



CONSUMER SERVICES TECHNICAL  
EDUCATION GROUP PRESENTS

KM-30

# *MICROWAVE OVEN HOOD COMBINATION*



JOB AID  
Part No. 8178573



# FORWARD

This Job Aid, “Whirlpool Microwave Oven Hood Combination,” (Part No. 8178573), provides the In Home Service Professional with information on the operation and service of the Whirlpool Microwave Oven Hood Combination. It is to be used as a training Job Aid and Service Manual. For specific information on the model being serviced, refer to the “Use and Care Guide,” or “Tech Sheet” provided with the microwave oven.

The Wiring Diagrams and Strip Circuits used in this Job Aid are typical and should be used for training purposes only. Always use the Wiring Diagram supplied with the product when servicing the unit.

## GOALS AND OBJECTIVES

The goal of this Job Aid is to provide detailed information that will enable the In Home Service Professional to properly diagnose malfunctions and repair the Microwave Oven Hood Combination.

The objectives of this Job Aid are to:

- Understand and follow proper safety precautions.
- Successfully troubleshoot and diagnose malfunctions.
- Successfully perform necessary repairs.
- Successfully return the microwave oven to proper operational status.

**WHIRLPOOL CORPORATION assumes no responsibility for any repairs made on our products by anyone other than Authorized In Home Service Professionals.**

Copyright © 2006, Whirlpool Corporation, Benton Harbor, MI 49022

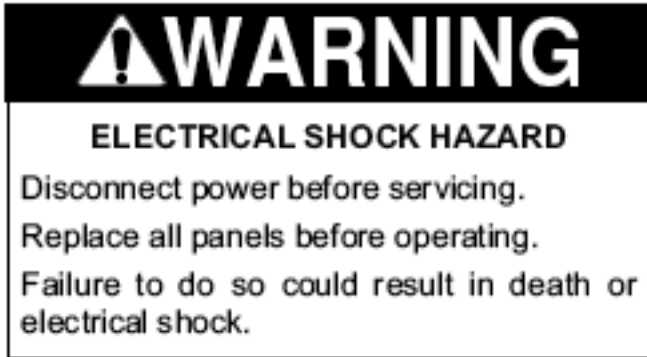
# TABLE OF CONTENTS

<b>GENERAL</b> .....	<b>1-1</b>
Important Safety Information .....	1-1
Warning to In Home Service Professionals .....	1-2
Precautions To Be Observed Before and During Servicing to Avoid Possible Exposure to Excessive Microwave Energy .....	1-3
R.F. Leakage Test .....	1-4
Whirlpool Model Number Designations .....	1-5
Whirlpool Serial Number Designations .....	1-6
Model & Serial Number Label and Tech Sheet Locations .....	1-6
Specifications.....	1-7
Whirlpool Microwave Oven Warranty.....	1-10
<b>INSTALLATION INFORMATION</b> .....	<b>2-1</b>
Hood Fan Motor Mounting Positions .....	2-1
<b>THEORY OF OPERATION</b> .....	<b>3-1</b>
Air Flow Paths.....	3-1
<b>COMPONENT ACCESS</b> .....	<b>4-1</b>
Component Locations.....	4-1
Removing the Turntable Motor & Hood (Cooktop) Lamp Assembly .....	4-2
Removing the Control Panel & Control Board .....	4-4
Removing the Motor Capacitor and Line Fuse .....	4-6
Removing the Door Switches .....	4-6
Removing the Oven Cavity Lamp and Charcoal Filter.....	4-8
Removing the Oven Rack Retainers .....	4-9
Removing the Outer Cabinet .....	4-10
Removing the Thermostats and Thermistor.....	4-11
Removing the Magnetron .....	4-12
Removing the High-Voltage Transformer.....	4-13
Removing the High-Voltage Diode and Capacitor .....	4-14
Removing the Oven Cavity Lamp Socket.....	4-15
Removing the AC Line Filter.....	4-16
Removing the Hood Fan Motor and Humidity Sensor .....	4-17
Removing the Fuse Holder & Mounting Bracket.....	4-18
Removing the Door and Door Disassembly.....	4-19
<b>COMPONENT TESTING</b> .....	<b>5-1</b>
H.V. Transformer.....	5-1
Magnetron.....	5-2
H.V. Capacitor.....	5-2
H.V. Diode.....	5-3

# TABLE OF CONTENTS - CONTINUED

Turntable Motor.....	5-3
Humidity Sensor .....	5-4
Hood Exhaust Fan Motor.....	5-4
AC Line Filter .....	5-5
Thermostats.....	5-5
<b>DIAGNOSIS &amp; TROUBLESHOOTING .....</b>	<b>6-1</b>
Interlock Switch Checkout Procedures .....	6-1
Touch Panel and Electronic Control Test .....	6-2
Microwave Oven Power Output Test .....	6-3
Failure Codes Indications .....	6-3
<b>WIRING DIAGRAM &amp; STRIP CIRCUITS.....</b>	<b>7-1</b>
Wiring Diagram - 8205889 - Sensor Model .....	7-1
Wiring Diagram - 8205660 - Non Sensor Model.....	7-2
Strip Circuits .....	7-3
Microwave Cooking.....	7-3
Hood Exhaust Fan On High Automatically.....	7-3
Hood Exhaust Fan On Low Speed.....	7-3
Hood Exhaust Fan On High / Medium .....	7-4
Microwave Oven Plugged In—Time of Day Displayed .....	7-4
Door Open—Oven Cavity Light Is On.....	7-4
Cooktop Light On High.....	7-4
Cooktop Light On Low (Night Light).....	7-4

# GENERAL IMPORTANT SAFETY INFORMATION



## IMPORTANT SAFETY INSTRUCTIONS

Before touching any oven component or wiring, always unplug the oven from its power source and discharge the capacitor by using a 20,000 ohm discharge resistor or use an insulated plastic handle screwdriver to short across the capacitor terminals.

Check that the unit is grounded before troubleshooting. Discharge any static charge from your body by touching ground before handling any part of the circuitry on the control board. Electrostatic discharge may damage the control circuit.

Do not touch oven components or wiring during operation. Attach meter leads with alligator clips when making operational tests.

For continued protection against radiation emission, replace only with these types of switches: Primary (Interlock) Switch: SZM-V16-FA-63 or VP-533A-OF; Secondary (Interlock) Switch: SZM-V01-FA-32; Interlock (Monitor) Switch: SZM-VI6-FA-62 or VP-532A-OF; Oven Lamp Switch: SZM-V6-FA-31 or VP-331 AOD.

It is neither necessary nor advisable to attempt measurement of high voltage.

Attaching the adaptor ground terminal to the wall receptacle cover screw does not ground the appliance unless the cover screw is metal and not insulated and the wall receptacle is grounded through the house wiring.

## ELECTROSTATIC DISCHARGE (ESD) SENSITIVE ELECTRONIC

ESD problems are present everywhere. ESD may damage or weaken the electronic control assembly. The new control assembly may appear to work well after repair is finished, but failure may occur at a later date due to ESD stress.

- Use an antistatic wrist strap. Connect the wrist strap to a green ground connection point or unpainted metal in the appliance; or touch your finger repeatedly to a green ground connection point or unpainted metal in the appliance.
- Before removing the part from its package, touch the antistatic bag to a green ground connection point or unpainted metal in the appliance.
- Avoid touching electronic parts or terminal contacts. Handle the electronic control assembly by the edges only.
- When repackaging the failed electronic control assembly in an antistatic bag, observe the above instructions.

# WARNING TO IN HOME SERVICE PROFESSIONALS

To avoid possible exposure to microwave radiation or energy, visually check the oven for damage to the door and door seal before operating any oven. Use a microwave survey meter to check the amount of leakage before servicing. In the event the R.F. leakage exceeds 4 mw/cm<sup>2</sup> at 5 cm, appropriate repair must be made before continuing to service the unit. Check interlock function by operating the door latch. The oven cook cycle should cut off before the door can be opened.

The door and latching assembly contains the radio frequency energy within the oven. The door is protected by three safety interlock switches. Do not attempt to defeat them.

**Under no circumstances should you try to operate the oven with the door open.**

- Proper operation of microwave ovens requires that the magnetron be properly assembled to the waveguide and cavity. Never operate the magnetron unless it is properly installed.
- Be sure the "RF" seal is not damaged and is assembled around the magnetron dome properly when installing the magnetron.
- Routine service safety procedures should be exercised at all times.
- Untrained personnel should not attempt service without a thorough review of test procedures and safety information contained in this Job Aid.

Whirlpool microwave ovens have a monitoring system designed to ensure proper operation of the safety interlock systems.

The interlock monitor switch will immediately cause the oven fuse to blow if the door is opened and the primary door interlock switch and/or the secondary interlock switch contacts fail in a closed position.

**CAUTION: Replace a blown fuse with a 20 ampere class H fuse only.**

Test the upper and lower door interlock switches, cook relay and interlock monitor switch (middle switch) for proper operation as described in the component test procedures, before replacing the blown oven fuse.

**Do not attempt to repair sticking contacts of any interlock switch, safety switch, or Cook (Latch) relay. The components must be replaced.**

Any indication of sticking contacts during component tests requires replacement of that component to ensure reliability of the safety interlock system.

NOTE: If the fuse is blown, the monitor, primary, and secondary interlock switches must be replaced. Be sure they are properly connected.

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

- A. Do not operate or allow the oven to be operated with the door open.
- B. Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary:
  - 1) Interlock operation
  - 2) Proper door closing
  - 3) Seal and sealing surfaces (arcing, wear, and other damage)
  - 4) Damage to or loosening of hinges and latches
  - 5) Evidence of dropping or abuse
- C. Before turning on the microwave power for any service test or inspection within the microwave generating components, check the magnetron, wave guide or transmission line, and cavity for proper alignment, integrity, and connections.
- D. Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted, using procedures described in this Job Aid, before the oven is released to the owner.
- E. A microwave leakage check to verify compliance with Federal Performance Standard should be performed on each oven prior to release to the owner.
- F. Do not attempt to operate the oven if the door glass is broken.

# R.F. LEAKAGE TEST

## EQUIPMENT

- Electromagnetic energy leakage monitor (NARDA 81 00B, HOLADAY H 1501 ).
- 275 ±15 ML glass beaker.

## TEST

On every service call, checks for microwave energy emission must be made according to the following manner.

1. Remove the cooking rack from the oven cavity, if the microwave oven is so equipped.
2. Place a 275 ±15 ML (9.3 oz.) glass of water in the center of the oven bottom.
3. Select “HIGH” cook power, turn the microwave oven on, and test for R.F. leakage at the following locations:
  - a) Around the cabinet at the front.
  - b) Around the door.
  - c) Across the console panel.
  - d) Horizontally across the door.
  - e) Vertically across the door.
  - f) Diagonally across the door.
  - g) Across the air vents.
  - h) Across the rear air vent.
  - i) All lockseams.
  - j) Weld at bottom.
  - k) Bottom plate.
  - l) Oven feet.
4. The scan speed is one inch per second. When checking for R.F. leakage, use an approved R.F. measuring device to ensure less than 4 mw/cm<sup>2</sup> emission at 5 cm distance with a maximum scan rate of 2.54 cm/second, in compliance with U.S. Government Department of Health, Education and Welfare 21CFR1030, performance Standard for Microwave Ovens. A properly operating door and seal assembly will normally register small emissions, but they must be no greater than 4 mw/cm<sup>2</sup> to allow for measurement uncertainty.

NOTE: Enter leakage readings in BEFORE and AFTER spaces on the service document.

All microwave ovens exceeding the emission level of 4 mw/cm<sup>2</sup> must be reported to Dept. of Service for microwave ovens immediately and the owner should be told not to use the microwave oven until it has been repaired completely.

If a microwave oven is found to operate with the door open, report to Dept. of Service, the manufacturer and CDRH\* immediately. Also tell the owner not to use the oven.

The interlock monitor switch acts as the final safety switch protecting the customer from microwave radiation. If the interlock monitor switch operated to blow the fuse when the interlocks failed, you must replace all interlock switches with new ones, because the contacts of those interlock switches may be melted and welded together.

If safety interlock/monitor switch replacement, or adjustment, is required, you must reconnect the circuit, and perform a continuity check on the monitor circuit.

All repairs must be performed in such a manner that microwave energy emissions are minimal.

Address for CDRH is:

Office of Compliance (HFZ-342) Center for  
Devices and Radiological Health  
2098 Gaither Road  
Rockville, MD 20850

\* CDRH: Center for Devices and Radiological Health, Food and Drug Administration.



# WHIRLPOOL MODEL NUMBER DESIGNATIONS

<b>MODEL NUMBER</b>	<b>M</b>	<b>H</b>	<b>2</b>	<b>17</b>	<b>5</b>	<b>X</b>	<b>S</b>	<b>T</b>	<b>0</b>
---------------------	----------	----------	----------	-----------	----------	----------	----------	----------	----------

**INTERNATIONAL SALES IND.  
OR MARKETING CHANNEL  
IF PRESENT**

**PRODUCT GROUP**  
 G = WHIRLPOOL GOLD  
 M = MICROWAVE

**PRODUCT IDENTIFICATION**  
 B = BROWNER  
 C = CONVECTION  
 G = GRILL / CRISPER  
 H = OTR HOOD COMBO  
 K = KITS  
 M = GOLD CONVECTION  
 S = STIRRER FAN  
 T = TURNTABLE

**MODEL VARIATIONS**  
 0 - 9

**CUBIC FEET**

04 = .4 CU. FT.	09 = 0.9 CU. FT.	15 = 1.5 CU. FT.
06 = .6 CU. FT.	10 = 1.0 CU. FT.	16 = 1.6 CU. FT.
07 = .7 CU. FT.	12 = 1.2 CU. FT.	17 = 1.7 CU. FT.
08 = .8 CU. FT.	14 = 1.4 CU. FT.	

**FEATURE LEVEL**  
 0 = 30" KIT (IF KIT)  
 2 = 22" KIT (IF KIT)  
 4 = 24" KIT (IF KIT)  
 5 = SENSORED MODEL  
 7 = 27" KIT (IF KIT)

**FEATURE CODE**  
 C = CSA APPROVED  
 S = CARRY IN WARRANTY (EFFECTIVE 02/96)  
 X = IN HOME WARRANTY (EFFECTIVE 02/96)

**YEAR OF INTRODUCTION**  
 S = 2006, T = 2007, V = 2008

**COLOR CODE**  
 B = BLACK, Q = WHITE, T = BISCUIT

**ENGINEERING CHANGE (0, 1, 2, 3, ETC.)**

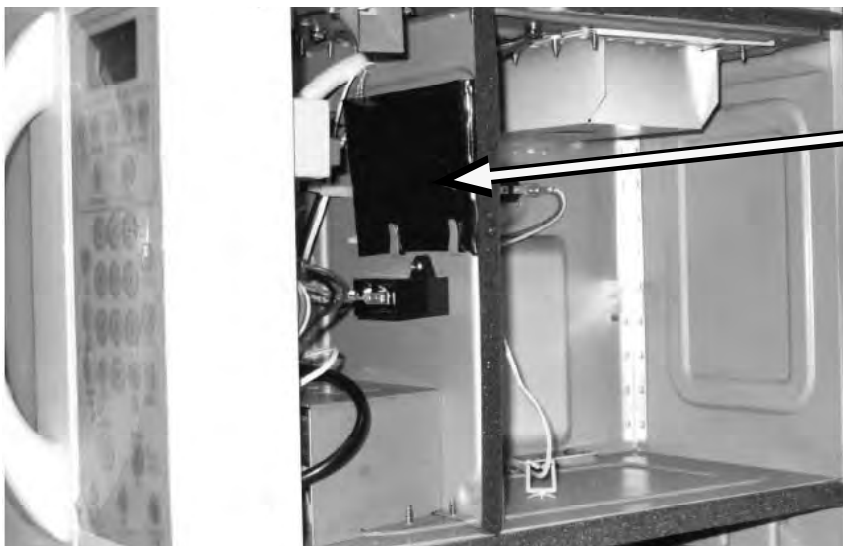
# WHIRLPOOL SERIAL NUMBER DESIGNATIONS

<b>SERIAL NUMBER</b>	TR	T	06	10001
<b>MANUFACTURING SITE</b> TR = Shunde				
<b>YEAR OF PRODUCTION</b> T = 2006				
<b>WEEK OF PRODUCTION</b> 06 = 6th week of the year				
<b>PRODUCT SEQUENCE NUMBER</b>				

## MODEL & SERIAL NUMBER LABEL AND TECH SHEET LOCATIONS



**Model & Serial  
Number Location**



**Tech Sheet Location  
(In black poly bag)**

# SPECIFICATIONS

MODEL	MH2175XS
Feature Level/Series	SENSOR Cooking
Colors	White, Black, Biscuit and Stainless
<b>CONTROL SYSTEM</b>	
Timer	Electronic
Limits	99 Min. 99 Sec.
Operation	TOUCH CONTROL, 30 Pads
Display	Blue Green with scrolling text
Convection Cooking Cycles	No
Keypad Disable / Child Lockout Mode	Yes - Press "Cancel" Key for 3 Seconds
Cooktop Light Wattage	One Incandescent 40 Watt bulb
Settings	3 levels (High, Night/Low, Off)
Fan Speed Indication	"Low - Medium - High" -Scrolling Text
Power Failure Indication	Yes - ' ' Displayed Flashing
Invalid Data Entry	"BEEP"
Technical Error Indication	"F-" With Error Number
Diagnostic System	Yes
<b>OVEN INTERIOR FEATURES</b>	
Capacity	1.7 cu. ft.
Size W x H x D (inches)	21" W x 9 1/2" H x 14" D
Size W x H x D (mm)	535 x 240 x 355 mm
Cooking Power	1000 Watts (IEC-705 Rating)
Turn Table	Yes, Sunken Flush
Cooling Fan	Automatic - On if oven is operating, Off if door open
Oven Light	Automatic - Turns on when oven door is open or oven is operating. (30 Watt)
<b>DOOR FEATURES</b>	
Handle/Latch	Yes/Pull to open
Seals	Two Stage (Capacitive and Reflective)
<b>MICROWAVE SYSTEM</b>	
Distribution	Top Feed w/ Stirrer
Magnetron	One standard
<b>SAFETY FEATURES</b>	
Interlock	Three Door/Latch Operated (Primary, secondary and monitor)
Thermal Protectors	Four - 1 Magnetron, 1 Oven Cavity, 1 Hood, 1 Wave Guide
<b>VENTILATION SYSTEM</b>	
Type	Convertible Recirculation or Exhaust Vertical/Horizontal
Duct Outlet Size	3 1/4"H x 10"W
Recirculation CFM	112
Exhaust CFM	221
Touch Control	4 Speed
Exhaust Fan 'Auto ON - High Speed	YES : 60° C, 140°F
Noise Level Recirculation (Acc. to IEC 704)	67dBA
Grease Filter	Yes (2)-low cost
Charcoal Filter	Yes (2)
Blower Type	Two Squirrel Cage Blower. Left fan wheel for hood airflow and cavity ventilation. Right fan for cooling airflow
Shipped	Recirculation mode
<b>EXTERIOR FEATURES</b>	
Power Cord Length	3 Feet
<b>OTHER SPECIFICATIONS</b>	
Electrical	120V, Single Phase, 60 Hz 1800 Watts, For Use With 15 - 20 Amp Circuit
Domestic Use Only	Yes
Agency Approvals	FCC, DHHS, U.L. Listed, CSA
Approx. Net Weight - Lb	57 lbs.
<b>LITERATURE</b>	
Use & Care Guide	8205887
Installation Instructions	8206433
Warranty	In Use & Care Guide
Tech Sheet	8205889

