

MAYTAG®

Maytag

**Accellis 2X
Service Manual**

16010225
Issued 8/00
Revised 12/00
16010419

SAFETY PRECAUTIONS

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

- A.- Do not operate or allow the oven to be operated with the door open.**
- B.- Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as needed.**
 - (1) Interlock operation.**
 - (2) Proper door closing.**
 - (3) Seal and sealing surfaces (arcing, wear, and other damage).**
 - (4) Damage to or loosening of hinges and latches.**
 - (5) Evidence of dropping or abuse.**
- C.- Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, wave guide or transmission line, and cavity for proper alignment, integrity, and connections.**
- D.- 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.**
- E.- A microwave leakage check to verify compliance with the Federal performance standard should be performed on each oven prior to release to the owner.**
- F.- Operate the oven from a properly grounded AC outlet capable of supplying 120/240 or a 120/208 volt, 60 Hz.**

THIS MANUAL, AS WELL AS THE INFORMATION CONTAINED IN IT, IS TO BE USED ONLY BY A MAYTAG AUTHORIZED SERVICE TECHNICIAN FAMILIAR WITH AND KNOWLEDGE-ABLE OF PROPER SAFETY AND SERVICING PROCEDURES AND POSSESSING HIGH QUALITY TESTING EQUIPMENT ASSOCIATED WITH MICROWAVE, GAS, AND ELECTRICAL APPLIANCE REPAIR.

ALL INDIVIDUALS WHO ATTEMPT REPAIRS BY IMPROPER MEANS OR ADJUSTMENT, SUBJECT THEMSELVES AND OTHERS TO THE RISK OF SERIOUS OR FATAL INJURY.

USE ONLY GENUINE MAYTAG APPROVED FACTORY REPLACEMENT COMPONENTS.

INTRODUCTION

The ACCELLIS 2X is designed with modular construction, which makes service and parts replacement easier and more cost efficient.

This manual is printed in a loose format and is divided into sections relating to a general group of components and/or service procedures. Each section is further subdivided to describe a particular component or service procedure.

The subdividing of the subject matter, plus the loose leaf form, will facilitate the updating of the manual as new revised components are added or new models are introduced.

Each page of the manual will be identified in the lower, left and right-hand corners, and as new or revised pages are published, the manual can easily be updated by following the filing instructions on the cover letter of the supplement.

This service manual is a valuable tool and care should be taken to keep it up-to-date by promptly and proper filing of subsequent pages as they are used.

MODELS COVERED IN THIS MANUAL:

**MER6750AAB
MER6750AAC
MER6750AAQ
MER6750AAW**

MODEL/SERIAL PLATE

The Model/Serial plate is located at the bottom left side of the service drawer on the front frame. The model number is very important to the technician for ordering proper parts both in and out of warranty. Always be sure to use the **complete** model number when ordering parts.

A wiring diagram/schematic is supplied with the unit. It is attached to the side panel and may be accessed by removing the service drawer. Please return the diagram to the storage compartment for future use.

CONTENTS

INTRODUCTION	i
CONTENTS	iii
SECTION 1. GENERAL INFORMATION	1-1
ELECTRICAL SAFETY	1-1
SERVICE PROCEDURE	1-1
ELECTRICAL SUPPLY	1-1
INSTALLATION	1-2
SECTION 2. ELECTRICAL COMPONENTS & TESTING	2-1
MAIN DISH	2-1
BAKED GOODS	2-1
DEFROST/HEAT	2-2
SECTION 3. COMPONENT DESCRIPTION	3-1
MAIN TOP	3-1
ELEMENTS	3-1
Ceran Element Cooktop	3-1
Ceran Element	3-2
Bake Element	3-2
Broil Element	3-3
Oven Sensor	3-3
ELECTRONIC CLOCK AND OVEN CONTROL	3-4
INFINITE SWITCH (Current Sensing)	3-4
Signal Lights	3-5
"Hot Surface" Light	3-5
Oven Light/Socket Replacement	3-5
HI-LIMIT THERMOSTAT	3-5
Thermostat Replacement	3-5
STORAGE DRAWER	3-6
OVEN DOOR	3-6
Door Assembly	3-8
Oven Door Hinge	3-10
BURNER - SMOKE ELIMINATOR REPLACEMENT	3-11
LEVELING LEGS	3-11
STIRRER BLADE	3-11
STIRRER MOTOR/BUSHING	3-12
MAGNETRON FAN ASSEMBLY	3-12
MAGNETRON	3-12
TRANSFORMER	3-13
DIODE	3-14
CAPACITOR	3-14
FUSE	3-14
HIGH VOLTAGE RELAY	3-14
PRIMARY/MONITOR INTERLOCK SWITCH	3-14
DOOR LOGIC SWITCH	3-15
SECTION 4. ELECTRICAL	4-1
Appliance Test Meter	4-1
Microwave Leakage Meter (RF Survey Instrument)	4-1

Using Voltmeter As A Continuity Tester	4-2
Voltage Checks	4-2
Electrical Test Meter	4-3
Wiring Installation	4-4
Clamp-On Ammeter	4-5
SECTION 5. TESTING & TROUBLESHOOTING	5-1
SELF-DIAGNOSES	5-1
Will Not Self-Clean	5-1
Microwave/Blower Does Not Operate	5-2
Stirrer Does Not Operate	5-3
Microwave Does Not Operate - Blower/Stirrer Does Operate	5-3
Main Dish (Slow) - Bake Goods (Operating Normal)	5-4
FLOW CHARTS	5-5
Will Not Bake	5-5
Will Not Broil	5-6
Will Not Clean	5-7
ELECTRONIC RANGE CONTROL	5-8
ELECTRICAL TEST FOR ELECTRONIC RANGE CONTROL	5-9
OPERATING PARAMETERS	5-9
Fault Code Information	5-10
Oven Temperature Adjustment	5-11
ELECTRONIC CONTROL - DC VOLTAGE CHECKS	5-11
SURFACE ELEMENT - Ceran	5-12
BAKE/BROIL UNIT	5-13
INFINITE SWITCH	5-13
Infinite Switch 1	5-14
Infinite Switch 2	5-14
OVEN SENSOR	5-14
INTERLOCK SWITCHES MODE OF OPERATION	5-15
Interlock Switches - Testing	5-15
Interlock Monitor Switch	5-16
Monitored Switch Replacement	5-16
SECTION 6. MICROWAVE THEORY AND GENERAL OPERATIONAL TESTING	6-1
GENERAL	6-1
Basic Theory And Operation	6-1
HIGH VOLTAGE COMPONENT TEST	6-3
Transformer	6-3
Diode	6-3
Capacitor	6-4
Magnetron	6-4
Limit Switch	6-5
DC Load Test Procedure	6-6
Magnetron Plate Current Test	6-6
INTERLOCK MONITOR FUSE FAILURE	6-7
COMPONENT TEST PROCEDURES	6-7
Testing for Microwave Leakage	6-8
SECTION 7. WIRING DIAGRAMS	7-1
DIAGRAM - MER6750	7-1
SCHEMATIC - MER6750	7-2

SECTION 1. GENERAL INFORMATION

ELECTRICAL SAFETY

The following instructions are based on safety considerations and must be strictly followed to eliminate the potential risks of fire, electrical shock, or personal injury.

CAUTION

DISCONNECT POWER TO UNIT AND DISCHARGE CAPACITOR BEFORE ATTEMPTING SERVICE. NEVER ASSUME THAT THE BLEEDER RESISTOR HAS DISCHARGED THE CAPACITOR. AFTER DISCONNECTING THE APPLIANCE FROM POWER SOURCE, AND PRIOR TO SERVICE, DISCHARGE THE CAPACITOR WITH THE BLADE OF AN INSULATED HANDLE SCREWDRIVER CONNECTED ACROSS THE CAPACITOR TERMINALS.

Whenever the appliance is being serviced, the electrical supply must be disconnected from the appliance to avoid contact with live terminals. The circuit breakers should be switched to the OFF position or the fuses removed from the branch electrical supply circuit which supplies electrical power (voltage) to the appliance. Prior to initial service, an electrical check (voltage check) for the absence of power (voltage) at the appliance should be done, either at the main terminal block or available electrical supply inlet on the unit to ensure that the correct circuit breakers have been thrown or the correct fuses removed and no power (voltage) is present at the appliance.

If electricity is required for a test to check for power or wattage at a component, the electricity should be turned off, the necessary connections or adjustments made and then the electricity restored for the test. As soon as the test is completed, the appliance should be disconnected from power before the electrical connections are removed or further service is performed.

- Disconnect the appliance from power and discharge capacitor before making or breaking electrical connections or adjustments.
- Disconnect the appliance from power before replacing components or performing service.

SERVICE PROCEDURE

When testing, removing or replacing component(s) or performing service:

1. **Disconnect the appliance from power and discharge the capacitor.**
2. Note the location of electrical wiring attachments and the order of disassembly for ease in reassembly.
3. Reassemble in the reverse order of removal unless specified otherwise.
4. Be sure that electrical connections are attached and secure.
5. Be sure that wiring is secured away from sharp edges and moving parts.
6. Do not bypass or disconnect any part or device designed into the appliance.
7. Be sure that ground wiring is connected and secure.
8. Be sure that access panels and covers are installed.

ELECTRICAL SUPPLY

An adequate electrical supply system is required for the cooking appliance. All wire connections must be in accordance with local codes and properly insulated. Check with local utility for governing electrical codes and ordinances. In the absence of

local electrical codes, the National Electrical Code, NFPA No.70, governing electrical range installations must be followed. A copy of the National Electrical Code, NFPA No.70, can be obtained by writing to:

**NATIONAL FIRE PROTECTION ASSOC.
Batterymarch Park
Quincy, Massachusetts 02269**

Most local Building Regulations and Codes require that all electrical wiring be completed by licensed electricians. All wiring should conform to Local and National Electrical Codes. Units require a single-phase three wire 120/240 volt or 120/208 volt, 60Hz, AC circuit. Wiring codes require a separate circuit be run from the main entrance panel to the range and that it be equipped with separate disconnect switch and fuses, either in the main entrance panel or in a separate switch and fuse box. In some communities, a solid or flexible continuous armored conduit must be used from main entrance panel to the terminal box on the rear of the range. Others will permit the termination of the range circuit at a polarized three or four wire plug-in outlet placed at a conventional point near the back of the range. The range is then connected to this outlet through an approved range connector (pigtail) fastened securely to the terminal block with proper relief at the range an a three or four pronged plug at the opposite end.

Outside Wiring

The local utility company will tell you whether the present electrical service to the home is adequate. It may be necessary to increase the size of the wiring to the house and service switch to take care of the electrical load demanded by the range. The kilowatt rating for the range is specified on the nameplate on the range.

House Wiring

Most local Building Regulations and Codes require that all electrical wiring be completed by licensed electricians. All wiring should conform to Local and Canadian Electrical Codes. Ranges require a single-phase four-wire 120/240-volt, 60Hz, AC circuit. Wiring codes require a separate circuit be run from the main entrance panel to the range and that it be equipped with separate disconnect switch and fuses, either in the main entrance panel or in a separate switch and fuse box.

INSTALLATION

All free-standing ranges can be installed with the back against (0 inches) a vertical combustible wall, and the sides below the cooktop surface against (0 inches) combustible base cabinets. Some cabinets and building materials are not designed to

IMPORTANT SAFETY NOTICE AND WARNING

The California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 165) requires the Governor of California to publish a list of substances known to the State of California to cause cancer or reproductive harm, and requires business to warn customers of potential exposures to such substances.

Users of this appliance are hereby warned that when the appliance is engaged in the self-clean cycle there may be some low-level exposure to some of the listed substances, including carbon monoxide. Exposure to these substances can be minimized by properly venting the appliance to the outdoors during self-clean cycle. This may be facilitated by turning on an exhaust fan or hood that is ducted to the outside to assist in adequate ventilation in conjunction with opening a window.

withstand the heat produced by the normal safe operation of a listed appliance. Discoloration or damage may occur.

