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MICROWAVE OVEN SERVICE MANUAL

**MODEL: LMV2053SB
LMV2053ST
LMV2053SW**

CAUTION

BEFORE SERVICING THE UNIT, READ THE
SAFETY PRECAUTIONS IN THIS MANUAL.

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CAUTION

WARNING TO SERVICE TECHNICIANS

PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

- a. Do not operate or allow the oven to be operated with the door open.**
- b. Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary; (1) Interlock operation, (2) proper door closing, (3) seal and sealing surfaces (arcing, wear, and other damage), (4) damage to or loosening of hinges and latches, (5) evidence of dropping or abuse.**
- c. Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, wave guide or transmission line, and cavity for proper alignment, integrity, and connections.**
- d. Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.**
- e. A Microwave leakage check to verify compliance with the Federal performance standard should be performed on each oven prior to release to the owner.**
 - Proper operation of the microwave ovens requires that the magnetron be assembled to the wave guide 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.
 - Routine service safety procedures should be exercised at all times.
 - Untrained personnel should not attempt service without a thorough review of the test procedures and safety information contained in this manual.

FOREWORD

Read this Manual carefully. Failure to adhere to or observe the information in this Manual may result in exposing yourself to the Microwave Energy normally contained within the oven cavity.

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SPECIFICATIONS

Rated Power Consumption	1700W maximum (Microwave oven+Cook top lamps+Ventilation fan)
Microwave Output	1100W (IEC60705)
Frequency	2450 MHz \pm 50 MHz
Power Supply	120 VAC, 60 Hz
Rated Current	14.5 Amp. (Microwave oven+Cook top lamps+Ventilation fan)
Magnetron Cooling	Forced Air Cooling
Rectification	Rectification Voltage Double Half-Wave
Door Sealing	Choke System
Safety Devices	Magnetron Thermostat: Open at 150 °C \pm 5 °C Close at 0 °C \pm 5 °C Oven Thermostat: Open at 110 °C \pm 5 °C Close at 0 °C \pm 5 °C Fuse (20A) Primary Interlock Switch Secondary Interlock Switch Interlock Monitor Switch
Magnetron	2M282J (Toshiba)
Cook top Lamp	130 V, 35 W (Halogen)
Cavity Lamp	125 V, 30 W or 40 W
Timer	Digital, up to 99 min.99 sec. (in each cooking stage)
Tray	Tempered Safety Glass
Overall Dimensions	29 ^{15/16} "(W)x16 ^{7/16} "(H)x15 ^{3/8} "(D)
Oven Cavity Size	23 ^{1/2} "(W)x10 ^{3/16} "(H)x14 ^{1/2} "(D)
Effective Capacity of Oven Cavity	2.0 Cu.ft.
Accessories	Owner's Manual & Cooking Guide, Installation Manual, Exhaust Adapter, Exhaust Damper, Mounting Kit and Filter, Rotating Ring Assembly, Glass Tray, Metal Rack.

SWITCH CHART

SWITCH MODE	PRIMARY INTERLOCK SWITCH	SECONDARY INTERLOCK SWITCH	INTERLOCK MONITOR SWITCH
CONDITIONS	COM NO	COM NO	COM NC
DOOR OPEN	OPEN	OPEN	CLOSE
DOOR CLOSED	CLOSE	CLOSE	OPEN

NOTE: Use the above switch chart with circuit diagram on page 5-1.

CAUTIONS

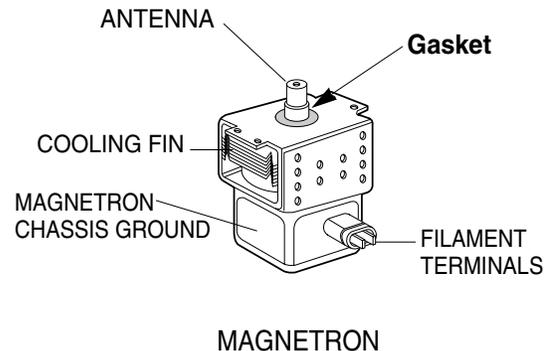
Unlike other appliances, the microwave oven is high-voltage and high-current equipment. Though it is free from danger in ordinary use, extreme care should be taken during repair.

- 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.
- Remove your watches whenever working close to or replacing the Magnetron.
- DO NOT touch any parts of the control panel circuit. A resulting static electric discharge may damage this P.C.B.
- 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 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 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.

PRECAUTIONS ON INSTALLATION

- A. Plug the power supply cord into a 120V AC, 60Hz, single-phase power source with a capacity of at least 20 amperes.
- B. Avoid placing the unit in a location where there is direct heat or splashing water.
- C. Install the unit on the mounting plate firmly.
- D. Place the unit as far away as possible from TV, radio, etc. to prevent interference.

GROUNDING INSTRUCTIONS

For personal safety, this appliance must be fully grounded at all times.

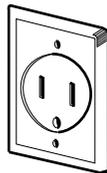
In the event of an electrical short circuit, grounding reduces the risk of electrical shock.

The plug must be plugged into an outlet that is properly installed and grounded.

CAUTION

This unit is equipped with a 3-prong plug for your safety. If the wall outlet is a grounded 3-hole type, the unit will be grounded automatically.

Plug with Ground Prong



Properly Polarized and Grounded Outlet

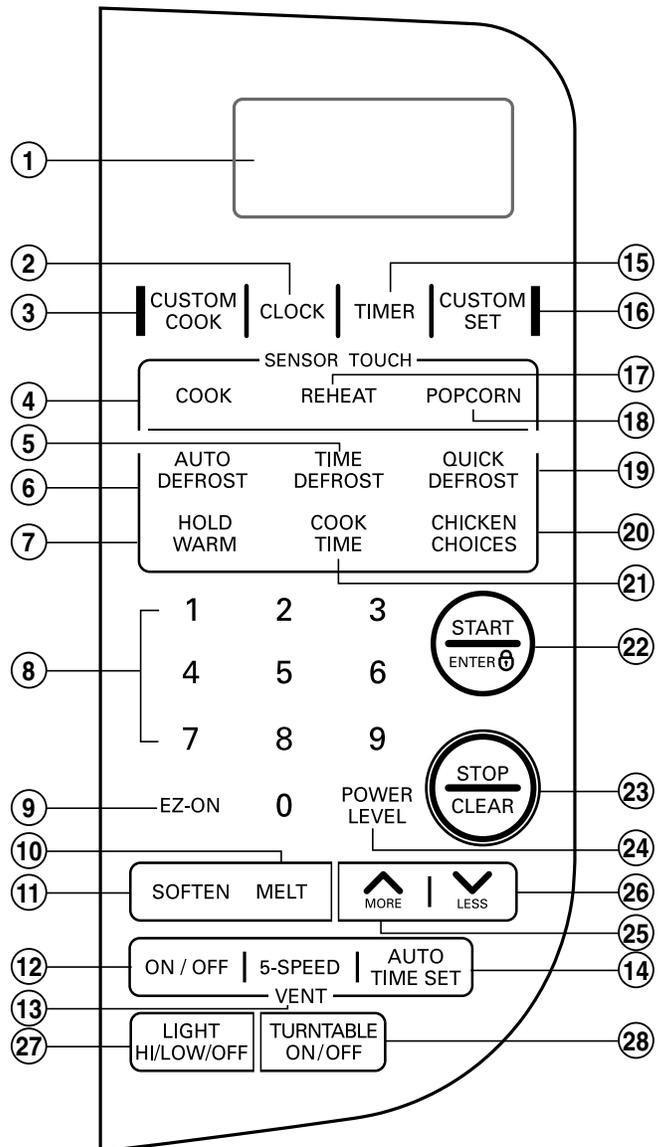
WARNING

Improper use of the grounding plug can cause electric shock.

Do not, under any circumstances, cut or remove the third ground prong from the power cord plug.

OPERATING INSTRUCTIONS

CONTROL PANEL

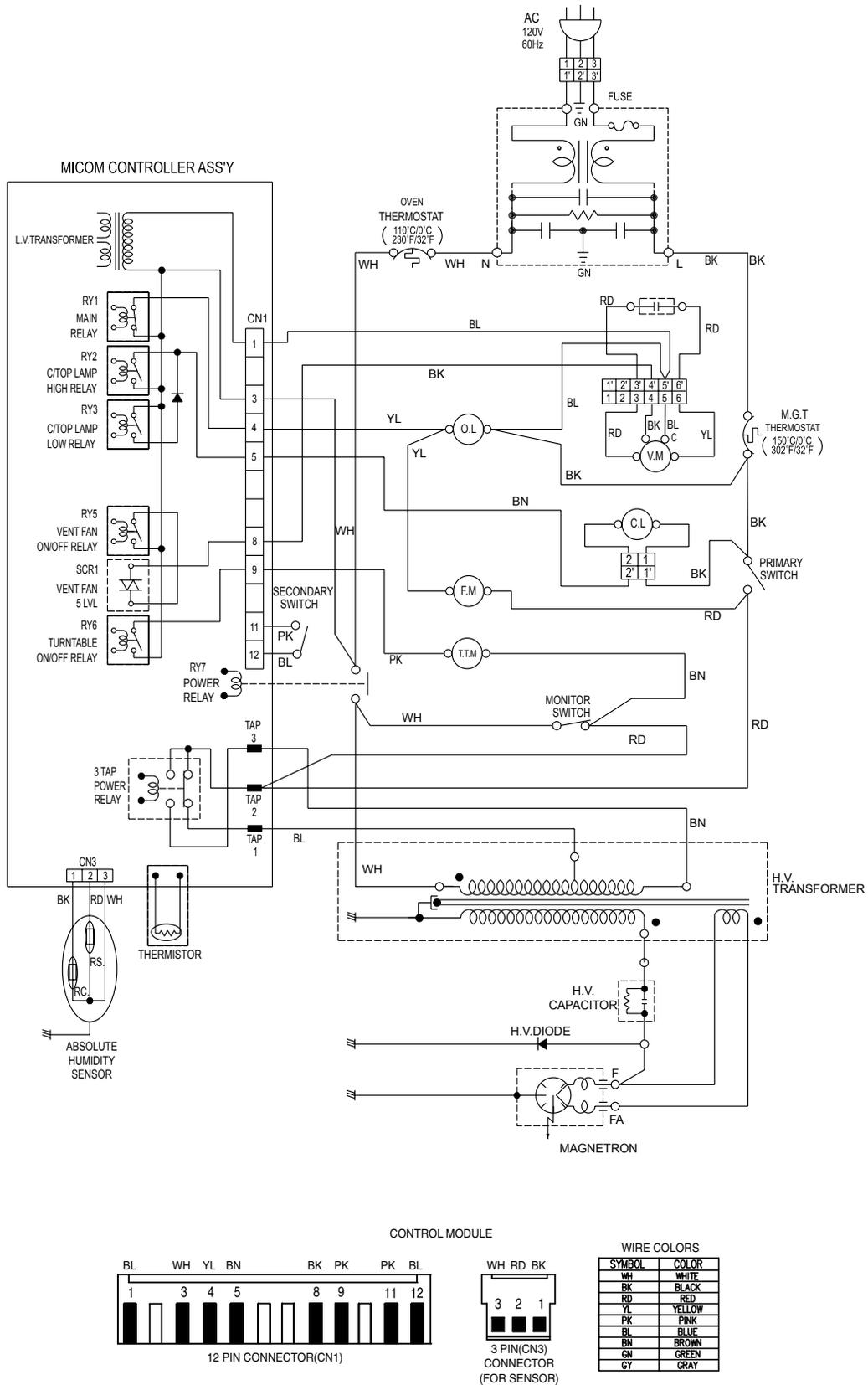


CONTROL PANEL INSTRUCTIONS

1. **DISPLAY:** The Display includes a clock and indicators to tell you time of day, cooking time setting, and cooking functions selected.
2. **CLOCK:** Touch this pad to enter the time of day.
3. **CUSTOM COOK:** Touch this pad to recall one cooking instruction previously programmed into memory.
4. **COOK:** Touch this pad to cook various types of food. The oven's sensor will tell the oven how long to cook depending on the amount of humidity coming from the food.
5. **TIME DEFROST:** Touch this pad to defrost most other frozen foods.
6. **AUTO DEFROST:** Meat, poultry, fish and bread. Touch this pad to select food type and defrost food by weight.
7. **HOLD WARM:** Touch this pad to keep hot, cooked foods warm in your microwave oven for up to 90 minutes.
8. **NUMBER:** Touch number pads to enter cooking time, power level, quantities or weights.
9. **EZ-ON:** Touch this pad to set and start quickly at 100% power level.
10. **MELT:** Touch this pad to melt Butter, Margarine, Chocolate, Cheese and Marshmallows.
11. **SOFTEN:** Touch this pad to soften Butter, Ice Cream, Cream Cheese or Frozen Juice.
12. **VENT ON/OFF:** Touch this pad to turn the fan on/off.
13. **VENT 5-SPEED:** Touch this pad to choose one of 5 fan speeds.
14. **VENT AUTO TIME SET:** Touch this pad when setting ventilation time. (1, 3, 5, 10 and 30 minutes.)
15. **TIMER:** Touch this pad to set the timer.
16. **CUSTOM SET:** Touch this pad to change the oven's default setting for sound, clock, display speed and defrost weight.
17. **REHEAT:** Touch this pad to reheat food. The oven's sensor will tell the oven how long to cook depending on the amount of humidity coming from the food.
18. **POPCORN:** Touch this pad when popping popcorn in your microwave oven. The oven's sensor will tell the oven how long to cook depending on the amount of humidity it detects from the popcorn.
19. **QUICK DEFROST:** This pad provides quick defrost for 1.0 pound of frozen food.
20. **CHICKEN CHOICES:** Touch this pad to cook various types of chicken.
21. **COOK TIME:** Touch this pad to set a cooking time.
22. **START/ENTER:** Touch this pad to start a function. If you open the door after oven begins to cook, touch START/ENTER again.
23. **STOP/CLEAR:** Touch this pad to stop the oven or to clear all entries.
24. **POWER LEVEL:** Touch this pad to select a cooking power level.
25. **MORE:** Touch this pad to add ten seconds of cooking time each time you press it.
26. **LESS:** Touch this pad to subtract ten seconds of cooking time each time you press it.
27. **LIGHT HI/LOW/OFF:** Touch this pad to turn the light on high, low or off.
28. **TURNTABLE ON/OFF:** Touch this pad to turn on/off the turntable. This option is not available in sensor cook and defrost modes.

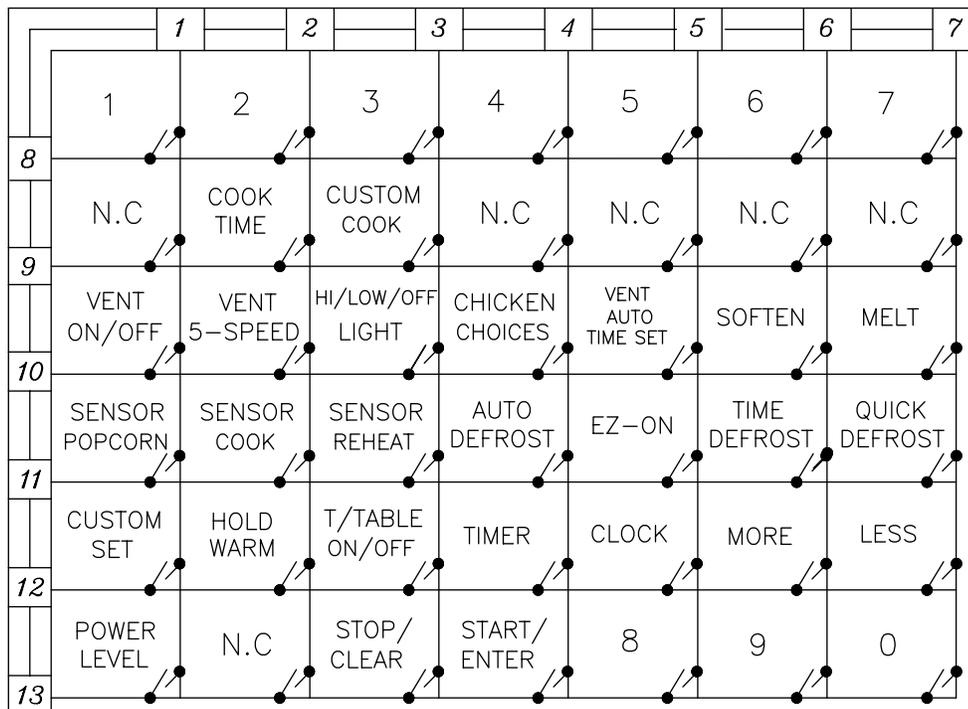
OVERALL CIRCUIT DIAGRAM

SCHEMATIC DIAGRAM



MATRIX CIRCUIT FOR TOUCH KEY BOARD

KEY MATRIX



GENERAL INFORMATION FOR SERVICE

GENERAL PRECAUTIONS IN USE

- A. Never operate the unit when it is empty.
Operating the oven with no load may shorten the life of the magnetron. Whenever cooking dry foods (dried fish, bread, etc.) or a small amount of food, be sure to put a glass of water into the cooking compartment. The glass turntable may become hot after operating, be careful when touching it.
- B. Aluminum foil should be avoided because it will disrupt cooking and may cause arcing. However, small pieces may be used to cover some parts of food to slow the cooking. Any aluminum foil used should never be closer than 2.5 cm to any side wall of the oven.

TRIAL OPERATION

After installation, the following sequences and results should be checked carefully.

- A. Put a container filled with water (about 1 liter) into the oven, and close the door tightly.
- B. Set cooking time for 10 minutes by touching "1" and then "0" three times. "1, 0, 0, 0" appears in the display window.
- C. Touch the START key.
Make sure the cavity light comes on. The unit will begin cooking and the display window will show the time counting down by seconds.
- D. After about 5 minutes, make sure the primary interlock switch, the secondary interlock switch and the interlock monitor switch operate properly by opening and closing the door several times. Touch the START key each time the door is closed.
- E. Continue operating the unit. Two short and a long beep sound signal is heard when the time is up.
The unit will shut off automatically.
- F. Confirm the water is hot.
- G. Finally, measure the output power according to "POWER OUTPUT MEASUREMENT" on page 7-3.

FEATURES AND SPECIFICATIONS

- A. The safety systems incorporated in this model are:
 - (1) Primary interlock switch
 - (2) Secondary interlock switch
 - (3) Interlock monitor switch
 - (4) Choke system
 - (5) Oven cavity thermostat
(Note: This thermostat located on the oven cavity will open and stop the unit from operation only if a high temperature is reached, such as, a fire created by overcooking food.)
- B. Any one of 10 power output levels ranging 0W to 1100W can be selected by the touch control and electronic computer system.
- C. Cooking time can be displayed on the digital readout.
- D. Three different cooking stages (Including Defrost) can be changed from one cooking stage to another. This is made possible with the memory function of the microprocessor.

