

MICROWAVE OVEN HOODS

IMPORTANT SAFETY NOTICE

THIS INFORMATION IS INTENDED FOR USE BY INDIVIDUALS POSSESSING ADEQUATE BACKGROUNDS OF ELECTRICAL, ELECTRONIC AND MECHANICAL EXPERIENCE. ANY ATTEMPT TO REPAIR A MAJOR APPLIANCE MAY RESULT IN PERSONAL INJURY AND PROPERTY DAMAGE. THE MANUFACTURER OR SELLER CANNOT BE RESPONSIBLE FOR THE INTERPRETATION OF THIS INFORMATION, NOR CAN IT ASSUME ANY LIABILITY IN CONNECTION WITH ITS USE.

DISCONNECT POWER BEFORE SERVICING IMPORTANT - RECONNECT ALL GROUNDING DEVICES

ALL PARTS OF THIS APPLIANCE CAPABLE OF CONDUCTING ELECTRICAL CURRENT ARE GROUNDED. IF GROUNDING WIRES, SCREWS, STRAPS, CLIPS, NUTS OR WASHERS USED TO COMPLETE A PATH TO GROUND ARE REMOVED FOR SERVICE, THEY MUST BE RETURNED TO THEIR ORIGINAL POSITION AND PROPERLY FASTENED.

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

A. IF OVEN IS OPERATIVE PERFORM MICROWAVE EMISSION CHECK PRIOR TO.

B. DO NOT OPERATE OR ALLOW THE OVEN TO BE OPERATED WITH THE DOOR OPEN.

C. IF THE OVEN OPERATES WITH THE DOOR OPEN :

- 1) INSTRUCT THE USER NOT TO OPERATE THE OVEN AND
- 2) CONTACT THE MANUFACTURER AND THE CENTER FOR DEVICES RADIOLOGICAL HEALTH IMMEDIATELY.

D. CHECK THE FOLLOWING SAFETY ITEMS ON ALL MICROWAVE OVENS (MWO) BEFORE ACTIVATING THE MAGNETRON. MAKE REPAIRS AS NECESSARY :

1. INTERLOCK OPERATION
2. PROPER DOOR CLOSING
3. SEAL AND SEALING SURFACES (CHECK FOR ARCING, WEAR, AND OTHER DAMAGE)
4. DAMAGE TO OR LOOSENING OF HINGES AND LATCHES
5. EVIDENCE OF DROPPING OR ABUSE

E. BEFORE TURNING ON MICROWAVE POWER FOR ANY SERVICE TEST OR INSPECTION WITHIN THE MICROWAVE GENERATING COMPARTMENTS, CHECK THE MAGNETRON, WAVE GUIDE, AND CAVITY FOR PROPER ALIGNMENT, INTEGRITY, AND CONNECTIONS.

F. ANY DEFECTIVE OR MISADJUSTED COMPONENTS IN THE INTERLOCK, MONITOR, DOOR SEAL, AND MICROWAVE GENERATION AND TRANSMISSION SYSTEMS SHALL BE REPAIRED, REPLACED, OR ADJUSTED BY PROCEDURES DESCRIBED IN THIS MANUAL BEFORE THE OVEN IS RELEASED TO THE OWNER.

G. A MICROWAVE LEAKAGE CHECK TO VERIFY COMPLIANCE WITH THE FEDERAL PERFORMANCE STANDARD SHOULD BE PERFORMED ON EACH OVEN PRIOR TO RELEASE TO THE OWNER.

GROUNDING SPECIFICATIONS

Leakage Current 0.5 mA. (Max.)
Ground Path Resistance 0.14 ohms (MAX.)

INSTALLATION REQUIREMENTS

ELECTRICAL
MWO Power 1100 Watts
Power Source 120 VAC, 60 Hz.
Line Current 13.5 Amps. (1580Watts)
Over Current Protection 20 Amps *
* Requires 120 Volt, 20 Amp. parallel,
grounded separate circuit.
Working Voltage 108-132 VAC.

MICROWAVE LEAKAGE TEST

1. Place 275 ml. water in 600 ml. beaker (WB64X5010)
2. Place beaker in center of oven shelf.
3. Set meter to 2450 MHz scale.
4. Turn oven "on" for 5 minute test.
5. Hold probe perpendicular to surface being tested and scan surfaces at rate of one inch/sec.