MODEL	MH1160XSB/Q
Feature Level/Series	Basic Non Sensor
Colors	Black, White
<b>CONTROL SYSTEM</b>	
Timer	Electronic
Limits	99 Min. 99 Sec.
Operation	TOUCH CONTROL, 25 Pads
Display	Blue Green with scrolling text--Dual Language English and French
Convection Cooking Cycles	No
Keypad Disable / Child Lockout Mode	Yes - Press "Cancel" Key for 3 Seconds
Cooktop Light Wattage	One Incandescent 40 Watt bulb
Fan Speed Indication	"Low-Medium-High"-Scrolling Text
Power Failure Indication	Yes - ':' Displayed Flashing
Invalid Data Entry	"BEEP"
Technical Error Indication	"F-" With Error Number
Diagnostic System	Yes
<b>OVEN INTERIOR FEATURES</b>	
Capacity	1.6 cu. ft.
Interior Dimensions W x H x D	21" W x 9 1/2" H x 14" D
Interior Dimensions W x H x D (mm)	535 x 240 x 355 mm
Cooking Power	950 Watts (IEC-705 Rating)
Turn Table	Yes, Sunken Flush
Cooling Fan	Automatic - On if oven is operating, Off if door open
Oven Light	Automatic - Turns on when oven door is open or oven is operating. (30 Watts)
<b>DOOR FEATURES</b>	
Seals	Two Stage (Capacitive and Reflective)
<b>MICROWAVE SYSTEM</b>	
Distribution	Top Feed w/o Stirrer
Magnetron	One standard
<b>SAFETY FEATURES</b>	
Interlock	Three Door/Latch Operated Primary, secondary and monitor
Thermal Protectors	Four - 1 Magnetron, 1 Oven Cavity, 1 Hood, 1 Wave Guide
<b>VENTILATION SYSTEM</b>	
Type	Convertible Recirculation or Exhaust Vertical/Horizontal
Duct Outlet Size	3 1/4"H x 10"W
Recirculation CFM Out	112
Exhaust CFM Out	221
Touch Control	2 Speed
Exhaust Fan Auto ON - High Speed	YES : 60° C, 140°F
Noise Level Recirculation (Acc. to IEC 704)	Sound Power Level: 70 dB(A)
Grease Filter	Yes (2)
Charcoal Filter	Yes (1)
Blower Type/ Ventilation	Twin Squirrel Cage Blower: Left fan wheel for hood airflow and cavity ventilation. Right fan for cooling airflow.
Shipped	Recirculation mode
<b>EXTERIOR FEATURES</b>	
Power Cord Length	3 Feet
<b>OTHER SPECIFICATIONS</b>	
Electrical	120V, Single Phase, 60 Hz 1800 Watts, For Use With 15 - 20 Amp Circuit
Domestic Use Only	Yes
Agency Approvals	FCC, DHHS, UL, CUL
Approx. Net Weight - Lb	57 lbs.
<b>LITERATURE</b>	
Use & Care Guide	8205884
Installation Instructions	8205870
Warranty	In Use & Care Guide
Tech Sheet	8205886
JobAid	8178573

MH1170XS	TMH16XS
Basic Non Sensor	Basic Non Sensor
Black, White, Biscuit and Stainless	(B)Black, (Q)White, (D)Silver
Electronic	Electronic
99 Min. 99 Sec.	99 Min. 99 Sec.
TOUCH CONTROL,	TOUCH CONTROL,
Blue Green scrolling text--Dual Language English and French	Blue Green with scrolling text--Dual Language English and French
No	No
Yes - Press "Cancel" Key for 3 Seconds	Yes - Press "Cancel" Key for 3 Seconds
One Incandescent 40 Watt bulb	One Incandescent 40 Watt bulb
"Low-Medium-High"-Scrolling Text	"Low-Medium-High"-Scrolling Text
Yes - ':' Displayed Flashing	Yes - ':' Displayed Flashing
"RETRY"-Scrolling Text	"RETRY"-Scrolling Text
"F." With Error Number	"F." With Error Number
Yes	Yes
1.7 cu. ft.	1.6 cu. ft.
21" W x 9 1/2" H x 14" D	21" W x 9 1/2" H x 14" D
535 x 240 x 355 mm	535 x 240 x 355 mm
1000 Watts (IEC-705 Rating)	1000 Watts (IEC-705 Rating)
Yes, Sunken Flush, Stoppable	Yes, Sunken Flush
Automatic - On if oven is operating, Off if door open	Automatic - On if oven is operating, Off if door open
Automatic - Turns on when oven door is open or oven is operating. (30 Watts)	Automatic - Turns on when oven door is open or oven is operating. (30 Watts)
Two Stage (Capacitive and Reflective)	Two Stage (Capacitive and Reflective)
Top Feed w/o Stirrer	Top Feed w/o Stirrer
One standard	One standard
Three Door/Latch Operated (Primary, secondary and monitor) (Primary, secondary and monitor)	Three Door/Latch Operated (Primary, secondary and monitor) (Primary, secondary and monitor)
Four - 1 Magnetron, 1 Oven Cavity, 1 Hood, 1 Wave Guide	Four - 1 Magnetron, 1 Oven Cavity, 1 Hood, 1 Wave Guide
Convertible Recirculation or Exhaust Vertical/Horizontal	Convertible Recirculation or Exhaust Vertical/Horizontal
3 1/4"H x 10"W	3 1/4"H x 10"W
112	112
221	221
2 Speed	2 Speed
YES : 60° C, 140°F	YES : 60° C, 140°F
Sound Power Level: 70 dB(A)	Sound Power Level: 70 dB(A)
Yes (2)	Yes (2)
Yes (1)	Yes (1)
Twin Squirrel Cage Blower: Left fan wheel for hood airflow and cavity ventilation. Right fan for cooling airflow.	Twin Squirrel Cage Blower: Left fan wheel for hood airflow and cavity ventilation. Right fan for cooling airflow.
Recirculation mode	Recirculation mode
3 Feet	3 Feet
120V, Single Phase, 60 Hz	120V, Single Phase, 60 Hz
1800 Watts, For Use With 15 - 20 Amp Circuit	1800 Watts, For Use With 15 - 20 Amp Circuit
Yes	Yes
FCC, DHHS, UL, CUL	FCC, DHHS, UL, CUL
57 lbs.	57 lbs.
8205884	8205884
8205870	8205870
In Use & Care Guide	In Use & Care Guide
8205880	
8178573	8178573

# WHIRLPOOL MICROWAVE OVEN WARRANTY

## WHIRLPOOL CORPORATION MAJOR APPLIANCE WARRANTY

### ONE YEAR LIMITED WARRANTY

For one year from the date of purchase, when this major appliance is operated and maintained according to instructions attached to or furnished with the product, Whirlpool Corporation or Whirlpool Canada LP (hereafter "Whirlpool") will pay for FSP® replacement parts and repair labor to correct defects in materials or workmanship. Service must be provided by a Whirlpool designated service company.

### ITEMS WHIRLPOOL WILL NOT PAY FOR

1. Service calls to correct the installation of your major appliance, to instruct you how to use your major appliance, to replace or repair house fuses or to correct house wiring or plumbing.
2. Service calls to repair or replace appliance light bulbs, air filters or water filters. Those consumable parts are excluded from warranty coverage.
3. Repairs when your major appliance is used for other than normal, single-family household use.
4. Damage resulting from accident, alteration, misuse, abuse, fire, flood, acts of God, improper installation, installation not in accordance with electrical or plumbing codes, or use of products not approved by Whirlpool.
5. Any food loss due to refrigerator or freezer product failures.
6. Replacement parts or repair labor costs for units operated outside the United States or Canada.
7. Pickup and delivery. This major appliance is designed to be repaired in the home.
8. Repairs to parts or systems resulting from unauthorized modifications made to the appliance.
9. Expenses for travel and transportation for product service in remote locations.
10. The removal and reinstallation of your appliance if it is installed in an inaccessible location or is not installed in accordance with published installation instructions.

### DISCLAIMER OF IMPLIED WARRANTIES; LIMITATION OF REMEDIES

CUSTOMER'S SOLE AND EXCLUSIVE REMEDY UNDER THIS LIMITED WARRANTY SHALL BE PRODUCT REPAIR AS PROVIDED HEREIN. IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR OR THE SHORTEST PERIOD ALLOWED BY LAW. WHIRLPOOL SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES AND PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR LIMITATIONS ON THE DURATION OF IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS, SO THESE EXCLUSIONS OR LIMITATIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE OR PROVINCE TO PROVINCE.

Outside the 50 United States and Canada, this warranty does not apply. Contact your authorized Whirlpool dealer to determine if another warranty applies.

If you need service, first see the "Troubleshooting" section of the Use & Care Guide. After checking "Troubleshooting," additional help can be found by checking the "Assistance or Service" section or by calling Whirlpool. In the U.S.A., call **1-800-253-1301**. In Canada, call **1-800-807-6777**.

8/05

**Keep this book and your sales slip together for future reference. You must provide proof of purchase or installation date for in-warranty service.**

Write down the following information about your major appliance to better help you obtain assistance or service if you ever need it. You will need to know your complete model number and serial number. You can find this information on the model and serial number label located on the product.

Dealer name \_\_\_\_\_

Address \_\_\_\_\_

Phone number \_\_\_\_\_

Model number \_\_\_\_\_

Serial number \_\_\_\_\_

Purchase date \_\_\_\_\_

8205884

© 2005 Whirlpool Corporation.  
All rights reserved.

© Registered Trademark/TM Trademark of Whirlpool, U.S.A.

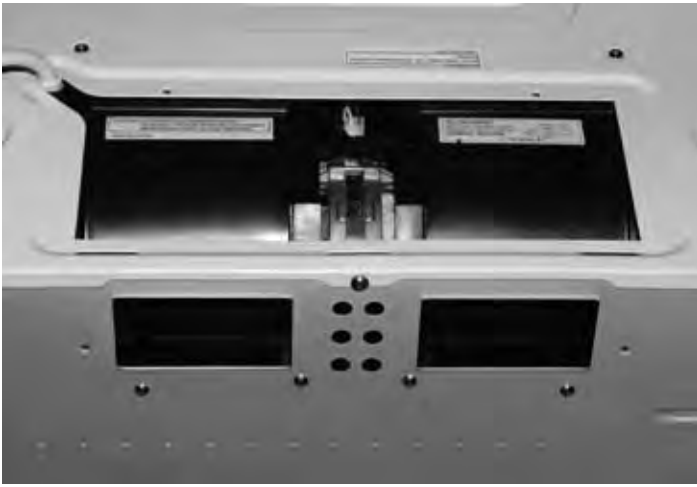


4619-652-68351  
11/05  
Printed in China

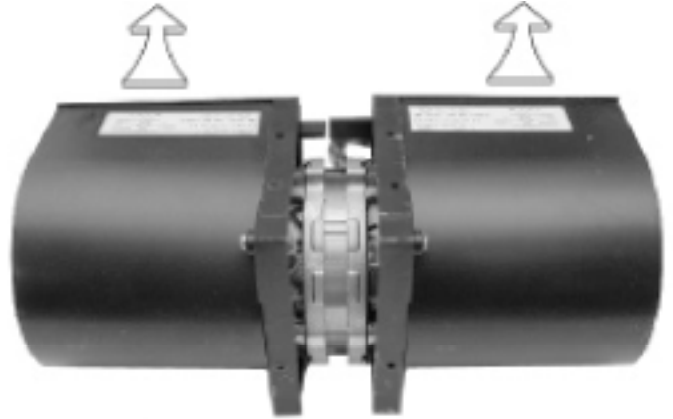
# INSTALLATION INFORMATION

## HOOD FAN MOTOR MOUNTING POSITIONS

### RECIRCULATING AIR



Airflow towards front of unit.  
Note: this is the way the unit is shipped.



### REAR VENTED AIR



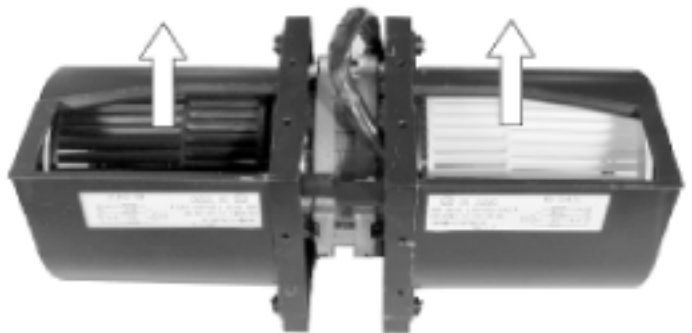
Airflow towards rear of unit. Unplug wire, turn fan motor over, and plug wire back into the quick disconnect socket over the top of the fan motor.



### TOP VENTED AIR



Airflow towards top of unit.



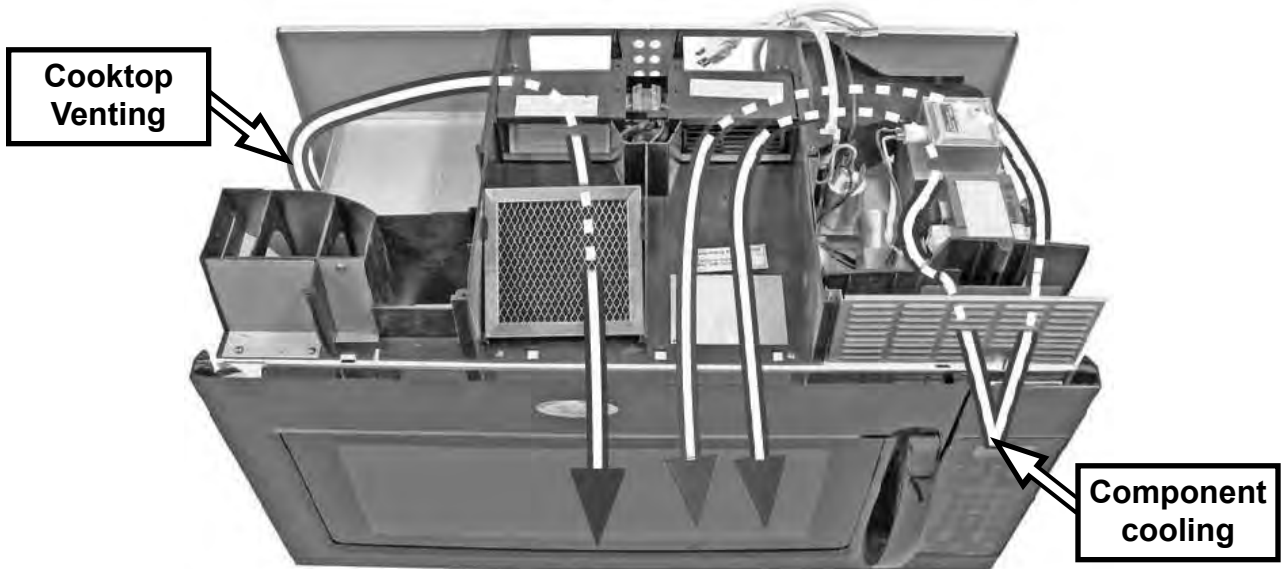
— NOTES —



# THEORY OF OPERATION

## AIRFLOW PATHS

The microwave uses the exhaust blower motor to remove vapors from the cooking area below the unit, it also circulates air within the unit to assist cooking performance and cool the operating components.



This process is accomplished by using one side of the blower motor assembly to pull ambient air into the unit to cool the working components,

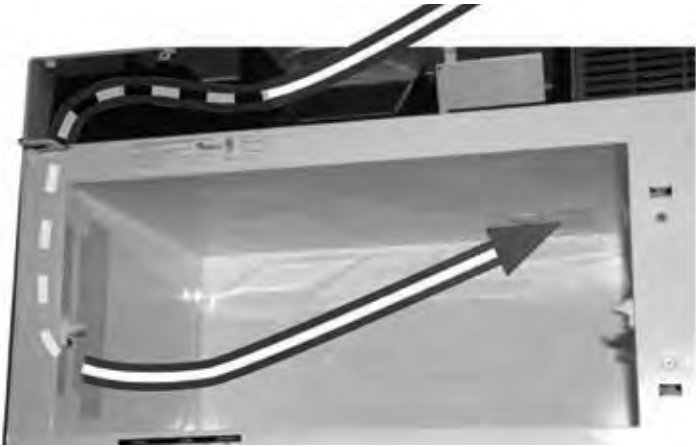
and the remaining side of the blower for exhausting steam and cooking odors.



Air is circulated in the unit to assist cooking performance.



The motor operates at two speeds--low speed all of the time and high speed during sensor-cooking modes.

