



*GE Consumer Service Training*

# Technician Manual

## **GE Countertop Microwave Ovens 0.9 Turntable 800 & 1000 Watt Models**

GE 800 Watts  
JES933PN/WN  
JE940PN/WN/GN

GE 1000 Watts  
JE950GN

## **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.

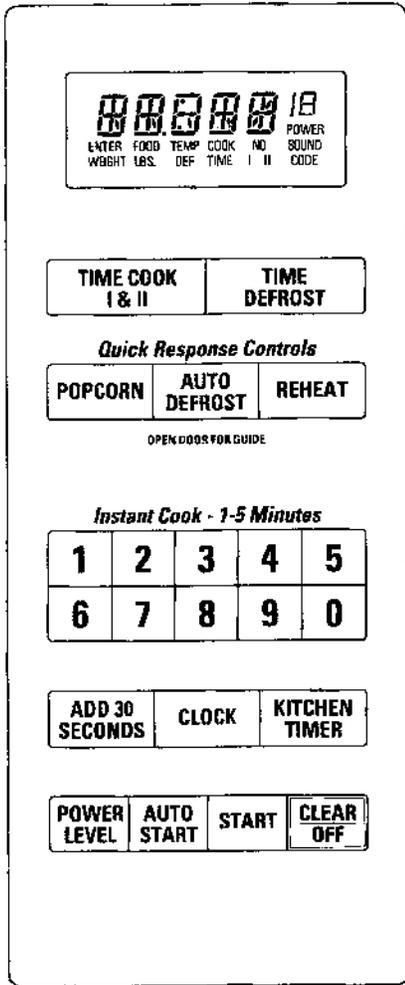
### **MICROWAVE LEAKAGE TEST**

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.

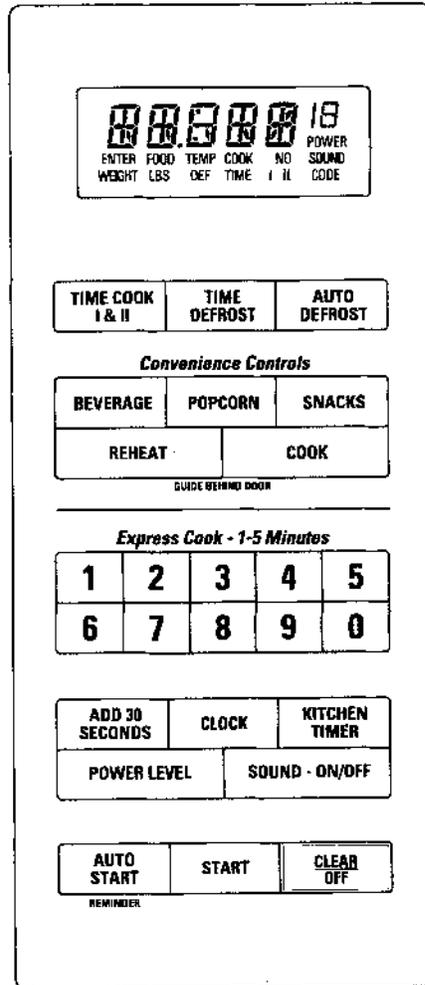
**NOTE: MAXIMUM ALLOWABLE LEAKAGE IS 5MW/CM<sup>2</sup>. 4MW/CM<sup>2</sup> IS USED TO ALLOW FOR MEASUREMENT AND METER ACCURACY.**

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.

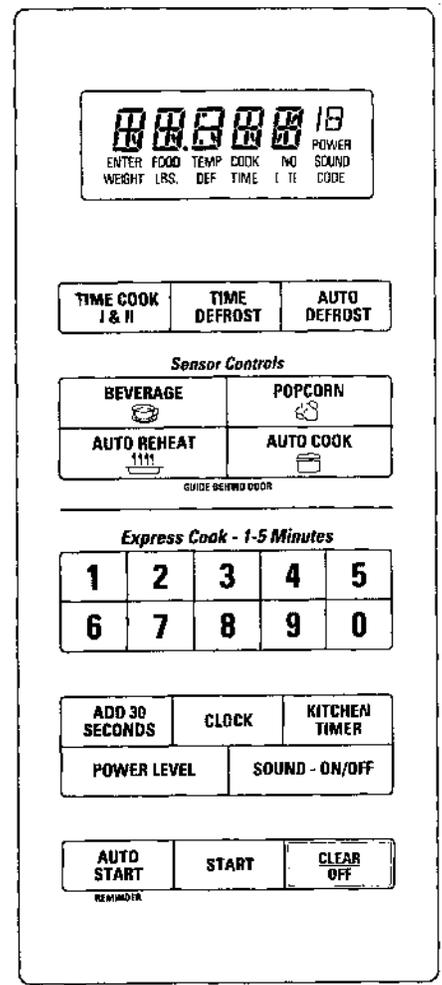
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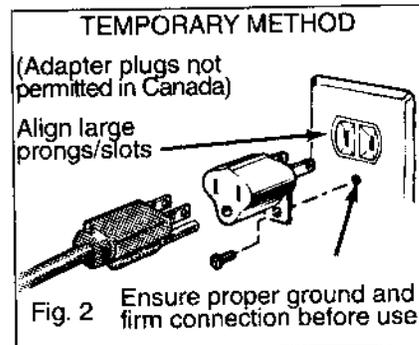
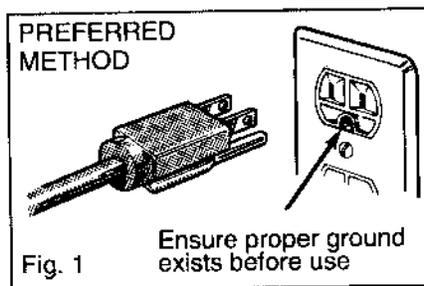
JES933(N)



JE940(N)



JE950GN



**Plug Installation**

Ensure proper ground exists before plugging in microwave oven. See Fig. 1 and Fig. 2.

## 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.

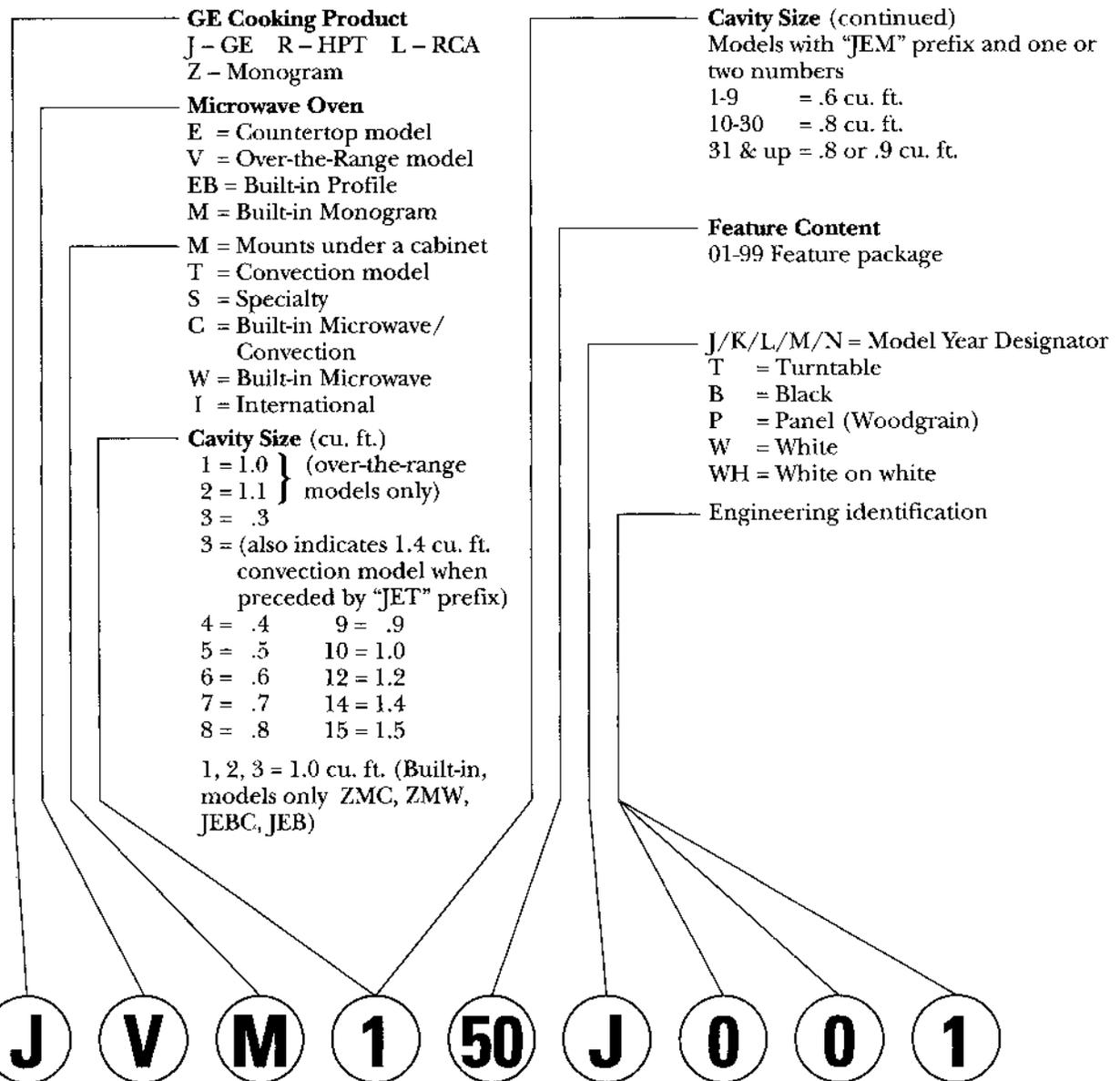
Materials with a high moisture content, like most foods, will absorb microwave energy. As the microwave energy enters the food, the food molecules align themselves with the microwave energy. Because the microwaves are changing polarity every half cycle, the food molecules are changing direction every 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	JES933(N)	JE940(N)	JE950GN
TIME COOK I & II	.	.	.
TIME DEFROST	.	.	.
AUTO DEFROST	.	.	.
POWER LEVEL	.	.	.
KITCHEN TIMER	.	.	.
CLOCK PAD	.	.	.
POPCORN (S=SENS T=TIMED)*	T	T	S
QUICK REHEAT: BEVERAGE*, SNACKS, COOK		.	
EXPRESS COOK* (1-5)	.	.	.
REHEAT	.	.	.
NUMBER PADS	.	.	.
ADD 30 SECONDS*	.	.	.
SENSOR CONTROLS: BEVERAGE*, AUTO REHEAT*, AUTO COOK			.
SOUND ON/OFF		.	.
CHILD LOCKOUT	.	.	.
START	.	.	.
AUTO START	.	.	.
CLEAR/OFF	.	.	.
OVEN CAVITY LIGHT	.	.	.
CLOCK	.	.	.
WARRANTY (CARRY IN)	1 YR	1 YR	1 YR
WARRANTY ON MAG-PART ONLY	5 YR	10 YR	10 YR
LINE CURRENT	12 AMPS	12 AMPS	14 AMPS
LINE WATTS	1200	1200	1600
MAG POWER (IEC-705)	800 W	800 W	1000 W
TOUCH CONTROL SYSTEM	.	.	.
CLOCK 1:00-12:59	.	.	.
TIMER (0-99 MIN 99 SEC)	.	.	.
CAVITY DIMENSIONS (WxHxD)	← 11-3/10" x 7-1/2" x 11-4/5" →		
CASE DIMENSIONS (WxHxD)	← 17-1/2" x 10-3/4" x 12-4/5" →		
NET WEIGHT	32	32	34

\*INSTANT ON

# Reading the Identification Tag

Every GE microwave oven has a model identification tag – a nameplate – attached. The location of attachment varies from one unit to another. This nameplate, when properly read, gives you specific information on that particular model.



