

Multimedia
Enhanced

Whirlpool®

KitchenAid®



AMANA®

IKEA®

TECHNICAL MANUAL

Microwave Hood Combination



W11400254B

FOREWORD

This Whirlpool® Technical Manual (Part No. W11400254B), provides the In-Home Service Professional with service information for the “Microwave Hood Combination.”

The Wiring Diagram used in this Technical Manual is typical and should be used for training purposes only. Always use the Wiring Diagram supplied with the product tech sheet when servicing the oven.

For specific operating and installation information on the model being serviced, refer to the “Use and Care Guide” or “Installation Instructions” provided with the oven.

GOALS AND OBJECTIVES

The goal of this Technical Manual is to provide information that will enable the In-Home Service Professional to properly diagnose malfunctions and repair the “Microwave Hood Combination.”

The objectives of this Technical Manual are to:

- Understand and follow proper safety precautions.
- Successfully troubleshoot and diagnose malfunctions.
- Successfully perform necessary repairs.

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

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TABLE OF CONTENTS

Microwave Hood Combination

SECTION 1: GENERAL INFORMATION.....	1-01
MICROWAVE HOOD COMBINATION SAFETY	1-02
PRODUCT SPECIFICATIONS.....	1-03
MODEL & SERIAL NUMBER LOCATION.....	1-11
MODEL NOMENCLATURE	1-12
TECH SHEET LOCATION	1-16
SECTION 2: DIAGNOSTICS.....	2-01
SAFETY	2-02
DIAGNOSTICS - TOUCH PANEL.....	2-03
ERROR/FAILURE CODES INDICATIONS	2-04
SECTION 3: COMPONENT TESTING	3-01
SAFETY	3-02
WIRING DIAGRAM.....	3-03
COMPONENT TESTING	3-10
COMPONENT LOCATION (NOT TO SCALE).....	3-14
SECTION 4: COMPONENT ACCESS	4-01
ACCESSING THE CONTROL PANEL	4-02
DOOR REMOVAL	4-03
OUTER WRAPPER REMOVAL	4-03
COMPONENT LOCATIONS.....	4-04

NOTES

Section 1: General Information

This section provides general safety, parts, and information for the “Microwave Hood Combination.”

- Microwave Hood Combination Safety
- Product Specifications
- Model & Serial Label
 - Location
 - Model Nomenclature
- Tech Sheet Location

Microwave Hood Combination Safety

Your safety and the safety of others are very important.

We have provided many important safety messages in this manual and on your appliance. Always read and obey all safety messages.



This is the safety alert symbol.

This symbol alerts you to potential hazards that can kill or hurt you and others.

All safety messages will follow the safety alert symbol and either the word "DANGER" or "WARNING."

These words mean:

⚠ DANGER

You can be killed or seriously injured if you don't immediately follow instructions.

⚠ WARNING

You can be killed or seriously injured if you don't follow instructions.

All safety messages will tell you what the potential hazard is, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed.

PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

- (a) Do not attempt to operate this oven with the door open since open-door operation can result in harmful exposure to microwave energy. It is important not to defeat or tamper with the safety interlocks.
- (b) Do not place any object between the oven front face and the door or allow soil or cleaner residue to accumulate on sealing surfaces.
- (c) Do not operate the oven if it is damaged. It is particularly important that the oven door close properly and that there is no damage to the:
 - (1) Door (bent),
 - (2) Hinges and latches (broken or loosened),
 - (3) Door seals and sealing surfaces.
- (d) The oven should not be adjusted or repaired by anyone except properly qualified service personnel.

Product Specifications

Whirlpool® Microwave Hood Combination

Dimensions	
Capacity (Cu. Ft.)	1.7 or 2.1
Cutout Width (IN, inches)	30
Depth Closed Excluding Handles (IN, inches)	15 ¹ / ₂ or 16 ¹ / ₈ or 16 ⁵ / ₁₆
Depth Closed Including Handles (IN, inches)	17 ³ / ₈
Depth With Door Open 90 Degree (IN, inches)	39 ¹ / ₂ or 50
Depth (IN, inches)	16 ¹ / ₈ or 17 ¹ / ₂ or 18 ¹ / ₂
Height (IN, inches)	17 ¹ / ₄ or 17 ⁵ / ₁₆
Width (IN, inches)	29 ⁷ / ₈ or 30
Microwave Details	
Cavity Finish	Non-Stick or Powder Coat
Convection	Yes
Convection Power (watts)	1600
Cooking Power (watts)	900 or 1000 or 1100
Interior Depth	16 ¹ / ₈ or 16 ³ / ₄
Interior Height	17 ¹ / ₄ or 17 ¹ / ₈
Interior Light	Incandescent
Interior Width	30
Number of Racks	1
Turntable	Stoppable Recessed
Turntable Diameter Size (IN, inches)	12 or 14
Work Surface Light	Incandescent
Description	
Microwave Type	Over-the-range
Size (IN, inches)	30
Exterior	
Cabinet Color	Black
Door Release	Handle
Door Swing	Left
Handle Color	Black
Controls	
Control Location	Right
Control Type	Electronic Touch
Display Color	Blue
Electronic Display Type	Digital
Number of Keypads	16 or 18 or 21
Number of Quick Touch/One-Touch Selections	6 or 7
Scrolling Electronic Display	Yes
Features	
Clock	Yes
Convenience Cooking Controls	Yes
Cooking Items Included	Cooking Rack
Night Light	Yes
Number of Convenience Control Pads	12 or 16

GENERAL INFORMATION (Cont.)

Number of Power Levels	10
Number of Sensor Control Keypads	0
One Touch Cooking	Yes
Sensor Cooking	Yes
Microwave Selections	Add 30 Seconds, Control Lock, Cook/Start, Cook Power, Cook Time, Defrost, End of Cycle Signal, Keep Warm, Kids Menu, Off/Cancel, Popcorn, Potato, Reheat, Scale, Soften/Melt, Steam, Timer, Beverage, Dinner Plate, Fresh Vegetable, Frozen Entree, Pizza, Convect, Languages - English/French
Ventilation System	
Blower Type	Dual Centrifugal
CFM Motor Class	220 or 300 or 400
Duct Direction	Vertical or Horizontal
Duct Outlet Size (IN, inches)	3 ¹ / ₄ x 10
Duct Type	Convertible Recirculating or Horizontal & Vertical Exhaust or Convertible for Vented or Non-Vented Use or Rectangular
Filters	Charcoal Odor Removing Filter
Number of Speeds	2 or 3 or 4
Ventilation Type	Downdraft or Updraft
Venting	Exterior or Recirculating
Electrical	
Amps	15 or 20
Hz	60
Volts	120

KitchenAid® Microwave Hood Combination

Dimensions	
Capacity (Cu. Ft.)	1.9 or 2
Depth With Door Open 90 Degree (IN, inches)	40 ¹ / ₂ or 44 ¹ / ₂
Depth (IN, inches)	16 ¹ / ₈ or 17
Height (IN, inches)	17 ¹ / ₈
Width (IN, inches)	30
Microwave Details	
Cavity Finish	Non-Stick
Convection	Yes
Convection Power (watts)	1600
Cooking Power (watts)	950 to 1200
Grill	Yes
Grill Power (watts)	1500
Interior Light	Halogen or Incandescent
Interior Depth	16 ³ / ₄
Interior Height	17 ¹ / ₄
Interior Width	30
Number or Racks	1 or 2
Turntable	Yes
Turntable Diameter Size (IN, inches)	14
Work Surface Light	Halogen

Description	
Microwave Type	Over-the-Range
Size (IN, inches)	30
Exterior	
Cabinet Color	Black
Door Release	Handle
Door Swing	Left
Handle Color	Stainless Steel
Controls	
Control Location	Right or Bottom
Control Type	Electronic Touch
Display Color	White
Electronic Display Type	VFD
Scrolling Electronic Display	Yes
Features	
Number of Power Levels	10
Sensor Cooking	Yes
Clock	Yes
Convenience Cooking Controls	Yes
Number of Convenience Control Pads	11 or 12 or 16
Night Light	Yes
Turntable	Yes
Turntable Diameter Size (IN, inches)	14
Microwave Selections	Control Lock, Cook Time, Defrost, Keep Warm, Popcorn, Reheat, Soften/Melt, Steam, Timer, Fresh Vegetable, Potato, Add 30 Seconds, Beverage, Convection, Cook Power, Cook/Start, Dinner Plate, Frozen Entree, Pizza, Power Level, Crisp, Grill, Speed Cook
Ventilation System	
Blower Type	Axial
Filters	Charcoal Odor Removing Filter
Duct Direction	Vertical or Horizontal
Duct Outlet Size (IN, inches)	3 ¹ / ₄ x 10
Duct Type	Rectangular
CFM Motor Class	300 or 400
Number of Speeds	3 or 6
Vent Fan Location	Back
Ventilation Type	Updraft
Venting	Exterior or Recirculating
Electrical	
Amps	15
Volts	120

JennAir® Microwave Hood Combination

Dimensions	
Capacity (Cu. Ft.)	1.9 or 2
Depth (IN, inches)	17
Height (IN, inches)	17 ⁵ / ₈
Width (IN, inches)	29 ⁷ / ₈ or 30
Microwave Details	
Cooking Power (watts)	900 or 1000
Convection	Yes
Convection Power (watts)	1600
Interior Light	Halogen or Incandescent
Number of Racks	1 or 2
Work Surface Light	Halogen
Turntable Diameter Size (IN, inches)	14
Description	
Microwave Type	Over-the-Range
Exterior	
Cabinet Color	Black
Door Release	Pocket
Door Swing	Left
Controls	
Control Type	Electronic Touch
Display Color	White
Electronic Display Type	Digital
Scrolling Electronic Display	Yes
Features	
Sensor Cooking	Yes
Clock	Yes
Microwave Selections	Add A Minute, Control Lock, Cook/Start, Cook Power, Cook Time, Defrost, Fresh Vegetable, Keep Warm, Kids Menu, Popcorn, Potato, Reheat, Soften/Melt, Timer, Frozen Entree
Ventilation System	
Blower Type	Axial
Filters	Charcoal Odor Removing Filter
Duct Direction	Vertical or Horizontal
Duct Outlet Size (IN, inches)	3 ¹ / ₄ x 10
Duct Type	Rectangular
CFM Motor Class	400
Number of Speeds	6
Ventilation Type	Downdraft
Venting	Exterior or Recirculating
Electrical	
Amps	15
Volts	120
Design Type	
Design Expression	Black Floating Glass