Test the following areas:

- Entire perimeter of door and control panel
- Viewing surface of door window
- Exhaust vents

6. Maximum leakage 4 MW/CM²
7. Record data on service invoice and microwave leakage report.

NOTE : Maximum allowable leakage is 5 MW/CM². 4 MW/CM² is used to allow for measurement and meter accuracy.

Inform the manufacturer of any oven found to have emission in excess of 5 MW/CM². Make repairs to bring the unit into compliance at no cost to owner and try to determine cause. Instruct owner not to use oven if it has not been brought into compliance.

● TECHNICAL DATA SHEET ●

WARNING!

TO PREVENT ELECTRICAL SHOCK, USE EXTREME CAUTION WHEN DIAGNOSING OVEN WITH OUTER CASE REMOVED AND POWER "ON". THE HIGH VOLTAGE SECTION OF THE POWER SUPPLY, INCLUDING FILAMENT LEADS HAVE THE POTENTIAL WITH RESPECT TO GROUND TO REACH 4000 VOLTS!

HIGH VOLTAGE CAPACITOR

The high voltage capacitor has an internal shunt resistor to automatically discharge the capacitor when the oven turns "off". Under normal operation the capacitor should fully discharge within 30 seconds.

WARNING!

Always be certain the capacitor is discharged before servicing. Discharge by placing an insulated handle screw driver between the diode connection of the capacitor and oven chassis ground.

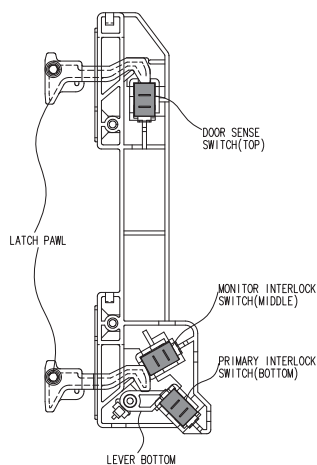
PERFORMANCE TEST

1. Measure line voltage (loaded). This test is based on normal voltage variations of 108V to 132V. Low voltage will Lower output power and temperature rise.
2. Place WB64 X0073 beaker containing one liter water (1000ml, 59°F-75°F) on turn table and record the starting water temperature with an accurate thermometer. (DO NOT USE ANY OTHER LOAD OR DISH AS RESULTS WILL VARY FROM STANDARD!)
3. Set at HIGH power for 2 minutes, and 3 sec.
4. Turn on the oven.
5. Record end water temperature. The minimum difference between the initial and ending temperature should be:

40°F @ 120 V

INTERLOCKS (DOOR Latch Switches)

Interlocks are designed as follows:
Primary - Bottom switch operated by bottom latch pawl connected to line (L) leg.



HOW TO TEST INTERLOCKS

1. Disconnect power, open control panel, and discharge capacitor. Primary
2. Check Continuity of Com and N.O.:
 - Door Closed - 0 Ω
 - Door Open - ∞ Ω

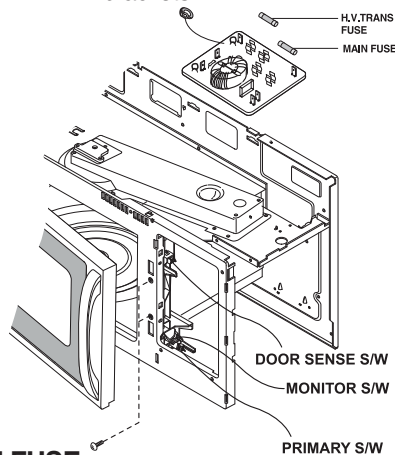
MONITOR SWITCH

The monitor switch is located between the top and bottom interlocks. The monitor switch is operated indirectly by the bottom latch pawl.

HOW TO TEST MONITOR

1. Disconnect power, open control panel, and discharge capacitor.
2. Disconnect monitor switch leads, and test at terminals:
 - Door Closed - ∞ Ω
 - Door Open - 0 Ω
3. Reconnect switch wiring.
4. Test Circuit Operation:
 - A) Connect temporary jumper across relay contacts and primary switch to simulate shorted switch contacts. Locate convenient connections in circuit to be certain COM and N.O. terminals are used.
 - B) Connect OHM meter (Low Scale) across the two line terminals of appliance power cord. Continuity must show:
 - Door Close - Some Ω
 - Door Open - 0 Ω
 - C) Remove 20 Amp. Fuse - Circuit must open (∞ Ohms). If not check wiring of monitor and interlock circuits.
 - D) WARNING! After test remove temporary jumper leads from interlocks and relay. Reconnect monitor switch leads, replace fuse.
 - E) Replacement of any parts in monitor circuit requires repeating this entire test procedure.

