



# TECHNICAL SERVICE GUIDE

## GE Built-In Microwave/Convection Ovens

### Model Numbers

ZMC3000	JEBC200
ZMW2000	JEB100



## **IMPORTANT SAFETY NOTICE**

This information is intended for use by individuals possessing adequate backgrounds of electrical, electronic and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

## **DISCONNECT POWER BEFORE SERVICING IMPORTANT – RECONNECT ALL GROUNDING DEVICES**

All parts of this appliance capable of conducting electrical current are grounded. If grounding wires, screws, straps, clips, nuts or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

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

- A. A microwave emission check should be performed prior to servicing if the oven is operative.
- B. Do not operate or allow the oven to be operated with the door open.
- C. If the oven operates with the door open:
  - 1) Instruct the user not to operate the oven and
  - 2) contact the manufacturer and the Center for Devices and Radiological Health immediately.
- D. 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
- E. 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.
- F. Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced or adjusted by procedure described in this manual before the oven is released to the owner.
- G. A microwave leakage check to verify compliance with the federal performance standard should be performed on each oven prior to release to the owner.

### **MICROWAVE LEAKAGE TEST**

1. Place 275 ml. water in 600 ml. beaker (WB64X5010).
2. Place beaker in center of oven shelf.
3. Set meter to 2450 MHz scale.
4. Turn oven "ON" for 5 minute test.
5. Hold probe perpendicular to surface being tested and scan surfaces at rate of one inch/second. Test following areas:
  - Entire perimeter of door and control panel
  - Viewing surface of door window
  - Exhaust vents
6. Maximum leakage 4MW/CM<sup>2</sup>.
7. Record date on service invoice and microwave leakage report.

**NOTE: MAXIMUM ALLOWABLE LEAKAGE IS 5MW/CM<sup>2</sup>. 4MW/CM<sup>2</sup> IS USED TO ALLOW FOR MEASUREMENT AND METER ACCURACY.**

Inform the manufacturer of any oven found to have emission in excess of 5MW/CM<sup>2</sup>. Make repairs to bring the unit into compliance at no cost to owner and try to determine cause. Instruct owner not to use oven until it has been brought into compliance.

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## PRODUCT DESCRIPTION

### Explanation of Microwave Cooking

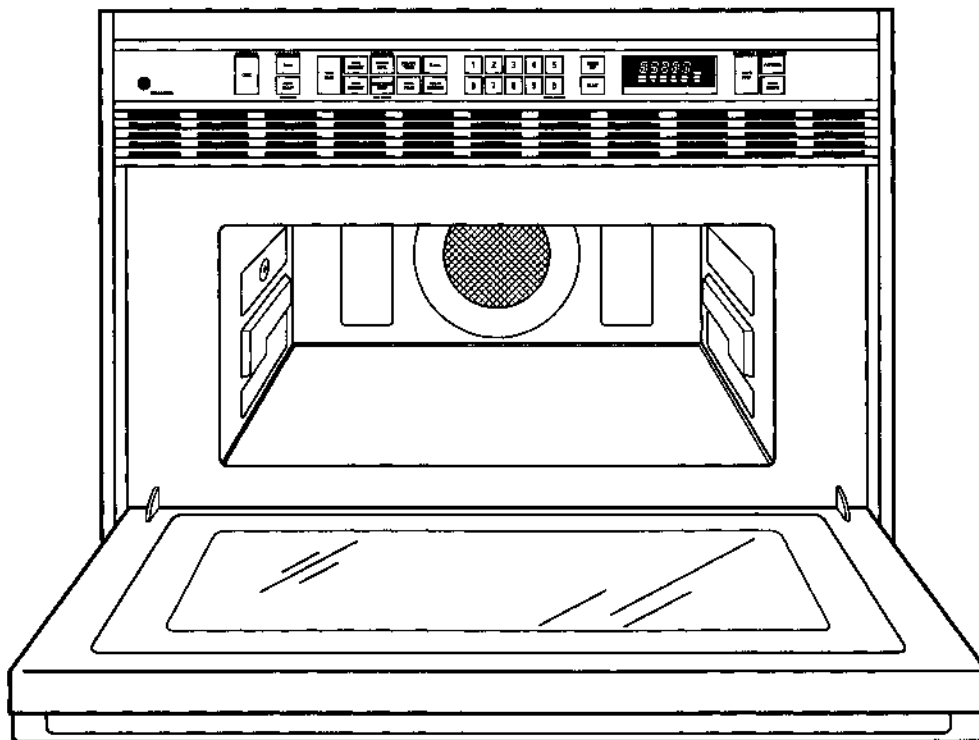
The GE Microwave Oven uses microwave energy to produce heat in the food to be cooked. Unlike conventional ovens microwave energy will cook foods without applying external heat.

Microwaves are short electromagnetic waves of RF (radio frequency) energy, that pass through materials such as glass, paper, china and most plastics. Materials such as metal and aluminum foil tend to reflect microwaves and may be used only as recommended in the cooking instructions.

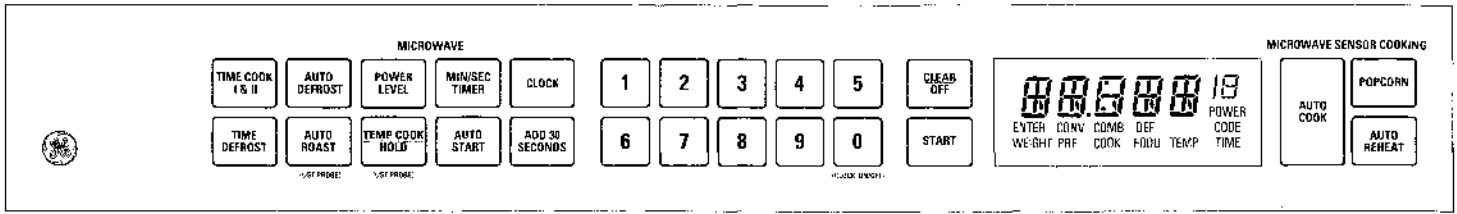
Materials with a high moisture content, like most foods, will absorb microwave energy. As the microwave energy enters the food, the food molecules align themselves with the microwave energy. Because the microwaves are changing polarity every half cycle, the food molecules are changing direction every half cycle or oscillating back and forth 4,900,000,000 times per second. This high speed oscillation causes friction between the molecules, thereby converting the microwave energy to heat.

FEATURES	ZMC3000 JEB200	ZMC2000 JEB100
COOKING COMPLETE REMINDER	•	•
TIME COOK	•	•
DELAYED COOKING*	•	•
MIN/SEC TIMER	•	•
AUTO DEFROST	•	•
TEMP COOK/HOLD	•	•
AUTO START	•	•
REMINDER	•	•
ADD 30 SECONDS	•	•
EXPRESS COOK*	•	•
AUTO COOK & ROAST	•	•
AUTO REHEAT	•	•
POPCORN	•	•
COMBINATION COOKING	•	
CONVECTION COOKING	•	
WARRANTY	1 YEAR	1 YEAR
WARRANTY ON MAG PART ONLY	10 YEARS	10 YEARS
<b>ELECTRICAL SPECIFICATIONS</b>		
LINE CURRENT	13 AMPS	13 AMPS
LINE WATTS	1300	1300
MAG POWER (IEC-705)	800 W.	800 W.
WEIGHT	72 LBS.	64 LBS.
CUTOUT DIMENSIONS	17-1/2" H x 25-1/4" W x 16" D (Min)	

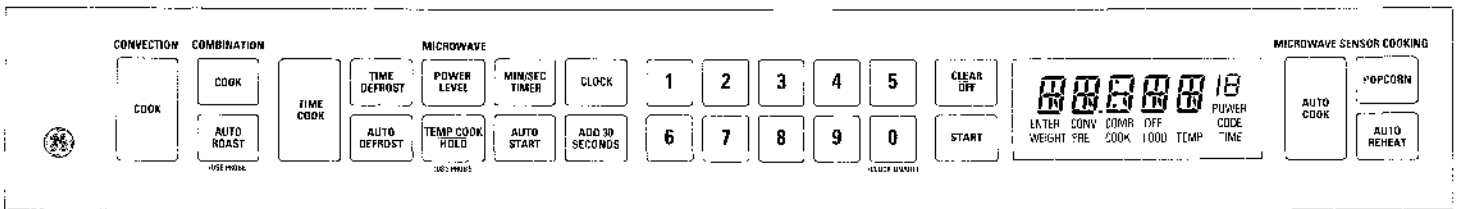
\*No function pad for these features



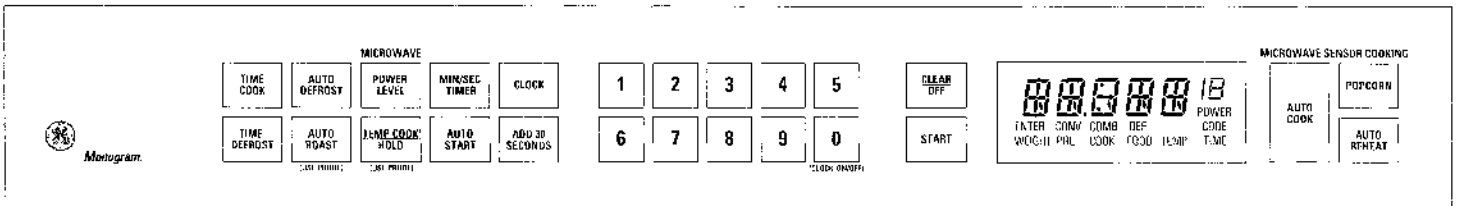
JEB100 will have a painted metal cavity



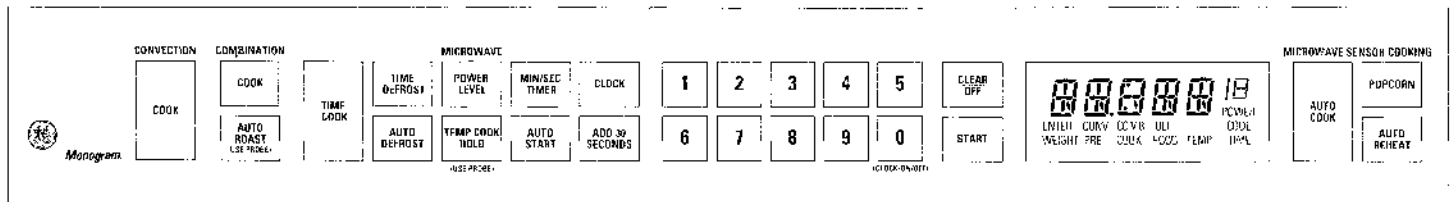
## JEB100 SERIES



## JEB200 SERIES



## ZMW2000 SERIES



## ZMC3000 SERIES

## OPERATION

### DESCRIPTION OF OPERATING SEQUENCE

The following is a description of component functions during oven operation.

### OFF CONDITION

Closing the door activates the door sensing and interlock switches. (In this condition, the monitor switch contacts are opened.)

When oven is plugged in, 120 volts A.C. is supplied to the smart board.

1. The display panel lights up for 15 seconds then "RESET" appears. Touch the CLOCK pad, enter time of day, then touch the START pad to set the clock and the oven is ready for use.

If power is interrupted at any time, the above sequence recurs, and you must reset the clock after touching the CLEAR/OFF pad.

### COOKING CONDITION, MICROWAVE ONLY

When the START pad is touched the following occurs:

1. Relay contacts are closed and the following components are turned on:
  - RY-1** oven lamp/fan motor
  - RY-2** power transformer
2. 120 volts A.C. is supplied to the primary winding of the power transformer and is converted to about 3.1 volts A.C. output on the filament winding, and approximately 2000 volts A.C. on the high voltage winding.
3. The filament winding voltage heats the magnetron filament and the H.V. is sent to a voltage doubler circuit. (-4000 VDC Half Phase)
4. The microwave energy produced by the magnetron is channeled through the wave guide into the cavity feedbox, and then into the cavity where the food is to be cooked.
5. Upon completion of the cooking time, the power transformer, oven lamp, etc. are turned off and the generation of microwave energy is stopped. The oven will revert to the OFF condition.
6. When the door is opened during a cook cycle, the monitor switch, door sensing switch, secondary interlock switch and primary interlock deactivate the main relay with the following results: The circuits to the cooling fan motor and the high voltage components are de-energized, the oven lamp remains on and the digital read-out displays the time remaining in the cook cycle when the door was opened.
7. The monitor switch electrically monitors the operation of the primary interlock switch and is mechanically associated with the door so that it will function in the following sequence:
  - (1) When the door opens, the primary interlock switch and secondary interlock switch open their contacts, then the monitor switch contacts close.



- (2) When the door is closed the monitor switch contacts open, and the contacts of the secondary interlock switch and primary interlock switch close.

If the primary interlock switch fails (contacts closed) when the door is opened, the closing of the monitor switch contacts will form a short circuit through the monitor fuse and primary interlock switch causing the monitor fuse to blow.

### POWER LEVEL 0 TO 10 COOKING

When Variable Cooking Power is programmed, 120 volts A.C. is supplied to the power transformer intermittently through the contacts of relay (RY-2) which is operated by the control unit within a 22 second time base. Microwave power operation is as follows:



VARI-MODE	ON TIME	OFF TIME
Power 10 (HIGH) (100% power)	22 sec.	0 sec.
Power 9 (approx. 90% power)	20 sec.	2 sec.
Power 8 (approx. 80% power)	18 sec.	4 sec.
Power 7 (approx. 70% power)	16 sec.	6 sec.
Power 6 (approx. 60% power)	14 sec.	8 sec.
Power 5 (approx. 50% power)	12 sec.	10 sec.
Power 4 (approx. 40% power)	10 sec.	12 sec.
Power 3 (approx. 30% power)	8 sec.	14 sec.
Power 2 (approx. 20% power)	6 sec.	16 sec.
Power 1 (approx. 10% power)	4 sec.	18 sec.
Power 0 (0% power)	0 sec.	22 sec.

**NOTE: The ON/OFF time ratio does not correspond with the percentage of microwave power, because approximately 3 seconds are needed for heating of the magnetron filament.**

### COOKING COMPLETE REMINDER

The control will beep once every minute until you open the door or touch CLEAR/OFF pad. This serves as a reminder that the cooking cycle is complete for all cooking and reheating features.

## CLOCK

To set the clock:

- Touch CLOCK pad.
- Enter time of day.
- Touch START pad (or clock pad) to start the clock.

**NOTE:** The clock display has an on/off feature, touch the 0 number pad to turn the clock display on or off.

## TIME COOK

**NOTE:** Only use metal shelf when cooking more than one item and never use or store rack on oven floor during microwaving.

Program up to 2 stages of memory cooking. Microwave for a selected amount of time using automatic power level 10 (High), or change power level after entering cooking time. When time is up the oven signals and flashes "END".

### To Use Time Cook:

1. Touch TIME COOK pad "ENTER COOK TIME" flashes.
2. Enter time and touch START.
3. At end of cycle – control "beeps" and flashes "END".

### To Use Additional Time Cook Stages:

1. Touch TIME COOK and enter time.
2. Touch POWER LEVEL pad desired.
3. Touch TIME COOK again, and enter time.
4. Enter desired POWER LEVEL.
5. Touch START.

## DELAYED COOKING (No function pad)

This feature will allow you to delay the start of cooking by 99 min. and 99 secs.

### To Use Delayed Cooking:

1. Touch TIME COOK enter cook time.
2. Touch MIN/SEC TIMER and enter number of minutes to delay start.
3. Touch Start.

## TIME DEFROST

The defrost setting is approximately 30% power, but can be changed to any power level before or during cooking.

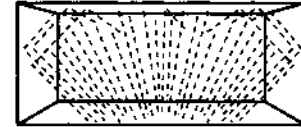
### To Use Time Defrost:

1. Touch DEFROST pad "Power 3" "Def Time" flashes.
  2. Enter defrost time.
  3. Touch START.
- At end of cycle control "beeps" and flashes "END".

## POWER LEVEL

This pad is used to change the amount of time the magnetron stays on. Ten would be the most (full power) and one the least.

## Microwave



### COOKING METHOD

Microwave energy is distributed evenly throughout the oven for thorough, fast cooking of food.

### HEAT SOURCE

Microwave energy.

### HEAT CONDUCTION

Heat produced within food by instant energy penetration.

### BENEFITS

Fast, high efficiency cooking. Oven and surroundings do not get hot. Easy clean-up.

**TIME  
DEFROST**



## MIN/SEC TIMER

The MIN/SEC TIMER is a no power HOLD feature which can be used for three timing functions:

- Operates as a minute timer.
- Can be used to “Delay Start” cooking. (Time Cook or Temp Cook only.)
- Can be used as a hold setting after defrost.
- Could be used while another program is running.