SERVICE INFORMATION

PRECAUTIONS AND REPAIR SERVICE TIPS

PRELIMINARY

A. SINCE NEARLY 4000 VOLTS EXISTS IN SOME CIRCUITS OF THIS UNIT REPAIRS SHOULD BE CARRIED OUT WITH GREAT CARE.

The filament leads of magnetron carry High Voltage with respect to ground. Extreme caution must be exercised. Never plug the unit into a power source to determine which component is defective in high voltage section.

B. TO AVOID POSSIBLE EXPOSURE TO MICROWAVE ENERGY LEAKAGE, THE FOLLOWING PRECAUTIONS MUST BE TAKEN BEFORE SERVICING.

- (1) Before the power is applied:
 - (a) Make sure the primary interlock switch, the secondary interlock switch and the interlock monitor switch operate properly by opening and closing the door several by opening and closing the door several times.
 - (b) Make sure the perforated screen and the dielectric choke of the door are correctly and firmly mounted.
- (2) After power is applied:
 - (a) Make sure the interlock switch mechanism is operating properly by opening and closing the door.
 - (b) Check microwave energy leakage must be below the limit of 5 mW/cm^2 .
(All service adjustments should be made for minimum microwave energy leakage readings).

(3) Do not operate the unit until it is completely repaired. If any of the following conditions exist, the unit must not be operated:

- (a) The door does not close firmly.
- (b) The hinge is broken.
- (c) The door seal is damaged.
- (d) The door is bent or warped, or there is any other visible damage on the unit that may cause microwave energy leakage.

NOTE: Always keep the seal clean.

- (e) Make sure that there are no defective parts in the interlock mechanism.
- (f) Make sure that there are no defective parts in the microwave generating and transmission assembly (especially waveguide).

(4) The following items should be checked after the unit is repaired:

- (a) The interlock monitor switch is connected correctly and firmly.
- (b) The magnetron gasket is properly positioned and mounted.
- (c) The waveguide and the oven cavity are intact. (no microwave energy leakage)
- (d) The door can be properly closed and the safety switches work properly.
- (e) The unit must stop when the door is opened or the time is up.

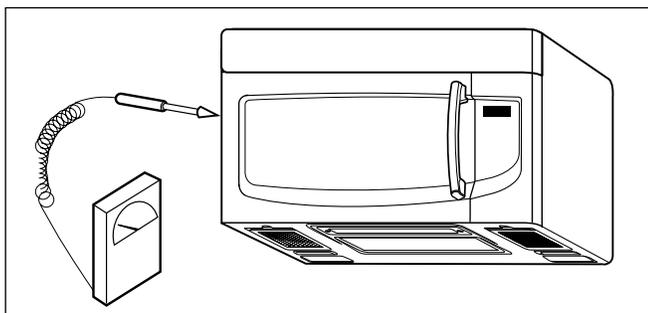
The unit must not be operated with any of the above components removed or by-passed.

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 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 excessive emission levels at no cost to the owner. The service personnel should ascertain the cause of the excessive leakage and 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 and CDRH (Center for Devices and Radiological Health) immediately.

NOTE: Address on CDRH
Office of Compliance (HFZ-312)
Center for Devices and Radiological Health
1390 Piccard Drive Rockville, Maryland 20850
 - The service personnel should check all surface and vent openings for microwave emission testing.
 - Check for microwave energy leakage after every servicing. The power density of the microwave radiation leakage emitted by the microwave oven should not exceed 1mW/cm². Always start measuring of an unknown field to assure safety for operating personnel from radiation leakage.
- NOTE:** The standard is 5mW/cm² while in the customer's home. 1mW/cm² stated here is manufacturer's own voluntary standard for units in customer's home.

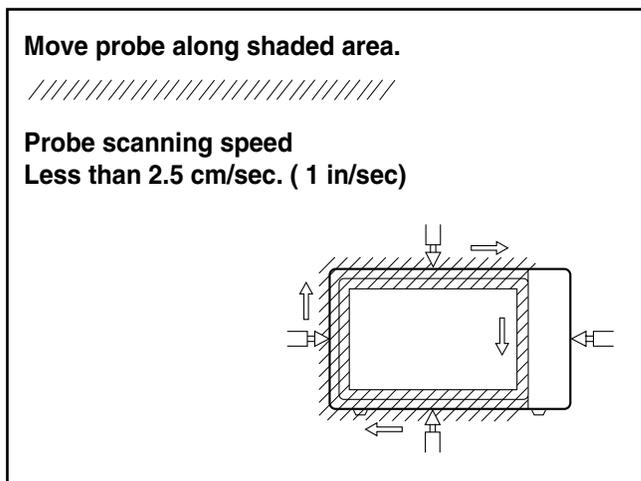


EQUIPMENT-

- TESTER (VOLTS-DC, AC, Ohmmeter)
- Microwave survey meter
 - Holaday HI-1500
HI-1501
 - Narda 8100
8200
- 600 cc non conductive material beaker (glass or plastic), inside diameter: approx. 8.5 cm (3 1/2 in.)
- Glass thermometer: 100°C or 212°F (1 deg scale)

MEASURING MICROWAVE ENERGY LEAKAGE

- **Pour 275±15cc of water at 20±5°C(68±9°F) into a beaker which is graduated to 600 cc, and place the beaker on the oven.**
- **Set the energy leakage monitor to 2,450 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.**



MEASUREMENT WITH THE OUTSIDE CASE REMOVED

- (1) 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.
 - Around the magnetron
 - The waveguide

WARNING: AVOID CONTACTING ANY HIGH VOLTAGE PARTS.

MEASUREMENT WITH A FULLY ASSEMBLED OVEN

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

NOTES:

Leakage with the outer panels removed -less than 5 mW/cm².

Leakage for a fully assembled oven ("Before the latch switch (primary) is interrupted") with the door in a slightly opened position-less than 1 mW/cm²

NOTE WHEN MEASURING

- (1) Do not exceed meter full scale deflection.
- (2) The test probe must be removed no faster than 1 inch/sec (2.5cm/sec) along the shaded area, otherwise a false reading may result.
- (3) 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.
- (4) When testing near a corner of the door, keep the probe perpendicular to the surface making sure the probe is moved horizontally along the oven surface.

RECORD KEEPING AND NOTIFICATION AFTER MEASUREMENT

- (1) 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.
- (2) Should the microwave energy leakage not be more than 1 mW/cm² after determining that all parts are in good condition, functioning properly and genuine replacement parts which are listed in this manual have been used.
- (3) At least once a year, have the electromagnetic energy leakage monitor checked for calibration by its manufacturer.

POWER OUTPUT MEASUREMENT

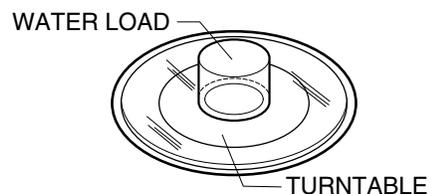
- (1) Microwave power output measurement is made with the microwave oven supplied at its rated voltage and operated at its maximum microwave power setting with a load of (1000±5)g of potable water.
- (2) The water is contained in a cylindrical borosilicate glass vessel having a maximum material thickness of 1/8" (3 mm) and an outside diameter of approximately 7.6" (190mm).
- (3) The oven and the empty vessel are at ambient Temperature(T₀)prior to the start of the test.
- (4) The initial temperature (T₁) of the water is (10±1)°C (50 °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 turntable which is in the lowest position and the microwave power switched on.
- (5) The time t for the temperature of the water to rise by a value T of (10±1)°K is measured, where t is the time in seconds and T 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.
- (6) The microwave power output P in watts is calculated from the following formula :

$$P = \frac{4.187 Mw(T_2 - T_1) + 0.55Mc(T_2 - T_0)}{t}$$

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

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

Where
P is the microwave power output, in watts:
Mw is the mass of the water, in grams:
Mc is the mass of the container, in grams:
T₀ is the ambient temperature, in °C:
T₁ is the initial temperature of the water, in °C:
T₂ is the final temperature of the water, in °C:
t is the heating time in seconds, excluding the magnetron filament heat-up time.



DISASSEMBLY INSTRUCTIONS

IMPORTANT NOTES:

UNIT MUST BE DISCONNECTED FROM ELECTRICAL OUTLET WHEN MAKING REPAIRS, REPLACEMENTS, ADJUSTMENTS AND CONTINUITY CHECKS.

WHEN RECONNECTING THE WIRE LEADS TO ANY PART, MAKE SURE THE WIRING CONNECTIONS AND LEAD COLORS ARE CORRECTLY MATCHED ACCORDING TO THE OVERALL CIRCUIT DIAGRAM. (ESPECIALLY SWITCHES AND HIGH VOLTAGE CIRCUIT.)

A. REMOVING POWER AND CONTROL CIRCUIT BOARD (Figures 1, 2 and 3)

- (1) Remove a screw securing the control panel assembly to the oven cavity.
- (2) Remove the control panel with pushing it upward.
- (3) Remove the connectors (CN1, CN3) and wire leads (3 Tap Power Relay, RY7) from the circuit board.

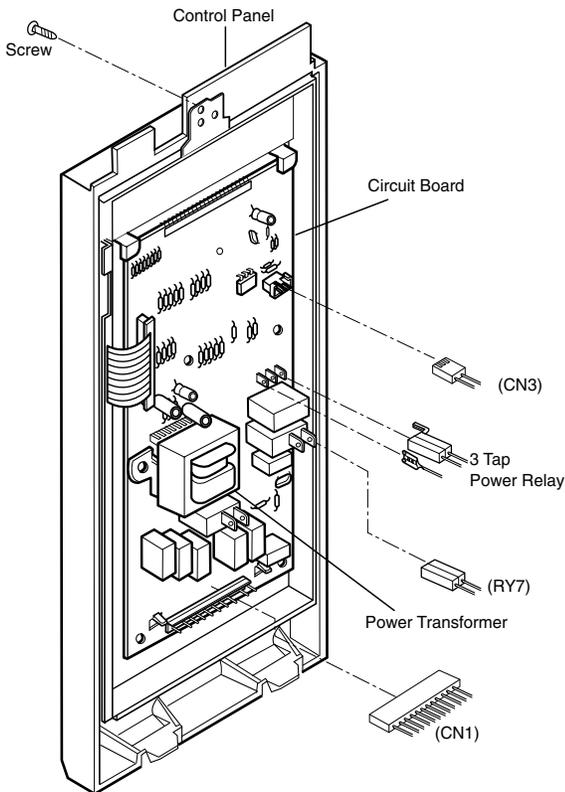


Figure 1

- (4) Remove 3 screws securing the circuit board.

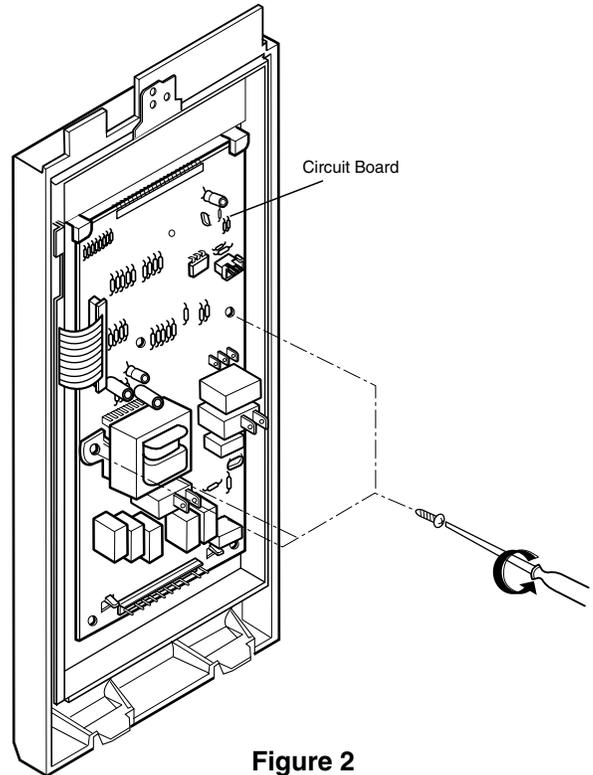


Figure 2

- (5) Remove the FPC connector from the terminal socket following "HOW TO REMOVE THE FPC CONNECTOR" on the next page.
- (6) Remove the circuit board from the control bracket carefully.

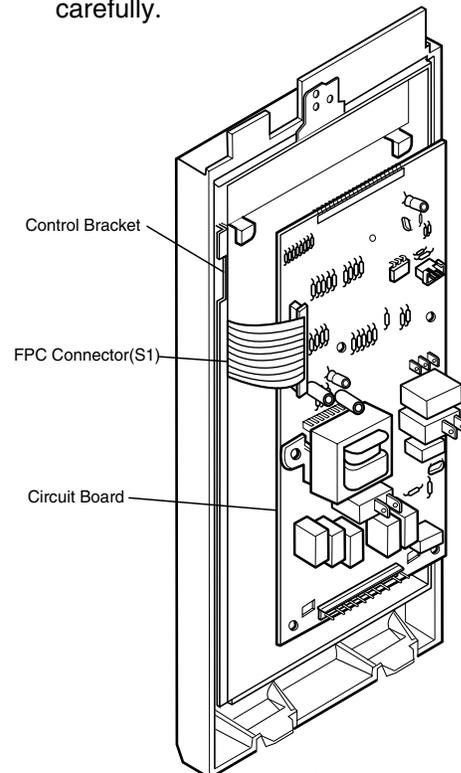


Figure 3

HOW TO REMOVE THE F.P.C. CONNECTOR

Follow the steps below as illustrated in Figures 4 and 5 to remove the F.P.C. connector.

- (1) Hold the edges of the plastic fastener with thumb and forefinger. (Figure 4)
- (2) Lift up the lever of the plastic fastener from the terminal socket by lightly pressing the lever end with forefinger. (Figure 5)
- (3) Remove the F.P.C. connector from the terminal socket.

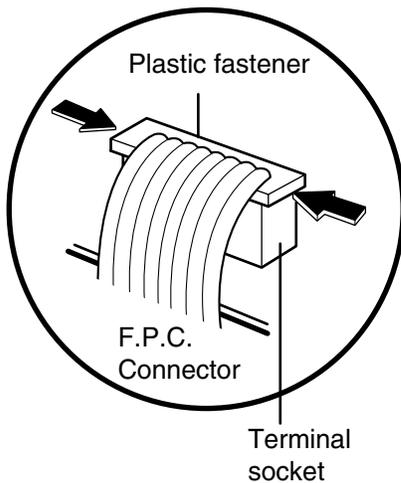


Figure 4

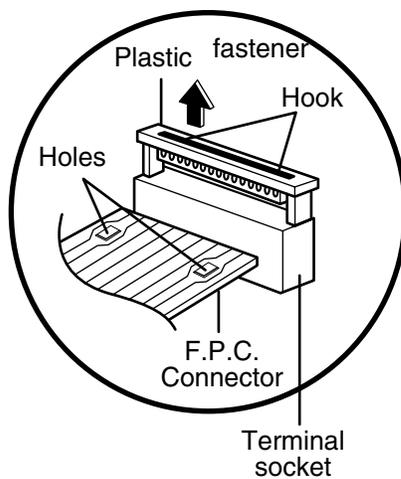


Figure 5

HOW TO INSERT THE F.P.C. CONNECTOR

Follow the steps below as illustrated in Figures 6 and 7 to insert the F.P.C. connector.

- (1) Insert the F.P.C. connector into the terminal socket securely with the fingers.
- (2) Hold the plastic fastener with thumb and forefinger of the other hand, and push it slowly into the terminal socket. (Figure 6)

NOTE: When reconnecting the F.P.C. connector make sure that the holes on the F.P.C. connector are properly engaged with the hooks on the plastic fastener

- (3) Lock the level of the plastic fastener into the hook of the terminal socket securely by releasing the fingers. (Figure 7)

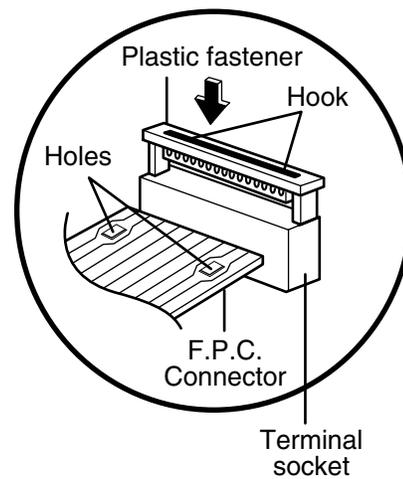


Figure 6

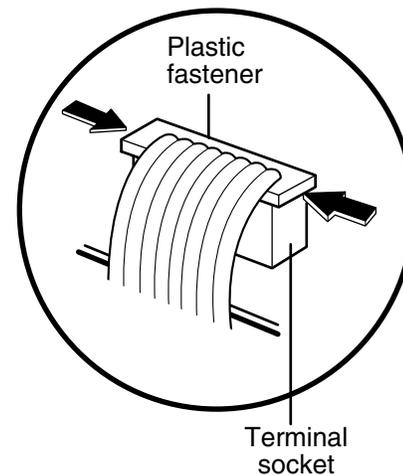


Figure 7

B. REMOVING THE OUTSIDE CASE (Figure 8)

- (1) Remove the vent grille by removing two screws securing it to the outside case.
- (2) Remove two screws securing it to the air duct.
- (3) Remove the mounting plate by turning the screws (1 or 2 screws)securing it to the outside case.
- (4) Remove two screws on the left central edge and two screws on the right central edge of Base plate. Remove the Mount, All from the outside case by removing one screw securing it to the outside case.
- (5) Remove four screws of the rear cavity.
- (6) Remove the outside case.