Amana® Microwave Hood Combination

Dimensions	
Capacity (Cu. Ft.)	1.6 or 2
Depth (IN, inches)	15 ¹ / ₂ or 17 ¹ / ₄ or 18
Height (IN, inches)	17 ¹ / ₈ or 17 ¹ / ₄ or 17 ³ / ₈
Width (IN, inches)	30
Depth Closed Excluding Handles (IN, inches)	15 ⁷ / ₈ or 16 ³ / ₈
Depth Closed Including Handles (IN, inches)	16 ³ / ₄
Depth With Door Open 90 Degree (IN, inches)	48 ¹ / ₂
Cutout Height (IN, inches)	16
Cutout Width (IN, inches)	30
Microwave Details	
Cavity Finish	Powder Coat or Non-Stick
Cooking Power (watts)	1000
Interior Light	Incandescent
Turntable	Stoppable Recessed
Turntable Diameter Size (IN, inches)	12 or 14
Work Surface Light	Incandescent
Description	
Microwave Type	Over-the-Range
Size (IN, inches)	30
Exterior	
Cabinet Color	Grey or Black
Door Release	Handle or Push Button
Door Swing	Left
Handle Color	Black
Controls	
Control Location	Right
Control Type	Electronic Touch
Display Color	Green or Blue or White
Electronic Display Type	Digital or VFD
Number of Keypads	14
Number of Quick Touch or One-Touch Selections	5
Scrolling Electronic Display	Yes
Features	
Number of Power Levels	10
Clock	Yes
Cooking Items Included	Flat Cooking Rack
Night Light	Yes
Number of Convenience Control Pads	9
Convenience Cooking Controls	Yes
One Touch Cooking	Yes
Sensor Cooking	Yes

GENERAL INFORMATION (Cont.)

Microwave Selections	Add 30 Seconds, Add A Minute, Control Lock, Cook Power, Cook Time, Cook/Start, Defrost, End of Cycle Signal, Fresh Vegetable, Frozen Entree, Frozen Vegetable, More - Less Function, Off/Cancel, Pause, Pizza, Popcorn, Potato, Reheat, Scale, Soften/Melt, Stage Cooking, Steam, Timer
Ventilation System	
Blower Type	Centrifugal or Dual Centrifugal
CFM Motor Class	220 or 300 or 400
Duct Direction	Vertical or Horizontal
Duct Outlet Size (IN, inches)	3 ¹ / ₄ x 10
Duct Type	Rectangular or Convertible Recirculating or Horizontal & Vertical Exhaust
Filters	Charcoal Odor Removing Filter
Number of Speeds	2 or 4
Ventilation Type	Updraft
Venting	Exterior or Recirculating
Electrical	
Amps	15
Hz	60
Volts	120

Maytag® Microwave Hood Combination

Dimensions	
Capacity (Cu. Ft.)	1.7 or 2.1
Cutout Width (IN, inches)	30
Depth Closed Excluding Handles (IN, inches)	16
Depth With Door Open 90 Degree (IN, inches)	39 ¹ / ₄ or 42
Depth (IN, inches)	15 ³ / ₄ or 16 ³ / ₄ or 17 ³ / ₄
Height (IN, inches)	17 ¹ / ₄
Width (IN, inches)	30 or 29 ⁷ / ₈
Microwave Details	
Cavity Finish	Powder Coat or Stainless
Convection	Yes
Convection Power (watts)	1600
Cooking Power (watts)	1000 or 1200
Interior Depth	16 or 16 ¹ / ₈
Interior Height	17 ¹ / ₈ or 17 ¹ / ₄
Interior Light	Incandescent
Interior Width	30
Number of Racks	1
Turntable	Stoppable Recessed
Turntable Diameter Size (IN, inches)	12 or 14
Work Surface Light	Halogen or Incandescent
Description	
Microwave Type	Over-the-Range
Size (IN, inches)	30

Exterior	
Cabinet Color	Black or Stainless
Door Release	Handle
Door Swing	Left
Handle Color	Black or Stainless Steel
Controls	
Control Location	Right
Control Type	Electronic Touch
Display Color	Amber
Electronic Display Type	Digital
Number of Keypads	14 or 22
Number of Quick Touch/One-Touch Selections	7
Scrolling Electronic Display	Yes
Features	
Clock	Yes
Convenience Cooking Controls	Yes
Cooking Items Included	Cooking Rack
One Touch Cooking	Yes
Sensor Cooking	Yes
Night Light	Yes
Number of Convenience Control Pads	10
Number of Power Levels	10
Microwave Selections	Add 30 Seconds, Add A Minute, Auto Cook, Control Lock, Cook Power, Cook Time, Cook/Start, Defrost, End of Cycle Signal, Fresh Vegetable, Keep Warm, Kids Menu, Pizza, Popcorn, Potato, Reheat, Scale, Snack Bar, Soften/Melt, Speed Cook, Steam, Timer
Ventilation System	
Blower Type	Axial
Duct Direction	Vertical or Horizontal
Duct Outlet Size (IN, inches)	8
Duct Type	Rectangular
Filters	Charcoal Odor Removing Filter
Number of Speeds	2 or 3 or 4
Vent Fan Location	Back
Ventilation Type	Updraft
Venting	Exterior or Recirculating
Electrical	
Amps	15
Hz	60
Volts	120

GENERAL INFORMATION (Cont.)

Ikea® Microwave Hood Combination

Dimensions	
Capacity (Cu. Ft.)	1.7
Depth With Door Open 90 Degree (IN, inches)	49 ¹ / ₂
Depth (IN, inches)	15 ⁷ / ₈
Height (IN, inches)	17 ³ / ₈
Width (IN, inches)	30
Microwave Details	
Cavity Finish	Powder Coat
Cooking Power (watts)	900
Interior Light	Incandescent
Work Surface Light	Incandescent
Turntable	Yes
Turntable Diameter Size (IN, inches)	12
Description	
Microwave Type	Over-the-Range
Size (IN, inches)	30
Exterior	
Cabinet Color	White or Grey
Door Release	Push Button
Door Swing	Left
Handle Color	White or Black
Controls	
Control Location	Right
Control Type	Electronic Touch
Display Color	Green
Number of Quick Touch/One-Touch Selections	5
Features	
Number of Power Levels	10
Clock	Yes
Convenience Cooking Controls	Yes
Number of Convenience Control Pads	9 or 12
One Touch Cooking	Yes
Microwave Selections	Control Lock, Popcorn, Reheat
Night Light	Yes
Ventilation System	
Filters	Charcoal Odor Removing Filter
CFM Motor Class	300
Number of Speeds	2
Ventilation Type	Updraft
Venting	Exterior or Recirculating
Electrical	
Amps	15
Hz	60
Volts	120

Model & Serial Number Location



Model & Serial Number
Label Location (behind door)



Model Nomenclature

Whirlpool® Model Nomenclature

MODEL NUMBER	W	M	H	3	1	0	1	7	A
Brand W = Whirlpool									
Platform M = Microwave O = Wall Oven									
Sub Platform/Fuel C = Countertop (Microwave) H = Microwave Hood Combo B = Built-In (Microwave) D = Drawer (Microwave)									
Series 1 = OPP 3 = Low Line 5 = Mid Line 7 = High (GOLD) 9 = Hero (GOLD)									
Feature Level/Key Feature Feature Level (0-9)									
Feature Level/Key Feature Feature Level (0-9)									
Size/Key Feature Capacity (1 - 9)									
Size/Key Feature Capacity (1 - 9)									
Year A = 2012 B = 2013 D = 2014 H = 2018 J = 2019									

KitchenAid® Model Nomenclature

MODEL NUMBER	K	M	H	C	3	19	E
Brand K = KitchenAid							
Categories C = Cooktop O = Wall oven F = Freestanding Range S = Slide-In Range M = Microwave Oven							
Configuration/Fuel B = Built-in C = Countertop H = Microwave Hood Combination							
Product Detail S = Sensor Cooking C = Convection P = Speedcook G = Grill							
Feature Pack (1-3)							
Capacity/Width 17 = 1.7 Cu. Ft. 18 = 1.8 Cu. Ft. 19 = 1.9 Cu. Ft. 20 = 2.0 Cu. Ft. 21 = 2.1 Cu. Ft. 22 = 2.2 Cu. Ft.							
Year D = 2014 E = 2015 F = 2016							

GENERAL INFORMATION (Cont.)