### To Use Min/Sec Timer While Another Program is Operating:

1. Set up other program, touch start.
2. Touch Min/Sec timer pad.
3. Enter the amount of time you want by touching the number pads.
4. Timer will automatically start in 3 seconds, no need to touch start again.

## AUTO DEFROST

With the AUTO DEFROST feature the oven automatically sets defrosting time and power levels. By using the Auto Defrost Guide (see conversion guide) the weight in pounds and tenths of a pound are used to determine defrosting time and power level.

### To Use Auto Defrost:

1. Touch AUTO DEFROST.
2. Enter food weight.
3. Touch START pad.

Twice during defrosting, the oven will “beep” and the display will flash “TURN”. Follow the directions in the Auto Defrost Guide (in Use and Care) for what to do at the first and second signal, then close door and touch start.

## TEMP COOK/HOLD

The TEMP COOK/HOLD feature is a Temp Cook function that will maintain the programmed temperature, for up to 1 hour.

The programmed temperature limits are 90°F-199°F. The control will not accept any inputs outside these limits.

In normal operation when the program temperature is reached, the control “beeps” and the display shows “HOLD”. The magnetron cycles “on” and “off” as needed, at a 50% power level to maintain the programmed temperature.

**IMPORTANT:** Temp Cook/Hold does not terminate automatically. It will stay in the HOLD mode until user stops it by touching CLEAR/OFF. It will “HOLD” the food at the programmed temperature for 60 minutes.

**NOTE:** If the Probe is not connected – display flashes “Probe” and will not start.

If food is below 90°F display shows “Cool” until food reaches 90°F then it tracks food temperature.

MIN/SEC  
TIMER

AUTO  
DEFROST

1.2  
ENTER  
WEIGHT

START

TURN

START

TEMP COOK  
HOLD

SELECT TEMPERATURE (Example 150°)  
SELECT POWER LEVEL

START

WHEN 150° IS REACHED  
OVEN WILL SOUND AND DISPLAY:

HOLD

## AUTO START

The AUTO START function provides a 12-hour delay start for any program or sequence of programs. Since it is a 12-hour timer, the start time can be delayed up to a maximum of 11 HOURS and 59 MINUTES.

**NOTE: The time-of-day clock must be set for the AUTO START function to work.**

### To Use Auto Start:

1. Touch AUTO START pad.
2. Enter the time of day you want the oven to start. Be sure microwave oven shows the correct time of day.
3. Enter desired cooking program.
4. Touch START pad. The oven will automatically start at the desired time.

## REMINDER (Use Auto Start Pad)

The Reminder feature, like an alarm clock, will signal (fast beeps) when a desired time of day is reached.

### To Use Reminder:

1. Touch Auto Start pad.
2. Enter the desired time of day (11 hours and 59 minutes maximum) that you want the oven to signal. Clock must show correct TOD.
3. Touch Start pad (REM will be in display).
4. When desired time is reached oven will signal with fast beeps until clear pad is touched or door is opened.

**NOTE: This feature cannot be used with or during any cooking function.**

## ADD 30 SECONDS

The ADD 30 SECONDS feature provides a way to extend cooking time by 30 seconds while the oven timer is counting down. It will add 30 seconds to the time shown each time the pad is touched.

## EXPRESS COOK (No Function Pad)

This feature is used to set the timer and cook for 1-5 minutes.

### To Use Express Cook:

1. Touch a number (1-5) for cooking time (Ex. 2 for two minutes).
  2. Touch the START pad.
- The oven will automatically signal, flash "END" and shut off at the end of the programmed time.

## CLEAR/OFF

When this pad is touched, it shuts off the oven and erases all settings (except for the time of day).

AUTO  
START

START

AUTO  
START

START

Rem

ADD 30  
SECONDS

1

2

3

4

5

START

CLEAR  
OFF

## SENSOR COOKING CONDITION

Using the AUTO COOK, POPCORN or AUTO REHEAT function, the foods are cooked without calculating time, power level or quantity. When the oven senses enough steam from the food, it relays the information to the microprocessor which will calculate the remaining cooking time and power level needed for best results. When the food is cooked, water vapor is developed. The sensor "senses" the vapor and its resistance increases gradually. When the resistance reaches the value set according to the menu, supplementary cooking is started.

The time of supplementary cooking is determined by experiment with each food category and entered into the microprocessor.

An example of how the sensor works:  
(AUTO COOK, 2)

1. Potatoes at room temperature. Vapor is emitted very slowly.
2. Heated potatoes. Moisture and humidity are emitted rapidly.
3. The sensor detects the moisture and humidity and calculates cooking time and variable power.

## COOKING SEQUENCE

1. Touch AUTO REHEAT pad then START pad.

**NOTE: The oven should not be operated on AUTO REHEAT immediately after plugging it in. Wait five minutes.**

2. The coil of the shut-off relay (RY-1) is energized, oven lamp and cooling fan motor are turned on, but the power transformer is not.
3. After about 12 seconds, the cook relay (RY-2) is energized and the power transformer is turned on. Microwave energy is then produced and the first stage is started.  
12 seconds cooling time is required to remove any vapor from the oven cavity and sensor.

**NOTE: During this first stage, do not open the door or touch CLEAR/OFF pad.**

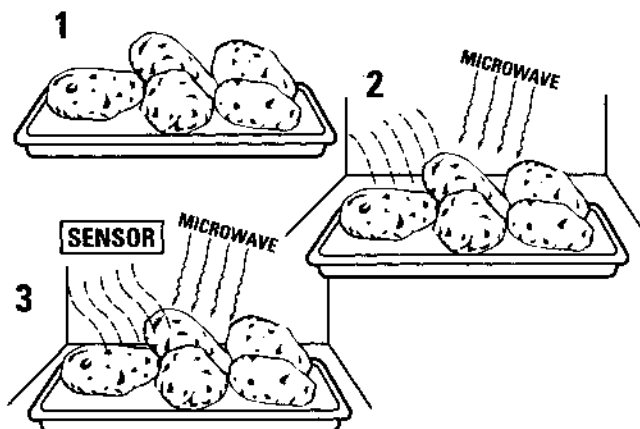
4. When the sensor detects the vapor emitted from the food, the display switches over to the remaining cooking time and the timer counts down to zero. At this time, the door may be opened to stir food, turn, or season, etc.
5. When the timer reaches zero, an audible signal sounds. The shut-off relay and cook relay are de-energized and the power transformer, oven lamp, and cooling motor are turned off.
6. Opening the door or touching the CLEAR/OFF pad will cause the time of day to reappear on the display and the oven will revert to an OFF condition.

## MICROWAVE SENSOR COOKING

AUTO  
COOK

POPCORN

AUTO  
REHEAT



AUTO  
REHEAT

START

## AUTO COOK

The AUTO COOK feature will automatically microwave at pre-programmed power levels and determines the proper amount of cooking time. This feature has 8 codes (Generic quantities and types of food are used).

- **Code 1** is designed for reheating foods quickly, turns the oven off automatically as soon as the sensor detects steam from the foods.
- **Codes 2-8**, When these codes are selected the oven determines how much additional cooking time is needed after steam has been sensed, automatically switches to TIME COOK and signals. The word "AUTO" on the display is then replaced by countdown numbers indicating remaining cooking time. When the signal is heard, the oven door may be opened for stirring, turning or rotating food.

### To Use AUTO COOK:

1. Touch AUTO COOK pad.
2. Enter desired code.
3. Touch START.

### To Adjust Auto Cook Time by 20%:

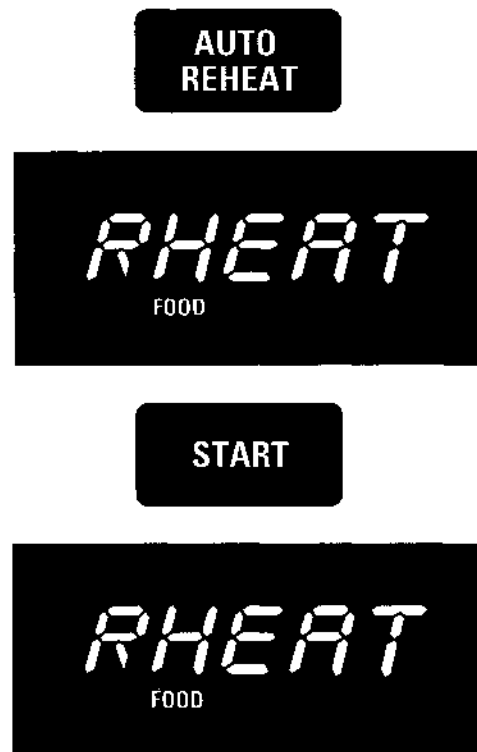
- Adding a 1 after the pre-selected cooking code will subtract 20% of the cooking time.
- Adding a 9 after the pre-selected cooking code will add 20% to the cooking time.

Example: If code 4 cooks chicken more done than wanted, enter code 41 and it will cook 20% less time. Auto code 4 will show in the display, the number 1 will not.

## AUTO REHEAT

With this feature the oven automatically adjusts its heating time to various types and amounts of pre-cooked food by sensing the steam that escapes as food heats. Do not open the oven door while the word "RHEAT" IS DISPLAYED, steam escaping will affect oven performance.

**NOTE:** Use of the metal shelf with Auto Reheat is NOT recommended. Best results are obtained with foods you want to steam or retain moisture (must be covered).



## POPCORN

The POPCORN feature is a preprogrammed function that uses the humidity sensor to automatically select the correct cooking time.

**NOTE: Use of the metal shelf with the popcorn pad is not recommended.**

**This feature works best when the popcorn contents are in the 3.0-3.7 ounces range.**

### To Use Popcorn:

1. Remove the outer wrapper from the microwave popcorn.
2. Open oven door and place package of popcorn in the center of the oven floor as directed by the manufacturer's instructions. Close oven door.
3. Touch POPCORN pad. "POP" flashes.
4. Touch START. The popcorn sensor automatically calculates the cooking time. After the popcorn sensor detects steam, the oven signals and displays remaining cooking time needed.
5. When cooking is completed, the oven signals and flashes "End". Open the door and remove the popcorn.

### How to adjust the Popcorn Program to provide a shorter or longer cook time:

If popcorn is undercooked you can make an adjustment by adding time.

- Touch the POPCORN pad and then touch number pad 9. The word "POP" will appear on the display with a plus sign beside it. The plus sign indicates 20 seconds more cooking time is being provided.

If popcorn is overcooked you can make an adjustment by subtracting time.

- Touch the POPCORN pad and then touch number pad 1. The word "POP" will appear on the display with a minus sign beside it. The minus sign indicates 20 seconds less cooking time is being provided.

## CONVECTION COOK

**(MUST USE METAL SHELF ON OVEN FLOOR)**

Convection cooking uses a heating element and a fan that circulates warm air throughout the oven cavity.

The **Convection Cook** function can also be used with or without the probe. If the probe is not connected the user must enter **the oven**

**temperature and cooking time.** If the probe is used, the user enters the **oven temperature and food temperature.**

- Oven temperature limits are 225°-450°F.
- Food temperature limits are 90°-199°F.

### To Convection Preheat and Time Cook:

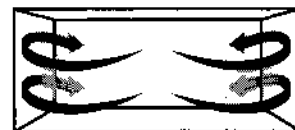
1. Touch Convection Cook. (Displays "F" and "ENTER CONV TEMP" flashes).
2. Enter oven temperature. "ENTER CONV TIME" flashes (do not enter time).
3. Touch start.



COOK  
TIME



## Convection



### COOKING METHOD

Hot air circulates around food to produce browned exteriors and seal in juices.

### HEAT SOURCE

Circulating heated air.

### HEAT CONDUCTION

Heat conducted from outside of food to inside.

### BENEFITS

Aids in browning and seals in flavor. Cooks some foods faster than regular ovens.

The display shows "CONV PRE" until oven reaches the preset temperature. The control "beeps" and the display flashes "READY" and "CONV PRE" when temperature is reached.

**NOTE: If the door is not opened in 30 minutes the oven will shut off automatically.**

**Preheat temperature will be 10% less than set temperature.**

4. When the oven is preheated, place food in oven and touch convection COOK pad. The display flashes "ENTER CONVECTION TIME" and "H:".

**NOTE: At set temperature of 350°F the temperature of the oven will actually average 345°F.**

5. Enter the cooking time. The maximum time is 9 hours and 99 minutes.

6. Touch START. When cooking is complete the control "beeps" and flashes "END" and turns the oven off.

**NOTE: Any time the door is opened during cooking, the display flashes "HOT" as a reminder that the oven is hot.**

**To Convection Cook without preheating:**

1. Touch Cook.
2. Enter oven temperature.
3. Enter cooking time.
4. Touch Start.

### COMBINATION COOKING (MUST USE METAL SHELF ON OVEN FLOOR)

Combination cooking uses microwave power and convection heat. Microwave power is "ON" 8 seconds and "OFF" 14 seconds of the 22 second Duty Cycle. Convection heat is "ON" 14 seconds and "OFF" 8 seconds. In this way microwave power and convection heat alternate "on" time. Both are never "on" at the same time.

Combination cooking can be done by time or by food temperature.

There are four combination codes which automatically set the microwave power and oven temperature:

Code	Oven Temp	Microwave Power (Watts)
1	250°F	220
2	275°F	220
3	300°F	220
4	350°F	220

**To Cook by Time:**

1. Touch Combination Cook.
2. Enter code.
3. Enter time in hours and minutes.
4. Start.

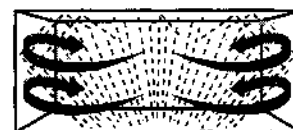
**To Cook by Food Temp:**

1. Connect probe.
2. Touch Combination Cook.
3. Enter code.
4. Enter food temp.
5. Start.

---

### Combination

---



#### COOKING METHOD

Microwave energy and convection heat combine to cook foods in up to one-half the time of regular ovens, while browning and sealing in juices.

---

#### HEAT SOURCE

Microwave energy and circulating heated air.

---

#### HEAT CONDUCTION

Food heats from instant energy from penetration and heat conducted from outside of food.

---

#### BENEFITS

Shortened cooking time from microwave energy, plus browning and crisping from convection heat.

---

**NOTE: Display shows "COOL" until the internal food temperature reaches 90°F then it will display actual food temperature.**

**AUTO ROAST**

The AUTO ROAST function uses the temperature probe to cook to a desired serving temperature. There are different codes which can be used with the Auto Roast program.

Each program code cooks to a specific temperature as shown in the chart.

		Code
Beef (med)	170°F	1
Beef (well)	190°F	3
Pork	190°F	3
Poultry	190°F	3

Auto Roast uses up to three reducing automatic power settings to insure even cooking results without overcooking. The power settings are fixed and cannot be changed.

**To Use Auto Roast (Codes 1 & 3):**

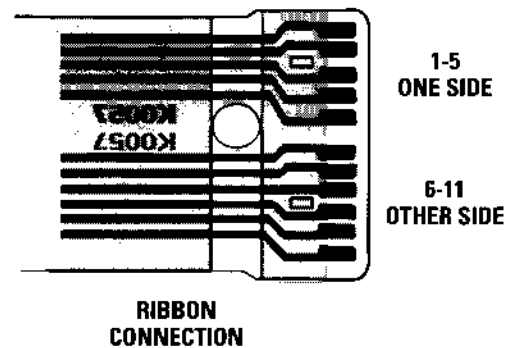
1. Connect probe.
2. Touch COMBINATION AUTO ROAST and code number.
3. Touch START.
4. For Code 1 after food reaches 1/3-1/2 its total roasting time the control "beeps" and flashes "Turn" as a signal to the user to turn the food.
5. When food reaches program temperature the control beeps 4 times and "HOLD" appears in the display for 60 minutes and then beeps 4 times and "END" appears.