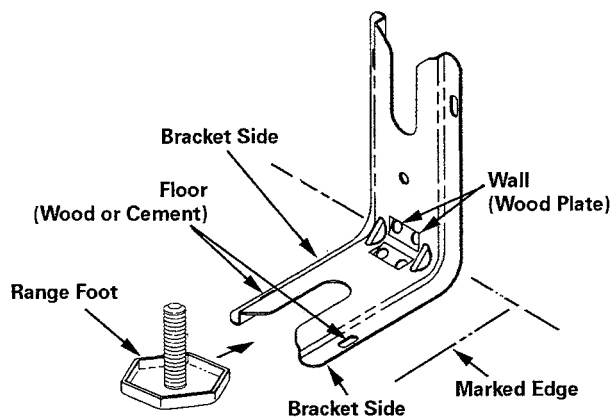
Range Connections

Remember – Mobile homes and some **Local Codes Do Not Permit Grounding Through Neutral**. Hence, 4-wire service **must** be provided for such installations. All others permit 3-wire service, use **copper wire only**.

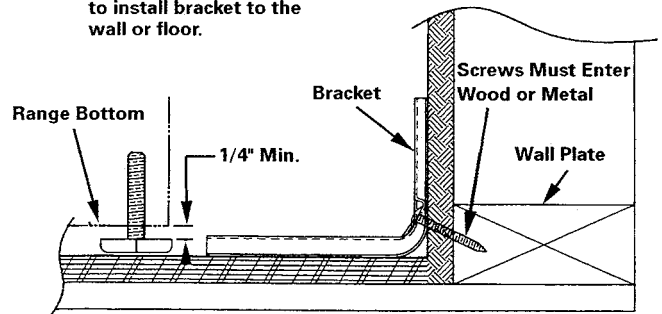
Note: For cord replacement – only a power-supply cord kit rated 240 volts minimum, 40 amperes, with closed loop terminals and marked for use with ranges shall be used.

Anti-Tip Bracket

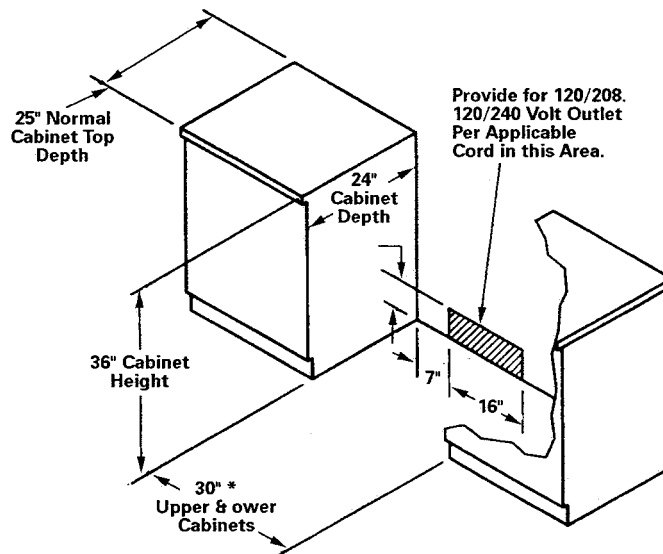
To reduce the risk of tipping of the range, a properly installed anti-tip device must secure the range. To check if device is installed properly, use a flashlight and look underneath range to see that one of the rear leveling legs is engaged in the bracket slot. When removing appliance for cleaning or servicing, be sure anti-tip device is engaged when range is replaced. The anti-tip device secures the rear leveling leg to the floor, when properly engaged.



Note: Use a minimum of (2) screws to install bracket to the wall or floor.



Anti-Tip Bracket



Free-Standing Range Installation Electric Free-Standing Range

***NOTE:** For canadian models, cutout width is 31".

SECTION 2. MODE OF OPERATION

	BAKE BELOW 260° F.	BAKE ABOVE 260° F.	BROIL BELOW 260° F.	BROIL ABOVE 260° F.	STIRRER ACTION	M / W POWER
MAIN DISH (Speed 1)	100%	50% TO 350° F.	100%	15 SEC. ON 45 OFF	10 SEC. ON/OFF	100% HIGH
BAKED GOODS (Speed 2) BELOW 30 MINUTES	100%	NORMAL CYCLE	100%	NORMAL CYCLE	10 SEC. ON/OFF	100% LOW
BAKED GOODS (Speed 2) ABOVE 30 MINUTES	100%	100% TO 375° F.	100%	15 SEC. ON 45 OFF	10 SEC. ON/OFF	100% LOW
THAW OR DEFROST ABOVE 60 MINUTES	OFF	OFF	OFF	OFF	10 SEC. ON/OFF	CYCLES HI PWR
THAW/DEFROST WITH HEAT LESS THAN 60 MINUTES	100% TO 300° F.	N A	100% TO 300° F.	N A	10 SEC. ON/OFF	100% HIGH

MAIN DISH

The microwave is on high power 100% of the time with the stirrer cycling 10 seconds on and 10 seconds off. The bake and broil elements are on 100% of the time until the oven cavity reaches 260°F. Once the oven cavity temperature reaches 260°F both elements are cycled for 30 to 45 seconds. The broil element is then energized 15 seconds of every minute, and the bake element is energized 30 seconds of every minute. Once the oven cavity temperature reaches 350°F, both elements are cycled off. The oven elements are then cycled on and off, broil 15 seconds, bake 30 seconds of each minute to maintain oven cavity temperature of 350°F.

BAKED GOODS

When set for less than 30 minutes the microwave is on low power 100% of the time with the stirrer cycling 10 seconds on, and 10 seconds off. The bake and broil elements are on 100% of the time until the oven cavity temperature reaches 260°F. Once the cavity temperature reaches 260°F, both elements are cycled off. Both elements then cycle on and off at 100% to maintain the oven cavity temperature of 260°F.

When set for 30 minutes in **BAKED GOODS** the microwave is on low power 100% of the time with the stirrer cycling 10 seconds on, and 10 seconds off. The **bake** and **broil** elements are on 100% of the time until the oven cavity temperature reaches 260°F. Once the oven cavity reaches 260°F, both elements are cycled off for 30 to 45 seconds, then the broil element is energized for 15 seconds of every minute with the bake element energized 100% of the time until the oven cavity temperature reaches 375°F. The elements are then cycled on and off, broil element 15 seconds of each minute, and the bake element 100% to maintain oven cavity temperature of 375°F.

DEFROST/HEAT

When set for less than one (1) hour the microwave is on high power 100% of the time with the stirrer cycling 10 seconds on and 10 seconds off. The bake and broil elements on 100% of the time until the oven cavity reaches 300°F. Once the oven cavity reaches 300°F the bake and broil elements cycle to maintain 300°F temperature in the oven cavity while the microwave operates at high power 100% of the time.

When set for over one (1) hour the microwave is on high power with the stirrer cycling 10 seconds on and 10 seconds off. The bake and broil elements are not energized. The microwave cycles unlike that of current microwave ovens, with speed defrost cycling the magnetron on and off at different stages of the programmed time.

- The ACCELLIS 2X Range electronic control outputs to the bake and broil elements when set for regular baking and broiling which operate the same as electric ranges currently being produced.
- When in bake the broil element is energized for about five seconds of every minute to assist in top browning.
- The control can be adjusted +35° to -35° from center. The control can be set for 50 or 60 Hertz.
- During Clean the broil element is energized for the first forty minutes, then switched to the bake element cycling at 865°F (±10°F).
- Customer cannot BAKE or BROIL if neither the door is latched nor can they clean if the door is not latched.
- If programmed for BAKE when the door is latched the word "door" will display with no alarm.

- If programmed for CLEAN and the door is not latched the word "door" will be displayed with an audible alarm sounding every second until it recognizes the door is closed.
- CLEAN TIME can be varied from two to four hours.
- The electronic control has three relays mounted on the control: BAKE, BROIL, or CLEAN.
- The auxiliary is energized when MAIN DISH or DEFROST are selected.

The microwave portion of the ACCELLIS 2X RANGE has a two-section capacitor that is used for high or low microwave output. The values are .48μf and .14μf for a total of .62μ when added together.

- During MAIN DISH and DEFROST the auxiliary relay on the electronic control is energized supplying 120 VAC to the coil of the high voltage relay whose action connect the two sections of the high voltage capacitor together.
- During BAKED GOODS the auxiliary relay is not energized and only the .14μf section of the high voltage capacitor is used.
- The microwave is on 100% when set for less than one hour. The bake and broil elements are on 100% of the time until oven temperature of 300°F is reached. The elements then cycle on and off to maintain temperature. The microwave is still at high power 100% of the time.

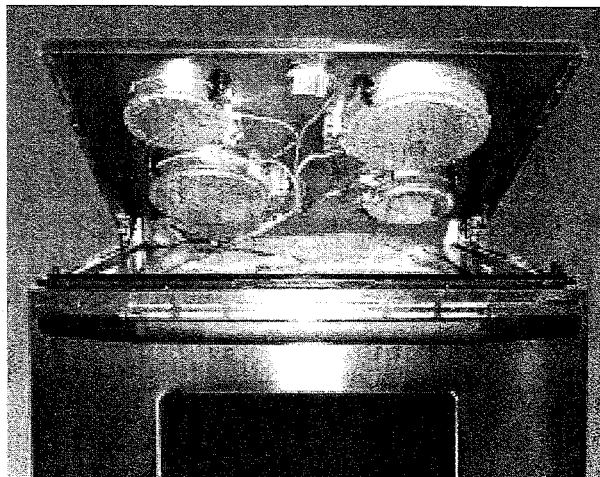
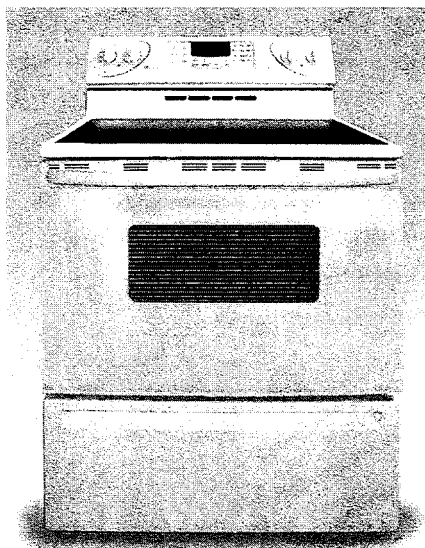
SECTION 3. COMPONENT ACCESS

As a general rule, the appliance should **ALWAYS** be disconnected from power source before servicing appliance or replacing component parts. Failure to disconnect the power increases the likelihood that a servicing error or mistake will result in serious or fatal injuries.

MAIN TOP

To Raise Ceran Cooktop

When cool open the door and remove the two screws securing the cooktop to the frame. Once the screws are removed raise cooktop and slide forward slightly. With the cooktop forward disconnect the wire harness and remove the cooktop.



ELEMENTS

Ceran Element Cooktop

Cooking areas are identified by patterns in the Ceran surface. The elements consists of element coil(s) contained in the element housing. Power to the element (240 volts) is provided and controlled by an infinite switch. Each heating element is equipped with a temperature limiter, which prevents heat surges and ensures that the heating elements will not overheat. The element and temperature limiter switch unit are available as a complete unit or individual parts.

When a cooking area is turned ON, the coil element under the cook top will heat up and glow. The element will cycle on and off to maintain the heat setting. When the element cycles on, it is normal to see a red glow through the smooth top.

Note: *It is normal for the element to cycle when set on the high setting.*

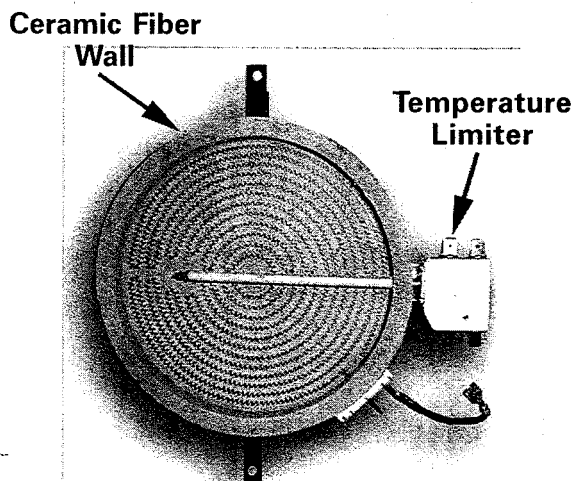
To Remove Element:

1. **Disconnect the appliance from power source before servicing.**
2. Remove the two screws securing the main top to the frame.

3. Slide the main top forward to access the wire harness. Disconnect the harness.
4. Lift the top off and lay aside securely with under side up.
5. Remove the screws securing element to main top.
6. Disconnect wiring to element and replace element.
7. Reverse procedure to reinstall.