IMPORTANT : Check for microwave leakage after replacing or adjusting Door, Interlock switches or brackets.



MAIN FUSE

WARNING! When 20 Amp. fuse is blown due to operation of the monitor switch, the monitor switch must be replaced. Also replace relays and / or interlock switches when continuity check shows contacts shorted.

INTERLOCK REPLACEMENT:

The switch housing is not adjustable. It is fixed on the front cavity with 2 screws.

IMPORTANT - CHECK FOR MICROWAVE LEAKAGE AFTER REPLACING OR ADJUSTING DOOR, INTERLOCK SWITCHES OR BRACKETS.

CAUTION !

When safety interlocks and monitor switches are repaired or replaced, check microwave leakage.

- Perform microwave leakage check, if leakage does not exceed 4 MW/CM² it is performing properly.

AUTOMATIC FAN FEATURE

Exhaust fan turns "ON" automatically during some surface unit heavy use conditions. (Cannot be turned off manually - will turn off automatically.) May stay on up to 15 mins. after range and lower oven controls are turned off.

HOOD THERMOSTAT

Single pole thermostat mounted ON R.H. side duct in control compartment. Contacts close at approx. 158 F.

BOTTOM THERMOSTAT

Single pole thermostat mounted on base plate. Contacts open at approx. 248 F.

DOOR ASSEMBLY (NOT ADJUSTABLE)

The door assembly is serviceable as an assembly or with parts.

MICROWAVE LEAKAGE TEST

A microwave leakage test must be performed any time a door is removed, replaced, disassembled, or adjusted for any reason. THE MAXIMUM LEAKAGE IS 4 MW/CM²

H. V. TRANS FUSE

WARNING! When 20 Amp. fuse is blown due to operation of the H. V. Trans failure mode, the H. V. Trans Fuse must be replaced.

MICROWAVE OVEN HOODS

**WARNING
NEVER TOUCH OR SERVICE THE
HIGH VOLTAGE CIRCUIT WITHOUT
DISCHARGING CAPACITOR BY
SHORTING ACROSS ITS TERMINALS.
TO AVOID POSSIBLE ELECTRICAL
SHOCK.**

OVEN THERMAL CUTOUT (FLAME SENSOR)

The Oven Thermal Cutout is located on the top side of the Oven Cavity beside Exhaust duct with a temperature rating of 212 F.(100 C.) The cutout is tightly held to the top of the oven cavity by a spring clip.

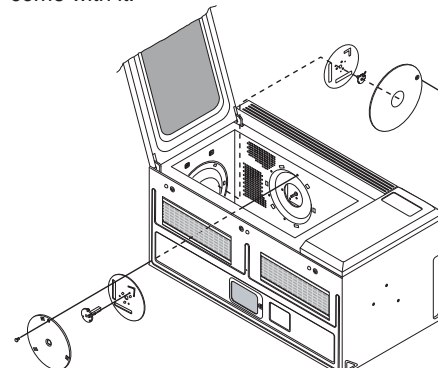
NOTE : If cutout cannot be removed from clip oven will have to be removed from installation and outer case removed.

ANTENNAES

The antennae are motor driven and located on the upper side(upper antenna) and left side(side antenna). The oven uses a top feed wave guide. The upper antenna blade is located in the wave guide and the side antenna blade motor is located on the left side cavity.

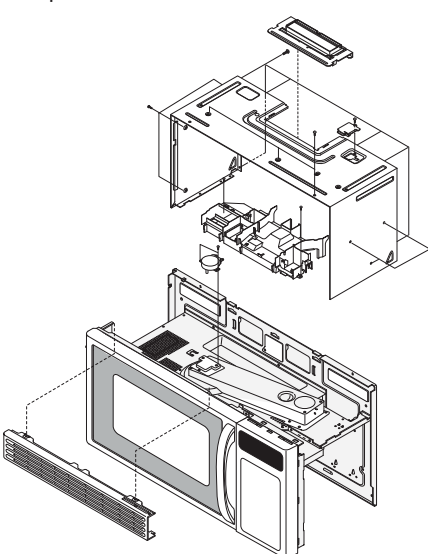
To Service Antenna Blades

1. Disconnect power and open the door.
2. Remove the clip and turn the antenna cover left.
3. Remove antenna cover and the antenna will come with it.