**GENERAL ELECTRIC CO. LOUISVILLE, KY 40225** UL LISTED 725F  
E70049

HOUSEHOLD MICROWAVE OVEN

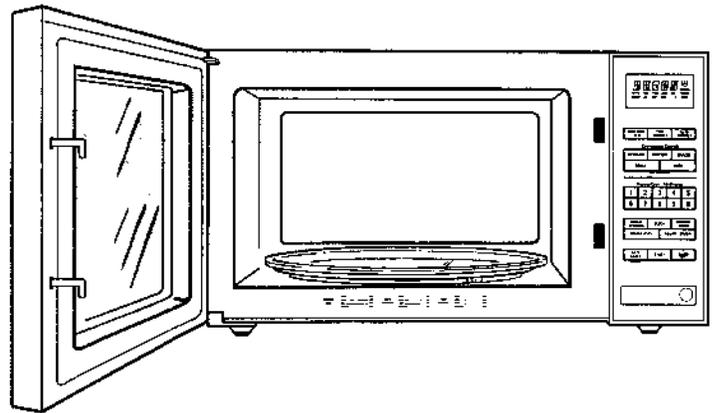
MODEL NO. <b>J VM150J 001</b>	SERIAL NO. <b>LD940719S</b>	MANUFACTURED <b>JUNE – 1990</b>
KW: 1.35 VAC/HZ: 120/60	WARRANTY: 1 YEAR FULL	FCC ID A3L9QN150J GENERAL ELECTRIC MADE IN KOREA

THIS PRODUCT COMPLIES WITH DHHS RULES 21 CFR SUB CHAPTER J

## 0.9 TURNTABLE COUNTERTOP MICROWAVE

An upgraded redesign of the 0.9 cu. ft. countertop microwave will be introduced in the GE model line late in the summer of 1994. The non-sensor version JES933(N) and JE940(N) will have an IEC cooking wattage rating of 800 watts. The sensor version JE950GN will be rated at 1000 watts (IEC).

These units will weigh approximately 33 pounds.



## FEATURES DESCRIPTION

### POWER UP

At power up or after a power interruption the display lights all segments and function indicator words for 15 seconds, and then "RESET".

### CLOCK

To set the clock, touch **CLOCK** and enter the time of day. The display will flash "TIME". Touch **START** (or **CLOCK**) to start the clock.



### CHILD LOCK-OUT

The control panel can be locked out to prevent the microwave from being accidentally started.

#### To Lock the Control:

- Press and hold the **CLEAR/OFF** pad for about 3 seconds.
- The display will beep twice and show **LOCK** and then return to the time of day.
- A small "1" will be displayed to indicate that the control panel is locked.
- If control is attempted to be used "LOCK" will be displayed then return to time of day.



#### To Unlock the Control:

- Press and hold the **CLEAR/OFF** pad for about 3 seconds.
- Control will beep twice and return to time of day.

### SOUND ON/OFF

This feature will turn the beeper on or off.

- Touch the **SOUND ON/OFF** pad once for sound.
- Touch the pad again for no sound. If the sound has been turned off, the display will show "OFF" and then return to the time of day. A small "NO SOUND" will be displayed.



### CLEAR/OFF

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



## POWER LEVELS AND DUTY CYCLE

The control has 10 power levels, 1-10. The chart indicates the time in seconds that the magnetron is on and off during the 30 second duty cycle.

POWER LEVEL	BEST USES
High 10	Fish, bacon, vegetables, boiling liquids.
Med-High 7	Gentle cooking of meat and poultry; baking casseroles and reheating.
Medium 5	Slow cooking and tenderizing such as stews and less tender cuts of meat.
Low 3	Defrosting without cooking; simmering; delicate sauces.
Warm 1	Keeping food warm without overcooking; softening butter.

Power Level	Mag On	Mag Off
1	4	26
2	7	23
3	10	20
4	13	17
5	16	14
6	19	11
7	22	8
8	25	5
9	28	2
10	30	0

## COOKING COMPLETE REMINDER

After the completion of all defrost and cook cycles (except Temp. Cook/Hold) the control will beep once every minute until door is opened or CLEAR pad is touched.

## KITCHEN TIMER

The KITCHEN TIMER is a no power HOLD feature which can be used for four 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 Kitchen Timer While Another Program is Operating:

1. Set up other program.
2. Touch KITCHEN 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.

## TIME COOK 1 & 2

The Time Cook function can be programmed for **one** or **two** time cook cycles in the same program. The two cycle feature is useful if a power level change is desired during the cooking operation. Each function can be set for a maximum of 99 minutes and 99 seconds.

Time Cook 1 & 2 can be programmed in any sequence but it will always execute **Time Cook 1** first.

## TIME DEFROST

The defrost setting is approximately 30% power. Touch time defrost and enter time.



### ADD 30 SECONDS

The ADD 30 SECONDS feature provides “instant on” at high power (10) for 30 seconds or can be used to add 30 seconds to any **timed** function.



### EXPRESS COOK/INSTANT COOK (No Function Pad)

This “instant on” feature will provide 1-5 minutes of cooking at power level 10 as soon as it is selected.

### 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.



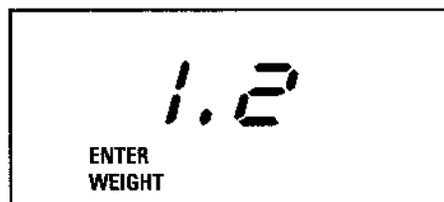
**NOTE: This feature cannot be used with or during any cooking function.**

### AUTO DEFROST (NON-SENSOR FEATURE)

The Auto Defrost function automatically sets the defrosting time and power levels by entering the weight of the frozen food. The weight must be entered in tenths of pounds. Use conversion guide and auto defrost guide in Use and Care.



At the end of the total defrost time, the control “BEEPS” and displays “HOLD” (no power) for the appropriate time associated with that code. At the end of the “HOLD” time the control “BEEPS” as it does for the end of the cooking mode.



#### TO USE AUTO DEFROST:

1. Touch AUTO DEFROST.
2. Enter food weight, use conversion guide and auto defrost guide.
3. Touch START.

When the oven reaches approximately half of the total defrosting time, the control “BEEPS” and the display flashes “TURN” as a signal to turn the food over for the remainder of the defrost time.

**IMPORTANT:** The magnetron power will continue to defrost even if food is not “turned”. “Turn” will continue to flash in the display.

**BEVERAGE (TIMED 1:30 per serving)**

This feature is used to reheat a beverage the size of a cup, one serving. The serving size can be changed to 2 or 3 serving size by touching that number right after touching the beverage pad.

**COOK (TIMED)**

The oven sets the cooking time and power level for a specific food category.

1. Touch COOK.
2. Enter food code.
3. Enter weight.
4. Touch START.

**NOTE:** To display the remaining cooking time, touch the COOK pad.

**POPCORN (TIMED 2:15 per bag)**

The popcorn feature is a pre-timed function that allows one touch cooking for prepackaged microwave popcorn in the 3.0-3.5 ounce range.

**TO USE POPCORN**

1. Remove the outer wrapper from the microwave popcorn and place package in center of oven floor per manufacturer’s instructions.
2. Touch POPCORN pad. POP flashes, oven turns on instantly.

**HOW TO ADJUST THE POPCORN PROGRAM TO PROVIDE A SHORTER OR LONGER COOKING TIME**

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

- Touch the POPCORN pad and then touch #9, this will add 20 seconds more cooking time.

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

- Touch the POPCORN pad and then touch #1, this will subtract 20 seconds of cooking time.

**SNACKS**

This feature sets the time and power level for cooking or warming many common type foods and different quantities. Use snack code guide (1-6).

1. Touch SNACKS pad.
2. Touch number pad of desired food code (food item appears on display).
3. A number pad is needed next to tell the quantity that is being cooked. (1-4, codes 5 & 6 you must enter weight).
4. Touch START.



**COOK GUIDE**

CODE	FOOD	DISPLAY	TIME
1	Canned Veggies	VEG 1	20 sec/oz
2	Frozen Veggies	VEG 2	42 sec/oz
3	Fresh Veggies	VEG 3	40 sec/oz
4	Potatoes	PotAt	30 sec/oz
5	Fish	FISH	29 sec/oz
6	Chicken	Chikn	33 sec/oz
7	Ground Beef, Pork, Turkey	Meat	28 sec/oz
8	Bacon	bACON	60 sec/oz
9	Frozen Pizza	PIZ	37 sec/oz

**SNACKS GUIDE**

CODE	FOOD	DISPLAY	TIME	QTY
1	Bakery – Rolls	bREAd	20 sec/item	1-4
2	Sandwiches	SANdW	50 sec/sand.	1-2
3	Leftover Pizza	PIZ	45 sec/slice	1-4
4	Dessert Toppings	TOP	20 sec/serv.	1-4
5	Soups	SOUP	15 sec/oz	8-40 oz
6	Cheese Dip	CHEEZ	10 sec/oz	4-16 oz

## REHEAT

The REHEAT feature is a short term program to automatically reheat a previously cooked food.

1. Touch REHEAT pad.
2. Select a number pad from 1-6 to select a food group.
3. Touch START.

**NOTE:** Reheat codes 1-5 allows you to heat up to 3 servings. Just touch the number pad 2 or 3 before start.

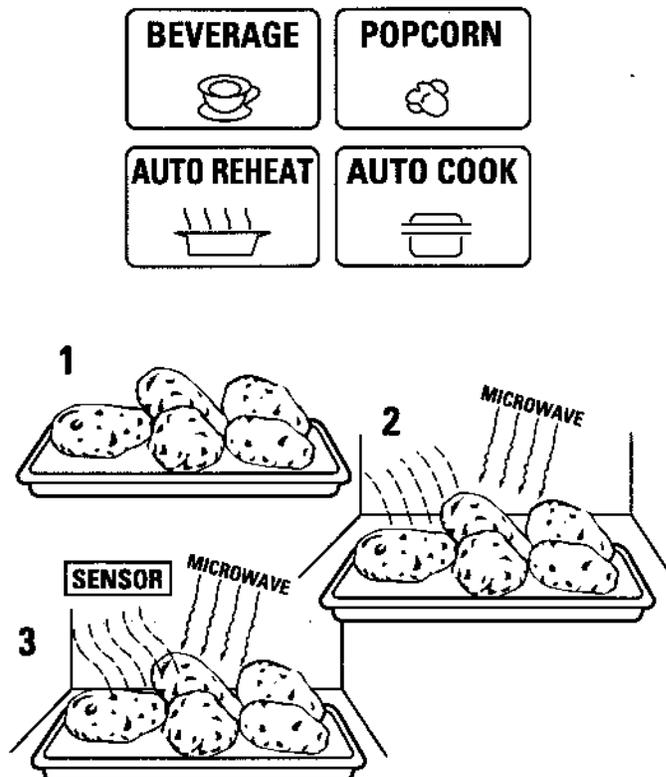
## SENSOR COOKING CONDITION (JE950GN model only)

Using the AUTO COOK, POPCORN, BEVERAGE 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, 4)

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.



## SENSOR COOKING PREFERENCE CONTROL

When using the sensor assisted cooking codes Auto Reheat and Auto Cook (Codes 2-7) it is possible to adjust the oven cooking time by 10%.

By immediately touching the number 1 pad after touching the Auto Reheat pad and Auto Cook pad (Codes 2-7) the oven will turn off 10% sooner.

By pressing the number 9 pad the oven will cook 10% longer.

## AUTO COOK (SENSOR MODEL)

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 2-7**, When these codes are selected the oven determines how much additional cooking time is needed after steam has been sensed,

## REHEAT GUIDE

CODE	DISPLAY	TIME/PER SERVING
1	PASTA	2:10
2	MEATS	1:00
3	VEGS	1:20
4	BEV	1:30
5	SAUCE	1:45
6	PLATE	3:15

## AUTO COOK GUIDE

CODE	DISPLAY	MAX. TIME
1	VEG 1	6:00
2	VEG 2	11:00
3	VEG 3	6:30
4	PotAt	5:30
5	FISH	4:00
6	Chikn	6:00
7	Meat	5:30

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 10% on cooking codes 2-7:**

- Adding a 1 after the pre-selected cooking code will subtract 10% of the cooking time.
- Adding a 9 after the pre-selected cooking code will add 10% to the cooking time.

Example: If code 6 cooks chicken more done than wanted, enter code 61 and it will cook 10% less time. Auto code 6 will show in the display, the number 1 will not.

**AUTO REHEAT (SENSOR MODEL)**

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.

AUTO REHEAT is an instant on function. No need to press start after selecting AUTO REHEAT.

**NOTE: Best results are obtained with foods you want to steam or retain moisture (must be covered). Maximum heating time is 3:30.**

**BEVERAGE (SENSOR MODEL)**

This instant on pad reheats beverages by sensing the steam with the sensor system.

**NOTE: Maximum heating time is 3:00.**

**POPCORN (SENSOR MODEL)**

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

**NOTE: This feature works best when the popcorn contents are in the 3.0-3.5 ounces range. Maximum heating time is 3:30.**

**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. Oven turns on instantly.



4. 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 (sensor model only) 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 (sensor model only) less cooking time is being provided.