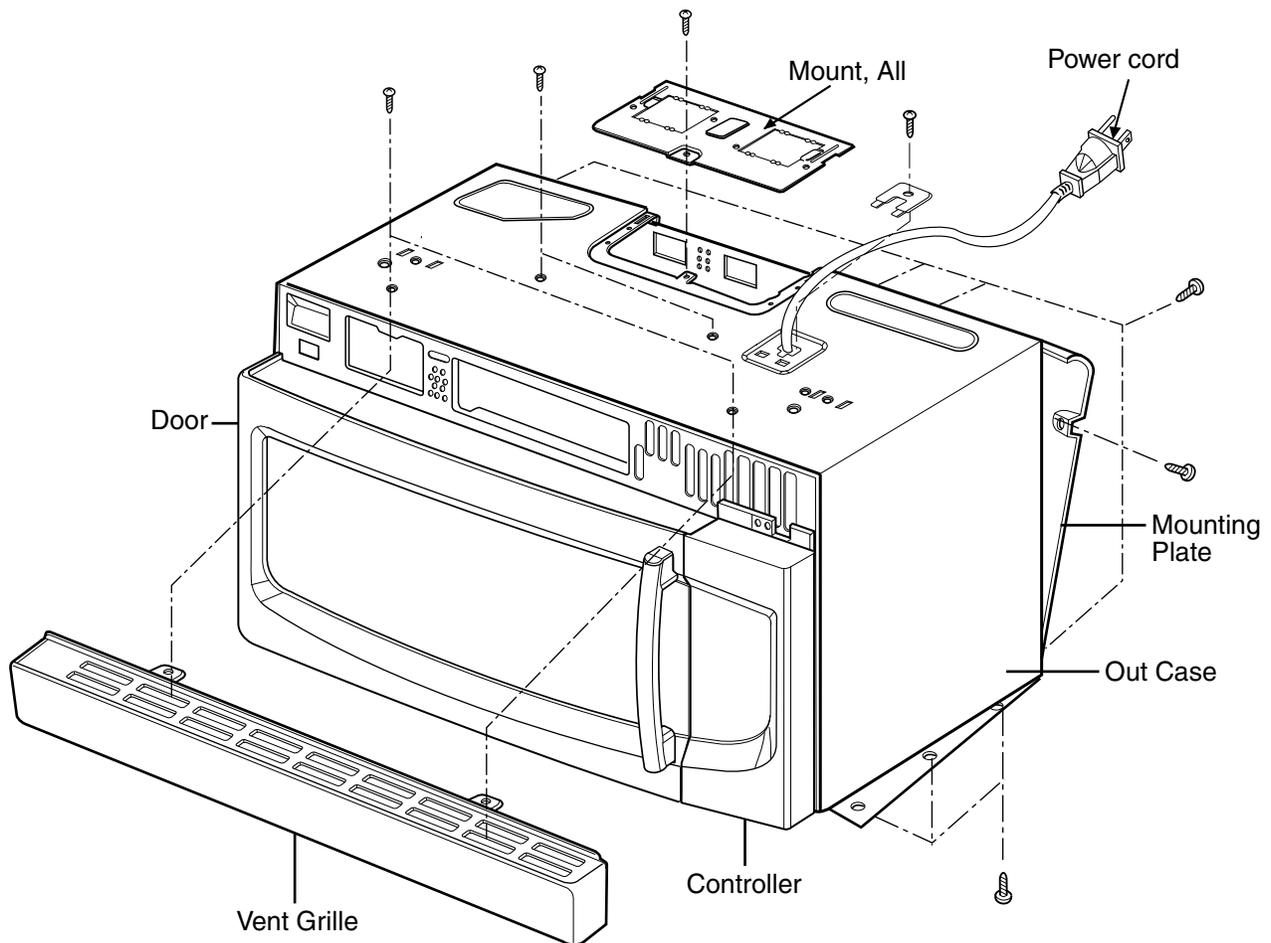


Figure 8

C. REMOVING THE DOOR INTERLOCK SWITCHES (Figures 9, 10)

- (1) Disconnect the wire leads from the interlock switches.
- (2) Remove two screws securing the Latch Board.
- (3) Make necessary replacements and check microwave energy leakage according to "ADJUSTMENT PROCEDURES" on page 7-12.

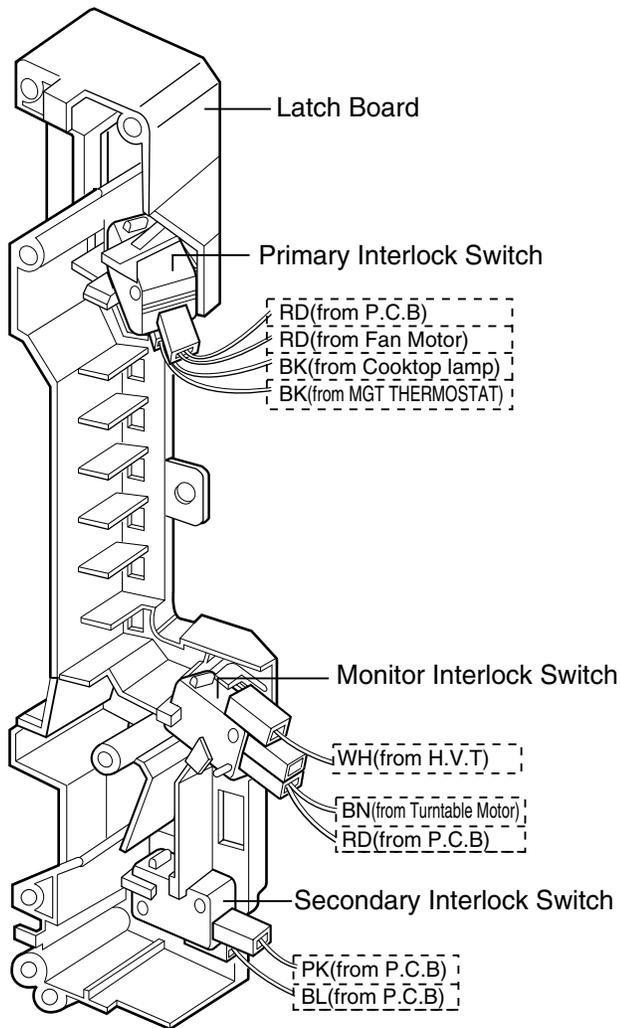


Figure 9

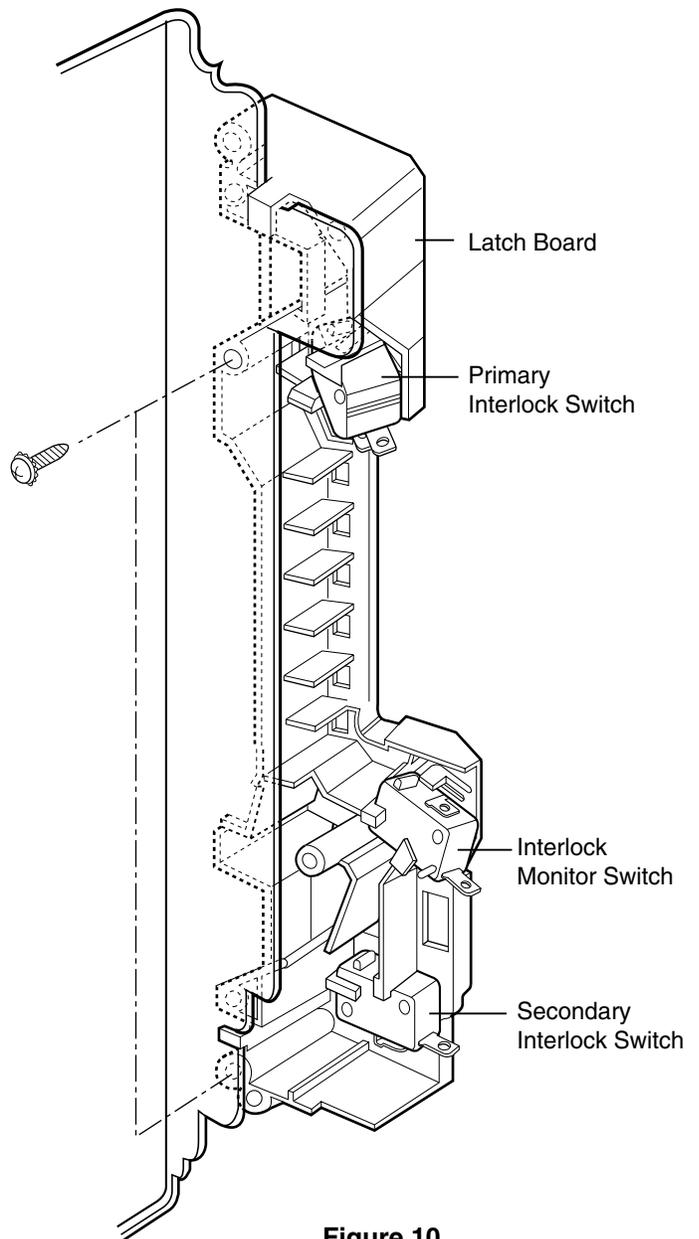


Figure 10

WIRE COLOR

SYMBOL	COLOR
WH	WHITE
BK	BLACK
BR	BROWN
RD	RED
YL	YELLOW
PK	PINK
BL	BLUE
GY	GRAY
GN	GREEN
N.P.	Not Provided

D. REMOVING MAGNETRON

(Figures 11 and 12)

- (1) Remove the vent grille by loosening two screws. (Figure 11)
- (2) Remove the outside case. See page 7-6.
- (3) Remove the controller ASS'Y.
- (4) Disconnect the leadwire.
- (5) Remove a screw securing the magnetron guide the the magnetron.
- (6) Remove four tap tite screws securing the magnetron to the wave guide.
- (7) Disconnect the leadwire.
- (8) Remove the magnetron VERY CAREFULLY.

NOTES:

- When removing the magnetron, make sure that its dome does not hit any adjacent parts, or it may be damaged.
- 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.

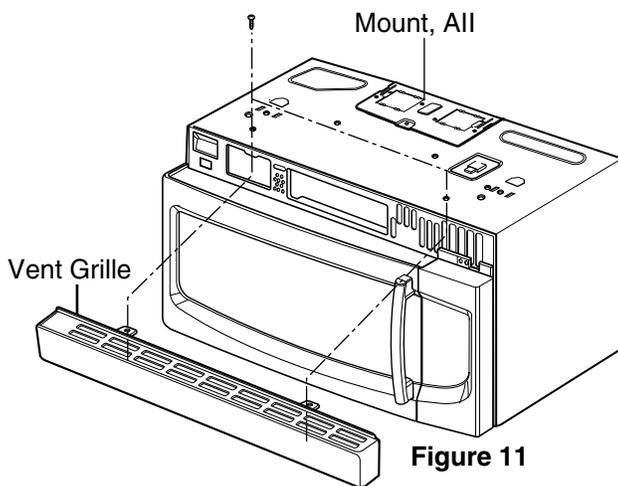


Figure 11

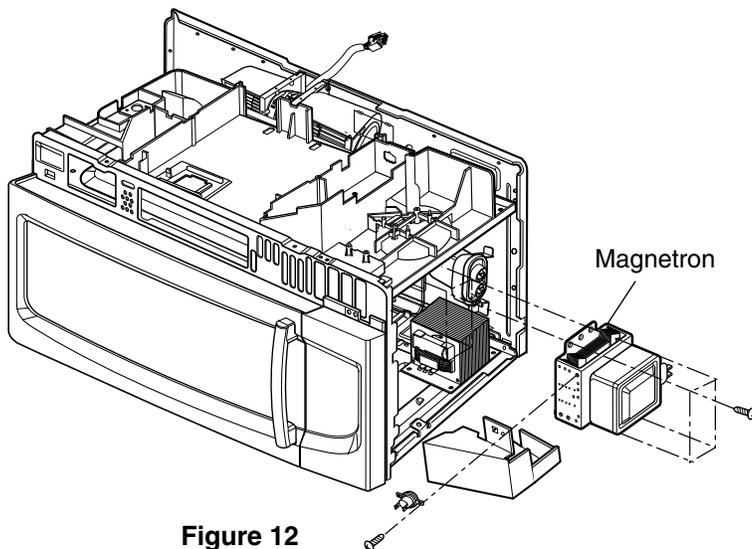


Figure 12

- After replacing the magnetron, check for microwave energy leakage with a survey meter. Check microwave energy leakage must be below the limit of 5 mW/cm². (All service adjustments should be made for minimum microwave energy leakage readings.)

E. REMOVING STIRRER FAN

(Figures 13 and 14)

- (1) Remove one rivet ASS'Y securing it to the oven upper plate by using knife blade.
- (2) Rotate slightly and pull out the stirrer fan cover.
- (3) Remove the stirrer fan.

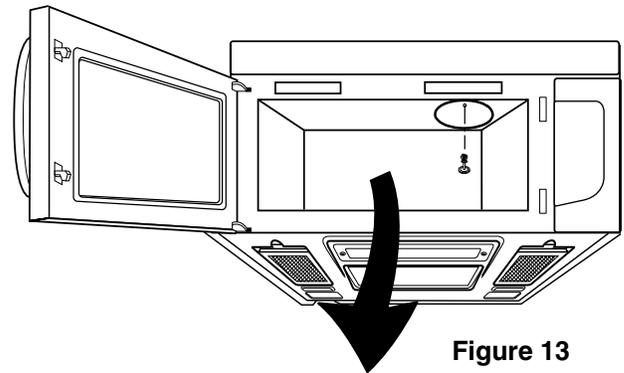


Figure 13

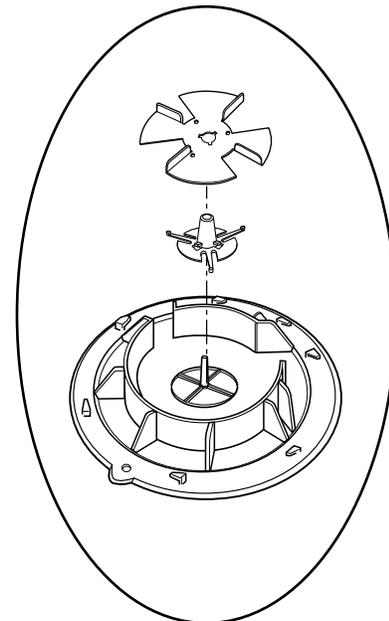


Figure 14

F. REMOVING DOOR (Figure 15)

- (1) Remove the vent grille by removing two screws securing it to the outside case loosening.
- (2) Lift up and remove the door.

NOTES:

- After replacing the door, be sure to check that the primary interlock switch, the secondary interlock switch and the interlock monitor switch is in good operating normally.
- After replacing the door, check for microwave energy leakage with a survey meter. Microwave energy leakage must be below the limit of $5\text{mW}/\text{cm}^2$ (With a 275 ml water load).

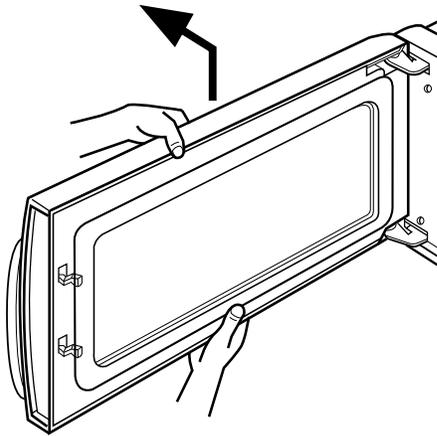


Figure 15

G. DISASSEMBLING DOOR (Figure 16)

- (1) Remove the dielectric choke by using knifeblade or small screw driver, etc.
- (2) Remove two screws securing it to the door handle.

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

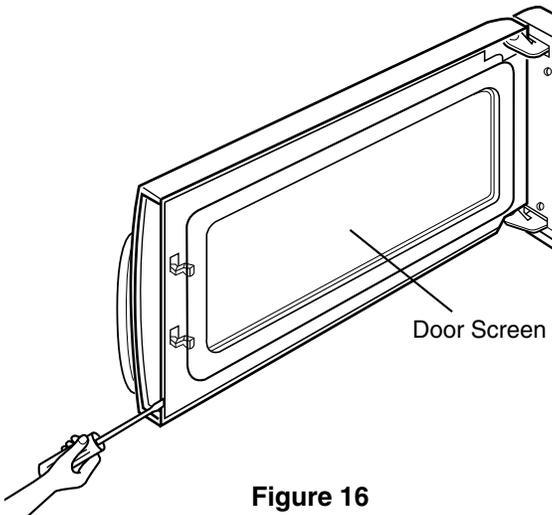
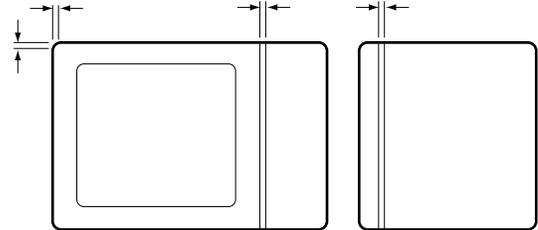


Figure 16

H. ASSEMBLING DOOR

- (1) 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.



I. REMOVING THE VENTILATION MOTOR

- (1) Remove the mounting plate by loosening mounting plate screws (1 or 2 screws) securing it to the back plate. (See Figure 17)
- (2) Remove MOUNT, ALL by loosening one screw securing the ventilation Motor and back plate. (See Figure 18-a)

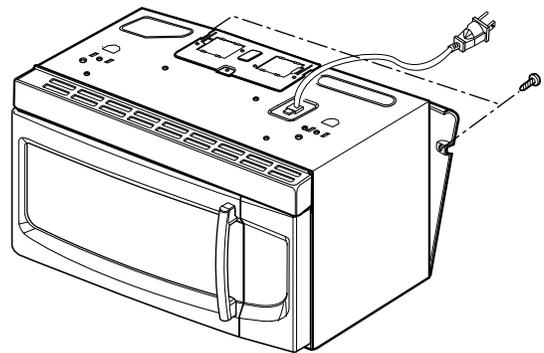


Figure 17

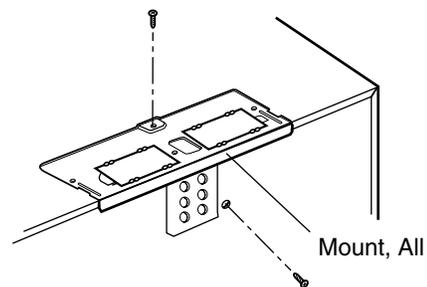


Figure 18-a

- (3) Carefully pull the ventilation motor ASS'Y out of the microwave oven. (See Figure 18-b)

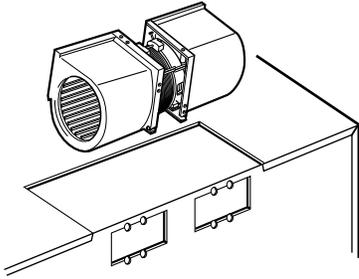


Figure 18-b

J. REMOVING THE TURNTABLE MOTOR

- (1) Remove the turntable.
- (2) Remove the turntable shaft VERY CAREFULLY with a slotted screwdriver. (Figure 19)
- (3) Remove the base plate by removing 8 screws securing it to the oven cavity. (Figure 20)
- (4) Disconnect the leadwire from the turntable motor terminals.
- (5) Remove 1 screw securing the turntable motor to the oven cavity ASS'Y. (Figure 21)

NOTES:

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

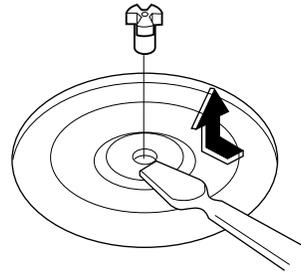


Figure 19

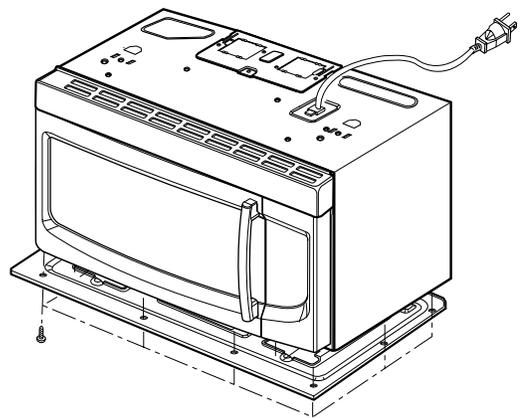


Figure 20

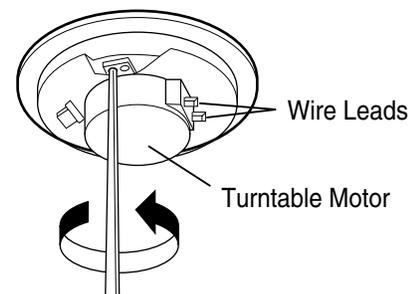


Figure 21

K. REPLACING THE HUMIDITY SENSOR

- (1) Remove the sensor by removing 1 screw securing it to the air duct. (See Figure 22)
- (2) Mount the new humidity sensor to the air duct.