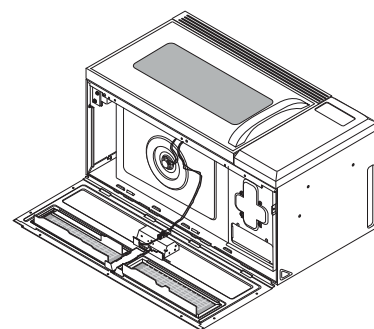
To Service Upper Antenna Motor & Side Antenna Motor

1. Disconnect power and remove grille screws(2).
2. Remove grille, assy hood damper and outer panel.
3. Remove the assy duct upper screws(2) and disconnect the antenna motor wire.
4. Remove each antenna motor screws(upper :2, side:1) and pull the antenna motor.



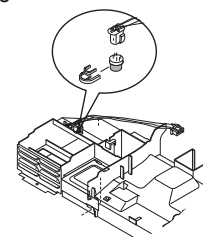
To Service Turntable(on/off) Motor

1. Disconnect power and remove bottom plate screws(5).
2. Remove bottom plate and disconnect the turntable motor wire.
3. Remove turntable motor screws(2) and pull the turntable motor.



SENSOR COOKING

The Sensor Cooking function uses a special gas sensor which detects both humidity (steam) and hydrocarbons (food odors) during the cooking process. Before conducting either of the sensor tests below, ensure the unit is plugged into a wall outlet for at least 5 minutes. Do not power the unit during the 5 minutes. If already plugged in, proceed. The sensor is a plug-in device located in the vent area at the top left hand corner of the cavity behind the grille



SENSOR COOKING TEST

1. Place 1/3 cup tap water in oven.
2. Touch **REHEAT**, **VEGETABLE**, the oven starts immediately.
3. Control Beeps and shuts off.
4. Touch **OFF**

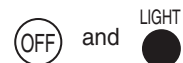
A) Test OK - Normal

B) Test Fails - Check Sensor

See Sensor Test Below

SENSOR TEST (QUICK TEST)

1. With 2 fingers touch and hold the following pads at the same time for 3 seconds :



2. Observe diagnostic number in display (numbers approximate)
 - 15-185 (Normal-verify with "detection test")
 - 213 or Higher (sensor failed to open, sensor unplugged, wiring or smart board)
 - Less than 6 (shorted sensor, or smart board).

NOTE: Only heater terminals (H : Black and Red leads) can be checked with ohmmeter (30 Ω).

**CAUTION : DO NOT ATTEMPT TO CHECK
SENSOR TERMINALS(White
and Orange leads).
* CAN DAMAGE SENSOR.**

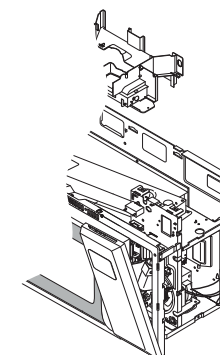
CAPACITOR AND DIODE REMOVAL

The high voltage capacitor and diode can be serviced through Control Panel after removing grille.

1. Disconnect power and discharge capacitor.
2. Disconnect capacitor leads and remove 1 screw.
3. Remove bracket-capacitor.

MAGNETRON, MAGNETRON FAN, VENT BLOWER AND POWER TRANSFORMER

Oven must be removed from wall.

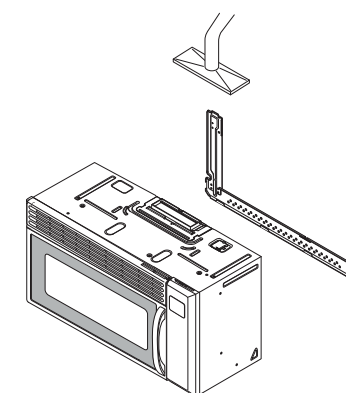


REMOVING OVEN FROM WALL (2 PEOPLE REQUIRED)

Oven hooked on metal tabs at bottom of wall mounting plate and fastened to cabinet by (3) top cabinet bolts.

CAUTION: Oven weights about 62 lbs.
Requires 2 people for removal.

1. Disconnect Power Cord, Top vented models - disconnect duct and remove damper assembly.
2. Remove top cabinet bolts(3).
3. Pull unit forward slowly, providing adequate support to prevent dropping unit during removal of last top cabinet bolt.