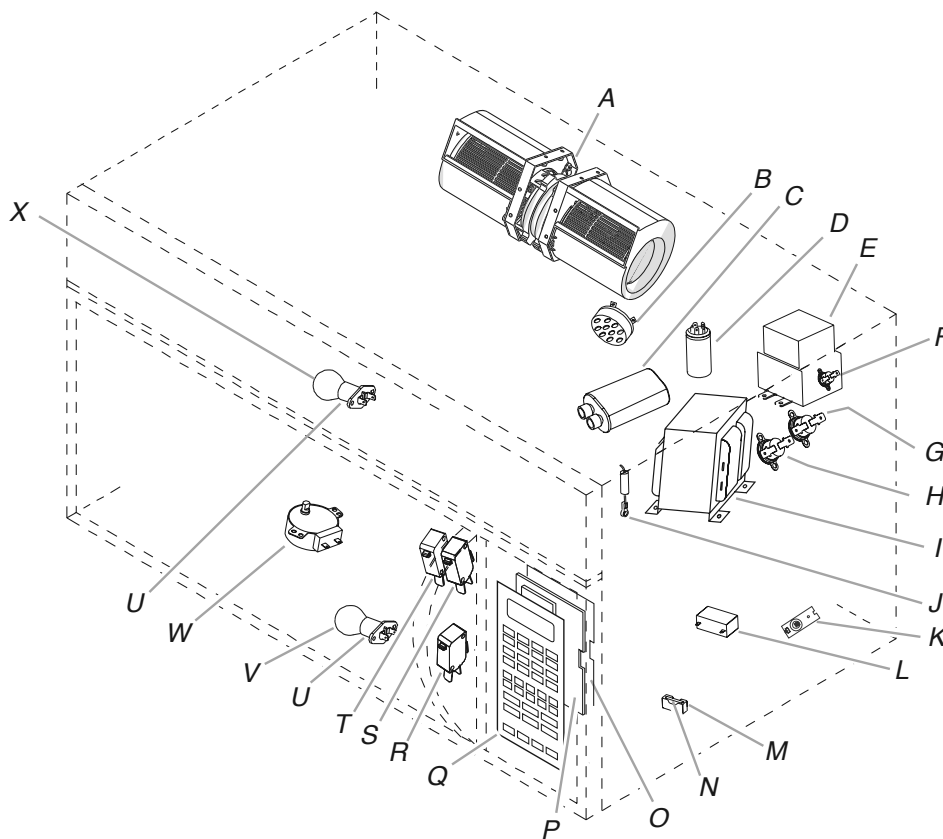


# COMPONENT ACCESS

This section instructs you on how to service each component inside the Model MH2175XS Microwave Oven Hood Combination. The components and their locations are shown below.

## COMPONENT LOCATIONS

Parts Layout  
(not to scale)



A. Hood fan motor assembly

B. Humidity sensor

C. H.V. capacitor

D. AC line filter

E. Magnetron

F. Magnetron thermostat—opens at 257°F  
(125°C), closes at 185°F (85°C)

G. Cavity thermostat 1—opens at 257°F  
(125°C), closes at -31°F (-35°C)

H. Cavity thermostat 2—opens at 257°F  
(125°C), closes at -31°F (-35°C)

I. H.V. transformer

J. H.V. diode

K. NTC thermistor

L. Motor capacitor

M. Line fuse

N. Fuse holder

O. Power display

P. Electronic control

Q. Touch panel

R. Secondary interlock switch

S. Monitor interlock switch

T. Primary interlock switch

U. Lamp holders

V. Hood (cooktop) lamp

W. Turntable motor

X. Cavity lamp

# REMOVING THE TURNTABLE MOTOR & HOOD (COOKTOP) LAMP ASSEMBLY

## **! WARNING**

### **ELECTRICAL SHOCK HAZARD**

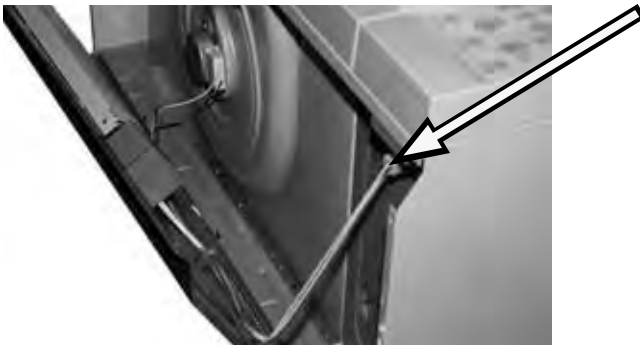
Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

**IMPORTANT:** When you work on the microwave oven, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Unplug microwave oven or disconnect power.
2. Remove the ten screws from the bottom cover and partially lower the top edge of the cover so you can access the component wiring below it.



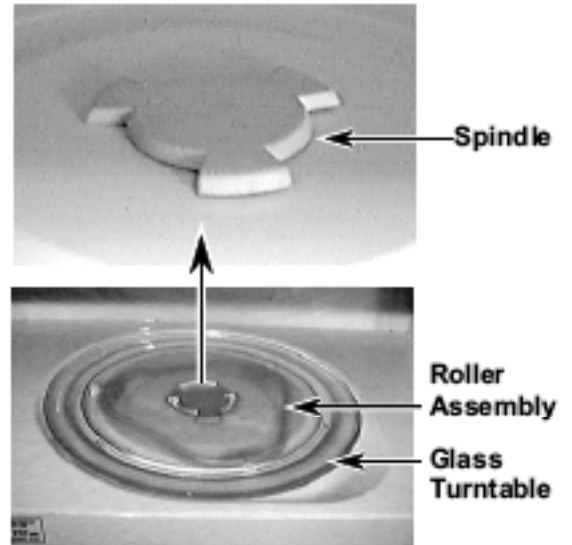
3. Disconnect the wire connector at the right side.



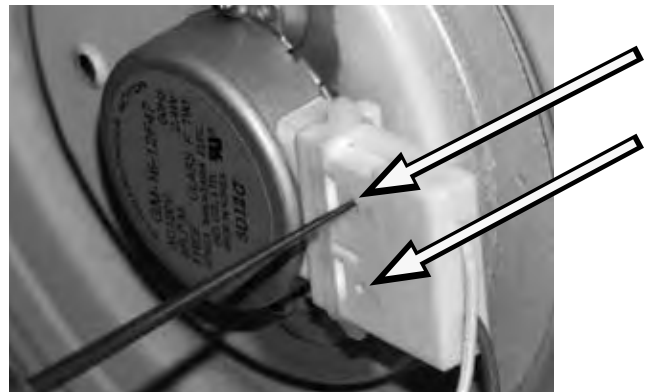
4. Remove the wire from the wire clip towards the middle of the bottom cover.



5. To remove the turntable motor:
  - a) Remove the glass turntable, roller assembly, and spindle from inside the oven cavity.



- b) There are two small holes on the connector. Lower the bottom cover just far enough to get a sharp tool with the right size (diameter less than 2mm) to press into the two access holes one by one and release the connector.



c) Remove the two screws from the turntable motor and remove the motor.



**NOTE:** When reassembling the wire connector onto the turntable motor, make sure the holes of the connector are facing away from the bottom of the unit, outward toward you.

f) Remove one screw to remove the lamp socket.

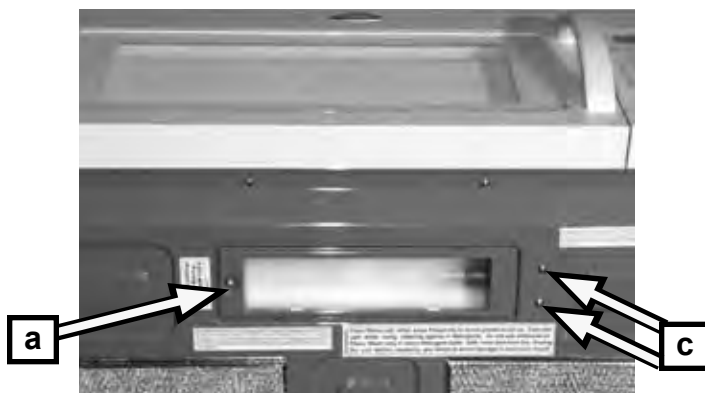


**6. To remove the cooktop lamp assembly:**

a) Remove the one screw to the left of the lamp housing that secures the lamp cover to the bottom of the unit.

b) Remove the lamp from the socket.

c) Remove the two screws to the right of the lamp housing that secure the lamp fixture electrical box cover to the inside of the bottom cover.



d) Remove the bottom cover from the unit.  
(see page 4-2 steps 1 thru 4)

e) Remove the electrical box cover to expose the lamp socket, wire connectors and one screw.

# REMOVING THE CONTROL PANEL & CONTROL BOARD

## **! WARNING**

### **ELECTRICAL SHOCK HAZARD**

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

**IMPORTANT:** When you work on the microwave oven, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Unplug microwave oven or disconnect power.
2. Remove the two screws from the top of the grille.



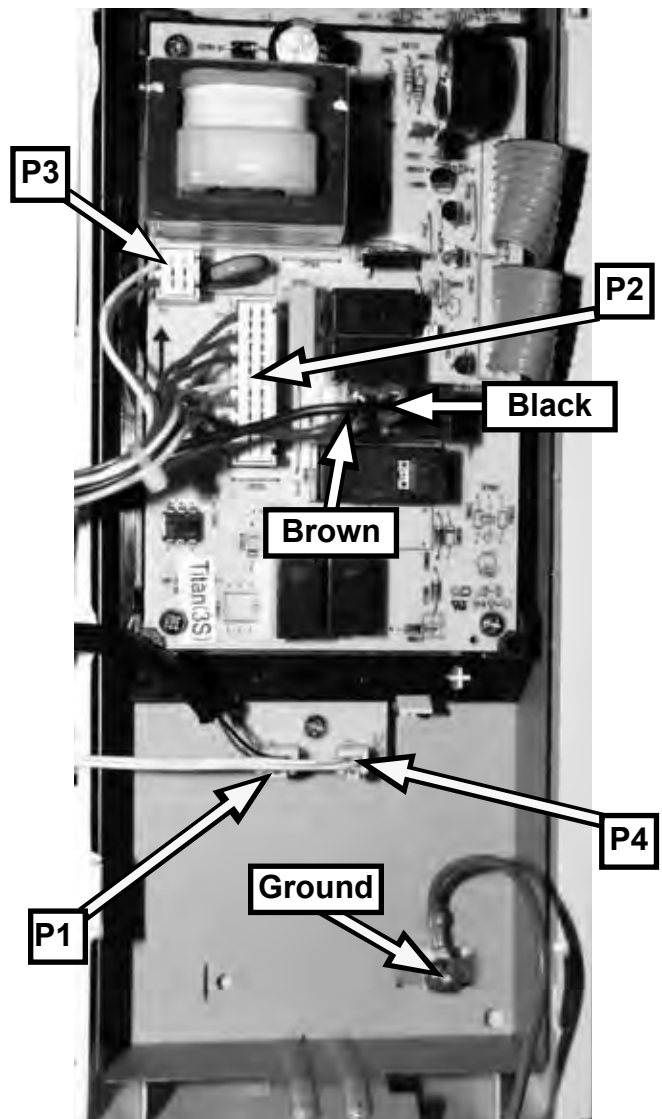
3. Pull the top of the air grille forward, lift the bottom tabs from the slots, and remove the grille.
4. Remove the screw from the top of the control panel.



5. Push the panel up to release the tabs from the slots. Pull the panel away from the microwave unit to gain access to the back side of it.



6. Disconnect the seven wire connectors from the control board.

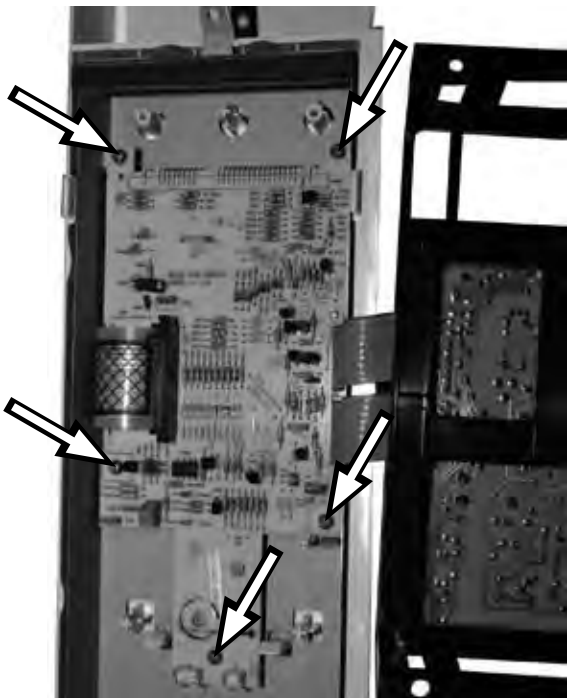


**7. To remove the microcomputer board:**

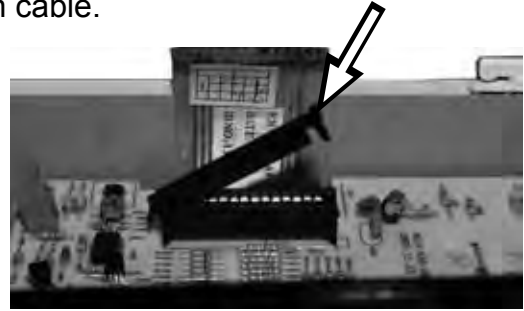
a) Remove 2 screws at the top and release 2 tabs at the bottom to be able to lift the top board.



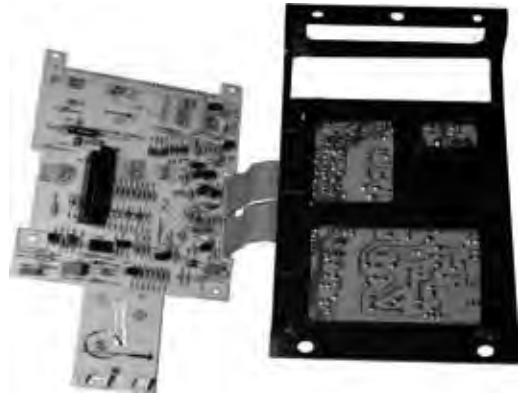
b) Remove 5 screws from the bottom board to release it from the touch panel assembly.



c) Press in on the locking tab end of the arm and lift the arm to release the touch panel ribbon cable.



d) You can now remove the microcomputer board assembly.



e) To remove the microcomputer board mounting bracket release 4 tabs.



f) Pull the bracket out of the touch panel assembly.



# REMOVING THE MOTOR CAPACITOR AND LINE FUSE

## REMOVING THE DOOR SWITCHES

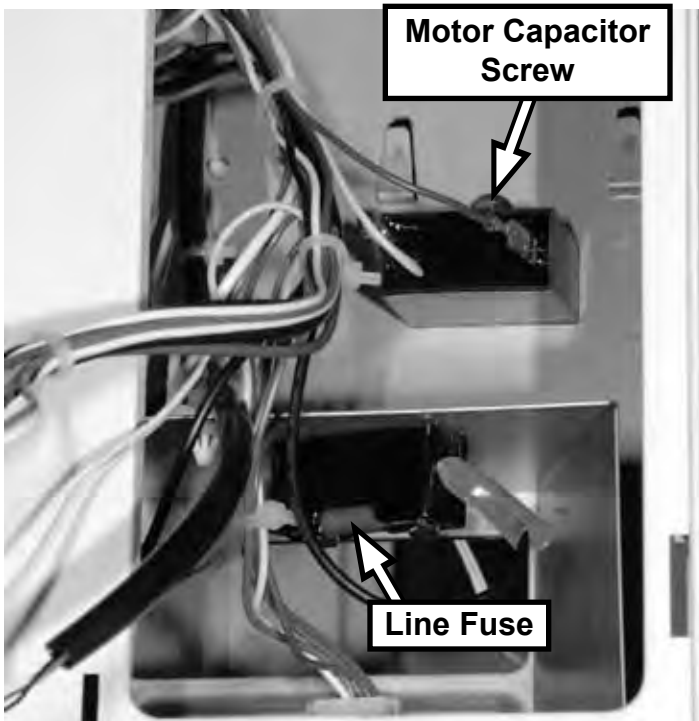
### **! WARNING**

#### **ELECTRICAL SHOCK HAZARD**

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

**IMPORTANT:** When you work on the microwave oven, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

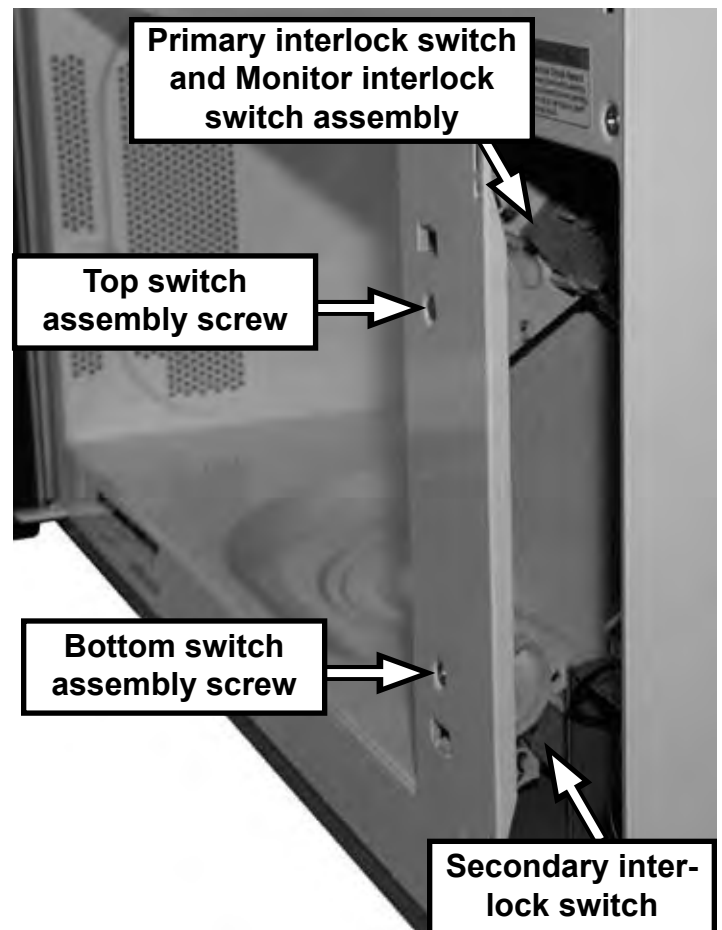
1. Unplug microwave oven or disconnect power.
2. Remove the control panel (see page 4-4).
3. To remove the motor capacitor, remove one screw.