**KEY PANEL TEST**

The key panel pads can be tested by checking continuity between pad connections at the end of the ribbon, use high scale. (Up to but not more than 2KΩ)

Ribbon Pad	Connectors	Pad	Connectors
TIME COOK	2-8	1	5-7
TIME DEFROST	6-9	2	4-7
TEMP. COOK HOLD	3-9	3	3-7
MIN/SEC. TIMER	6-11	4	2-7
POWER LEVEL	4-10	5	1-7
ADD 30 SECONDS	1-8	6	6-8
AUTO COOK	5-10	7	5-8
AUTO ROAST	2-9	8	4-8
AUTO DEFROST	5-9	9	3-8
AUTO REHEAT	5-11	0	6-7
AUTO START	2-10	CLOCK	4-11
START	1-10	COMB. COOK	6-10
CLEAR OFF	3-11	CONV. COOK	1-9
POPCORN	3-10		

**AUTO ROAST**  
(USE PROBE)

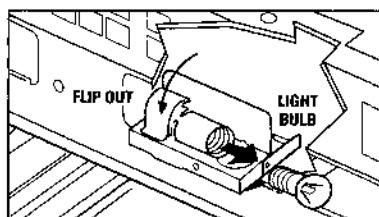
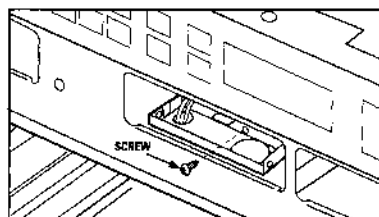
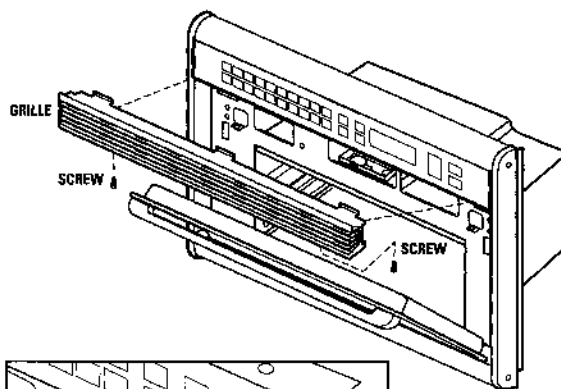


## CAVITY LIGHT

The light is located in the middle of the oven behind the grille.

### To Service Cavity Light:

1. DISCONNECT POWER.
2. Open oven door and remove grille (2 screws).
3. Remove screw holding light bulb housing in place.
4. Lift on door overhang and rotate light bulb housing towards the front of the oven.
5. Unscrew and replace 40 watt light bulb (WB02X4253).



## REMOVING OVEN FROM WALL

1. Remove Grille (2 screws on bottom).
2. Remove 2 installation screws (behind grille).
3. Slide out from wall until power cord can be reached and unplugged.
4. Remove from wall.

**NOTE: 2 people are recommended to remove oven from the wall.**

## ANTENNA/ANTENNA MOTOR

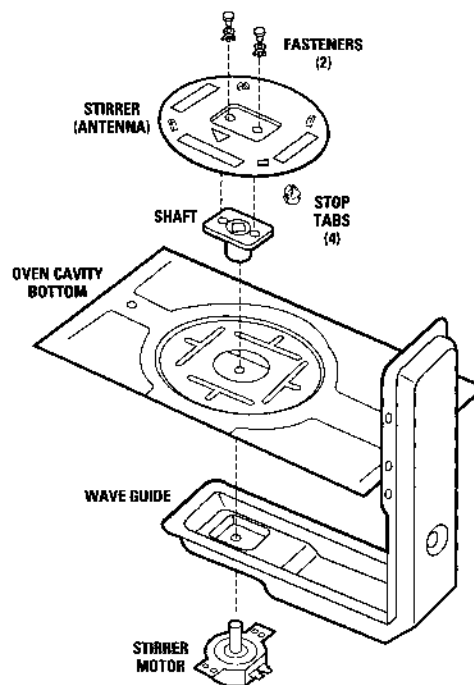
The antenna and antenna motor are located below the removable glass floor.

### To Service Antenna:

1. Remove glass shelf (suction cup or putty knife).
2. Lift antenna off of antenna motor shaft.

### To Service Antenna Motor:

1. Disconnect power and remove from wall.
2. Remove antenna.
3. Carefully put oven on its back.
4. Remove 2 screws to access panel on bottom of oven.
5. Disconnect motor leads and 2 screws that secure motor.





## DOOR

The oven door consists of a handle, outer glass, sub-door assembly, choke cover, hinge assembly, and latch pawls.

### To Remove Glass:

1. Remove 2 screws on top of door next to the handle ends.
2. Lift glass and handle from bottom trim.

### To Remove Handle:

1. Remove glass.
2. Remove 2 screws that go through brackets on the inner glass side.

### To Replace Latch Pawls:

1. Remove glass.
2. Use long nose pliers to disconnect spring on bottom hook of latch pawl.
3. Slide latch pawl pivot sideways to remove.
4. Remove spring and latch pawl.

**NOTE: Latch pawls can be replaced individually.**

### To Remove Door:

1. Open the door and insert small Allen wrench/drill bit (holding pin) into the hole of the hinge body (**put tape on each side of hinge hole to protect door from being scratched**).
2. Close the door against the inserted material (holding pin) and lift. Door will come off with hinge.

### To Service Bottom Hinge Springs:

1. Remove door.
2. Remove glass.
3. Loosen bottom trim on affected side.
4. Remove the inserted material (holding pin) from hinge body on affected side.

**NOTE: Hinge hook will have to be pulled away from the door in order to remove the holding pin.**

5. Remove 3 screws securing old hinge assembly. Install new hinge assembly.
6. Pull hinge hook out and reinsert holding pin.
7. Replace door.

### To Replace Inner Door:

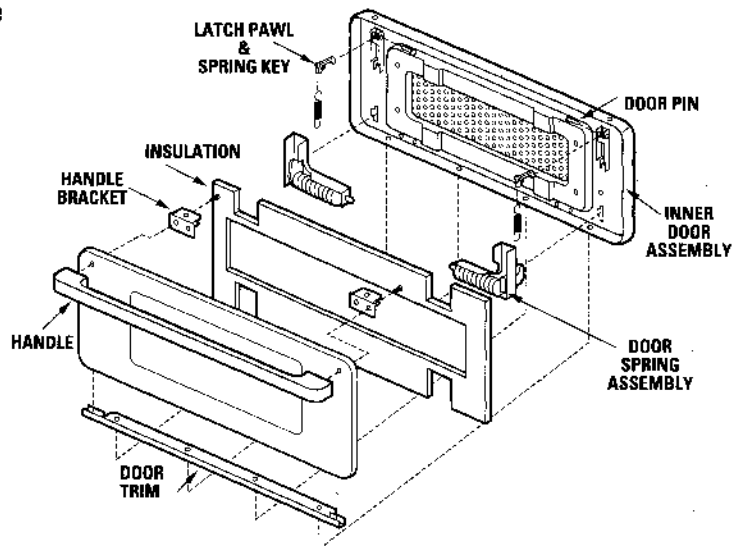
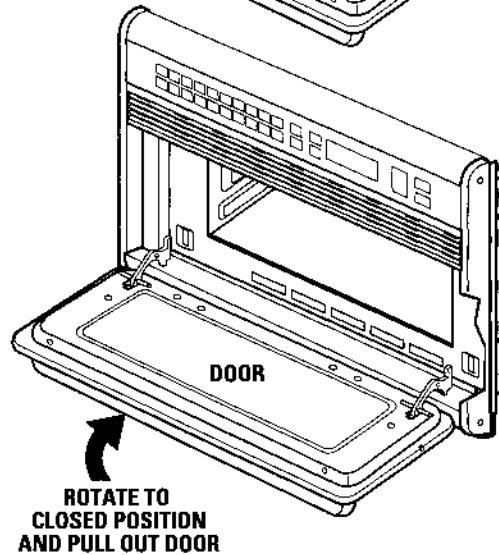
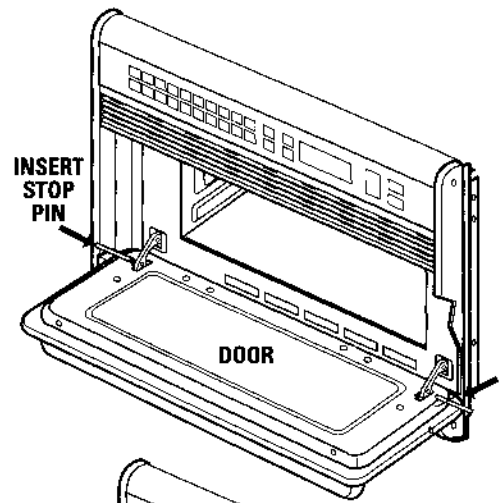
1. Remove door.
2. Remove glass.
3. Remove handle.
4. Transfer components to new inner door.

## MONITOR SWITCH

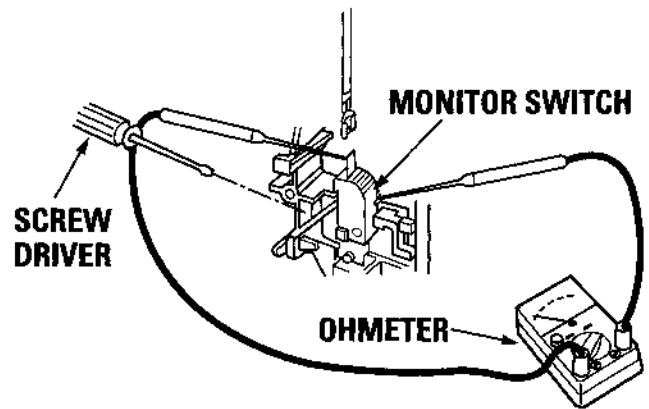
The monitor switch is activated (the contacts opened) by the latch head on the door while the door is closed. The switch is intended to render the oven inoperative by means of blowing the monitor fuse when the contacts of the primary interlock relay and secondary interlock switch fail to open when the door is opened.

### Functions:

1. When the door is opened, the monitor switch contact closes (to the ON condition). At this time the primary interlock relay and secondary interlock switch are in the OFF condition (contacts open).



- As the door goes to a closed position, the monitor switch contacts are first opened and then the door sensing switch and the secondary interlock switch contacts close. (On opening the door, each of these switches operate inversely.)
- If the door is opened, and the primary interlock relay and secondary interlock switch contacts fail to open, the monitor fuse blows simultaneously with closing of the monitor switch contacts.  
**CAUTION:** Before replacing a blown monitor fuse, test the primary interlock relay, door sensing switch, monitor switch and secondary interlock switch for proper operation.



### MONITOR SWITCH TEST

Disconnect the oven from power supply. Before performing this test, make sure that the secondary interlock switch and the primary interlock relay are operating properly. Disconnect the wire lead from the monitor switch (NC) terminal. Check the monitor switch operation by using the ohmmeter as follows:

When the door is open, the meter should indicate a closed circuit. When the monitor switch actuator is pushed by a screwdriver through the lower latch hole on the front plate of the oven cavity with the door opened (in this condition the plunger of the monitor switch is pushed in), the meter should indicate an open circuit. If improper operation is indicated, the switch may be defective.

After testing the monitor switch, re-connect the wire lead to the monitor switch (NC) terminal.

### FUSE

The 15 amp fuse is located on the top right side of the oven above the right interlock. It is attached to the top of the magnetron.

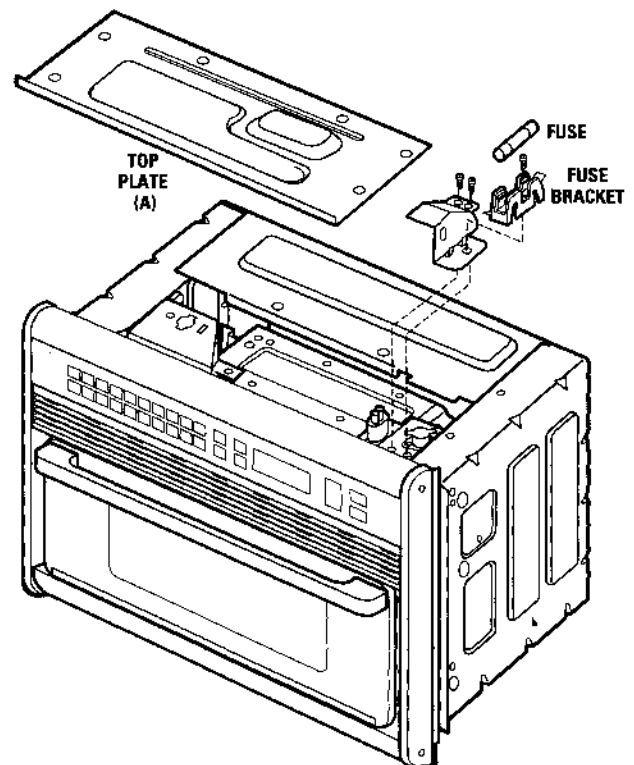
#### If Fuse is Blown Check:

- Monitor switch operation.
- Shorted power relay (on smart board).
- Open varistor on board (visual check).

**CAUTION:** BEFORE REPLACING A BLOWN MONITOR FUSE, TEST THE DOOR SENSING SWITCH, PRIMARY INTERLOCK RELAY, SECONDARY INTERLOCK SWITCH AND MONITOR SWITCH FOR PROPER OPERATION. IF THE MONITOR FUSE IS BLOWN BY IMPROPER SWITCH OPERATION, MONITOR FUSE (15A) AND SWITCH MUST BE REPLACED EVEN IF THE MONITOR SWITCH OPERATES NORMALLY.

#### To Replace the Fuse:

- DISCONNECT POWER, pull oven from wall far enough to remove the top front cover and discharge capacitor.
- Remove and check fuse. If blown check monitor switch operation, shorted power relay, and varistor.



# DESCRIPTION AND FUNCTION OF COMPONENTS

## TOUCH CONTROL PANEL ASSEMBLY TEST

The touch control panel assembly is divided into two units, Touch Control Pad and Smart Board, and troubleshooting by unit replacement is described according to the symptoms indicated.

### 1. Touch Control Pad.

The following symptoms indicate a defective touch control pad:

- a) When touching the pads, a certain pad produces no signal at all.
- b) When touching a number pad, two figures or more are displayed.
- c) When touching the pads, sometimes a pad produces no signal.

**NOTE: If necessary touch control pad can be checked with ohmmeter.**

### 2. Smart Board

The following symptoms indicate a defective smart board:

#### 2-1 In connection with pads

- a) When touching the pads, a certain group of pads do not produce a signal.
- b) When touching the pads, no pads produce a signal.

#### 2-2 In connection with indicators

- a) At a certain digit, all or some segments do not light up.
- b) At a certain digit, brightness is low.
- c) Only one indicator does not light.
- d) The corresponding segments of all digits do not light up; or they continue to light up.
- e) Wrong figure appears.
- f) A certain group of indicators do not light up.
- g) The figure of all digits flicker.

#### 2-3 Other possible problems caused by defective smart board

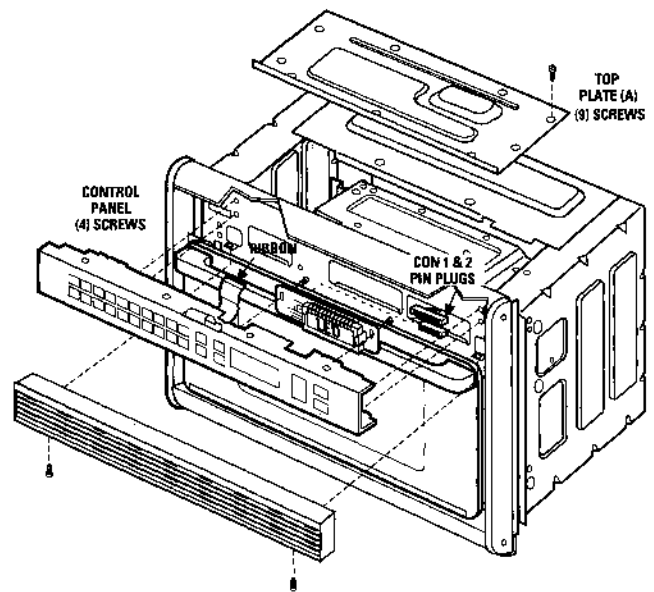
- a) Buzzer does not sound or continues to sound.
- b) Clock does not operate properly.
- c) Cooking is not possible.
- d) Proper temperature measurement is not obtained.

## TOUCH CONTROL

This touch control pad will be replaced as an assembly. If necessary the key panel pads can be checked by a continuity test.

### To Replace Touch Control Pad:

1. DISCONNECT POWER.
2. Pull oven from wall far enough to remove front top panel.
3. Disconnect ribbon from connector and connectors 7 and 8 on smart board, or connector 1 and 2 on touch control panel.
4. Remove top trim, 2 screws.
5. Remove grille, 2 screws.
6. Remove fuse bracket (on top of magnetron) 2 screws.
7. Remove 4 screws (2 on each side) holding control panel to frame. Screws are horizontal with heads facing rear of unit. Stubby screwdriver would be helpful.