• TECHNICAL DATA SHEET •

SMART BOARD

The SMART BOARD contains the power relay, LVT, vent blower triac, surface light relays, and other components to perform the proper switching circuits. Several disconnect plugs are also located on the SMART BOARD :

- CON 201 - Ribbon Connector
- CON 202 - Vent Blower, T/Table Connector
- CON 203 - Primary L.V.T, Main Relay, Inrush Relay, Cooktop Lamp Relay Connector
- CON 204 - Door & Hood Sensing Connector
- CON 205 - Key Module
- CON 206 - Gas Sensor Connector
- CON 207 - Louver Connector

Many diagnostic circuit tests can be made at the disconnect plugs. (Refer to diagnosis flow chart and simplified schematic in mini-manuals.)

ERROR MESSAGE

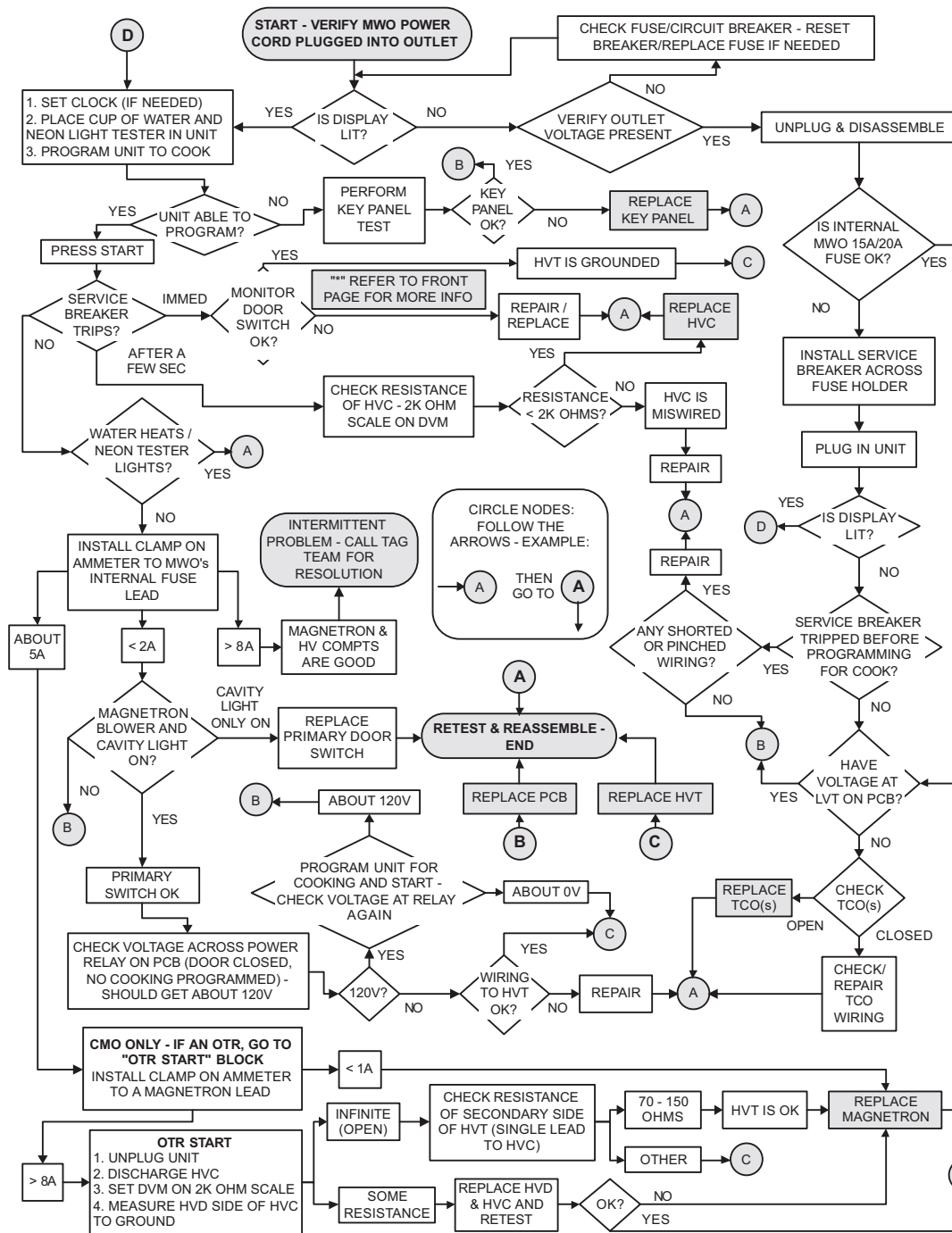
Display Signal	Condition
• F1	Open thermal sensor(convection)
• F2	Shorted thermal sensor(convection)
• F3	Keypanel shorted for > 60seconds
• F4	Open humidity sensor
• F5	Shorted humidity sensor
• F10	Shorted touch panel

