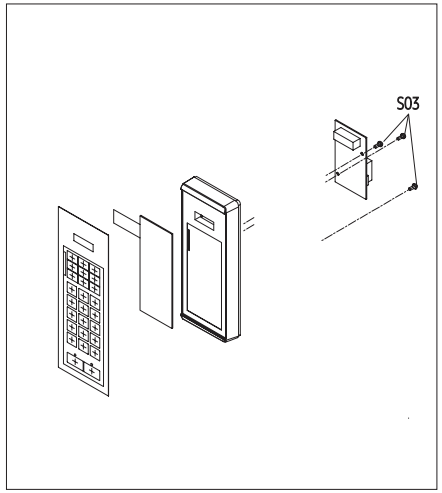
- Remove the wire lead from the turntable motor VERY CAREFULLY.
- Be sure to grasp the connector, not the wires, when removing.

Remove turntable motor:



10. PCB ASSEMBLY REMOVAL

- Remove the control panel assembly from the cavity.
- Remove the screws that hold the PCB to the control panel.
- Disconnect the flat cable from the PCB and take off the PCB.

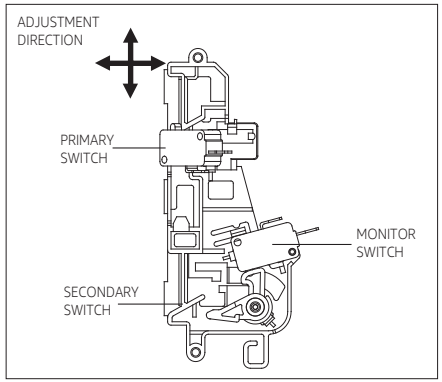


11. INTERLOCK SYSTEM

A. INTERLOCK MECHANISM

The door lock mechanism 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.

B. MOUNTING OF THE PRIMARY/MONITOR/ SECONDARY SWITCHES TO THE LATCH BOARD

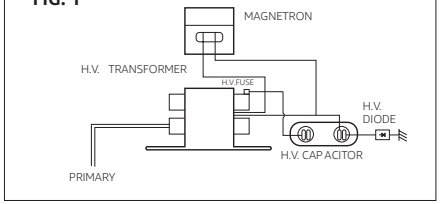


C. INSTALLATION AND ADJUSTMENT OF THE LATCH BOARD TO THE OVEN ASSEMBLY

- 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 0.5 mm (1/64 in).**

  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.

FIG. 1 **CAUTION: CHECK THE CORRECT POSITION**



INTERLOCK CONTINUITY TEST

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

TYP NO. KW3A, HK-14, LF-10-02M (022M)

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

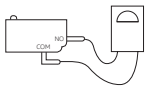
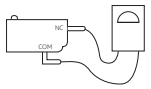
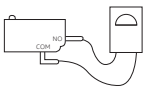
Disconnect the wire lead from the secondary switch.

Connect the ohmmeter leads to the common (COM) and normally open (NO) terminals of the switch. The meter should indicate an open circuit in the door open condition. When the door is closed, the 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.

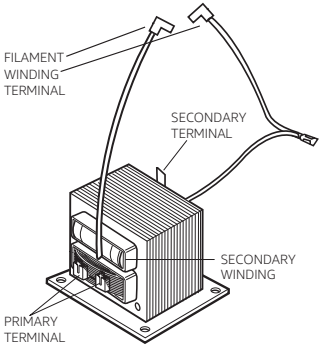
COMPONENTS	TEST PROCEDURE		RESULTS	
SWITCHES (Wire leads removed)	Check for continuity of the switch with an Ohmmeter		Door open	Door closed
	Primary Switch Type No. KW3A HK-14, LF-10-02M(022M)			
	Monitor Switch Type No. KW3A HK-14, LF-10-02M(022M)			
	Secondary Switch Type No. KW3A HK-14, LF-10-02M(022M)			
	NOTE : After checking for the continuity of switches, make sure that they are correctly connected.			