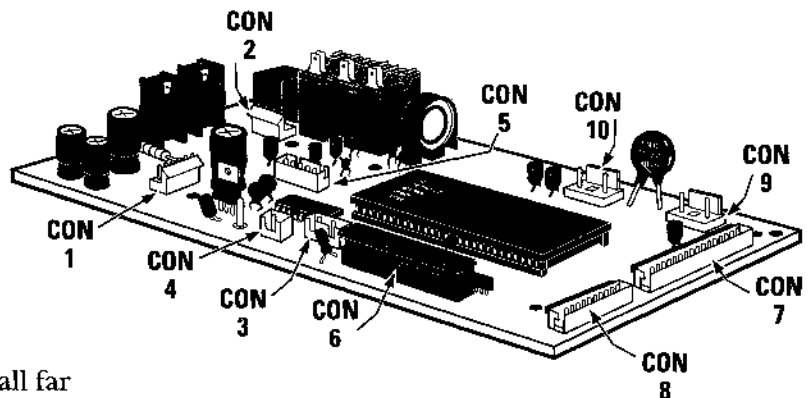
**NOTE:** Disconnect ribbon and CON 1 & 2 pin plugs.

## SMART BOARD

The smart board is held in place by 6 plastic stand-offs. When stand-offs are squeezed together the board can be pulled over them for board removal.

**Many diagnostic circuit tests can be made at the disconnect plugs.**

- CON 1 – 6 pin LVT secondary connector
- CON 2 – 4 pin damper & heater motor relay
- CON 3 – 4 pin door sense & thermistor
- CON 4 – 2 pin probe connector
- CON 5 – 5 pin gas sensor connector
- CON 6 – 11 pin key panel connector
- CON 7 – 13 pin sub smart board connector
- CON 8 – 9 pin sub smart board connector
- CON 9 – 2 pin fusible link connector
- CON 10 – 2 pin LVT primary connector



### To Replace Smart Board:

1. DISCONNECT POWER, pull oven from wall far enough to remove top front panel.
2. Disconnect and mark smart board connections.
3. Squeeze plastic stand-offs (6) and lift board over stand-offs.

## GAS SENSOR TEST

Microwave sensor cooking uses a special gas sensor which detects both humidity (steam) and hydrocarbons (food odors) during the cooking process. The sensor is located on the exhaust duct at the top left corner of the cavity, behind the grille.

### Checking the initial sensor cooking condition

1. The oven should be plugged in at least five minutes before sensor cooking.
2. Room temperature should not exceed 95°F (35°C).
3. The unit should not be installed in any area where heat and steam are generated, for example, next to a conventional surface unit.
4. Exhaust vents are provided on the back of the unit for proper cooling and air flow in the cavity. To permit adequate ventilation, be sure to install

so as not to block these vents. There should be some space for air circulation.

5. Be sure the exterior of the cooking container and the interior of the oven are dry. Wipe off any moisture with a dry cloth or paper towel.
6. The Sensor works with food at normal storage temperature. For example, chicken pieces would be at refrigerator temperature and canned soup at room temperature.
7. Avoid using aerosol sprays or cleaning solvents near the oven while using Sensor settings. The sensor will detect the vapor given off by the spray and turn off before food is properly cooked.
8. After about 2 to 9 minutes if the sensor has not detected the vapor of the food, **ERROR** will appear and the oven will shut off.

#### Quick Test Sensor:

With 3 fingers touch and hold the following pads at the same time.

6 7 8

Observe diagnostic numbers in display (numbers are approximate).

- 40-210 normal, can verify with Detection Test.
- 255 or higher (sensor failed open, unplugged, wiring problem, or smart board problem).

**NOTE: Only heater terminals can be checked with ohmmeter (30Ω).**

**CAUTION! Checking sensor terminals with ohmmeter can damage sensor.**

#### To Perform Sensor Detection Test:

1. Place 1/3 cup of tap water in oven. Do not use styrofoam cup.
2. Touch – Auto Cook – 1 – Start
3. After 1-1/2 – 2-1/2 minutes control should beep and display END.
4. Touch clear/off.
  - Test OK – Normal
  - Test fails – Check sensor

#### To Service Gas Sensor:

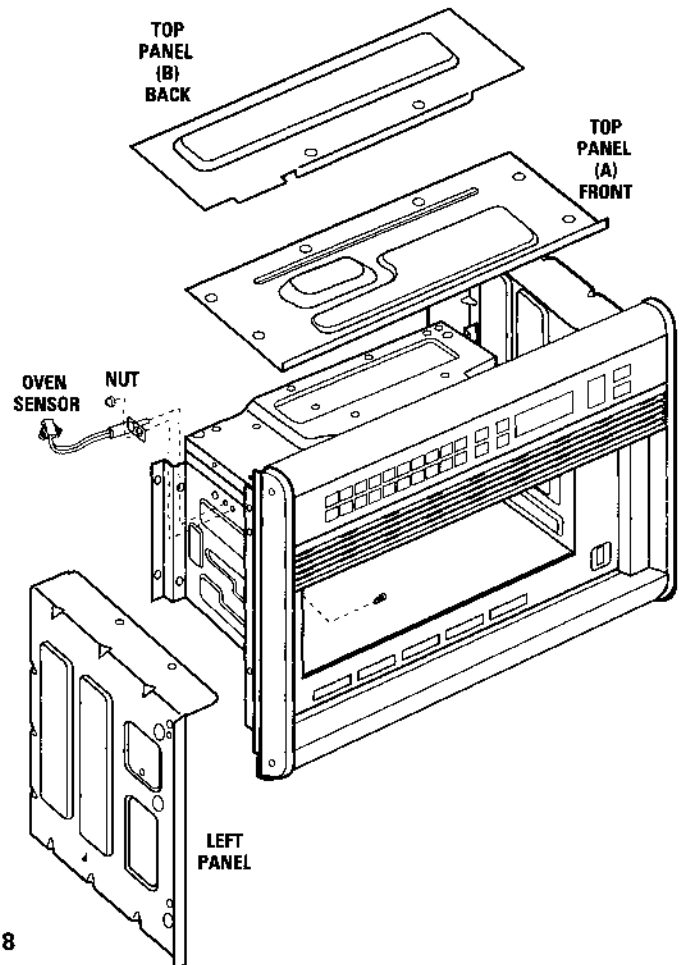
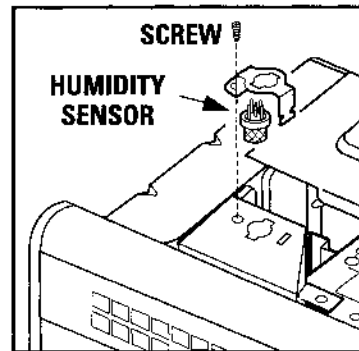
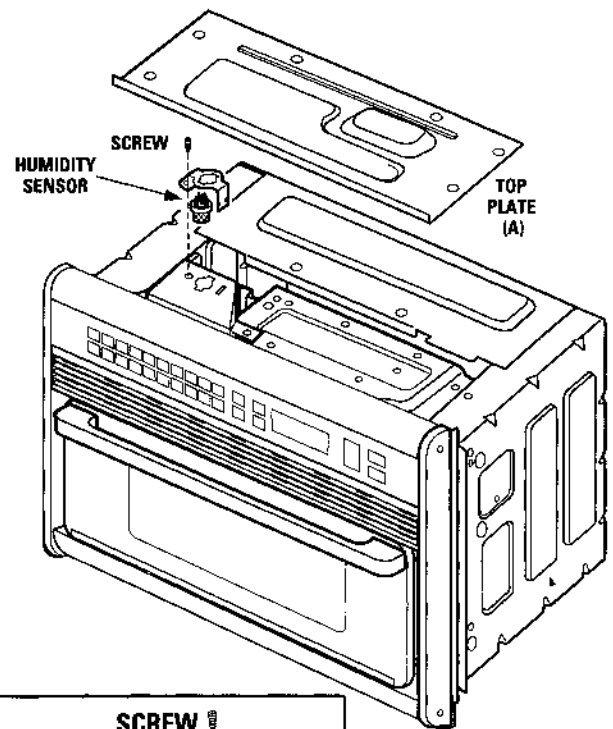
1. **DISCONNECT POWER**, pull away from the wall far enough to remove top front cover and discharge capacitor.
2. Remove 1 screw holding bracket.
3. Lift sensor and connector out and unplug sensor from connector.

#### OVEN SENSOR

The oven sensor is a negative coefficient thermistor, that is when the temperature goes up the resistance goes down. The sensor should measure above 60,000Ω resistance when cold.

#### To Remove Oven Sensor:

1. **DISCONNECT POWER**, pull oven from wall far enough to remove top front panel.
2. Remove screw inside cavity (next to probe).
3. Lift sensor out and unplug connector.



## PROBE RECEPTACLE

Receptacle is located on left hand side of cavity. The probe is a sensor that has a thermistor swagged in the tip of a stainless steel tube.

The probe can be checked by using an ohmmeter. At room temperature there should be approximately 60,000Ω. If inserted into a container of hot water the resistance will visibly drop.

### To Remove Probe Receptacle:

1. DISCONNECT POWER, pull oven from wall far enough to remove top front panel.
2. Unscrew nut holding probe receptacle (in cavity).
3. Disconnect wiring from connector 4 on smart board, remove receptacle.

## INTERLOCKS AND DOOR SWITCHES

The switches are mounted to 2 plastic latch bodies mounted on each side of the cavity. **SWITCH LOCATIONS ARE DESCRIBED AS YOU FACE THE OVEN.**

- Primary Located in right body latch, inside switch on bottom.
- Secondary Located in left body latch. Outside switch on bottom.
- Monitor Located in right body latch on top.
- Door Sense Located in right body latch, outside switch on bottom and located in left body latch, inside switch on bottom.

They are activated by the latch heads on the door. When the door is opened, the switches interrupt the circuit to all components, except the oven lamp. A cook cycle cannot take place until the door is firmly closed thereby activating both interlock switches. The primary interlock system consists of the door sensing switch and primary interlock relay located on the control circuit board.

### How to Adjust Switches:

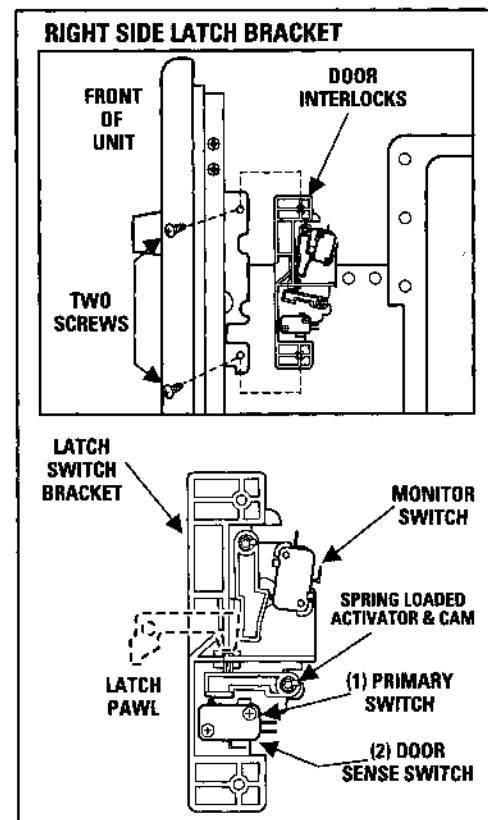
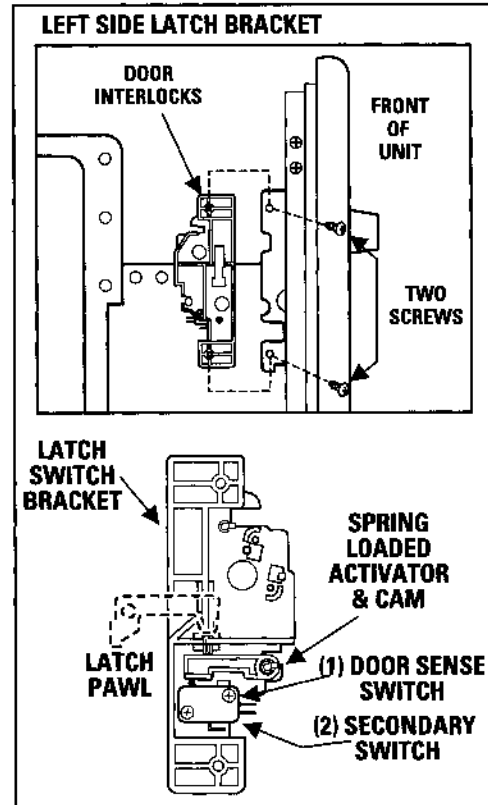
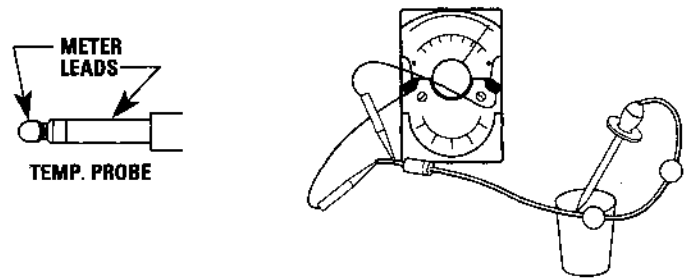
1. DISCONNECT POWER, pull oven from wall far enough to remove top front panel.
2. Remove side access cover to switches.
3. Loosen switch bracket through holes in side of unit.
4. Adjust each switch housings for proper switch operation, door fit, and retighten screws.
5. Check for Microwave Leakage.

### How to Replace Switches in Left Bracket:

1. DISCONNECT POWER, pull oven from wall far enough to remove top front panel.
2. Remove front top cover and discharge capacitor.
3. Remove 2 bracket screws (do not drop them).
4. Open door, work bracket up through the top.
5. Switches are held in by plastic mounting tabs, make sure they are not bent or broken.

### How to Replace Switches in Right Bracket:

1. Follow steps 1 and 2 for left bracket.
2. Remove oven from wall.
3. Remove outer right panel.
4. Remove 2 bracket screws and bracket.



- Switches are held in by plastic mounting tabs, make sure they are not bent or broken.

**NOTE: When making any adjustments or replacements of switches and switch brackets a microwave leak check MUST be performed when done.**

### HOW TO TEST INTERLOCKS

DISCONNECT POWER, pull oven from the wall far enough to remove top front access panel and interlock access panels, and discharge capacitor.

#### Primary

Check continuity of Com and N.O.:

- Door Closed – 0 Ohms
- Door Open – Infinite Ohms

#### Secondary

Check continuity of Com and N.O.:

- Door Closed – 0 Ohms
- Door Open – Infinite Ohms

#### Monitor

Check continuity of Com and N.C.:

- Door Closed – Infinite Ohms
- Door Open – 0 Ohms

#### Door Sense

Check continuity of Com and N.C.:

- Door Closed – Infinite Ohms
- Door Open – 0 Ohms

#### Test Circuit Operation:

- Connect temporary jumper across relay contacts, primary and secondary interlock switches to simulate shorted switch contacts. Locate convenient connections in circuit to be certain Com and N.O. or N.C. terminals are used.
- Connect Ohmmeter (low scale) across the 2 line terminals of appliance power cord. Continuity must show:
  - Door Closed – Some Ohms
  - Door Open – 0 Ohms
- Remove 15 amp fuse – Circuit must open (infinite ohms). If not, check wiring of monitor and interlock circuits.

**WARNING: After testing, remove temporary jumpers.**

### FLAME SENSOR

The oven thermal cut-out is located on the exhaust duct. The temperature rating is 248°F. If open find cause and replace.

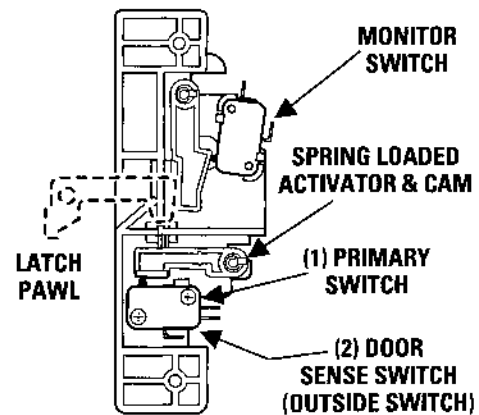
#### To Replace Flame Sensor:

- DISCONNECT POWER, remove oven from wall, remove top cover, and discharge capacitor.
- Remove left outer panel.
- Remove 2 screws holding flame sensor.