* Error sound will beep for 3 cycles (2 second on, 1 second off) loudly in upper condition.

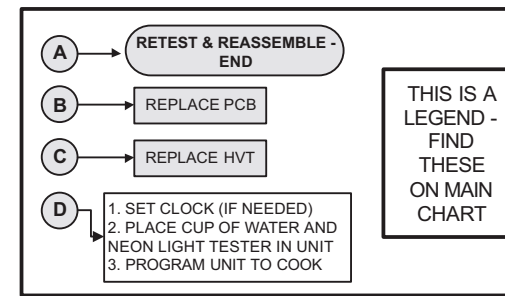
CONTROL PERFORMANCE TEST

- Set Clock-Touch options pad, touch set clock pad, enter time of day, AM/PM touch enter pad.
- Alternately touch each function pad and enter time or temperature selection for the function. Also change power levels.
- Touch Off after each function test to clear that function.
- Repeat procedure for each function to exercise each pad.
- Control and display should respond to each entry.
- Refer results to Diagnostic Flow Chart.

MWO TROUBLESHOOTING FLOW CHART



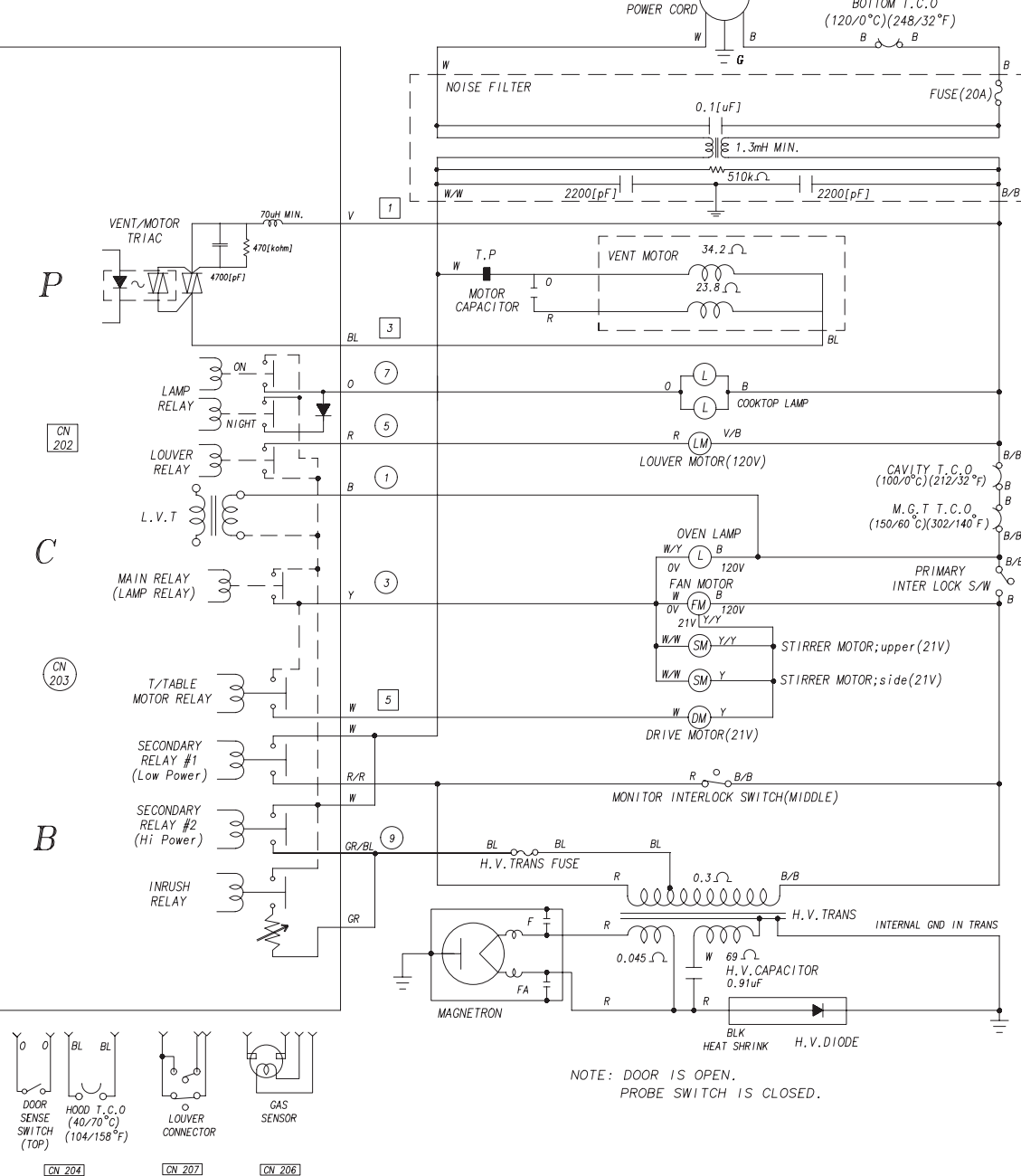
- DVM - DIGITAL VOLT METER
- HVC - HIGH VOLTAGE CAPACITOR
- HVD - HIGH VOLTAGE DIODE
- HVT - HIGH VOLTAGE TRANSFORMER
- LVT - LOW VOLTAGE TRANSFORMER
- TCO - THERMAL CUT OUT (TEMPERATURE SENSOR)
- PCB - PRINTED CIRCUIT BOARD