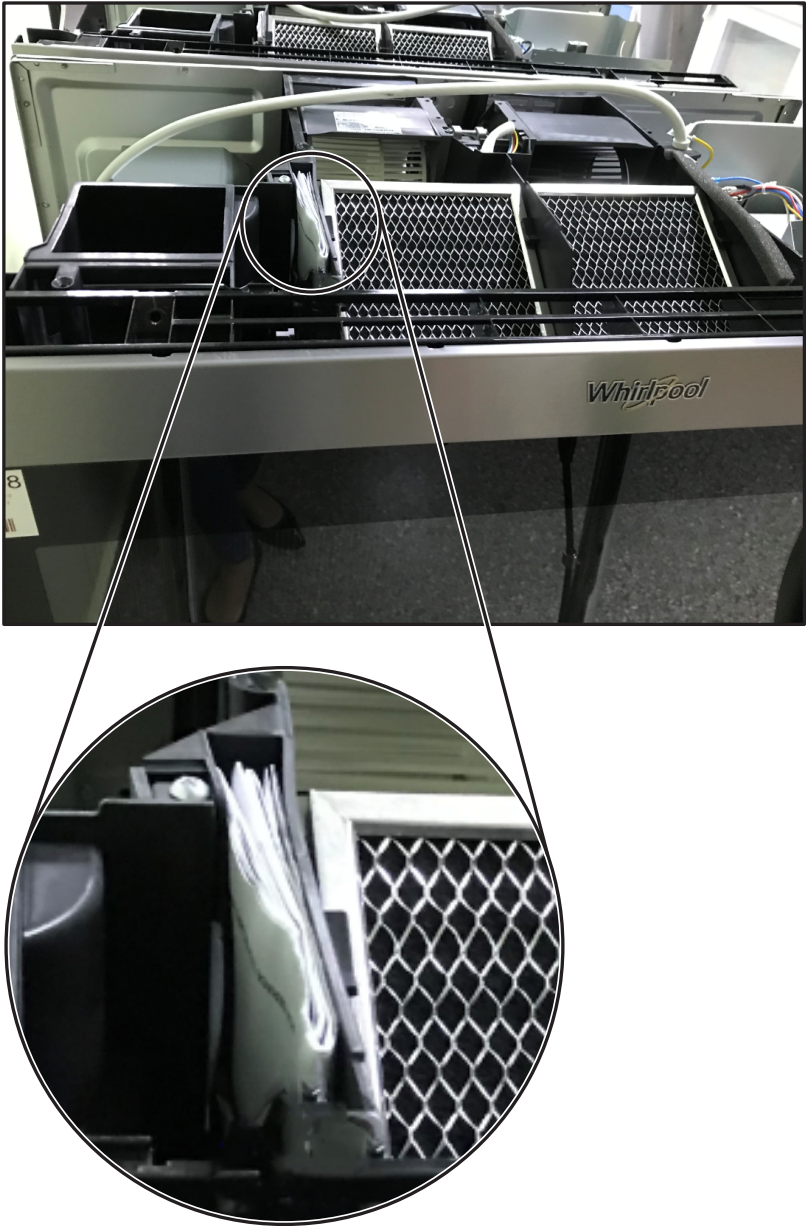
Amana® Model Nomenclature

MODEL NUMBER	A	MV	2	3	0	7	P	F	B
Brand A = Amana									
Platform Type MV = Over the Range Micro MC = Countertop Micro									
Suite Series 2 = Basic / OPP / Contract 4 = 3 Piece 6 = 2 Piece									
Sensor 3 = Non-Sensor 5 = Sensor									
Feature Level Feature Level (0-9)									
Capacity 2 = 2.0 Cu. Ft. 5 = 1.5 Cu. Ft. 6 = 1.6 Cu. Ft. 7 = 1.7 Cu. Ft.									
Cleaning System R = CleanRelease® Technology V = None P = Power Coated									
Launch Year D = 2014 E = 2015 F = 2016 G = 2017 H = 2018 J = 2019									
Color Indicator W = White B = Black D = Silver S = Stainless Steel									

Maytag® Model Nomenclature

MODEL NUMBER	Y	M	MV	4205 - 6190	D	H
Country Y = Canada						
Brand M = Maytag						
Product Type MV = Microwave/Vent						
Feature Pack						
Year D = 2014 E = 2015 F = 2016						
Color S = Stainless Steel H = White E = Black						

Tech Sheet Location



Section 2: Diagnostics

This section provides diagnostic and fault codes information for the “Microwave Hood Combination.”

- Safety
- Diagnostics - Touch Panel
- Error/Failure Codes Indication

For Service Technician Use Only

Safety

⚠ DANGER**Electrical Shock Hazard**

Only authorized technicians should perform diagnostic voltage measurements.

After performing voltage measurements, disconnect power before servicing.

Failure to follow these instructions can result in death or electrical shock.

⚠ WARNING**Electrical Shock Hazard**

Disconnect power before servicing.

Replace all parts and panels before operating.

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

Voltage Measurement Safety Information

When performing live voltage measurements, you must do the following:

- Verify the controls are in the off position so that the appliance does not start when energized.
- Allow enough space to perform the voltage measurements without obstructions.
- Keep other people a safe distance away from the appliance to prevent potential injury.
- Always use the proper testing equipment.
- After voltage measurements, always disconnect power before servicing.

IMPORTANT: Electrostatic Discharge (ESD) Sensitive Electronics

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 wrist strap to 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 electronic control assembly by edges only.
- When repackaging failed electronic control assembly in antistatic bag, observe above instructions.

For Service Technician Use Only

Diagnostics - Touch Panel

Touch Panel and ACU PCBA 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. Plug in microwave oven or reconnect power and press Cancel button to Standby (".").
2. Open and close door, then press CANCEL - CANCEL - START within 3 seconds.
All display segments will be lit to indicate the Test mode has been entered. In the upper left corner of the display, either the condition of the ACU will be displayed ("GOOD") or the most recent error code.
3. Open door. The model number will be displayed.
4. Close door. All display segments will be lit.
5. Press indicated keypad for correct display readout and beep.

NOTE: If the Cancel button is pressed during this diagnostic routine, you will exit the Test mode.

Key Tables for Test Mode

Key Name	Function	Display	Buzzer
AccuPop or Popcorn	-	SmartPop Testing, SmartPop Pass or SmartPop Fail* or POPCORN Testing, POPCORN Pass or POPCORN Fail*	1 beep
Add 1 Minute	-	Key 8	1 beep
Add 30 sec	-	Key 9 or Key 20	1 beep
Auto Cook	Humidity sensor check	XXX	1 beep
Beverage	-	Key 34	1 beep
Clock	-	Key 6	1 beep
Clock/Options	HF NTC Thermistor	XXX	1 beep
Convect	Cavity Sensor Check	0000-0250	1 beep
Convect Bake or Bake	- or FC function and FC NTC check	000-0150 or 0000-0260	1 beep
Convect Roast or Roast	- or Humidity Sensor Check	Key 53	1 beep
Cook	Failure History Check	Key 13 OR 7000-9999	1 beep
Cook Time/Power	RH NTC sensor check or Failure History Check	If no error history:GOOD If error history: FxEx YY FxEx YY...	1 beep
Cook Power/Cook/Reheat	Humidity Sensor Check	Key 11 or Key 22 or 7000-9999	1 beep
Cook Time	-	Key 10 or Key 21	1 beep
Defrost	-	Key 5 or Key 15 or Key 25	1 beep
Potato or Baked Potato	-	Key 14 or Key 19 or key 31	1 beep
Reheat	-	Key 8 or Key 14 or Key 24	1 beep
Select Choice/Select	-	Key 27	1 beep
Set Up	-	Key 25	1 beep
Snack Menu	-	Key 38	1 beep
Soften/Melt	-	Key 9 or Key 24 or Key 29	1 beep
Start	Software version check	xx.xx.xx or Key 1	1 beep

Key Name	Function	Display	Buzzer
Start Add 30 Sec	Software version check	03.00.00**	1 beep
Start/Add 1 min	Display UI SW, ACU PCB SW, Touch SW, EE PROM data version and Gee version	UI: xx.xx.xx ACU: xx.xx.xx TH: xx.xx.xx EE: xx.xx.xx Gee: xx.xx.xx (alternating)	Yes
Steam/Simmer	-	Key 12 or Key 20	1 beep
Stop/Clear	Exit Test Mode	-	1 beep
Timer Set/Off	Erase Service Error Records	GOOD or Key 5 or Key 7	1 beep
Turntable	-	Key 9 or Key 29	1 beep
Vegetable	-	Key 9 or Key 21 or Key 2E	1 beep
Defrost 1 lb	-	Key 23	1 beep
Dinner Plate	-	key 32	1 beep
Frozen Entree	-	Key 15 or Key 33	1 beep
(Fresh/Frozen) Vegetable	-	Key 2E	1 beep
Hood Exhaust Fan (HF) Hi/Low/Off	-	Key 4	1 beep
Hood Light or Light or 	-	Key 30	1 beep
Keep Warm	- or NTC ambient temperature check	Key 6 or 0000-0120	1 beep
Kids Menu	-	Key 10 or Key 37	1 beep
Kitchen Timer on/off	-	Key 5 or Key 7	1 beep
Light On/Night/Off	-	Key 3	1 beep
Vent Fan or 	-	Key 28	1 beep
Warm Hold	Hood NTC ambient temperature check	0000-0120 or Key 6	1 beep
Steam Clean	-	Key 14	1 beep
Air Fry	-	Key 19	1 beep
Grill	Grill Heater Check	Grill	1 beep

* Knock on microwave oven door 12-24 times, and then the result (Pass or Fail) will be displayed.
** May be higher, depending on software upgrades at time of production.

For Service Technician Use Only

Key Name	Function	Display	Buzzer
1	Cooling Fan On or Cavity Light and Turntable Motor* On—Relay 4901	Cavity Lamp or Key 33	1 beep
2	Cavity Light, Cooling Fan, and Turntable ON or Hood (Cooktop) Light ON (High)—Relay 4911	Cavity Light and Turntable or Key 34	1 beep
3	TT, CL, MW Relay 4913 & 4903 (1000 W or 1200 W) On for 10 seconds	MW Turbo On or Key 35 or Key 36	1 beep
4	- or HF NTC Thermistor	100-977** or XXX or Key 14 or Key 34	1 beep
5	-	Key 15 or Key 37 or Key 38 or Key 35	1 beep
6	Cavity Light & Turntable On—Relay 4901 or Hood (Cooktop) Light On (High)—Relay 4910	Hood Light High or Key 38	1 beep
7	Hood Light On (Low)—Relay 4909 or Vent Fan On (Low Speed)—Relay 4905	Hood Light Low or Key 39	1 beep

Key Name	Function	Display	Buzzer
8	Hood (Cooktop) Light On (Night)—Relay 4912 or Vent Fan Relay 4911 On (High Speed)	Hood Fan Highest or Key 40	1 beep
9	HF On (High Speed)—Relay 4902 & Relay 4905 or Vent Fan On Relay 4911 Off (Low Speed)	Hood Fan Lowest or Key 41	1 beep
0	LED Grid Check or Microwave Oven (1000 W or 900 W), CL, TT, and CF ON or TT, CL, MW Relays 4913 and 4903 (1050 W) On	Key 32 or MW	1 beep
Off/Cancel (to lock, hold for 3 seconds)	Exit Test mode	-	1 beep
Options	-	Key 25	1 beep
Options/Clock/Setup/ Settings	Error history check or HF NTC Thermistor	If no error history: GOOD If error history: FxEx FxEx.. or XXX OR 100-977**	1 beep
Pizza	-	Key 20 or key 35	1 beep
Popcorn	-	Key 18 or Key 30	1 beep
 or 	-	key 45	1 beep
 or 	-	key 46	1 beep

*Turntable motor does not turn on with cavity light when door is open.
**Varies, depending on room temperature.

NOTE: Icons flash, "8" will flash, then populate display from right to left.

Error/Failure Codes Indications

NOTE: Many of the problems listed in the chart below may be solved by power cycling: Unplug microwave oven or disconnect power. After 1 minute, plug in microwave oven or reconnect power.

Display	Likely Failure Condition	Recommended Repair Procedure
Enter the Diagnostics mode (press CANCEL - CANCEL - START) and press COOK TIME/POWER to verify the failure code. If the failure code displayed matches complaint, see chart below for details.		
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.
F1E4	Microwave ACU PCBA failure	1. Unplug microwave oven or disconnect power. 2. Replace ACU PCBA. 3. Replace all parts and panels before operating. 4. Plug in microwave oven or reconnect power.