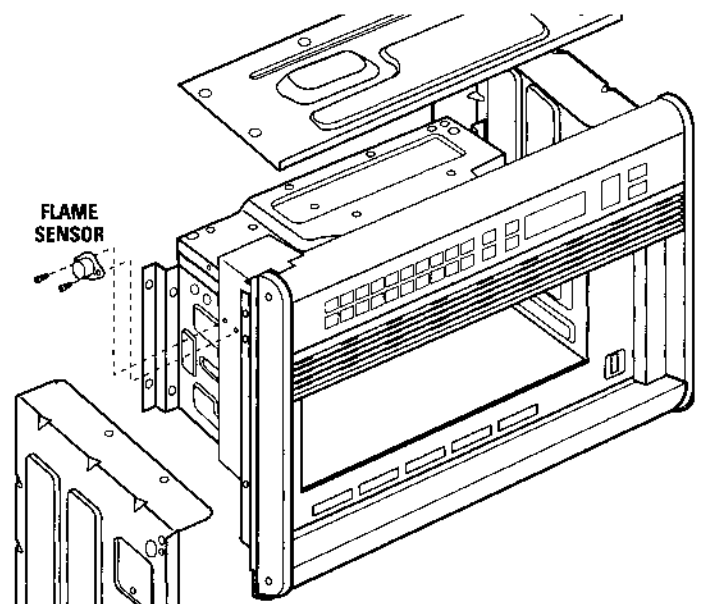
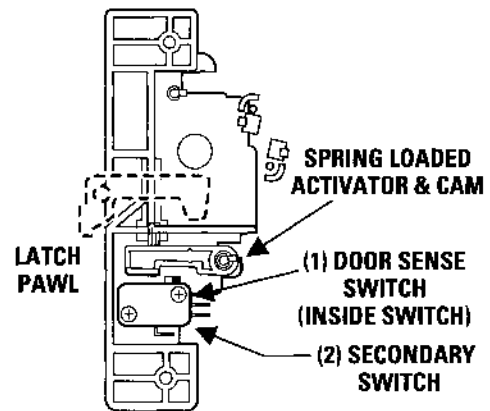
### CAPACITOR, DIODE AND VARISTOR

The high voltage capacitor should always be discharged by shorting a terminal with 1 or 2 screwdrivers or with 1 screwdriver with a grounded wire attached. The capacitor has an internal discharge “shunt” resistor, but the mechanical discharge procedure should always be followed for personal safety.

RIGHT LATCH SWITCH BRACKET



LEFT LATCH SWITCH BRACKET



## HIGH VOLTAGE CAPACITOR TEST

DISCHARGE THE HIGH VOLTAGE CAPACITOR BEFORE TOUCHING ANY OVEN COMPONENTS OR WIRING.

If the capacitor is open, no high voltage will be available to the magnetron. Disconnect input leads and check for short or open between the terminal using an ohmmeter.

Checking with a high ohm scale, if the high voltage capacitor is normal, the meter will indicate continuity for a short time and should indicate an open circuit once the capacitor is charged. If the above is not the case, check the capacitor with an ohmmeter to see if it is shorted between either of the terminals and case.

If it is shorted, replace the capacitor.

## HIGH VOLTAGE RECTIFIER TEST

DISCHARGE THE HIGH VOLTAGE CAPACITOR BEFORE TOUCHING ANY OVEN COMPONENTS OR WIRING.

Isolate the rectifier from the circuit. Using the highest ohm scale of the meter, read the resistance across the terminals and observe, reverse the leads to the rectifier terminals and observe meter reading. If a short is indicated in both directions, or if an infinite resistance is read in both directions, the rectifier is probably defective and should be replaced.

### To Replace the High Voltage Capacitor:

1. DISCONNECT POWER and remove oven from wall.
2. Remove top covers and discharge cap.
3. Remove capacitor mounting strap (1 screw).
4. Disconnect and mark wires.

### To Replace Diode (Rectifier):

1. Follow steps 1 and 2 for HVC.
2. Remove 1 screw from case side of diode and pull connector off of the other side at the capacitor.

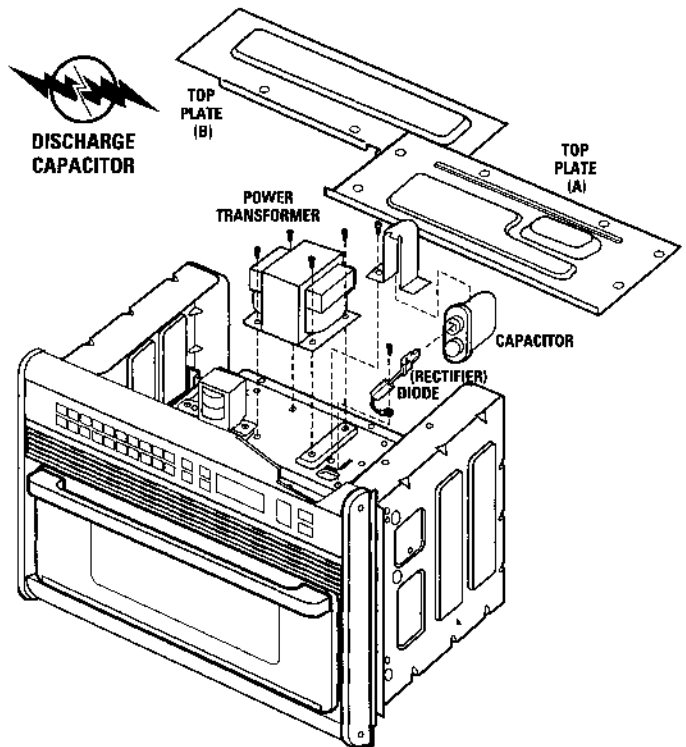
The varistor is located on the smart board and can be replaced without having to replace the board. A visual check to see if it has burned is usually all that is needed.

### To Replace the Varistor:

1. Follow steps 1 and 2 for HVC.
2. Clip old varistor wires at green body leaving two short leads.
3. Replacement varistor has push on terminals. Push these on the cut leads of the old varistor.
4. Check for tightness.

## POWER TRANSFORMER

The high voltage power transformer is mounted on a servicing tray with the cap, diode and low voltage transformer. The 4 screws that secure the power transformer come from the bottom up through the tray.





## POWER TRANSFORMER TEST

DISCHARGE THE HIGH VOLTAGE CAPACITOR BEFORE TOUCHING ANY OVEN COMPONENTS OR WIRING.

Disconnect the primary input terminals and measure the resistance of the transformer with an ohmmeter. Check for continuity of the coils with an ohmmeter. On the Rx 1 scale, the resistance of the primary coil should be less than 1 ohm and the resistance of the high voltage coil should be approximately 60 ohms; the resistance of the filament coils should be less than 1 ohm.

(HIGH VOLTAGES ARE PRESENT AT THE HIGH VOLTAGE TERMINAL, SO DO NOT ATTEMPT TO MEASURE THE FILAMENT AND HIGH VOLTAGE.)

### To Remove the Power Transformer:

1. DISCONNECT POWER, remove top covers, discharge capacitor and remove from wall.
2. Remove 4 screws that secure servicing tray and ground wire next to cap.
3. Disconnect and mark wire leads from power transformer and magnetron.
4. Lift servicing tray up and turn sideways towards low voltage transformer side.

**NOTE: Be careful not to damage smart board.**

5. Remove 4 screws that secure transformer to unit.
6. Remove (4) screws from the bottom holding transformer to base plate.

## LOW VOLTAGE TRANSFORMER

The control low voltage transformer is mounted to a service tray on top of the oven. It can be checked for continuity at the smart board.

### To Replace Low Voltage Transformer:

1. DISCONNECT POWER, pull oven from wall far enough to remove top front panel.
2. Remove 2 screws securing transformer.
3. Disconnect connector 1 and 10 from smart board.

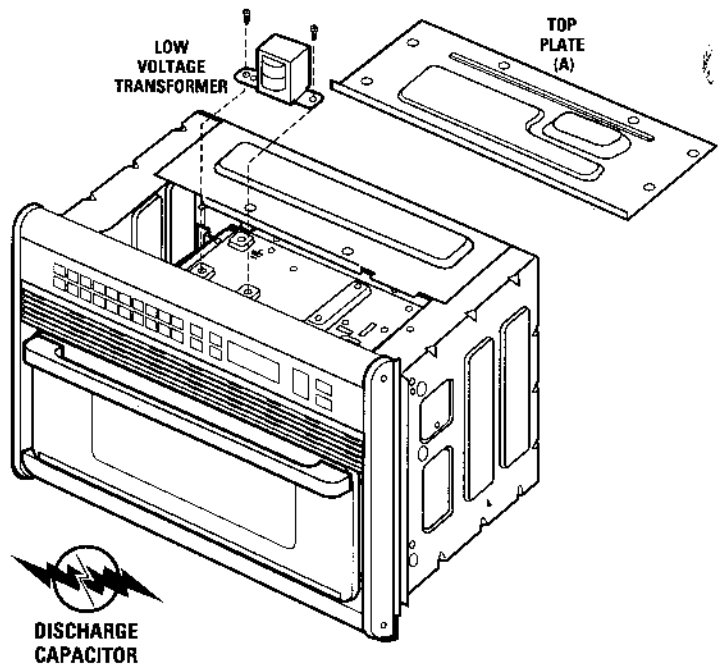
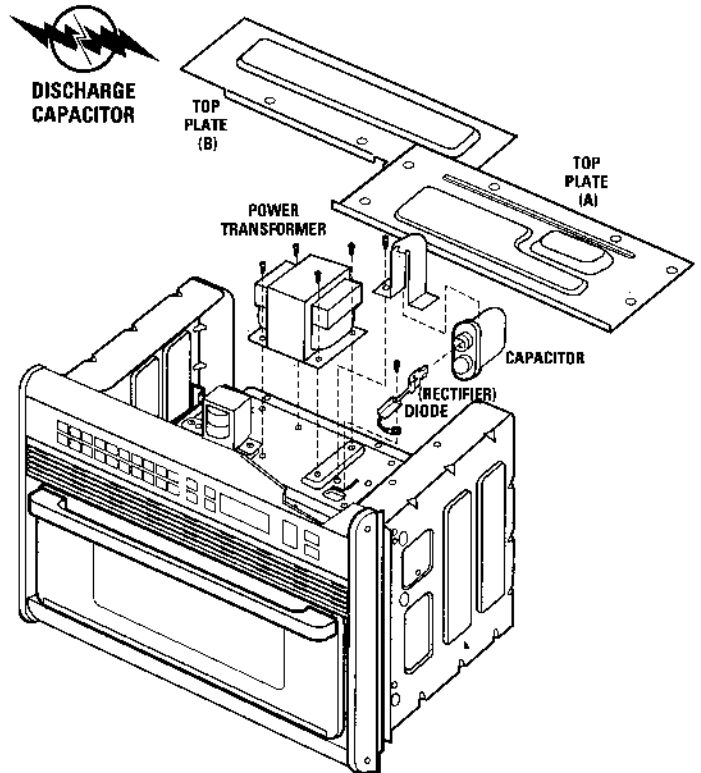
## COMPONENT TEST

### MAGNETRON ASSEMBLY TEST

*High voltages are present during the cook cycle, so extreme caution should be observed. Disconnect oven from power supply and discharge the high voltage capacitor before touching any oven components or wiring.*

To test for an open filament, isolate the magnetron from the high voltage circuit. A continuity check across the magnetron filament leads should indicate less than 1 ohm.

To test for a shorted magnetron, connect the ohmmeter leads between the magnetron filament leads and chassis ground. This test should indicate an infinite resistance. If there is little or low resistance the magnetron is grounded and must be replaced.



Power output of the magnetron can be measured by performing a water temperature rise test. This test should only be used if above tests do not indicate a faulty magnetron and there is no defect in the following components or wiring: Silicon rectifier, high voltage capacitor and power transformer.

### **MAGNETRON AND MAGNETRON TCO (O/L)**

The magnetron can be checked for an open or shorted tube. It is mounted to the waveguide by 4 screws. It also has a fuse assembly and a damper fan assembly attached to the top of it.

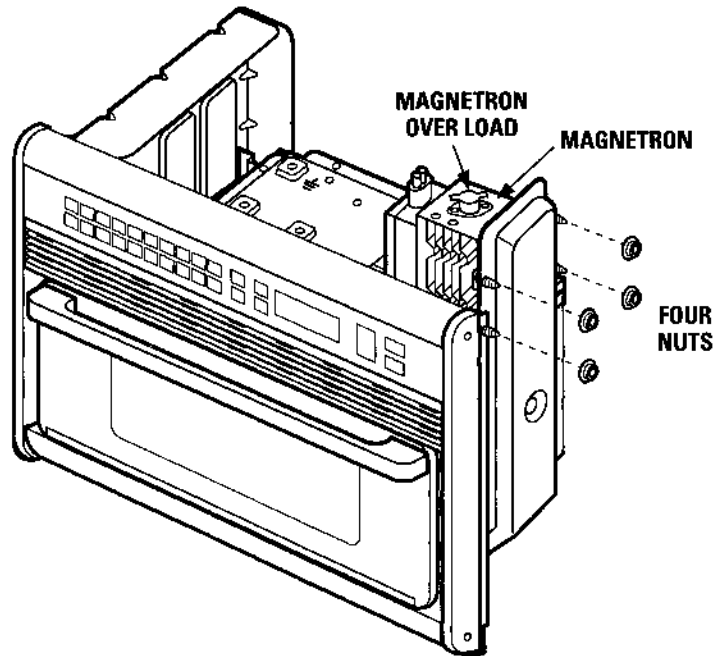
The magnetron tco will open at a temperature of 302°F and close at 140°F.

#### **To Replace the Magnetron TCO:**

1. DISCONNECT POWER, pull oven far enough to remove top front panel, and discharge capacitor.
2. Remove magnetron TCO leads and remove 2 screws that hold TCO.

#### **To Replace the Magnetron:**

1. Follow steps 1 and 2 for TCO removal.
2. Remove oven from wall, take rear top cover off and right side cover.
3. Disconnect and mark high voltage connectors to magnetron.
4. Remove metal damper duct (5 screws) on side of oven.
5. Remove fuse assembly located on top of magnetron tube.
6. Remove 1 screw from damper door assembly that is located on top of magnetron.
7. Remove 4 magnetron mounting nuts.
8. Slide magnetron sideways towards the middle to remove.



### **MAGNETRON FAN MOTOR**

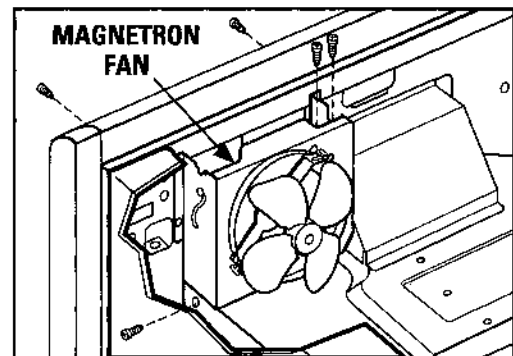
The magnetron fan motor drives a blade which draws in cool external air. This cool air is directed through the air vanes surrounding the magnetron and cools the magnetron assembly. Most of the air is then exhausted directly through the vents.

### **DAMPER DOOR MOTOR (CONVECTION MODELS ONLY)**

The damper door motor and assembly is located next to the magnetron tube at the back right rear of oven.

The damper door remains open during microwaving and it is closed for convection and combination cooking.

Damper door is closed during those cooking functions because the magnetron fan motor is always running when the oven is on. This would allow more air (cooler room air) to be blown into the oven cavity.



Closing this door also contributes to the pressurizing of the cavity. This will minimize the air mixture and help cut down on moisture build up.

**If the damper door did not close while convection cooking or combination cooking these two things could happen.**

1. More heated air could be pushed out the exhaust, the flame sensor could detect this and open.
2. If the oven doesn't come up to temperature as quickly as the micom thinks it should the display will show "ERROR".

#### **To Remove Damper Door Motor:**

1. DISCONNECT POWER, remove oven from wall, remove top covers and discharge capacitor.
2. Disconnect damper motor leads and remove 2 small screws that hold motor to top of metal assembly.
3. Separate motor from damper cam.
4. Remove 3 larger screws from damper bracket.
5. Install new motor through bracket and attach damper cam. Ensure that damper cam shaft is in damper slot.
6. Reassemble and don't forget the ground wire.

#### **HEATER TCO (THERMAL CUT-OUT) (CONVECTION MODELS ONLY)**

This TCO is located on the back wall next to the convection fan motor. It is a safety device that is responsible for not allowing runaway convection heater temperatures.

