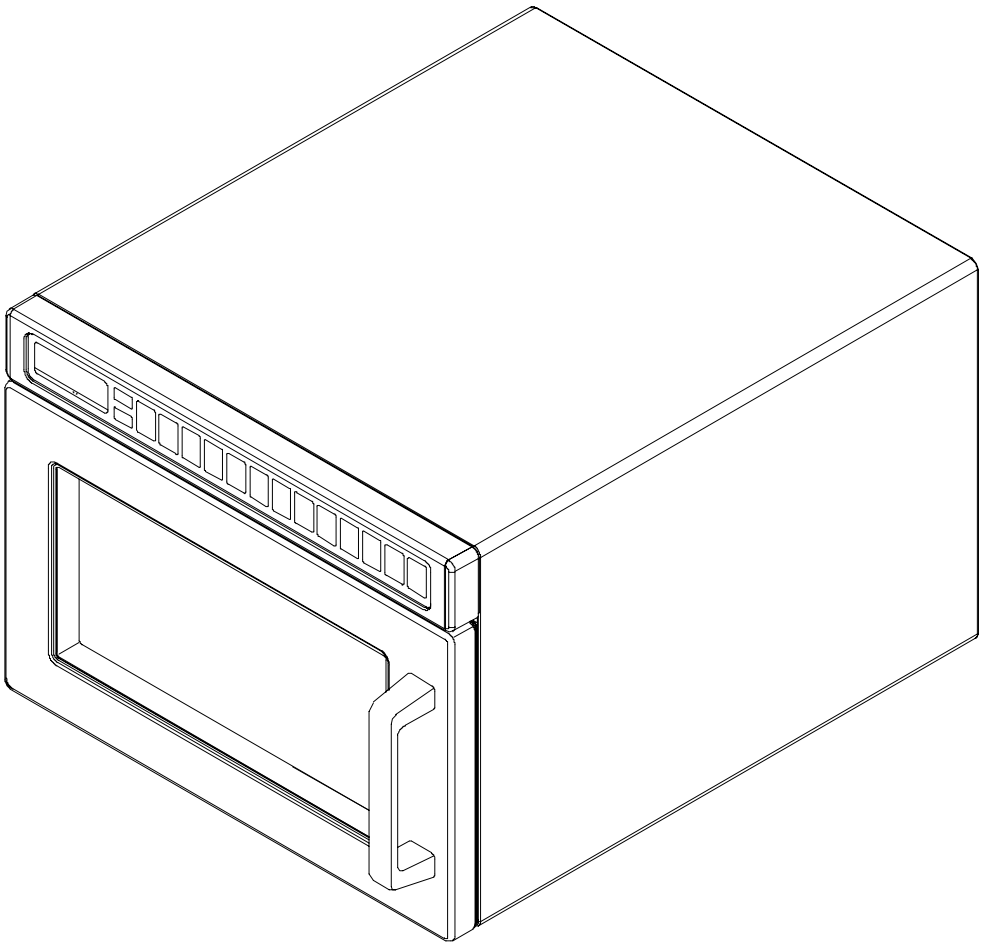
Training Manual

.6 – 50 Hz Compact Models



Amana®

MENUMASTER®

COMMERCIAL MICROWAVE OVEN

HDC–5 _ 50 Hz R2
June 2007

www.amanacommercial.com

Model Number List

DEC11E.....(P1325203M)
(P1330512M)
DEC11E2.....(P1331213M)
(P1331235M)
DEC14E.....(P1325207M)
(P1330516M)
DEC14E2.....(P1331217M)
(P1331239M)
DEC18E.....(P1325211M)
(P1330520M)
DEC18E2.....(P1331221M)
(P1331243M)
HDC511.....(P1325201M)
(P1330510M)
HDC511A .....(P1325213M)
HDC5112.....(P1331211M)
(P1331233M)
HDC514.....(P1325205M)
(P1330514M)
HDC514A .....(P1325214M)
HDC5142.....(P1331215M)
(P1331237M)
HDC518.....(P1325209M)
(P1330518M)
HDC518A .....(P1325215M)
HDC5182.....(P1331219M)
(P1331241M)
HDC5212.....(P1331224M)
(P1331245M)

MCHDC521 ....(P1331246M)
(P1331225M)
UC11E .....(P1325204M)
(P1330513M)
UC11E2 .....(P1331214M)
(P1331236M)
UC14E .....(P1325208M)
(P1330517M)
UC14E2 .....(P1331214M)
(P1331240M)
UC18E .....(P1325212M)
(P1330517M)
UC18E2 .....(P1331222M)
(P1331244M)
UHDC511 .....(P1325202M)
(P1330511M)
UHDC5112 .....(P1331212M)
(P1331234M)
UHDC514 .....(P1325206M)
(P1330515M)
UHDC5142 .....(P1331216M)
(P1331238M)
UHDC518 .....(P1325210M)
(P1330519M)
UHDC5182 .....(P1331220M)
(P1331242M)
CDEC14E2 .....(P1331251M)
CDEC18E2 (P1331252M)
CDEC21E2 .....(P1331253M)
CHDC5142 (P1331248M)
CHDC5182 (P1331249M)
CHDC5212 (P1331250M)

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⚠ CAUTION

All safety information must be followed as provided in Service Manual RS5320013.

⚠ WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

Models	UHDC511* UC11E*	HDC511* HDC511A DEC11E*	UHDC514* UC14E*	HDC514* HDC514A DEC14E* CHDC514 CDEC14E2	UHDC518* UC18E*	HDC518* HDC518A DEC18E* CHDC518 CDEC18E2
Power Source						
Voltage AC	230 VAC	230 VAC	230 VAC	230 VAC	230 VAC	230 VAC
Amperage (single unit)	13 A	13 A	13 A	13 A	13 A	13 A
Frequency	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
Single phase, 3 wire earthed	X	X	X	X	X	X
Power Output						
Nominal microwave energy (IEC705)	1100 Watts	1100 Watts	1400 Watts	1400 Watts	1800 Watts	1800 Watts
Minimum temperature rise (ΔT)	11º F / 5.5º C	11º F / 5.5º C	14º F / 7.5º C	14º F / 7.5º C	18º F / 10º C	18º F / 10º C
Operating frequency	2450 MHz	2450 MHz	2450 MHz	2450 MHz	2450 MHz	2450 MHz
Power Consumption						
Cook condition microwave	1800 W / 8 A	1800 W / 8 A	2300 W / 10 A	2300 W / 10 A	3000 W / 13 A	3000 W / 13 A
Dimensions						
Cabinet						
Width	423 mm	423 mm	423 mm	423 mm	423 mm	423 mm
Height	335 mm	335 mm	335 mm	335 mm	335 mm	335 mm
Depth	548 mm	548 mm	578 mm	578 mm	578 mm	578 mm
Oven Interior						
Width	331 mm	331 mm	331 mm	331 mm	331 mm	331 mm
Height	175 mm	175 mm	175 mm	175 mm	175 mm	175 mm
Depth	305 mm	305 mm	305 mm	305 mm	305 mm	305 mm
Weight						
Crated	29 kg	29 kg	31 kg	31 kg	31 kg	31 kg

Models	MCHDC521	DEC21E2 HDC5212 CHDC5212 CDEC21E2
Power Source		
Voltage AC	230 VAC	230 VAC
Amperage (single unit)	16 A	32 A
Frequency	50 Hz	50 Hz
Single phase, 3 wire earthed	X	X
Power Output		
Nominal microwave energy (IEC705)	2100 Watts	2100 Watts
Minimum temperature rise (ΔT)	21º F / 11.5º C	21º F / 11.5º C
Operating frequency	2450 MHz	2450 MHz
Power Consumption		
Cook condition microwave	3100 Watts / 13.5 A	3100 Watts / 13.5 A
Dimensions		
Cabinet		
Width	423 mm	423 mm
Height	335 mm	335 mm
Depth	578 mm	578 mm
Oven Interior		
Width	331 mm	331 mm
Height	175 mm	175 mm
Depth	305 mm	305 mm
Weight		
Crated	31 kg	31 kg

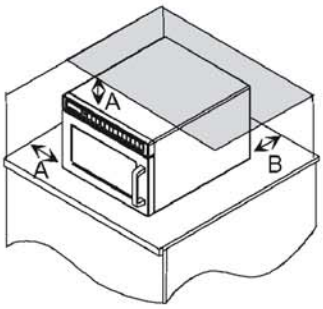
Quick Start Reference Guide

Refer to Product Safety Manual for Safety Statements

Complete Owner's Manual available online

CLEAN FILTR

This oven displays CLEAN FILTR at user defined intervals. When the message displays Amana recommends cleaning the air filter thoroughly. **Cleaning the air filter will not shut off the message.** The message will stop displaying automatically after 24 hours. Depending on microwave use and environmental conditions, the filter may need to be cleaned more frequently. Once the frequency is determined, set the option for the appropriate time frame.



Oven Clearances

A—Allow at least 7" (17.8 cm) of clearance around top and sides of oven. Proper air flow around oven cools electrical components. With restricted air flow, oven may not operate properly and life of electrical parts is reduced.
B—Allow at least 2 $^{9}/_{16}$ " (6.5 cm) between air discharge on back of oven and back wall.

So...how do I use it?

1 Preprogrammed Pads

To cook food using preprogrammed cooking sequences.

1. Open oven door and place food in oven. Close door.
2. Press desired pad.
3. Oven begins to cook.
4. At end of cooking cycle oven beeps and shuts off.

X X2 Programming *(some models)*

To change the cooking factor:

1. Open oven door.
2. Press and hold pad 1 for approximately 5 seconds.
3. Press pad to be reprogrammed.
4. Press the X2 pad.
5. Press a numbered pad to change the cooking factor.
   - Cooking factor can be set from 10% to 100%.
   - Default is 80%.
   - Pad 5 would change the cooking factor to 50%.
6. Press START pad to save changes.

Manual Operation

To cook food using a specific entered time and power level.