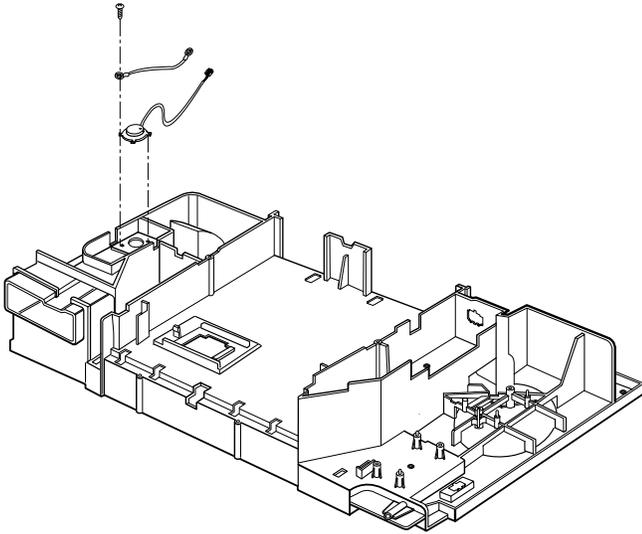


Figure 22

INTERLOCK SYSTEM

INTERLOCK MECHANISM

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

ADJUSTMENT PROCEDURES

To avoid possible exposure to microwave energy leakage, adjust the door latches and interlock switches, using the following procedure.

The Interlock Monitor and Primary Interlock Switch act as the final safety switch protecting the user from microwave energy. The terminals between "COM" and "NC" of the Interlock Monitor must close when the door is opened. After adjusting the Interlock Monitor Switch, make sure that it is correctly connected. Mounting of the primary/monitor/secondary switches to the latch board.

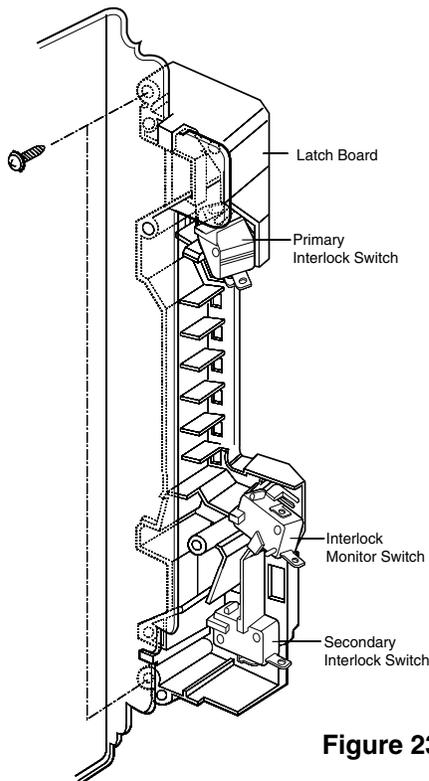


Figure 23-a

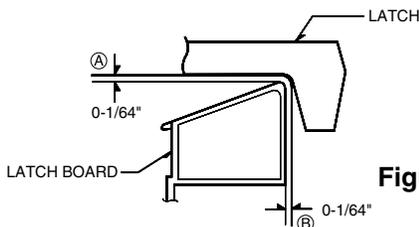


Figure 23-b

CHECK THE DOOR LATCH AND SWITCH CLOSING.

NOTE:

The outer cover of the microwave oven is removed.

- (1) Set the microwave oven on its side so that you can see the latch board and the switches, as shown in Figure 23-a.
- (2) Close the door tightly and check gaps A and B to be sure they are no more than 1/64" (0.5 mm). See Figure 23-b for close-up view of gaps A and B (door latches). If all gaps are less than 1/64" (0.5 mm), adjustment of the latch board may not be necessary. Go to Steps 5 and 6 to check the sequence of the switches.

NOTE:

If any gap is larger than 1/64" (0.5 mm), you will need to adjust the latch board". Go to step 3 and follow all steps in order.

ADJUST THE LATCH AND SWITCH CLOSING

- (3) Loosen the two screws holding the plastic latch board as shown.
- (4) With the oven door closed tightly, move the latch board upward toward the top of the oven and/or away from the door latch until the gaps are less than 1/64" (0.5 mm). Hold the latch board tightly in this position until you check the sequence of the switches in steps 5 and 6.

TEST THE LATCH AND SWITCH SEQUENCE

- (5) Open the oven door slowly. Watch the door latch, the Secondary Switch, Release Rod and Lever on the switches to make sure they are zero to the body of the switches in the following sequence:

- Primary Interlock Switch
- Secondary Interlock Switch
- Interlock Monitor Switch

Adjust the latch board until the switches operate in this sequence. See Steps 3 and 4.

- (6) Close the oven door slowly and be sure it is tightly closed. Watch the three switches to make sure they are zero to the body of the switches in the following sequence:

- Interlock Monitor Switch
- Primary Interlock Switch
- Secondary Interlock Switch

NOTE: The Interlock Monitor Switch is an added safety check on the Primary and Secondary Interlock Switches. If the Primary and Secondary Interlock Switches allow the oven to operate with the door open, the Monitor Switch will blow the fuse.

- (7) When you achieve the proper sequence of switches in Steps 5 and 6, tighten the latch board screws at that point.

TEST THE MICROWAVE ENERGY LEAKAGE

Make sure the microwave energy leakage is below the limit of $1\text{mW}/\text{cm}^2$ (with a 275 ml water load) and $5\text{mW}/\text{cm}^2$ (with a 275 ml water load without the cabinet) when measured with a survey meter.

INTERLOCK CONTINUITY TEST

A. PRIMARY INTERLOCK SWITCH TEST

When the door is opened slowly, an audible **click** should be heard at the same time or successively at intervals and 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.

B. SECONDARY INTERLOCK SWITCH TEST

Disconnect the wire lead from the secondary switch.

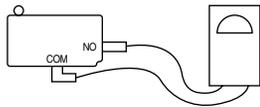
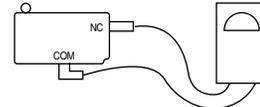
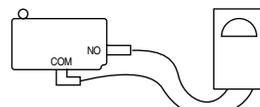
Connect the ohmmeter leads to the common (COM) and normally open (NO) terminals of the switch. The meter should indicate an open circuit in the door open condition. When the door is closed, meter should indicate a closed circuit. When the secondary switch operation is abnormal, make the necessary adjustment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

C. 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			
	Monitor Switch			
	Secondary Switch			
NOTE : After checking for the continuity of switches, make sure that they are connected correctly.				

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

TYPE NO. SZM-V16-FA-63 OR VP-533A-OF OR V-5230Q FOR PRIMARY SWITCH

TYPE NO. SZM-V16-FA-62 OR VP-532A-OF OR V-5220Q FOR MONITOR SWITCH

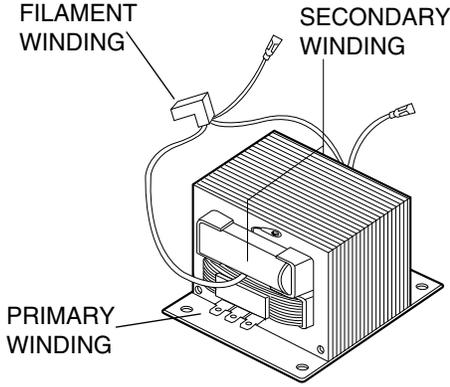
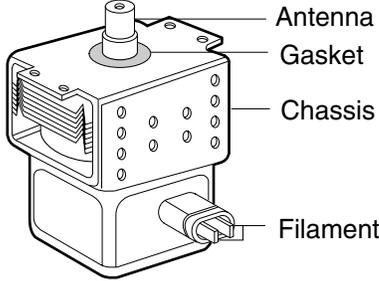
TYPE NO. SZM-V16-FA-63 OR VP-533A-OF OR V-5230Q FOR SECONDARY SWITCH

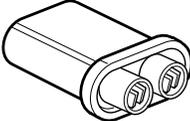
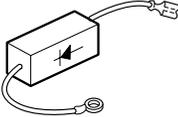
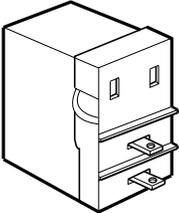
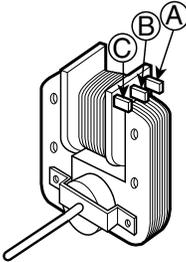
TEST AND CHECKOUT PROCEDURES AND TROUBLESHOOTING

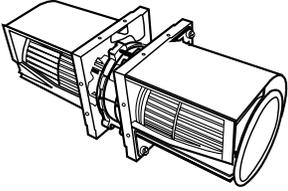
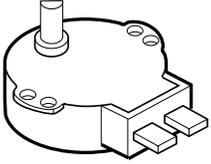
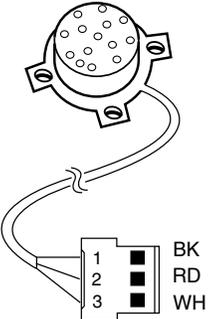
CAUTIONS

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 LEAD WIRES FROM THE PRIMARY WINDING OF THE HIGH VOLTAGE TRANSFORMER.
2. ALL OPERATIONAL CHECKS WITH MICROWAVE ENERGY MUST BE DONE WITH A LOAD (1 LITER OF WATER IN CONTAINER) IN THE OVEN.

A. TEST PROCEDURES

COMPONENTS	TEST	RESULTS
<p>TRANSFORMER</p>	 <p>1. Remove wire leads.</p> <p>2. Measure resistance. (ohm meter scale: Rx1)</p> <ul style="list-style-type: none"> • Primary winding High Low • Secondary winding • Filament winding <p>3. Measure resistance. (ohm meter scale: Rx1000)</p> <ul style="list-style-type: none"> • Primary winding to ground • Filament winding to ground 	<p>Approx. 0.2 to 0.5 ohms Approx. 0.2 to 0.5 ohms Approx. 50 to 120 ohms 0 ohm</p> <p>Normal: Infinite Normal: Infinite</p>
<p>MAGNETRON</p>	 <p>1. Remove wire leads. Install the magnetron seal in the correct position. Check that the seal is in good condition.</p> <p>2. Measure resistance. (ohm meter scale: Rx1)</p> <ul style="list-style-type: none"> • Filament terminal <p>3. Measure resistance. (ohm meter scale: Rx1000)</p> <ul style="list-style-type: none"> • Filament to chassis 	<p>Normal: Less than 1 ohm</p> <p>Normal: Infinite</p>

COMPONENTS	TEST	RESULTS																																	
<p>CAPACITOR</p>	<p>1. Remove wire leads. 2. Measure resistance. (ohm meter scale: Rx1000)</p> <ul style="list-style-type: none"> • Terminal to terminal • Terminal to case 	<p>Normal:  Momentarily indicates several ohms, and then gradually returns to infinite</p> <p>Normal: Infinite. </p>																																	
<p>DIODE Some inexpensive ohm meters may indicate infinite resistance in both directions.</p>	<p>1. Measure continuity. Forward. (ohm meter scale: Rx1000)</p> <p>2. Measure continuity. Reverse. (ohm meter scale: Rx1000)</p> 	<p>Normal: Continuity.  Abnormal: Infinite. </p> <p>Normal: Infinite.  Abnormal: Continuity. </p>																																	
<p>RELAY 7</p>	<p>1. Measure continuity. (ohm meter scale: Rx1)</p> <p>2. Remove the lead wires and operate oven at power level 1 through power level 10.</p> 	<table border="1" data-bbox="1182 1081 1495 1474"> <thead> <tr> <th>Power Level</th> <th>Open</th> <th>Close</th> </tr> </thead> <tbody> <tr><td>1</td><td>4 Sec</td><td>18 Sec</td></tr> <tr><td>2</td><td>6 Sec</td><td>16 Sec</td></tr> <tr><td>3</td><td>8 Sec</td><td>14 Sec</td></tr> <tr><td>4</td><td>10 Sec</td><td>12 Sec</td></tr> <tr><td>5</td><td>12 Sec</td><td>10 Sec</td></tr> <tr><td>6</td><td>14 Sec</td><td>8 Sec</td></tr> <tr><td>7</td><td>16 Sec</td><td>6 Sec</td></tr> <tr><td>8</td><td>18 Sec</td><td>4 Sec</td></tr> <tr><td>9</td><td>20 Sec</td><td>2 Sec</td></tr> <tr><td>10</td><td>22 Sec</td><td>0 Sec</td></tr> </tbody> </table>	Power Level	Open	Close	1	4 Sec	18 Sec	2	6 Sec	16 Sec	3	8 Sec	14 Sec	4	10 Sec	12 Sec	5	12 Sec	10 Sec	6	14 Sec	8 Sec	7	16 Sec	6 Sec	8	18 Sec	4 Sec	9	20 Sec	2 Sec	10	22 Sec	0 Sec
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7	16 Sec	6 Sec																																	
8	18 Sec	4 Sec																																	
9	20 Sec	2 Sec																																	
10	22 Sec	0 Sec																																	
<p>FAN MOTOR</p>	<p>1. Remove wire leads.</p> <p>2. Measure resistance. (ohm meter scale: Rx1)</p> 	<p>Normal: Approximately Terminal Ⓐ-Ⓒ : 35 to 50 ohms Terminal Ⓐ-Ⓑ : 5 to 15 ohms</p> <p>Abnormal: Infinite or several.</p>																																	

COMPONENTS	TEST	RESULTS
VENTILATION MOTOR	<ol style="list-style-type: none"> 1. Remove lead wires. 2. Measure resistance. (ohm meter scale:Rx1) 	<p>Normal: Approximately 20 to 40 ohms Abnormal: Infinite</p>
TURNTABLE MOTOR	<ol style="list-style-type: none"> 1. Remove wire leads. 2. Measure resistance. (ohm meter scale: Rx1000) 	<p>Normal: Approximately 2.5 to 3.5 Kohms Abnormal: Infinite or several.</p>
ABSOLUTE HUMIDITY SENSOR	<ol style="list-style-type: none"> 1. Disconnect sensor connector from micom computer board. 2. Measure resistance terminal to terminal (ohm meter scale: R X 1000) 	<p>Normal: Approximately BK-RD: 6.0 Kohms RD-WH: 3.0 Kohms BK-WH: 3.0 Kohms Abnormal: Infinite or approx. 0 ohm</p>

COMPONENTS	TEST	RESULTS						
<p>TOUCH KEY BOARD</p>	<p>Measure the resistance between terminal pins of connector KEY CONNECTOR.</p> <p>NOTE: When reconnecting the FPC connector, make sure that the holes on the FPC connector are properly engaged with hooks on the plastic fastener.</p> <p style="text-align: center;">MATRIX CIRCUIT FOR TOUCH KEY BOARD</p> <p style="text-align: center;">CONNECTOR(KEY CON)</p>	<table border="1" data-bbox="1172 242 1515 410"> <thead> <tr> <th data-bbox="1172 242 1279 327">Resistance value</th> <th data-bbox="1279 242 1386 327">When touched</th> <th data-bbox="1386 242 1515 327">When not touched</th> </tr> </thead> <tbody> <tr> <td data-bbox="1172 327 1279 410"></td> <td data-bbox="1279 327 1386 410">Less than 400 ohms</td> <td data-bbox="1386 327 1515 410">More than 1 mega ohm</td> </tr> </tbody> </table> <p style="text-align: center;">FPC CONNECTOR Top</p>	Resistance value	When touched	When not touched		Less than 400 ohms	More than 1 mega ohm
Resistance value	When touched	When not touched						
	Less than 400 ohms	More than 1 mega ohm						

NOTES:

- A MICROWAVE ENERGY 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.