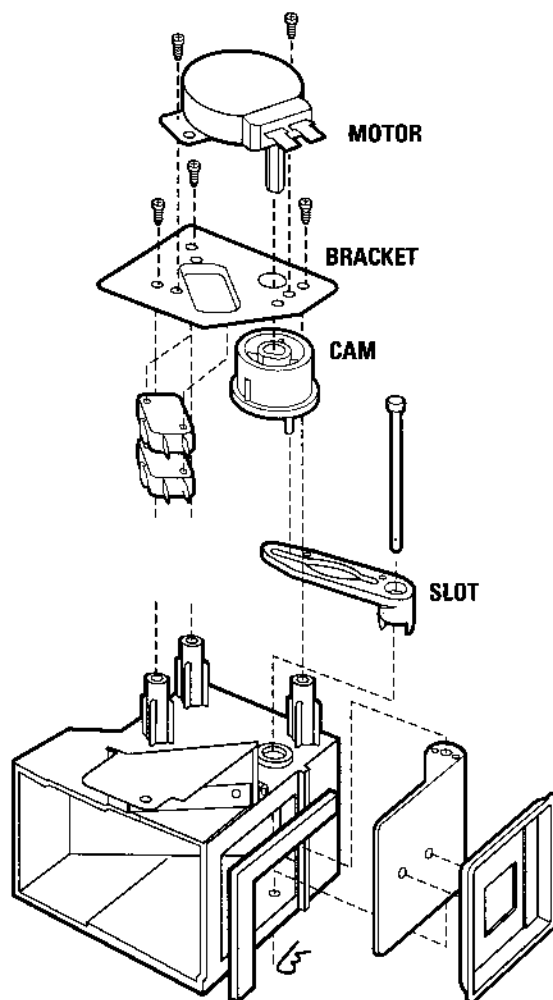
#### **To Remove Heater TCO:**

1. DISCONNECT POWER and remove oven from wall.
2. Remove top panels and discharge cap.
3. Remove screws that hold sides to back panel.
4. Remove outer back plate.
5. Rotate back panel up.
6. Disconnect leads to TCO and 2 screws that hold it in place.

#### **CONVECTION FAN AND HEATER (CONVECTION MODELS ONLY)**

The convection fan and heater are located at the rear of the oven. There are two fan blades on the convection motor shaft. One is for the movement of air across the heater (internal blade) and the outside fan blade is to cool the fan motor.

The convection heater has *two* helix heater coils contained in the sheath. The resistance should measure about 9-10 ohms because they are in parallel. If they measure 18-20 ohms then one of the heater helix coils would be open. This would cause not enough convection heat and heater would have to be replaced.



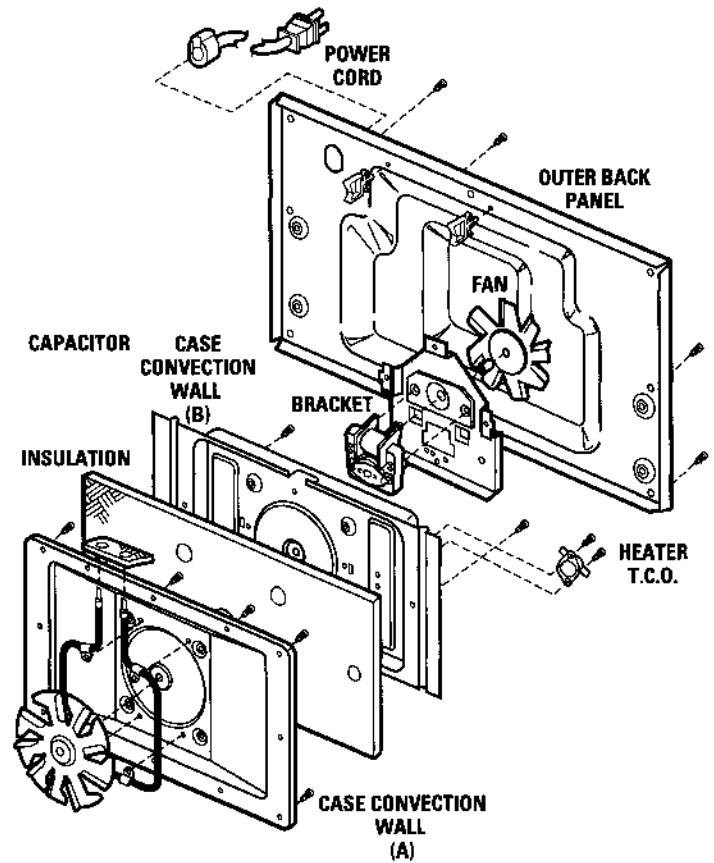
### To Remove Convection Heater:

1. Follow steps 1-5 for TCO removal.
2. Remove 2 nuts from each side of burner box, located in the middle.
3. Remove 4 screws across top of burner box and 5 screws across the bottom of the burner box.
4. Remove 4 screws holding heating element in place. Heater is now free.

### To Remove Convection Fan Motor:

1. Follow steps 1-3 for convection heater removal.
2. Remove LEFT threaded nut holding fan blade in place.
3. Remove 4 screws that are located inside of heating element.
4. Remove 3 screws at the other end of the assembly.
5. Remove the 2 screws holding the motor to the motor bracket.

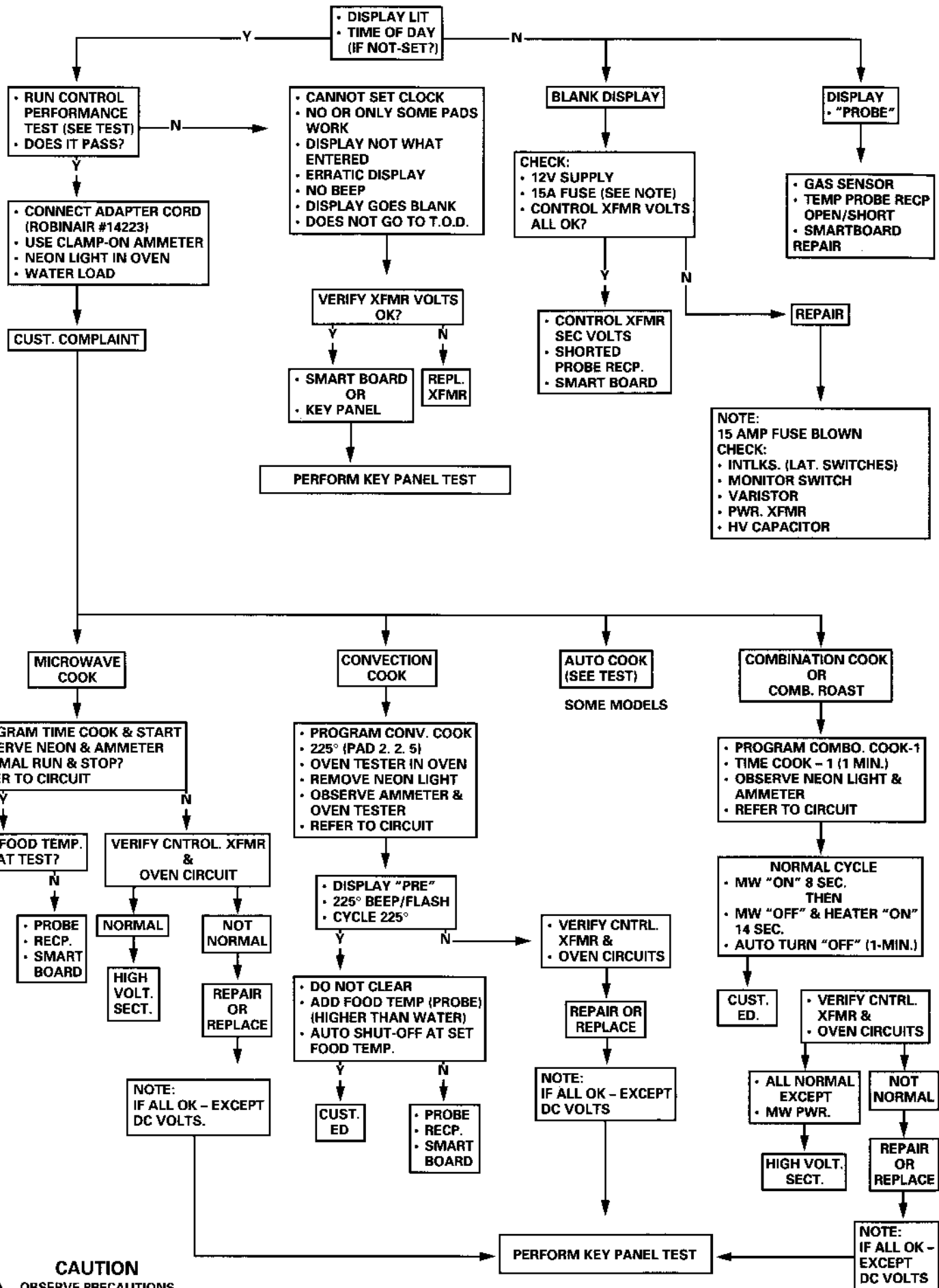
**NOTE: The spacer on the motor shaft goes between the outside fan blade and the burner box.**



### MICROWAVE PERFORMANCE TEST

1. Measure line voltage (loaded). This test is based on normal voltage variations of 105V to 130V. Low voltage will affect power and temperature rise.
2. Place (1) WB64X0073 beaker containing exactly one liter of water between 59°F and 75°F in the center of the shelf. Record the starting water temperature with an accurate glass thermometer (Robinair No. 12084).
3. Set at HIGH (Power).
4. Turn oven "ON" and time for exactly two minutes and three seconds.
5. At the end of time, record the water temperature. The difference between starting and ending temperatures is the temperature rise. Depending on line voltage, the normal minimum temperature rise should be:

Line Volts	Minimum Temperature Rise
105V	25°F.
120V	28°F.



**CAUTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
SENSITIVE  
DEVICES

# SERVICING

## TROUBLESHOOTING GUIDE

When troubleshooting the microwave oven, it is helpful to follow the Sequence of Operation in performing the checks. Many of the possible causes of trouble will require that a specific test be performed. These tests are given a procedure letter which will be found in the "Test Procedure" section.

**IMPORTANT:** If the oven becomes inoperative because of a blown monitor fuse in the monitor switch, primary interlock relay and secondary interlock switch circuit, check the monitor switch, primary interlock relay, door sensing switch and secondary interlock switch before replacing the monitor fuse.

CONDITION	TEST PROCEDURE	PROBLEM	POSSIBLE CAUSE AND DEFECTIVE PARTS																			
			Short in Power Cord	Short or Open Wiring	Magnetron	Power Transformer	Rectifier Assembly	H.V. Capacitor	Primary Interlock Switch	2nd Interlock Switch	Monitor Switch	Monitor Fuse	Temperature Fuse or Thermal Cut-out	Control Unit	Oven Lamp or Socket	Cooling Fan Motor	Stirrer Fan	Wrong Operation	Low Voltage	Dirty Oven Cavity	Sensor Assembly	Turntable Motor
OFF CONDITION		Home fuse blows when power cord is plugged into wall receptacle	●	●																		
		Microwave fuse blows when power cord is plugged into wall receptacle.		●						●												
		All letter and indicator lights do not appear in display when power cord is first plugged into wall outlet.		●						●	●	●	●									
		Display does not operate properly when CLEAR/OFF key is touched. (Buzzer should sound and time of day should appear in display.)							●				●									
		Oven lamp does not light with door opened.		●							●	●	●	●								
COOKING CONDITION		Door closed, oven lamp and cooling fan motor on can not clear.							●													
		Oven lamp does not light in cool cycle or when door is opened.										●										
		Oven lamp does not light at all.		●								●	●									
		Oven lamp lights but fan motor or turntable motor do not operate.		●										●							●	
		Oven does not go into cook cycle when START pad is touched.		●					●	●	●	●	●									
		Oven seems to be operating but little or no heat is produced in oven load. (Food is incompletely cooked or not cooked at all at end of cook cycle.)		●	●	●	●	●	●													
		Oven produces extremely uneven heating in cook cycle.		●										●	●	●	●	●	●		●	
		Oven does not cook properly when programmed for Cooking Power 5 mode. (Operates properly on Cooking Power 10 mode.)		●									●									
SENSOR COOKING CONDITION		Oven is in the sensor cooking condition but sensor does not end, or sensor turns off about max. 30 min. after start. When a cup of water is heated by sensor, the oven does not shut off when water is boiling.										●								●		

--- HARNESS LEADS  
 --- PARTS LEADS

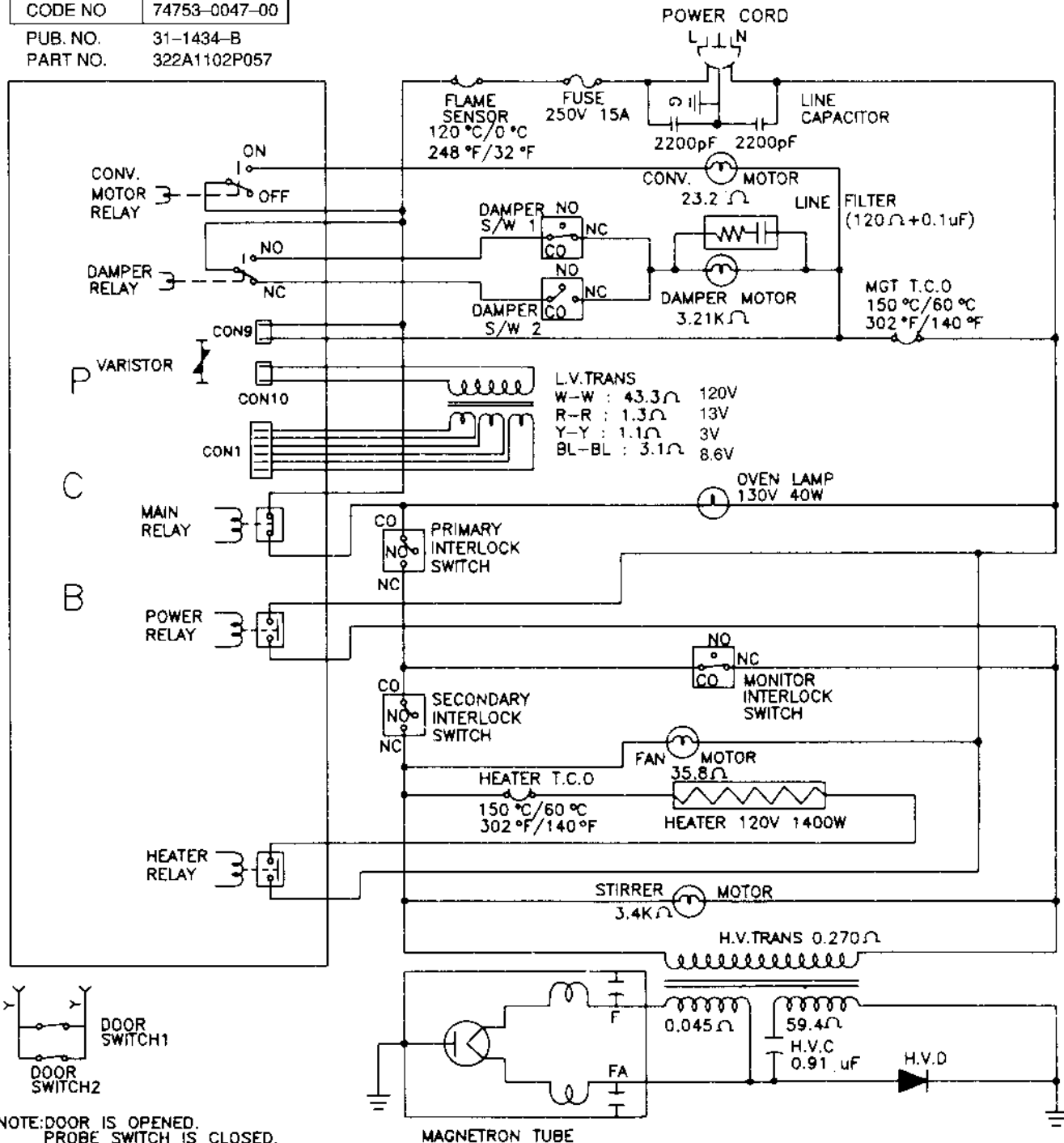
# WIRING DIAGRAM

COLOR	SYMBOL
WHITE	W
BLACK	B
RED	R
BLUE	BL
ORANGE	O
YELLOW	Y
GREEN	G
BROWN	BR
GRAY	GY

## WARNING

POWER MUST BE DISCONNECTED  
 BEFORE SERVICING THIS APPLIANCE

MODEL NO	ZMC3000B ZMC3000W JIBC2000B JIBC2000W
CODE NO	74753-0047-00
PUB. NO.	31-1434-B
PART NO.	322A1102P057



NOTE: DOOR IS OPENED,  
 PROBE SWITCH IS CLOSED.