1. Open oven door and place food in oven. Close door.
2. Press TIME ENTRY pad and enter cooking time.
3. Press POWER LEVEL pad to program level of microwave power if desired.
   - For a lower microwave power, press pads 1 (for 10%), through 9 (for 90%), or 0 for no microwave energy.
4. If stage cooking is desired, press TIME ENTRY pad and repeat steps 2 through 4.
5. Press START pad.
6. At end of cooking cycle oven beeps and shuts off.

Programming Items

1. Open oven door.
2. Press and hold pad 1 for approximately 5 seconds.
3. Press pad to be reprogrammed.
4. Enter cooking time by using the number pads.
5. Press POWER LEVEL pad to program level of microwave power if desired.
   - For a lower microwave power, press pads 1 (for 10%), through 9 (for 90%), or 0 for no microwave energy.
6. Press TIME ENTRY pad to add up to four additional cooking stages.
   - Total cooking time cannot exceed 60 minutes.
   - Enter cook time and power level as in steps 4 and 5.
7. Press START pad to set new programming changes to the pad.

NOTE: To discard changes, press STOP/RESET pad or close oven door.

X2 Pad (some models)

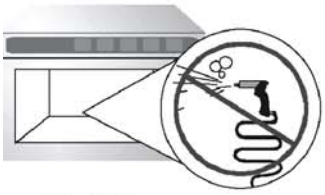
1. Open oven door and place food in oven. Close door.
2. Press X2 pad.
3. Press desired preprogrammed pad or pad sequence.
4. Oven begins cooking. Displayed cooking time is the total of original cooking time and added X2 time.

The switching operation of this microwave oven can cause voltage fluctuations on the supply line. The operation of this oven under unfavorable voltage supply conditions can have adverse effects. This device is intended for the connection to a power supply system with a maximum permissable system impedance Zmax of **0.31 Ohms** at the interface point of the user's supply. The user has to ensure that this device is connected only to a power supply system which fulfills the requirement above. If necessary, the user can ask the public power supply company for the system impedance at the interface point.

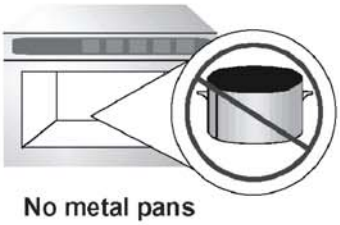
Quick Start Reference Guide

Refer to Product Safety Manual for Safety Statements

Complete Owner's Manual available online



DO NOT power spray



No metal pans

Can I change an option?

Options such as single or double pad programming, beep volume, and maximum cooking time can be changed to suit individual preferences.

To change options:

1. Open oven door.
   - If door is closed or RESET pad is pressed before programming is complete, changes are discarded and microwave exits programming mode.
2. Press and hold pad 2 for approximately 5 seconds.
   - This begins options mode.
   - Microwave will beep and OP: displays.
3. Press number pad that controls option to be changed.
   - See table below for options.
   - Current option will display.
4. Press number pad again to change the option.
   - Each time pad is pressed, option will change.
   - Match code displayed with code for desired option.
5. Press START pad to save changes.
   - To change additional options, repeat steps 3 and 4.
   - Changes appear after door is closed or STOP/RESET pad is pressed.

Numbered Pads	Display	Options (Factory Settings in Bold)
1	**OP:10**	**3 second continuous beep.**
End of Cycle Beep	OP:11	Continuous beep until door is opened.
	OP:12	5 beeps bursts until door is opened.
2	OP:20	Eliminates beep.
Speaker Volume	OP:21	Sets volume to low.
	OP:22	**Sets volume to medium.**
	OP:23	Sets volume to high.
3	OP:30	Prevents beep when pad is pressed.
Key Beep	**OP:31**	**Allows beep when pad is pressed.**
4	OP:40	15 seconds after oven door is opened, keyboard disabled.
Keyboard Enable Window	OP:41	30 seconds after oven door is opened, keyboard disabled.
	OP:42	**1 minute after oven door is opened, keyboard disabled.**
	OP:43	2 minutes after oven door is opened, keyboard disabled.
5	OP:50	Prevents adding heating time while oven is heating.
Add Time During Heating	**OP:51**	**Allows heating time to be changed while oven is heating when a memory pad is pressed.**
6	**OP:60**	**Allows oven to resume heating time countdown after door is opened during cycle.**
Reset Door Open	OP:61	Cancels heating time count down after door is opened during cycle.
7	**OP:70**	**Allows 60 minutes of heating time.**
Maximum Heating Time	OP:71	Allows 10 minutes of heating time.
8	OP:80	Allows use of preprogrammed pads only.
Manual Operation	**OP:81**	**Allows use of manual time entry and preprogrammed pads.**
9	**OP:90**	**Allows 10 (0-9) preprogrammed pads.**
Double Digit Operation	OP:91	Allows 100 (00-99) preprogrammed pads.
0	OP:00	Do not display message.
Clean Filter Message	**OP:01**	**Display message for 24 hours every 7 days.**
	OP:02	Display message for 24 hours every 30 days.
	OP:03	Display message for 24 hours every 90 days.

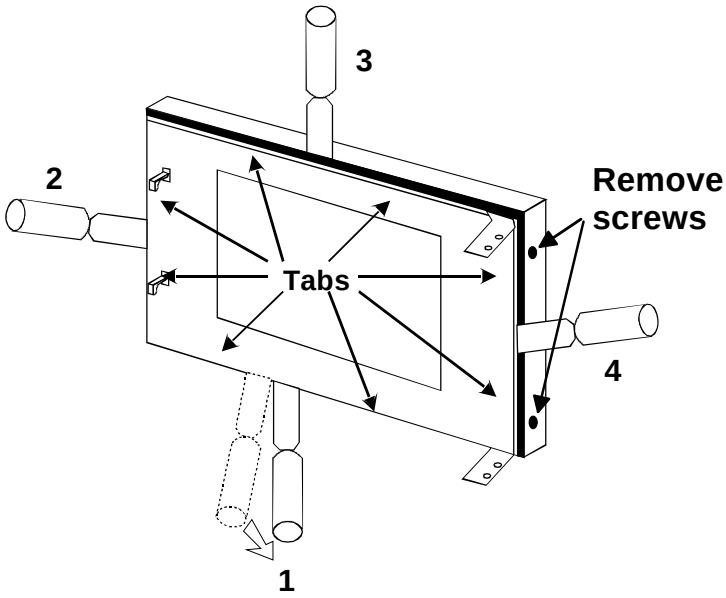
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Printed in U.S.A. 12/03

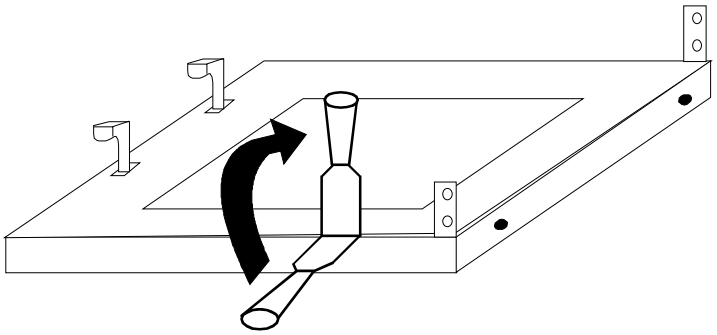
For full product documentation visit:
www.amanacommercial.com/wavelink

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Amana, Iowa 52204

Inner Door/Window Removal

1. Open oven door.
2. **Remove screws on hinge side.**
3. Beginning at the bottom, carefully insert 1” putty knife between inner and outer door. Pry up on inner door to release tabs, (2 tabs per side). Work in a clockwise direction to release all tabs, see illustration below.





CAUTION

When glass retainer is removed, be careful glass does not fall out of frame.

Bulletin

√ **Comm. Microwave**	Dehumidifier	Dishwasher
Domm. Microwave	√ **Export Comm.**	Heating Product
Laundry Product	PTAC Products	Range Product
Refrigerator/Fzr	Room Air Cond.	

Date July 31, 2001

No CR–236–B
EXCMW-125-B
Page 1 of 1

Type
Parts Manual Update
Policy Letter
√ Service Information

Attention
Service Managers
√ Service and Parts Managers

Models CRC and HDC Compact Commercial Ovens

Issue Broken tray as a result of arcing at front lip of cavity.

Warranty Ceramic trays may be claimed under warranty only if damage was caused by antenna failure (arcing).

Trays are not covered under warranty if there is evidence that damage was caused by impact, thermal shock (frozen or refrigerated product placed on warm tray), oven operated with metal pans, oven operated without a food load or lack of proper cleaning and maintenance.

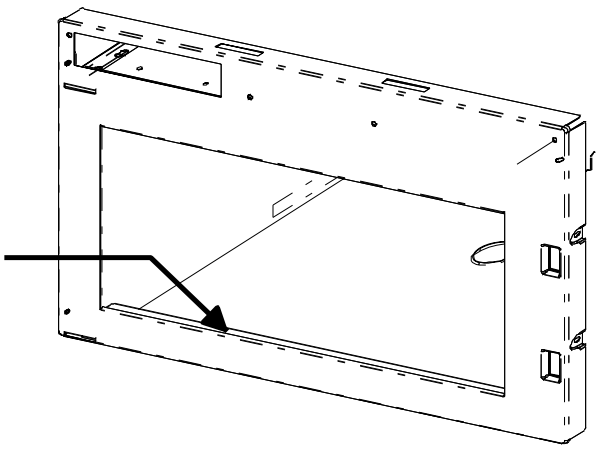
NOTE: Typical symptoms of metal pan usage or empty cavity operation include arc spots on the front lip of cavity, 1 to 2 inches from either side.