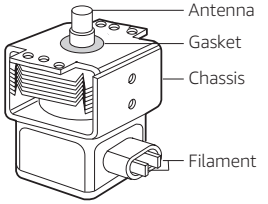
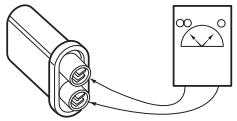
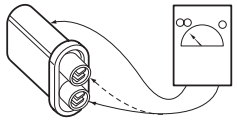
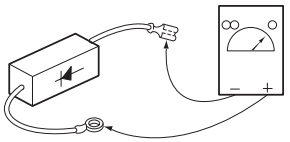
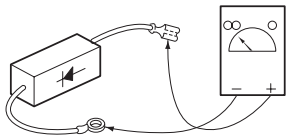
COMPONENT TEST PROCEDURE

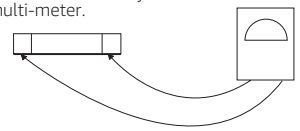
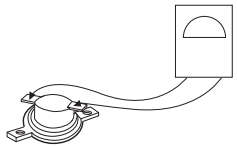
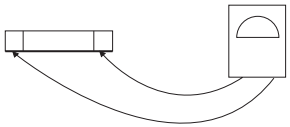
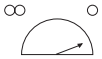
CAUTIONS:

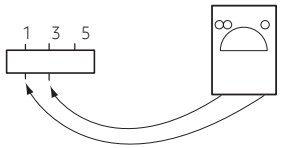
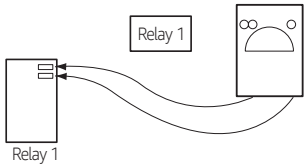
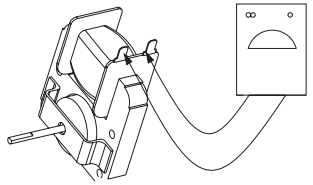
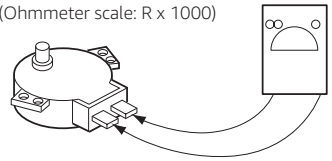
A. DISCONNECT THE POWER SUPPLY CORD FROM THE OUTLET WHENEVER REMOVING THE OUTER CASE FROM THE UNIT. PROCEED WITH THE TEST ONLY AFTER DISCHARGING THE HIGH-VOLTAGE CAPACITOR AND REMOVING THE WIRE LEADS FROM THE PRIMARY WINDING OF THE HIGH-VOLTAGE TRANSFORMER. (SEE PAGE 1)

B. ALL OPERATIONAL CHECKS WITH MICROWAVE ENERGY MUST BE DONE WITH A LOAD (1 LITER OF WATER IN CONTAINER) IN THE OVEN.

COMPONENTS	TEST PROCEDURE	RESULTS
HIGH-VOLTAGE TRANSFORMER (Wire leads removed)	 Measure the resistance. (Ohmmeter scale: Rx1) • Primary winding • Secondary winding • Filament winding Measure the resistance. (Ohmmeter scale: Rx1000) • Primary winding to ground • Filament winding to ground	 Approx: 0.645 ± 10%Ω Approx: 203 ± 10%Ω Less than: 1 ohm Normal: Infinite Normal: Infinite
MAGNETRON (Wire leads removed)	Measure the resistance. (Ohmmeter scale: Rx1) • Filament terminal Measure the resistance. (Ohmmeter scale: Rx1000) • Filament to chassis	Normal: Less than 1 ohm Normal: Infinite

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. (Ohmmeter scale: Rx1000) • Terminal to terminal. 	Normal: Momentarily indicates several ohms, and then gradually returns to 10M ohms.
	Measure the resistance. (Ohmmeter scale: Rx1000) • Terminal to case. 	Normal: Infinite
HIGH-VOLTAGE DIODE *NOTE: Some inexpensive meters may indicate infinite resistance in both direction.	Measure the continuity (Forward). (Ohmmeter scale: Rx10000) 	Normal: Continuity. Abnormal: Infinite *
	Measure the continuity (Reverse). (Ohmmeter scale: Rx10000) 	Normal: Infinite Abnormal: Continuity.

COMPONENTS	TEST PROCEDURE	RESULTS	
FUSE	Check for continuity of the fuse with a multi-meter. 	Normal 	Abnormal 
	NOTE: If the fuse is blown, check the primary, the secondary, and the monitor switches, H.V.D. and H.V.C. before replacing the fuse. If the fuse is blown by improper switch operation replace the defective switch and the fuse at the same time. Replace just the fuse if the switches operate normally.		
THERMAL CUT-OUT		Below specified temperature 	Above specified temperature 
H.V. FUSE		Normal 	Abnormal 