To Remove Glass Top Assembly:

1. **Disconnect the appliance from power source before servicing.**
2. Remove two (2) screws securing glass top to frame. The screws are located in the front left and right corners of the range and are accessible with the door open.
3. Grasp front edge of cooktop and slide out slightly. With the top moved forward disconnect the wiring harness.
4. Lift the top off the unit and lay aside securely.
5. Reverse procedure to reinstall.



CERAN ELEMENT

Ceran Element

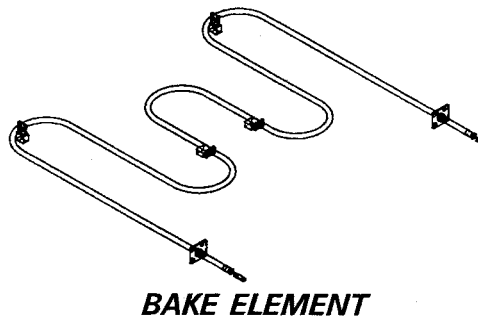
- Left front and right rear element wattage: 208/240 volts @ 900/1200 watts. Approximately 48Ω.
- Left rear element wattage: 208/240 volts @ 1580/2200 watts. Approximately 27Ω.
- Dual element wattage: 208/240 volts @ 1580/2200 watts. Approximately 27Ω for the outer element. 208/240 volts @ 580/750 watts. Approximately 73Ω for the inner element.

Bake Element

Element Wattage: 208/240 volts @ 2250/3000 watts. Approximately 19Ω

The bake function controls the Bake and Broil heating elements. During a Bake cycle, the Broil element will be on 10 seconds of a 60-second duty cycle, and then the Bake element will be on the remaining 50 seconds. The Bake and Broil elements will be staged during **conventional** baking only.

Note: The Bake element will be the first element to turn on at the beginning of any conventional bake cycle.



To Access Bake Element:

1. **Disconnect the appliance from power source before servicing.**
2. Remove lift off door for more accessibility. (Before lifting off door the two (2) screws that secure liner to hinge must be removed. SEE DOOR SECTION).

3. Remove four (4) screws securing bake element to back of oven cavity.
4. **Gently** pull element through cavity wall until terminals can be accessed. **Use Caution:** Space is limited.
5. Disconnect wiring.
6. Remove/replace element as necessary.

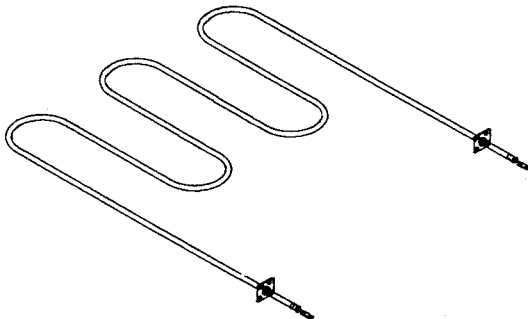
CAUTION

Be sure mesh gasket is in place to prevent microwave leakage.

7. Reverse procedure to reinstall.
8. RF Leakage test is required after BAKE ELEMENT is replaced. (See Section 6 for test procedure.)

Broil Element

The broil function controls only the Broil heating element. The Bake element is inactive during a Broil cycle. During a Broil cycle, the control will monitor the oven temperature and cycle the Broil element on and off if the temperature associated with the selected range is reached.



BROIL ELEMENT

To Access Broil Element:

1. **Disconnect the appliance from power source before servicing.**

2. Remove lift off door for more accessibility. (Before lifting off door, the two (2) screws that secure liner to hinge must be removed. (See Door Section for procedure.)
3. Remove broil support brackets (2) and remove screws securing broil element to back oven.
4. **Gently** pull element through cavity wall until terminals can be accessed. **Use Caution:** Space is limited.
5. **Disconnect** wiring.
6. Remove/Replace element as necessary.

CAUTION

Be sure mesh gasket is in place to prevent microwave leakage.

7. Reverse procedure to reinstall.
8. RF Leakage Test is required after Broil element is replaced. (See Section 6 for test procedure.)

Oven Sensor

The oven sensor is located inside the oven cavity, attached to the rear wall of the cavity. As the oven temperature increases, the resistance of the oven sensor increases. The resistance is measured by the electronic control to determine the oven temperature.

To Access Oven Sensor:

1. **Disconnect the appliance from power source before servicing.**



OVEN SENSOR

2. Allow the oven and the oven sensor to cool to room temperature.

3. Open oven door and remove two (2) screws securing sensor to oven cavity and gently pull through cavity wall.
4. Disconnect the oven sensor at the connector blocks and remove/replace as necessary.
5. Reattach the connector blocks and reassemble.
6. RF Leakage Test is required after oven sensor is replaced. (See Section 6 for test procedure).
6. Remove four (4) screws securing control to control mounting plate.
7. Disconnect wiring and remove/replace control.
8. Reverse procedure to replace.

IMPORTANT

When replacing oven sensor make sure mesh gasket is in place to prevent microwave leakage.

ELECTRONIC CLOCK AND OVEN CONTROL

Automatic cooking feature is used to turn the oven on and off at a preset time-of-day. This feature can be used to delay the start of a cooking operation or a self-clean cycle. The automatic cooking feature will not operate unless the clock is functioning and is set at the correct time-of-day.

To Gain Access To Electronic Clock/Oven Control:

1. **Disconnect the appliance from power source before servicing.**
2. Remove two (2) screws securing backguard panel to the end caps.
3. Remove two (2) screws securing backguard panel to backguard housing. (Screws located between control panel and main top.)
4. Lift backguard panel up, tilt forward and lay panel on protected surface of main top for servicing.
5. Remove two (2) screws securing control-mounting plate to backguard.

INFINITE SWITCH (Current Sensing)

This unit is equipped with controls that provide an infinite choice of settings from LOW to HIGH. The control can be set on any of the numbered settings. To operate, push in and turn control knob to the desired setting.

Note: *The infinite switch is a current sensing switch.*

The infinite switch is a rotary switch, which controls the power dissipated by a heating element. A heater-bimetal opens and closes the cycling contacts, which applies and removes voltage from the heating element. Control is attained by regulating the ratio of the time between the opening and closing of the contacts. This is usually referred to as input percentage and is controlled by a cam, which can provide virtually any infinitely adjustable performance. This performance is assured when the switch is subjected to elevated ambient temperatures through automatic temperature compensation.

The infinite switch stems are colored coded for identification. The silver colored stem controls the left front and right rear element, the silver colored stem with a red dot controls the left rear, and the brass colored stem controls the right front element. Amperage is rated at 3-15.5A range +/- 10%.

Note: *When replacing the infinite switch, the switch MUST be matched to the element.*

The infinite switches are located on the backguard panel or the manifold panel, depending on the model.

To Access Control:

1. **Disconnect the appliance from power source before servicing.**
2. Remove control knobs.
3. Remove two (2) screws from backguard panel securing panel to housing.
4. Remove two (2) screws securing backguard panel to end cap.
5. Lift backguard panel up and tilt forward, then lay panel on protected surface on main top for servicing.
6. Remove two (2) mounting screws securing infinite switch to backguard panel.
7. Disconnect wiring and remove/replace control.
8. Reverse procedure to replace.

Signal Lights

Ranges are equipped with two (2) signal lights to indicate when a surface element is on. The light will remain on until the element is turned off. After a cooking operation, be sure element and signal light are off.

The signal lights are located on the backguard panel and may be accessed from the backside of the panel when removed. The red indicator lens pops in and out, and the light slides sideways into a lock position. Reverse the procedure to remove.

"Hot Surface" Light

The Accellis 2X is equipped with a **Hot Surface Light**. This red light will turn on to indicate that the cooking area is hot and will remain on until the area has cooled.

The switch is located in the front center of the burner box, and may be accessed by removing the main top.

To Access Hot Surface Light:

1. **Disconnect the appliance from power source before servicing.**
2. Open oven door and remove the screws securing the main top to the frame.
3. Slide the top forward and disconnect the wire harness.
4. Lift the top off and lay on a protected surface with under side up.
5. Release the tabs securing the switch to the top. Once the tabs are released the switch can be removed.
6. Reverse procedure to replace.

Oven Light/Socket Replacement

The oven light is accessible from the front of the range. To remove open the oven door, unscrew the lens cover, and remove the Halogen bulb. To replace the oven socket:

1. **Disconnect the appliance from power source before servicing.**
2. Remove the main top. (See top removal)
3. Open the oven door and remove the lens cover and bulb.
4. Release the tabs securing the socket to the chassis.
5. Disconnect the wires and remove the socket.

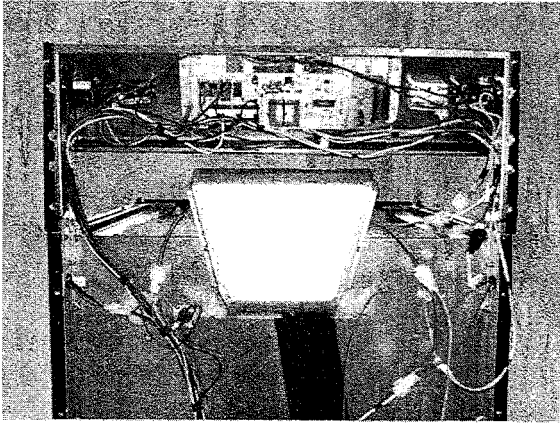
HI-LIMIT THERMOSTAT

The HI-Limit Thermostat is mounted to range main back. The purpose of this thermostat is to break line voltage to oven

control in case of a runaway temperature. Range may be removed from cabinetry for rear serviceability.

Thermostat Replacement

1. Disconnect the appliance from power source before servicing.



BACK OF UNIT

2. Remove screws securing range back panel to main back.
3. Remove two screws securing thermostat to range main back.
4. Remove wiring.
5. Replace in reverse order.

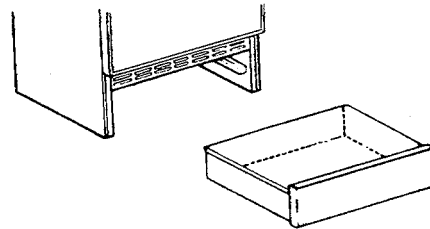
STORAGE DRAWER

The storage drawer is located at the bottom of the range.

To Remove: Empty drawer then pull drawer out to the first stop position.

Lift up front of drawer and pull to the second stop position. Grasp sides and lift up and out to remove drawer.

To Replace: Fit ends of drawer glides onto rails. Lift up drawer front and gently push in to first stop position. Lift up drawer again and continue to slide drawer to the closed position.



STORAGE DRAWER

To Replace Storage Panel:

1. Remove drawer from range and lay on protected surface.
2. Remove screws securing drawer panel to drawer.
3. Trim is held into position with slots and grooves similar to oven door. With door resting on its side, grasp the bottom end cap and push in a backward motion toward the back of drawer. This will free trim from groove. With a slight twisting motion, rotate trim counterclockwise to free tabs from slots in the liner and remove.
4. Reverse procedure to assemble and reinstall.

To Replace Storage Drawer:

1. Remove drawer from range.
2. Remove screws securing drawer panel to drawer.
3. Remove glides and bumpers from drawer.
4. Reverse procedure to assemble.

CAUTION

Hinge arms are spring mounted and will slam shut if accidentally hit. **Never place hand or fingers between the hinges and the front oven frame.** Injury may occur if hinge snaps back.

OVEN DOOR

Do not place excessive weight on an open oven door or stand on an opened door. In some cases it could cause the range to tip over, breakage of the door, or serious injury.

To Remove Lift-Off Door:

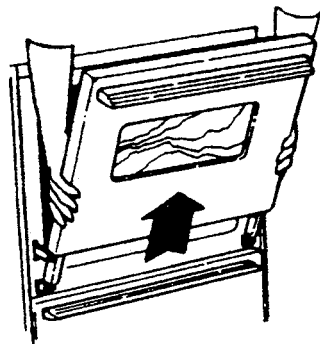
Open door and remove two (2) screws securing door liner to door hinges. After removing screws close door to the "stop position". In stop position door is open approximately 4".

Grasp door as illustrated. Lift up evenly until door clears the hinge arms.

DO NOT USE DOOR HANDLE TO LIFT DOOR.

IMPORTANT

Any time door is removed from range and re-installed a RF Leakage test is required. (See Section 6 for test procedure.)