SCHEMATIC DIAGRAM

WARNING
POWER MUST BE DISCONNECTED
BEFORE SERVICING THIS APPLIANCE

PCTO Round2
MODEL NO. : JVM2070

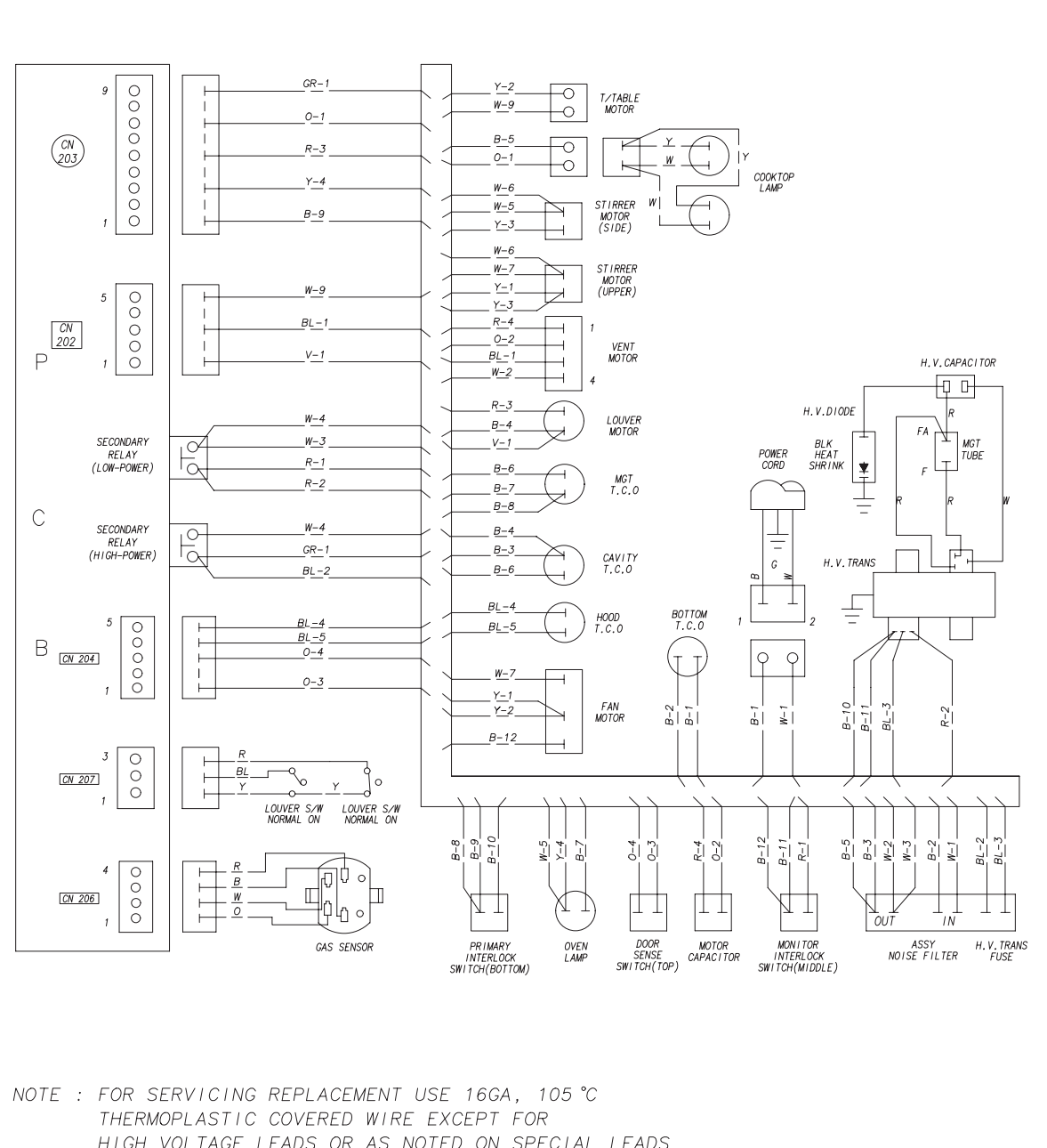


COLOR	SYMBOL
GRAY	GR
WHITE	W
BLACK	B
RED	R
BLUE	BL
ORANGE	O
YELLOW	Y
GREEN	G
PINK	P
AZURE	A
VIOLET	V
BROWN	BR

WIRING DIAGRAM

WARNING
POWER MUST BE DISCONNECTED
BEFORE SERVICING THIS APPLIANCE

PCTO Round2
MODEL NO. : JVM2070



COLOR	SYMBOL
GRAY	GR
WHITE	W
BLACK	B
RED	R
BLUE	BL
ORANGE	O
YELLOW	Y
GREEN	G
PINK	P
AZURE	A
VIOLET	V
BROWN	BR

GROUND
HARNES LEADS
PARTS LEADS

NOTE : FOR SERVICING REPLACEMENT USE 16GA, 105 °C THERMOPLASTIC COVERED WIRE EXCEPT FOR HIGH VOLTAGE LEADS OR AS NOTED ON SPECIAL LEADS.

OTR 10 CRITICAL PARTS LIST FOR SERVICE

NO	PARTS NAME	SEC PARTS NO.	GEA CAT - NO.
1	SMART BOARD	RAS-OTR10VM-00	WB27X10900
2	MAGNETRON	OM75P(10)ERHN	WB27X10735
3	H.V. DIODE (RECTIFIER)	DE91-70063A	WB27X1160
4	H.V. CAPACITOR (0.91uF)	2501-001011	WB27X10011