COMPONENTS	TEST PROCEDURE	RESULTS	
L.V.Transformer of PCB (Refer to schematic diagram)	Check for PCB connector. NOTE: Disconnect the 3 pin connector from PCB. 	Normal 	Abnormal 
RELAY 1 OF PCB (Wire leads removed) NOTE: Relay Relay 1: Fan motor Turntable motor Oven lamp Microwave		Cooking Start 	OFF 
FAN MOTOR (Wire leads removed)	Measure the resistance. (Ohmmeter scale: R x 1) 	Normal: 100~500 Ω Abnormal: Infinite or several Ω	
TURNTABLE MOTOR (Wire leads removed)	Measure the resistance. (Ohmmeter scale: R x 1000) 	Normal: Approx.100~200K Ω Abnormal: Infinite or several Ω	

NOTE:
- 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.

TROUBLESHOOTING

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

CAUTIONS

1. Check grounding before troubleshooting.
2. Be careful of the high-voltage circuit.
3. Discharge the high-voltage capacitor (see page 2).
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 the meter.
5. Do not touch any part of the circuitry on the digital programmable circuit since static electric discharge may damage this control panel.
   Be sure to ground yourself to avoid any electrostatic discharge build-up in the 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 needs to cook 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	• Wrap the thinner part with aluminum foil. • Use plastic wrap or lid • Stir once or twice while cooking soup, cocoa, milk, etc.
Turntable drags or makes noise	Excessive weight on tray or improperly balanced	Distribute food evenly. Cook smaller portions and/or use lighter weight cookware.

TROUBLE 1

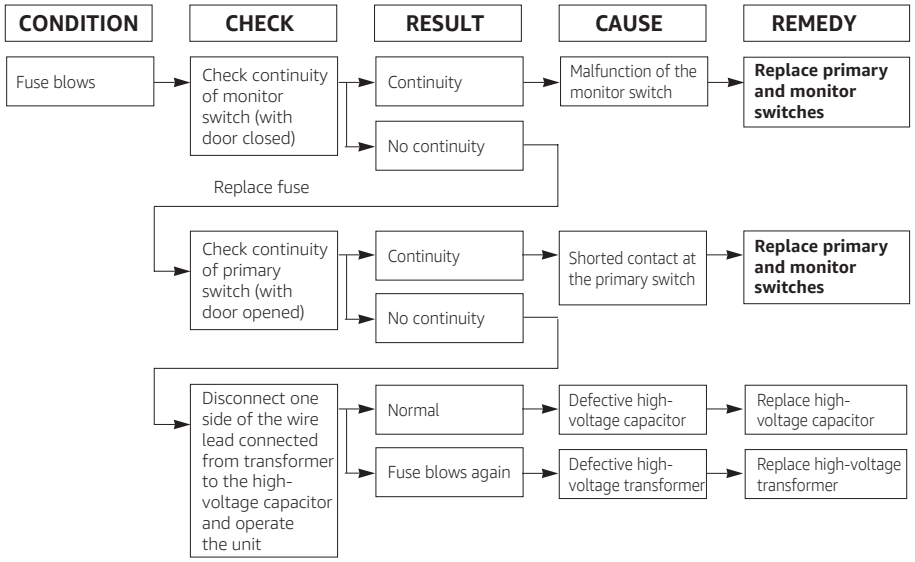
The following visual conditions indicate a control circuit that may be defective.

1. Incomplete segments of digital clock and/or timer display.
   • 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
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
Some inputs cannot be programmed	Replace key membrane assembly and check operation	Everything works as specified	Defective key membrane assembly	Replace key membrane assembly
Display shows a number or figure different from one touched		Still have trouble	Defective PCB assembly	Replace PCB assembly
Random programming when touching other pads				
Display is fixed at some figure and can not accept any input				