OVEN DOOR REMOVAL

To Disassemble Door:

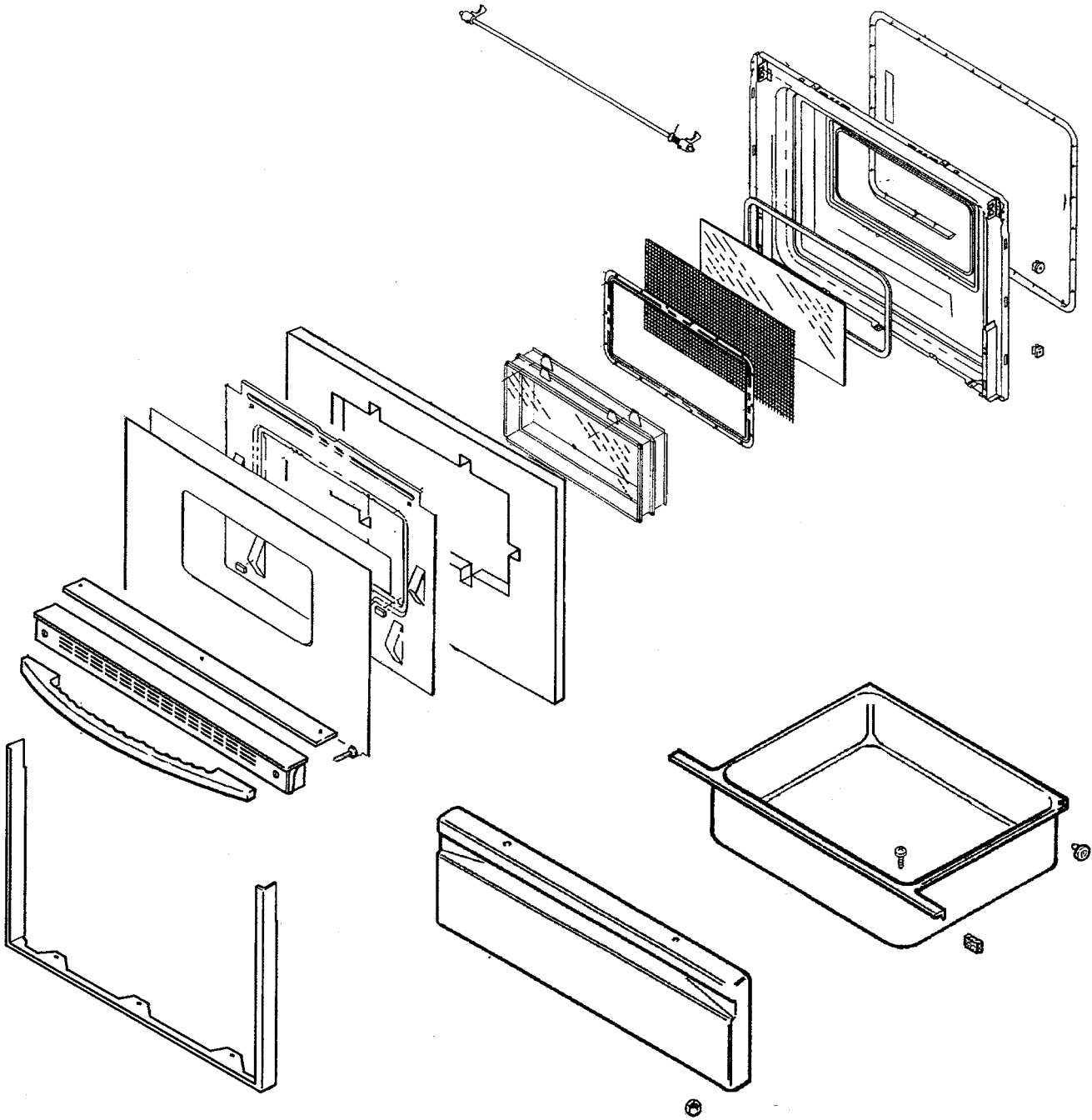
1. Open oven door and remove the two (2) screws securing the door liner to the hinges.
2. Close door to the stop position and lift off hinges. Remove door and lay on protected surface, liner side up.
3. Remove the three (3) screws securing the door frame to the liner at the bottom.

4. Remove the two (2) side screws that secure the door frame to door liner.
5. Remove the four (4) screws securing the door trim at the top.
6. Slide the door frame and glass off liner from the bottom.
7. Remove the four (4) screws securing the door handle to the door liner. (Two on the sides and two in front).
8. Remove the two (2) screws securing door baffle to liner.
9. Remove (4) screws securing door baffle to window pack. Remove baffle.
10. Remove insulation wrap.
11. Remove four (4) screws securing window pack to liner. Window pack comes out as an assembly.
12. Remove screws securing screen retainer to door liner. (Lift out retainer and inner glass.)
13. Remove inner door glass screen.
14. Remove window gasket choke.
15. Door gasket can be replaced without door being disassembled by pulling gasket out of bottom insert of door. The gasket is secured with clips inserted into door liner.

For the chrome model the door comes apart as follows:

1. Open oven door and remove the two (2) screws securing the door liner to the hinges.
2. Close door to the stop position and lift off hinges. Remove door and lay on protected surface, liner side up.
3. Remove the three (3) screws securing the door frame to the liner at the bottom.

Door Assembly



4. Remove the two (2) screws securing the door frame to the liner at the top.
5. Lift the door frame off the liner.
6. Remove the two (2) screws securing the heat baffle to the door baffle. Remove door baffle.
7. Remove the latch pawl and rod assembly. (See the latch pawls, rod, springs section).
8. Remove the screws securing the screen glass supports to the baffle. Remove the screen glass and supports.
9. Remove the two screws securing door baffle to liner at bottom.
10. Remove (4) screws securing door baffle to window pack.
11. Remove door baffle.
12. Remove insulation wrap.
13. Remove four (4) screws securing window pack to door liner. Lift window pack out.
14. Remove screws securing screen retainer to door liner. (Lift out retainer and inner glass).
15. Remove inner door glass screen.
16. Remove window gasket choke.
17. Door gasket can be replaced without the door being disassembled by pulling gasket out of bottom insert of door. The gasket is secured with clips inserted into door liner.

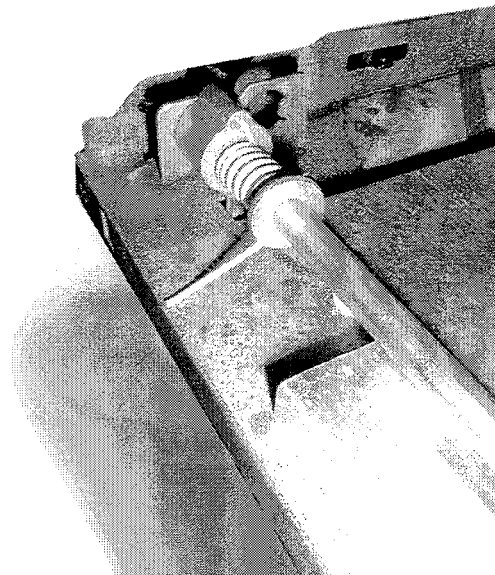
IMPORTANT

Any time oven door is removed and reinstalled a RF Leakage Test is required. (See Section 6 for test procedure.)

To Replace Latch Pawls, Rod, Springs

1. Remove door and lay on protected surface, liner side up. Remove the three (3) screws securing the door frame to liner at the bottom.
2. Remove the two (2) side screws that secure the door frame to the door liner.
3. Remove the four (4) screws securing the door trim at the top.
4. Slide the door frame and glass off liner from the bottom.
5. Remove the four (4) screws securing the door handle. Remove the handle.
6. Use flat blade screwdriver and place between latch pawl and rod retainer bracket pawl.
7. Apply pressure toward latch pawl spring and remove pawl from rod retainer bracket.
8. Reverse procedure to reinstall.

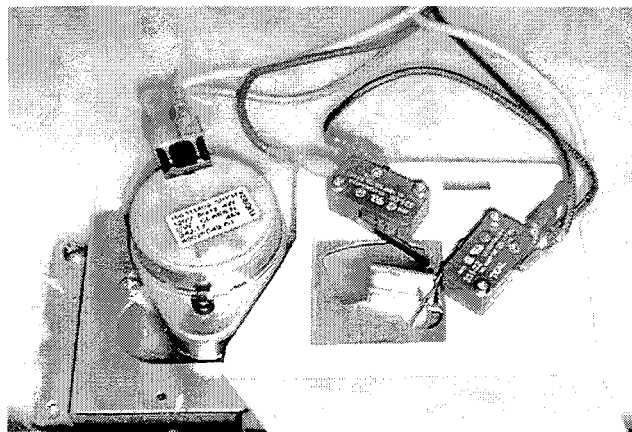
Note: The latch pawls are keyed into the retainer brackets. Make sure the alignment is proper when reinstalling.



DOOR LATCH PAWLS, ROD, SPRING

To Replace Lock Assembly:

1. **Disconnect the appliance from power source before servicing.**
2. Open oven door or remove for convenience.
3. Remove main top and slide forward. Disconnect wire harness. (See Top Removal).
4. Lift top off and lay aside securely.
5. Remove two (2) screws securing lock assembly to oven frame in front.
6. Disconnect wiring.
7. Remove two (2) screws securing lock assembly to frame.
8. Slide assembly out.
9. Reverse procedure to reinstall.



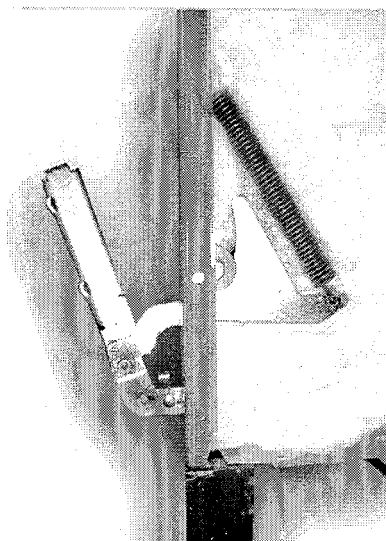
DOOR LOGIC SWITCH LOCATION

Oven Door Hinge

The unit will need to be pulled away from the cabinetry to remove/replace door hinges.

To Access/Replace Oven Door Hinges:

1. **Disconnect the appliance from power source before servicing.**
2. Remove main top assembly as described previously and lay aside securely.
3. Remove oven door assembly as previously described and lay aside securely.
4. Remove the screws securing side panel at the top and back of frame.
5. Remove the screws securing the rear panel to frame.
6. Slide the side panel away from the frame at rear and lift out of the slots in the front. Remove panel.
7. Remove the two (2) screws securing hinge to front frame flange.
8. Complete hinge assembly may be removed.
9. Reverse procedure to reinstall.

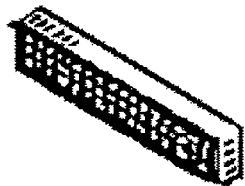


OVEN DOOR HINGE

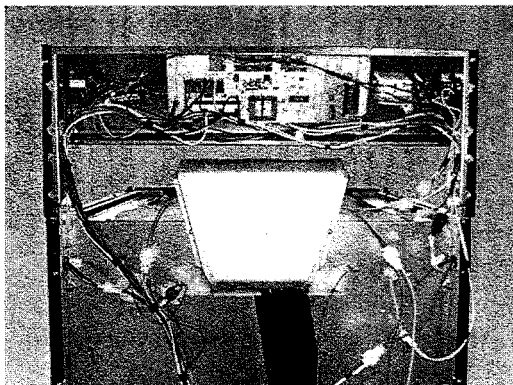
BURNER – SMOKE ELIMINATOR REPLACEMENT

The smoke eliminator is located between oven cavity and the vent box assembly.

1. **Disconnect the appliance from power source before servicing.**
2. Remove three screws securing vent box to oven cavity. (Screws are located inside oven cavity one on each side of oven cavity vent.)
3. Remove screws securing main back wire cover.
4. Remove three (3) screws securing magnetron blower vent box to main back.
5. Remove two (2) screws securing vent box to oven main back.
6. Reverse procedure to replace.



SMOKE ELIMINATOR

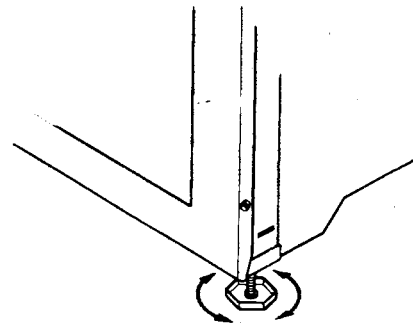


REAR OF UNIT

LEVELING LEGS

Some floors are not level. For proper baking, your range must be level.