B. CHECKOUT PROCEDURES

(1) CHECKOUT PROCEDURES FOR FUSE BLOWING

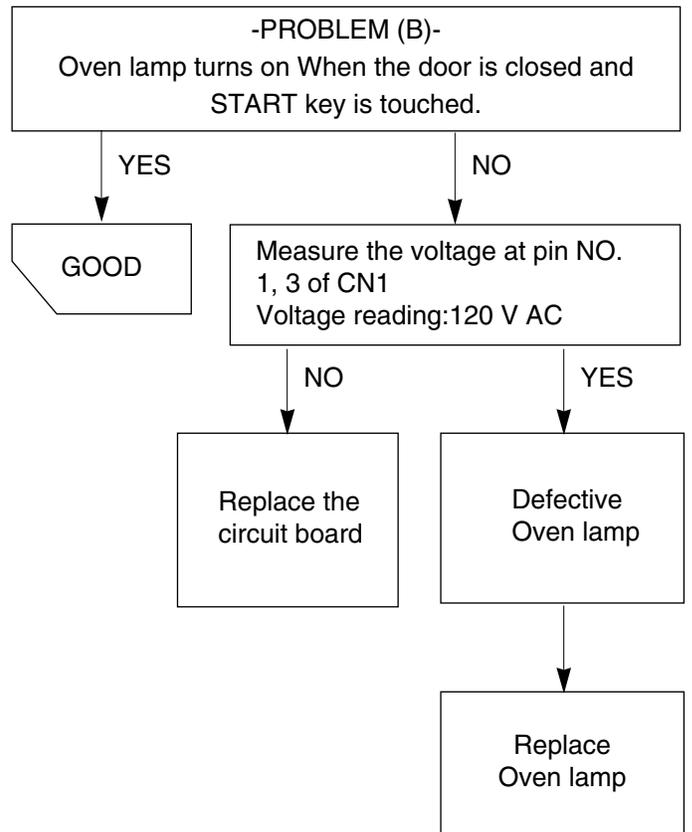
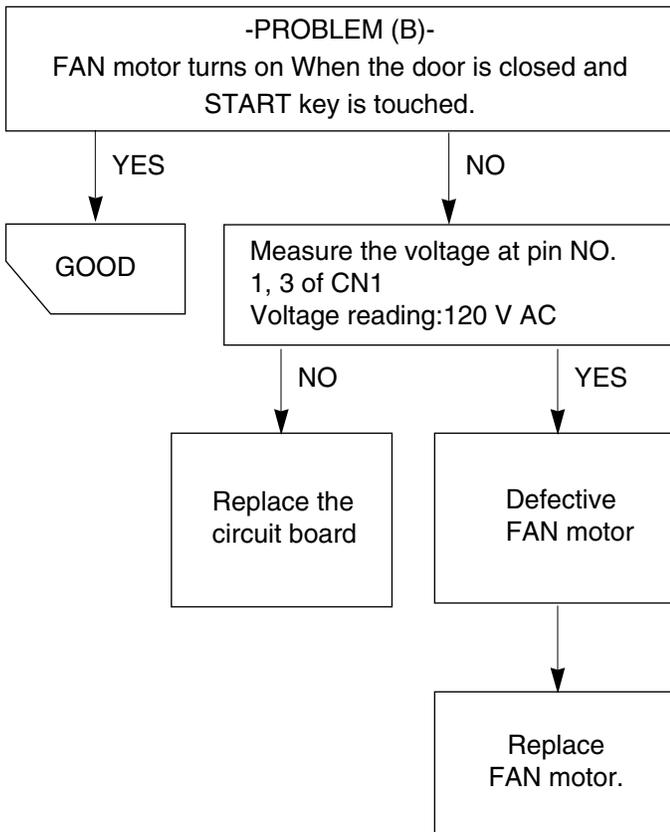
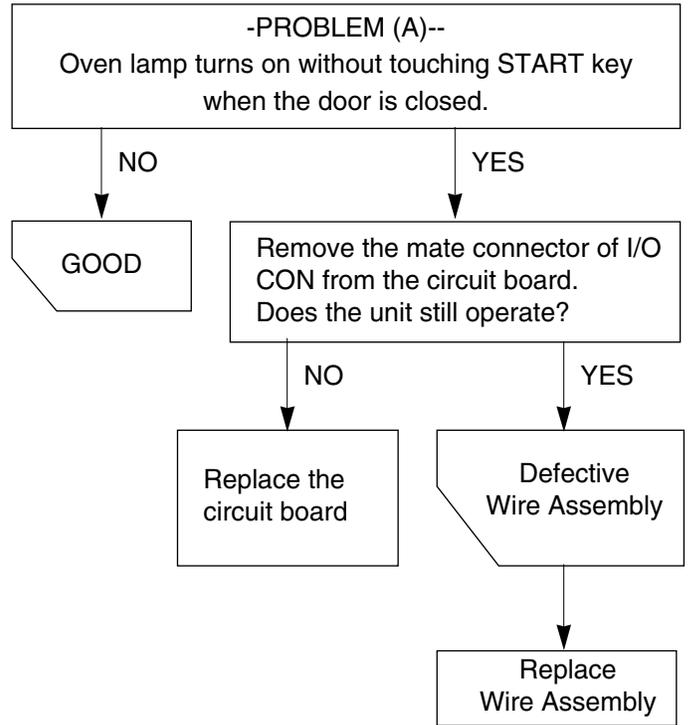
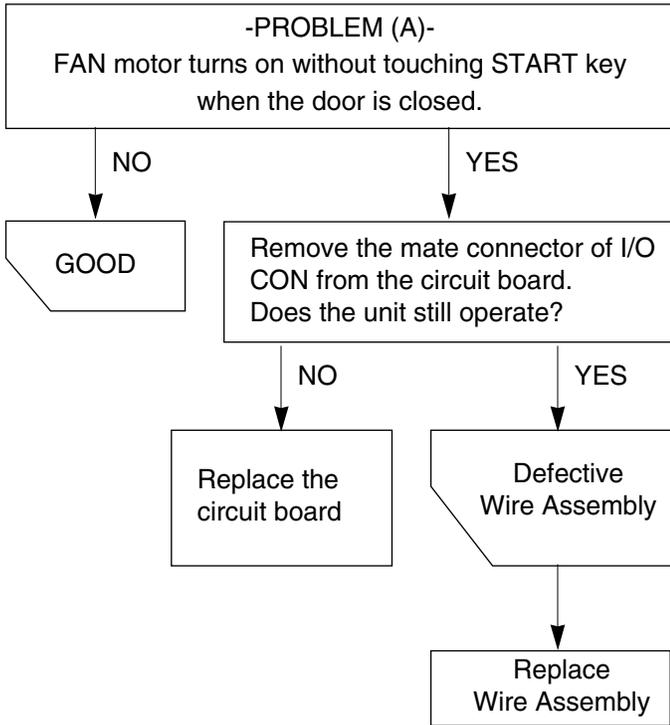
CAUTION: REPLACE BLOWN FUSE WITH 20 AMPERE FUSE.

PROBLEMS	CAUSES
Fuse blows immediately after the door is closed.	Improper operation of the primary interlock, secondary interlock switches and/or the interlock monitor switch.
Fuse blows immediately after the door is opened.	
Fuse blows when the door is closed and START key is touched.	Malfunction of the high voltage transformer; the high voltage capacitor including the diode, the magnetron, the blower motor or the circuit board.

NOTES:

- If the fuse is blown by an improper switch operation, replace all switches and the fuse at the same time. After replacing the defective switches with new ones, make sure that they are correctly connected.
- Check for microwave energy leakage according to INTERLOCK ADJUSTMENT PROCEDURES on page 7-12 when the primary interlock, secondary interlock switches and/or the interlock monitor switches are adjusted or replaced.

(2)CHECKOUT PROCEDURES FOR RELAY.



(3) CHECKOUT PROCEDURES FOR CIRCUIT BOARD

The following symptoms indicate a defective circuit board.

- 1) Check the input current. If the input current is more than 20A, check the magnetron and wiring. If the input current is less than 0.5 A, there is no input to the H.V.T.
- 2) The start function fails to operate but the high voltage Systems, the interlock switches, the door sensing and the relay check good.
- 3) The unit with a normal relay continuously operates.
- 4) The buzzer does not sound or continues to sound.
- 5) Some segments of one or more digits do not light up, or they continue to light up, or segments light when they should not.
- 6) Wrong figures appear.
- 7) The figures of all digits.
- 8) The clock does not keep time properly.

NOTE: A MICROWAVE ENERGY LEAKAGE TEST MUST ALWAYS BE PERFORMED WHEN THE UNIT IS SERVICED FOR ANY REASON.

C. TROUBLE SHOOTING

Before following this troubleshooting read TRIAL OPERATION on page 6- 1.

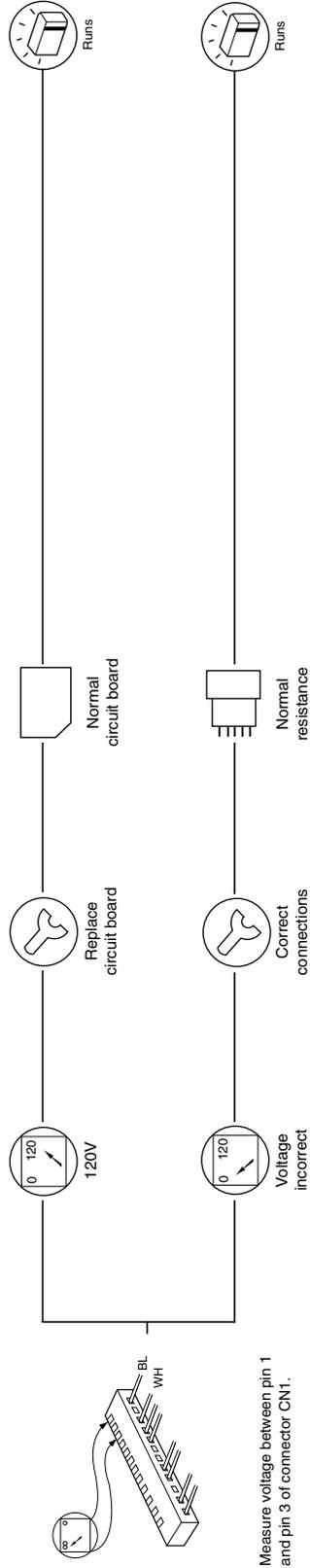
- DISPLAY Problems, A thru C
- HELP UP Problems, D thru E

•BUZZER Problems, F

PROBLEM - A: "PLEASE SET TIME OF DAY" does not appear in display window when power supply cord is plugged into wall outlet.

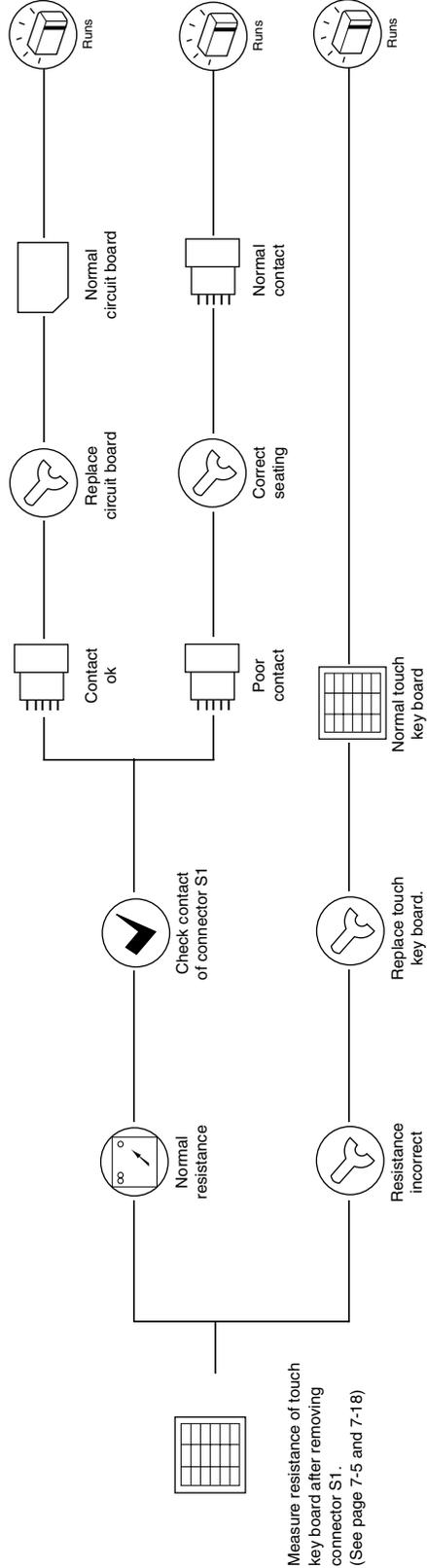
1 Check: 1. POWER SUPPLY

2. FUSE (See "CHECKOUT PROCEDURES FOR FUSE BLOWING; on page 7- 19)
3. OVEN CAVITY THERMOSTAT



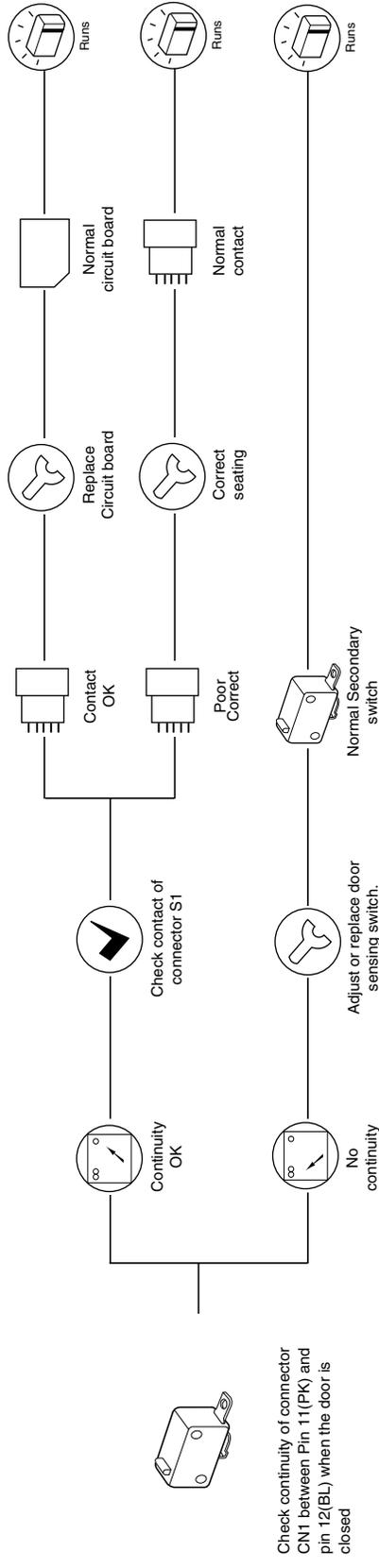
PROBLEM - B: Display does not show correct numbers and/or correct indications when programmed.

1



PROBLEM - E: Display does not start countdown when START key is touched.

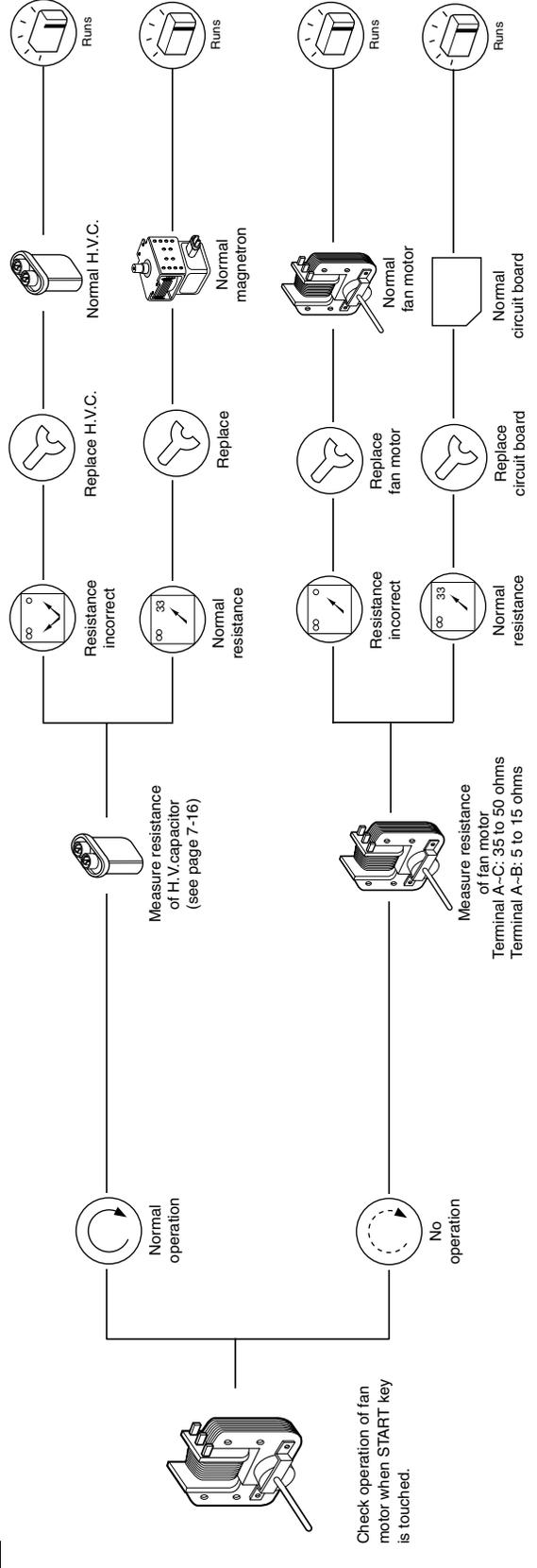
1 Check: 1. TOUCH KEY BOARD (START KEY FUNCTION)



Check continuity of connector CN1 between Pin 11(PK) and pin 12(BL) when the door is closed

PROBLEM - D: Unit operation seems to be normal but no heating is produced in oven load.

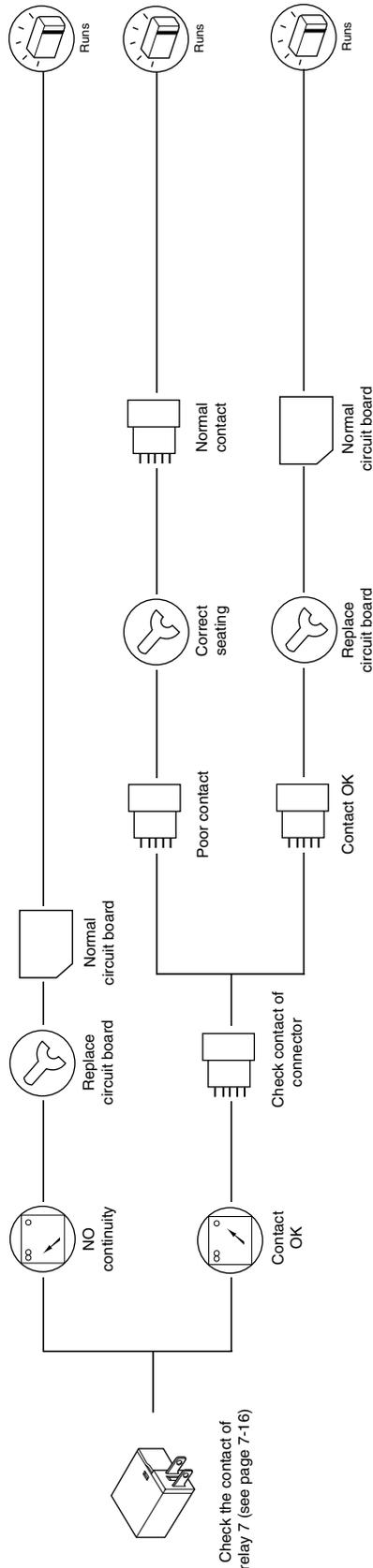
1 Check: 1. AIR VENTS



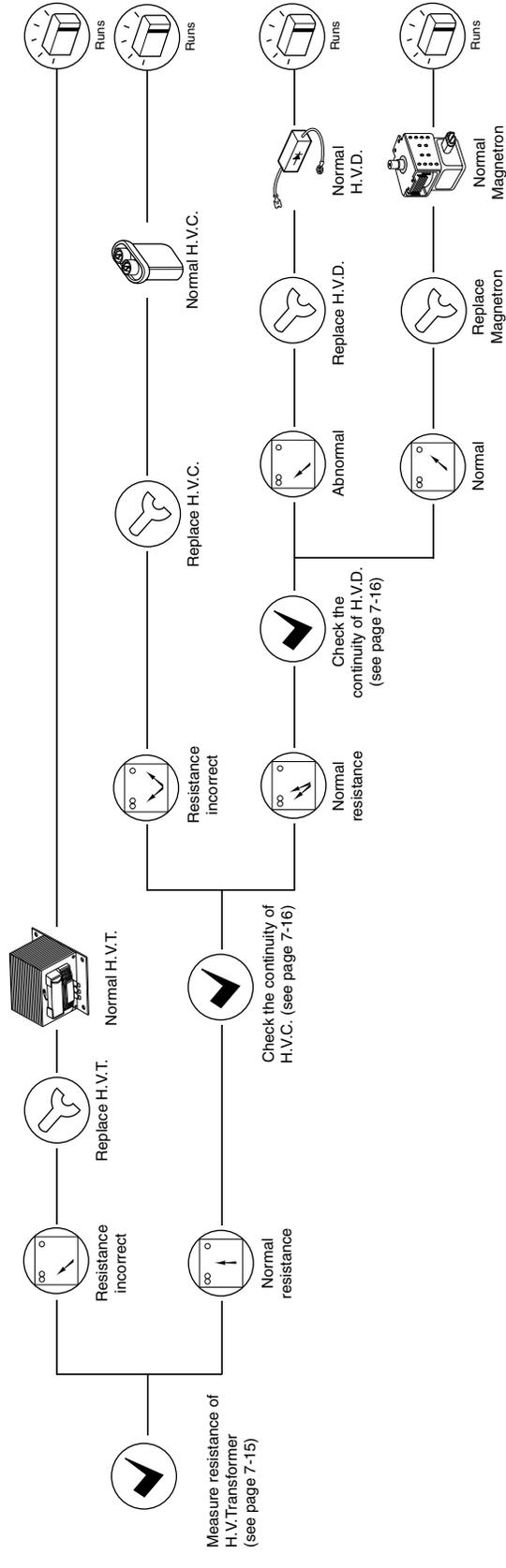
Check operation of fan motor when START key is touched.