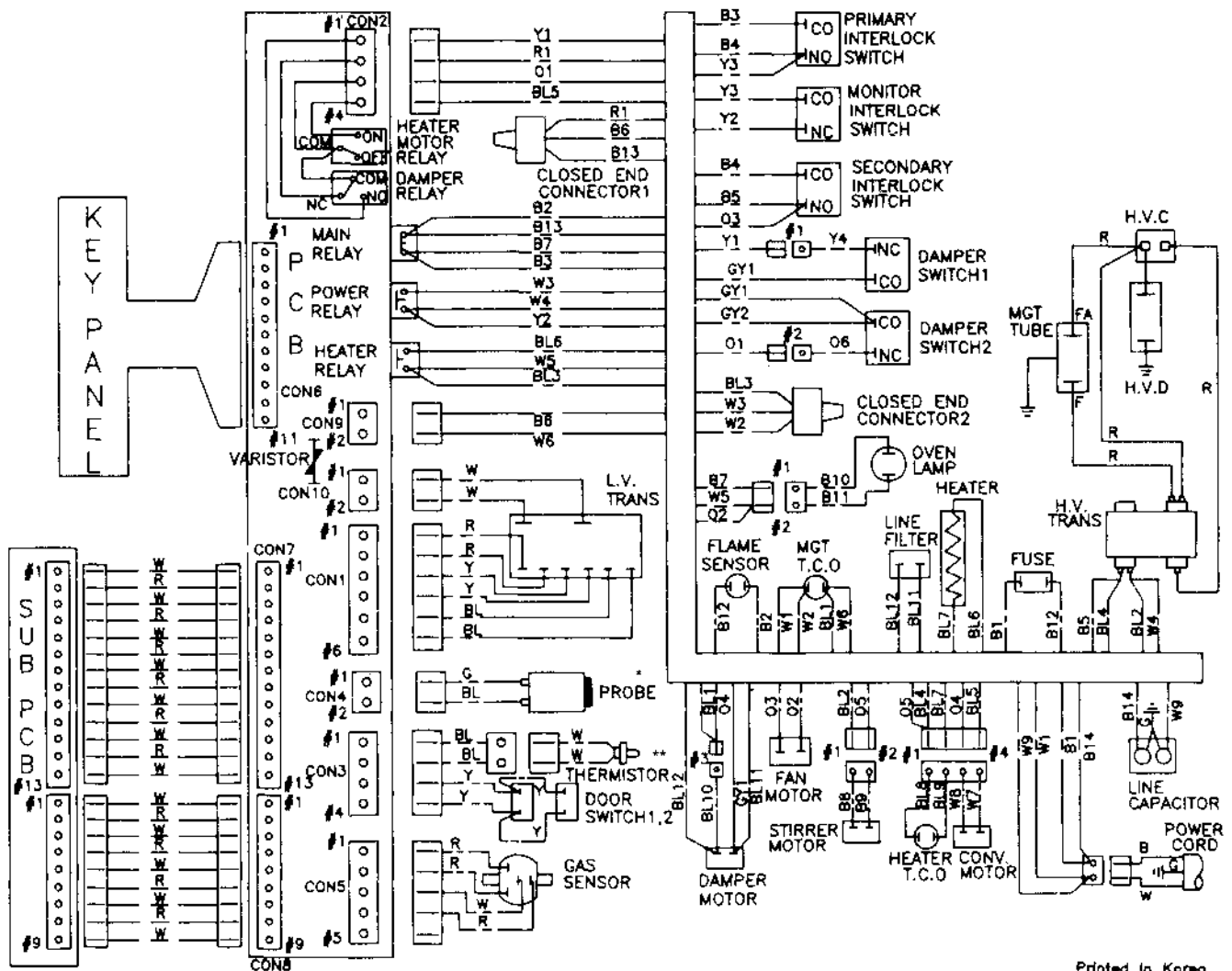
--- HARNESS LEADS  
 --- PARTS LEADS

# WIRING DIAGRAM

**WARNING**  
 POWER MUST BE DISCONNECTED  
 BEFORE SERVICING THIS APPLIANCE

COLOR	SYMBOL
WHITE	W
BLACK	B
RED	R
BLUE	BL
ORANGE	O
YELLOW	Y
GREEN	G
BROWN	BR
GRAY	GY </td

MODEL NO	ZMC3000B ZMC3000W JIBC200B JIBC200W
CODE NO	74753-0047-00
PUB. NO.	31-1434-B
PART NO.	322A1102P057



Printed in Korea

\* Probe resistance will be approximately 60,000Ω, depends on ambient temperature.

\*\* Thermistor (oven sensor) should measure more than 60,000Ω resistance cold (room temperature)



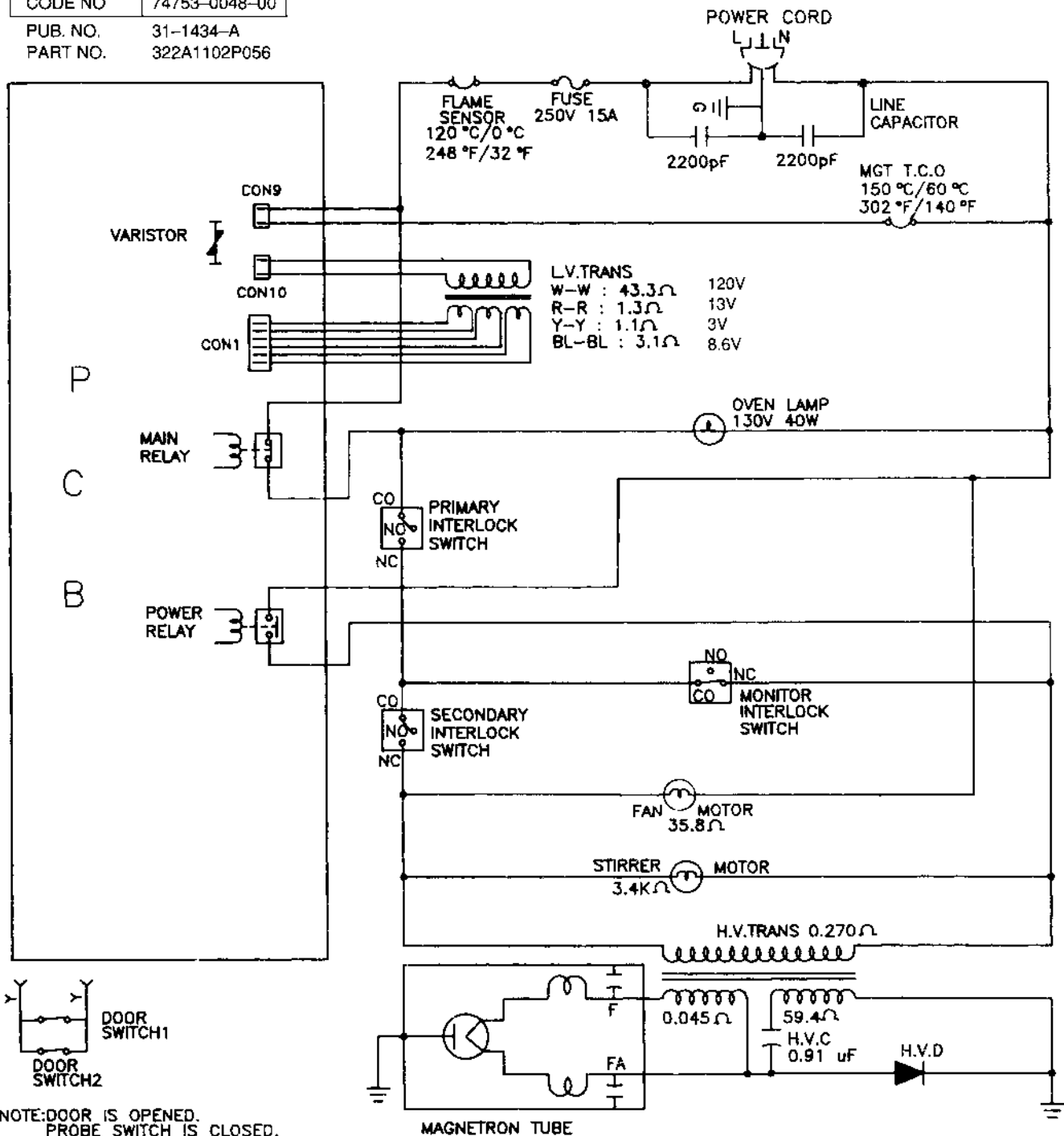
- - - HARNESS LEADS  
 ——— PARTS LEADS

# WIRING DIAGRAM

COLOR	SYMBOL
WHITE	W
BLACK	B
RED	R
BLUE	BL
ORANGE	O
YELLOW	Y
GREEN	G
BROWN	BR
GRAY	GY

**WARNING**  
 POWER MUST BE DISCONNECTED  
 BEFORE SERVICING THIS APPLIANCE

MODEL NO	ZMW2000W ZMW2000B JEB100W JEBC100B
CODE NO	74753-0048-00
PUB. NO.	31-1434-A
PART NO.	322A1102P056



--- HARNESS LEADS  
 --- PARTS LEADS

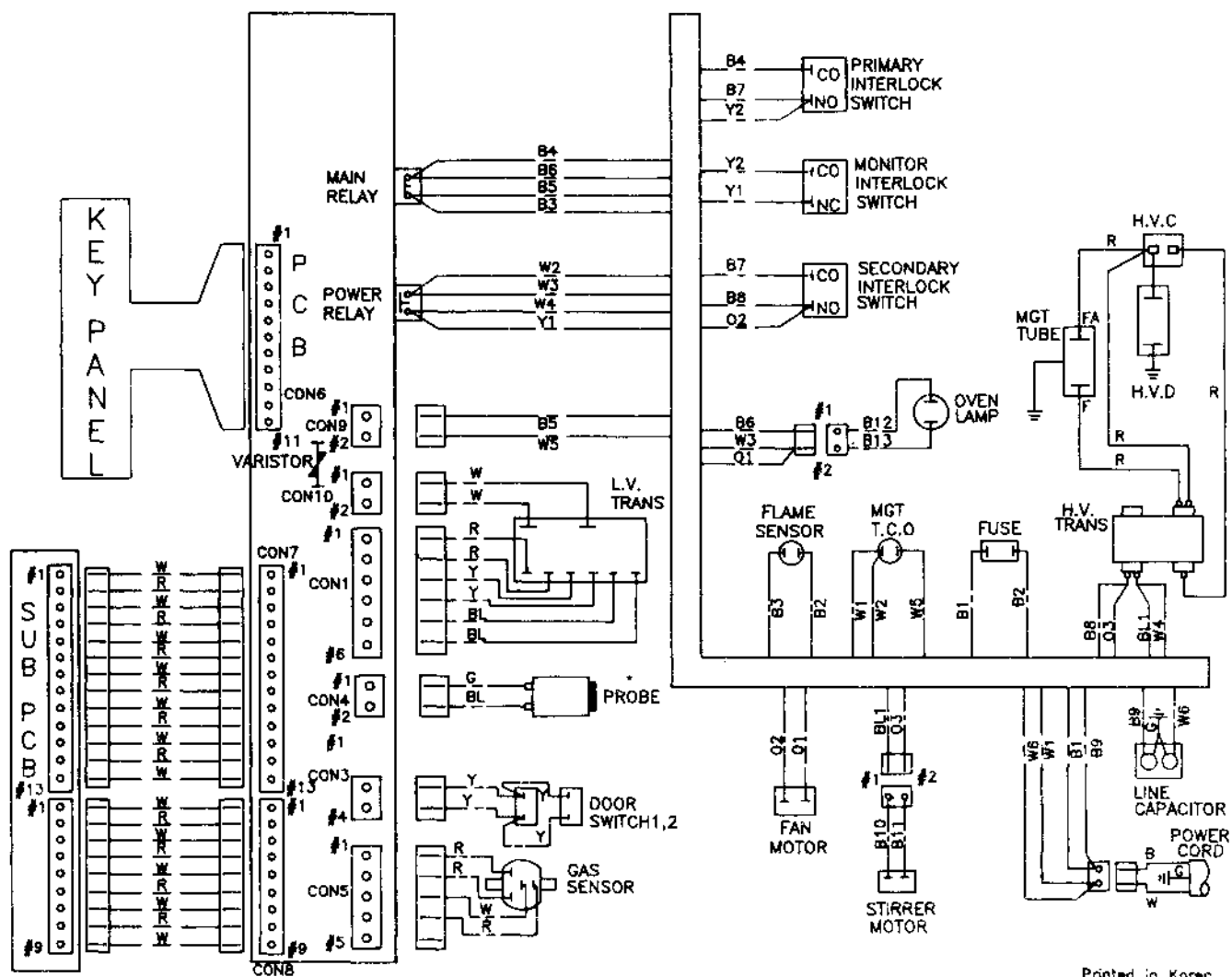
# WIRING DIAGRAM

## WARNING

POWER MUST BE DISCONNECTED BEFORE SERVICING THIS APPLIANCE

COLOR	SYMBOL
WHITE	W
BLACK	B
RED	R
BLUE	BL
ORANGE	O
YELLOW	Y
GREEN	G
BROWN	BR
GRAY	GY

MODEL NO	ZMW2000W ZMW2000B JEB100W JEB100B
CODE NO	74753-0048-00
PUB. NO.	31-1434-A
PART NO.	322A1102P056

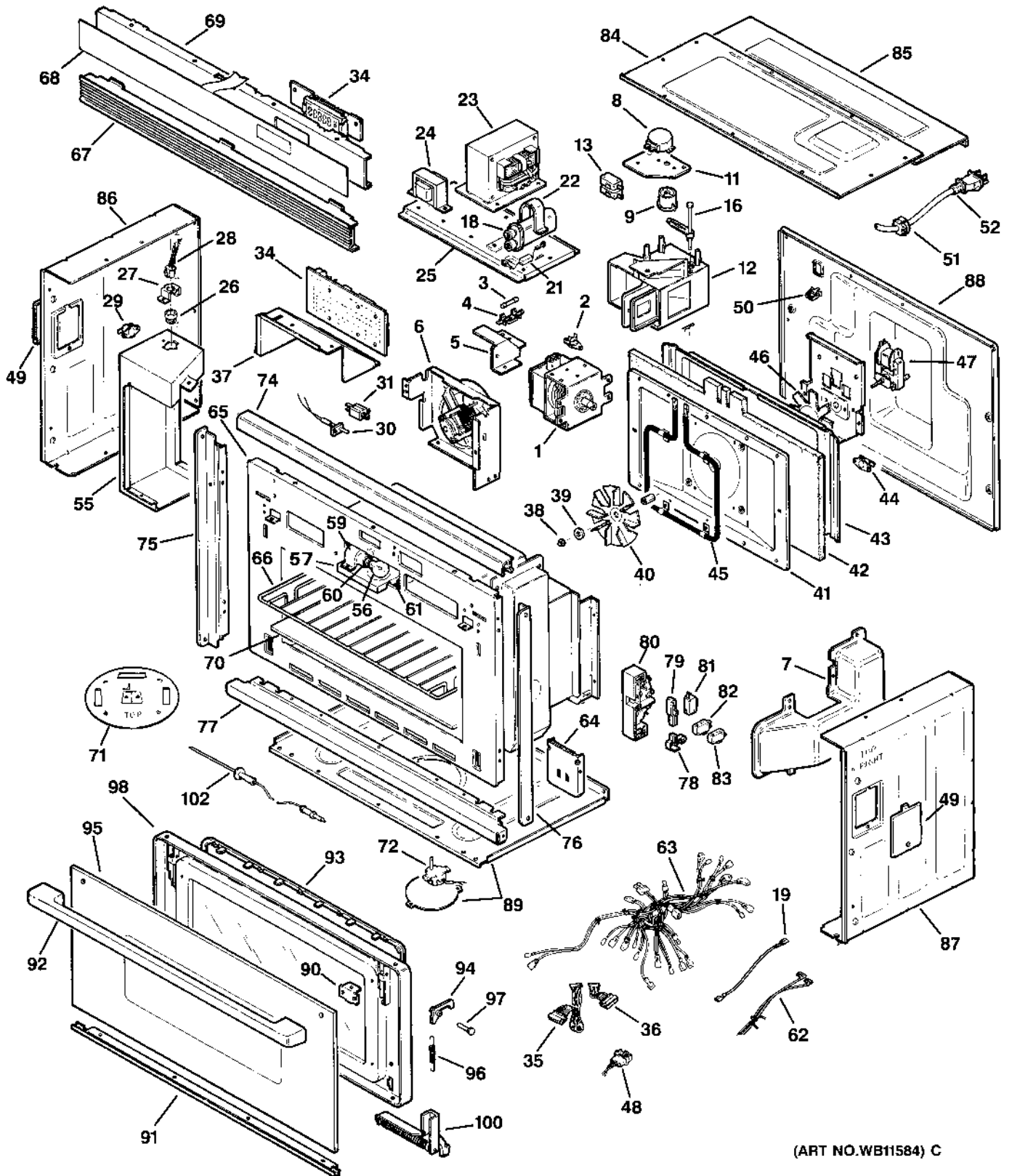


Printed in Korea

\*Probe resistance will be approximately 60,000Ω, depends on ambient temperature.