For Service Technician Use Only

Display	Likely Failure Condition	Recommended Repair Procedure
F2E1	Stuck key failure	1. Unplug microwave oven or disconnect power. 2. Replace touch panel. 3. Replace all parts and panels before operating. 4. Plug in microwave oven or reconnect power.
F4E1	Cavity temperature sensor failure	1. Enter the Diagnostics mode (press CANCEL -CANCEL - START), and then press CONVECT to display the cavity temperature sensor reading. Verify the sensor temperature reading is at room temperature (typically 50°F to 90°F [10°C to 32°C]) and verify failure code. If failure code matches complaint, continue to Step 2. 2. Unplug microwave oven or disconnect power. 3. Disconnect sensor from ACU PCBA. 4. Measure sensor resistance between connector pins and confirm reading is between 9.7 kΩ and 10.3 kΩ at room temperature. If measurement is not correct, or if a short or open circuit is found, replace sensor. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power. 7. Enter the Diagnostics mode (press CANCEL -CANCEL - START), and then press CONVECT to display the cavity temperature sensor reading. Verify the temperature sensor reading. If the reading is correct, stop. 8. If the reading is still not correct, unplug microwave oven or disconnect power. 9. Replace ACU PCBA. 10. Replace all parts and panels before operating. 11. Plug in microwave oven or reconnect power.
F4E4	Humidity sensor failure	1. Enter the Diagnostics mode (press CANCEL -CANCEL - START), and then press COOK to display the humidity sensor reading. If display does not show "8891," continue to Step 2. 2. Unplug microwave oven or disconnect power. 3. Connect a new humidity sensor to the ACU PCBA P6 connector. 4. Replace all parts and panels before operating. 5. Plug in microwave oven or reconnect power. 6. Enter the Diagnostics mode (press CANCEL -CANCEL - START), and then press COOK to see if failure code reappears. NOTE: There may be a delay (approximately 1 minute, 20 seconds) before the failure code is displayed. 7. If the failure code reappears, unplug microwave oven or disconnect power. 8. Replace ACU PCBA. 9. Replace all parts and panels before operating. 10. Plug in microwave oven or reconnect power.
F4E9	Popcorn error/Smart pop sound failure	1. Enter the Diagnostics mode (press CANCEL -CANCEL - START), and then press POPCORN. 2. Knock on the microwave oven door no fewer than 12 times within 5 seconds to check if the counter display operates properly. 3. If the counter does not operate properly, unplug microwave oven or disconnect power. 4. Check to see if the sound channel is blocked or the tube is loosened. 5. If the sound channel and tube are not blocked, connect a new Popcorn cable to the ACU PCBA. 6. Replace all parts and panels before operating. 7. Plug in microwave oven or reconnect power. 8. If failure code reappears, unplug microwave oven or disconnect power. 9. Replace Popcorn PCBA. 10. Replace all parts and panels before operating. 11. Plug in microwave oven or reconnect power. 12. If failure code reappears, unplug microwave oven or disconnect power. 13. Replace ACU PCBA. 14. Replace all parts and panels before operating. 15. Plug in microwave oven or reconnect power.

For Service Technician Use Only

Display	Likely Failure Condition	Recommended Repair Procedure
F8E5	Exhaust air temperature detection failure	1. Enter the Diagnostics mode (press CANCEL -CANCEL - START), and then press WARM HOLD to display the HF NTC thermistor reading. Verify the temperature reading is at room temperature (typically 50°F to 90°F [10°C to 32°C]) and verify failure code. If failure code matches complaint, continue to Step 2. 2. Unplug microwave oven or disconnect power. 3. Disconnect HF NTC thermistor cable from ACU PCBA. 4. Measure resistance between connector pins and confirm reading is between 9.5 kΩ and 10.5 kΩ at room temperature. If measurement is not correct or a short or open circuit is found, replace HF NTC thermistor. 5. Replace all parts and panels before operating. 6. Plug in microwave oven or reconnect power. 7. Enter the Diagnostics mode (press CANCEL -CANCEL - START), and then press WARM HOLD to display the HF NTC thermistor reading. Verify the temperature reading. If it is still not correct, replace ACU PCBA. 8. If failure does not appear, stop.

Primary, Monitor, Secondary and Door Interlock Switch Checkout Procedures

IMPORTANT: Before checking the interlock switches, unplug microwave oven or disconnect power. Be sure to disconnect all of the wires at the switch being tested before making any continuity readings.

NOTE: The Primary Interlock switch, Monitor Interlock switch, Secondary, and Door Interlock Switch are mounted in the door lock switch cradle. All the Interlock Switches can be identified by the wire colors that are connected to the terminals of the switches. See the chart below for wire color designation.

Switch	Check By	Door Open	Door Closed
Primary Interlock	1. Unplug microwave oven or disconnect power. 2. Disconnect the wires at the Primary Interlock Switch. 3. Check from the common terminal (black/black wires) to the normally open terminal (black/white wires). 4. Reconnect wires to switch.	-	+
Monitor Interlock	1. Unplug microwave oven or disconnect power. 2. Disconnect the wires at the Monitor Interlock Switch. 3. Check from the common terminal (white/red or brown wires) to the normally closed terminal (blue/white wires). 4. Reconnect wires to switch.	+	-
Secondary Interlock	1. Unplug microwave oven or disconnect power. 2. Disconnect the wires at the Secondary Interlock Switch. 3. Check from the common terminal (white/blue wires) to the normally open terminal (blue/blue wires). 4. Reconnect wires to switch.	-	+
Door Interlock	1. Unplug microwave oven or disconnect power. 2. Disconnect the wires at the Door Interlock Switch. 3. Check from the common terminal (blue wire) to the normally closed terminal (orange wire). 4. Reconnect wires to switch.	+	-

(+) Continuity (-) No Continuity

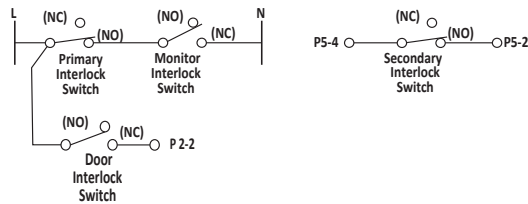
NOTES: Interlock, Monitor switches and Door interlock switch cannot be adjusted and all these switches should be replaced if any one of them is found to be defective. After replacing interlock/monitor switches, reconnect wires to switch and check for continuity. Safety interlocks and monitor switches will actuate within 2 mm.

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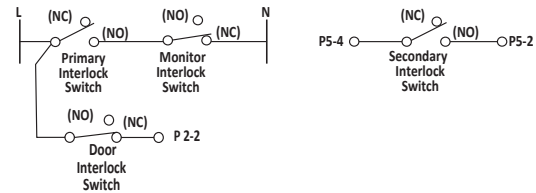
NOTES: These diagrams are not intended to show a complete circuit; they represent the position of switches during “DOOR OPEN” or “DOOR CLOSED” (continuity checks only).

Models with Halogen Grill Element:

Door Closed

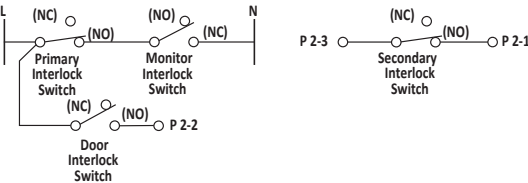


Door Open

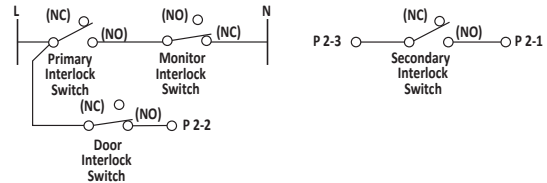


All Other Models:

Door Closed



Door Open



Not Heating Troubleshooting Instruction

IMPORTANT: High-voltage is present at the magnetron and high-voltage capacitor terminals. Avoid direct contact when power is connected to these components to avoid serious injury or possible death. Always be sure that the high-voltage capacitor is discharged before accessing any of these components.

For a no-heat condition, refer to the following step-by-step instructions:

1. Unplug microwave oven or disconnect power.
2. Discharge the high-voltage capacitor.
3. Disconnect the high-voltage transformer primary windings.
4. Attach the voltmeter leads to the high-voltage transformer primary input wires.
5. Plug in microwave oven or reconnect power.
6. Close door and program the microwave oven to operate for 30 seconds.
7. Press START.
8. Check the input voltage at the high-voltage transformer primary input wires. If the voltage is not close to the rating voltage 120 ± 15 VAC, unplug microwave oven or disconnect power. Check the circuitry as follows:
 - Measure resistance of the fuse, microswitches, and thermostats. Replace any failed components (refer to the wiring diagram).
9. If the input voltage at the high-voltage transformer primary input wires is close to the rating voltage 120 ± 15 VAC, unplug microwave oven or disconnect power.
10. Check the power supply components. Refer to the “Component Tests” section.
 - High-voltage transformer
 - High-voltage capacitor
 - High-voltage diode
11. If the power supply components check out OK, check the connection between the magnetron and the high-voltage transformer.
12. If all of the components check out OK, replace the magnetron.
13. Reconnect the high-voltage transformer primary windings.

ACU PCBA Pin Voltage Matrix

Check for proper voltage by completing the following steps:

1. Unplug microwave oven or disconnect power.
2. Connect voltage measurement equipment to the terminals listed below. (P1-3 and P2-3 are neutral.)
3. Plug in microwave oven or reconnect power, and confirm voltage reading.
4. Unplug microwave oven or disconnect power.

NOTE: For 50 V and over, the tolerance is ± 15 V. For 0 V, the tolerance is ± 3 V.

Abbreviations

CL - Cavity Light

HL - Hood Light, N - Neutral, FC - Forced Convection, HF - Hood Fan, L - Line Voltage, TT - Turntable Motor, NFS - Neutral for Switch

NOTE: When checking voltage readings on ACU PCBA, connect the grounding test lead of voltmeter to ACU PCBA neutral wire. Use the positive test lead to probe connectors designated below.