Action If encountering arcing at front lip of cavity, proceed as follows:

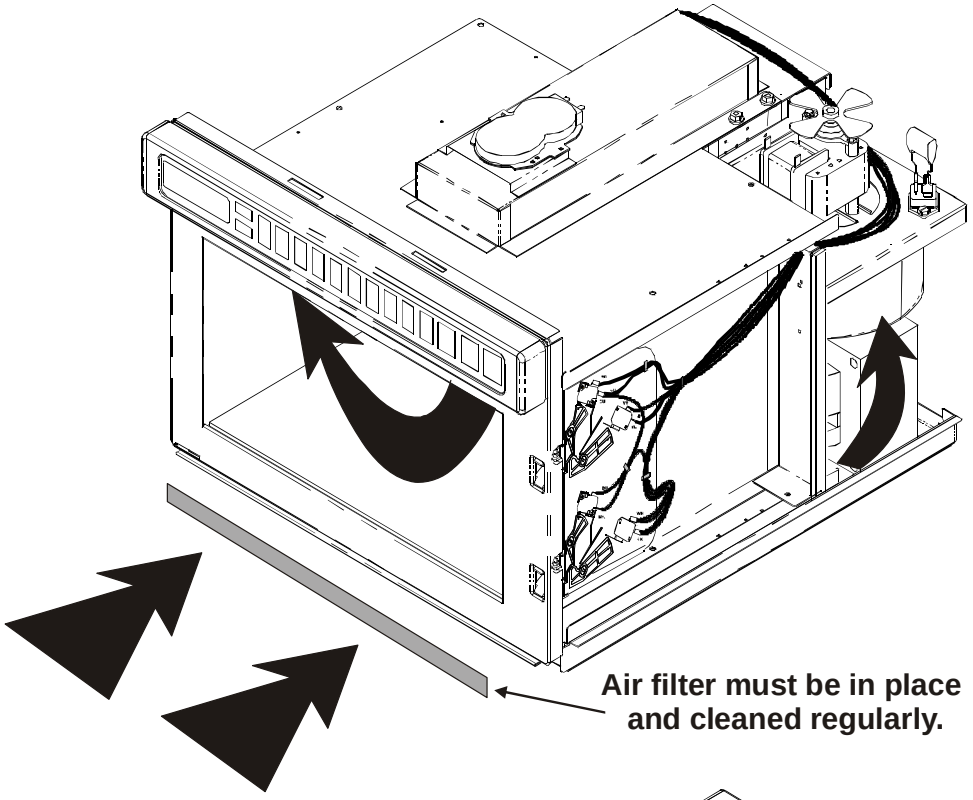
1. Check antenna operation – if either antenna is stalled, hot spots will occur.
2. Remove oven tray.
3. Thoroughly remove any carbon build-up from front lip using fine grade sandpaper.
4. Thoroughly clean cavity and front lip removing all old RTV.
5. Before installing new tray, apply a generous bead of RTV on the front lip of cavity, (see below).
6. Install new tray and reseal using instructions supplied with the tray.
7. If arcing has damaged the oven door, replace inner oven door and inspect door ring weldment for arcing.*
8. Replace door ring weldment if it is damaged.*

***To ensure proper operation, use the instructions in the Service Manual when reinstalling the oven door.**

Apply a generous bead of RTV along this lip before installing oven tray

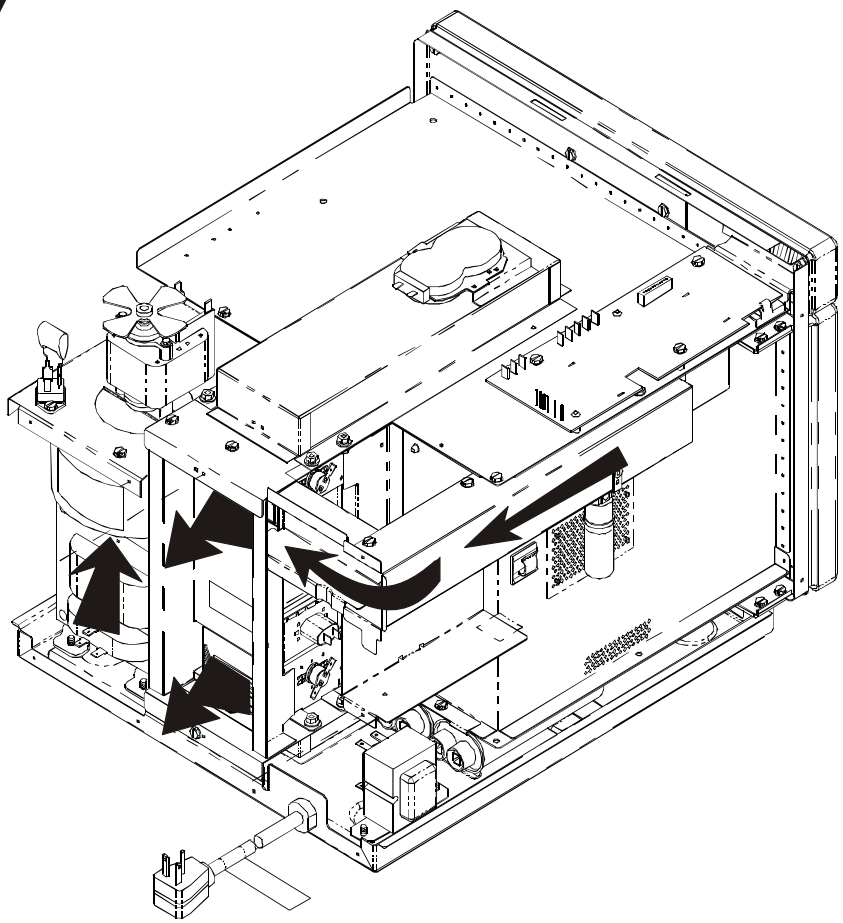


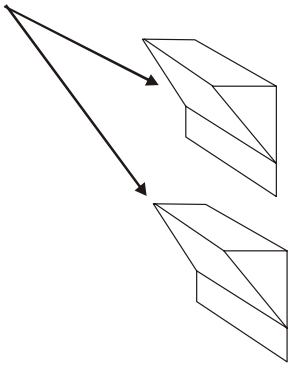
Air Flow



Air filter must be in place and cleaned regularly.

On two tube ovens: To ensure proper spacing and air flow, air ducts must be in place if oven is installed in a closed back installation.





Improved Filter for .6 Compact Ovens

New improved filter kit **12002550**, is now available from Maytag Services and in production ovens beginning December 2003.

The new filter is more durable, easier to remove, clean, and reinstall.

New filter kit part number **12002550** will replace old filter part numbers 12135801, 12135802, 12135803 and 12135804.

When servicing microwave ovens, make sure to check the air intake and exhaust for obstructions and for a clean filter. Remember, cool components last longer!



Side retainers on older units



Bottom retainers on newer units.



New Filter 12002550 - December 2003 and later

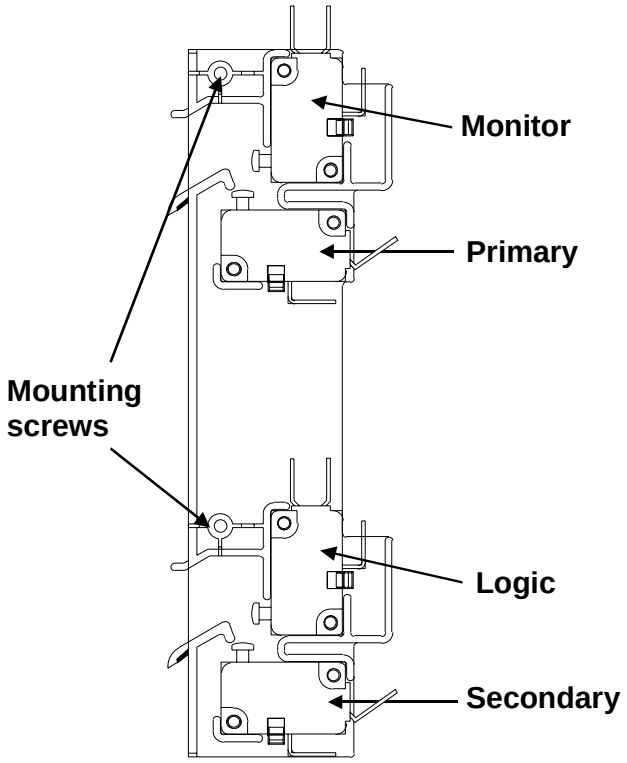
NOTE: When installing new style filter on older units with side retainers, it will be necessary to remove the securing tabs located on each side of the filter. No modification is necessary when installing on units with bottom retainers.



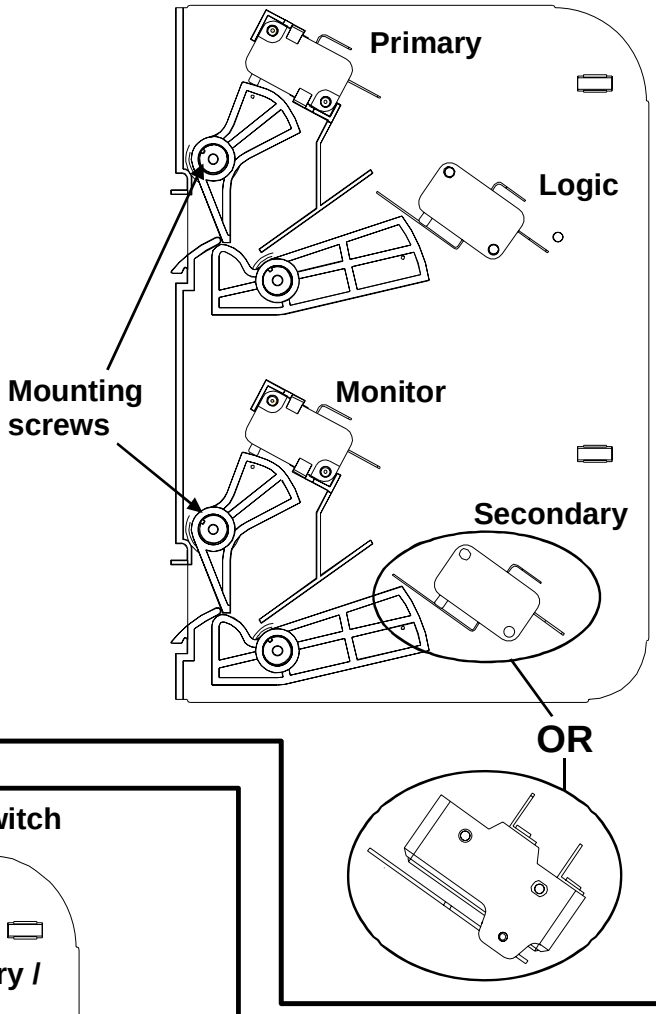
Old Style Filter 12135801, 12135802, 12135803, 12135804
prior to December 2003