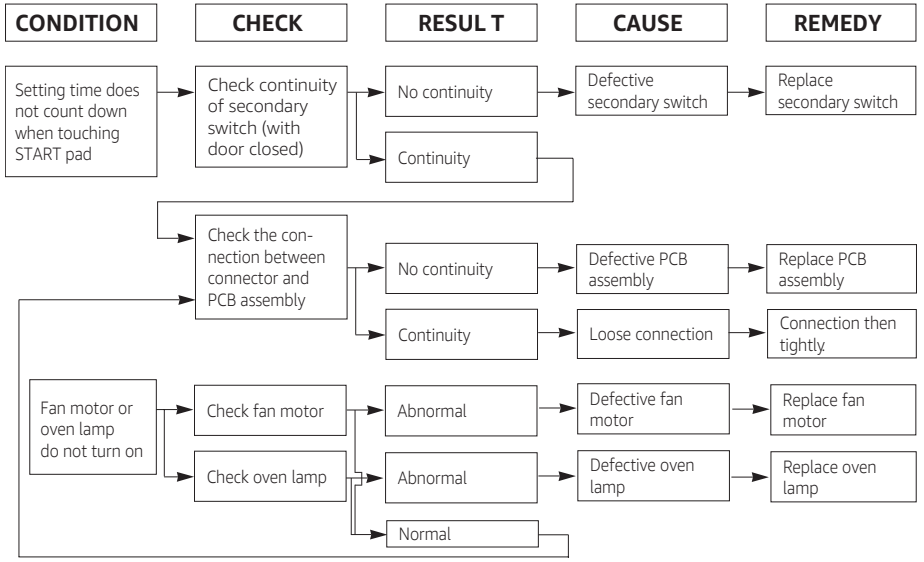
TROUBLE 2

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



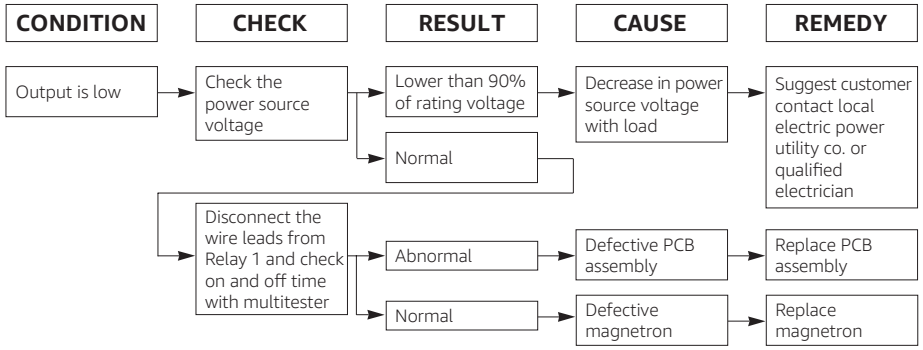
TROUBLE 3

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



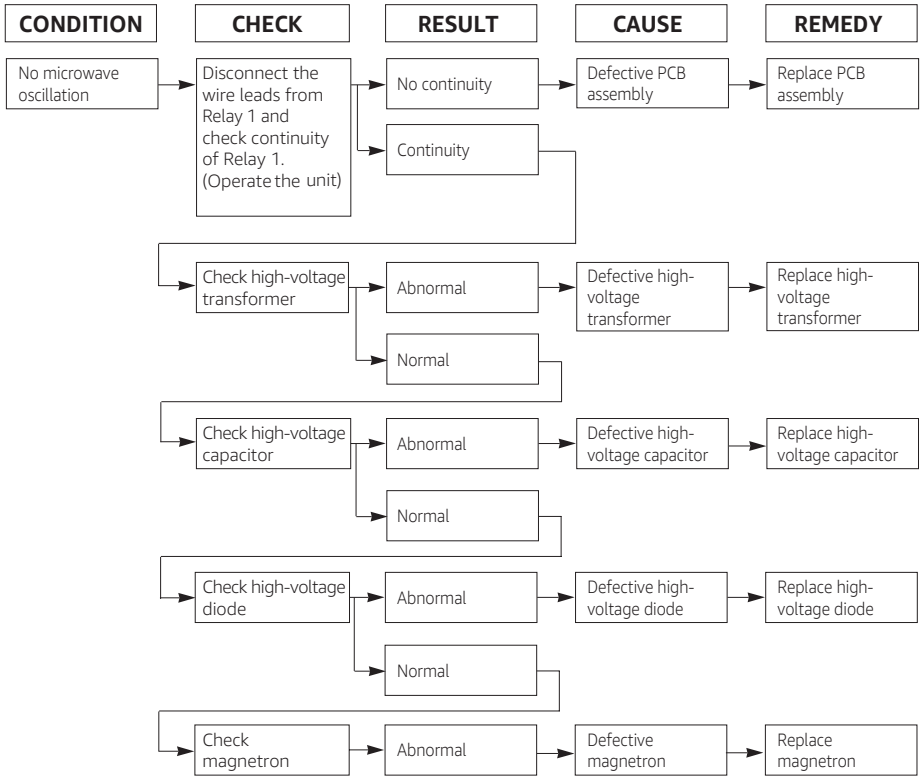
TROUBLE 4

Oven seems to be operating but output power is low.