PROBLEM - E: Unit does not heat up even if display counts down when START key is touched for HIGH POWER cooking.

1 Check: 1. PRIMARY AND SECONDARY INTERLOCK SWITCHES
2. THERMOSTAT

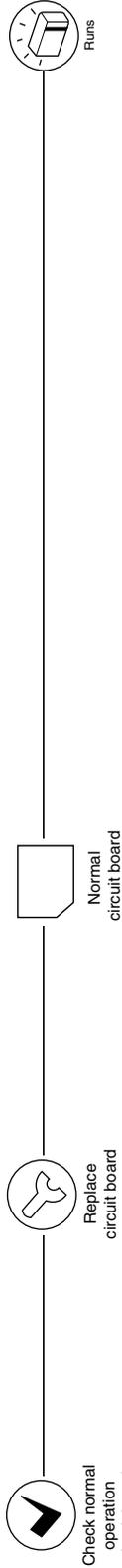


2



PROBLEM - F: No buzzing when touching the key, between stages or at end of cooking

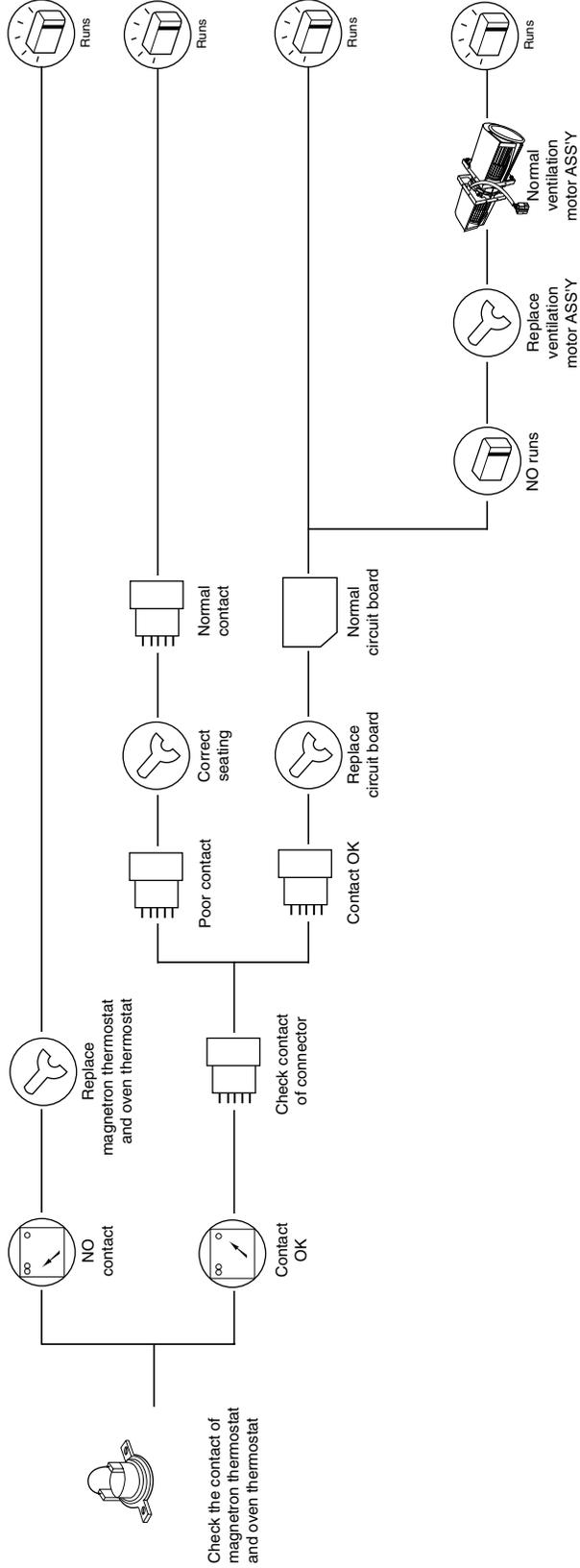
1



PROBLEM - G: Ventilation fan does not operate when VENT ON/OFF key is touched.