4. To remove the line fuse, pull the fuse out of the fuse holder.

To remove the door switches:

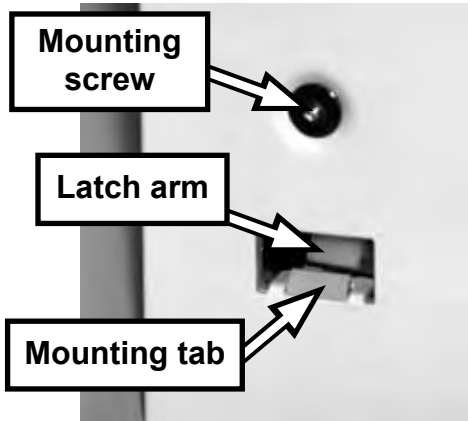
1. Unplug microwave oven or disconnect power.
2. Remove the control panel (see page 4-4).
3. Open the microwave oven door.
4. The Primary interlock switch and Monitor interlock switch are attached to a mounting bracket at the top.



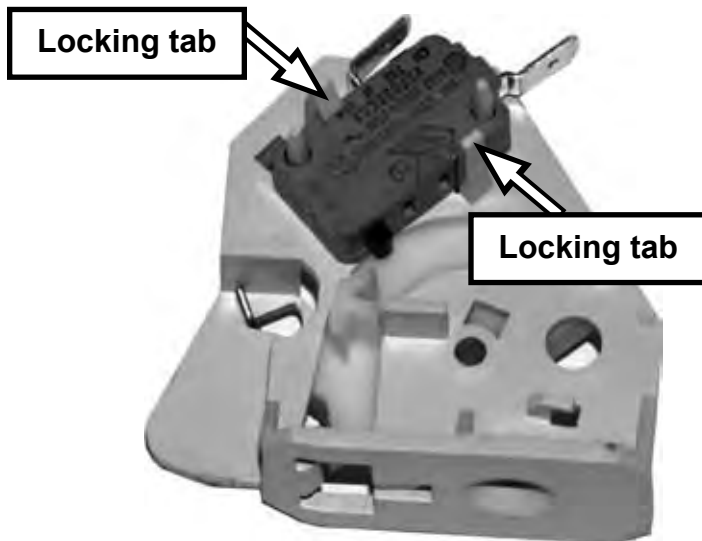
5. The secondary interlock switch is attached to a mounting bracket at the bottom.



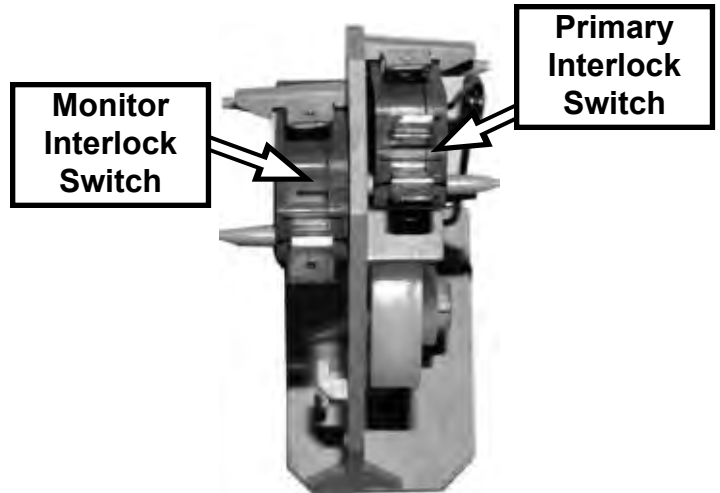
6. To remove a switch assembly, remove the mounting screw from the front panel of the microwave for the desired assembly.
7. Use a flat blade screwdriver to push the latch arm back just far enough to release the mounting tab and remove the assembly from the unit.



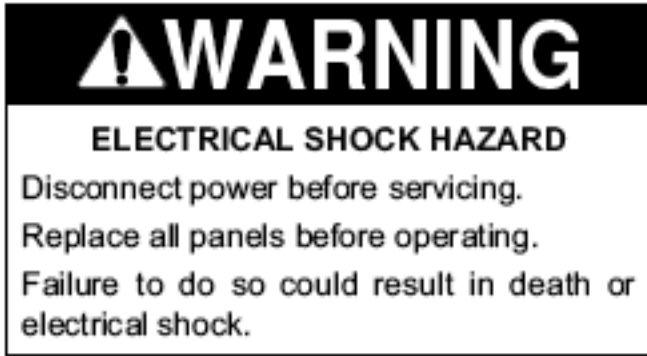
8. Disconnect the wire connectors from the terminals.
9. To remove the monitor interlock switch from the mounting bracket, press the locking tabs away from the switch and slide the switch up off the mounting posts.



10. The Primary interlock switch and Monitor interlock switch are located on opposite sides of their mounting bracket. The Primary interlock switch can be removed from the mounting bracket in the same manner as shown above for the Monitor interlock switch.

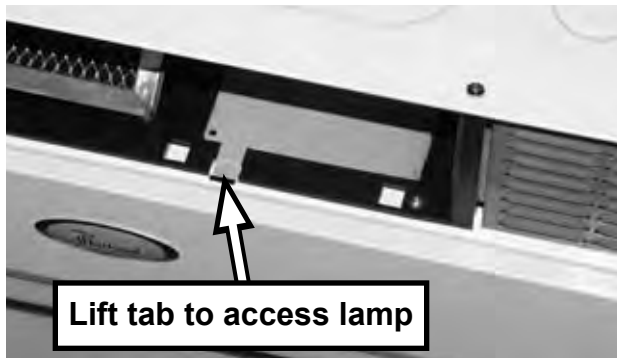


# REMOVING THE OVEN CAVITY LAMP AND CHARCOAL FILTER



**IMPORTANT:** When you work on the microwave oven, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Unplug microwave oven or disconnect power.
2. Remove the air grille (see page 4-4).
3. To change the oven cavity lamp, lift the tab on the cover to access the lamp.

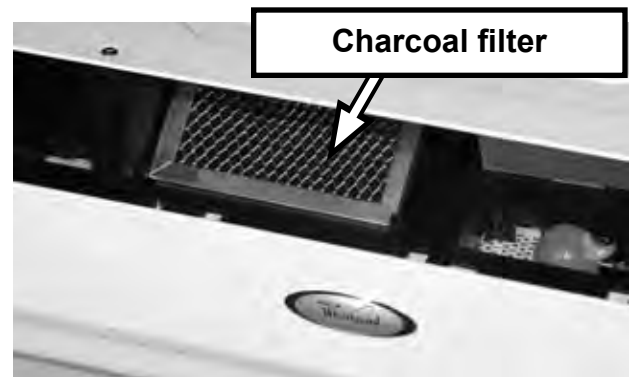


4. Unscrew the lamp from the socket. There will be a dab of silicone that is intended to keep the bulb from loosening in the socket during shipping. Be sure to clean off any loose silicone from the socket before installing a new lamp.



To remove the charcoal filter:

1. Unplug microwave oven or disconnect power.
2. Remove the air grille (see page 4-4).
3. Lift the charcoal filter from the mounting frame and pull it out of the microwave unit.
4. Replace the charcoal filter with the correct replacement filter.



# REMOVING THE OVEN RACK RETAINERS

## **! WARNING**

### **ELECTRICAL SHOCK HAZARD**

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

**IMPORTANT:** When you work on the microwave oven, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Unplug microwave oven or disconnect power.
2. Open the microwave oven door.
3. Locate the four oven rack retainers, two on each side of the oven interior.



4. Remove the one screw that attaches each rack retainer to the wall of the microwave oven.



## REMOVING THE OUTER CABINET

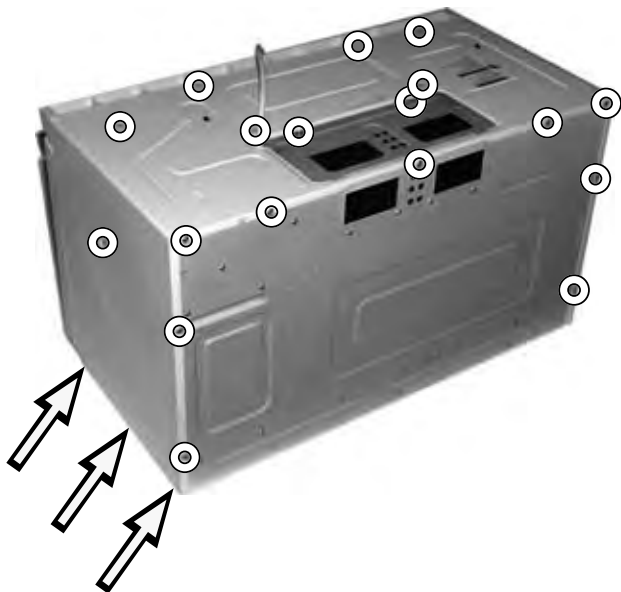
### **! WARNING**

#### **ELECTRICAL SHOCK HAZARD**

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

**IMPORTANT:** When you work on the microwave oven, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Unplug microwave oven or disconnect power.
2. Remove the air grille (see page 4-4).
3. Remove the 8 screws visible on the top of the microwave unit.
4. Remove the 1 screw visible on the side.
5. Remove the 9 screws around the edge of the back panel.
6. Remove the 3 screws on each end of the bottom panel (not shown).



7. After removing all the screws, pull each side out and push it back from the front corners of the unit to release the tabs on the inside front edge of the cabinet.



8. The cabinet may now be completely removed from the unit.
9. **CAUTION:** Discharge the high-voltage capacitor with a 20,000 Ohm resistor to chassis ground.

# REMOVING THE THERMOSTATS AND THERMISTOR

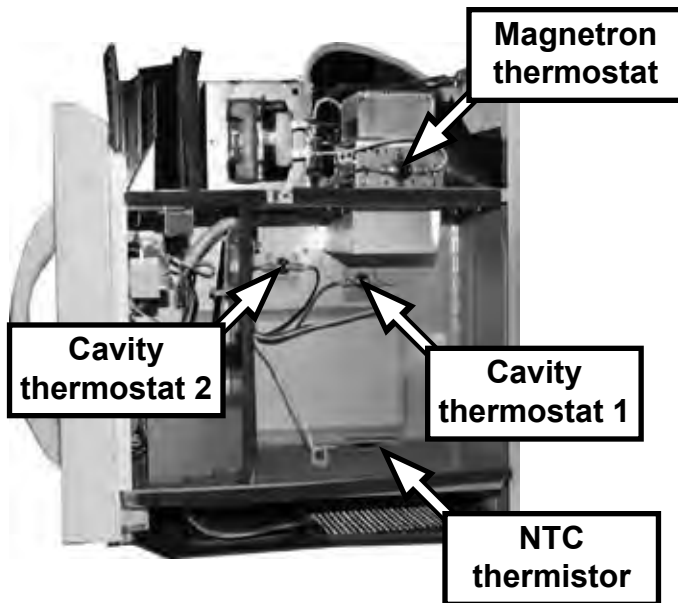
## ! WARNING

### ELECTRICAL SHOCK HAZARD

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

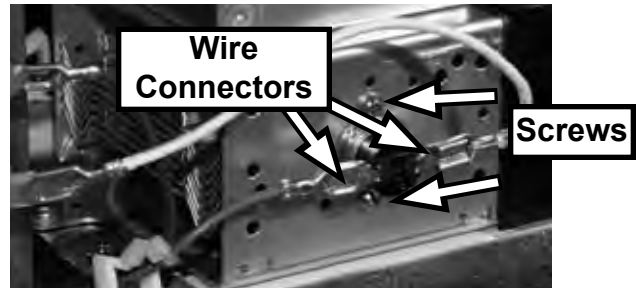
**IMPORTANT:** When you work on the microwave oven, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Unplug microwave oven or disconnect power.
2. Remove the outer cabinet (see page 4-10).
3. **CAUTION:** Discharge the high-voltage capacitor with a 20,000 Ohm resistor to chassis ground.



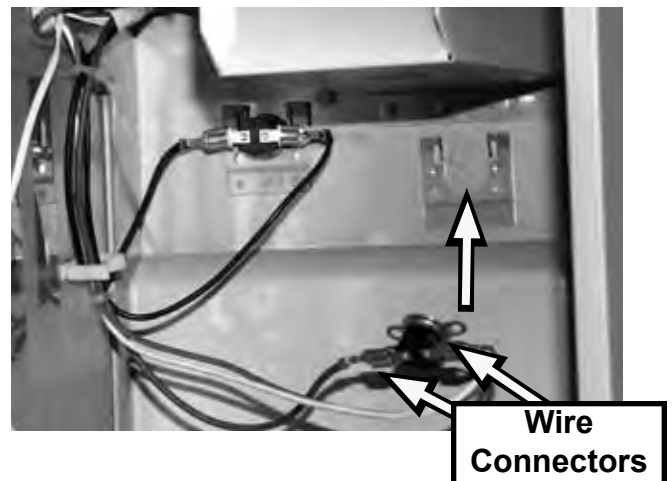
To remove the magnetron thermostat:

1. Remove 2 screws and disconnect the wire connectors.



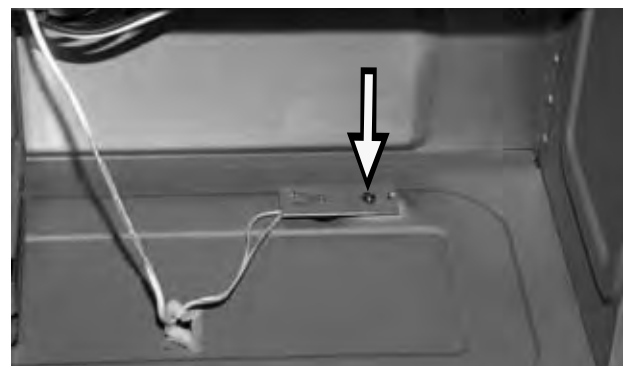
To remove the Cavity thermostats:

1. Slide the thermostat up and out from behind the mounting bracket. Remove the wire connectors.



To remove the NTC thermistor (base thermistor):

1. Remove one screw and remove the connection at P4 of the microcomputer board (see illustration on page 4-4).



## REMOVING THE MAGNETRON

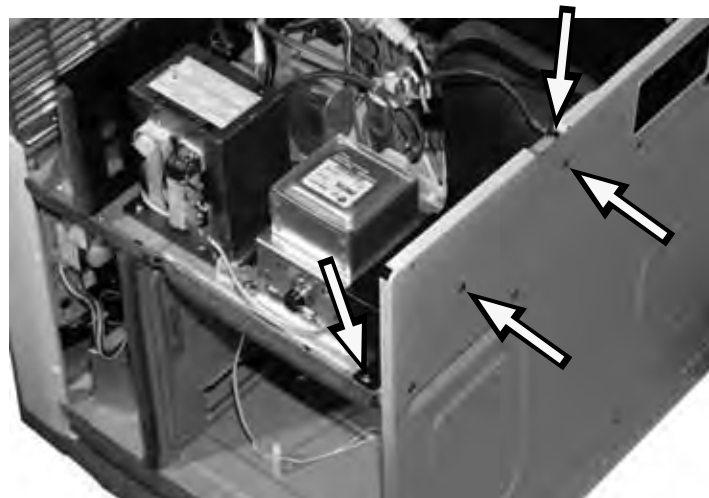
### **! WARNING**

#### **ELECTRICAL SHOCK HAZARD**

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

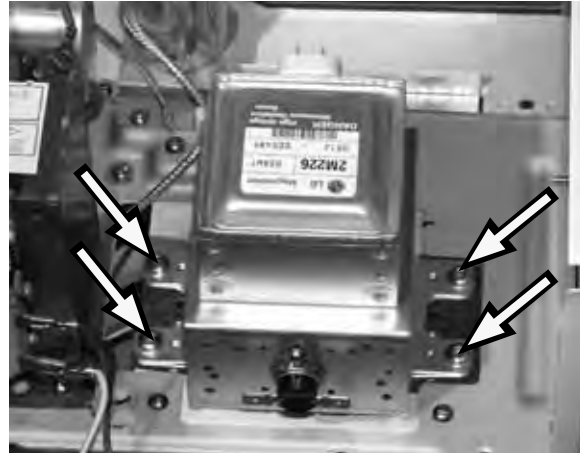
**IMPORTANT:** When you work on the microwave oven, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Unplug microwave oven or disconnect power.
2. Remove the outer cabinet (see page 4-10).
3. **CAUTION:** Discharge the high-voltage capacitor with a 20,000 Ohm resistor to chassis ground.



4. Remove 3 screws that secure the air shroud and 1 screw that secures the ground wire. Lift the air shroud up to expose two of the four screws that secure the magnetron to the unit.
5. Remove 2 wire connectors from the thermostat and 2 wire connectors from the magnetron terminals.