**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 secondary 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.

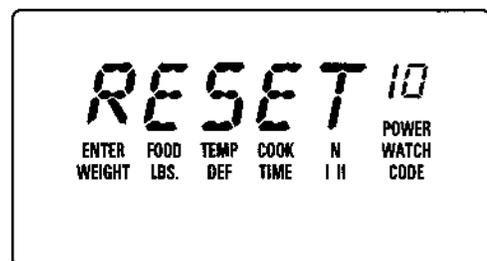
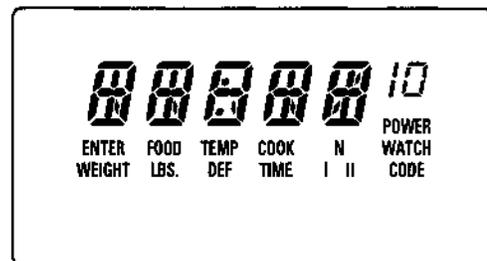
1. The display panel lights up for 15 seconds then "RESET" appears. Touch the CLOCK pad to set the clock and the oven is ready for use.

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

**COOKING CONDITION**

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/turntable 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 2280 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.



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 relay are activated 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 readout displays the time remaining in the cook cycle when the door was opened.
7. The monitor switch electrically monitors the operation of the secondary interlock switch and the primary interlock relay and is mechanically associated with the door so that it will function in the following sequence:
  - (1) When the door opens, the secondary interlock switch, primary interlock relay and secondary interlock switch open their contacts, then the monitor switch contacts close.

**CLOCK**

**CLEAR  
OFF**

## DESCRIPTION AND FUNCTION OF COMPONENTS

### OUTER CASE REMOVAL

To remove outer case, proceed as follows:

1. Disconnect oven from power supply.
2. Remove screws from rear and along the side edge of case.
3. Slide the entire case back about 1 inch (3 cm) to free it from retaining clips on the cavity faceplate.
4. Lift entire case from the unit.

**CAUTION: DISCHARGE HIGH VOLTAGE CAPACITOR BEFORE TOUCHING ANY OVEN COMPONENTS OR WIRING.**

### TOUCH CONTROL PANEL ASSEMBLY TEST

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

#### 1. Key Panel.

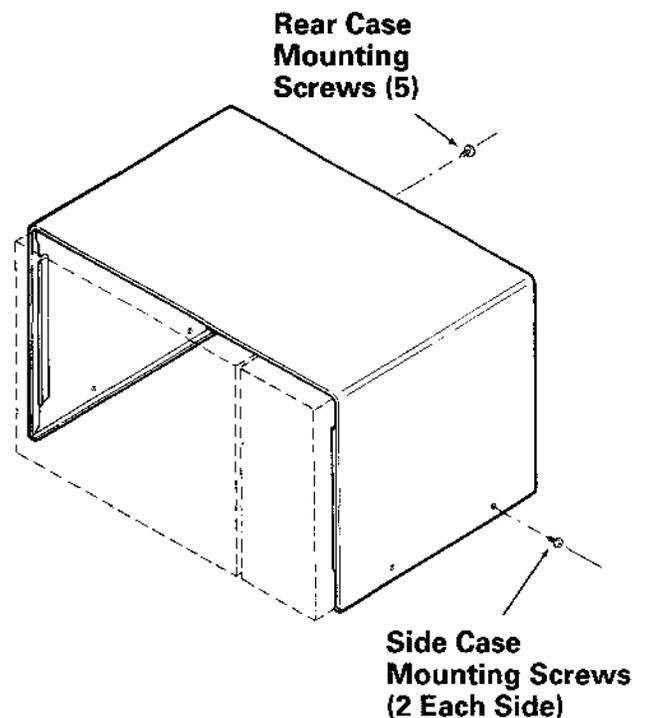
The following symptoms indicate a defective key panel:

- 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 key panel 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.

### CONTROL PANEL

The control panel consists of the Key Panel, Trim, Crystal & Smart Board along with the Door Release Button.

#### To Remove Control Panel Assembly

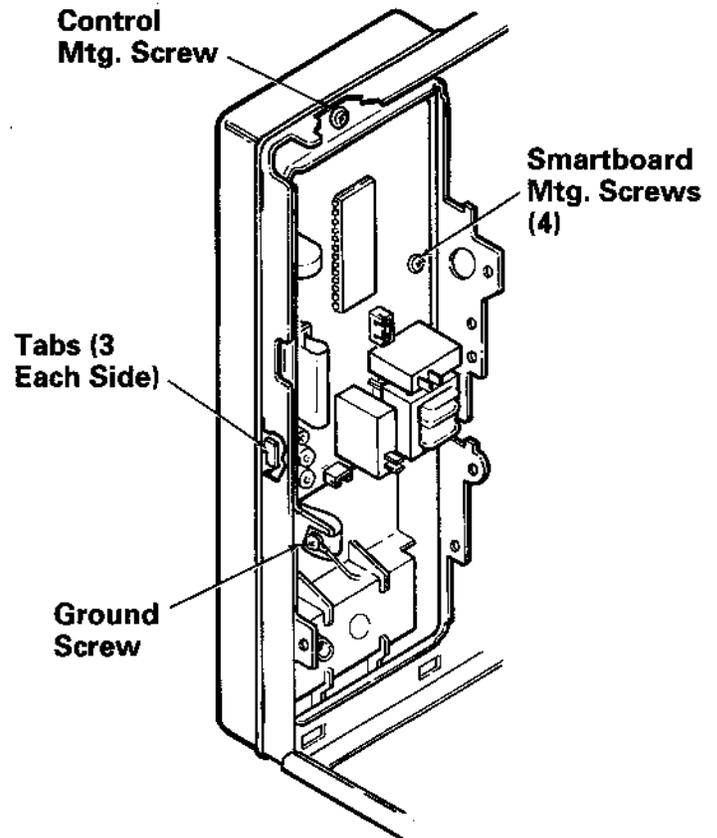
1. DISCONNECT POWER, remove case and DISCHARGE CAPACITOR.
2. Disconnect leads to the control, remove key panel and smart board ground screw.
3. Remove top mounting screw and lift control up to disengage tabs at side of cavity.

### SMART BOARD (PCB)

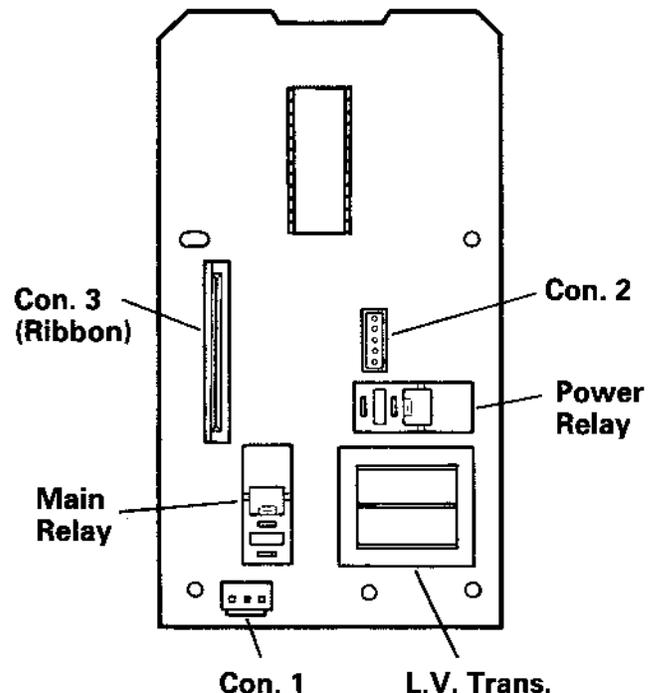
The smart board is mounted to the control trim by four screws, and contains the Control Transformer (except for sensor model) Power Relay, Main Relay (secondary interlock), Varistor, and three connectors (Con 1 – Control Transformer, Con 2 – Key Panel, and Con 3 – Door Sense Switch).

The following checks can be made to help verify if a problem is with the smart board or another component:

1. Power to the board – disconnect Con 1 from board and measure voltage at harness connector (120VAC).
2. Measure control transformer primary resistance ( $80\Omega$ /Sensor,  $267\Omega$ /Non-sensor) at Con 1 on smart board.
3. Check main relay and power relay contacts to determine if they are shorted (squeeze connector when removing) – should read  $\infty \Omega$ .
4. Check door sense switch operation by disconnecting Con 3 and checking at harness connection. Door open –  $\infty \Omega$ , and door closed –  $0\Omega$ .



### NON-SENSOR BOARD



### CONTROL TRANSFORMER – SENSOR MODEL

The control transformer is separate from the smart board on the sensor model. To service, remove case and unplug leads from smart board and disconnect primary plug. Remove 2 transformer mounting screws.

### KEY PANEL

The key panel has 1 ribbon connector on smart board.

If necessary, the key panel pads can be checked by a continuity test. For ease of handling, the key panel or control should be removed and placed on a flat surface.

The ribbon connections are on one side (1-13). Pad operation can be checked between connections at end of ribbon (use high Ohms scale).

### SENSOR

PAD	CONN	PAD	CONN
TIME COOK I & II	1-10	1	2-11
TIME DEFROST	2-13	2	3-11
AUTO DEFROST	1-13	3	4-11
BEVERAGE (SENSOR)	3-12	4	5-11
POPCORN (SENSOR)	1-12	5	6-11
AUTO REHEAT (SENSOR)	4-12	6	2-8
AUTO COOK (SENSOR)	4-9	7	3-8
ADD 30 SECONDS	1-11	8	4-8
CLOCK	3-9	9	5-8
KITCHEN TIMER	2-10	0	6-8
POWER LEVEL	6-13		
SOUND-ON/OFF	2-9		
AUTO START	5-13		
START	2-12		
CLEAR/OFF	3-13		

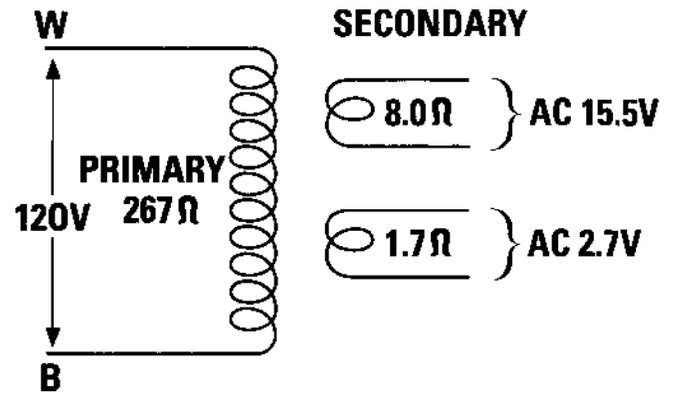
### NON-SENSOR

PAD	CONN	PAD	CONN
POWER LEVEL	6-13	0	6-8
TIME DEFROST	2-13	1	2-11
ADD 30 SECONDS	1-11	2	3-11
TIME COOK I & 2	1-10	3	4-11
KITCHEN TIMER	2-10	4	5-11
AUTO START	5-13	5	6-11
CLOCK	3-9	6	2-8
CLEAR/OFF	3-13	7	3-8
AUTO DEFROST	1-13	8	4-8
REHEAT	4-13	9	5-8
START	2-12		
POPCORN	5-12		

### TO REPLACE KEY PANEL

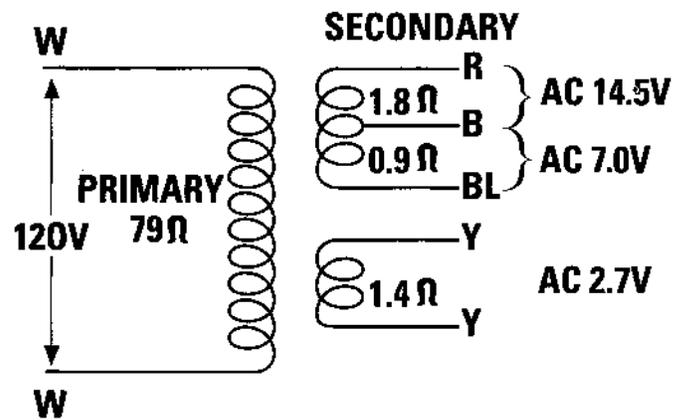
Key Panel and Control Trim will be replaced as a complete assembly.

### CONTROL TRANSFORMER

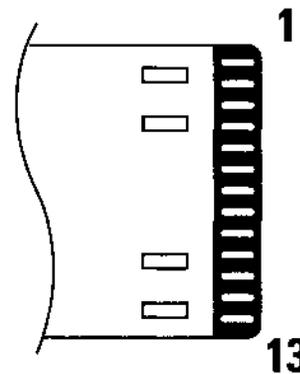


### Non-Sensor Models (on P.C. board)

### CONTROL TRANSFORMER



### Control Transformer JE950GN Only



## DOOR OPENER

The door is opened by pushing the button on the control panel which raises the switch lever and the latch head from the latch hook, releasing the door.

## OVEN LAMP

The Oven Light Assembly is located in the Air Duct attached to the top of the component compartment by two spring tabs. To replace the lamp the outer case must be removed, complete oven light assembly removed and replaced with a new assembly.