1

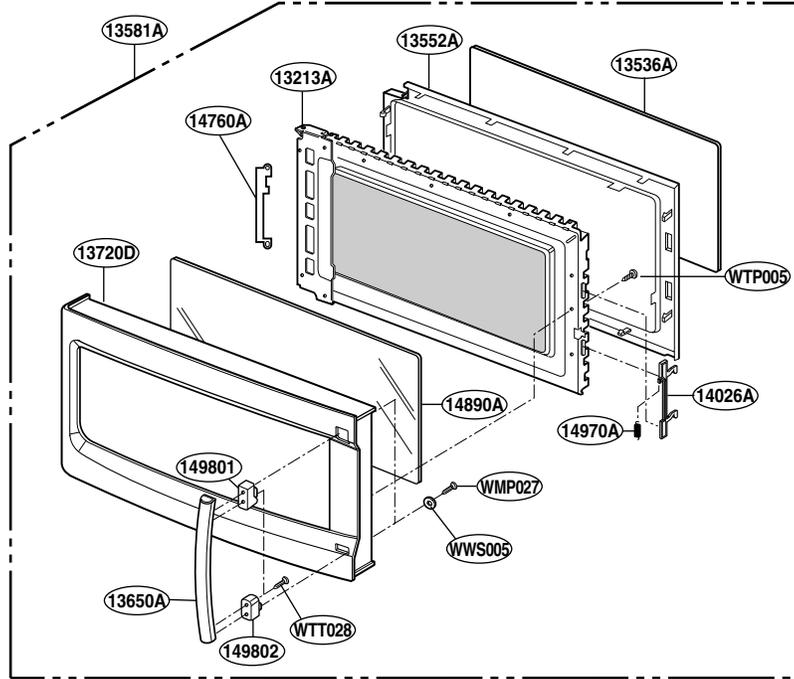
Check: 1. POWER SUPPLY
2. FUSE



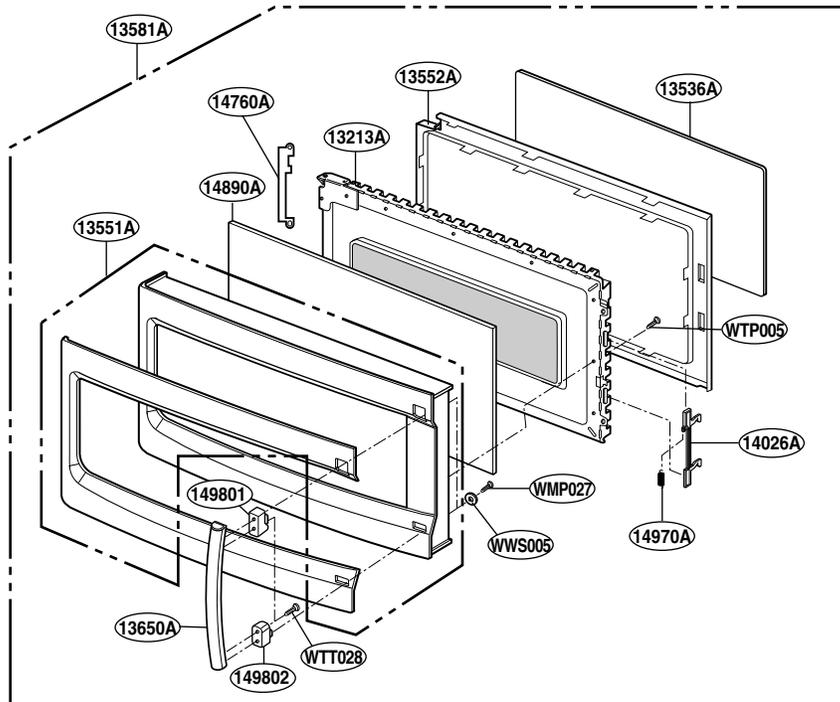
EXPLODED VIEW

DOOR PARTS

For Model: LMV2053SB
LMV2053SW

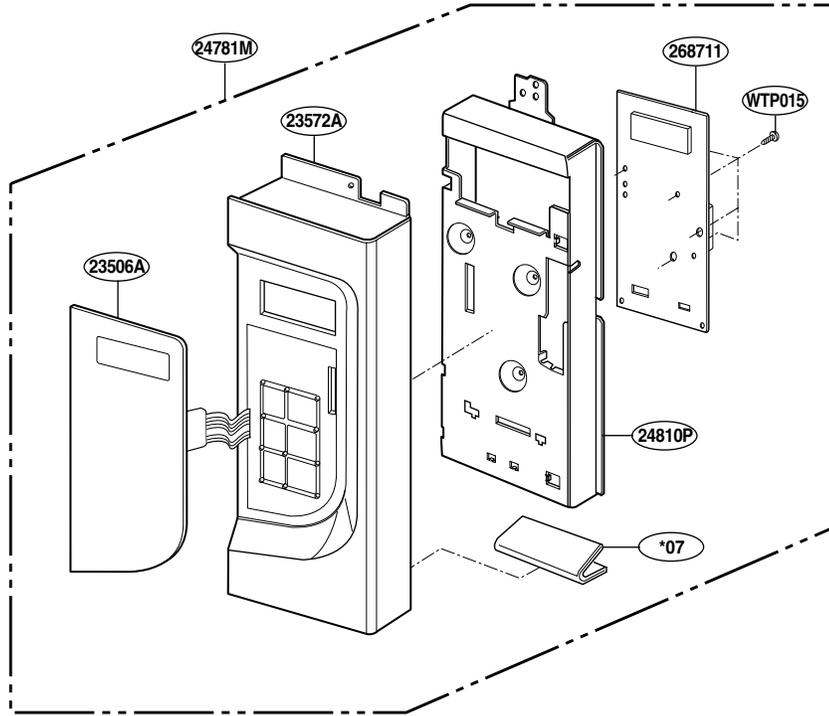


For Model: LMV2053ST

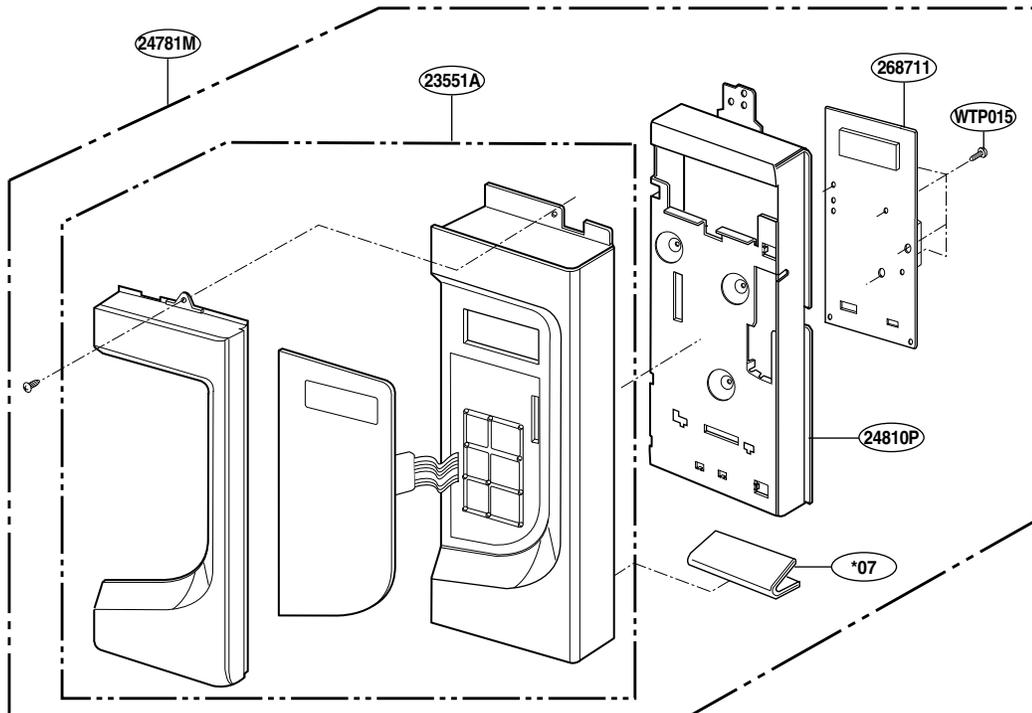


CONTROLLER PARTS

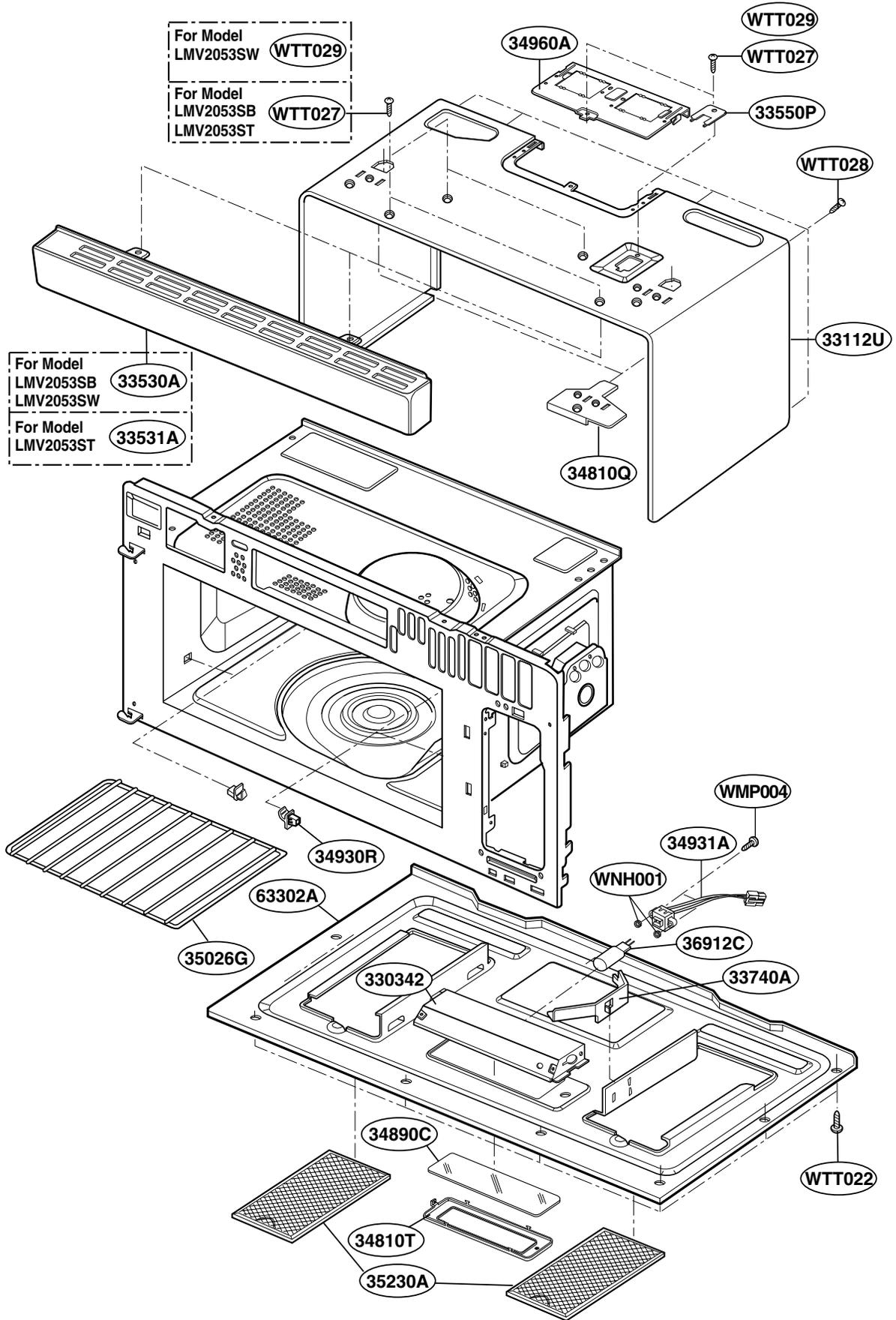
For Model: LMV2053SB
LMV2053SW



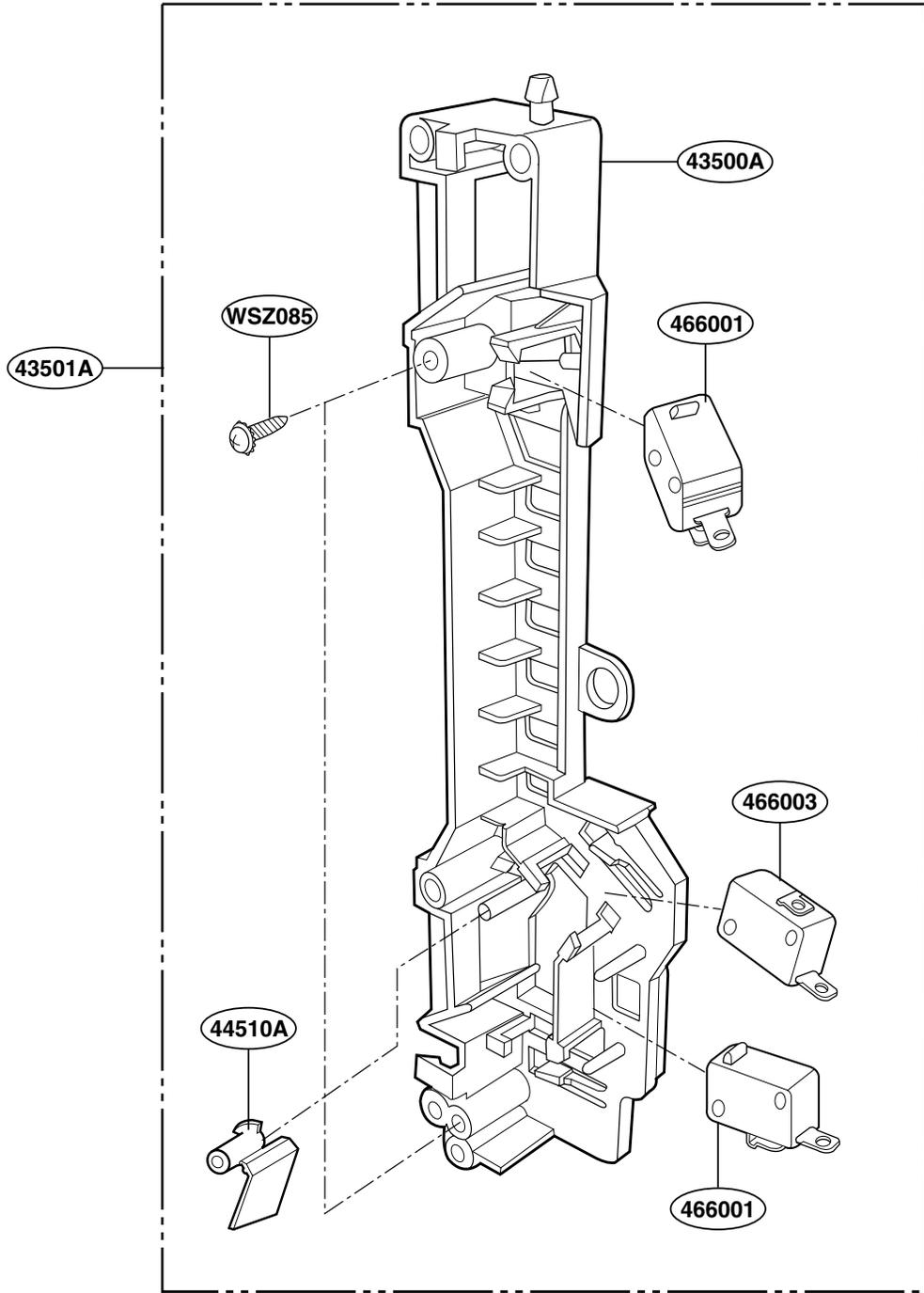
For Model: LMV2053ST



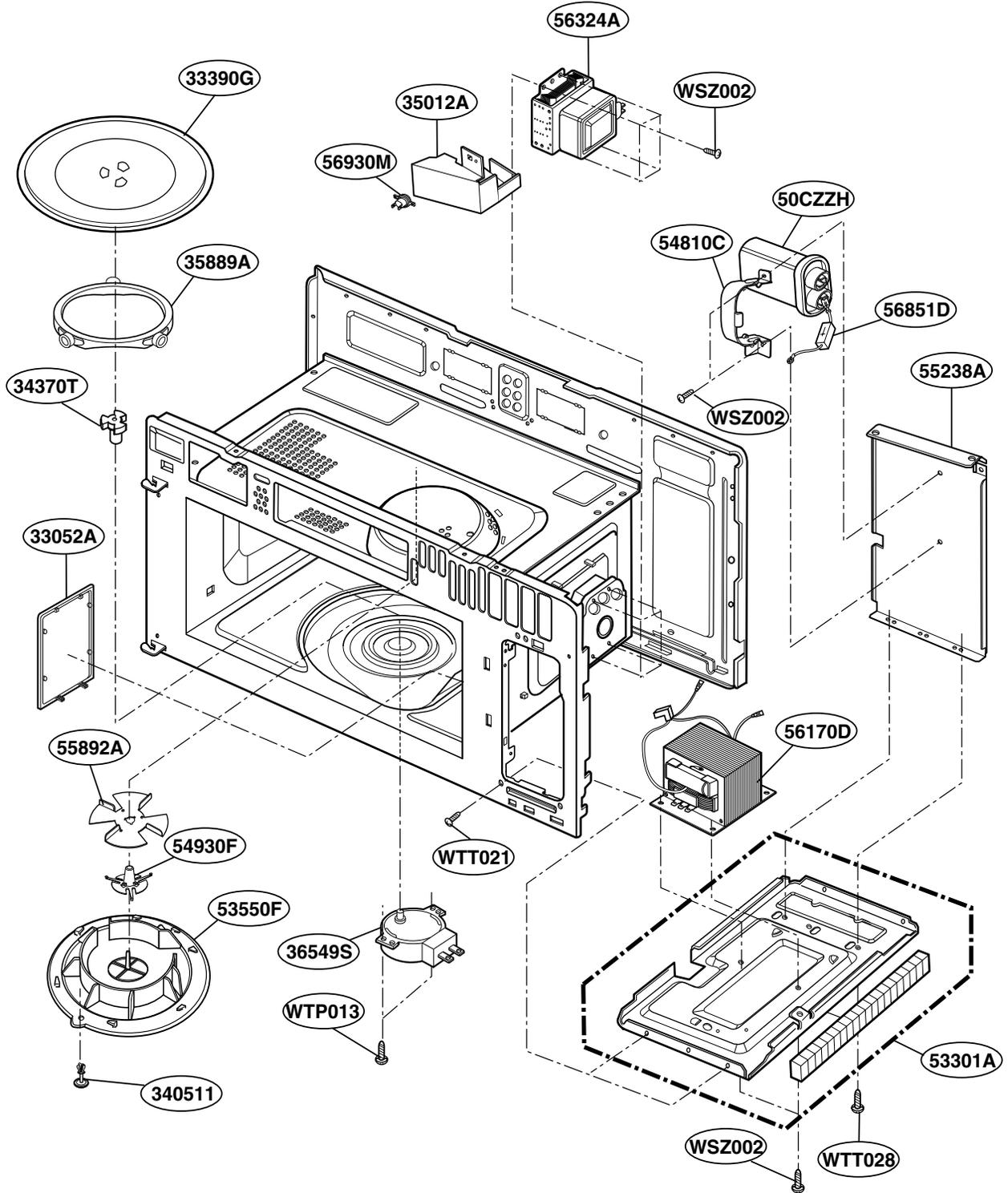
OVEN CAVITY PARTS



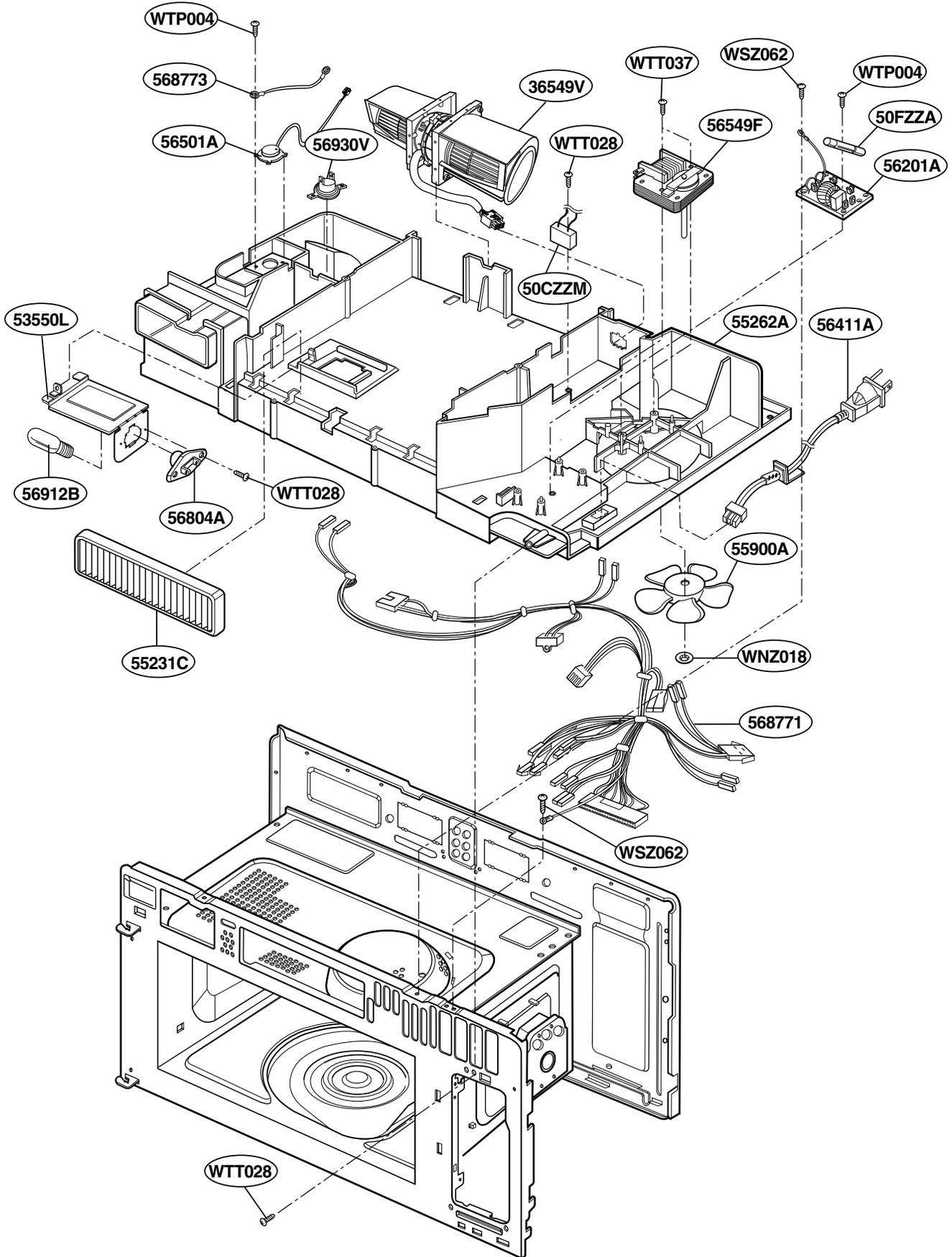
LATCH BOARD PARTS



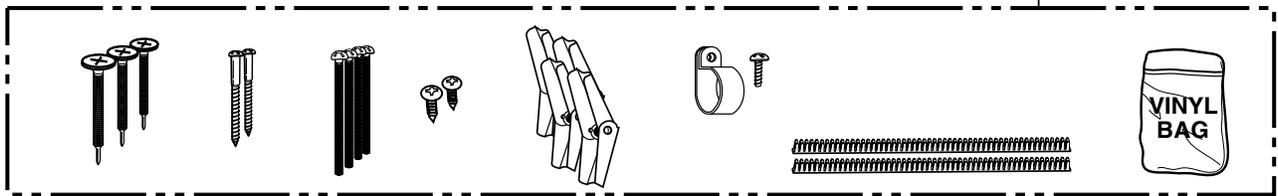
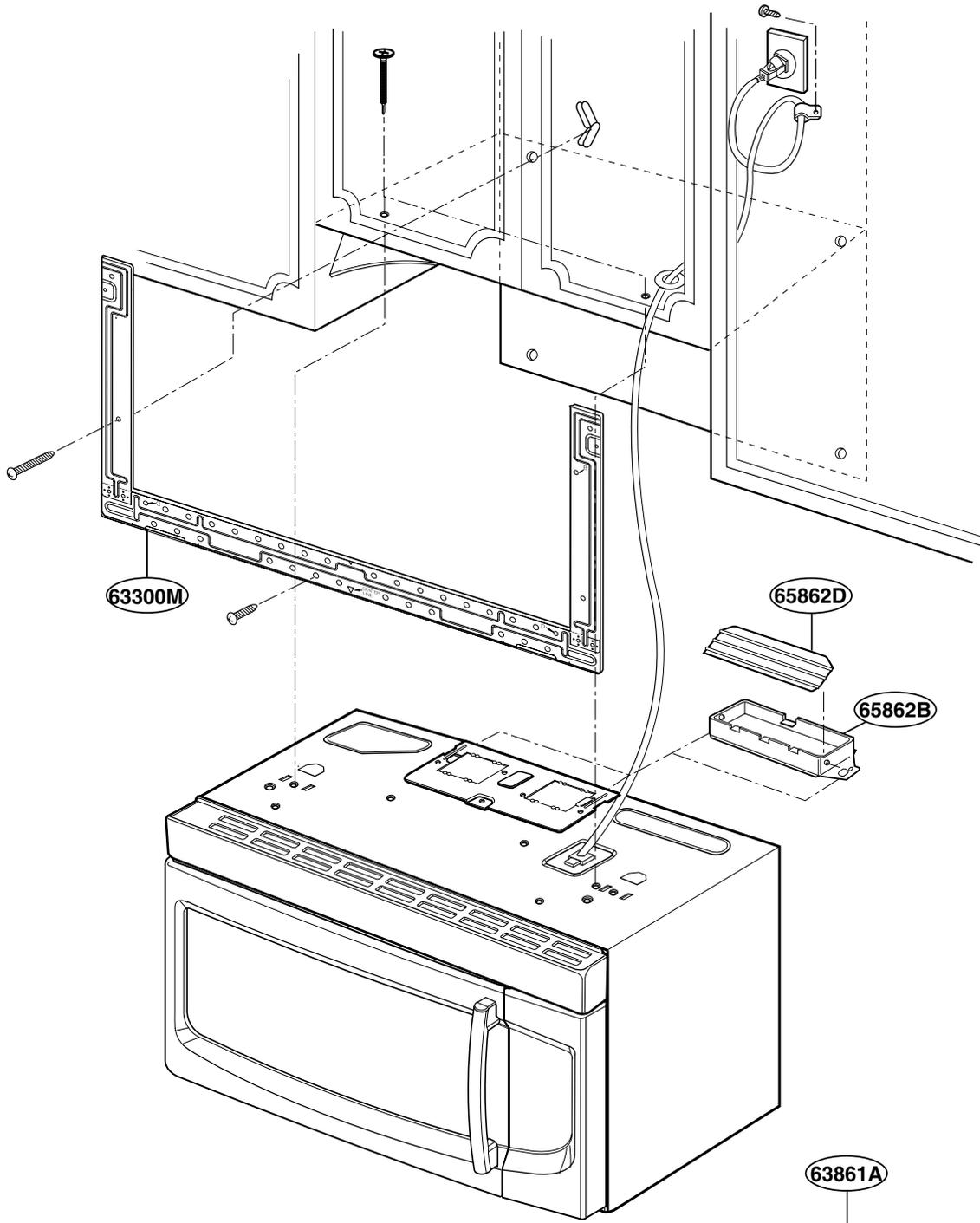
INTERIOR PARTS (I)



INTERIOR PARTS (II)



INSTALLATION PARTS



- OWNERS MANUAL
- *01
- SERVICE MANUAL
- *02
- INSTALLATION MANUAL
- *04
- COOKING GUIDE LABEL
- *05
- UPPER TEMPLATE
- *06-1
- WALL TEMPLATE
- *06-2

REPLACEMENT PARTS LIST

For Model : LMV2053SB

Rev.1 Dec 21, 2005

LOC. NO.	PART NO.	DESCRIPTION	SVC	ALTERNATE
*01	3828W5A4700	MANUAL,OWNERS	R	
*02	3828W5S6298	MANUAL,SERVICE	R	
*04	3828W5U0492	MANUAL,INSTALLATION	R	
*05	3850W1D134B	LABEL,COOKING GUIDE	R	
*06-1	4922W1A027A	TEMPLATE	R	
*06-2	4922W5A060A	TEMPLATE	R	
*07	3840W1T0026	CARD,TECHNICAL	R	
*10	3890W2Y267B	BOX,YELLOW	R	
13213A	3213W0A003D	DOOR FRAME ASSEMBLY	R	
13536A	3536W1A006D	SEAL TAPE	R	3536WRA001T
13552A	3552W0A001B	CHOKE COVER	R	
13581A	3581W0A147L	DOOR ASSEMBLY	R	
13650A	3650W1A189C	HANDLE,DOOR	R	
13720D	3720W0D403B	PANEL,DOOR	R	
14026A	4026W2A015A	LATCH	R	
14760A	4760W1A016A	BAFFLE	R	
14890A	4890W1A057P	GLASS	R	
14970A	4970WRA001G	SPRING	R	
149801	4980W1A115B	SUPPORTER	R	
149802	4980W1A116B	SUPPORTER	R	
23506A	3506W1A841B	KEY MEMBRANE	R	
23572A	3720W0C297B	PANEL,CONTROL	R	
24781M	4781W1M452K	CONTROLLER ASSEMBLY,KEY PAD	R	
24810P	4810W1A300A	BRACKET,CONTROL PANEL	R	
268711	6871W1A419K	PWB(PCB) ASSEMBLY,SUB	R	
330342	3034W1A008A	REFLECTOR	R	
33052A	3052W3A015A	CANOPY,RESIN	R	
33112U	3112W1U023G	OUT CASE,U-BENDING	R	
33390G	3390W1G014A	TRAY,GLASS	R	
33530A	3530W0A053B	GRILLE,VENT	R	
33550P	3550W3A084A	COVER,POWER CORD	R	
33740A	3740W2A003A	PROTECTOR (MECH)	R	
340511	4051W3A001A	RIVET ASSEMBLY	R	
34370T	4370W3A001A	SHAFT,TURN TABLE	R	
34810Q	4810W3G062A	BRACKET,MOUNT	R	
34810T	4810W2T003A	BRACKET,LAMP	R	
34890C	4890W4A001H	GLASS	R	4890W4A001D
34930R	4930W1A026A	HOLDER,COOK AUXILIARY	R	
34931A	4931W1A009G	HOLDER ASSEMBLY	R	4931W1A009A
34960A	4960W1A008A	MOUNT	R	
35012A	4974W1A039A	GUIDE,AIR	R	
35026G	5026W1A052C	SHELF	R	5026W1A052B
35230A	2B72705C	FILTER(MECH),GREASE	R	2B72705B
35889A	5889W2A005J	ROTATING RING ASSEMBLY	R	
36549S	6549W1S013D	MOTOR(CIRC),SYNCHRONOUS	R	
36549V	6549W1V006J	MOTOR(CIRC),VENTILATION	R	
36912C	6912A40002D	LAMP,HALOGEN	R	
43500A	3500W1A013A	BOARD,LATCH	R	
43501A	3501W1A016M	BOARD ASSEMBLY,LATCH	R	3501W1A019A
44510A	4510W4A005A	LEVER	R	
466001	6600W1K004C	SWITCH,MICRO	R	3B73362F
466001	6600W1K004C	SWITCH,MICRO	R	3B73362E
466003	6600W1K004B	SWITCH,MICRO	R	3B73361D
466003	6600W1K004B	SWITCH,MICRO	R	3B73361E