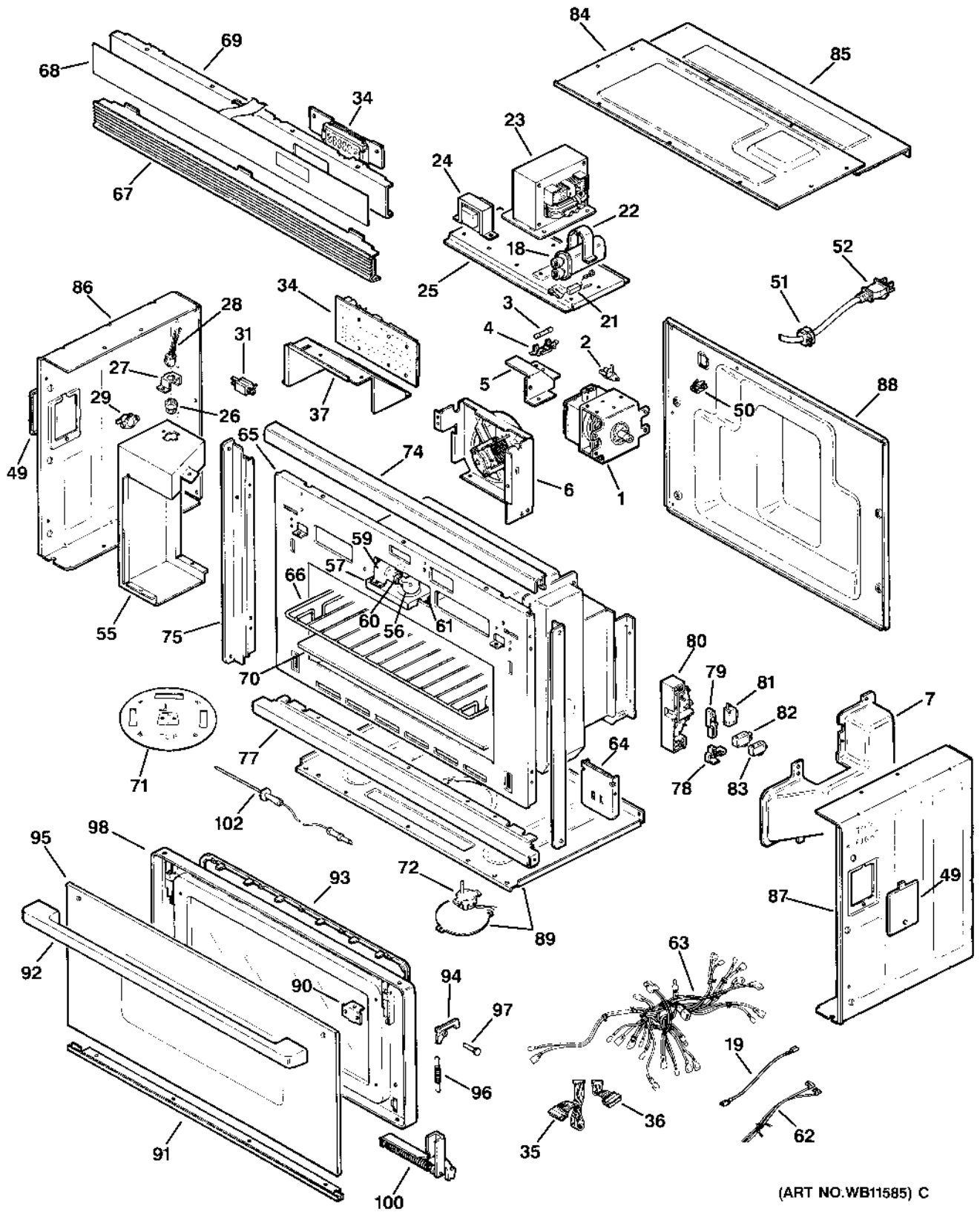
# PARTS IDENTIFICATION

## MODELS ZMC3000B01, ZMC3000W01



(ART NO. WB11584) C

# PARTS IDENTIFICATION MODELS ZMW2000B01, ZMW2000W01

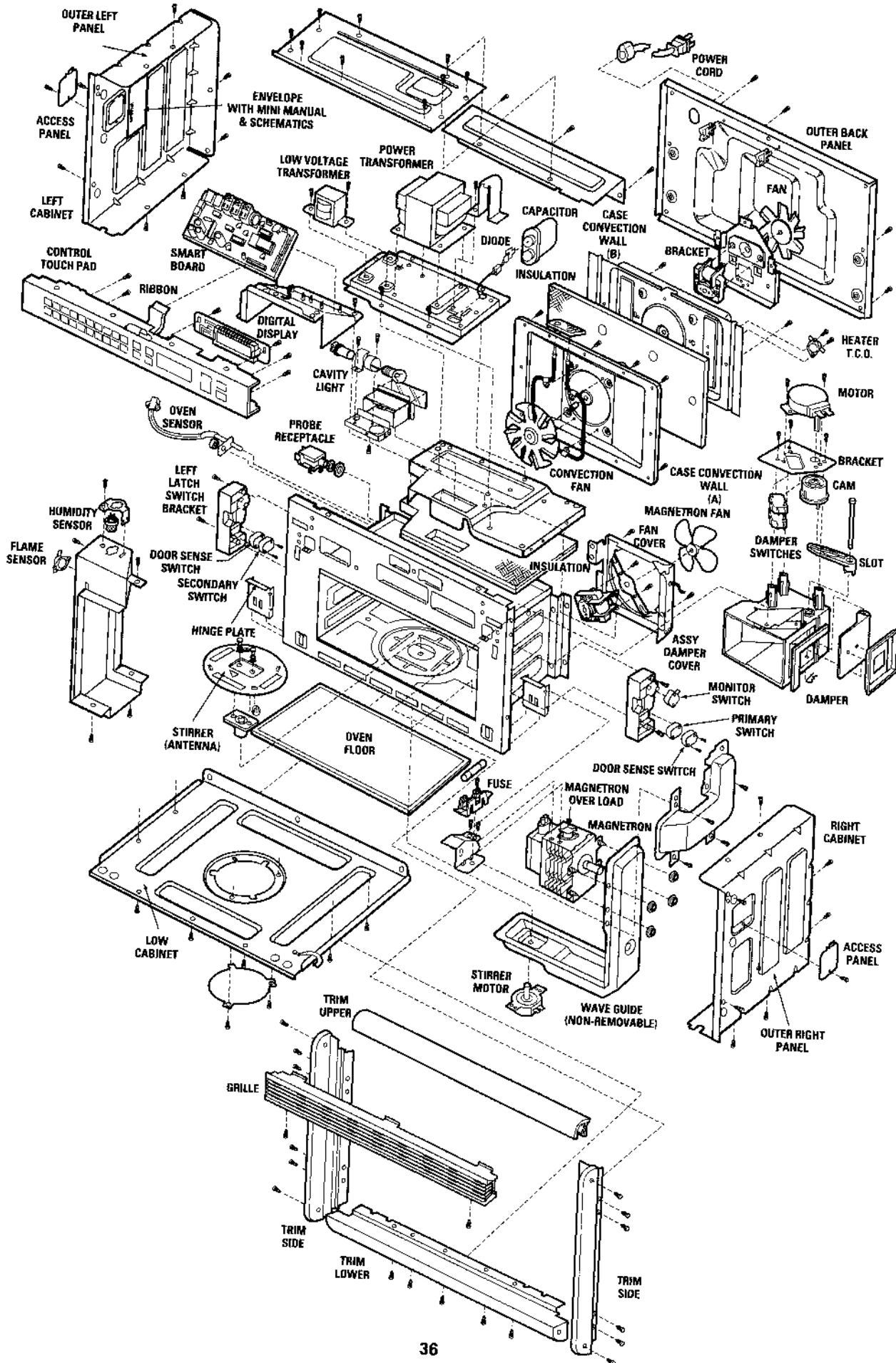


(ART NO. WB11585) C

Ref. No.	Part No.	Part Description	ZMC3000B01	ZMC3000W01	ZMW2000B01	ZMW2000W01
1	WB27X0764	Magnetron	1	1	1	1
2	WB24X0805	Thermo S/W	1	1	1	1
3	WB27X0696	Fuse	1	1	1	1
4	WB06X0234	Holder Fuse	1	1	1	1
5	WB06X0339	Cover-Mgt	1	1	1	1
6	WB26X0162	Fan Motor	1	1	1	1
7	WB06X0340	Air Guide	1	1	1	1
8	WB26X0163	Synch Motor	1	1	—	—
9	WB01X1470	Damper Cam	1	1	—	—
10	WB01X1471	Damper Plate	1	1	—	—
11	WB06X0341	Bkt Damper Motor	1	1	—	—
12	WB06X0342	Cover Damper	1	1	1	1
13	WB24X0806	Sensitive Switch	2	2	1	1
14	WB01X1472	Damper Lever	1	1	—	—
16	WB01X1473	Pin Plate Damper	1	1	—	—
17	WB18X0482	Wire Harness "I" Damper	1	1	—	—
18	WB27X0585	Capacitor – HV	1	1	1	1
19	WB18X0455	Lead Wire	1	1	1	1
20	WB18X0483	Lead Wire "B"	1	1	1	1
21	WB27X5070	Rectifier	1	1	1	1
22	WB06X0343	Bkt – HVC	1	1	1	1
23	WB27X0600	Transformer – HV	1	1	1	1
24	WB27X0870	L.V.T.	1	1	1	1
25	WB06X0344	Bkt – HVT	1	1	1	1
26	WB06X0248	Sensor Gas	1	1	1	1
27	WB06X0345	Bkt – Cover	1	1	1	1
28	WB18X0484	Wire Harness "H" Sensor	1	1	1	1
29	WB24X0807	Thermostat Switch	1	1	1	1
30	WB27X0877	Thermistor	1	1	—	—
31	WB08X0302	Receptacle – Probe	1	1	1	1
32	WB18X0485	Wire Harness "G" Probe	1	1	1	1
34	WB27X0871	Smartboard	1	1	—	—
	WB27X0872	Smartboard	—	—	1	1
35	WB18X0486	Wire Harness "E"	1	1	1	1
36	WB18X0487	Wire Harness "F"	1	1	1	1
37	WB06X0346	Bkt – PCB	1	1	1	1
38	WB01X1416	Nut – Special Left Hand Th	1	1	—	—
39	WB01X1415	Washer – Conv. Fan	2	2	—	—
40	WB06X0028	Fan – Convection	1	1	—	—
41	WB53X0296	Case – Conv. "A"	1	1	—	—
42	WB53X0294	Adiabatic – Convection	1	1	—	—
43	WB53X0295	Case – Conv. "B"	1	1	—	—
44	WB21X0486	Thermostat – Magnetron	1	1	—	—
45	WB44X0239	Heater Sheathed	1	1	—	—
46	WB06X0347	Cooling Fan	1	1	—	—
47	WB26X0164	Conv. Motor	1	1	—	—
48	WB18X0488	Wire – Harness "D"	1	1	—	—
49	WB53X0306	Cover – Access	2	2	2	2
50	WB02X9330	Wire Saddle	2	2	2	2
51	WB01X1474	Bushing – Cord	1	1	1	1
52	WB18X0489	Power – Cord	1	1	1	1
53	WB53X0297	Base – Top Plate	1	1	1	1
54	WB53X0298	Adiabatic – Top	1	1	—	—
55	WB06X0348	Duct Exhaust	1	1	1	1
56	WB06X0015	Oven – Lamp	1	1	1	1
57	WB04X0144	Cover – Oven Lamp	1	1	1	1
58	WB04X0145	Bkt – Lamp	1	1	1	1
59	WB04X0146	Holder Lamp	1	1	1	1
60	WB08X0275	Socket Lamp	1	1	1	1
61	WB36X0867	Glass – Lamp	1	1	1	1

Ref. No.	Part No.	Part Description	ZMC3000B01	ZMC3000W01	ZMW2000B01	ZMW2000W01
62	WB18X0490	Wire – Harness “B” Lamp	1	1	1	1
63	WB18X0491	Wire – Harness “A” Main	1	1	—	—
	WB18X0492	Wire – Harness “A” Main	—	—	1	1
64	WB04X0147	Bkt – Hinge	2	2	2	2
65	NOT AVAIL	Cavity	1	1	1	1
66	WB48X0225	Wire Rack	1	1	1	1
67	WB07X1956	Black Grill	1	—	1	—
	WB07X1955	White Grill	—	1	—	1
68	WB27X0873	Key Panel Asm WH	—	1	—	—
	WB27X0874	Key Panel Asm BLK	1	—	—	—
68	WB27X0875	Key Panel Asm WH	—	—	—	1
	WB27X0876	Key Panel Asm BLK	—	—	1	—
69	WB04X0148	Bkt – Panel	1	1	1	1
70	WB49X0672	Bottom Tray Asm	—	—	1	1
	WB49X0678	Ceramic Tray Asm	1	1	—	—
71	WB06X0349	Stirrer Blade Asm	1	1	1	1
72	WB26X0154	Stirrer Motor	1	1	1	1
73	WB18X0493	Wire – Harness “C” Stirrer	1	1	1	1
74	WB07X1958	Trim Upper Black	1	—	1	—
	WB07X1957	Trim – Upper White	—	1	—	1
75	WB07X1960	Trim Left Black	1	—	1	—
	WB07X1959	Trim – Left White	—	1	—	1
76	WB07X1962	Trim Right Black	1	—	1	—
	WB07X1961	Trim – Right White	—	1	—	1
77	WB07X1964	Trim Lower Black	1	—	1	—
	WB07X1963	Trim – Lower White	—	1	—	1
78	WB04X0149	Lever Side “A”	2	2	2	2
79	WB04X0150	Lever Side “B”	1	1	1	1
80	WB04X0151	Body – Latch	2	2	2	2
81	WB24X0428	Switch Primary & Monitor	1	1	1	1
82	WB24X0429	Switch – Monitor	2	2	2	2
84	WB53X0299	Cabinet – Upper “A”	1	1	1	1
85	WB53X0300	Cabinet – Upper “B”	1	1	1	1
86	WB53X0301	Cabinet – Left	1	1	1	1
87	WB53X0302	Cabinet – Right	1	1	1	1
88	WB53X0303	Cabinet – Back	1	1	1	1
89	WB53X0304	Cabinet – Lower	1	1	1	1
90	WB14X0177	Bkt – Handle	2	2	2	2
91	WB04X0152	Bkt – Door White	—	1	—	1
	WB04X0153	Bkt – Door BLK	1	—	1	—
92	WB15X0312	Handle Door Black	1	—	1	—
	WB15X0311	Handle – Door White	—	1	—	1
93	WB55X0830	Inner Door Frame	1	1	1	1
94	WB04X0154	Door – Key	2	2	2	2
95	WB36X0869	Outer Door Glass BLK	1	—	1	—
	WB36X0868	Outer Door Glass White	—	1	—	1
96	WB01X1475	Spring Key	2	2	2	2
97	WB02X9766	Pin – Door Key	2	2	2	2
98	WB55X0831	Liner & Choke Asm	1	1	—	—
	WB55X0832	Liner & Choke Assembly	—	—	1	1
99	WB53X0305	Adiabatic – Door	1	1	—	—
100	WB04X0155	Latch Asm Left	1	1	—	—
	WB04X0156	Asm Latch Left	—	—	1	1
101	WB04X0157	Latch Asm Right	1	1	—	—
	WB04X0158	Asm Latch Right	—	—	1	1
102	WB20X0159	Probe (Gray)	1	1	1	1
9999	31-1434	Mini-Manual	1	1	—	—
	49-8329	Use & Care Booklet	1	1	—	—
9999	49-8328	Use & Care Manual	—	—	1	1
	31-1434	Mini Manual	—	—	1	1

# PARTS DISASSEMBLY



# DOOR DISASSEMBLY