## 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 windings 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 windings should be approximately 70-110 ohms (measure from #5 on high voltage transformer to chassis ground); the resistance of the filament windings 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.)

## POWER TRANSFORMER REMOVAL

1. Disconnect oven from power supply and remove outer case.
2. Discharge high voltage capacitor.
3. Remove oven contents.
4. Remove four (4) screws from bottom of oven that go through the transformer.
5. Disconnect and mark leads.
6. Reinstall reversing this procedure.

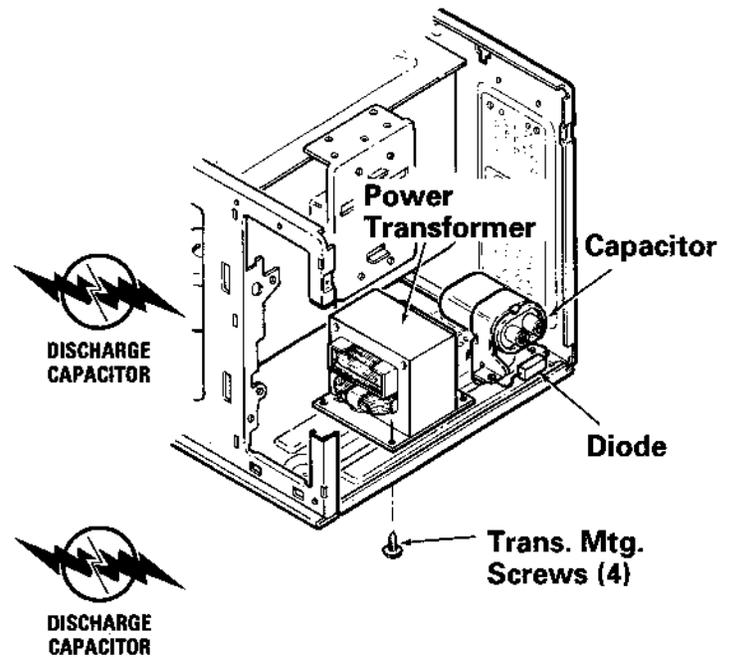
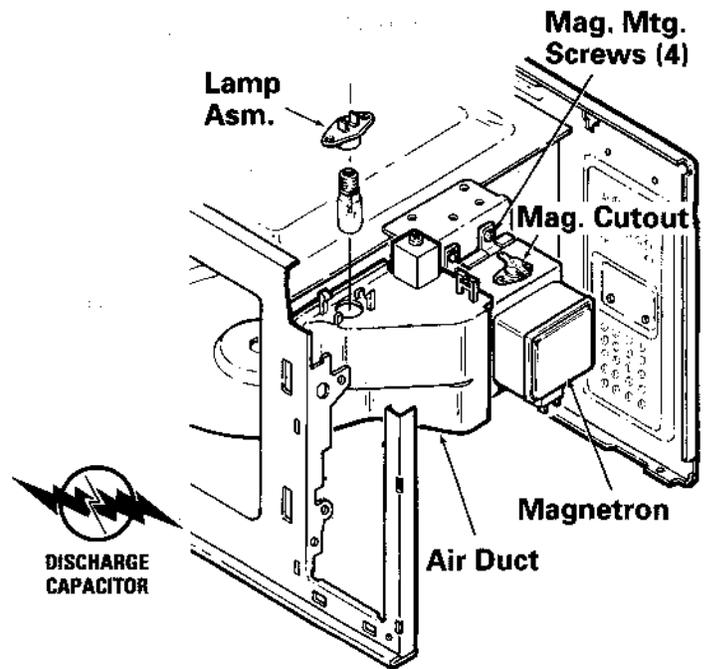
## HIGH VOLTAGE CAPACITOR TEST

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

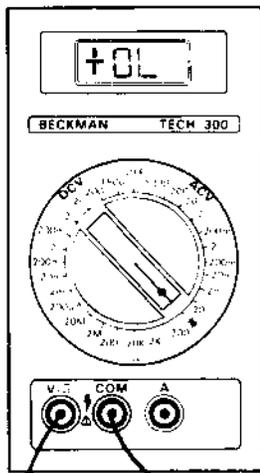
If the capacitor is open, no high voltage will be available to the magnetron. Disconnect input leads and check for short or open between the terminal using an ohmmeter.

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.

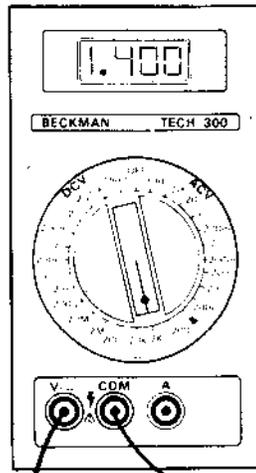


**#1 SHORT TEST**  
RANGE = ←←



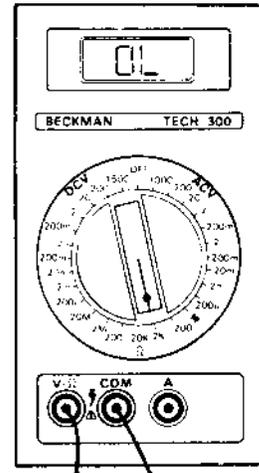
SHOULD READ "+OL"  
OR "INFINITY" ANY OTHER  
READING = SHORTED  
REPLACE DIODE

**#2 FORWARD BIAS**  
RANGE = 2K



READ APPROX.  
"1.400"

**REVERSE BIAS**  
RANGE = 2K



READ "OL"

NOTE: READING MAY VARY WITH OTHER BRAND METERS.

**HIGH VOLTAGE RECTIFIER/DIODE 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.

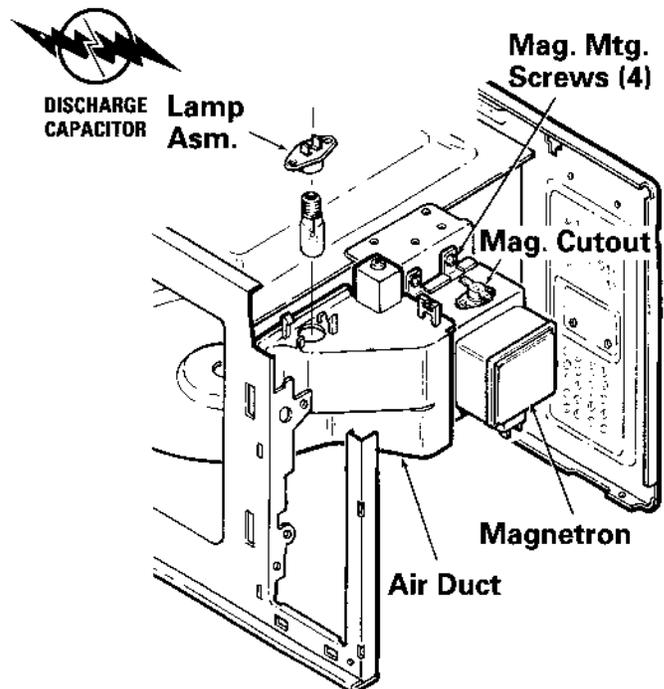


**RECTIFIER/DIODE ASSEMBLY AND HIGH VOLTAGE CAPACITOR REMOVAL**

1. Disconnect oven from power supply and remove outer case.
  2. Discharge high voltage capacitor.
  3. Remove one (1) screw holding capacitor holder to oven cavity bottom plate.
  4. Disconnect terminal of rectifier from capacitor.
  5. Remove bracket holding capacitor.
- CAUTION: WHEN REPLACING H.V. RECTIFIER AND HIGH VOLTAGE CAPACITOR, GROUND SIDE TERMINAL OF H.V. RECTIFIER MUST BE SECURED FIRMLY WITH A GROUNDING SCREW AND WASHER.

**MAGNETRON THERMAL CUTOUT**

The magnetron thermal cutout is located on the top of the magnetron and is designed to prevent damage to the magnetron if an overheated condition develops in the tube due to cooling fan failure, obstructed air ducts, dirty or blocked air intake.



Under normal operation, the magnetron thermal cutout remains closed. However, when abnormally high temperatures are reached within the magnetron, the magnetron thermal cutout will open at 320°F (160°C) causing the oven to shut down.

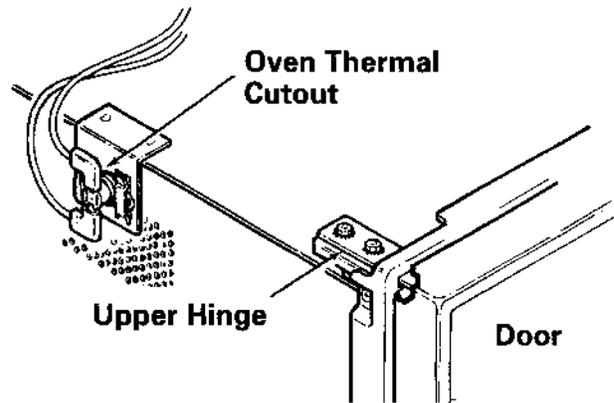
**NOTE: Magnetron thermal cutout is resetable (140°F).**

### OVEN THERMAL CUTOUT

The thermal cutout, located on the opposite side of the component compartment, is designed to prevent damage to the unit if the foods in the oven catch fire due to overheating caused by improper setting of cook time or failure of control unit.

Under normal operation, the oven thermal cutout remains closed. However, when abnormally high temperatures are reached within the oven cavity, the oven thermal cutout will open at 248°F (120°C), causing the oven to shut down.

**NOTE: Oven thermal cutout is non-resetable.**

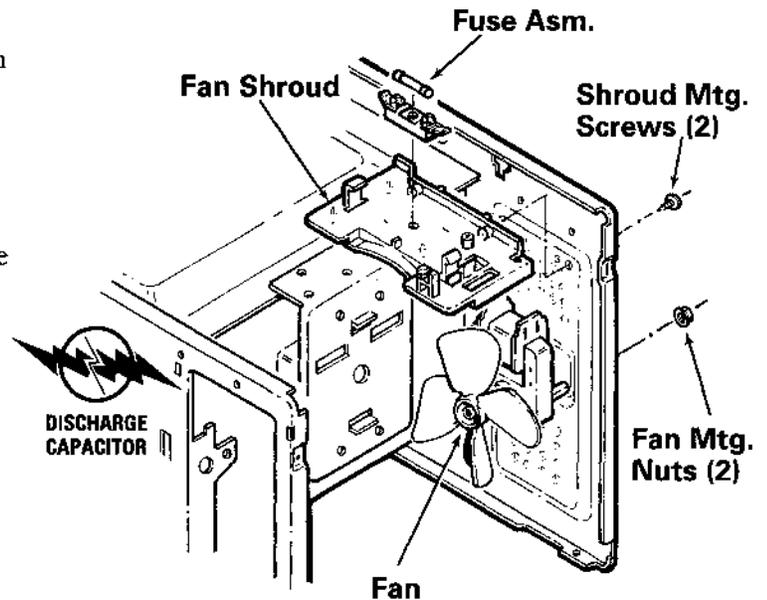


### MAGNETRON FAN MOTOR

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. This air is channeled through the oven cavity to remove steam and vapors given off from the heating foods. It is then exhausted through the exhausting air vents at the oven cavity.

### MAGNETRON FAN MOTOR ASSEMBLY REMOVAL

1. Disconnect oven from power supply and remove outer case.
2. Discharge high voltage capacitor.
3. Disconnect the wire leads from the fan motor. **(Positive lock connectors – see illustration.)**  
*At times the positive lock connectors will be housed in plastic. If so, just squeeze plastic and connector will release.*
4. Remove 2 nuts from rear of oven holding fan assembly.
5. Remove fan motor.
6. Remove fan blade.
7. Replace motor and reassemble fan blade.

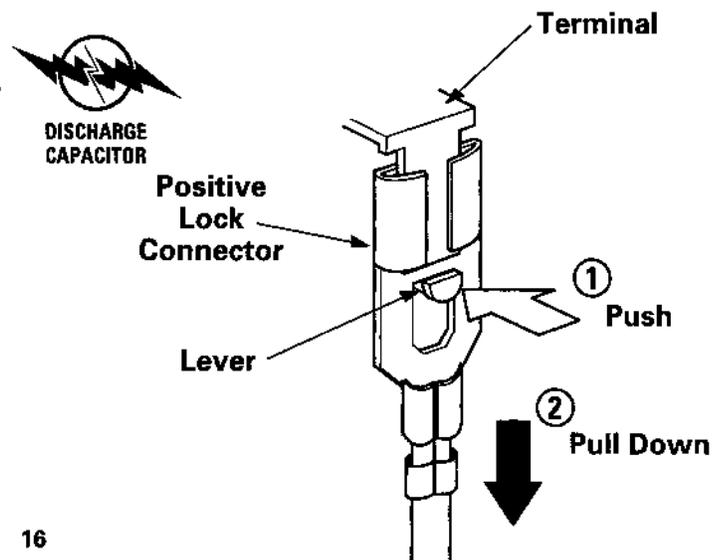


### MAGNETRON ASSEMBLY TEST

*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 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.