INTERLOCK SWITCHES

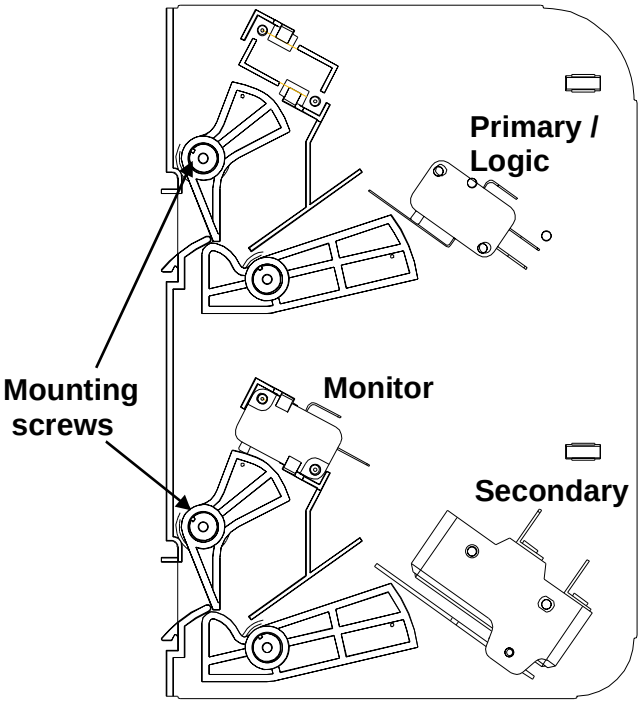
R0150154 Early Production Switch



R0000277 Replacement for Early Production Switch



12538901Q Later Production Switch

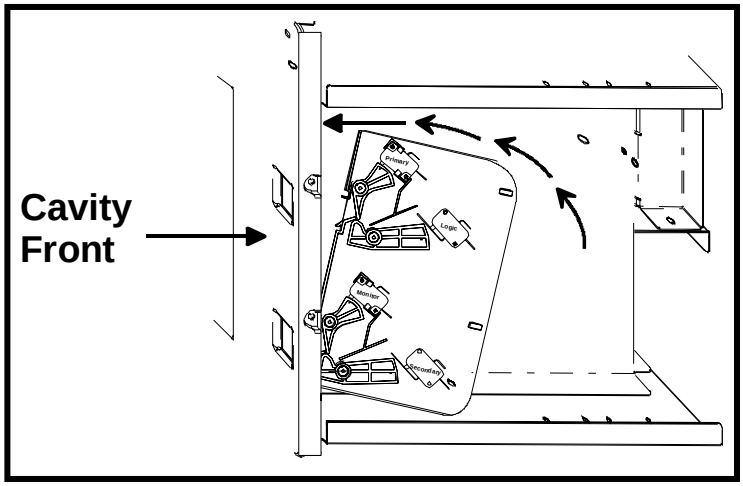


SWITCH REPLACEMENT / DOOR ADJUSTMENT

⚠ WARNING

To avoid risk of electrical shock, personal injury or death; disconnect electrical power before servicing.

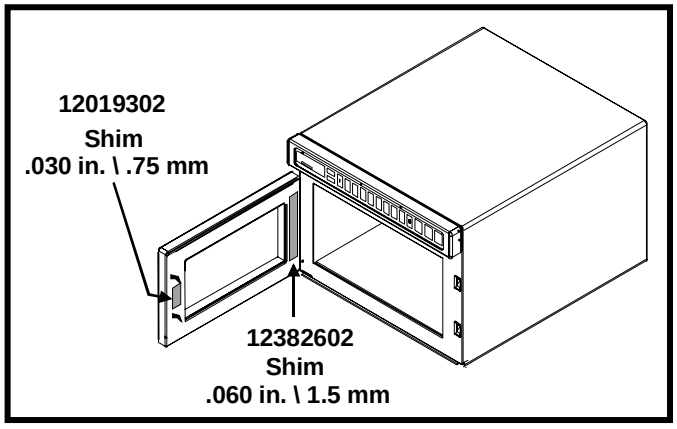
1. Remove and retain two (2) screws securing switch to cavity. Remove switch.
2. Position new switch assembly into cavity opening.
   - First, insert bottom ramp of switch into bottom opening.
   - Tilt switch upward and insert top ramp of switch into top opening.
   - Be sure both ramps are fully protruded through the front frame of cavity.



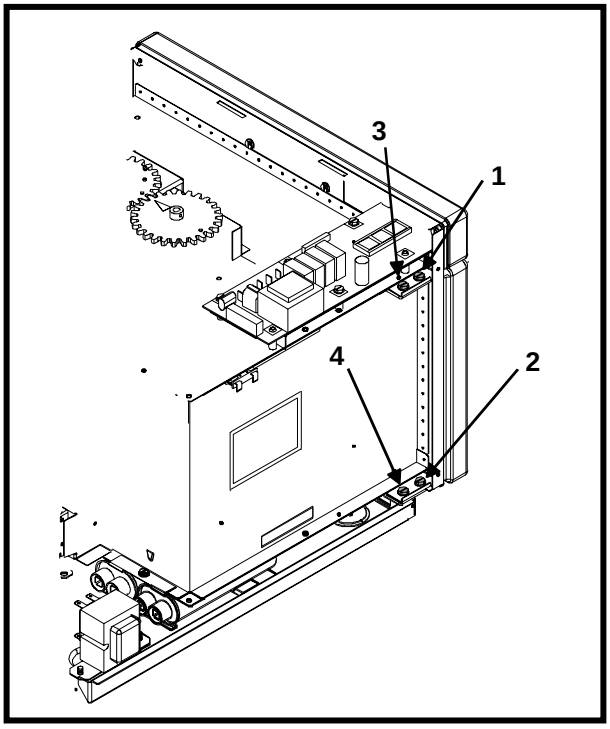
3. Loosely install screws removed in step 1.
4. Push and hold switch assembly towards front of oven and tighten screws.
5. Transfer wires to new switch.
6. Secure wires to switch bracket using plastic wire ties.

IMPORTANT: It is necessary to adjust the door assembly for correct switch function.

7. Tape shims 12382602 and 12019302 to door, as shown.



8. With door closed, loosen door hinge bolts 1/2 turn.
9. Lift upward on door, using the door handle.
10. With left hand, clamp door to cavity on hinge side of door.
11. While holding door in place, tighten hinge bolts in the order shown.

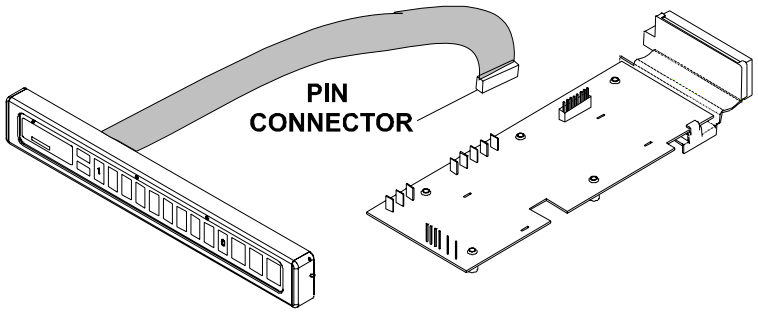


12. Open and close door several times to check switch operation.

NOTE: If switches do not activate, check condition and alignment of door and hinges.

13. Remove shims.

TOUCH PANEL and CONTROL BOARD



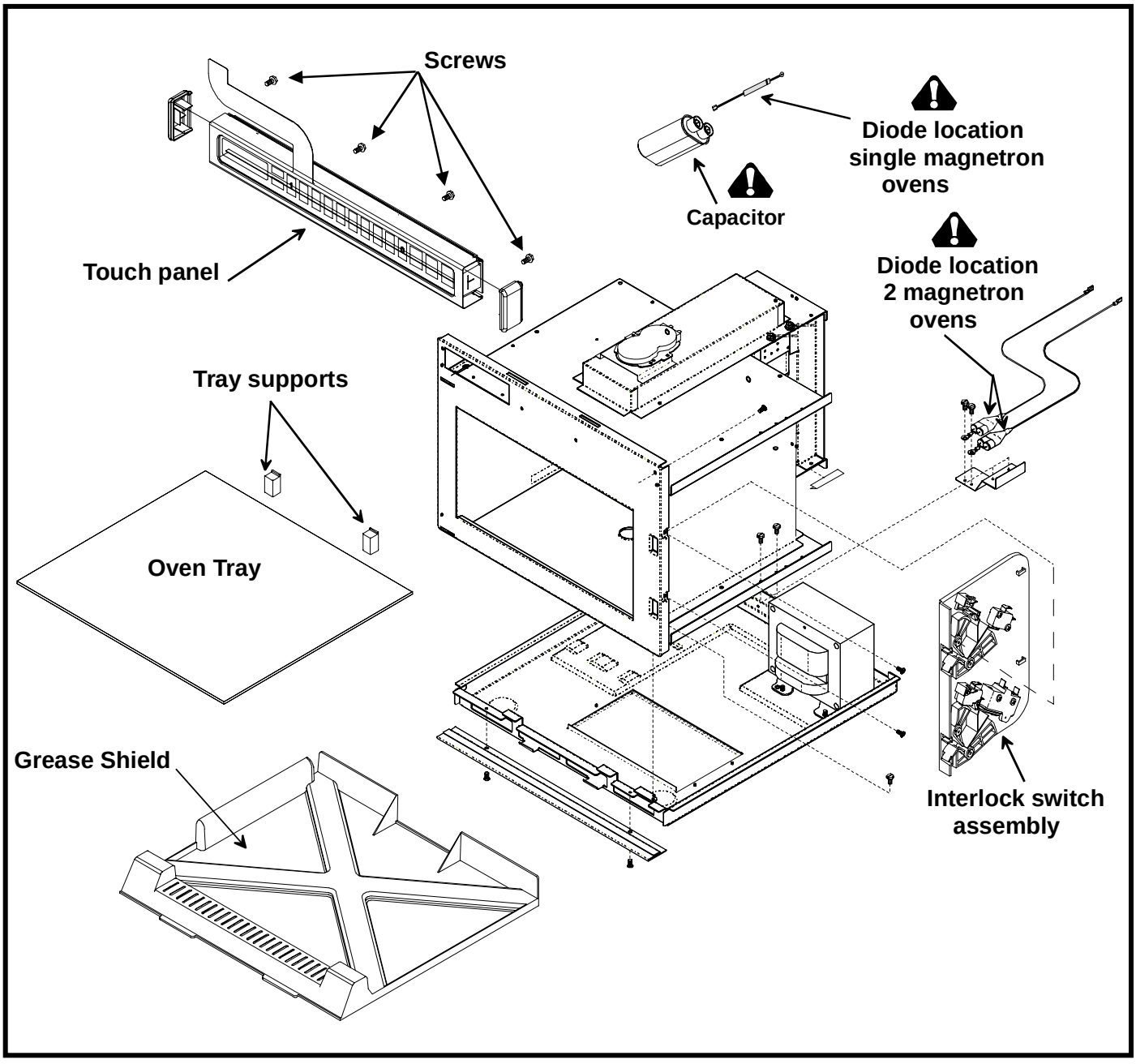
Error Codes	Corrective Action
F1	Replace Board.
F2	Replace Board.
F3	Replace Board.
F4	Replace Board.
F5	Replace Touch Panel.
F6	Replace Board.