6. Remove the four T-20 Torx® screws that secure the magnetron to the unit and remove the magnetron.



# REMOVING THE HIGH-VOLTAGE TRANSFORMER

## **! WARNING**

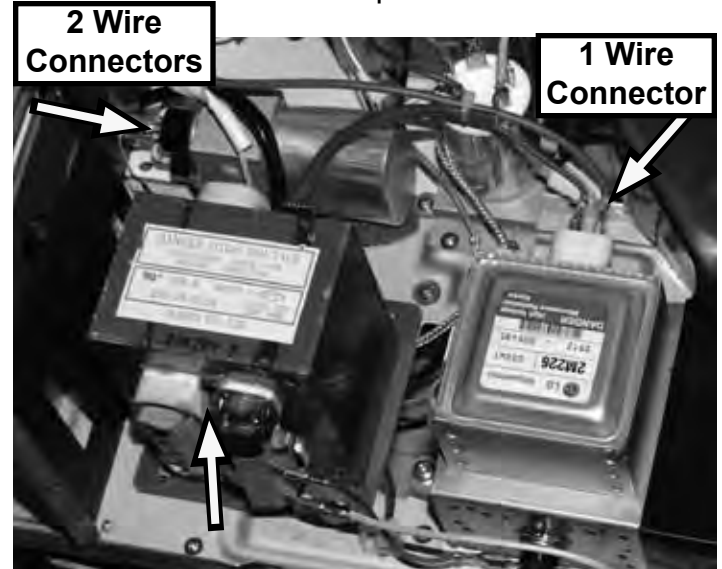
### **ELECTRICAL SHOCK HAZARD**

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

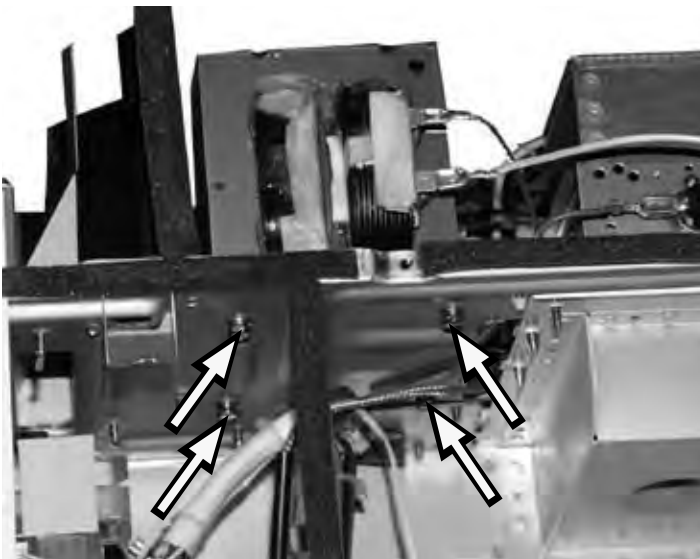
**IMPORTANT:** When you work on the microwave oven, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Unplug microwave oven or disconnect power.
2. Remove the outer cabinet (see page 4-10).
3. **CAUTION:** Discharge the high-voltage capacitor with a 20,000 Ohm resistor to chassis ground.
4. Remove the 4 screws from below the transformer that secure it to the microwave unit.

5. Remove the 2 wire connectors on the front, 1 wire connector from the magnetron and 2 wire connectors from the capacitor.



2 Wire Connectors



# REMOVING THE HIGH-VOLTAGE DIODE AND CAPACITOR

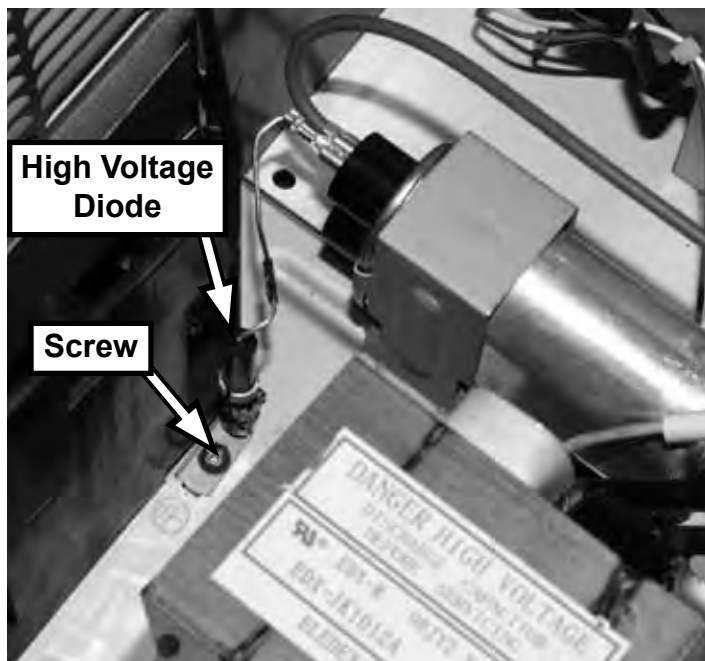
## ! WARNING

### ELECTRICAL SHOCK HAZARD

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

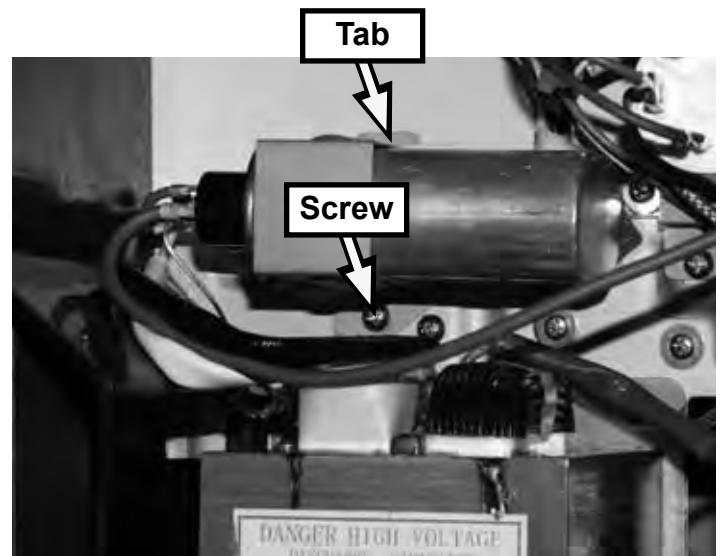
**IMPORTANT:** When you work on the microwave oven, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Unplug microwave oven or disconnect power.
2. Remove the outer cabinet (see page 4-10).
3. **CAUTION:** Discharge the high-voltage capacitor with a 20,000 Ohm resistor to chassis ground.
4. Remove one screw to remove the diode. Disconnect one wire connector from the capacitor.



To remove the High-Voltage Capacitor:

1. Unplug microwave oven or disconnect power.
2. Remove the outer cabinet (see page 4-10).
3. **CAUTION:** Discharge the high-voltage capacitor with a 20,000 Ohm resistor to chassis ground.
4. Remove one screw and slide the tab out from the slot in the unit.
5. Disconnect the wire connectors and remove the capacitor from the unit.





## REMOVING THE OVEN CAVITY LAMP SOCKET

### **! WARNING**

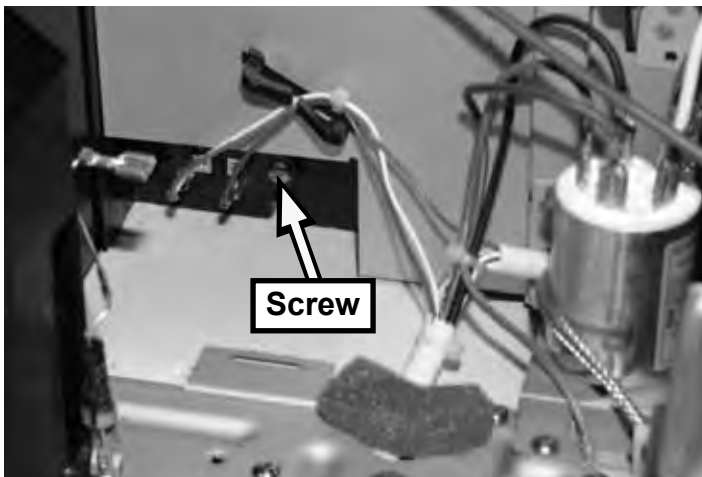
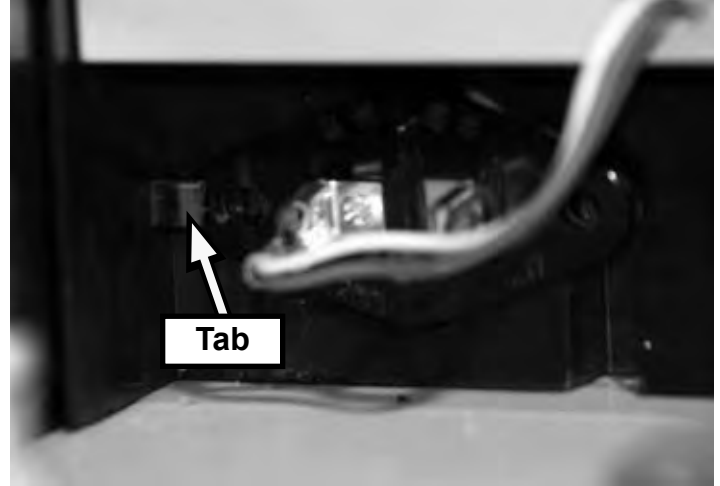
#### **ELECTRICAL SHOCK HAZARD**

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

**IMPORTANT:** When you work on the microwave oven, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Unplug microwave oven or disconnect power.
2. Remove the outer cabinet (see page 4-10).
3. **CAUTION:** Discharge the high-voltage capacitor with a 20,000 Ohm resistor to chassis ground.
4. Remove the oven cavity lamp (see page 4-8).
5. Remove the capacitor (see previous page).
6. Remove one screw that secures the oven cavity lamp socket to the unit.

7. Twist the lamp socket to release it from the one tab on the left side.
8. Remove the two wire connectors and remove the lamp socket from the unit.



## REMOVING THE AC LINE FILTER

### **! WARNING**

#### **ELECTRICAL SHOCK HAZARD**

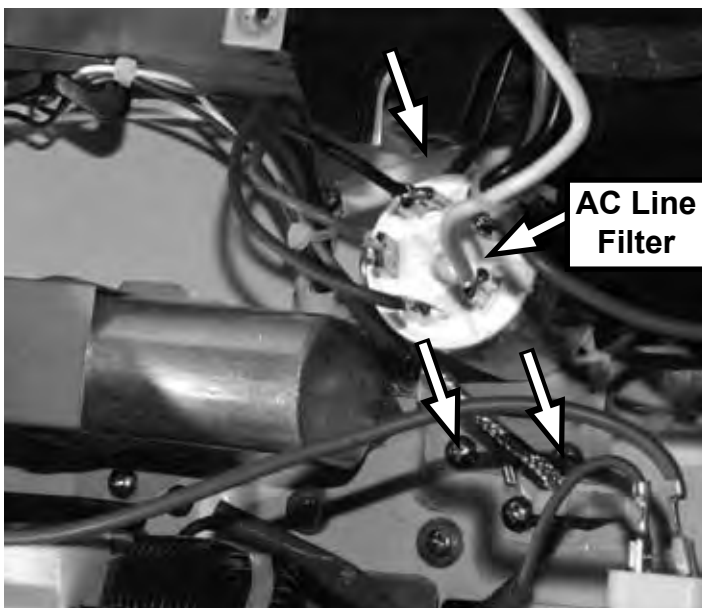
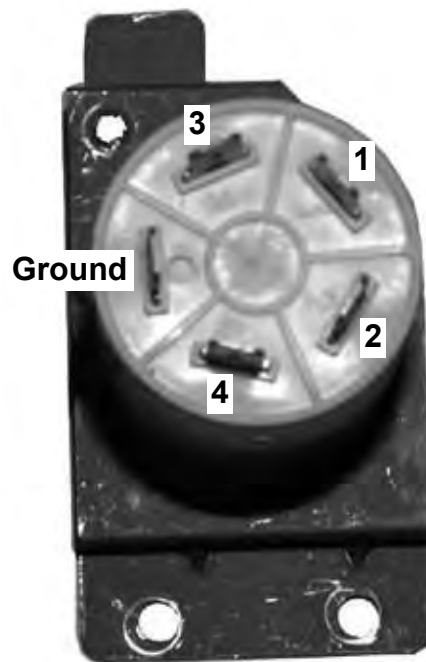
Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

**IMPORTANT:** When you work on the microwave oven, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Unplug microwave oven or disconnect power.
2. Remove the outer cabinet (see page 4-10).
3. **CAUTION:** Discharge the high-voltage capacitor with a 20,000 Ohm resistor to chassis ground.
4. Remove 3 screws that secure the AC line filter to the unit. Slide the AC line filter and bracket out from under the tab to remove it.
5. Disconnect the 5 wire connectors from the AC line filter.

6. When reinstalling the wire connectors to the AC line filter, install the following wires to the following connection spades:

1. Black AC line in
  2. White AC line in
  3. Black
  4. Blue
- Green Ground



# REMOVING THE HOOD FAN MOTOR AND HUMIDITY SENSOR

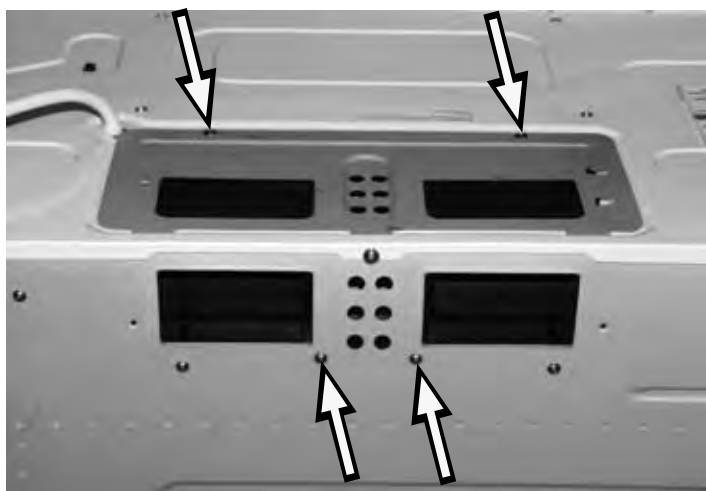
## ! WARNING

### ELECTRICAL SHOCK HAZARD

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

**IMPORTANT:** When you work on the microwave oven, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

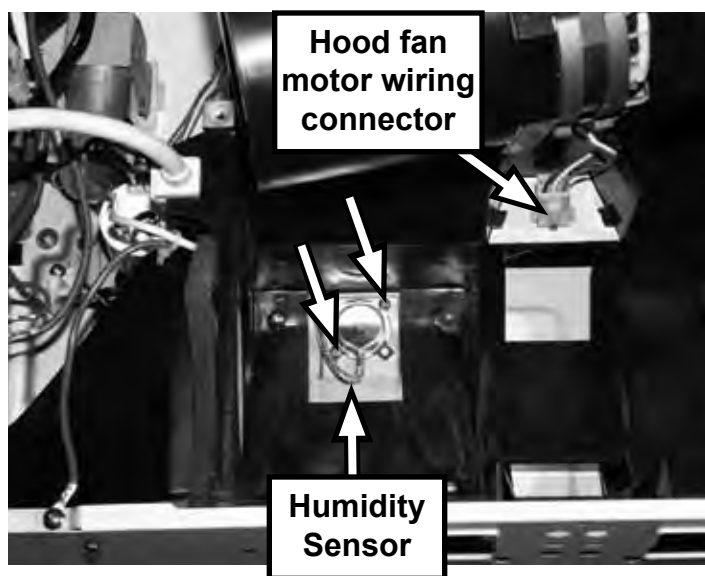
1. Unplug microwave oven or disconnect power.
2. Remove 2 screws from the top of the microwave oven that secure the cover plate to the outer cabinet. Lift the front of the cover plate and pull the tabs out of the slots at the back of the unit.
3. Remove 2 screws from the back of the unit that secure the hood fan motor assembly to the unit.



4. Pull the hood fan motor assembly up and out of the top of the unit. Disconnect the wiring connector to remove the assembly.

To remove the humidity sensor:

1. Unplug microwave oven or disconnect power.
2. Remove the outer cabinet (see page 4-10).
3. **CAUTION:** Discharge the high-voltage capacitor with a 20,000 Ohm resistor to chassis ground.
4. Remove the hood fan motor. (See left column)
5. Remove the 2 screws that secure the Humidity sensor to the unit. Disconnect the wire connector at P1 on the microcomputer board (see illustration on page 4-4).



# REMOVING THE FUSE HOLDER & MOUNTING BRACKET

## **! WARNING**

### **ELECTRICAL SHOCK HAZARD**

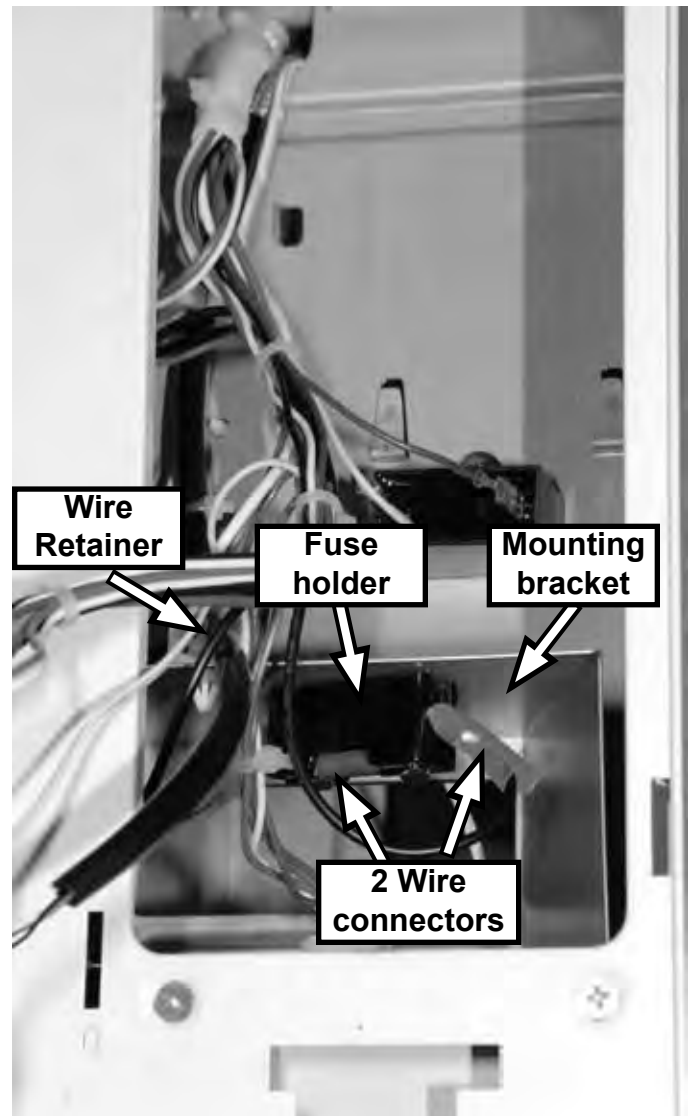
Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

**IMPORTANT:** When you work on the microwave oven, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Unplug microwave oven or disconnect power.
2. Remove the bottom cover (see page 4-2, steps 1-3).
3. Remove the 2 screws near the front right corner of the bottom of the unit.