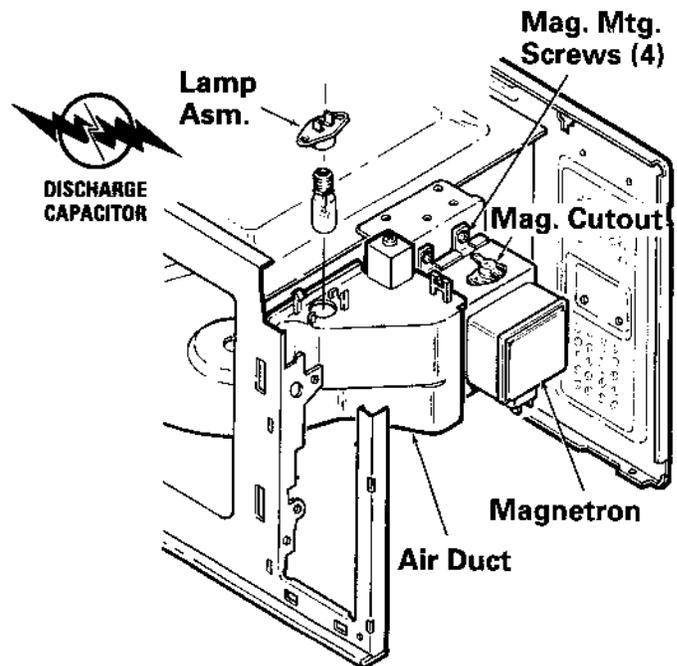
## MAGNETRON REMOVAL

1. Disconnect oven from power supply and remove outer case.
2. Discharge high voltage capacitor.
3. Remove one (1) screw holding the magnetron air guide to magnetron.
4. Remove the air duct from the component compartment and magnetron wiring.
5. Carefully loosen four (4) screws holding magnetron to wave guide with magnetic screwdriver. When removing the screws hold the magnetron to prevent it from falling.
6. Remove the magnetron from the unit with care so it does not hit any metal object.

### Re-install

1. Re-install magnetron to the wave guide with four (4) mounting screws. Re-install air duct.
2. Re-connect wire leads to magnetron.

**CAUTION: WHEN REPLACING THE MAGNETRON, BE SURE THE R.F. GASKET IS IN PLACE AND MOUNTING SCREWS ARE TIGHTENED SECURELY.**



## DOOR SENSING AND PRIMARY INTERLOCK SWITCHES

The primary, door sense, and monitor switches are mounted to a plastic body on the right side of the cavity.

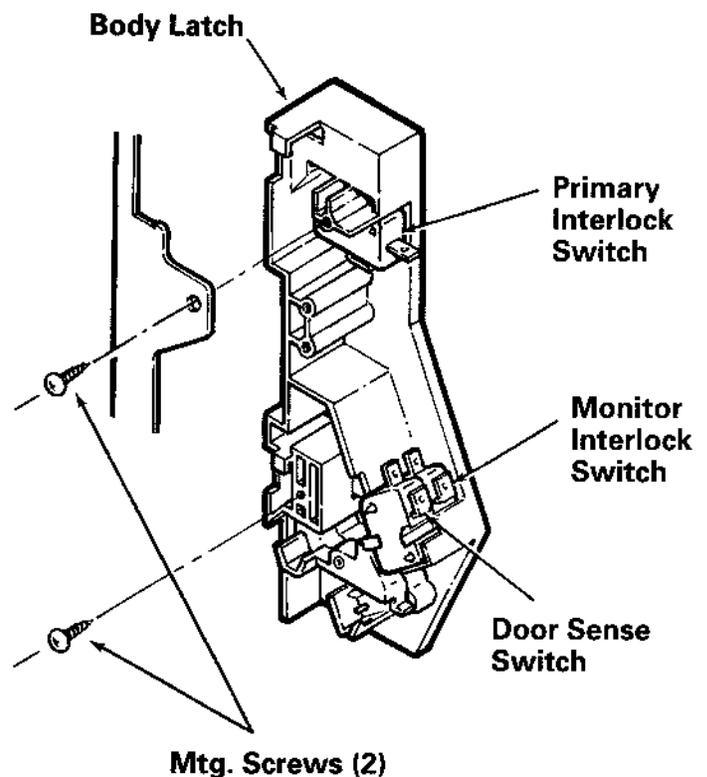
The secondary interlock relay (RY-2/Power Relay) is mounted on the smart board. They are activated by the latch heads on the door. When the door is opened, the switches interrupt the circuit to all components, except the oven lamp. A cook cycle cannot take place until the door is firmly closed thereby activating both interlock switches. The primary interlock system consists of the door sensing switch and primary interlock switch.

### 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 switch and secondary interlock relay 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 switch and secondary interlock relay are in the OFF condition (contacts open).



2. As the door goes to a closed position, the monitor switch contacts are first opened and then the door sensing switch and the primary interlock switch contacts close. (On opening the door, each of these switches operate inversely.)
3. If the door is opened, and the secondary interlock relay and primary 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 switch, door sensing switch, monitor switch and secondary interlock relay for proper operation.

### BLOWN MONITOR FUSE

If the monitor fuse is blown when the door is opened, check the primary interlock switch, secondary interlock relay and monitor switch before replacing the blown monitor fuse.

**CAUTION:** BEFORE REPLACING A BLOWN MONITOR FUSE, TEST THE DOOR SENSING SWITCH, PRIMARY INTERLOCK SWITCH, SECONDARY INTERLOCK RELAY AND MONITOR SWITCH FOR PROPER OPERATION. IF THE MONITOR FUSE IS BLOWN BY IMPROPER SWITCH OPERATION, MONITOR FUSE (20A – 1000W/15A – 800W) AND SWITCH MUST BE REPLACED EVEN IF THE MONITOR SWITCH OPERATES NORMALLY.

### PRIMARY INTERLOCK SYSTEM TEST

#### Door Sensing Switch

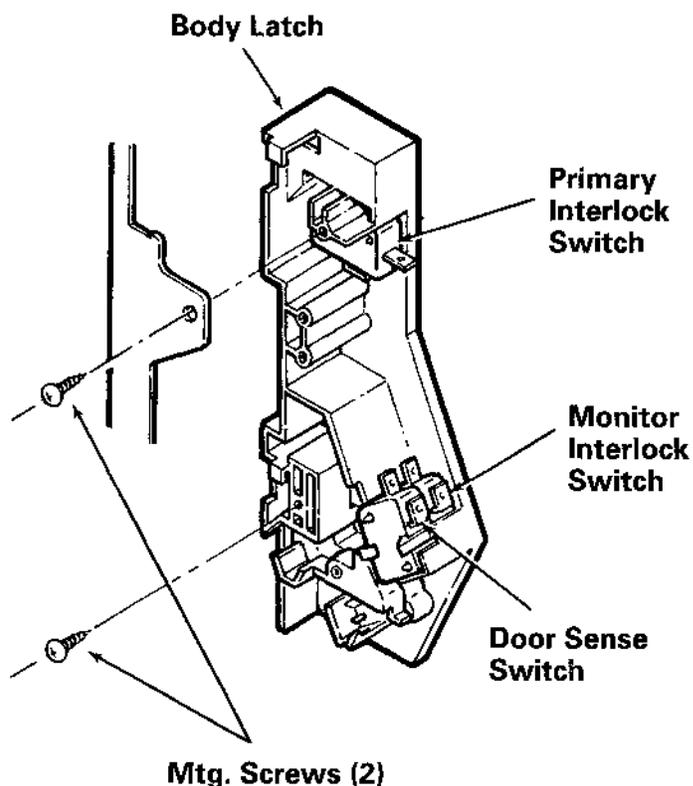
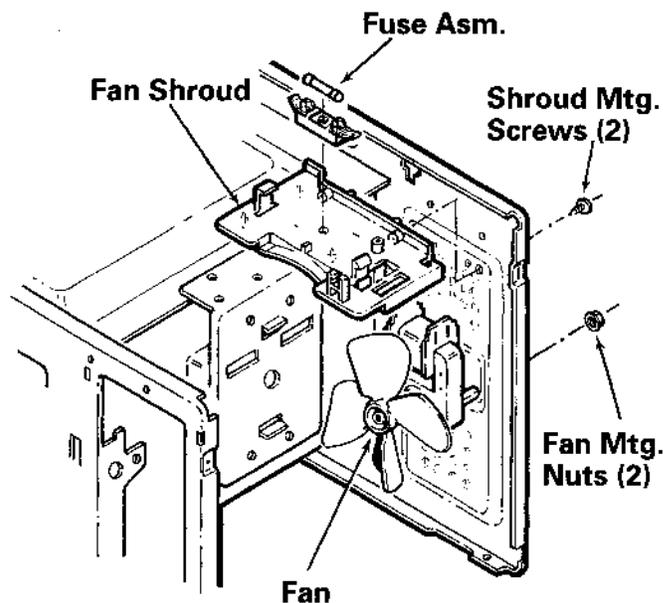
Isolate the switch and connect the ohmmeter to the common (COM.) and normally open (NO) terminal of the switch, the meter should indicate an open circuit with the door open and a closed circuit with the door closed. If improper operation is indicated, replace the door sensing switch.

#### Secondary Interlock Relay (RY2/Power Relay)

Disconnect two (2) wire leads from the male tab terminals on the printed wiring circuit board provided in the control panel assembly. The tab terminals are located in the left area of the circuit board on the component side, and are connected to the contacts of the primary interlock relay. Check the state of the relay contacts using an ohmmeter. The relay contacts should be open. If the relay contacts are closed, replace the circuit board entirely.

#### Primary Interlock Switch Test

Isolate the switch and connect the ohmmeter to the common (COM.) and normally open (NO) terminal of the switch. The meter should indicate an open circuit with the door open and a closed circuit with the door closed. If improper operation is indicated, replace the primary interlock switch.



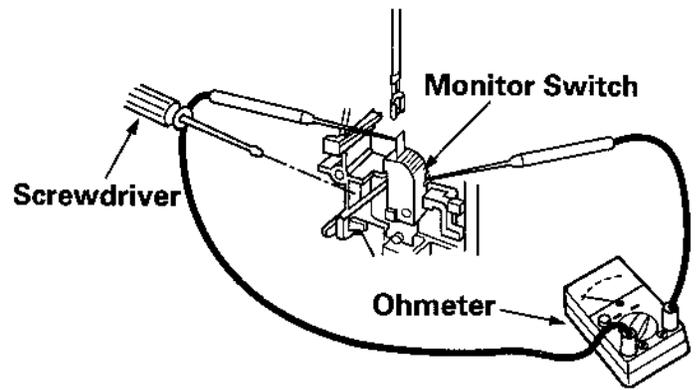
## MONITOR SWITCH TEST

Disconnect the oven from power supply.

Before performing this test, make sure that the primary interlock switch and the secondary 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.



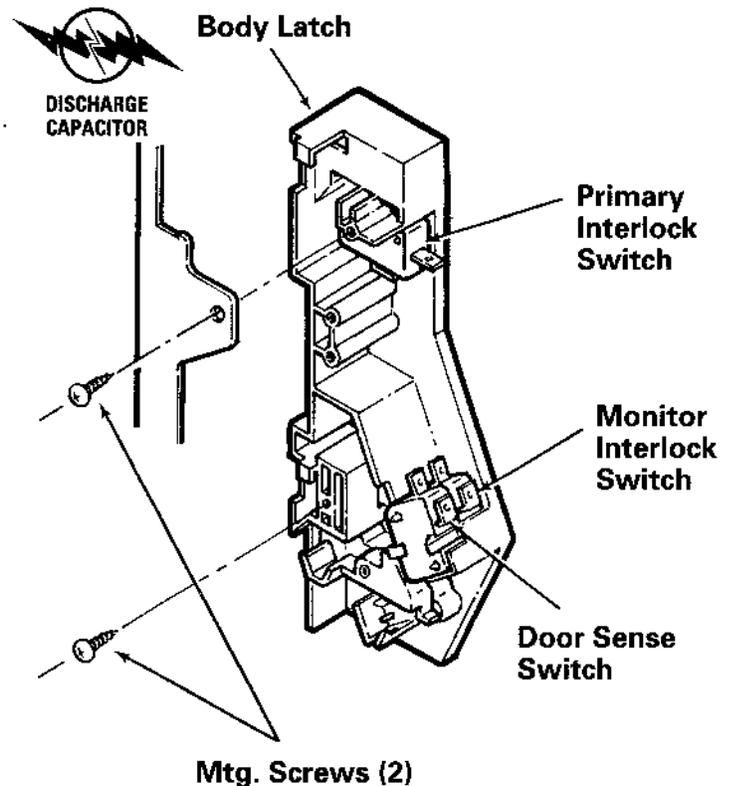
## DOOR SENSING, PRIMARY INTERLOCK AND MONITOR SWITCH REMOVAL

1. Disconnect oven from power supply and remove outer case.
2. Discharge high voltage capacitor.
3. Disconnect wire leads from the switches.
4. Remove two (2) screws holding latch switch bracket to component compartment front flange.
5. Remove latch switch bracket assembly.
6. Push outward on the two (2) retaining tabs holding switch in place.
7. Switch is now free.