Disassembly

⚠ WARNING

To avoid the risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitors before following any disassembly procedure.

Component Location



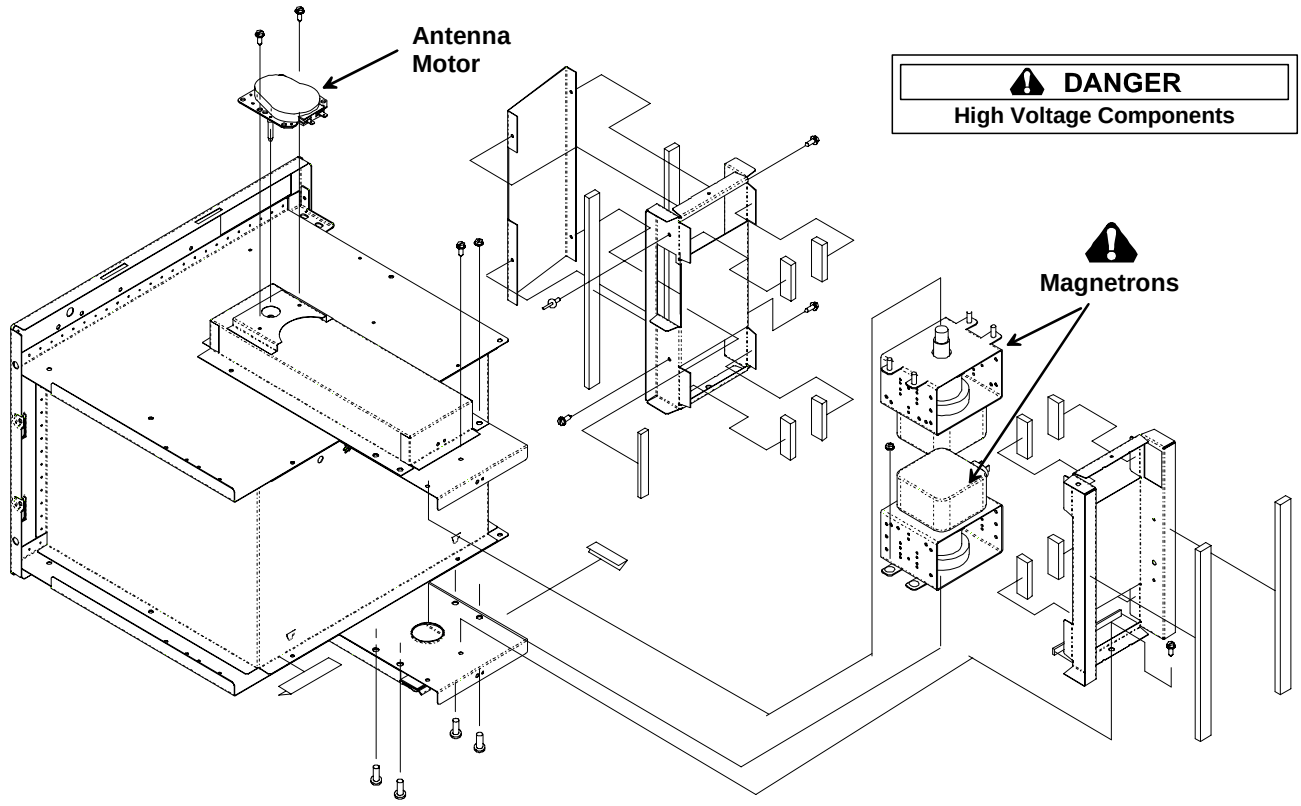
⚠ DANGER

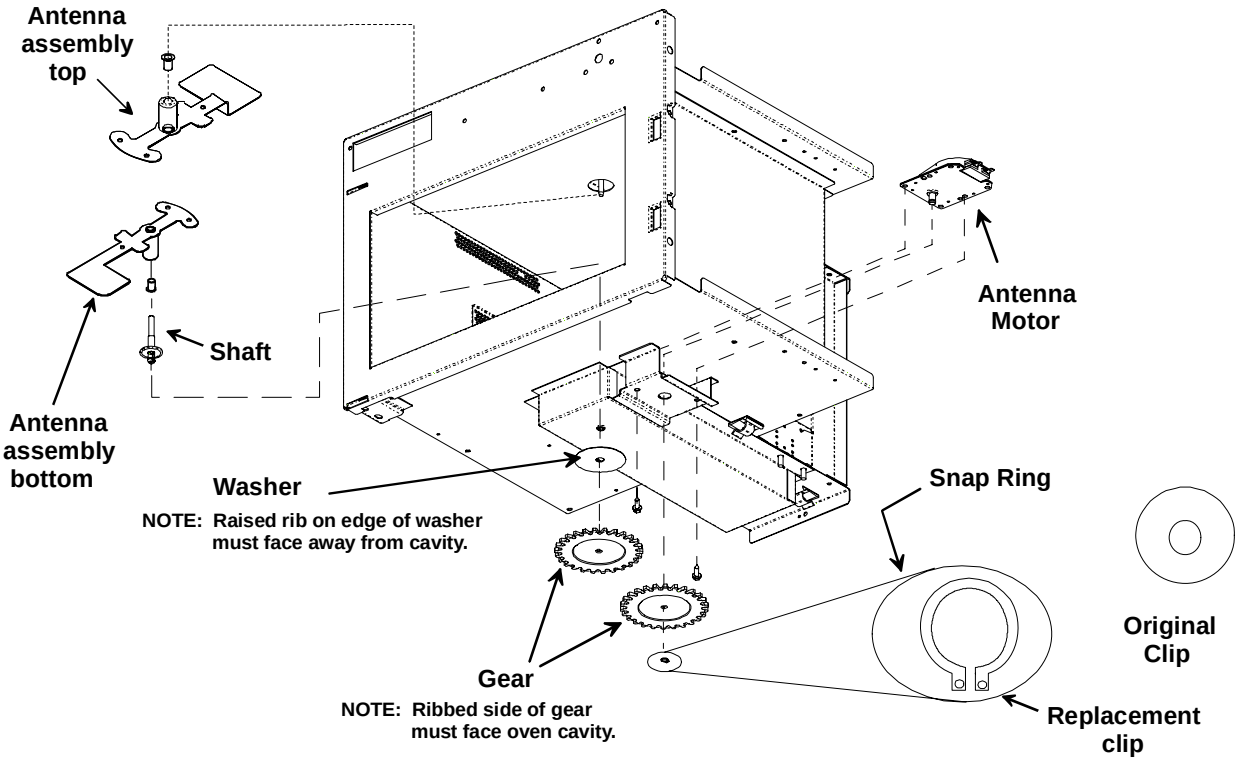
High Voltage Components

Disassembly

WARNING

To avoid the risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitors before following any disassembly procedure.