For Service Technician Use Only

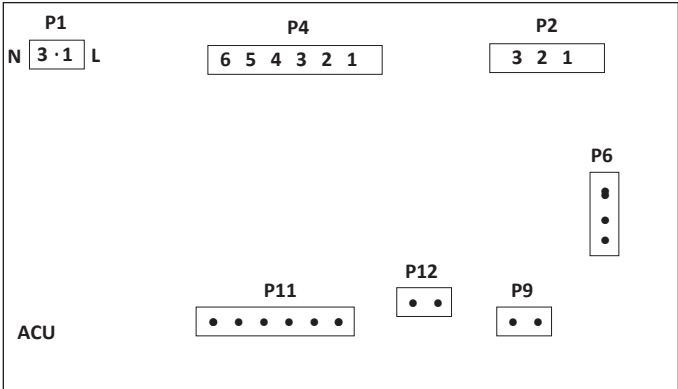
MW Oven Plugged In—Sitting Idle—ACV Reading																	MW Oven Running— ACV Readings
Pin Name	Wire Color	Power On, Door Closed	Power On, Door Open	Hood Fan Motor— High	Hood Fan Motor— High, Door Open	Hood Fan Motor— Med-High	Hood Fan Motor— Med-High, Door Open	Hood Fan Motor— Medium	Hood Fan Motor— Medium, Door Open	Hood Fan Motor— Low	Hood Fan Motor— Low, Door Open	Hood Light-High	Hood Light-High, Door Open	Hood Light-Low	Hood Light-Low, Door Open	MW Oven Start	
P1-1 (L)	Brown	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	
P1-3 (N)	White	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
P2-1 (NFS)	White	0	120	0	120	0	120	0	120	0	120	0	120	0	120	6.3	
P2-2 (Door)	Orange	0	120	0	120	0	120	0	120	0	120	0	120	0	120	50	
P2-3 (N)	Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
P2-4 (N)	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
P4-1 (FC-V)	Blue	0	120	0	120	0	120	0	120	0	120	0	120	0	120	0	
P4-2 (TT)	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0	120	
P4-3 (CL)	Green	0	120	0	120	0	120	0	120	0	120	0	120	0	120	120	
P4-4 (HL)	Yellow	0	0	0	0	0	0	0	0	0	0	120	120	68	68	0	
P4-5 (HF)	Black	0	0	120	120	88	88	78	78	64	64	0	0	0	0	0	
P4-6 (HF-R)	Gray	0	0	120	120	89	89	78	78	83	83	0	0	0	0	0	

MW Oven Plugged In—Sitting Idle—ACV Readings (Models with Halogen Grill Element)																				MW Oven Running— ACV Readings
Pin Name	Wire Color	Power On, Door Closed	Power On, Door Open	Hood Fan Motor—1	Hood Fan Motor—1 Door Open	Hood Fan Motor—2	Hood Fan Motor—2, Door Open	Hood Fan Motor—3	Hood Fan Motor—3, Door Open	Hood Fan Motor—4	Hood Fan Motor—4, Door Open	Hood Fan Motor—5	Hood Fan Motor—5, Door Open	Hood Fan Motor—6	Hood Fan Motor—6, Door Open	Hood Light-High	Hood Light-High, Door Open	Hood Light-Low	Hood Light-Low, Door Open	MW Oven Start
P1-1 (L)	Brown	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
P1-3 (N)	White	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
P2-1 (NFS)	White	0	120	0	120	0	120	0	120	0	120	120	120	120	120	0	120	0	120	6.3
P2-2 (Door)	Orange	0	120	0	120	0	120	0	120	0	120	120	120	120	120	0	120	0	120	50
P2-3 (N)	Brown/ Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
P4-1 (FC-V)	Blue	0	0	0	0	0	0	0	0	0	120	0	0	0	0	0	0	0	0	0
P4-2 (TT)	Red	0	120	0	120	0	120	0	120	0	120	120	120	120	120	0	120	0	120	120
P4-3 (CF)	Green	0	120	0	120	0	120	0	120	0	120	120	120	120	120	0	120	0	120	120
P4-4 (HL)	Yellow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	120	120	68	68	0
P4-5 (HF)	Black	0	0	120	120	85	85	80	80	74	74	67	67	61	61	0	0	0	0	0
P4-6 (HF-R)	Gray	0	0	120	120	85	85	80	80	74	74	67	67	80	80	0	0	0	0	0

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Connectors on ACU (Halogen Grill Element)

NOTE: There are purposely empty terminals between each of the numbered terminals on P1 connector.



Section 3: Component Testing

This section provides the wiring diagram, component testing, and component location for the “Microwave Hood Combination.”

- Safety
- Wiring Diagram
- Component Testing
- Component Location

For Service Technician Use Only

Safety

DANGER



Electrical Shock Hazard

Only authorized technicians should perform diagnostic voltage measurements.

After performing voltage measurements, disconnect power before servicing.

Failure to follow these instructions can result in death or electrical shock.

WARNING



Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

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

Voltage Measurement Safety Information

When performing live voltage measurements, you must do the following:

- Verify the controls are in the off position so that the appliance does not start when energized.
- Allow enough space to perform the voltage measurements without obstructions.
- Keep other people a safe distance away from the appliance to prevent potential injury.
- Always use the proper testing equipment.
- After voltage measurements, always disconnect power before servicing.

Caution: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

Wiring diagram for models WMH73521, WMH53520C, YWMH53520C, WMH76719, YWMH76719, WMH31017A, WMH32519C, YWMH31017A, WMH31017F, WMH32519F and YWMH31017F



3-4 ■ Microwave Hood Combination

Microwave Hood Combination ■ 3-5

[illegible]

AC 120V/125V 60Hz
POWER CORD

2 4 3 1

WH BK YL / GN

Cy Cx R

Fuse 20AMP

AC Line Filter

Cavity Thermostat BU WH

Monitor Interlock Switch BU

Primary Interlock Switch WH

Door Interlock Switch BU

Door Interlock Switch WH

CL

White Tab Golden Tab

HF

White Tab Golden Tab

HL

White Tab Golden Tab

BU WH

P5-4 P5-5

Motor Capacitor P6-3 P6-2 P6-1

BU BK W G

HF relay 4912

HF relay 4917

HF relay 4911

CL Relay 4901

TT Relay 4902

SMPS

Fuse

CL

P4-1 YL P4-2 GY P4-3 BK P4-4 WH

N P-1 L P-2 R P-3 WH

Door Interlock Switch BU

Door Interlock Switch WH

P2-1 GY P2-2 BU P2-3 WH

NFS

33K

P4-5 RD P4-6 WH

TTM

MW Turbo Relay 4903

2C

33K

68K

HF NTC

P9

ACU

RD

BU WH

BU WH

CF

P5-2 BU P5-1 BK

Secondary Interlock Switch

Magnetron Thermostat BU WH

Red Tube Black Tube

FA Fc

Magnetron

Black Tube

R

W

H.V. Capacitor

H.V. Diode

H.V. Transformer

High-Voltage Components

Condition: Door Open

Symbol Notes:

BK Wire Color

P6-1 Pin No. --1

Connector Name

HOOD LAMP (COOKTOP LAMP)

HL

CAVITY LAMP

CL

COOLING FAN MOTOR

CF

TURNABLE MOTOR

TT

HOOD FAN MOTOR

HF

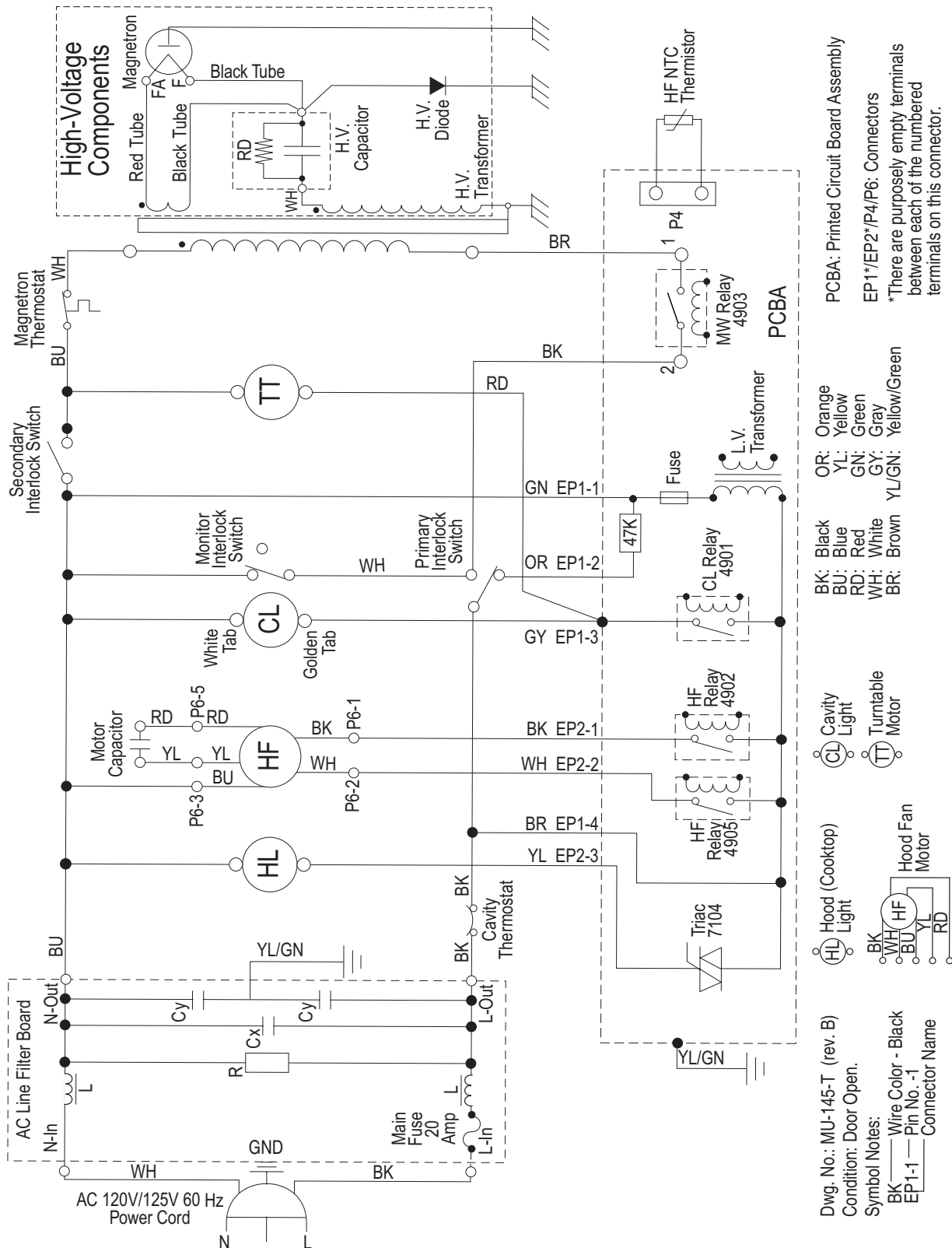
P2/P3/P4/P5/P6/P7: CONNECTORS

BK BLACK WH WHITE BR: BROWN BU BLUE GN: GREEN OR: ORANGE RD: RED YL: YELLOW GY: GRAY

DWG NO.: MU-147-T (Rev. C)

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Wiring diagram for models IMH15, IMH16, IMH160D, IMH172D, IMH160F, IMH172F and IMH205F



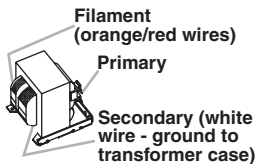
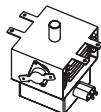
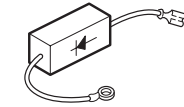
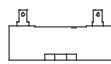
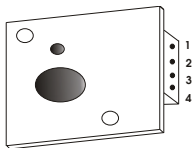
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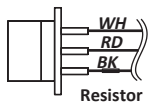
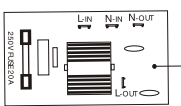
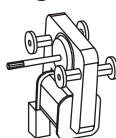
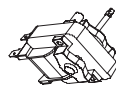
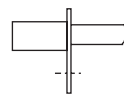
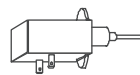
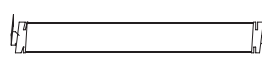
Component Testing

IMPORTANT:

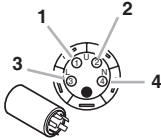
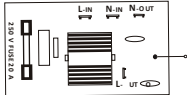
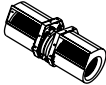
- Unplug microwave oven or disconnect power.
- Discharge the high-voltage capacitor and remove the lead wires from the primary winding of the high-voltage transformer before conducting any of the following tests.
- Remove the lead wires from the related component before conducting any of the following 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 V battery.