Leveling legs are located on each corner of the base of the range.

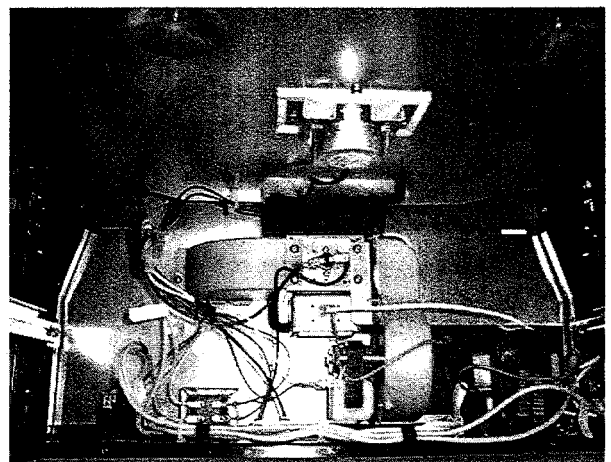


LEVELING LEGS

Place a level horizontally on an oven rack and check front-to-back and side-to-side. Level by turning the legs.

STIRRER BLADE

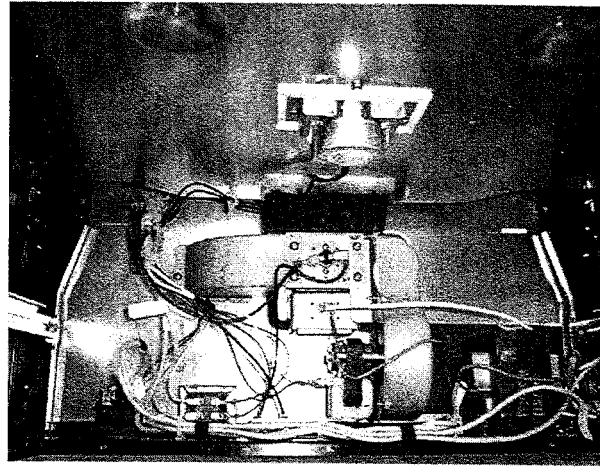
1. **Disconnect the appliance from power source before servicing.**
2. Remove oven door as described previously, for access.
3. Remove four (4) screws securing match plate to oven cavity.



STIRRER

4. Remove eight (8) screws securing bezel and stirrer blade cover to oven cavity. (Lift bezel and mica cover out).
5. Blade can now be removed by lifting straight up.
6. Reverse procedure to reinstall.
7. Microwave leakage test is required after door has been reinstalled. (See Section 6 for RF leakage test procedure).

Note: *Stirrer blade must be removed before replacing stirrer motor or bushing.*



STIRRER

STIRRER MOTOR/BUSHING

1. **Disconnect the appliance from power source before servicing.**
2. Remove storage drawer as described previously.
3. Remove five (5) screws securing microwave component shield to range.
4. Remove four (4) screws securing stirrer-motor cover to bottom of range.
5. Remove two (2) screws securing stirrer motor mounting bracket to launch box.
6. Remove two (2) screws securing stirrer motor to mounting bracket.
7. Reverse procedure to reinstall.
8. After replacing stirrer bushing or stirrer motor reinstall stirrer blade as described previously.
9. Microwave leakage test is required after stirrer motor, bushing, or blade is replaced.

MAGNETRON FAN ASSEMBLY

1. **Disconnect the appliance from power source and discharge capacitor before servicing.**
2. Remove storage drawer.
3. Remove five (5) screws securing microwave component shield to range.
4. Remove two (2) screws securing fan housing to magnetron.
5. Remove wiring. Fan assembly can now be removed.
6. Reverse procedure to reinstall.

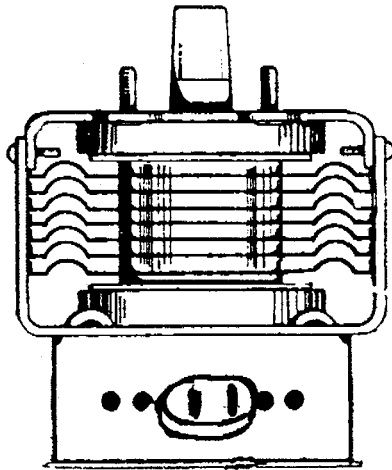
MAGNETRON

1. **Disconnect the appliance from power source and discharge capacitor before servicing.**
2. Follow steps 2 through 6 as described above.
3. Remove two (2) screws securing magnetron duct to magnetron.
4. Remove the screws securing magnetron duct to range main back.

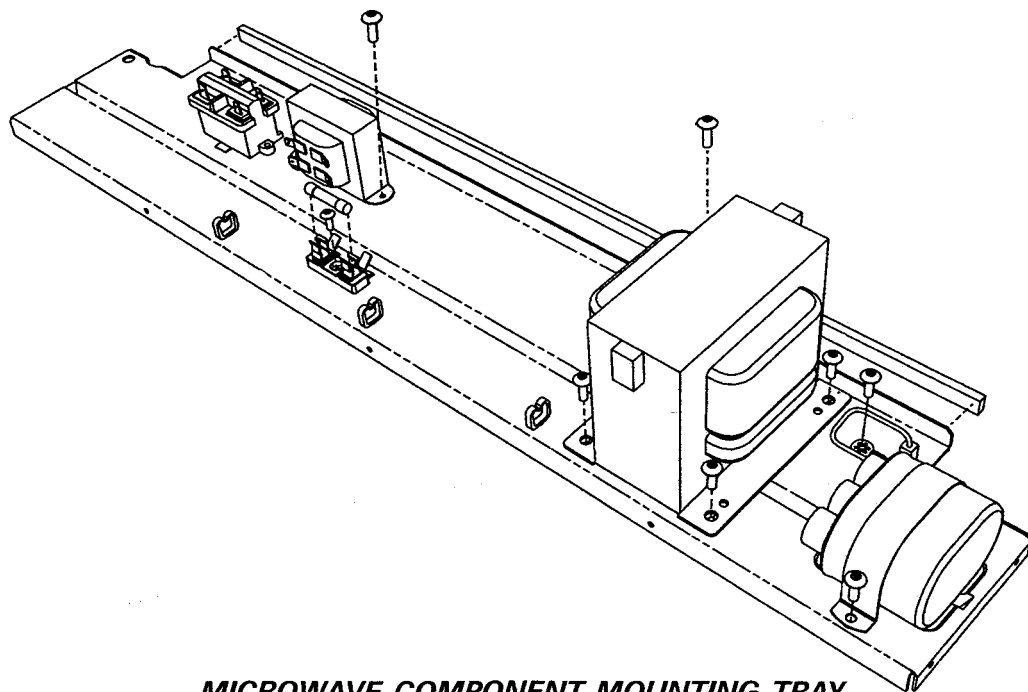
5. Remove wiring from magnetron.
6. Remove four nuts securing magnetron to launch box.

Note: A 5/16" open-end wrench is required to remove the magnetron mounting nuts.

7. Reverse Procedure to reinstall.
8. Microwave leakage test is required after magnetron has been replaced. (See Section 6 for RF leakage test procedure).



MAGNETRON



MICROWAVE COMPONENT MOUNTING TRAY

TRANSFORMER

1. Disconnect the appliance from power source and discharge capacitor before servicing.
2. Remove storage drawer as previously described.
3. Remove five (5) screws securing microwave component shield to range.
4. Remove wiring from transformer.
5. Remove two (2) screws securing transformer to microwave component mounting tray.
6. Transformer can now be removed by sliding transformer forwards.
7. Reverse procedure to reinstall.

DIODE

1. **Disconnect the appliance from power source and discharge capacitor before servicing.**
2. Remove storage drawer.
3. Remove five (5) screws securing microwave component shield to range.
4. Remove the screw securing diode load to microwave component mounting support.
5. Remove spade terminal of diode from capacitor.
6. Reverse procedure to reinstall.

CAPACITOR

1. **Disconnect the appliance from power source and discharge capacitor before servicing.**
2. Remove storage drawer.
3. Remove five (5) screws securing microwave component shield to range.
4. Remove the screw securing capacitor-mounting bracket to microwave component mounting support.
5. Remove wiring.
6. Reverse order to reinstall.

FUSE

A 15-Ampere fuse located on microwave component mounting support protects the microwave circuit.

Note: *This fuse does not affect conventional cooking.*

To access fuse:

1. **Disconnect the appliance from power and discharge capacitor before servicing.**
2. Remove the storage drawer.
3. Remove five (5) screws securing microwave component shield to range.
4. Remove fuse with needle nose pliers from fuse holder.
5. Reverse procedure to reinstall.

HIGH VOLTAGE RELAY

1. **Disconnect the appliance from power source and discharge capacitor before servicing.**
2. Remove storage drawer.
3. Remove five (5) screws securing microwave component shield to range.
4. Remove the screw securing high voltage relay to microwave component mounting support.
5. Remove wiring
6. Reverse order to reinstall.

PRIMARY/MONITOR INTERLOCK SWITCH

Facing the range the primary interlock and monitor switch are located in right top corner behind side panel and are activated by door latch pawl.

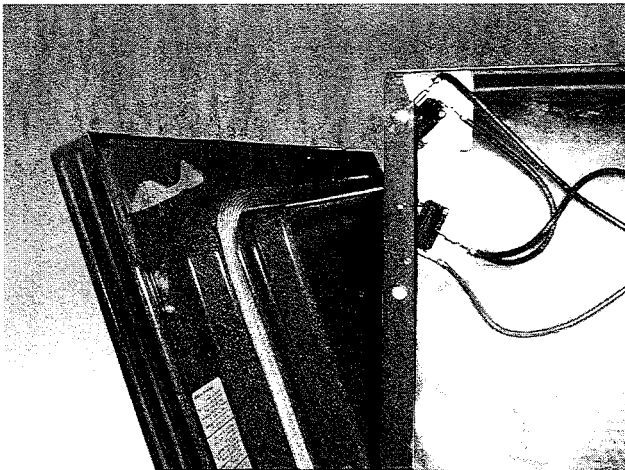
The user and service personnel are protected from accidental microwave energy exposure by a primary interlock switch, a secondary interlock switch, and a monitor switch.

DO NOT attempt to operate the oven by defeating or bypassing interlock and safety switches.

The range will have to be removed from cabinetry to replace secondary or monitor switch.

To replace primary/monitor interlock switch:

1. **Disconnect the appliance from power source before servicing.**
2. Remove main top as previously described.
3. Remove screws securing side panel to main back and top frame.
4. Remove two (2) screws securing switch assembly to front frame of range.
5. Remove wiring.
6. Reverse procedure to reinstall.