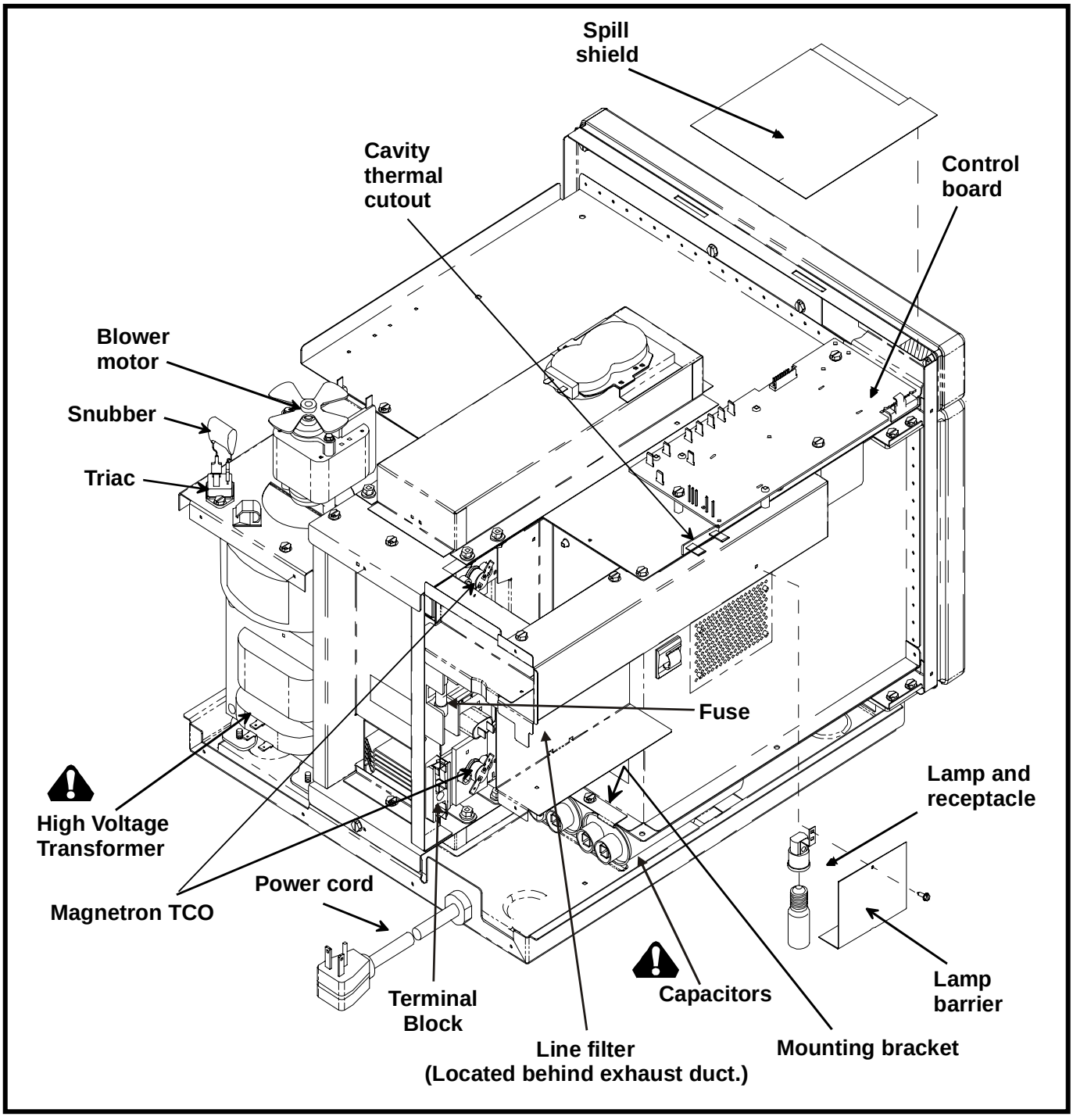




Disassembly

⚠ WARNING

To avoid the risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitors before following any disassembly procedure.



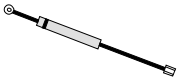
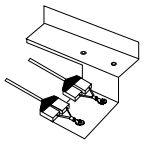
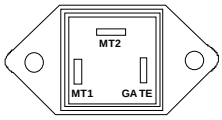
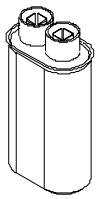
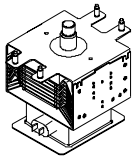
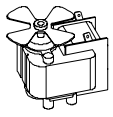
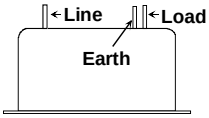
⚠ DANGER

High Voltage Components

Component Specifications

⚠ WARNING

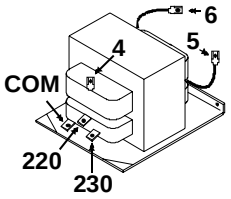
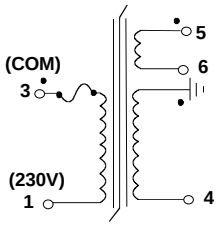
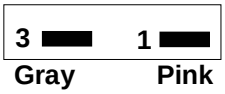
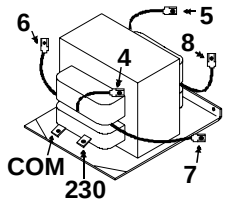
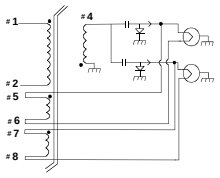
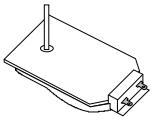
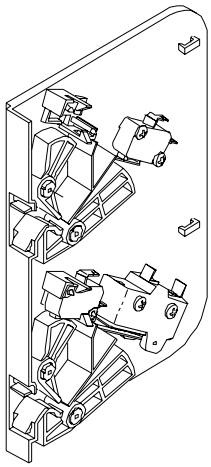
To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

Illustration	Component	Testing	Results
	Thermal Cutout	Disconnect all wires from TCO. Measure resistance across terminals. Cavity Thermal Fuse ..... Magnetron TCO.....	 **Open:** 104° C (219° F). **Open:** 138° C (280° F. **Closed:** 82° C (180° F).
1100 Watt units  1400, 1800, and 2100 Watt units 	Diode Assembly	**Discharge Capacitors** Remove diode lead from capacitor and connect ohmmeter. Reverse leads for second test.	Infinite resistance should be measured in one direction and 50KΩ or more in the opposite direction. **NOTE:** Test meter must contain a battery of 6 volts minimum.
	Triac	Disconnect wires to triac. Measure resistance from: MT1 to MT2 ..... MT1 to Gate..... MT2 to Gate..... All terminals to ground.....	**Caution - Do not operate oven with wire to terminal MT2 removed.** Infinite. Approximately 40 Ω or more. Infinite. Infinite.
	Capacitor	**Discharge Capacitors** Remove wires from capacitor terminals and connect ohmmeter, set on highest resistance scale to terminals. Also check between each terminal and capacitor case.	 **Between Terminals:** Meter should momentarily deflect towards zero then return to over 5 MΩ. If no deflection occurs, or if continuous deflection occurs, replace capacitor. **Terminal to Case:** Infinite resistance.
	Snubber Assembly	Disconnect wires to snubber. Measure resistance across terminals	 Infinite.
	Magnetron	**Discharge Capacitors** Remove wires from magnetron and connect ohmmeter to terminals. Also check between each terminal and ground.	**Between Terminals:** Less than 1 Ω. Each terminal to ground measures Infinite resistance. **NOTE:** This test is not conclusive. If oven does not heat and all other components test good replace the magnetron and retest.
	Blower Motor	Remove all wires from motor. Measure resistance across coil	 Approximately 30 Ω.
	Line filter	Measure resistance: Line to Line ..... Load to Load..... Line to Load..... Any terminal to Earth.....	 .8 M Ω. .8 M Ω. Continuity. Infinite.
Wire Harness		Test resistance of wires	Continuity.

Component Specifications

⚠ WARNING

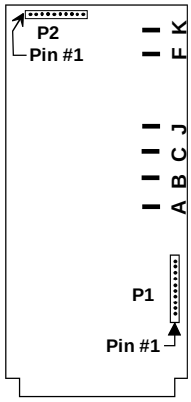
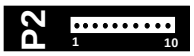
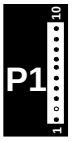
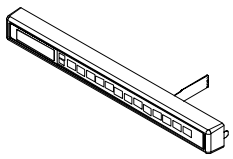
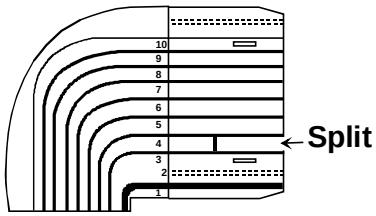
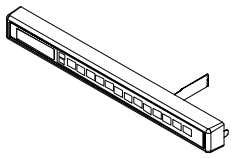
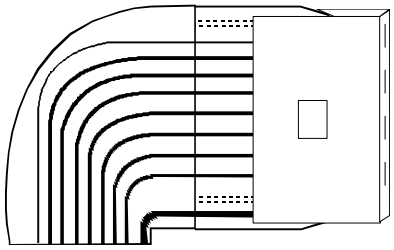
To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

Illustration	Component	Testing	Results
	Transformer **1100 Watt** 	**Discharge Capacitor** Remove all wires from terminals, and measure resistance from: 220 to Common 230 to Common Terminal 5 to 6 Terminal 4 to Earth screw on transformer Terminal 4 to any other terminal 	This transformer is equipped with a 155° C thermal cutout. 1.3 Ω. 1.3 Ω. <1 Ω. 70 Ω. Infinite resistance. If not, replace transformer.
	Transformer – **1400, 1800, and 2100 Watt** 	**Discharge Capacitor** Remove all wires from terminals, and measure resistance from: 230 to Common Terminal 5 to 6 Terminal 7 to 8 Terminal 4 to Earth screw on transformer Terminal 4 to any other terminal	 1 Ω. <1 Ω. <1 Ω. 38 - 45 Ω ± 5%. Infinite resistance. If not, replace transformer.
	Stirrer motor	Remove all wires from motor. Measure resistance across terminals	 Approximately 12 KΩ.
	Interlock switch assembly **Primary** **Secondary** **Monitor**	Disconnect wires to switch. With door open measure resistance from: Terminal C to NO Primary Terminal C to NO Secondary Terminal C to NC Monitor With door closed measure resistance from: Terminal C to NO Primary Terminal C to NO Secondary Terminal C to NC Monitor **Door Closed** C — NC **Monitor** C — NO **Primary** C — NO **Secondary**	 Infinite. Infinite. Continuity. Continuity. Continuity. Infinite.