At this time switch lever will be free, do not lose it.

### Re-install

1. Re-install the primary interlock switch. The door sense/monitor switches are in the lower position and the primary interlock switch is in the upper position.
2. Re-connect wire leads to each switch. Refer to pictorial diagram.
3. Secure latch switch bracket (with two (2) mounting screws) to component compartment front flange.
4. Make sure that the monitor switch is operating properly.



## DOOR SENSING, PRIMARY INTERLOCK AND MONITOR SWITCH ADJUSTMENT

If the door sensing switch, primary interlock switch and monitor switch do not operate properly due to a misadjustment, the following adjustment should be made:

1. Loosen the two (2) screws holding latch switch bracket to the component compartment front flange.
2. With door closed, adjust latch switch bracket by moving it back and forth, and up and down. In and out play of the door allowed by the upper and lower position of the latch switch bracket should be less than 0.5mm (.02"). The vertical position of the latch switch bracket should be

placed where the door sensing switch and primary interlock switch have activated with the door closed.

3. Firmly secure the screws with washers.
4. Check the door sensing switch operation. If the door sensing switch has not activated with the door closed, loosen screw and adjust the latch switch bracket position.

After adjustment, check the following:

1. In and out play of door remains less than 0.5mm (.02") when in latched position. First check upper position of latch switch bracket, pushing and pulling upper portion of door toward the oven face. Then check lower portion of the latch switch bracket, pushing and pulling lower portion of the door toward the oven face. Both results (movement of the door) should be less than 0.5mm (.02").
2. The door sensing switch and primary interlock switch interrupt the circuit before the door can be opened.
3. Monitor switch contacts close when door is opened.
4. Re-install outer case and check for microwave leakage around door with an approved microwave survey meter.

### TURNTABLE MOTOR AND COUPLING REMOVAL

1. Disconnect the oven from the power supply.
2. Remove glass shelf and supporter from oven.
3. Remove turntable motor cover from case bottom secured by one screw.
4. Disconnect leads from motor.
5. Remove two screws securing motor to bottom of cavity and lift out.

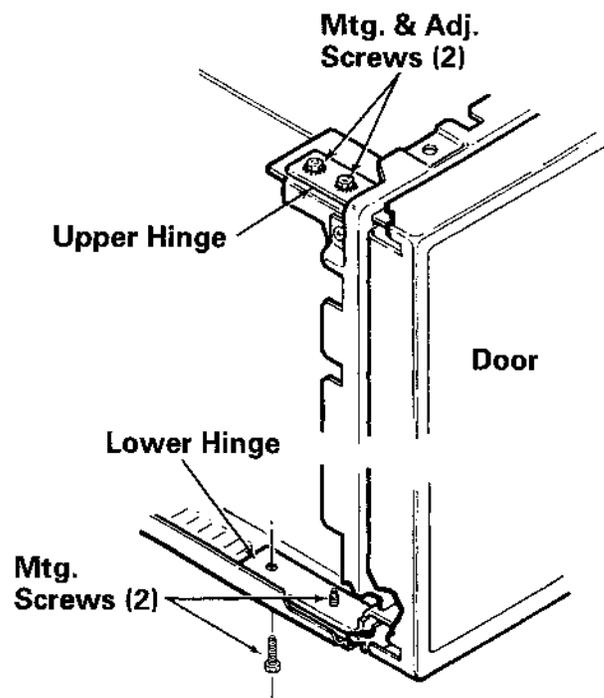
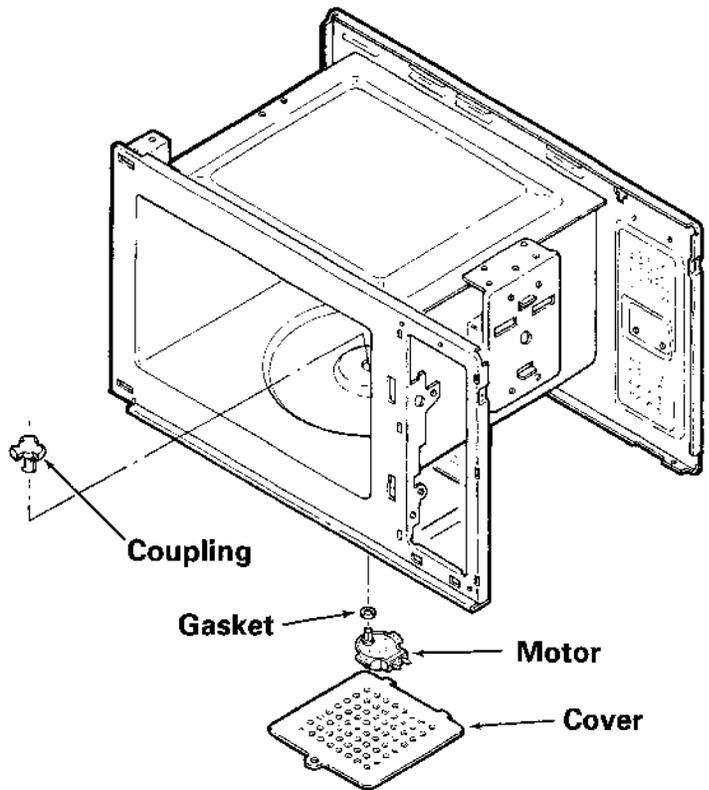
### DOOR ADJUSTMENT

The door can be adjusted by keeping screws of each hinge loose. Lower oven hinge can be loosened with Torx screwdriver (T-15).

After adjustment, make sure of the following:

1. Door latch heads catch smoothly, latch hook through latch holes, and also latch head goes through center of latch hole.
2. Deviation of door alignment from horizontal line of cavity faceplate is to be less than 1.0mm (.04").
3. Door is positioned with its face depressed toward cavity faceplate.
4. Re-install outer case and check for microwave leakage around door with an approved microwave survey meter.

**NOTE: Door on a microwave oven is designed to act as an electronic seal preventing the leakage of microwave energy from oven cavity during cook cycle. This function does not require that door be airtight, moisture- (condensation) tight or light-tight. Therefore, occasional appearance of moisture, light or sensing of gentle warm air movement around oven door is not abnormal and do not of themselves, indicate a leakage of**



**microwave energy from oven cavity. If such were the case, your oven could not be equipped with a vent, the very purpose of which is to exhaust vapor-laden air from oven cavity.**

## **DOOR DISASSEMBLY**

The door will be replaced as an assembly.

## **GAS SENSOR (JE950GN)**

Microwave sensor cooking uses a special gas sensor which detects both humidity (steam) and hydrocarbons (food odors) during the cooking process.

### **Checking the initial sensor cooking condition:**

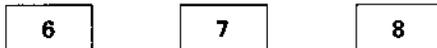
1. The oven should be plugged in at least five minutes before sensor cooking.
2. Room temperature should not exceed 95°F (35°C).
3. The unit should not be installed in any area where heat and steam are generated, for example, next to a conventional surface unit.
4. Exhaust vents are provided on the back 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.
9. The sensor is a plug-in device located in the air exhaust on the left side.

## **TO SERVICE**

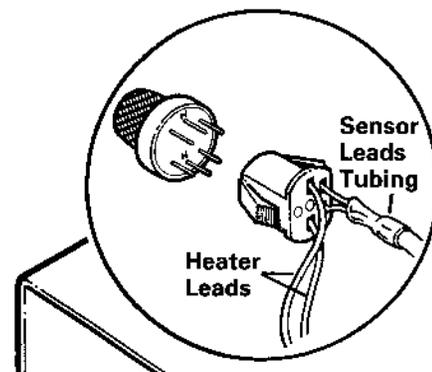
1. Remove outer case.
2. Separate retainer from receptacle and unplug sensor.

## **AUTO COOK DIAGNOSTIC TEST (QUICK TEST)**

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



2. Observe diagnostic number in display (numbers approximate)
  - 10-210 (Normal – verify with “sensor detection test”)
  - 213 or higher (Sensor failed open, sensor unplugged, wiring, or smart board)
  - Less than 8 (shorted sensor, or smart board)



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

**CAUTION:  
DO NOT ATTEMPT TO CHECK SENSOR TERMINALS  
(CAN DAMAGE SENSOR).**

### **SENSOR DETECTION TEST**

1. Place small amount of water (about 1/4 cup) in right front corner of oven.

2. Program **AUTO COOK** **2** **START**

3. Simultaneously touch **6** **7** **8**  
and observe diagnostic numbers in the display.  
Record initial number (Ex. 70)

4. Record the number at humidity detection  
(control beeps – unit shuts off).

5. The number of “detection” should be approximately 75% of the HIGHEST NUMBER.

Ex.: If high no. = 70, then low number should be approximately 52 ( $70 \times .75 = 52$ ).

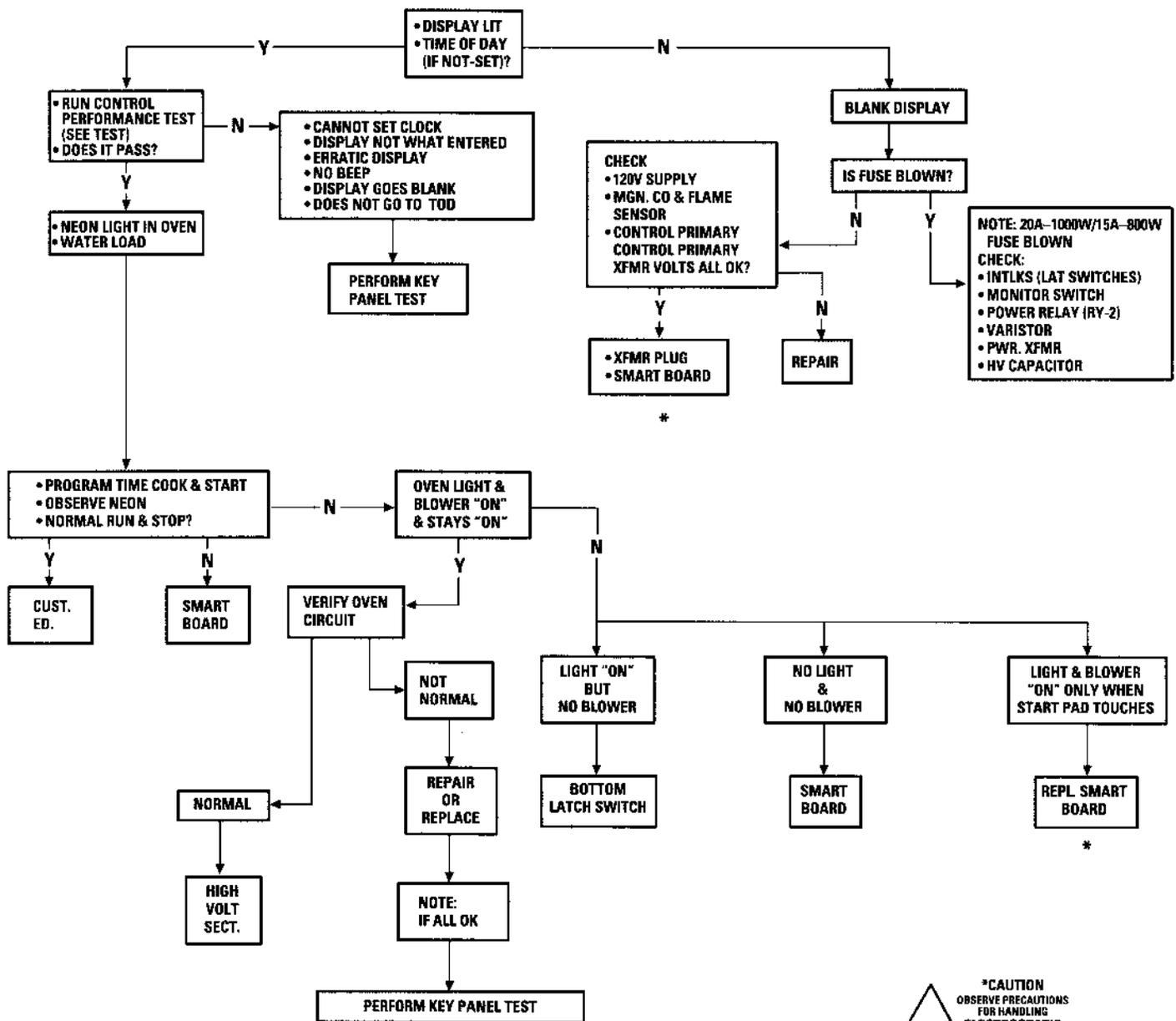
**NOTE: As long as detection DOES OCCUR and is approximately 75% of high number, (plus or minus a few numbers) the sensor system is working normally.**

## PERFORMANCE TEST (ALL MODELS)

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 upon the line voltage, the minimum temperature rise should be: 33°F @ 120V for 800 watt, 39°F @ 120V for 1000 watt.