4. Remove the control panel (see page 4-4, steps 2 - 5).
5. Remove the wires from the retainer on the top of the fuse holder mounting bracket.
6. Remove the 2 wire connectors from the fuse holder.
7. Pull the assembly out of the microwave unit.
8. Remove the fuse from the holder.
9. Remove 1 screw in the bottom of the fuse holder to remove the holder (not shown in photo. Only visible when fuse is removed).



# REMOVING THE DOOR AND DOOR DISASSEMBLY

## **! WARNING**

### **ELECTRICAL SHOCK HAZARD**

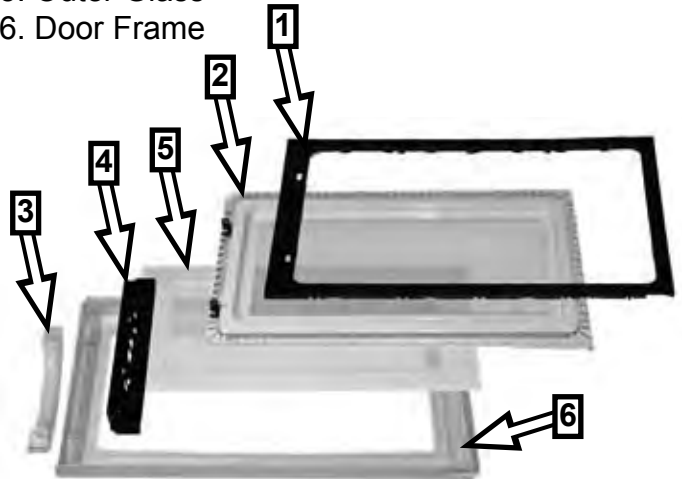
Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

**IMPORTANT:** When you work on the microwave oven, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Unplug microwave oven or disconnect power.
2. Remove the air grille (see page 4-4, steps 2 & 3).
3. Remove the 1 T-10 Torx® screw from the top hinge of the door.
4. Lift the door up and off the other hinge to remove the door.
5. Place the door face down on a protective surface. (All removal procedures assume the door is face down with the handle to the left.)

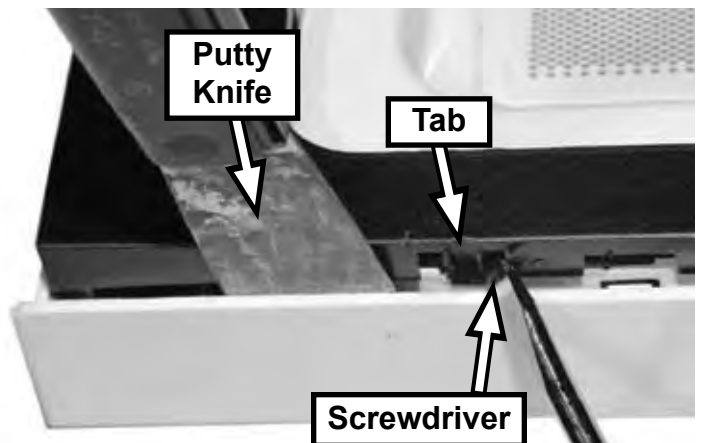
Components of the MHC door (in order of removal.):

1. Choke Seal
2. Inner Door
3. Handle
4. Door Bracket
5. Outer Glass
6. Door Frame

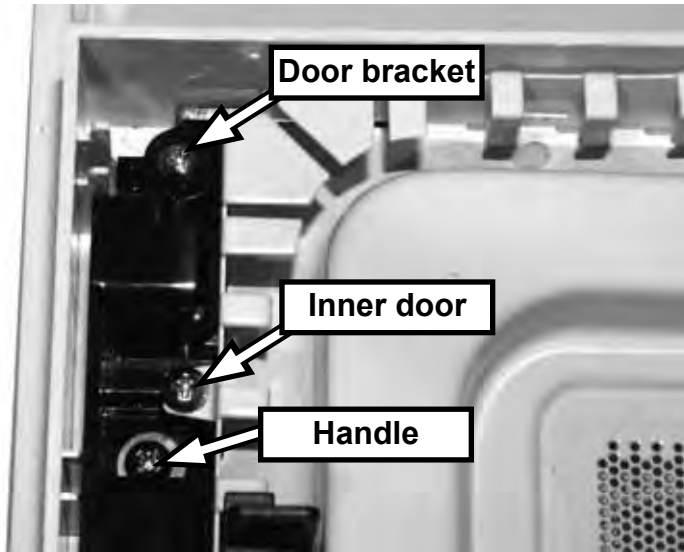


### **Choke seal removal:**

1. There are 4 tabs on the top edge, 3 tabs on each side and 5 tabs on the bottom edge.
2. Use a putty knife to open the gap between the door frame and the choke seal.
3. Locate each tab and use a flat blade screwdriver to gently lift the choke seal and release each tab. Place the screwdriver in the slot directly beside each tab and lift from there.
4. Only lift enough to release each tab all the way around the choke seal to avoid bending and possibly breaking the choke seal.

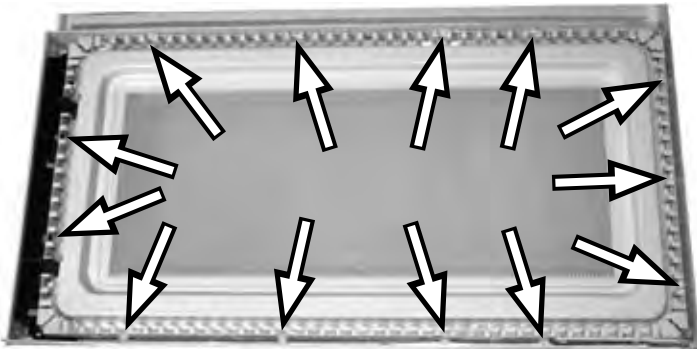


**Inner door removal:** This shows the screw locations for each labeled component at the top of the door bracket. The same screws are at the bottom of the bracket, in reverse order.



2. Beginning at the bottom left corner, work your way across the bottom edge to release 4 tabs. Release 3 tabs on the right edge and 2 tabs on the left edge.

3. Gently lift the inner door from the bottom edge to release the 4 clips along the top edge.



**Handle removal:**

1. Remove two screws from the door bracket that secure the handle to the front of the door. Refer to the photo at the top of this column for screw location.

2. The handle can be replaced without regard for orientation of top and bottom.

**Door bracket removal:**

1. Remove two screws that secure the door bracket to the door frame. Refer to the photo in the left column for screw location.

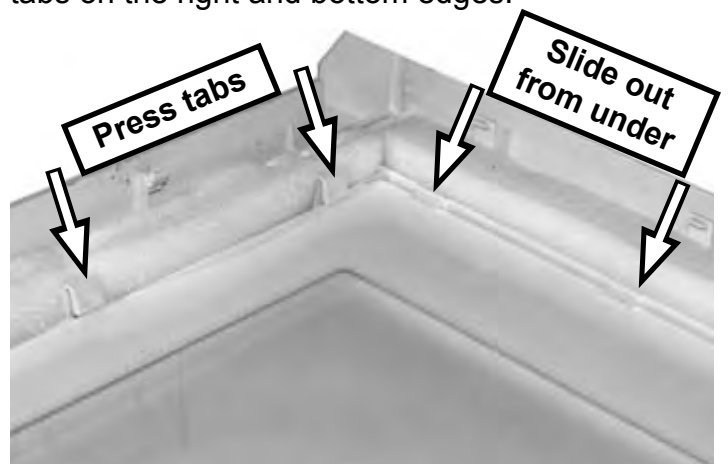
**Door Latch Removal:**

1. After removing the Inner door, turn it over.  
2. Each door latch is secured with one screw. Remove the screw and slide the latch out of the slot in the inner door.



**Outer glass removal:**

1. Press the 5 tabs at the top edge of the outer glass that secure it to the door frame.  
2. Lift the glass at the top left corner just enough to slide the glass to the left and up from under the tabs on the right and bottom edges.



# COMPONENT TESTING

## H.V. TRANSFORMER

### Important

Before testing any of the components, perform the following checks:

- Unplug microwave oven or disconnect power.
- Remove the lead wires from the related component before conducting any of the following tests.
- Discharge the high-voltage capacitor and remove the lead wires from the primary winding of the high-voltage transformer before conducting any of the following tests.
- All operational checks using microwave energy must be done with the microwave oven loaded with a minimum of 8 oz (250 mL) of water in a microwave safe container.
- Conduct a microwave energy test after performing any tests or repairs to the microwave oven.
- Check that all wire leads are in the correct positions before operating the microwave oven.
- Grasp wire connectors when removing the wire leads from microwave oven parts.
- All testing must be done with an ohmmeter having a sensitivity of 20,000 ohms per volt DC or greater, and powered by at least a 9-volt battery

### **! WARNING**

#### **ELECTRICAL SHOCK HAZARD**

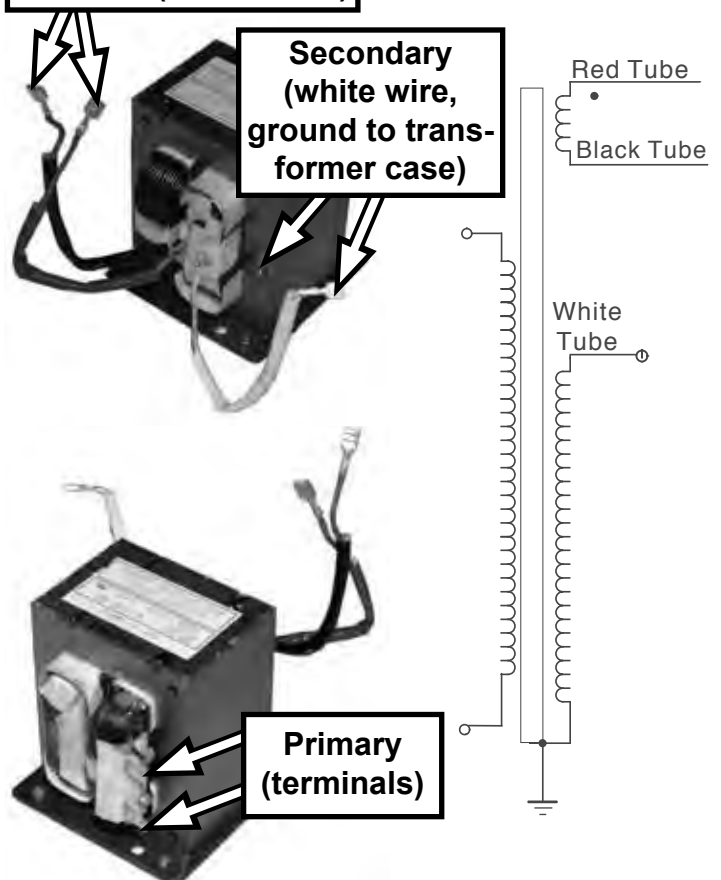
Disconnect power before servicing.

Replace all panels before operating.

Failure to do so could result in death or electrical shock.

1. Unplug microwave oven or disconnect power.
2. Remove wire leads.
3. Measure resistance (ohmmeter scale: Rx1):
  - Primary winding: Less than 0.5 ohm (approximate)
  - Secondary winding: 80 ohms (approximate)
  - Filament winding: 0 ohms
4. Measure resistance (ohmmeter scale: Rx1k):
  - Primary winding to grounding: Normal: Infinite
  - Filament winding to grounding: Normal: Infinite

#### Filament (black & red)



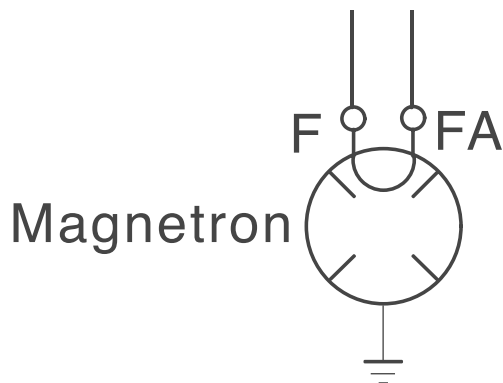
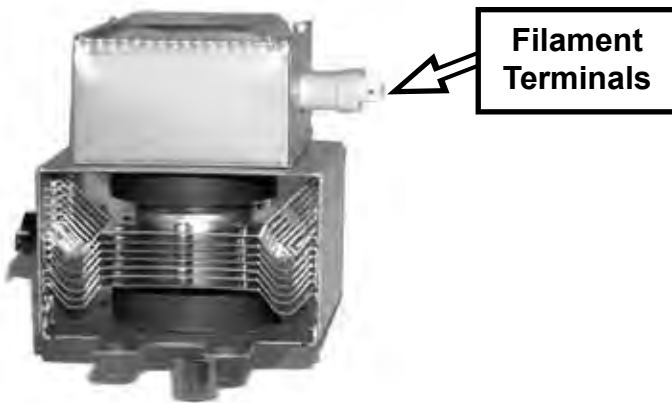
## MAGNETRON

**! WARNING**

### ELECTRICAL SHOCK HAZARD

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

1. Unplug microwave oven or disconnect power.
2. Remove wire leads. Check that the seal is in good condition.
3. Measure resistance (ohmmeter scale: Rx1):
  - Filament terminal: Normal: Less than 1 ohm
4. Measure resistance (ohmmeter scale: Rx1k):
  - Filament to chassis: Normal: Infinite



## H.V. CAPACITOR

**! WARNING**

### ELECTRICAL SHOCK HAZARD

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

1. Unplug microwave oven or disconnect power.
2. Remove wire leads.
3. Measure resistance (ohmmeter scale: Rx10k):
  - Terminal to terminal: Normal: Momentarily indicates several ohms, and then gradually returns to infinite.
  - Terminal to case: Normal: Infinite





## H.V. DIODE

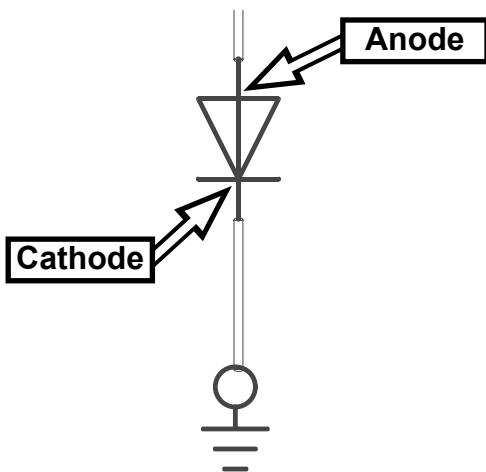
**! WARNING**

### ELECTRICAL SHOCK HAZARD

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

NOTE: Some inexpensive meters may indicate infinite resistance in both directions.

1. Unplug microwave oven or disconnect power.
2. Measure resistance (ohmmeter scale: Rx1k):
  - Forward: Normal: Continuity; Abnormal: Infinite
  - Reverse: Normal: Infinite; Abnormal: Continuity



## TURNTABLE MOTOR

**! WARNING**

### ELECTRICAL SHOCK HAZARD

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

1. Unplug microwave oven or disconnect power.
2. Remove wire leads.
3. Measure resistance (ohmmeter scale: Rx1k):
  - Turntable Motor—Normal: 2.7k-3.8k ohms (approximate); Abnormal: Infinite



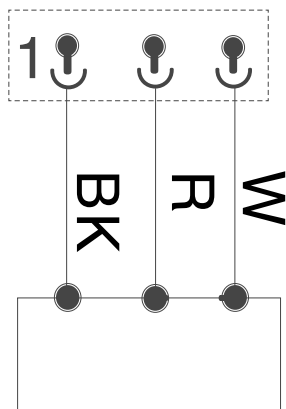
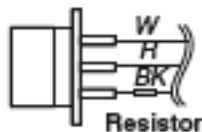
## HUMIDITY SENSOR

### **! WARNING**

#### ELECTRICAL SHOCK HAZARD

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

1. Unplug microwave oven or disconnect power.
2. Remove the 3-pin connector from the electronic control (P1). NOTE: Do not remove the attached resistor, which is used for internal resistance calibration.
3. Measure resistance across pins 1 & 3, and across pins 2 & 3 (ohmmeter scale: Rx1k):
  - Normal: 2.8k ohms (approximate) at 77°F (28°C) +/- 18°F (-10°C)
  - Abnormal: Infinite



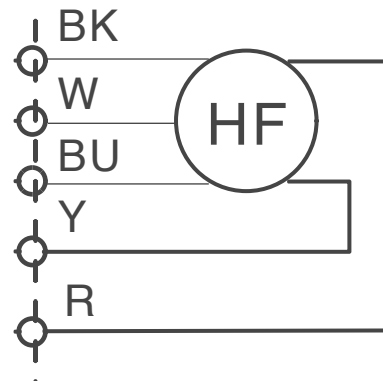
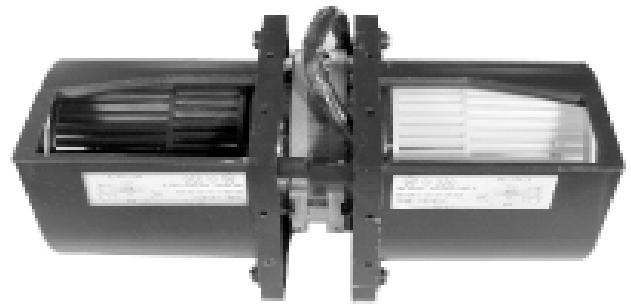
## HOOD EXHAUST FAN MOTOR

### **! WARNING**

#### ELECTRICAL SHOCK HAZARD

Disconnect power before servicing.  
Replace all panels before operating.  
Failure to do so could result in death or electrical shock.