Component Specifications

⚠ WARNING

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Illustration	Component	Testing	Results
	Controller board   **P1 connector used for touch panel ribbon**	Line voltage to control board P2 connector Pin 1—Pin 3..... Output drive voltage to triac Triac terminals..... Gate—T1 ..... Fan relay (controls blower motor, antenna motor(s), and oven light) Control board..... Terminals C—J..... Cook relay Control board..... Terminals F—K.....	Line voltage (All Conditions) 0 VAC (Idle and Standby) 0.9 VAC (Cook) Line voltage (Idle) 0 VAC (Standby and Cook) Line voltage (Idle) 0 volts (Standby and Cook) **ERROR CODES** F1..... Replace Control Board F2..... Replace Control Board F3..... Replace Control Board F4..... Replace Control Board F5..... Replace Touch Panel F6..... Replace Control Board
	Touch Panel Assembly	Continuity is indicated as 100 Ω and below. **Pin 1:** Ground. 	**Pad** / **Trace (measure both)** / **Measurement** 1 / 8 & 1, 10 & 1 / Continuity. 2 / 7 & 1, 10 & 1 / Continuity. 3 / 6 & 1, 10 & 1 / Continuity. 4 / 5 & 1, 10 & 1 / Continuity. 5 / 4 & 1, 10 & 1 / Continuity. 6 / 3 & 1, 10 & 1 / Continuity. 7 / 8 & 1, 9 & 1 / Continuity. 8 / 7 & 1, 9 & 1 / Continuity. 9 / 6 & 1, 9 & 1 / Continuity. 0 / 5 & 1, 9 & 1 / Continuity. Start / 4 & 1, 9 & 1 / Continuity. Stop/Reset / 4 & 1, 8 & 1 / Continuity. Power Level / 5 & 1, 8 & 1 / Continuity. X 2 / 6 & 1, 8 & 1 / Continuity. Time Entry / 7 & 1, 8 & 1 / Continuity.
	Touch Panel Assembly	Continuity is indicated as 100 Ω and below. **Pin 1:** Ground. 	**Pad** / **Trace (measure both)** / **Measurement** 1 / 8 & 1, 10 & 1 / Continuity. 2 / 7 & 1, 10 & 1 / Continuity. 3 / 6 & 1, 10 & 1 / Continuity. 4 / 5 & 1, 10 & 1 / Continuity. 5 / 4 & 1, 10 & 1 / Continuity. 6 / 3 & 1, 10 & 1 / Continuity. 7 / 8 & 1, 9 & 1 / Continuity. 8 / 7 & 1, 9 & 1 / Continuity. 9 / 6 & 1, 9 & 1 / Continuity. 0 / 5 & 1, 9 & 1 / Continuity. Start / 4 & 1, 9 & 1 / Continuity. Stop/Reset / 4 & 1, 8 & 1 / Continuity. Power Level / 5 & 1, 8 & 1 / Continuity. X 2 / 6 & 1, 8 & 1 / Continuity. Time Entry / 7 & 1, 8 & 1 / Continuity.

Conditions

Initial Power Up Condition: Apply power to oven with door closed.

Idle Condition: Oven plugged in, display blank (no other components operating).

Standby Condition: Open oven door, light and motors operate.

Cook Condition: Food load in oven, cook cycle initiated.

Power Testing Procedure

⚠ WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

All Amana and Menumaster microwave oven power outputs are rated using the IEC705 standards. Using the IEC705 test method requires precision measurements and equipment that is not practical to be performed in the field. Using the test shown below will indicate if the oven performance is satisfactory.

Test equipment required:

- 1000 ml test container and thermometer (Power test kit 1000100006).
- Digital watch / watch with a second hand for use on ovens with electromechanical timers.

Important Notes:

- Low line voltage will cause low temperature rise / power output.
- Ovens must be on a dedicated circuit, properly grounded, and polarized. Other equipment on the same circuit may cause a low temperature rise / power output.
- This test and results are not a true IEC705 test procedures and are only intended to provide servicers with an easy means of determining if the microwave oven cooking output is correct.

Procedure

1. Fill the test container to the 1000 ml line with cool tap water.

NOTE: Water temperature should be approximately 60° F / 16° C.

2. Using the thermometer, stir water for five to ten seconds; measure, and record the temperature (T1).
3. Place test container of water in the center of oven cavity and close door.
4. Heat the water for a 33-second full power cycle.

NOTE: Use a digital watch or a watch with a second hand for ovens with electromechanical timers.

5. At end of the cycle, remove test container. Using the thermometer, stir water for five to ten seconds and record temperature (T2).
6. Subtract the starting water temperature (T1), from the ending water temperature (T2) to obtain the temperature rise (ΔT).
7. If the temperature rise (ΔT) meets or exceeds the minimum, the test is complete. If the temperature rise (ΔT) fails to meet the minimum temperature rise, test the line voltage to verify it is correct. Then repeat steps 1-6 making sure to change the water. If the temperature rise (ΔT) fails to meet the minimum temperature rise again the oven will require service.

Minimum Temperature Rise at Thirty -Three (33) Seconds Run Time

ΔT (°F)	Cooking Power Output	ΔT (°F)	Cooking Power Output	ΔT (°C)	Cooking Power Output	ΔT (°C)	Cooking Power Output
10	1000	20	2000	5	1000	11	2000
11	1100	21	2100	5.5	1100	11.5	2100
12	1200	22	2200	6.5	1200	12	2200
14	1400	24	2400	7.5	1400	13	2400
17	1700	25	2500	9.5	1700	13.5	2500
18	1800	27	2700	10	1800	15	2700
19	1900	30	3000	10.5	1900	16.5	3000

Isolation Test – Two Magnetron Models

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

If the customer is complaining of low heat, it may be necessary to isolate the upper and lower high voltage systems.

Method 1

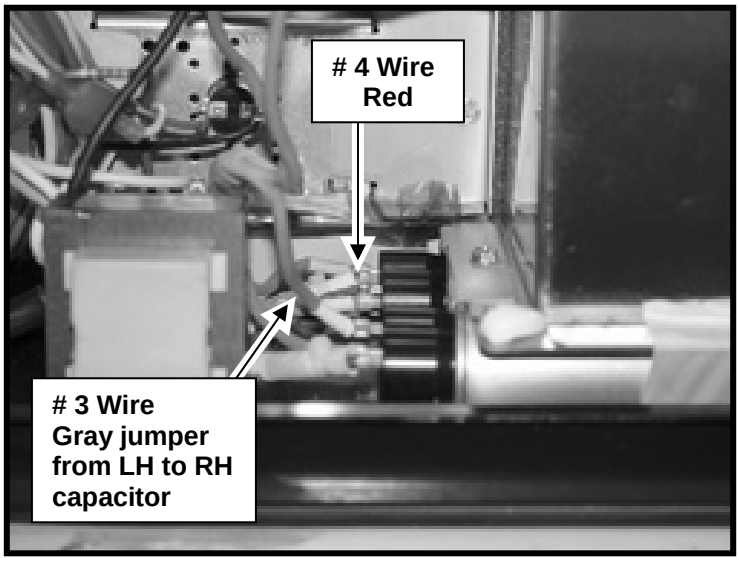
1. Be sure outercase wrapper and back panel are installed on the oven.
2. Place a water load in the oven.
3. Confirm antennas are rotating.
4. Operate the oven for 60 seconds on full power.
5. Discharge air from both magnetrons should be warm.
6. If the discharge air from one magnetron is significantly cooler than the other, a problem may exist with the cooler magnetron.

Method 2

1. Unplug oven and discharge capacitors.
2. To prepare oven for LOWER MAGNETRON high voltage system check, locate the Gray # 3 jumper wire that connects between the capacitors.
3. Remove jumper wire connection from both capacitors and position wire to prevent any short to electrical components.
4. Follow the guidelines for performance test (1000 ml. of 60º F (16º C) water for 33 seconds) and record the temperature difference and confirm antenna is rotating.
5. To prepare oven for UPPER MAGNETRON high voltage system test check, unplug oven and discharge capacitors.
6. Remove Red High Voltage Transformer wire # 4 from left hand capacitor (looking from the rear) and move to the right hand capacitor.
7. Repeat step # 4 above.

Example using model HDC18:

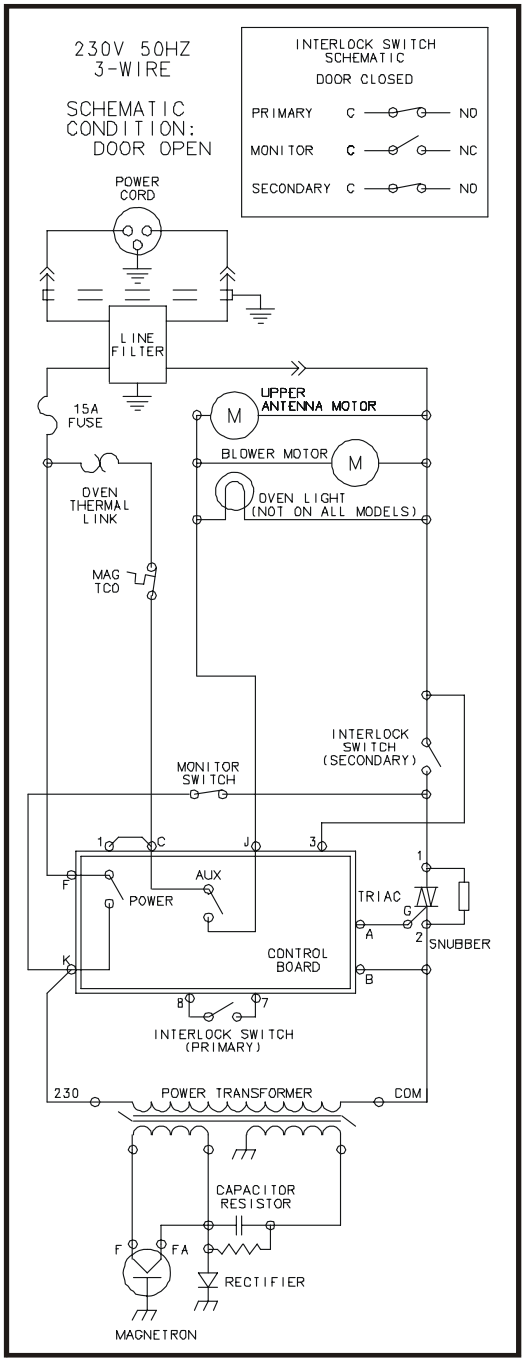
Performance test with both magnetrons operating should be minimum of 18º F (10º C) Temperature rise. With either magnetron operating individually, temperature rise should be a minimum of 9º F (4.5º C) for each system.