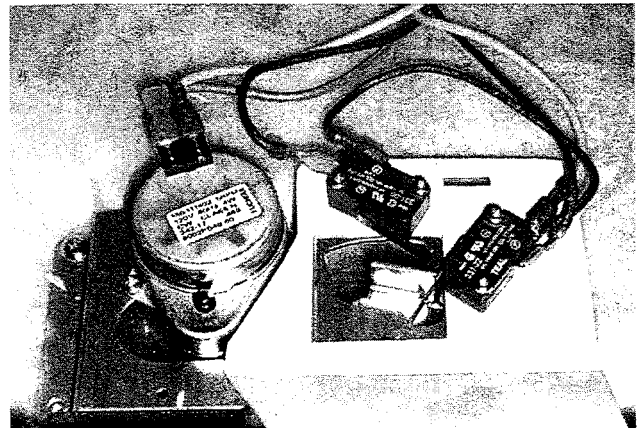
PRIMARY/ MONITOR SWITCH

DOOR LOGIC SWITCH

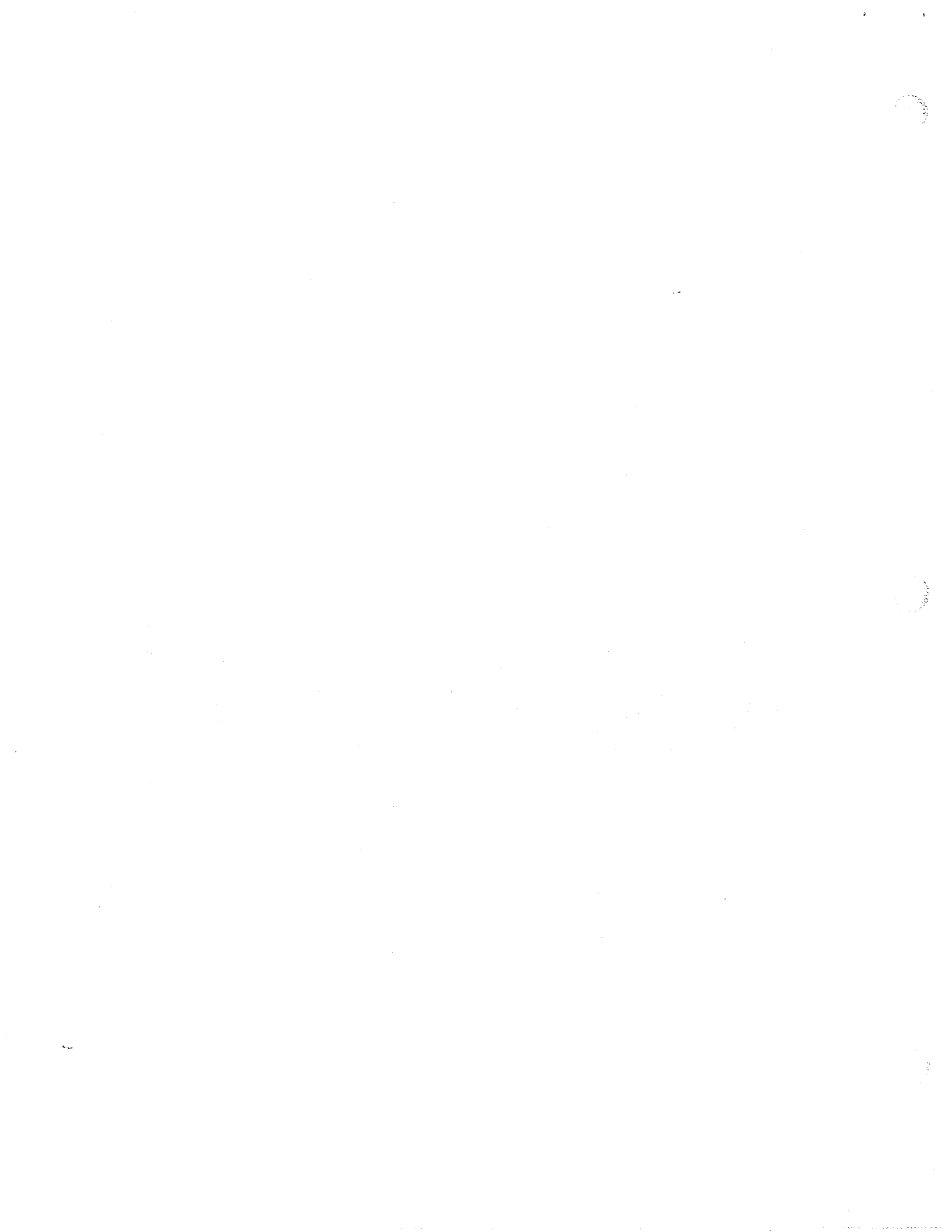
Facing the range the door logic switch is located in top left corner behind side panel and is activated by door latch pawl. (Range will have to be removed from cabinetry to replace door logic switch).

To replace logic switch:

1. **Disconnect the appliance from power source before servicing.**
2. Remove main top as previously described.
3. Remove screws securing side panel to main back and top frame.
4. Remove two (2) screws securing switch assembly to front frame of range.
5. Remove wiring.
6. Reverse procedure to reinstall.



DOOR LOGIC SWITCH LOCATION



SECTION 4. ELECTRICAL TEST EQUIPMENT

The equipment required to service products depends largely upon the condition encountered. Locating a malfunction will often require the use of electrical testing equipment such as:

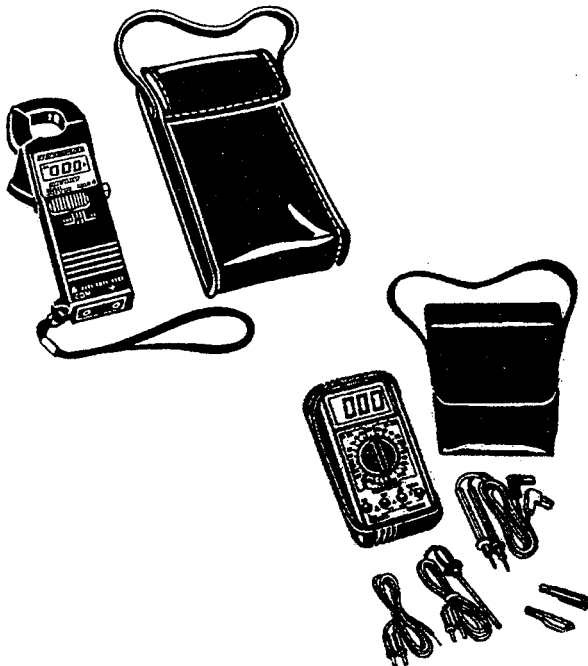
- Appliance Test Meter
- Clamp on Ammeter
- Test Cord
- RF Survey Instrument

Appliance Test Meter

CAUTION

Always disconnect power supply and discharge capacitor before making continuity checks or taking resistance readings.

An Appliance Test Meter is a multipurpose tester combining an AC – DC voltage tester with multi – range ohmmeter.



Probably the easiest means of testing electrical components is "continuity testing" with an appliance test meter. Continuity is a complete or continuous path from one point in an electrical circuit to another point.

The obvious advantages of being able to check electrical components and circuits without power applied is one of the features of the ohmmeter. Multiple ranges allow accurate determination of resistance of both single components and entire circuit paths. Resistance is measured in "ohms".

Set Meter For Use as Follows:

1. Calibrate meter by touching test probes together and turning adjusting dial until meter reads "0" on the ohm scale. Recheck calibration whenever adjusting dial for ohm settings is changed. (Replace battery if adjustment will not bring meter reading to "0").
2. Select the scale most easily read and place test probes on respective terminals. When checking switch, the reading would normally be either open or closed. A reading of 70 on the R x 10 scale would for example be 700 ohms resistance.

Microwave Leakage Meter (RF Survey Meter)

Suitable RF survey instrument to perform microwave leakage test. Only the following instruments meet the requirements for this test:

- Holiday Industries – Model 1500, 1501, 1700, 1800
- NARDA – Model 8100, 8200
- Simpson – Model 380

Using Voltmeter As A Continuity Tester

CAUTION

Always disconnect power supply before making continuity checks or taking resistance readings.

While we normally think of continuity testing as only an ohmmeter function, a voltmeter can also be used, particularly when testing switch contacts. The primary difference is that power is applied to the circuitry under test and appropriate caution **MUST** be exercised.

The voltmeter is connected across the component terminal with the wires still in place and with power disconnected.

The meter is set for 300-volt range and power is reconnected. A voltage reading indicates a voltage drop across the component. There should be **no voltage drop** across closed switch contacts or fuses.

The voltmeter connected across hi-limit thermostat terminals, as an example, will show no reading when thermostat is closed and will show voltage when thermostat is open.

This type of continuity testing is an excellent method at locating questionable switch contacts or poor electrical contact. The resultant internal heating can shorten component life.

Voltage Checks

CAUTION

Use extreme caution when checking voltage.

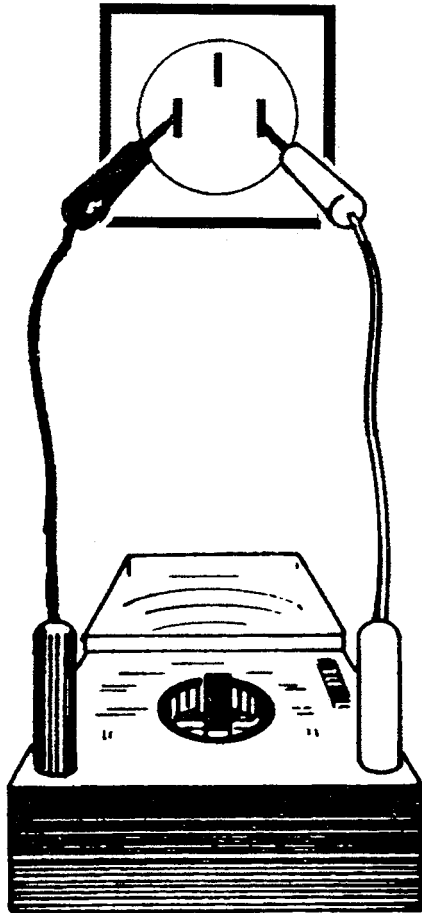
These checks will consist of taking readings at the wall receptacle in order to determine the availability of voltage to the product. Voltage checks on individual components of a product are **NOT** recommended due to the possibility of electrical shock. Component part testing is best accomplished through continuity checks with an Appliance Test Meter. (See section on Appliance Test Meter under ELECTRICAL TEST EQUIPMENT.)

Note: *Use of the meter on voltage higher than the indicated range may cause permanent damage to the meter. To prevent damage, first select highest range and then lower the range to readings, which fall within the lower scale.*

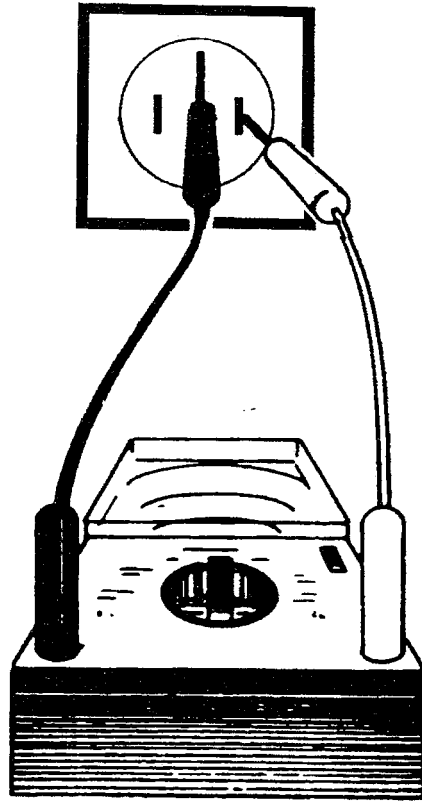
SET UP METER FOR USE AS FOLLOWS:

1. Turn selector knob to desired meter function and appropriate range.
2. Plug black lead into socket marked (-) negative.
3. Plug red lead into socket marked (+) positive.
4. Place test leads into receptacle in order to determine voltage available.