## DIAGNOSIS FLOW CHART

Refer result to Diagnosis Flow Chart



# 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	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 Cutout	Control Unit	Oven Lamp or Socket	Cooling Fan Motor	Stirrer Fan	Wrong Operation	Low Voltage	Dirty Oven Cavity	AH Sensor Assembly	Turntable Motor	
	PROBLEM																					POSSIBLE CAUSE AND DEFECTIVE PARTS
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 cannot 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 AH sensor does not end, or AH 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.												●							●		

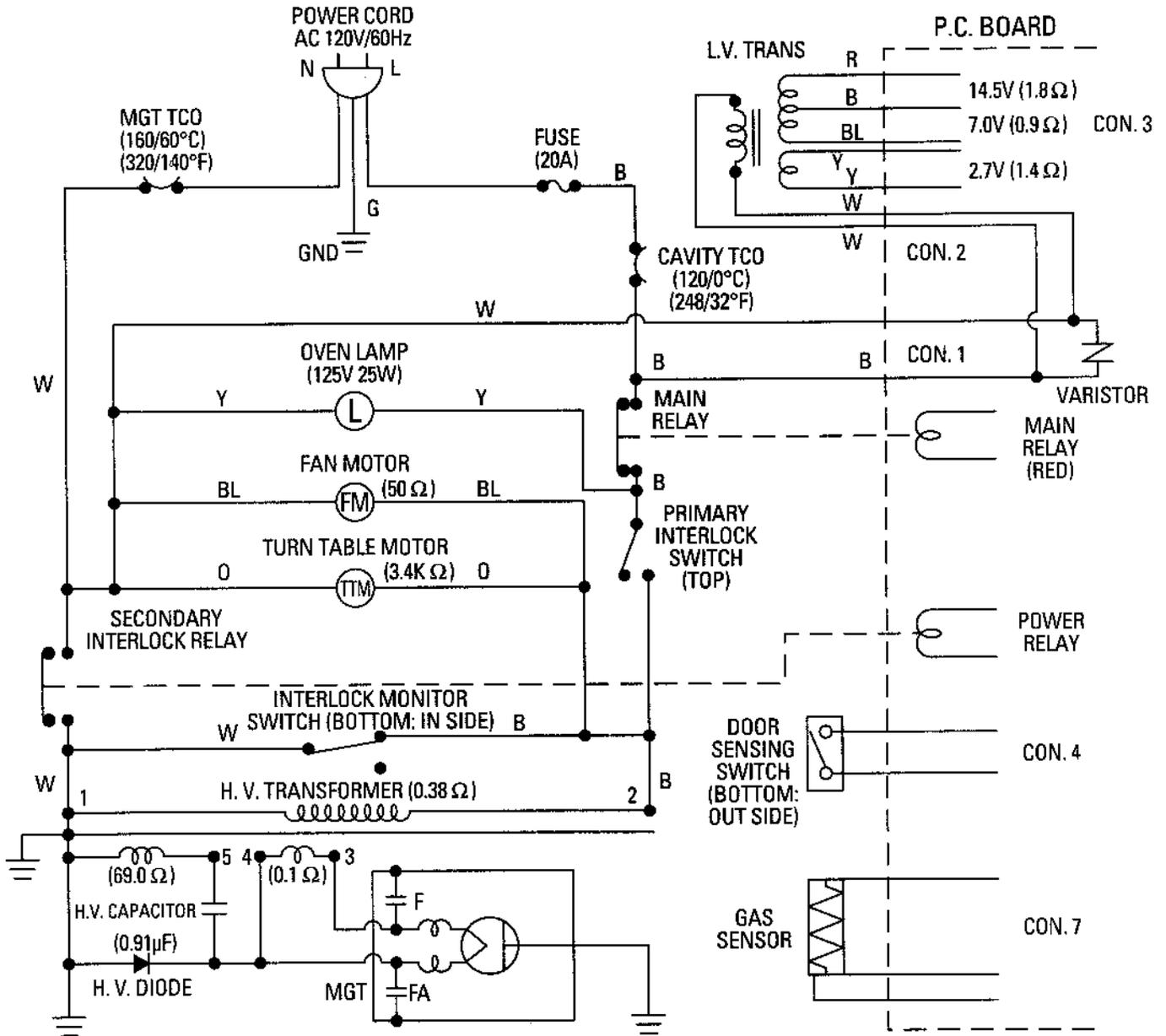
CODE NUMBER  
74753-0061-00

MODEL NAME  
JE950GN

# SCHEMATIC DIAGRAM

## WARNING

Power must be disconnected  
before servicing this appliance.

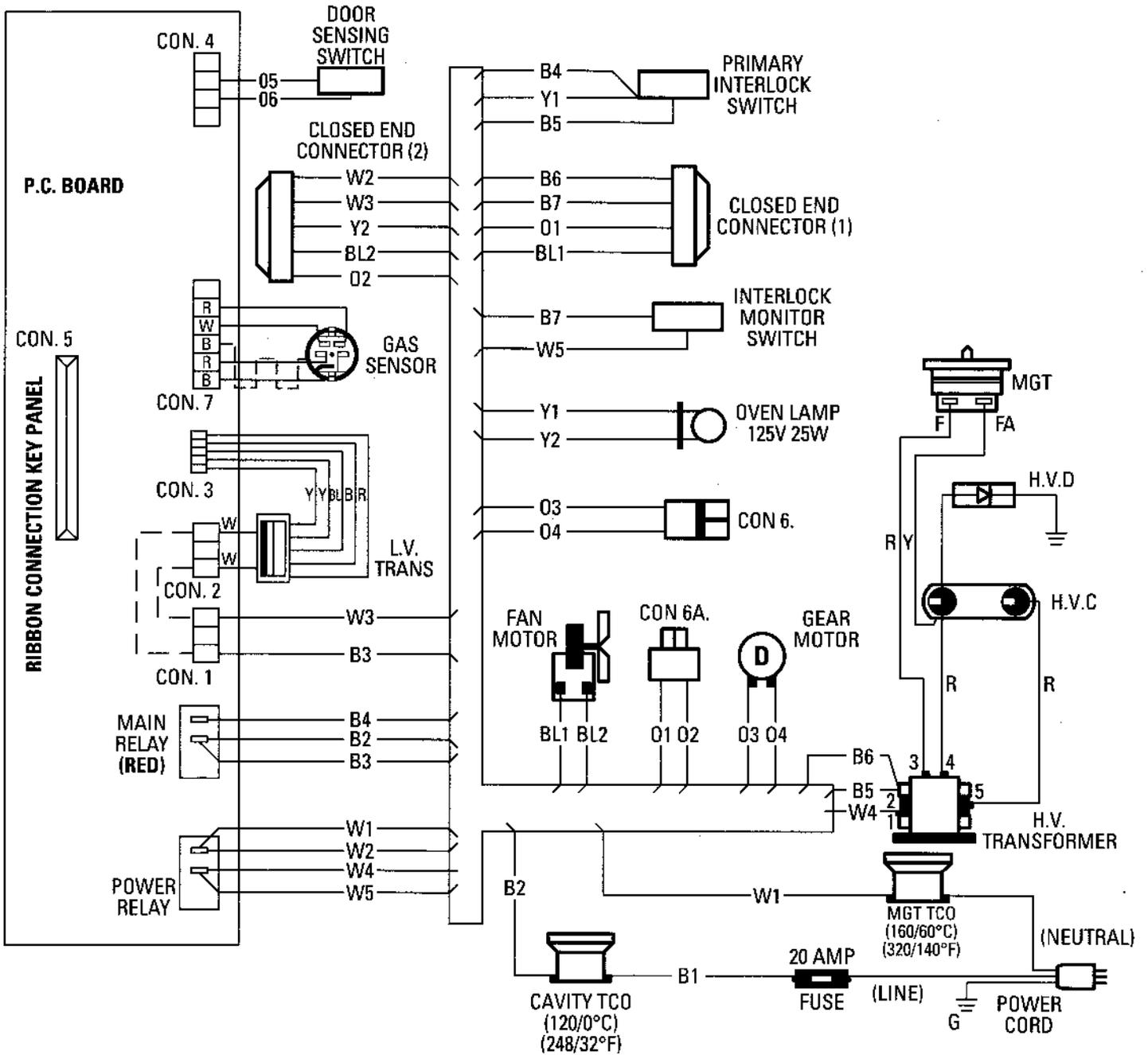


**NOTE 1:** Circuit shown with door in opened position.

**NOTE 2:** For service replacement, use 16GA 105°C thermoplastic covered wire except for high voltage leads or as noted on special leads.

# WIRING DIAGRAM

SYMBOL	COLOR
B	BLACK
W	WHITE
BL	BLUE
O	ORANGE
Y	YELLOW
G	GREEN



**NOTE 3:** All leads that enter common lead path ( ) must be traced to their terminations. Con. 6 and 6A are connected together.

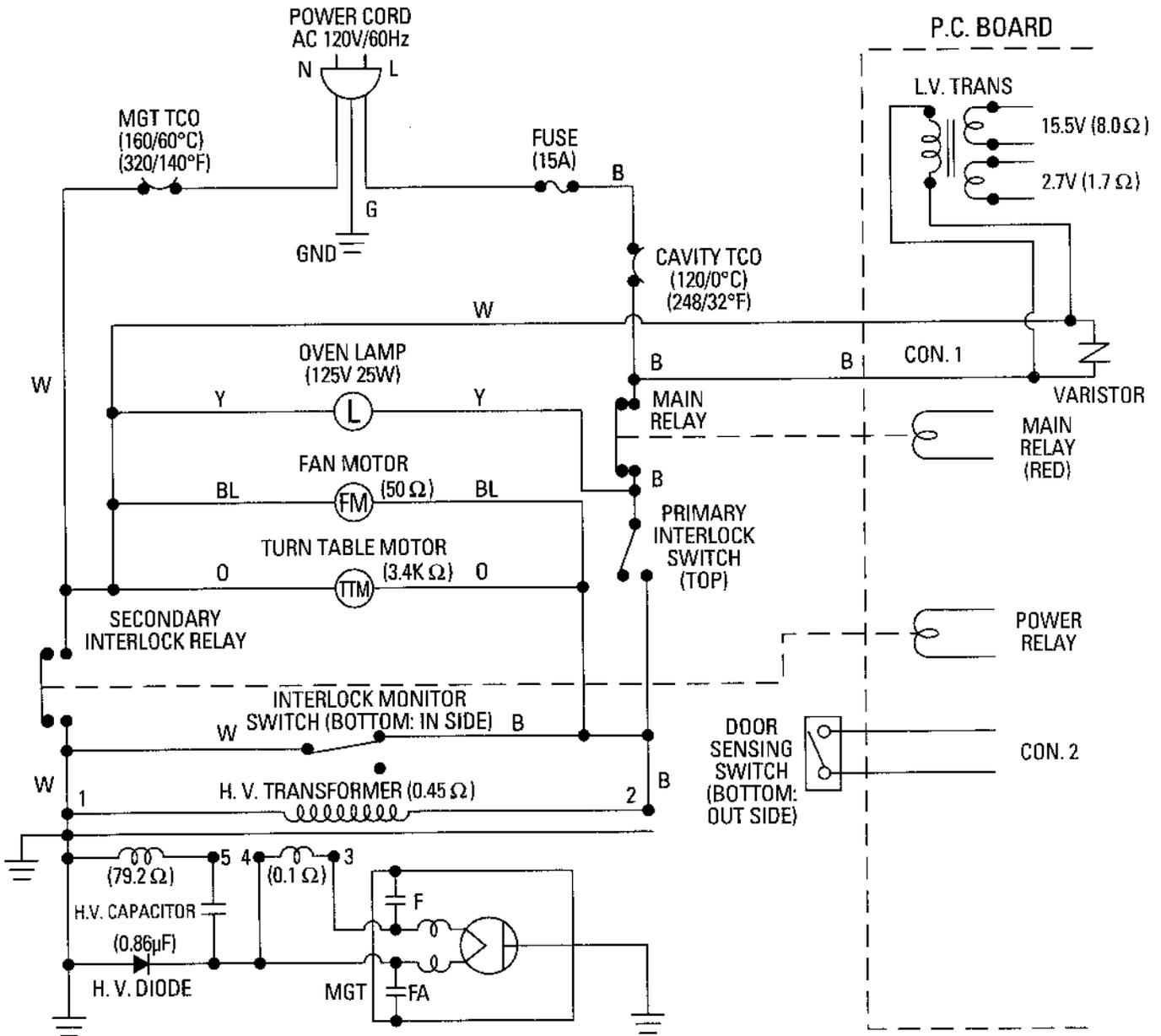
CODE NUMBER  
74753-0060-00

MODEL NAME  
JE940PN/GN/WN  
JES933PN/WN

# SCHEMATIC DIAGRAM

## WARNING

Power must be disconnected  
before servicing this appliance.