Wiring and Schematic Diagrams

WARNING

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DANGER

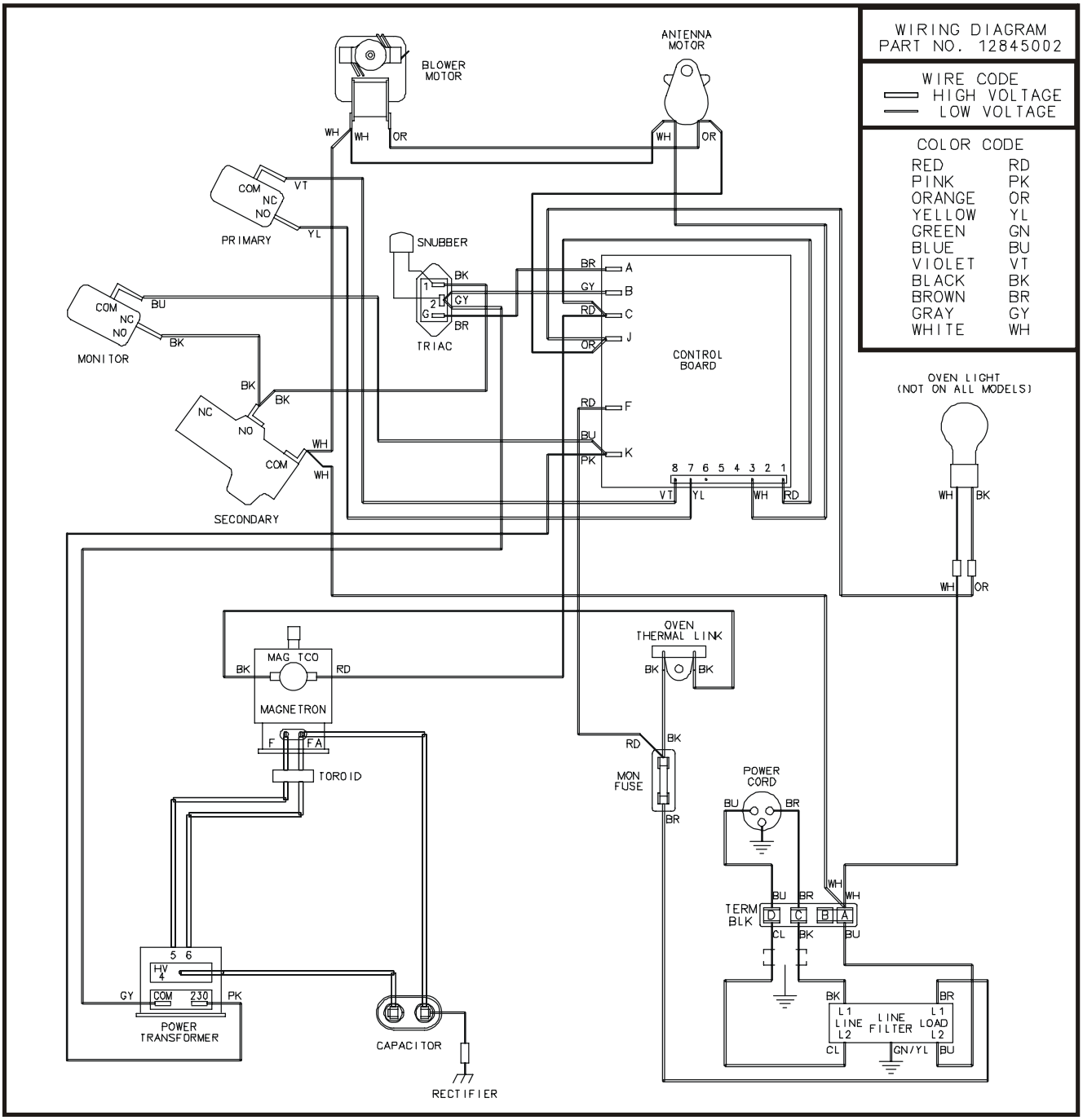
HIGH VOLTAGE

Sample: Oven Schematic, One (1) Tube (Magnetron)

Wiring and Schematic Diagrams

WARNING

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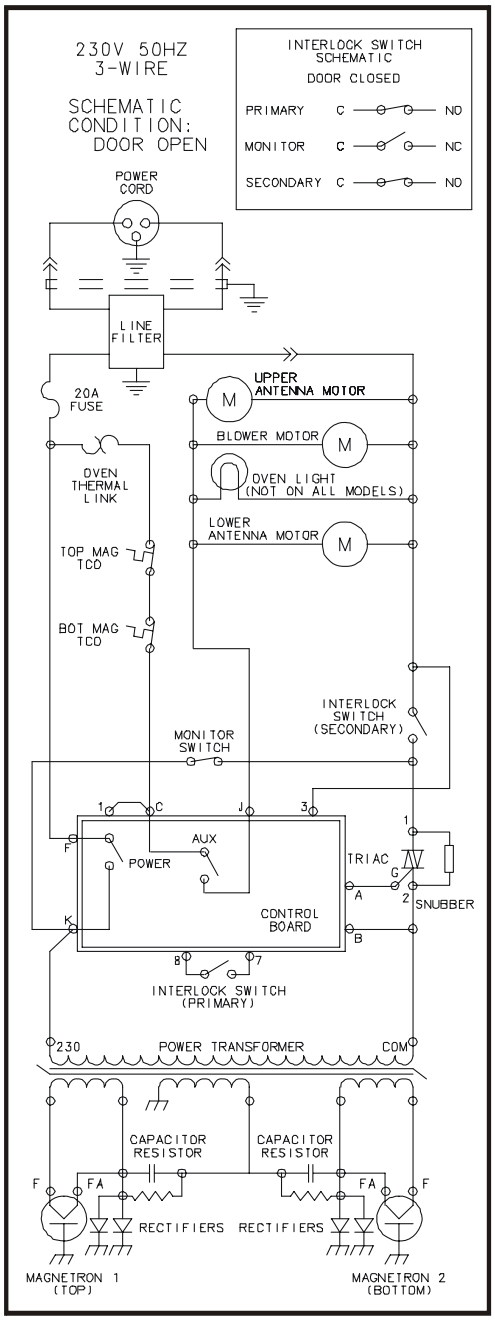


Sample: Oven Wiring Diagram, One (1) Tube (Magnetron)

Wiring and Schematic Diagrams

WARNING

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DANGER

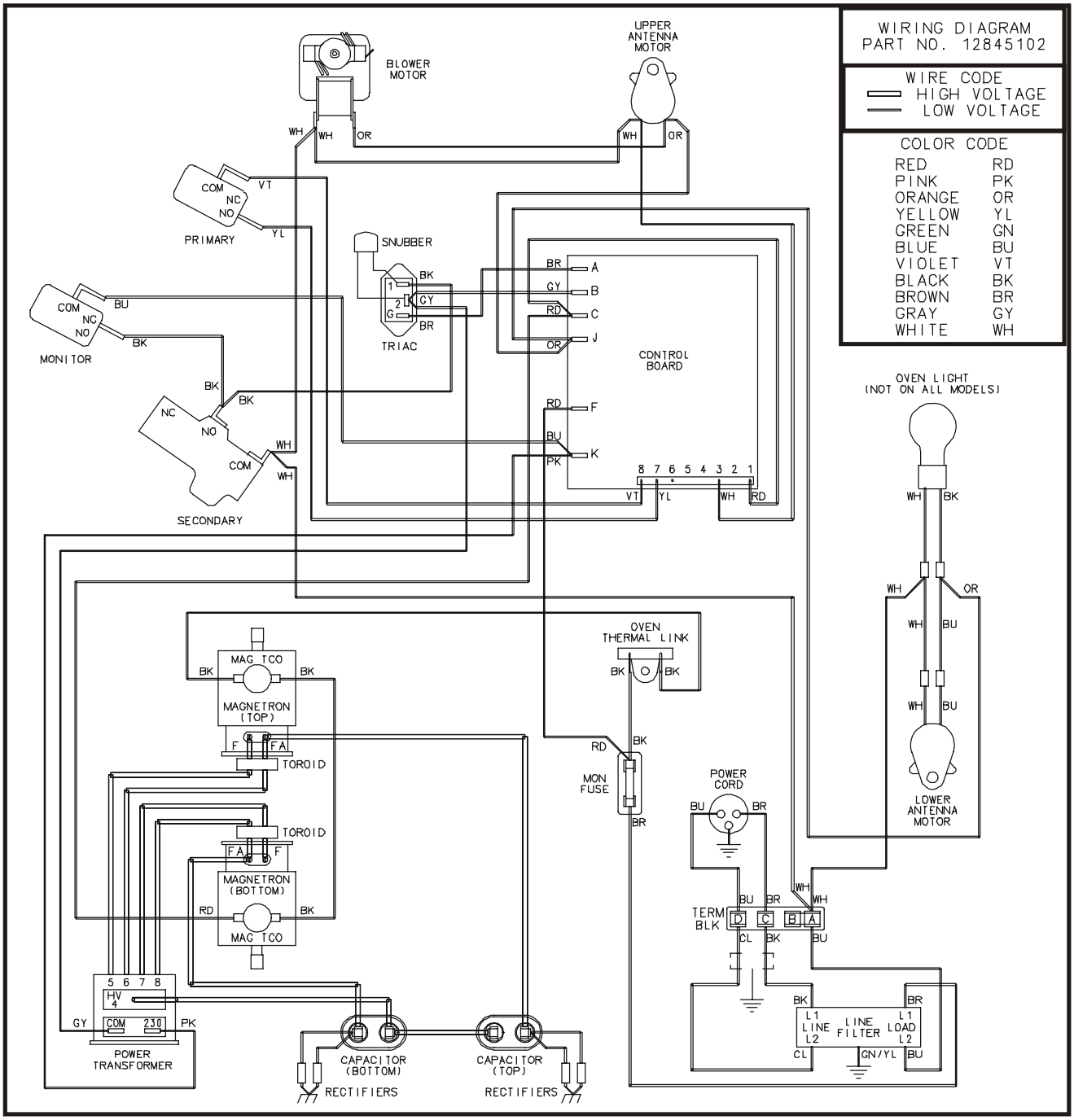
HIGH VOLTAGE

Sample: Oven Schematic, Two (2) Tube (Magnetron)

Wiring and Schematic Diagrams

WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires power.



Sample: Oven Wiring Diagram, Two (2) Tube (Magnetron)