Components	Test/Results
H.V. Transformer 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance: ■ Primary winding: Less than 0.5 ohm (approximate) ■ Secondary winding: 120 ohms (approximate) ■ Filament winding: 0 ohms ■ Primary winding to grounding: Normal: Infinite ■ Filament winding to grounding: Normal: Infinite
Magnetron 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance: ■ Filament terminal: Normal: Less than 1 ohm ■ Filament to chassis: Normal: Infinite
H.V. Capacitor 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance: ■ Terminal to terminal: Normal: Momentarily indicates several ohms, gradually returns to Infinite ■ Terminal to case: Normal: Infinite
H.V. Diode 	NOTE: Some inexpensive meters may indicate infinite resistance in both directions. 1. Unplug microwave oven or disconnect power. 2. Measure resistance: ■ Forward: Normal: Continuity ■ Reverse: Normal: Infinite
Turntable Motor/Open Door Motor 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance: ■ Normal: 2.4 k to 3.2 k ohms (approximate)
Motor Capacitor 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure motor capacitor: ■ Normal: Momentarily 0 ohms, then goes to Infinite
Humidity Sensor ACU 	1. Unplug microwave oven or disconnect power. 2. Remove the 4-pin connector from the cable. 3. Measure resistance across pins 1 and 2. ■ Normal: 10 K ohms $\pm$ 5% at 77°F (25°C) 4. Measure capacity value across pins 3 and 4. ■ Normal: 180 pF $\pm$ 5% at 55%RH

For Service Technician Use Only

Components	Test/Results
Humidity Sensor ACU (Halogen Grill Element) 	NOTE: Do not remove the attached resistor which is used for internal resistance calibration. 1. Unplug microwave oven or disconnect power. 2. Remove the 3-pin connector from the electronic control (P6). 3. Measure resistance across pins 1 and 3 and across pins 2 and 3: ■ Normal: 2.8 k ohms (approximate) at 77°F (28°C) ± 18°F (-10°C)
HF NTC Thermistor 	1. If "NTC SHORT, CALL FOR SERVICE" or "NTC OPEN, CALL FOR SERVICE" scrolls on display, unplug microwave oven or disconnect power. 2. Measure resistance: ■ Normal: 10 k ohms ± 5% at 77°F (25°C)
AC Line Filter Board 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance: ■ Normal: L-IN to L-OUT (coil): Less than 1 ohm; N-IN to N-OUT (coil): Less than 1 ohm
Thermostats 	NOTE: Refer to "Parts Layout" for opening and closing temperatures. 1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure continuity: ■ Normal: Continuity
Cooling Fan Motor 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance: ■ Normal: 40 to 60 ohms (approximate)
FC Motor 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance: ■ Normal: 23 to 25 ohms
FC Ring Heater 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance: ■ Normal: 9 ± 3 ohms
FC Thermistor 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance: ■ Normal: 17 k ± 20% ohm at 77°F (25°C)
FC Thermoactuator 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance: ■ Normal: 1.2 k ± 0.5 k ohms
Power Resistor 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance: ■ Normal: 20 ohms/25 W
Quartz Grill Heater 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance: ■ Normal: 5 ± 1 ohms ■ Normal: 29 ± 5 ohms (Halogen Grill Element)

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Components	Test/Results
Halogen Grill Element 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure continuity (ohmmeter scale: Rx1): ■ Normal: 2 ± 1 ohms
AC Line Filter 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance: ■ Normal: 1-3 (coil): Less than 1 ohm; 2-4 (coil): Less than 1 ohm; 3-4 (resistor): 550 k-800 k ohms ■ Abnormal: Infinite
AC Line Filter Board 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance: ■ Normal: L-IN to L-OUT (coil): Less than 1 ohm; N-IN to N-OUT (coil): Less than 1 ohm
Hood Exhaust Fan Motor 	1. Unplug microwave oven or disconnect power. 2. Remove wire leads. 3. Measure resistance: ■ High Speed—Normal: Red (RD) and Blue (BU) wires: 70 to 100 ohms (approximate); Blue (BU) and Black (BK) wires: 30 to 60 ohms (approximate) ■ Low Speed—Normal: Red (RD) and Blue (BU) wires: 70 to 100 ohms (approximate); Blue (BU) and White (WH) wires: 50 to 80 ohms (approximate)

For Service Technician Use Only

Power Output Measurement

The power output of the magnetron can be measured using the following “Voltage Measurement at Power Source” and “Output Test” sections. Before you perform the test:

- Make sure that the oven cavity is cool and clean.
- Check the line voltage at the wall outlet while microwave oven is operating. See the “Voltage Measurement at Power Source” section.

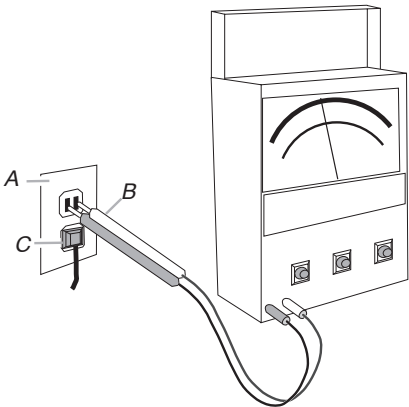
Tools Needed

- 2-cup measuring cup
- Thermometer
- Voltmeter/ohmmeter

Voltage Measurement at Power Source

1. Fill the measuring cup with 2 cups (500 mL) of tap water.
2. Place in the center of the microwave oven cavity.
3. Operate the microwave oven on high power for 1 minute.
4. While the microwave oven is operating, measure the line voltage at the power source. See “Measure Voltage” illustration.
5. Verify the voltage is constant during microwave oven operation. If voltage drops below 108 V, contact a qualified electrician to check your electrical supply.
6. Make note of the voltage while the microwave oven is running and proceed to the output test.

Measure Voltage



A. House power supply wall outlet
B. Voltmeter/ohmmeter test leads
C. Microwave oven plug

Output Test

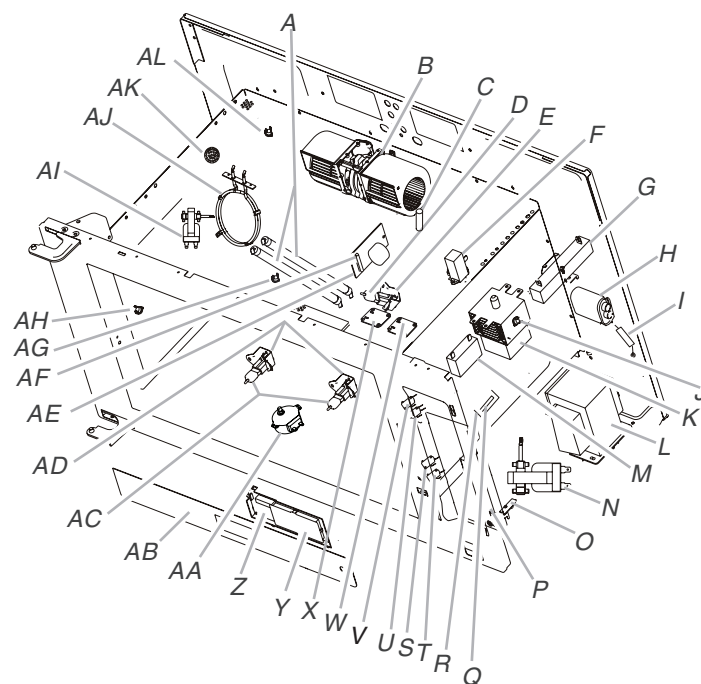
1. Fill the measuring cup with 2 cups (500 mL) of 70°F (21°C) tap water.
2. Stir the water with the thermometer to ensure uniform temperature. Add warm or cool water to bring the water to the correct temperature.
3. Place the measuring cup in the center of the microwave oven cavity.
4. Operate the microwave oven on high power for 1 minute.
5. Remove the measuring cup and stir the water with the thermometer for about 20 seconds.
6. Record the temperature of the water.
7. Refer to the model serial tag on the microwave oven to acquire wattage output rating of the microwave oven.

8. Using the following chart, determine if the output of the microwave oven is within the range listed based on the line voltage and wattage rating of the microwave oven.