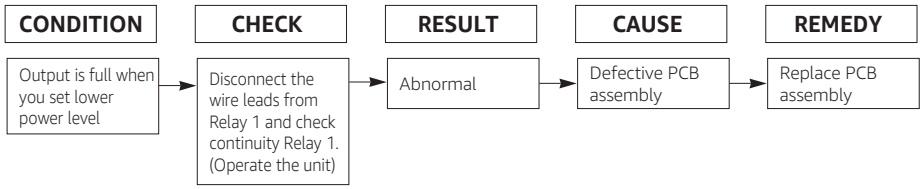
TROUBLE 5

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



TROUBLE 6

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

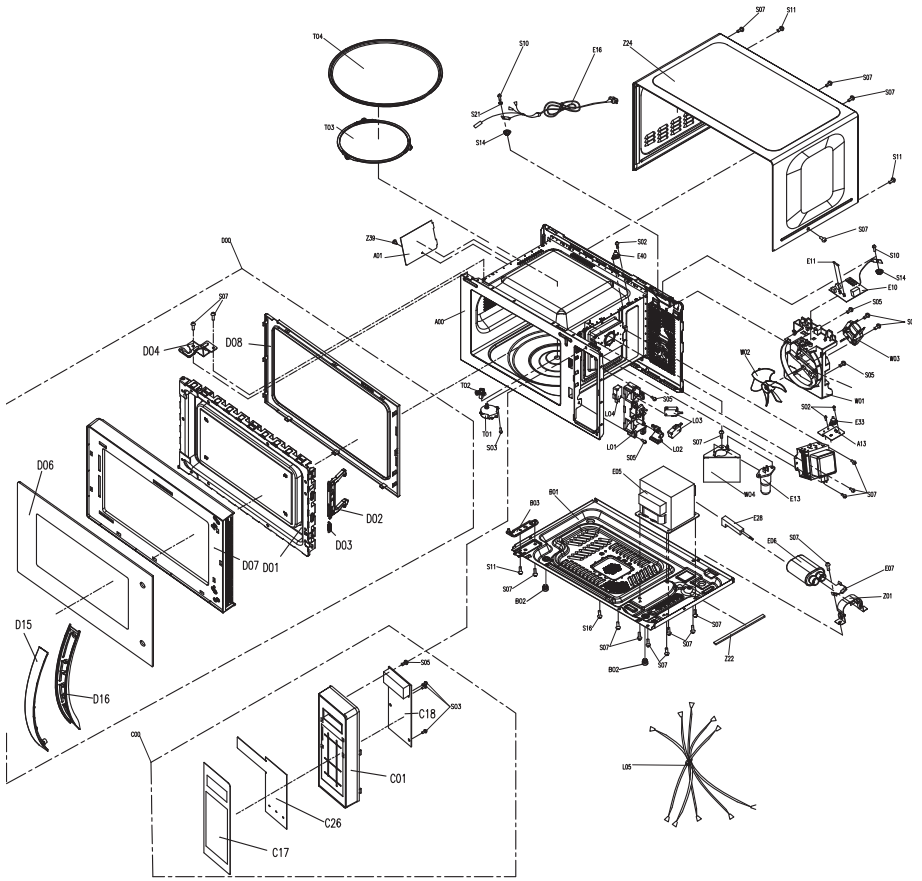


NOTE: • Make sure the wire leads are in the correct positions.
- When removing the wire leads from parts be sure to grasp the connector not the wires.
- When removing the magnetron, be sure to install the magnetron gasket in the correct position and in good condition.