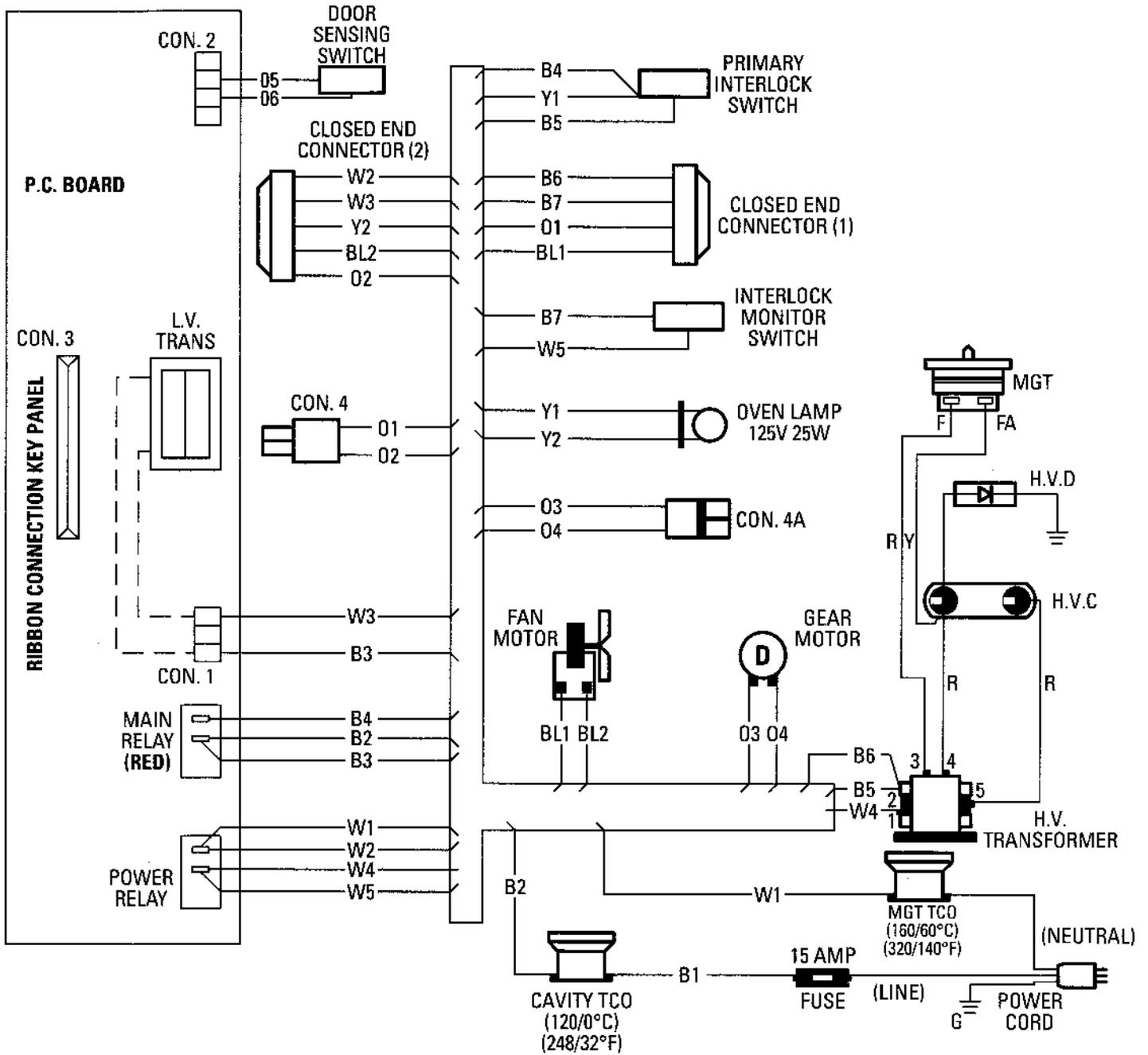


**NOTE 1:** Circuit shown with door in opened position.

**NOTE 2:** For service replacement, use 16GA 105°C thermoplastic covered wire except for high voltage leads or as noted on special leads.

# WIRING DIAGRAM

SYMBOL	COLOR
B	BLACK
W	WHITE
BL	BLUE
O	ORANGE
Y	YELLOW
G	GREEN



**NOTE 3:** All leads that enter common lead path (□) must be traced to their terminations. Con. 4 and 4A are connected together.



Ref. No.	Part No.	Part Description	JES933PN	JES933WN	JE940GN	JE940PN	JE940WN	JE950GN
0030	WF01X0158	Holder – Digitron	1	1	1	1	1	1
0047	WB06X0415	Support – Management	1	1	1	1	1	1
0280	WB36X0904	Lamp (125V, 25W)	1	1	1	1	1	1
0923	WB07X2028	Control Panel	1	—	1	1	—	1
	WB07X2034	Control Panel	—	1	—	—	1	—
1121	WB24X0813	Thermostat Switch	1	1	1	1	1	1
1200	WB56X2158	Outer Case	—	—	1	—	—	1
	WB56X2160	Outer Case	—	1	—	—	1	—
	WB56X2161	Outer Case	1	—	—	1	—	—
1205	WB06X0401	Body Latch Switch	1	1	1	1	1	1
1206	WB18X0519	Power Cord	1	1	1	1	1	1
1209	WB06X0421	Coupler	1	1	1	1	1	1
1210	WB06X0402	Lever – Switch (A)	1	1	1	1	1	1
1211	WB06X0403	Lever – Switch (B)	1	1	1	1	1	1
1212	WB01X1449	Locking Button	1	1	1	1	1	1
1217	WB14X0189	Lower Hinge	1	—	1	1	—	—
	WB14X0193	Lower Hinge	—	1	—	—	1	1
1283	WB01X1224	Screw – Tap TH	2	2	2	2	2	2
1417	WB26X0172	T/T Motor	1	1	1	1	1	1
1422	WB26X0170	Fan Motor Assembly	1	1	1	1	1	1
1430	WB24X0812	Thermostat Switch	1	1	1	1	1	1
1433	WB27X0974	HV Transformer	—	—	—	—	—	1
	WB27X0988	HV Transformer	1	1	1	1	1	—
1434	WB27X0950	Magnetron	1	1	1	1	1	—
	WB27X0972	Magnetron	—	—	—	—	—	1
1437	WB06X0406	Bracket Capacitor	1	1	1	1	1	1
1438	WB27X0949	HV Capacitor	—	—	—	—	—	1
	WB27X0993	HV Capacitor	1	1	1	1	1	—
1439	WB27X0944	HV Diode (Rectifier)	1	1	1	1	1	1
1445	WB24X0801	Door Sens-Top. Pri. Int'lk	2	2	2	2	2	2
1446	WB24X0800	Monitor Switch	1	1	1	1	1	1
1462	WB06X0405	Cover – Air	1	1	1	1	1	1
1475	WB06X0397	Cover Lamp	1	1	1	1	1	1
1476	WB06X0398	Foot (w/Pin)	2	2	2	2	2	2
1508	WB49X0683	Cooking Tray	1	1	1	1	1	1
1509	WB06X0416	Support Roller Assembly	1	1	1	1	1	1
1514	WB06X0385	Holder Sensor	—	—	—	—	—	1
1517	WB06X0414	Sensor – Gas	—	—	—	—	—	1
1518	WB04X0179	Cooking Guide Label	1	1	—	—	—	—
	WB04X0182	Cooking Guide Label	—	—	1	1	1	—
	WB07X2033	Cooking Guide Label	—	—	—	—	—	1
1524	WB08X0312	Sensor Socket	—	—	—	—	—	1
1609	WB36X0903	Crystal	1	1	1	1	1	1
1613	WB03X0867	Button, Door	1	—	1	1	—	1
	WB03X0869	Button, Door	—	1	—	—	1	—
1621	WB06X0234	Holder Fuse	1	1	1	1	1	1
1626	WB27X0945	Fuse (20 Amp)	—	—	—	—	—	1
	WB27X0951	Fuse (250V, 15A)	1	1	1	1	1	—
1634	WB09X0291	Spring Button	1	1	1	1	1	1

Ref. No.	Part No.	Part Description	JES933PN	JES933WN	JE940GN	JE940PN	JE940WN	JE950GN
1640	WB18X0529	Assy. Wire Lead – A	—	—	—	—	—	1
	WB18X0532	Wire Lead A	1	1	1	1	1	—
1643	WB27X0973	LV Transformer	—	—	—	—	—	1
	WB27X0989	LV Transformer	1	1	1	1	1	—
1648	WB18X0520	Wiring – Harness "A"	—	—	—	—	—	1
	WB18X0530	Wiring – Harness "A"	1	1	1	1	1	—
1649	WB18X0521	Wire Harness B	1	1	1	1	1	—
	WB18X0531	Wire Harness B	—	—	—	—	—	1
1654	WB27X0975	Key Panel Assembly	—	—	—	—	—	1
	WB27X0987	Key Panel Assembly	—	—	1	1	—	—
	WB27X0990	Key Panel Assembly	—	—	—	—	1	—
	WB27X0991	Key Panel Assembly	—	1	—	—	—	—
	WB27X0992	Key Panel Assembly	1	—	—	—	—	—
1655	WB27X0976	Smartboard	—	—	—	—	—	1
	WB27X0980	Smartboard	1	1	1	1	1	—
1800	WB55X0891	Door Assembly	—	—	—	—	—	1
	WB55X0901	Door Assembly	1	—	1	1	—	—
	WB55X0902	Door Assembly	—	—	—	—	1	—
	WB55X0905	Door Assembly	—	1	—	—	—	—
1805	WB55X0892	Inner Door Frame	1	—	1	1	—	1
	WB55X0903	Inner Door Frame	—	1	—	—	1	—
1807	WB55X0895	Door Film	1	1	1	1	1	1
1810	WB06X0399	Door Key	1	—	1	1	—	1
	WB06X0412	Door Key	—	1	—	—	1	—
1815	WB09X0298	Spring Door Key	1	1	1	1	1	1
1817	WB14X0188	Upper Hinge	1	—	1	1	—	—
	WB14X0192	Upper Hinge	—	1	—	—	1	1
1822	WB36X0911	Screen Door Outer	—	—	—	—	—	1
	WB36X0912	Screen Door Outer	1	—	1	1	—	—
	WB36X0913	Screen Door Outer	—	—	—	—	1	—
	WB36X0914	Screen Door Outer	—	1	—	—	—	—
1827	WB55X0893	Door & Choke Assembly	1	—	1	1	—	1
	WB55X0904	Door & Choke Assembly	—	1	—	—	1	—
3003	WB01X1436	Washer – Screw	8	8	8	8	8	8
3005	WB01X1435	Mtg Screw Tap F	14	14	14	14	14	14
3006	WB01X1439	Screw, (2S-4x12)	10	10	10	10	10	10
3500	WB06X0418	Sleeve Fan Motor	1	1	1	1	1	1
4000	WB06X0417	Bracket Cover Motor	1	1	1	1	1	1
5591	WB06X0404	Lever Door	1	1	1	1	1	1
7094	WB01X1457	Flange Bolt M5x12	4	4	4	4	4	4
7128	WB01X1460	Screw Truss HD, 4x12MM	—	—	4	—	—	4
	WB01X1493	Screw Truss HD, 4x12MM	—	4	—	—	4	—
	WB01X1494	Screw Truss HD, 4x12MM	4	—	—	4	—	—
9999	31-20011	Mini-Manual	1	1	1	1	1	—
	31-20011-A	Wiring Diagram/Schematic	1	1	1	1	1	—
	31-20027	Mini-Manual	—	—	—	—	—	1
	31-20027-A	Wiring Diagram	—	—	—	—	—	1
	49-8472	Use and Care Manual	—	—	1	1	1	—
	49-8473	Use and Care Manual	—	—	—	—	—	1
	49-8495	Use and Care Manual	1	1	—	—	—	—