Water Temperature for Line Voltage and Wattage Rating			
Voltage	700 W	1000 W	1200 W
120 V	96°F to 102°F (36°C to 39°C)	110°F to 116°F (43°C to 47°C)	124°F to 130°F (51°C to 54°C)
108 V	91°F to 97°F (33°C to 36°C)	101°F to 107°F (38°C to 42°C)	111°F to 117°F (44°C to 47°C)

For Service Technician Use Only

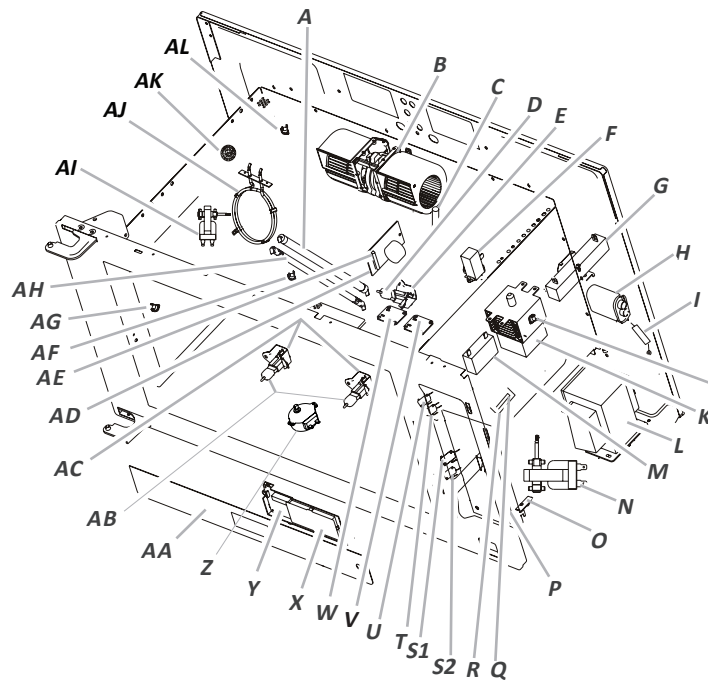
Component Location (Not to Scale)



- | | |
|--|---|
| A. Quartz grill heater (2) | V. Primary interlock switch |
| B. Hood fan motor assembly | W. POPCORN PCBA |
| C. FC thermistor | X. Fade in/Fade out PCBA |
| D. Cavity light | Y. Display board |
| E. Cavity light holder | Z. Lens |
| F. FC thermoactuator | AA. Turntable motor |
| G. Power resistor | AB. Touch foil |
| H. H.V. capacitor | AC. Hood (cooktop) lights |
| I. H.V. diode | AD. Hood (cooktop) light holders |
| J. Magnetron thermostat—
opens at 293°F (145°C),
closes at 221°F (105°C) | AE. AC line filter board |
| K. Magnetron | AF. Main fuse (20 A) |
| L. H.V. transformer | AG. Grill thermostat—
opens at 329°F (165°C),
closes at 266°F (130°C) |
| M. Motor capacitor | AH. FC thermostat—
opens at 329°F (165°C),
closes at 266°F (130°C) |
| N. Cooling fan motor | AI. FC motor |
| O. HF NTC thermistor | AJ. FC ring heater |
| P. ACU PCBA | AK. Humidity sensor |
| Q. Turbo fuse (20 A) | AL. Cavity thermostat—
opens at 329°F |
| R. Turbo fuse holder | |
| S. Secondary interlock switch | |
| T. Door interlock switch | |
| U. Monitor interlock switch | |

For Service Technician Use Only

Component Location (Not to Scale) (Models with Halogen Grill Element)



- | | |
|--|---|
| A. Quartz grill heater | U. Primary interlock switch |
| B. Hood fan motor assembly | V. POPCORN ACU |
| C. FC thermistor | W. Fade in/Fade out ACU |
| D. Cavity light | X. Display board |
| E. Cavity light holder | Y. Lens |
| F. FC thermoactuator | Z. Turntable motor |
| G. Power resistor | AA. Touch foil |
| H. H.V. capacitor | AB. Hood (cooktop) lights |
| I. H.V. diode | AC. Hood (cooktop) light holders |
| J. Magnetron thermostat—
opens at 293°F (145°C),
closes at 221°F (105°C) | AD. AC line filter board |
| K. Magnetron | AE. Main fuse (20 A) |
| L. H.V. transformer | AF. Grill thermostat—
opens at 329°F (165°C),
closes at 266°F (130°C) |
| M. Motor capacitor | AG. FC thermostat—
opens at 329°F (165°C),
closes at 266°F (130°C) |
| N. Cooling fan motor | AH. Halogen grill element |
| O. HF NTC thermistor | AI. FC motor |
| P. ACU PCBA | AJ. FC ring heater |
| Q. Turbo fuse (20 A) | AK. Humidity sensor |
| R. Turbo fuse holder | AL. Cavity thermostat—
opens at 329°F (165°C),
non-resettable |
| S1. Secondary interlock switch | |
| S2. Door interlock switch | |
| T. Monitor interlock switch | |



Multimedia Enhanced

Section 4: Component Access

This section provides service parts access, removal, and replacement instructions for the “Microwave Hood Combination.”

- Accessing the Control Panel
- Door Removal
- Outer Wrapper Removal
- Component Locations

Video Available  Look for this ICON throughout Section 4



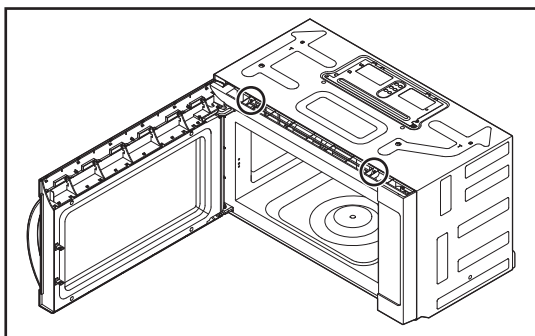
Accessing the Control Panel

⚠ WARNING

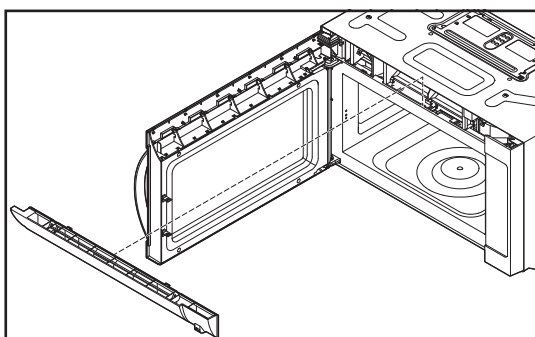


Electrical Shock Hazard
 Disconnect power before servicing.
 Replace all parts and panels before operating.
 Failure to do so can result in death or electrical shock.

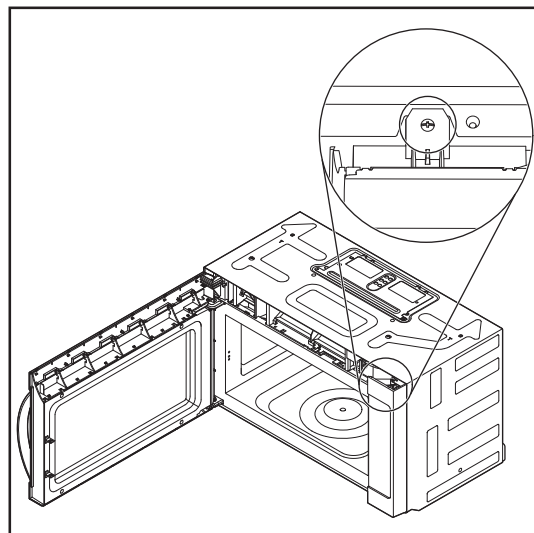
1. Remove the two Phillips head screws holding the vent on.



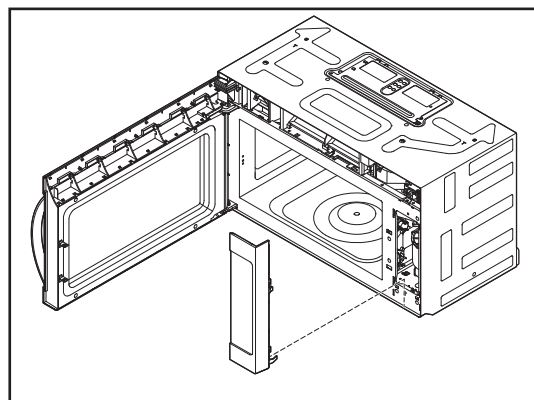
2. Lift and remove the vent.



3. Remove the Phillips head screw at the top of the control panel.



4. Lift up and pull out the control panel.



Door Removal

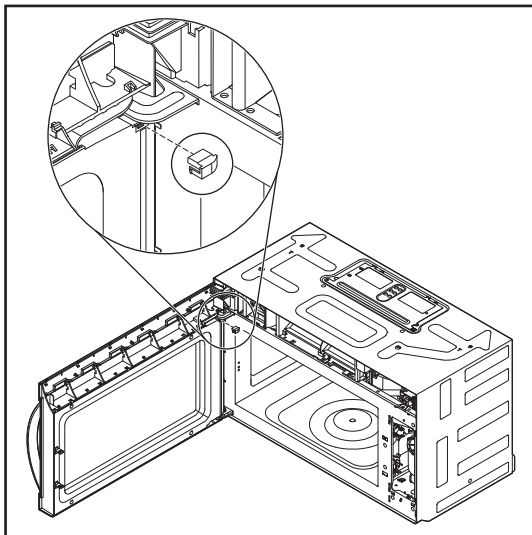
⚠ WARNING**Electrical Shock Hazard**

Disconnect power before servicing.

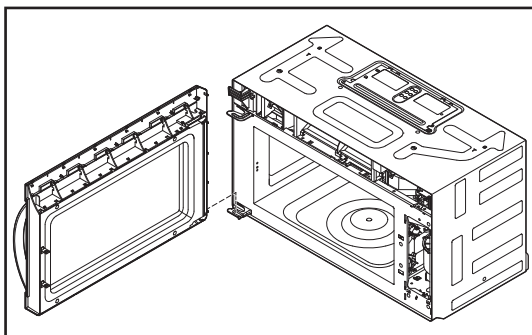
Replace all parts and panels before operating.

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

1. Remove the plastic insert below the upper door hinge.



2. Lift up and pull out to remove the door.



Outer Wrapper Removal

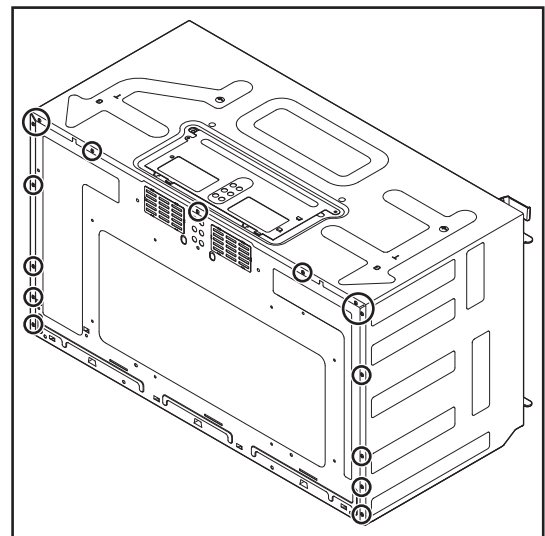
⚠ WARNING**Electrical Shock Hazard**

Disconnect power before servicing.

Replace all parts and panels before operating.