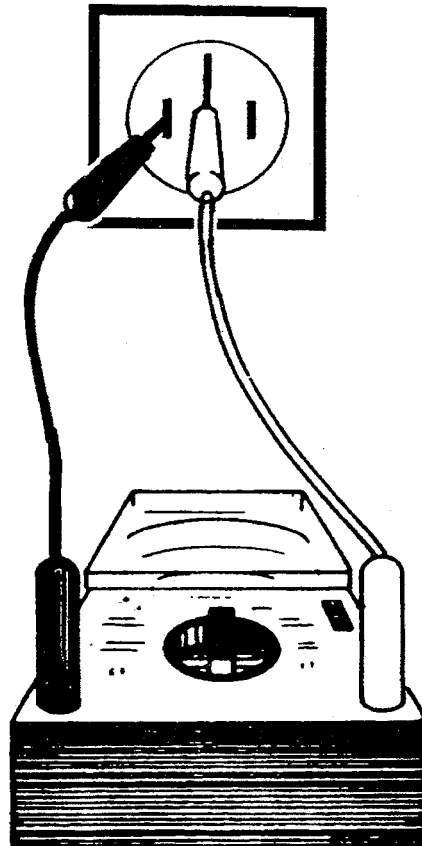
Electrical Test Meter



VOLT METER-240

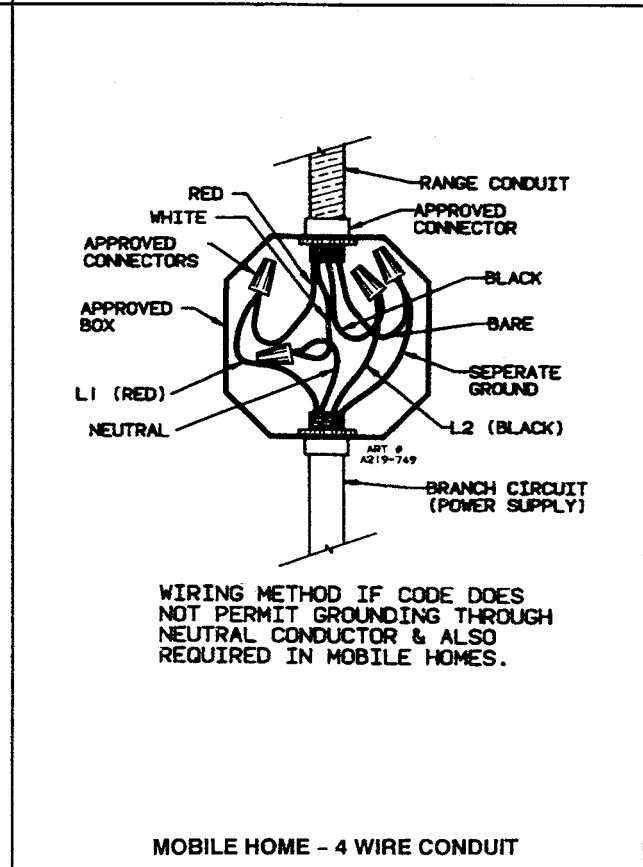
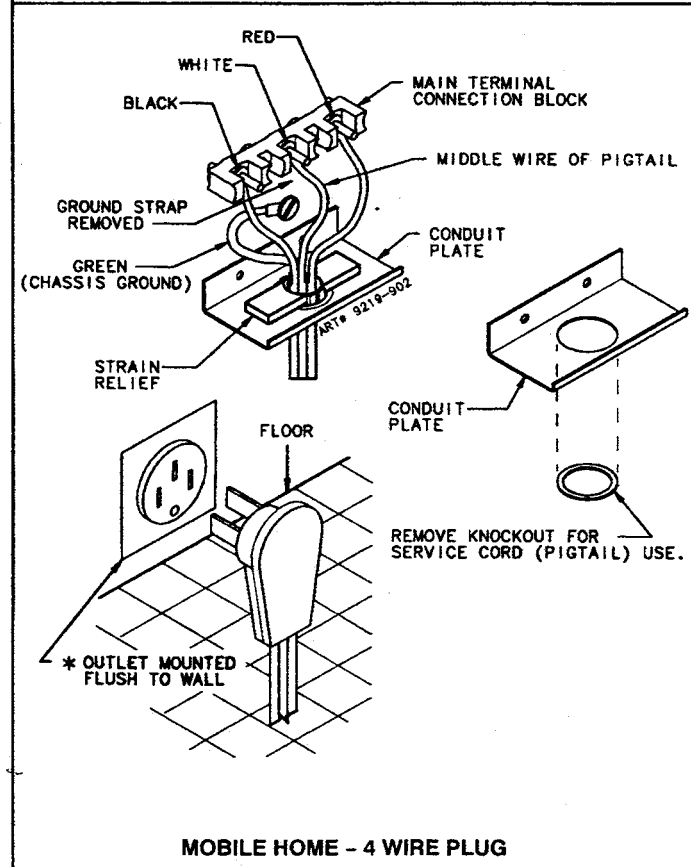
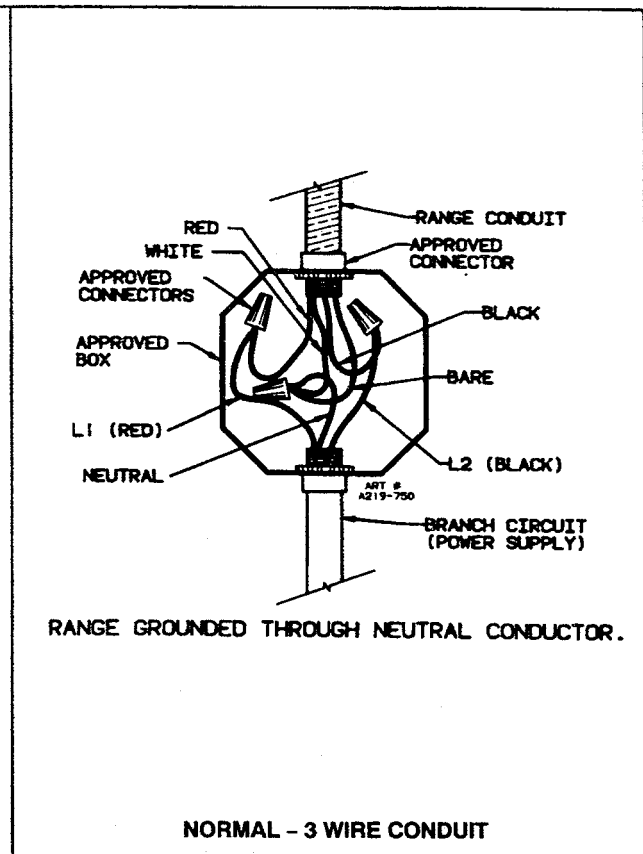
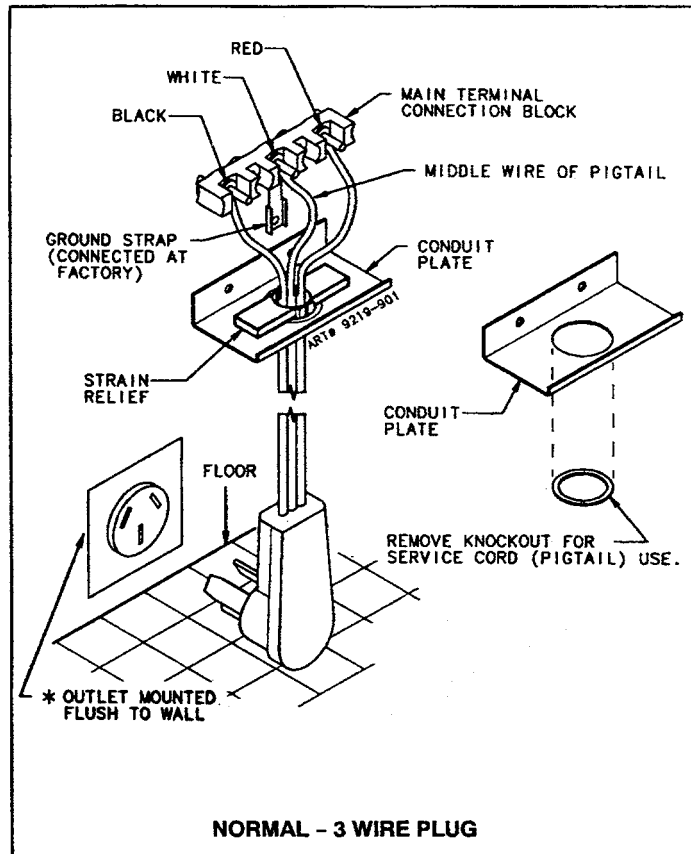


VOLT METER-120



VOLT METER-120

Wiring Installation



CAUTION

Always disconnect the power supply before making continuity or resistance checks. Failure to do so will result in damage to your meter! Internal batteries provide all the power needed to make resistance checks. They should be checked at least once a year and replaced as needed.

Continuity: Is there a path or not? References are made between a "closed" (continuity) reading and an "open" (no continuity) reading. One note, when you get an "open" reading, try a higher resistance range (setting). A very high resistance appears as an "open" on the lower ranges. For best accuracy always "re-zero" meter when changing ranges and/or the physical position of the meter.

Continuity testing, as related to an electrical component, is the check of a part for an "open" or "closed" circuit.

Electrical components fall into two general categories.

1. **LOADS** – Devices that **use** or consume electricity. Examples would include bake, broil, surface elements, lamps, and magnetron.
2. **SWITCHES** – Devices that **control** the supply of electricity to the load or loads in a circuit. Examples include door switches, relays, oven control, and infinite switches.

Continuity test of "load" device will show-varying levels of resistance from very low for some transformer windings to very high for some components on electronic control boards. Usually it is more important to know if there is a path for current flow through a device (continuity) than to know the exact resistance (ohms) of the device.

Continuity test of switches will show virtually no resistance across closed contacts.

Resistance, even low values indicates burned or dirty contacts in a switch.

Continuity testing is a process of eliminating those electrical components involved in a given function of the appliance, until the inoperative part is found. By reviewing the list of possible electrical problems under given conditions, and then performing appropriate continuity checks on the parts involved, you should be able to locate the electrical component which is inoperative.

When checking components or circuit paths for continuity, external wiring should be disconnected to eliminate false readings through external paths. Isolate what you want to test.

Clamp-On Ammeter

Each circuit in an appliance has a "normal" current draw, which is an indication of the performance of that circuit. Current draw levels, less than or more than normal, give clues to malfunctions. The clamp-on ammeter measures these currents without breaking the circuit by measuring the strength of the magnetic field developed around each conductor. Current is read by separating the conductors and clamping the jaws of the ammeter around each conductor on which current is to be read. Low amperage readings indicate problems such as damaged heating elements, etc. High amperage readings indicate the unit being tested is operating under an increased mechanical or electrical load.

Note: *Overloads on a circuit breaker or fuse can be traced to the product being tested or the circuit breaker (or fuse) by checking the product's current draw. If the amperage reading is less than the breaker reading, the breaker or fuse box is at fault.*

Note: *A wattmeter reading will provide better information than an ammeter as it gives a more accurate indication.*

SECTION 5. TESTING AND TROUBLESHOOTING

SELF-DIAGNOSES

The Electronic Range Control (ERC) used on the Accellis 2X is equipped with a diagnosis feature. To activate the diagnosis mode of the ERC it is necessary to remove power from the ERC, depress the Cancel and Broil pad, and hold down while applying power to the ERC. It is also necessary to select each different diagnosis within sixteen (16) seconds of the last entry or the ERC will revert to normal operation. You may make as many entries as desired as long as the time span from releasing one pad and selecting another pad is less than sixteen seconds, and you do not have any one pad depressed for over 16 seconds. When diagnosis mode is activated all digits will display "--". To exit mode press cancel or Auto exit occurs 16 seconds after last key pressed.

KEY PRESSED	RELAY or ACTION ACTIVATED
BAKE	The bake relay will close
Broil	The broil relay will close
Main Dish	Magnetron
Baked Goods	High Voltage
Oven Light	Oven light is on
Frozen Foods	Stirrer
Defrost	Moisture Fan
Clean	Motorized door lock
Stop Time	Beeper
Cook Time	Display error codes
Timer	DLB Output
0 through 9	Display number in time digits
Clock	Light VFD segments then toggle every other segment

Will Not Self-Clean

The clean function controls both the BAKE and BROIL heating elements. The Broil element will be energized 100% of the time for the first forty minutes followed by the Bake element on 100% for the duration of the cycle. The Bake element is cycled once the clean temperature 865°F is reached.

the door and latch logic switches must be closed for the oven to accept a clean program. Unlike previous models this range can be programmed for clean immediately after a BAKE and BROIL cycle. (Oven temperature is not a factor when programming any cycle).

When trouble shooting the range for cleaning complaints it must be determined if the BAKE and BROIL functions operate normally. After the determination is made

- When programming for CLEAN if either the door or latch logic switch is not made, the display will flash "Door" along with an audible alarm.

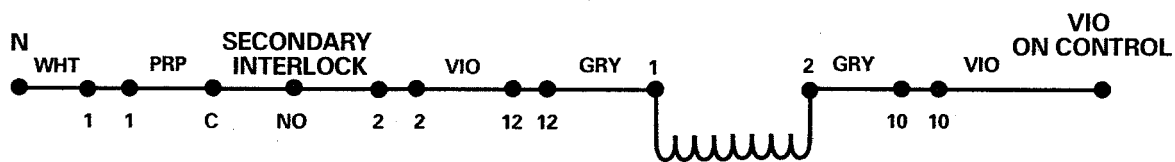
- The door logic switch is made any time the door is closed and is located on the left front side of the range behind the side panel.
- Door lock is obtained via the door lock motor and is driven via input from the electronic control.
- If the clean cycle cannot be initiated and the door switches and their wiring have been checked as listed in the flow chart, the ERC is probably at fault.
- A shorted or open sensor "F3" will not allow any program to be entered.
- If clean is aborted during the cycle, the door and latch logic switches can be checked by the display. Any time that the oven temperature is over 400°F and the oven and door position switches are made the "lock" will appear in the display.
- If the clean cycle aborts with a runaway fault code "F1:1" if oven temperature is over 650°F in bake or "F1:2" if oven temperature is over 950°F in clean, it can be checked by:
 1. Take an ohm reading across the oven sensor (1050 to 1100 ohms is normal at room temperature).
 2. Check the sensor harness for an open or shorted wire.
 3. Check for a loose connection.