5	H.V. TRANSFORMER (TAP)	DE26-00126A	WB27X10867
6	FUSE(20AMP);65TL	3601-001198	WB27X10474
7	STIRRER MOTOR	DE31-00173A	WB26X10037
8	STIRRER ASSEMBY	DE31-00025A	WB26X10137
9	TURNTABLE DRIVE MOTOR	DE97-00385A	WB06X10519
10	VENT FAN MOTOR	DE97-00386A	WB06X10523
11	CAPACITOR MOTOR (Black)	DE31-00026A	WB26X10136
12	INTERLOCK SWITCH	DE31-00028A	WB26X10138
13	SENSOR - GAS (HUMIDITY)	DE59-50002A	WB27X10170
14	THERMOSTAT (TCO)	3405-001034	WB24X10038
15	THERMOSTAT (TCO)	3405-001033	WB24X10075
16	THERMOSTAT (TCO)	DE32-60013A	WB27X1170
17	THERMOSTAT (TCO)	DE47-20196A	WB27X10195
18	THERMOSTAT (TCO)	DE47-20007A	WB27X10166
19	THERMOSTAT (TCO)	DE47-20020A	WB27X10194
20	THERMOSTAT (TCO)	DE47-20059A	WB27X1127
21	CHARCOAL FILTER	DE63-30016C	WB02X10956
22	TURNTABLE (COOKING TRAY)	DE74-00023A	WB49X10063
23	Halogen Lamps (120V 20 W)	4713-001165	WB36X10213
24	GLASS COVER - COOK TOP LAMP	DE67-00088A	WB36X10167