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

1. Remove all screws required to pull the outer wrapper off the unit as shown in below illustration.



Component Locations

**WARNING**

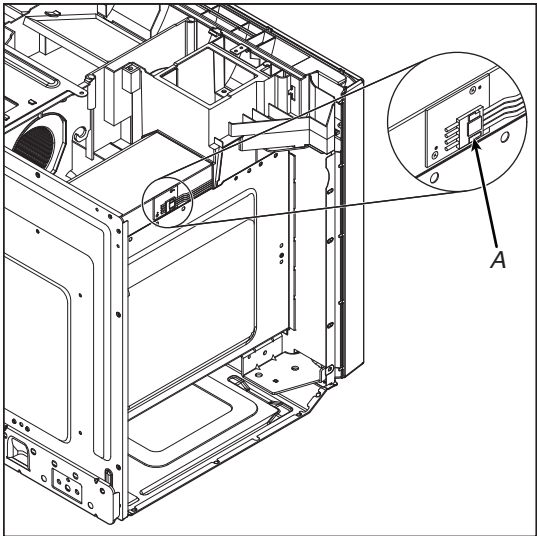


Electrical Shock Hazard

Disconnect power before servicing.

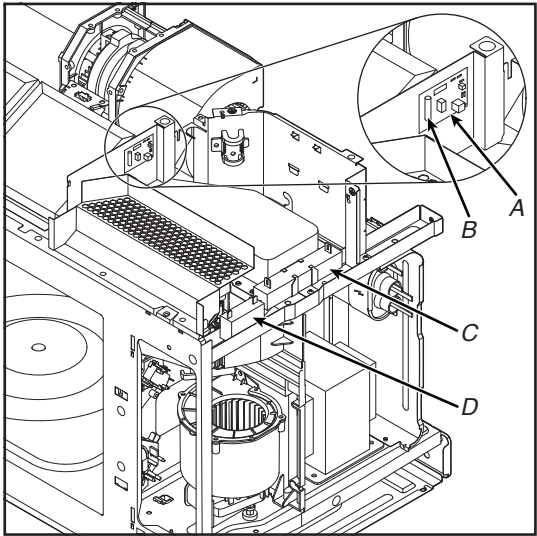
Replace all parts and panels before operating.

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

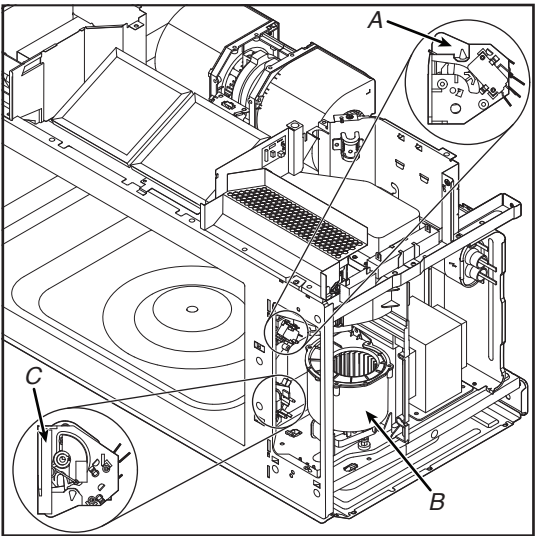


A. Humidity Sensor ACU

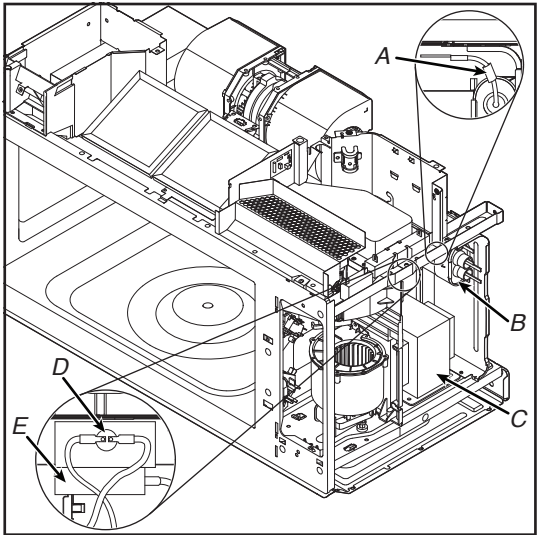
NOTE: Humidity Sensor ACU is on the left side of the unit when the wrapper is removed.



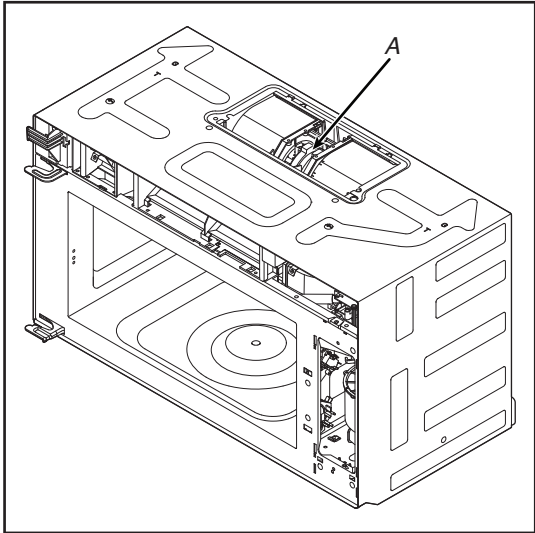
A. AC Line Filter Board C. Power Resistor
B. Line Fuse 20 A D. Motor Capacitor



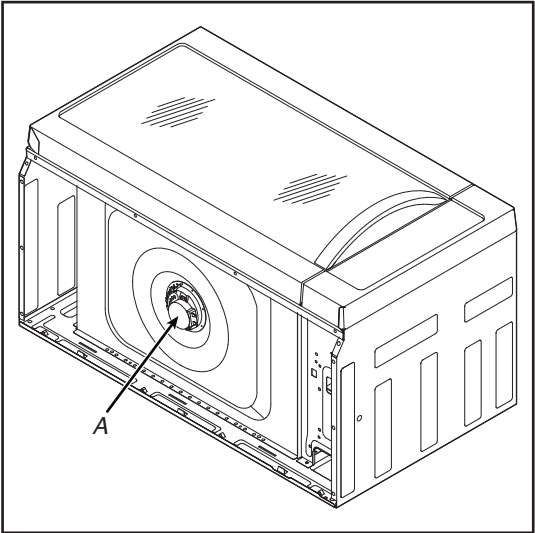
A. Upper Interlock switch holder and switches
B. Cooling Fan Motor
C. Lower Interlock switch holder and switches



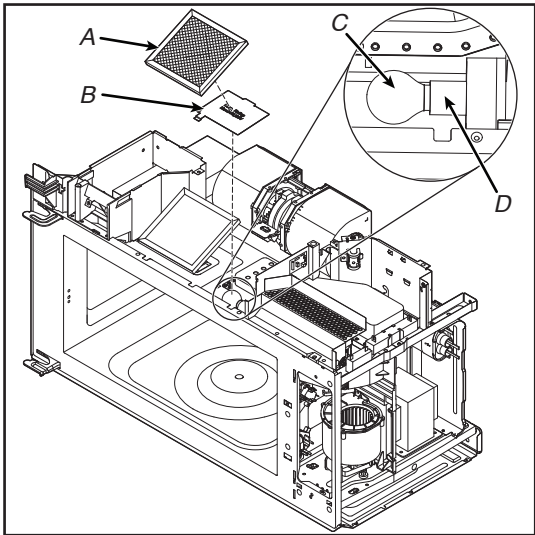
A. H.V. Diode D. Magnetron
B. H.V. Capacitor Thermostat
C. H.V. Transformer E. Magnetron



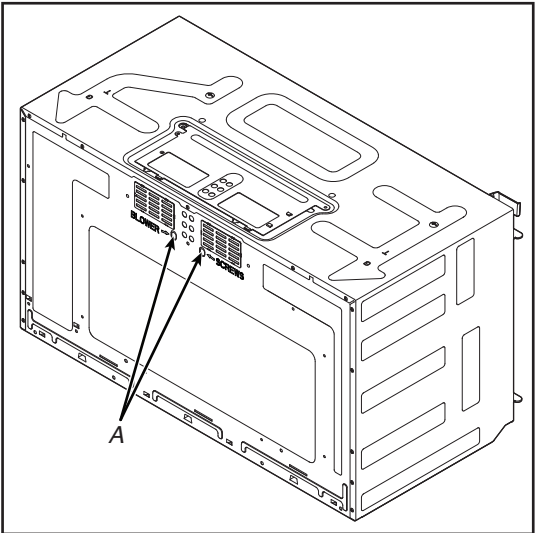
A. Hood Fan Motor Assembly



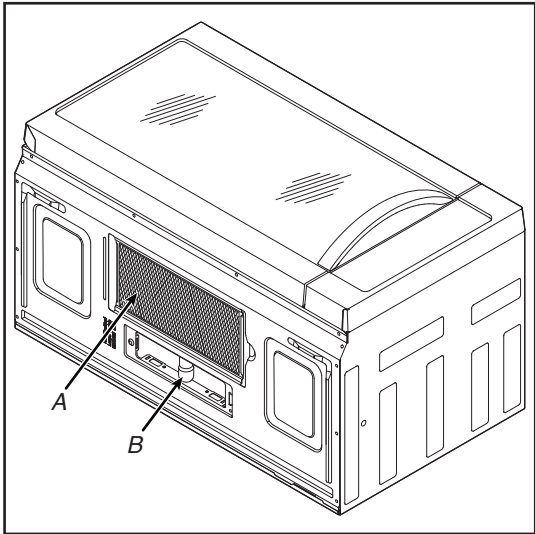
A. Turntable Motor



A. Carbon Filter
B. Cavity Light Cover
C. Cavity Light
D. Cavity Light Holder



A. Hood Fan Motor Adjustment
Screw Locations



A. Grease Filter
B. Hood (Cooktop) Light

PRODUCT SPECIFICATIONS & WARRANTY INFORMATION SOURCES

IN THE UNITED STATES:

FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL:

FOR WHIRLPOOL PRODUCTS: 1-800-253-1301

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

THE TECHNICAL ASSISTANCE LINE: 1-800-832-7174

**HAVE YOUR STORE NUMBER READY TO IDENTIFY YOU AS AN
AUTHORIZED IN-HOME SERVICE PROFESSIONAL**

FOR LITERATURE ORDERS (CUSTOMER EXPERIENCE CENTER):

PHONE: 1-800-851-4605

FOR TECHNICAL INFORMATION AND SERVICE POINTERS:

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

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Combination
W11400254B**