1. Unplug microwave oven or disconnect power.
2. Remove wire leads.
3. Measure resistance (ohmmeter scale: Rx1):
  - High Speed—Normal: Red (R) and Blue (BU) wires: 100-200 ohms (approximate); Blue (BU) and Black (BK) wires: 40-100 ohms (approximate); Abnormal: Infinite
  - Low Speed—Normal: Red (R) and Blue (BU) wires: 100-200 ohms (approximate); Blue (BU) and White (W) wires: 80-150 ohms (approximate); Abnormal: Infinite



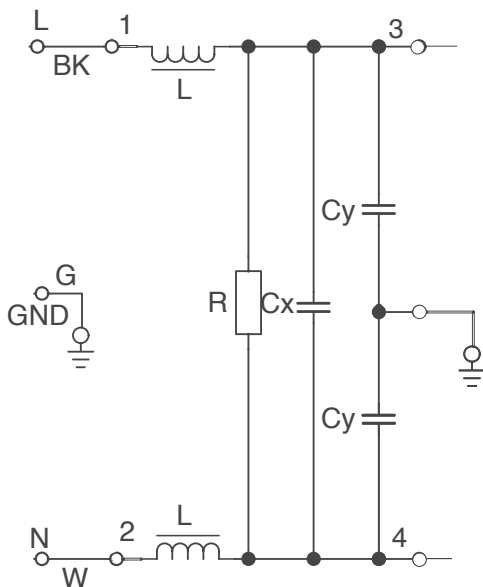
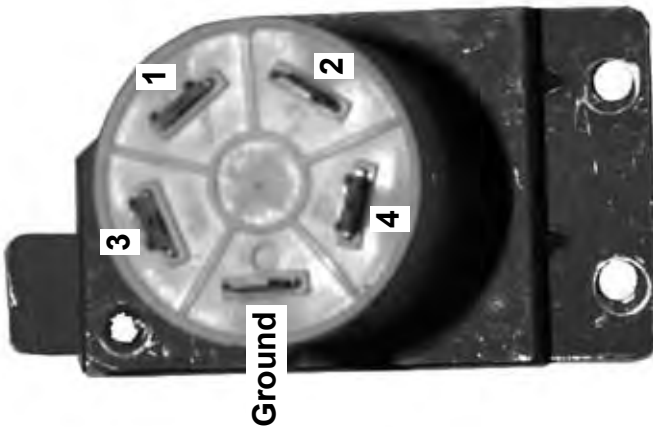
## AC LINE FILTER

### ⚠️ WARNING

#### ELECTRICAL SHOCK HAZARD

Disconnect power before servicing.  
 Replace all panels before operating.  
 Failure to do so could result in death or electrical shock.

1. Unplug microwave oven or disconnect power.
2. Remove wire leads.
3. Measure resistance (ohmmeter scale: Rx1):
  - Normal: 1-3 (coil): Less than 1 ohm; 2-4 (coil): Less than 1 ohm; 3-4 (resistor): 550k-800k ohms
  - Abnormal: Infinite



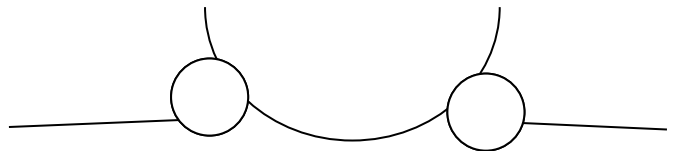
## THERMOSTATS

### ⚠️ WARNING

#### ELECTRICAL SHOCK HAZARD

Disconnect power before servicing.  
 Replace all panels before operating.  
 Failure to do so could result in death or electrical shock.

1. Unplug microwave oven or disconnect power.
2. Remove wire leads.
3. Measure continuity (ohmmeter scale: Rx1)
  - Cavity and Magnetron Thermostats— Normal: Continuity; Abnormal: Infinite
  - Magnetron thermostat opens at 257°F (125°C), closes at 185°F (85°C)
  - Cavity thermostat 1 opens at 257°F (125°C), closes at -31°F (-35°C)
  - Cavity thermostat 2 opens at 257°F (125°C), closes at -31°F (-35°C)



— NOTES —

# DIAGNOSIS & TROUBLESHOOTING

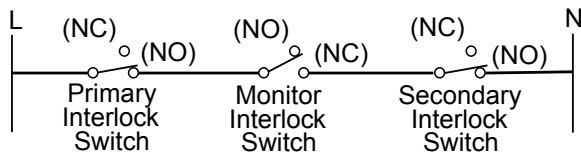
## INTERLOCK SWITCH CHECKOUT PROCEDURES

Switch	Check By	Door Open	Door Closed
Primary Interlock	<ol style="list-style-type: none"> <li>1. Unplug microwave oven or disconnect power.</li> <li>2. Disconnect the wires at the Primary Interlock Switch.</li> <li>3. Check from the common terminal (black/brown wires) to the normally open terminal (black/white wires).</li> </ol>	-	+
	<ol style="list-style-type: none"> <li>1. Unplug microwave oven or disconnect power.</li> <li>2. Disconnect the wires at the Primary Interlock Switch.</li> <li>3. Check from the common terminal (black/brown wires) to the normally closed terminal (orange wire).</li> </ol>	+	-
Secondary Interlock	<ol style="list-style-type: none"> <li>1. Unplug microwave oven or disconnect power.</li> <li>2. Disconnect the wires at the Secondary Interlock Switch.</li> <li>3. Check from the common terminal (blue/white wires) to the normally open terminal (blue wires).</li> </ol>	-	+
Monitor Interlock	<ol style="list-style-type: none"> <li>1. Unplug microwave oven or disconnect power.</li> <li>2. Disconnect the wires at the Monitor Interlock Switch.</li> <li>3. Check from the common terminal (white wire) to the normally closed terminal (blue/white wires).</li> </ol>	+	-

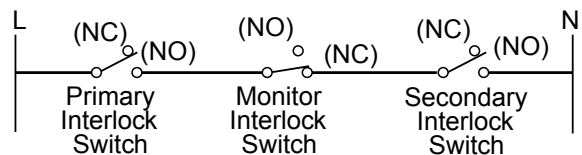
(+) Continuity (-) No Continuity

NOTE: These diagrams are not intended to show a complete circuit; they represent the position of switches during "DOOR OPEN" or "DOOR CLOSED" (continuity checks only).

Door Closed



Door Open



## TROUBLESHOOTING

Do not continue with the diagnostics of appliance if the household fuse is blown, a circuit breaker is tripped or if there is less than 120-volt power supply at the wall outlet. Complete the following steps before checking microwave oven circuitry:

1. Unplug microwave oven or disconnect power.
2. Check for loose wiring or incorrect wiring within microwave oven.
3. Disconnect white wire from power transformer and discharge high-voltage capacitor.
4. All testing must be done with an ohmmeter having a sensitivity of 20,000 ohms per volt DC or greater, and powered by at least a 9-volt battery.
5. All operational checks using microwave energy must be done with the microwave oven loaded with a minimum of 8 oz (250 mL) of water in a microwave safe container.

# TOUCH PANEL AND ELECTRONIC CONTROL TEST

The microwave hood combination is provided with a self-diagnostic routine that can be accessed through the touch keypad.

To initiate this routine:

1. Press and hold the OFF/CANCEL button while opening the door. While still holding the OFF/CANCEL button, unplug the microwave oven for 2 seconds, then plug it back in.
2. Release the OFF/CANCEL button and close the door. All VFD segments will be lit to indicate the test mode has been entered.

NOTE: If the OFF/CANCEL button is pressed during this diagnostic routine, you will exit the test mode.

## Key Tables for Test Mode

Key Name	Function	Display	Buzzer
Start	-	Key 1	1 beep
Light Hi/Lo/Off	-	Key 3	1 beep
Hood Exhaust Fan (HF) Hi/Med/Lo/Off	-	Key 4	1 beep
Turntable On/Off	-	Key 5	1 beep
Clock	-	Key 6	1 beep
Timer Set/Off	-	Key 7	1 beep
Add 30 Sec	-	Key 9	1 beep
Cook Time	-	Key 10	1 beep
Cook Power	-	Key 11	1 beep
Warm Hold	-	Key 12	1 beep
Cook	-	Key 13	1 beep
Reheat	-	Key 14	1 beep
Defrost	-	Key 15	1 beep
Frozen Entrée	-	Key 16	1 beep
Beverage	-	Key 17	1 beep
Popcorn	-	Key 18	1 beep
Baked Potato	-	Key 19	1 beep
Frozen Vegetable	-	Key 21	1 beep
Fresh Vegetable	-	Key 22	1 beep

Key Name	Function	Display	Buzzer
0	-	Key 32	1 beep
1	Cavity Light On—Relay 4901	Key 33	1 beep
2	Cooktop Light On (High)—Relay 4911	Key 34	1 beep
3	Microwave Oven On for 10 Seconds—Relay 4903	Key 35	1 beep
4	-	Key 36	1 beep
5	-	Key 37	1 beep
6	Cavity Light & Turntable On—Relay 4901 & 4906	Key 38	1 beep
7	-	Key 39	1 beep
8	Cooktop Light On (Night)—Relay 4912	Key 40	1 beep
9	HF On (High Speed)—Relay 4902 & Triac 7104	Key 41	1 beep
Off/Cancel (to lock hold, hold for 3 seconds)	Exit Test Mode	-	1 beep

# MICROWAVE OVEN POWER OUTPUT TEST

1. Place 8 oz (250 mL) of lukewarm water in the center of the microwave oven.
2. Operate on HIGH power level for 2 minutes. Water should be hot.

NOTE: If the water takes longer than 2 minutes to heat, this may indicate either the operating voltage is lower than 110 volts or there is a problem with the microwave oven.

## FAILURE CODES INDICATIONS

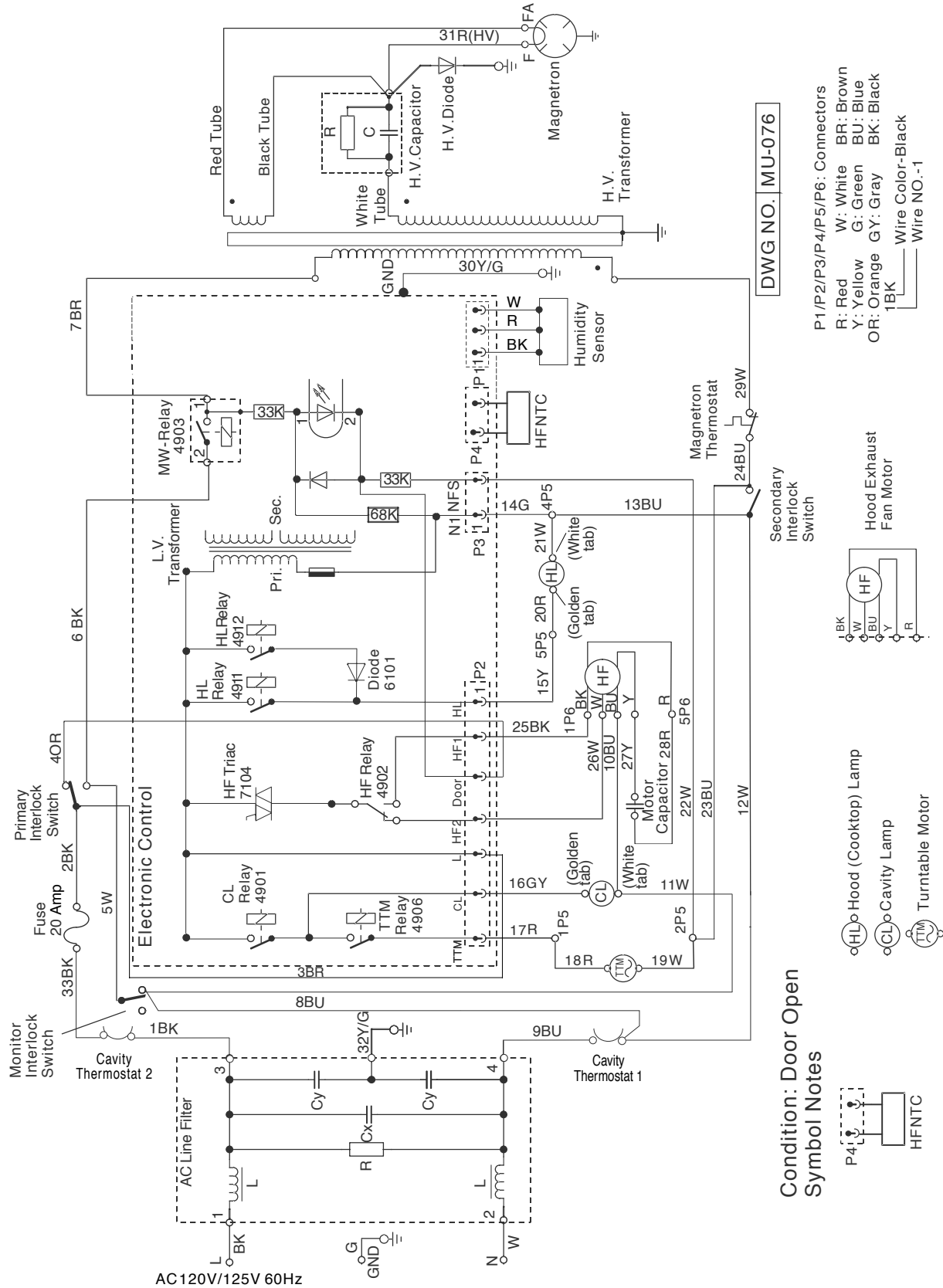
Display	Likely Failure Condition	Recommended Repair Procedure
Flashing colon “:”	Power failure	After a power failure, the colon “:” will be flashing. Press any key to end this indication. The colon will then be steady when in standby.
F2	Touch panel failure	<ol style="list-style-type: none"><li>1. Unplug microwave oven or disconnect power.</li><li>2. Replace touch panel.</li><li>3. Plug in microwave oven or disconnect power.</li><li>4. If problem persists, unplug microwave oven or disconnect power.</li><li>5. Replace electronic control.</li><li>6. Plug in microwave oven or reconnect power.</li></ol>
F3H	Humidity sensor failure	<ol style="list-style-type: none"><li>1. Unplug microwave oven or disconnect power.</li><li>2. Connect a new sensor to the electronic control (at P1).</li><li>3. Plug in microwave oven or reconnect power.</li><li>4. If problem persists, unplug microwave oven or disconnect power.</li><li>5. Replace electronic control.</li><li>6. Plug in microwave oven or reconnect power.</li></ol>
F6	Microwave relay failure	<ol style="list-style-type: none"><li>1. Unplug microwave oven or disconnect power.</li><li>2. Check wiring to Relay 4903 for short circuits.</li><li>3. If wiring is OK, replace electronic control.</li><li>4. Plug in microwave oven or reconnect power.</li></ol>

— NOTES —



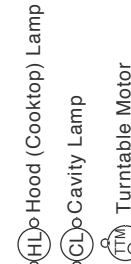
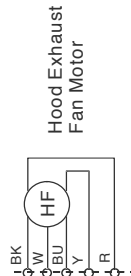
# WIRING DIAGRAM & STRIP CIRCUITS

## WIRING DIAGRAM - 8205889 - SENSOR MODEL

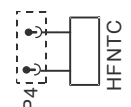


DWG NO. MU-076

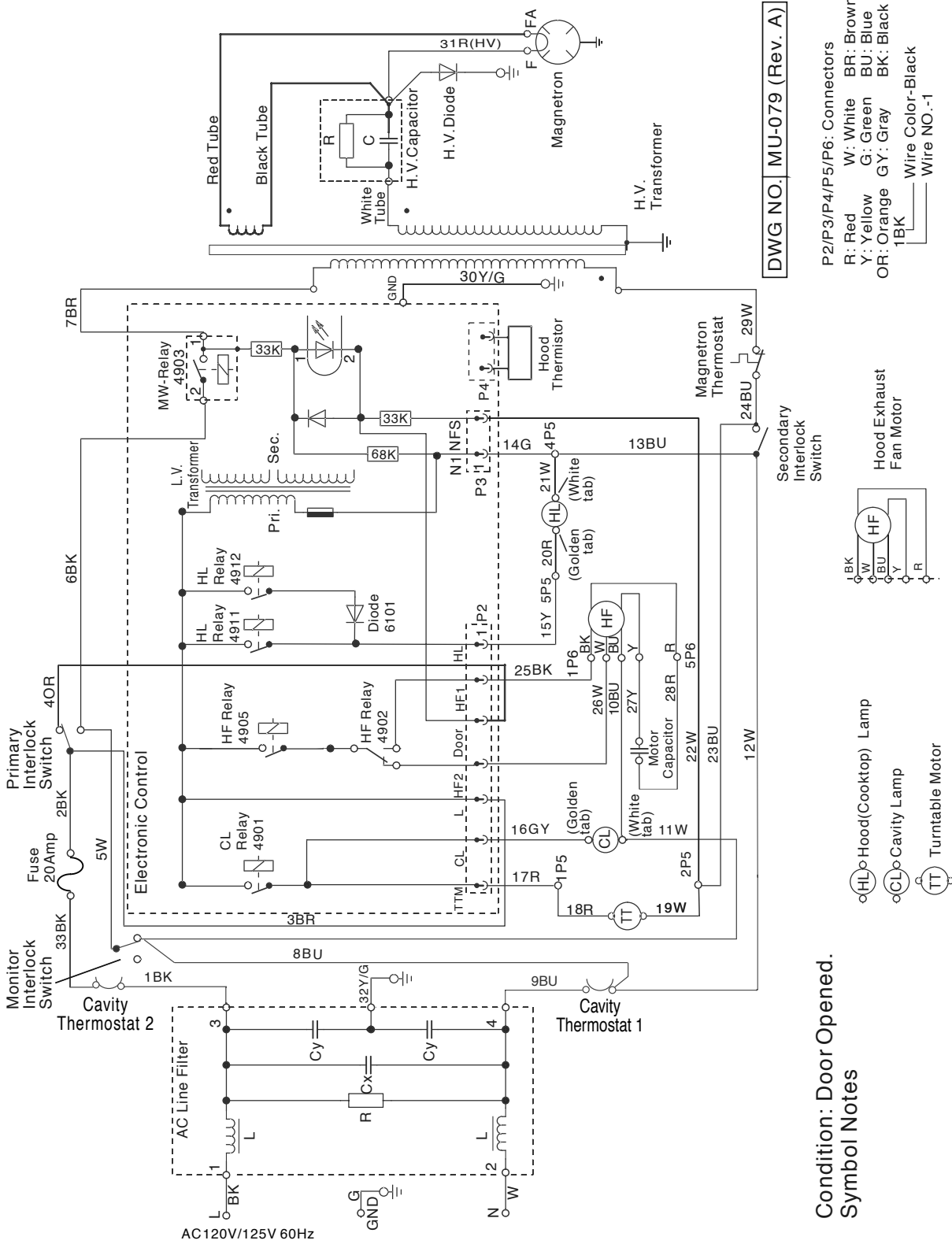
P1/P2/P3/P4/P5/P6: Connectors  
 R: Red W: White BR: Brown  
 Y: Yellow G: Green BU: Blue  
 OR: Orange GY: Gray BK: Black  
 1BK Wire Color-Black  
 Wire NO.-1