ATTACHED FILES LIST

1. Exploded View and Spare Parts List
2. Wiring Diagram

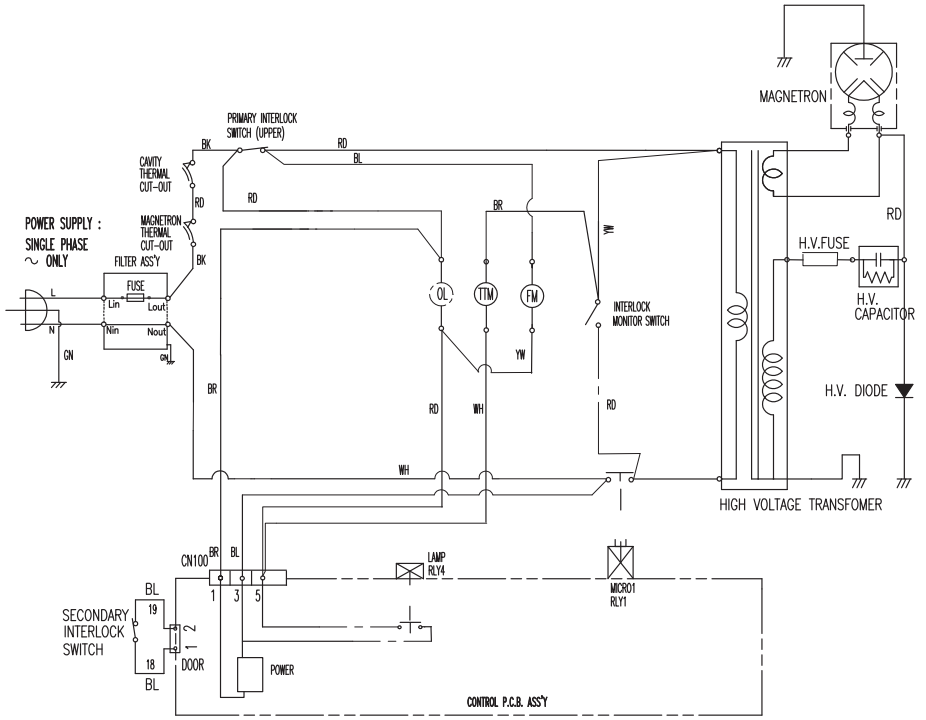
EXPLODED VIEW AND SPARE PARTS LIST



No.	Part Name	Qty.
Z24	CASE OUT	1
Z22	SPONGE	1
Z01	HOLDER H.V.C	1
W04	GUIDE WIND	1
W03	MOTOR FAN	1
W02	FAN	1
W01	GUIDE FAN	1
T04	TRAY	1
T03	RING ROTATING ASS'Y	1
T02	COUPLER	1
T01	MOTOR TRAY	1
S21	SPRING WASHER ø4.1	1
S16	SCREW ST4*10TDB	2
S14	NUT M4	3
S11	SCREW CT4*10TBHC	4
S10	SCREW ST4*10TB	3
S07	SCREW CT4*8TBHC	16
S06	SCREW ST4*20TBHC	2
S05	SCREW ST4*12PwBHC	5
S03	SCREW ST4*8PBHC	3
S02	SCREW ST3*8PBHC	3
L05	HARNESS MAIN	1
L04	MICROSWITCH MONITOR	1
L03	MICROSWITCH INTERLOCK	2
L02	LEVER SWITCH	1
L01	BOARD LATCH	1
E40	THERMOSTAT 110/70 *H	1
E33	THERMOSTAT 160/95 *H	1

No.	Part Name	Qty.
C28	H.V.FUSE	1
E16	POWER CORD ASS'Y	1
E13	LAMP	1
E11	FUSE	1
E10	FILTER NOISE	1
E07	H.V.DIODE	1
E06	H.V.CAPACITOR	1
E05	H.V.TRANSFORMER	1
E01	MAGNETRON	1
D17	HANDLE WASHER	1
D16	HANDLE COVER	1
D08	GASKET DOOR	1
D07	PANEL DOOR	1
D06	DOOR SCREEN	1
D04	ASS'Y BRKT HINGE *T	1
D03	SPRING LATCH	1
D02	LATCH	1
D01	ASS'Y DOOR FRAME	1
C26	MEMBRANE SWITCH CIRCUIT	1
C18	PCB ASS'Y	1
C17	MEMBRANE SWITCH	1
C01	PANEL CONTROL	1
B03	ASS'Y BRKT HINGE *U	1
B02	LEG	2
B01	BASE PLATE	1
A13	BRKT THERMOSTAT	1
A01	COVER WAVE GUIDE	1
A00	ASS'Y CAVITY	1

WIRING DIAGRAM



[CONDITION]
DOOR : CLOSED
COOK : OFF

NOTE :
OL : OVEN LAMP
FM : FAN MOTOR
TTM : TURNTABLE MOTOR

BK : BLACK
RD : RED
WH : WHITE
YW : YELLOW
BL : BLUE
BR : BROWN
GN : GREEN

PN:16170000A65421