R : SERVICE PARTS

LOC. NO.	PART NO.	DESCRIPTION	SVC	ALTERNATE
50CZZH	0CZZW1H004C	CAPACITOR,DRAWING[HIGH VOLTAGE]	R	0CZZW1H002J
50CZZH	0CZZW1H004C	CAPACITOR,DRAWING[HIGH VOLTAGE]	R	6120W3H003J
50CZZM	0CZZW1M001C	CAPACITOR,DRAWING[MOTOR CONDENSER]	R	
50FZZA	3B74133K	FUSE,DRAWING	R	3B74133H
53301A	3301W1A045A	PLATE ASSEMBLY	R	
53550F	3550W1S001A	COVER,STIRRER FAN	R	
53550L	3550W3A082A	COVER,LAMP	R	
54810C	4810WRC002A	BRACKET,CAPACITOR	R	
54930F	4930W3A013A	HOLDER,STIRRER FAN	R	
55231C	5230W1A003A	FILTER(MECH),CHARCOAL	R	
55238A	4974W1A037A	GUIDE,AIR	R	
55262A	5208W0A018A	DUCT	R	
55892A	5900W1A024A	FAN	R	
55900A	5900W1A027B	FAN	R	
56170D	6170W1D100C	TRANSFORMER,HIGH VOLTAGE	R	6170W1D100A
56170D	6170W1D100C	TRANSFORMER,HIGH VOLTAGE	R	6170W1D100B
56201A	2B72130F	FILTER ASSEMBLY(CIRC)	R	
56324A	6324W1A001E	MAGNETRON	R	
56411A	6411W1A014T	POWER CORD ASSEMBLY	R	6411W2A002N
56411A	6411W1A014T	POWER CORD ASSEMBLY	R	6411W1A014X
56501A	6501W1A013A	SENSOR ASSEMBLY	R	
56549F	6549W1F009H	MOTOR(CIRC),FAN	R	
56804A	6620G00007B	SOCKET(CIRC),LAMP	R	6804W2A001A
56804A	6620G00007B	SOCKET(CIRC),LAMP	R	6804W2A001B
56851D	6021W3B001Q	CABLE ASSEMBLY	R	6021W3B001M
568771	6877W1A564B	HARNESS	R	
568773	3B72342Q	HARNESS	R	
56912B	6912W3Q001A	LAMP,DRAWING	R	6912W3Q001D
56930M	6930W1A003D	THERMOSTAT	R	
63300M	3301W0A003A	PLATE ASSEMBLY	R	3300W0A030C
56930V	6930W1A003J	THERMOSTAT	R	
63302A	3302W0A054B	BASE PLATE	R	
63861A	2B72771H	KIT ASSEMBLY	R	2B72771G
65862B	3B72144A	BRACKET,MISC	R	
65862D	3B71432A	DAMPER	R	
WMP004	1MPC0303118	SCREW MACHINE,PAN HEAD	R	
WMP027	1MPC0404718	SCREW MACHINE,PAN HEAD	R	
WNH001	1NHA0300018	NUT,HEXAGON	R	
WNZ018	1NZZW1A004C	NUT,DRAWING	R	
WSZ002	1SBF0402418	SCREW TAP TITE(S),BINDING HEAD	R	
WSZ062	4000W4A003A	SCREW,DRAWING	R	
WSZ085	4B70188C	SCREW,DRAWING	R	
WTP004	1TPL0302418	SCREW TAPPING,PAN HEAD	R	
WTP005	1TPL0302618	SCREW TAPPING,PAN HEAD	R	
WTP013	1TPL0402418	SCREW TAPPING,PAN HEAD	R	
WTP015	1TPL0402618	SCREW TAPPING,PAN HEAD	R	
WTT021	1TTL0402418	SCREW TAPPING,TRUSS HEAD	R	
WTT022	1TTL0402422	SCREW TAPPING,TRUSS HEAD	R	
WTT027	1TTL0402816	SCREW TAPPING,TRUSS HEAD	R	
WTT028	1TTL0402818	SCREW TAPPING,TRUSS HEAD	R	
WTT037	1TTL0403818	SCREW TAPPING,TRUSS HEAD	R	
WWS005	1WSD0400032	WASHER,SPRING LOCK	R	

R : SERVICE PARTS

REPLACEMENT PARTS LIST

For Model : LMV2053ST

Rev.1 Dec 21, 2005

LOC. NO.	PART NO.	DESCRIPTION	SVC	ALTERNATE
*01	3828W5A4700	MANUAL,OWNERS	R	
*02	3828W5S6298	MANUAL,SERVICE	R	
*04	3828W5U0492	MANUAL,INSTALLATION	R	
*05	3850W1D134B	LABEL,COOKING GUIDE	R	
*06-1	4922W1A027A	TEMPLATE	R	
*06-2	4922W5A060A	TEMPLATE	R	
*07	3840W1T0026	CARD,TECHNICAL	R	
*10	3890W2Y267C	BOX,YELLOW	R	
13213A	3213W0A003D	DOOR FRAME ASSEMBLY	R	
13536A	3536W1A006D	SEAL TAPE	R	3536WRA001T
13551A	383EW1A124C	SERVICE PARTS	R	
13552A	3552W0A001B	CHOKE COVER	R	
13581A	3581W0A147G	DOOR ASSEMBLY	R	
13650A	3650W1A179A	HANDLE,DOOR	R	
14026A	4026W2A015A	LATCH	R	
14760A	4760W1A016A	BAFFLE	R	
14890A	4890W1A057P	GLASS	S	
14970A	4970WRA001G	SPRING	R	
149801	4980W1A105A	SUPPORTER	R	
149802	4980W1A106A	SUPPORTER	R	
23551A	383EW1A125C	SERVICE PARTS	R	
24781M	4781W1M452L	CONTROLLER ASSEMBLY,KEY PAD	R	
24810P	4810W1A300A	BRACKET,CONTROL PANEL	R	
268711	6871W1A419K	PWB(PCB) ASSEMBLY,SUB	R	
330342	3034W1A008A	REFLECTOR	R	
33052A	3052W3A015A	CANOPY,RESIN	R	
33112U	3112W1U023G	OUT CASE,U-BENDING	R	
33390G	3390W1G014A	TRAY,GLASS	R	
33531A	3531W1A020A	GRILLE ASSEMBLY	R	
33550P	3550W3A084A	COVER,POWER CORD	R	
33740A	3740W2A003A	PROTECTOR (MECH)	R	
340511	4051W3A001A	RIVET ASSEMBLY	R	
34370T	4370W3A001A	SHAFT,TURN TABLE	R	
34810Q	4810W3G062A	BRACKET,MOUNT	R	
34810T	4810W2T003A	BRACKET,LAMP	R	
34890C	4890W4A001H	GLASS	R	4890W4A001D
34930R	4930W1A026A	HOLDER,COOK AUXILIARY	R	
34931A	4931W1A009G	HOLDER ASSEMBLY	R	4931W1A009A
34960A	4960W1A008A	MOUNT	R	
35012A	4974W1A039A	GUIDE,AIR	R	
35026G	5026W1A052C	SHELF	R	5026W1A052B
35230A	2B72705C	FILTER(MECH),GREASE	R	2B72705B
35889A	5889W2A005J	ROTATING RING ASSEMBLY	R	
36549S	6549W1S013D	MOTOR(CIRC),SYNCHRONOUS	R	
36549V	6549W1V006J	MOTOR(CIRC),VENTILATION	R	
36912C	6912A40002D	LAMP,HALOGEN	R	
43500A	3500W1A013A	BOARD,LATCH	R	
43501A	3501W1A016M	BOARD ASSEMBLY,LATCH	R	3501W1A019A
44510A	4510W4A005A	LEVER	R	
466001	6600W1K004C	SWITCH,MICRO	R	3B73362E
466001	6600W1K004C	SWITCH,MICRO	R	3B73362F
466003	6600W1K004B	SWITCH,MICRO	R	3B73361D
466003	6600W1K004B	SWITCH,MICRO	R	3B73361E
50CZZH	0CZZW1H004C	CAPACITOR,DRAWING[HIGH VOLTAGE]	R	0CZZW1H002J

R : SERVICE PARTS

LOC. NO.	PART NO.	DESCRIPTION	SVC	ALTERNATE
50CZZH	0CZZW1H004C	CAPACITOR,DRAWING[HIGH VOLTAGE]	R	6120W3H003J
50CZZM	0CZZW1M001C	CAPACITOR,DRAWING[MOTOR CONDENSER]	R	
50FZZA	3B74133K	FUSE,DRAWING	R	3B74133H
53301A	3301W1A045A	PLATE ASSEMBLY	R	
53550F	3550W1S001A	COVER,STIRRER FAN	R	
53550L	3550W3A082A	COVER,LAMP	R	
54810C	4810WRC002A	BRACKET,CAPACITOR	R	
54930F	4930W3A013A	HOLDER,STIRRER FAN	R	
55231C	5230W1A003A	FILTER(MECH),CHARCOAL	R	
55238A	4974W1A037A	GUIDE,AIR	R	
55262A	5208W0A018A	DUCT	R	
55892A	5900W1A024A	FAN	R	
55900A	5900W1A027B	FAN	R	
56170D	6170W1D100C	TRANSFORMER,HIGH VOLTAGE	R	6170W1D100A
56170D	6170W1D100C	TRANSFORMER,HIGH VOLTAGE	R	6170W1D100B
56201A	2B72130F	FILTER ASSEMBLY(CIRC)	R	
56324A	6324W1A001E	MAGNETRON	R	
56411A	6411W1A014T	POWER CORD ASSEMBLY	R	6411W2A002N
56411A	6411W1A014T	POWER CORD ASSEMBLY	R	6411W1A014X
56501A	6501W1A013A	SENSOR ASSEMBLY	R	
56549F	6549W1F009H	MOTOR(CIRC),FAN	R	
56804A	6620G00007B	SOCKET(CIRC),LAMP	R	6804W2A001A
56804A	6620G00007B	SOCKET(CIRC),LAMP	R	6804W2A001B
56851D	6021W3B001Q	CABLE ASSEMBLY	R	6021W3B001M
568771	6877W1A564B	HARNESS	R	
568773	3B72342Q	HARNESS	R	
56912B	6912W3Q001A	LAMP,DRAWING	R	6912W3Q001D
56930M	6930W1A003D	THERMOSTAT	R	
56930V	6930W1A003J	THERMOSTAT	R	
63300M	3301W0A003A	PLATE ASSEMBLY	R	3300W0A030C
63302A	3302W0A054B	BASE PLATE	R	
63861A	2B72771H	KIT ASSEMBLY	R	2B72771G
65862B	3B72144A	BRACKET,MISC	R	
65862D	3B71432A	DAMPER	R	
WMP004	1MPC0303118	SCREW MACHINE,PAN HEAD	R	
WMP027	1MPC0404718	SCREW MACHINE,PAN HEAD	R	
WNH001	1NHA0300018	NUT,HEXAGON	R	
WNZ018	1NZZW1A004C	NUT,DRAWING	R	
WSZ002	1SBF0402418	SCREW TAP TITE(S),BINDING HEAD	R	
WSZ062	4000W4A003A	SCREW,DRAWING	R	
WSZ085	4B70188C	SCREW,DRAWING	R	
WTP004	1TPL0302418	SCREW TAPPING,PAN HEAD	R	
WTP005	1TPL0302618	SCREW TAPPING,PAN HEAD	R	
WTP013	1TPL0402418	SCREW TAPPING,PAN HEAD	R	
WTP015	1TPL0402618	SCREW TAPPING,PAN HEAD	R	
WTT021	1TTLO402418	SCREW TAPPING,TRUSS HEAD	R	
WTT022	1TTLO402422	SCREW TAPPING,TRUSS HEAD	R	
WTT027	1TTLO402816	SCREW TAPPING,TRUSS HEAD	R	
WTT028	1TTLO402818	SCREW TAPPING,TRUSS HEAD	R	
WTT037	1TTLO403818	SCREW TAPPING,TRUSS HEAD	R	
WWS005	1WSD0400032	WASHER,SPRING LOCK	R	

R : SERVICE PARTS

REPLACEMENT PARTS LIST

For Model : LMV2053SW

Rev.1 Dec 21, 2005

LOC. NO.	PART NO.	DESCRIPTION	SVC	ALTERNATE
*01	3828W5A4700	MANUAL,OWNERS	R	
*02	3828W5S6298	MANUAL,SERVICE	R	
*04	3828W5U0492	MANUAL,INSTALLATION	R	
*05	3850W1D134B	LABEL,COOKING GUIDE	R	
*06-1	4922W1A027A	TEMPLATE	R	
*06-2	4922W5A060A	TEMPLATE	R	
*07	3840W1T0026	CARD,TECHNICAL	R	
*10	3890W2Y267A	BOX,YELLOW	R	
13213A	3213W0A003D	DOOR FRAME ASSEMBLY	R	
13536A	3536W1A006D	SEAL TAPE	R	3536WRA001T
13552A	3552W0A001B	CHOKE COVER	R	
13581A	3581W0A147K	DOOR ASSEMBLY	R	
13650A	3650W1A189D	HANDLE,DOOR	R	
13720D	3720W0D403A	PANEL,DOOR	R	
14026A	4026W2A015A	LATCH	R	
14760A	4760W1A016A	BAFFLE	R	
14890A	4890W1A057N	GLASS	R	
14970A	4970WRA001G	SPRING	R	
149801	4980W1A115A	SUPPORTER	R	
149802	4980W1A116A	SUPPORTER	R	
23506A	3506W1A841A	KEY MEMBRANE	R	
23572A	3720W0C297A	PANEL,CONTROL	R	
24781M	4781W1M452J	CONTROLLER ASSEMBLY,KEY PAD	R	
24810P	4810W1A300A	BRACKET,CONTROL PANEL	R	
268711	6871W1A419K	PWB(PCB) ASSEMBLY,SUB	R	
330342	3034W1A008A	REFLECTOR	R	
33052A	3052W3A015A	CANOPY,RESIN	R	
33112U	3112W1U023F	OUT CASE,U-BENDING	R	
33390G	3390W1G014A	TRAY,GLASS	R	
33530A	3530W0A053A	GRILLE,VENT	R	
33550P	3550W3A084A	COVER,POWER CORD	R	
33740A	3740W2A003A	PROTECTOR (MECH)	R	
340511	4051W3A001A	RIVET ASSEMBLY	R	
34370T	4370W3A001A	SHAFT,TURN TABLE	R	
34810Q	4810W3G062A	BRACKET,MOUNT	R	
34810T	4810W2T003A	BRACKET,LAMP	R	
34890C	4890W4A001H	GLASS	R	4890W4A001D
34930R	4930W1A026A	HOLDER,COOK AUXILIARY	R	
34931A	4931W1A009G	HOLDER ASSEMBLY	R	4931W1A009A
34960A	4960W1A008A	MOUNT	R	
35012A	4974W1A039A	GUIDE,AIR	R	
35026G	5026W1A052C	SHELF	R	5026W1A052B
35230A	2B72705C	FILTER(MECH),GREASE	R	2B72705B
35889A	5889W2A005J	ROTATING RING ASSEMBLY	R	
36549S	6549W1S013D	MOTOR(CIRC),SYNCHRONOUS	R	
36549V	6549W1V006J	MOTOR(CIRC),VENTILATION	R	
36912C	6912A40002D	LAMP,HALOGEN	R	
43500A	3500W1A013A	BOARD,LATCH	R	
43501A	3501W1A016M	BOARD ASSEMBLY,LATCH	R	3501W1A019A
44510A	4510W4A005A	LEVER	R	
466001	6600W1K004C	SWITCH,MICRO	R	3B73362E
466001	6600W1K004C	SWITCH,MICRO	R	3B73362F
466003	6600W1K004B	SWITCH,MICRO	R	3B73361D
466003	6600W1K004B	SWITCH,MICRO	R	3B73361E

R : SERVICE PARTS

LOC. NO.	PART NO.	DESCRIPTION	SVC	ALTERNATE
50CZZH	0CZZW1H004C	CAPACITOR,DRAWING[HIGH VOLTAGE]	R	0CZZW1H002J
50CZZH	0CZZW1H004C	CAPACITOR,DRAWING[HIGH VOLTAGE]	R	6120W3H003J
50CZZM	0CZZW1M001C	CAPACITOR,DRAWING[MOTOR CONDENSER]	R	
50FZZA	3B74133K	FUSE,DRAWING	R	3B74133H
53301A	3301W1A045A	PLATE ASSEMBLY	R	
53550F	3550W1S001A	COVER,STIRRER FAN	R	
53550L	3550W3A082A	COVER,LAMP	R	
54810C	4810WRC002A	BRACKET,CAPACITOR	R	
54930F	4930W3A013A	HOLDER,STIRRER FAN	R	
55231C	5230W1A003A	FILTER(MECH),CHARCOAL	R	
55238A	4974W1A037A	GUIDE,AIR	R	
55262A	5208W0A018A	DUCT	R	
55892A	5900W1A024A	FAN	R	
55900A	5900W1A027B	FAN	R	
56170D	6170W1D100C	TRANSFORMER,HIGH VOLTAGE	R	6170W1D100A
56170D	6170W1D100C	TRANSFORMER,HIGH VOLTAGE	R	6170W1D100B
56201A	2B72130F	FILTER ASSEMBLY(CIRC)	R	
56324A	6324W1A001E	MAGNETRON	R	
56411A	6411W1A014T	POWER CORD ASSEMBLY	R	6411W2A002N
56411A	6411W1A014T	POWER CORD ASSEMBLY	R	6411W1A014X
56501A	6501W1A013A	SENSOR ASSEMBLY	R	
56549F	6549W1F009H	MOTOR(CIRC),FAN	R	
56804A	6620G00007B	SOCKET(CIRC),LAMP	R	6804W2A001A
56804A	6620G00007B	SOCKET(CIRC),LAMP	R	6804W2A001B
56851D	6021W3B001Q	CABLE ASSEMBLY	R	6021W3B001M
568771	6877W1A564B	HARNESS	R	
568773	3B72342Q	HARNESS	R	
56912B	6912W3Q001A	LAMP,DRAWING	R	6912W3Q001D
56930M	6930W1A003D	THERMOSTAT	R	
56930V	6930W1A003J	THERMOSTAT	R	
63300M	3301W0A003A	PLATE ASSEMBLY	R	3300W0A030C
63302A	3302W0A054B	BASE PLATE	R	
63861A	2B72771H	KIT ASSEMBLY	R	2B72771G
65862B	3B72144A	BRACKET,MISC	R	
65862D	3B71432A	DAMPER	R	
WMP004	1MPC0303118	SCREW MACHINE,PAN HEAD	R	
WMP027	1MPC0404718	SCREW MACHINE,PAN HEAD	R	
WNH001	1NHA0300018	NUT,HEXAGON	R	
WNZ018	1NZZW1A004C	NUT,DRAWING	R	
WSZ002	1SBF0402418	SCREW TAP TITE(S),BINDING HEAD	R	
WSZ062	4000W4A003A	SCREW,DRAWING	R	
WSZ085	4B70188C	SCREW,DRAWING	R	
WTP004	1TPL0302418	SCREW TAPPING,PAN HEAD	R	
WTP005	1TPL0302618	SCREW TAPPING,PAN HEAD	R	
WTP013	1TPL0402418	SCREW TAPPING,PAN HEAD	R	
WTP015	1TPL0402618	SCREW TAPPING,PAN HEAD	R	
WTT021	1TTL0402418	SCREW TAPPING,TRUSS HEAD	R	
WTT022	1TTL0402422	SCREW TAPPING,TRUSS HEAD	R	
WTT028	1TTL0402818	SCREW TAPPING,TRUSS HEAD	R	
WTT029	1TTL0402822	SCREW TAPPING,TRUSS HEAD	R	
WTT037	1TTL0403818	SCREW TAPPING,TRUSS HEAD	R	
WWS005	1WSD0400032	WASHER,SPRING LOCK	R	

R : SERVICE PARTS