Condition: Door Open  
 Symbol Notes

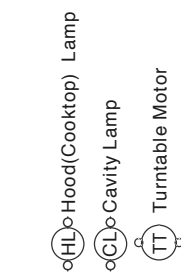
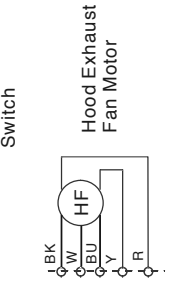


# WIRING DIAGRAM - 8205660 - NON SENSOR MODEL



DWG NO. MU-079 (Rev. A)

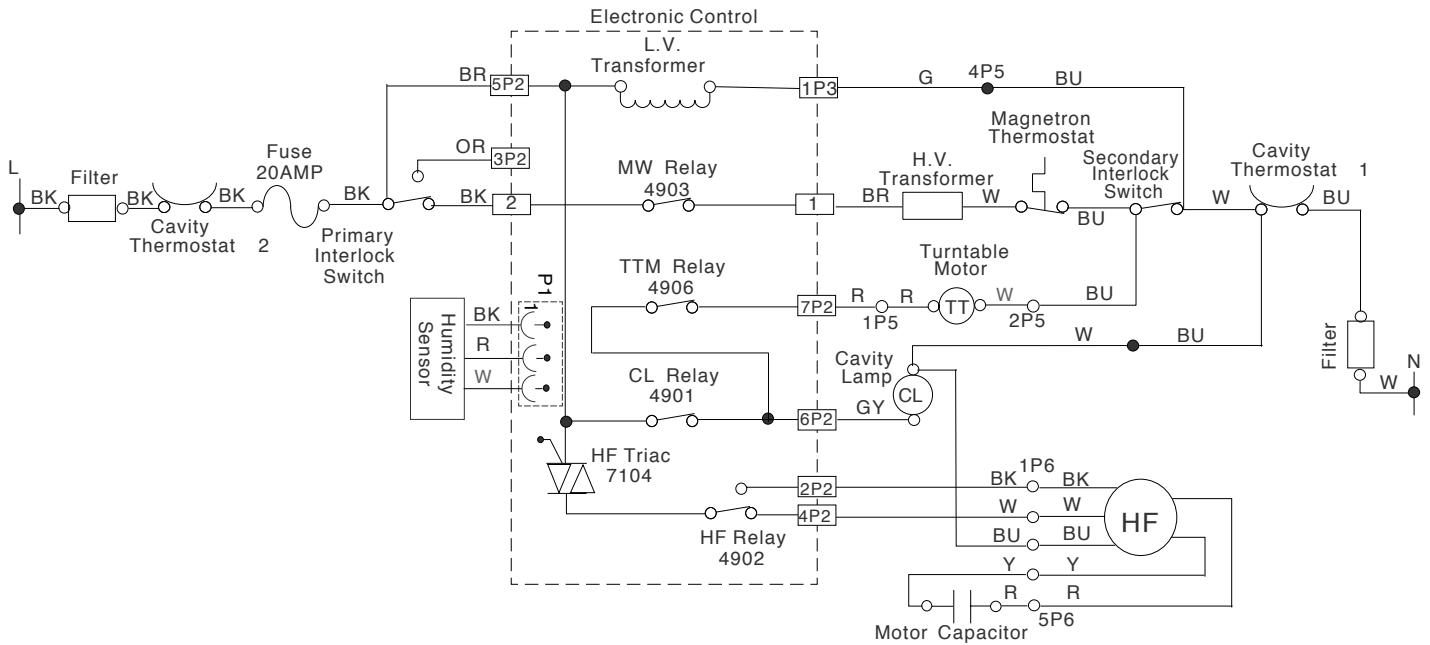
P2/P3/P4/P5/P6: Connectors  
 R: Red W: White BR: Brown  
 Y: Yellow G: Green BU: Blue  
 OR: Orange GY: Gray BK: Black  
 1BK: Wire Color-Black  
 Wire NO.-1



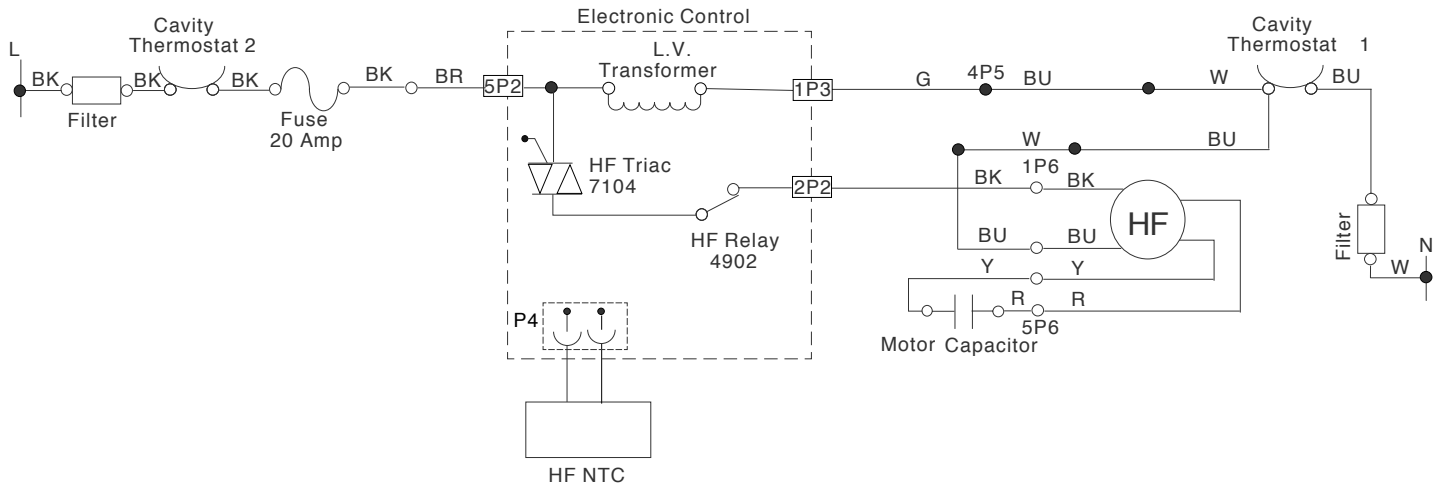
Condition: Door Opened.  
 Symbol Notes

# STRIP CIRCUITS

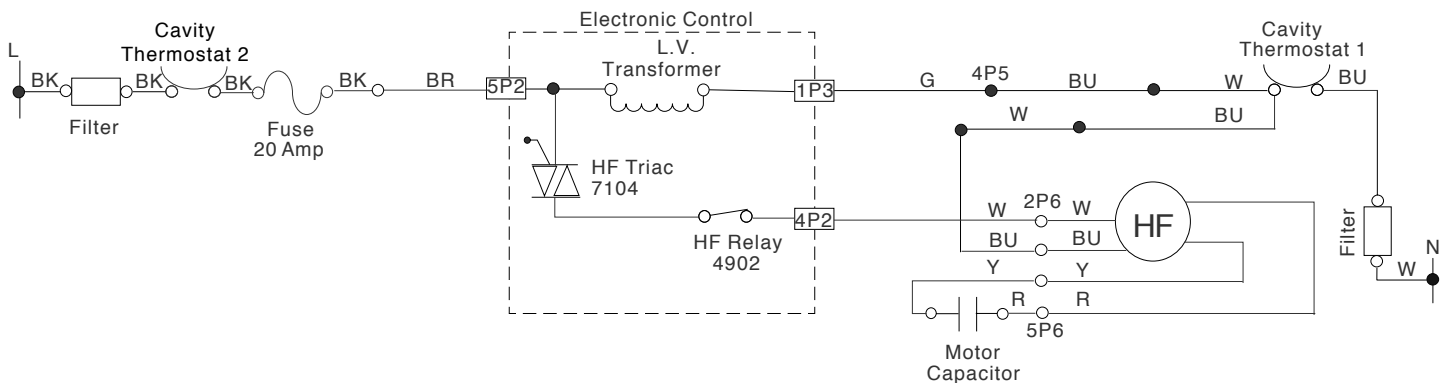
## MICROWAVE COOKING



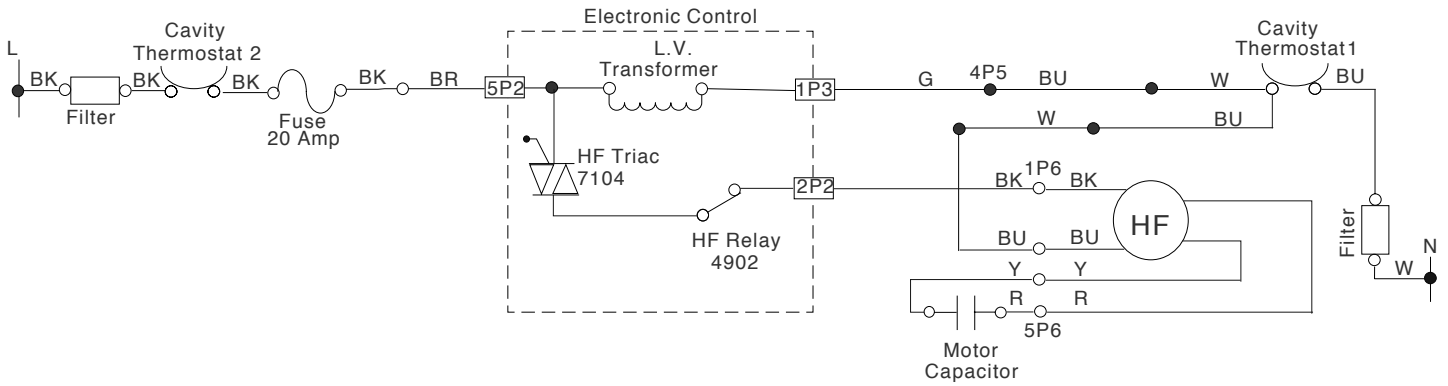
## HOOD EXHAUST FAN ON HIGH AUTOMATICALLY



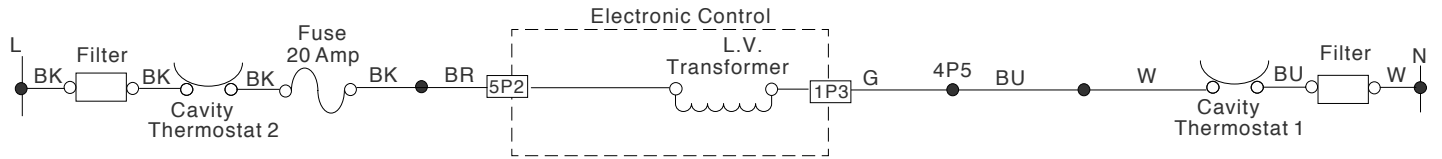
## HOOD EXHAUST FAN ON LOW SPEED



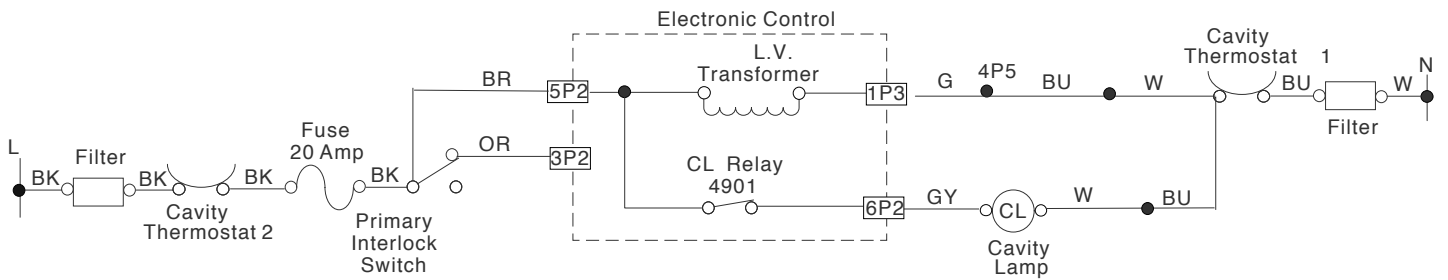
# HOOD EXHAUST FAN ON HIGH / MEDIUM



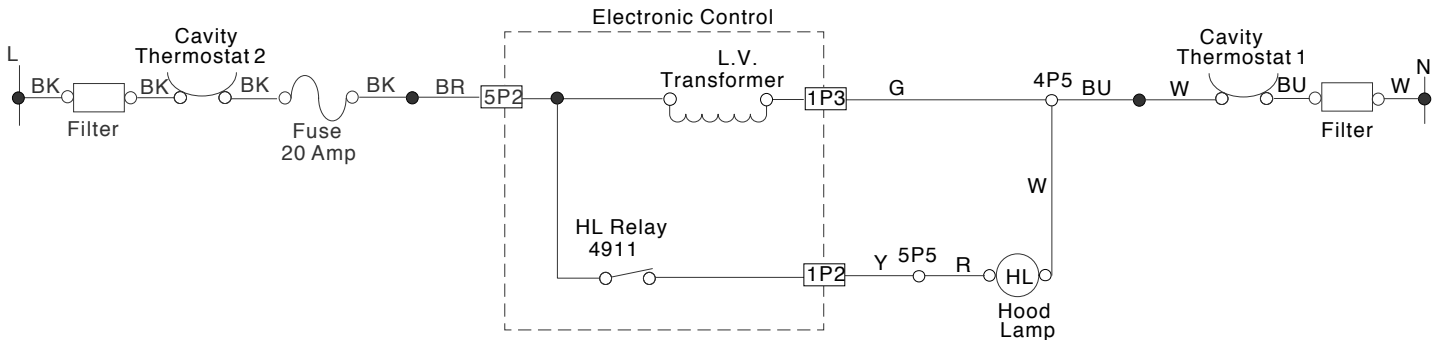
# MICROWAVE OVEN PLUGGED IN—TIME OF DAY DISPLAYED



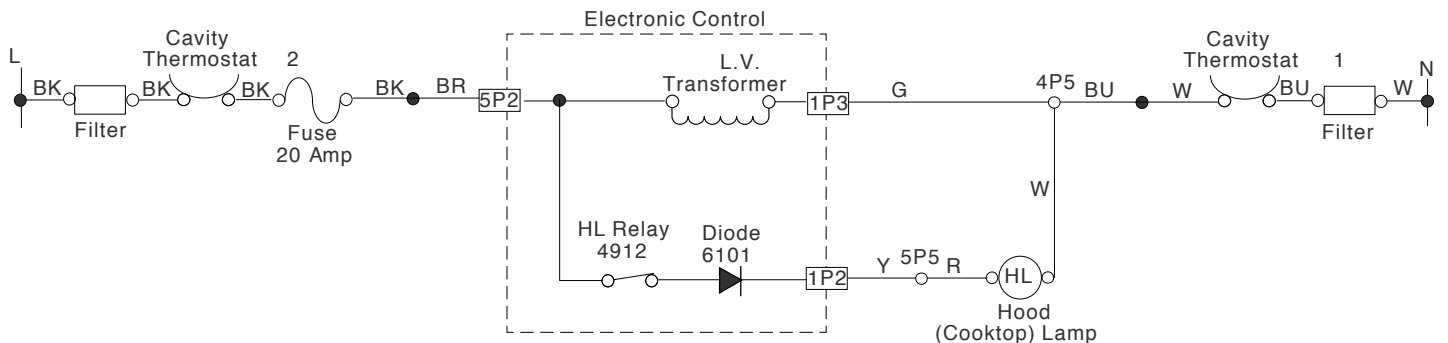
# DOOR OPEN—OVEN CAVITY LIGHT IS ON



# COOKTOP LIGHT ON HIGH



# COOKTOP LIGHT ON LOW (NIGHT LIGHT)



**PRODUCT SPECIFICATIONS  
AND  
WARRANTY INFORMATION SOURCES**

***IN THE UNITED STATES:***

**FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL:**

**FOR WHIRLPOOL PRODUCTS: 1-800-253-1301  
FOR KITCHENAID PRODUCTS: 1-800-422-1230  
FOR ROPER PRODUCTS: 1-800-447-6737**

**FOR TECHNICAL ASSISTANCE WHILE AT THE CUSTOMER'S HOME CALL:**

**THE TECHNICAL ASSISTANCE LINE: 1-800-253-2870**

**HAVE YOUR STORE NUMBER READY TO IDENTIFY YOU AS AN  
AUTHORIZED SERVICER**

**FOR LITERATURE ORDERS:**

**PHONE: 1-800-851-4605**

**FOR TECHNICAL INFORMATION AND SERVICE POINTERS:**

**[www.servicematters.com](http://www.servicematters.com)**

---

***IN CANADA:***

**FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL:**

**1-800-461-5681**

**FOR TECHNICAL ASSISTANCE WHILE AT THE CUSTOMER'S HOME CALL:**

**THE TECHNICAL ASSISTANCE LINE: 1-800-488-4791**

**HAVE YOUR STORE NUMBER READY TO IDENTIFY YOU AS AN  
AUTHORIZED SERVICER**