Microwave Blower Does Not Operate

Check voltage from neutral to connector 1 of the clock relay. If 120VAC is not present check the following:

1. Contacts 1 to 3 at the clock relay. (No voltage should be present if the contact is closed).
2. Wire connectors.
3. Blower motor.

Microwave Circuit

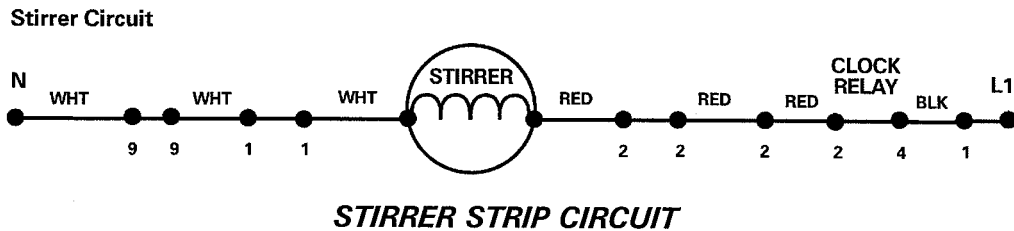


MICROWAVE BLOWER STRIP CIRCUIT

Stirrer Does Not Operate

Check voltage from neutral to connector 1 of the clock relay. If 120VAC is not present, check the following:

1. Contacts 1 to 4 at the clock relay. (No voltage should be present if the contact is closed).
2. Wire connectors.
3. Stirrer motor.

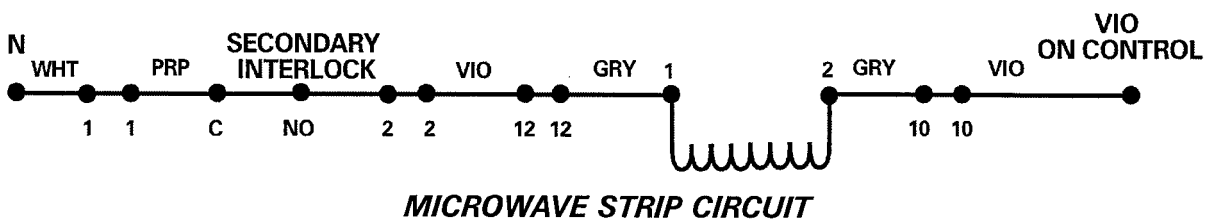


Microwave Does Not Operate - - Blower/Stirrer Does Operate

Check voltage from neutral to VIO connector on the electronic control. If 120VAC is not present check the following:

1. Secondary Interlock Switch.
2. Connections 1 to 2 at the transformer. (120VAC should be present).
3. Wire connectors.

Microwave Circuit

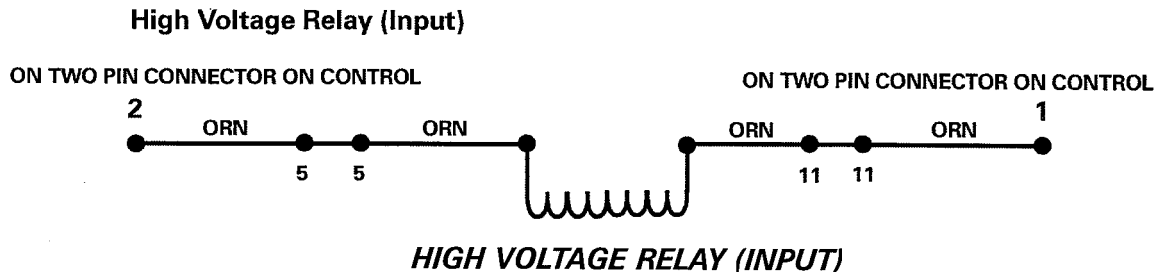


Main Dish (Slow) - - Baked Goods (Operating Normal)

In Main Dish the Bake element, Broil element, magnetron relay, stirrer relay, moisture fan, and high voltage relay are active. In Baked Goods the Bake element, Broil element, magnetron relay, stirrer relay, and moisture fan are active. Check voltage from connector 1 to 2 at the two-pin connector on the electronic control. If 24 VDC is present check the following:

1. Disconnect power to the unit and discharge the capacitor. Remove the two orange wires at the high voltage relay.
2. Take an ohm reading across the two terminals that the wires were just removed from. Infinite resistance indicates an open coil on the relay.
3. Wire connectors.

If all checks are good, check the output of the relay.



High Voltage Relay (Output)

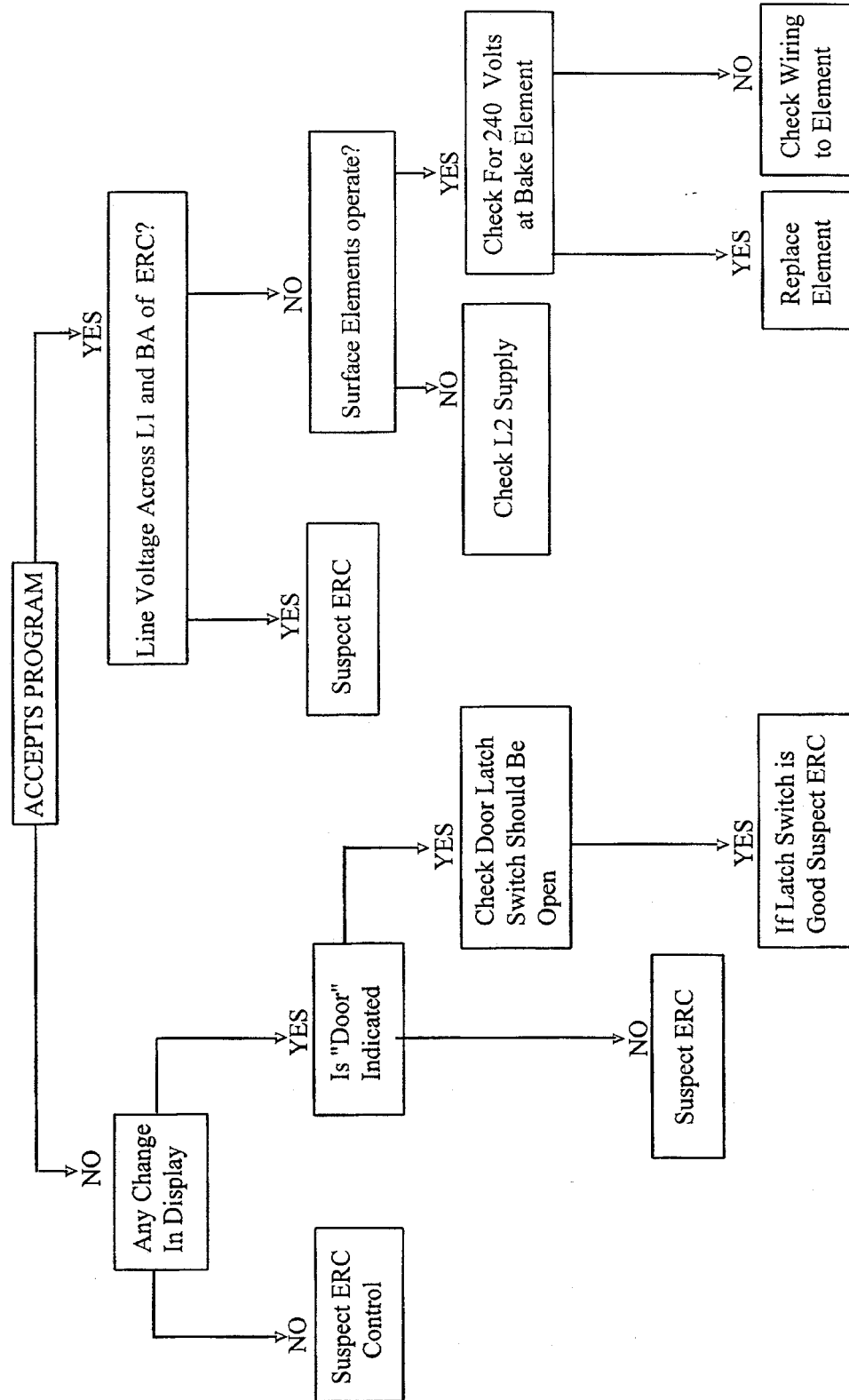


Check the capacitance of the high voltage capacitor as follows:

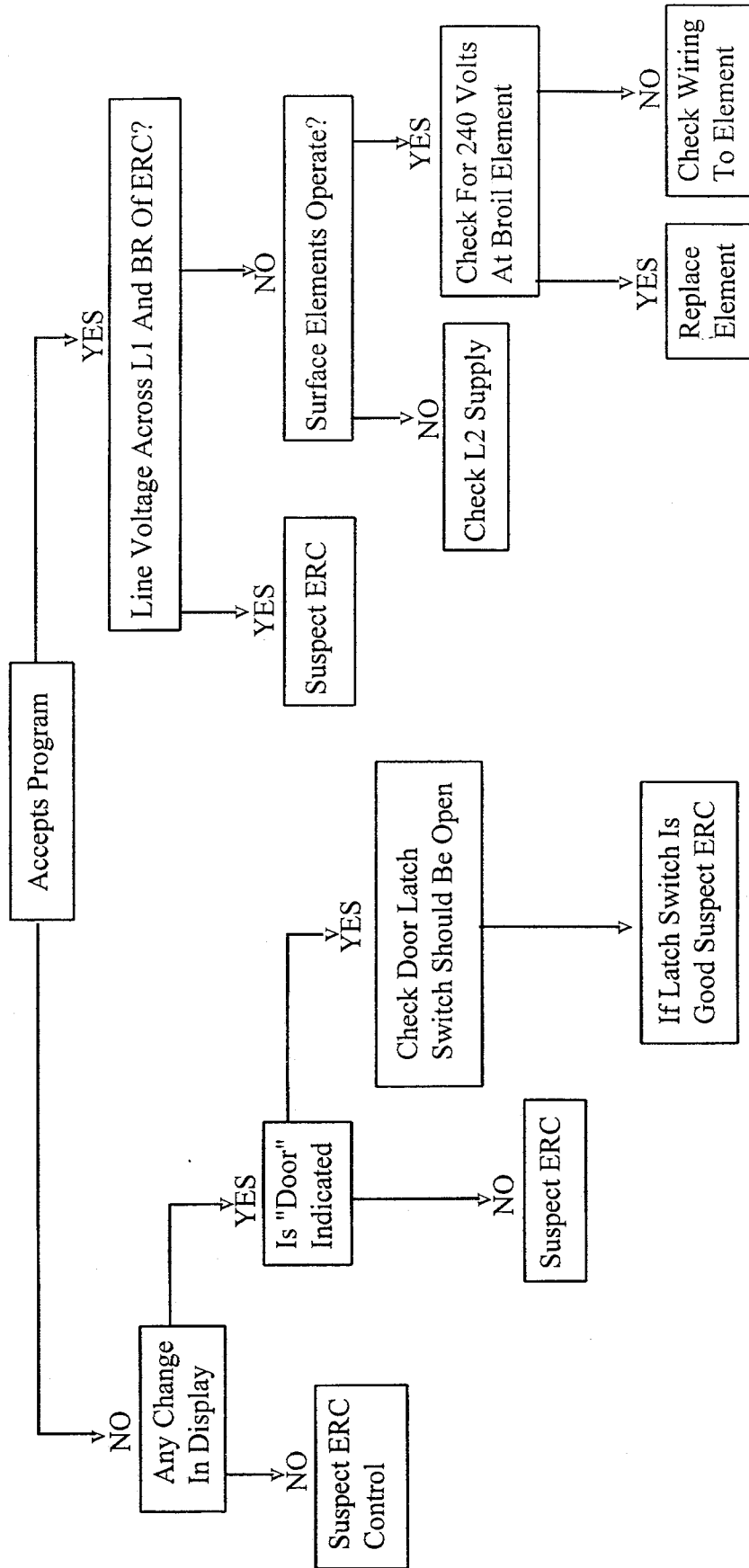
1. **Disconnect power to the unit and discharge the capacitor.**
2. Remove the red and white wire from the high voltage relay.
3. Set the ohmmeter to R X 10000 ohms and measure each wire (Red and White) to ground.

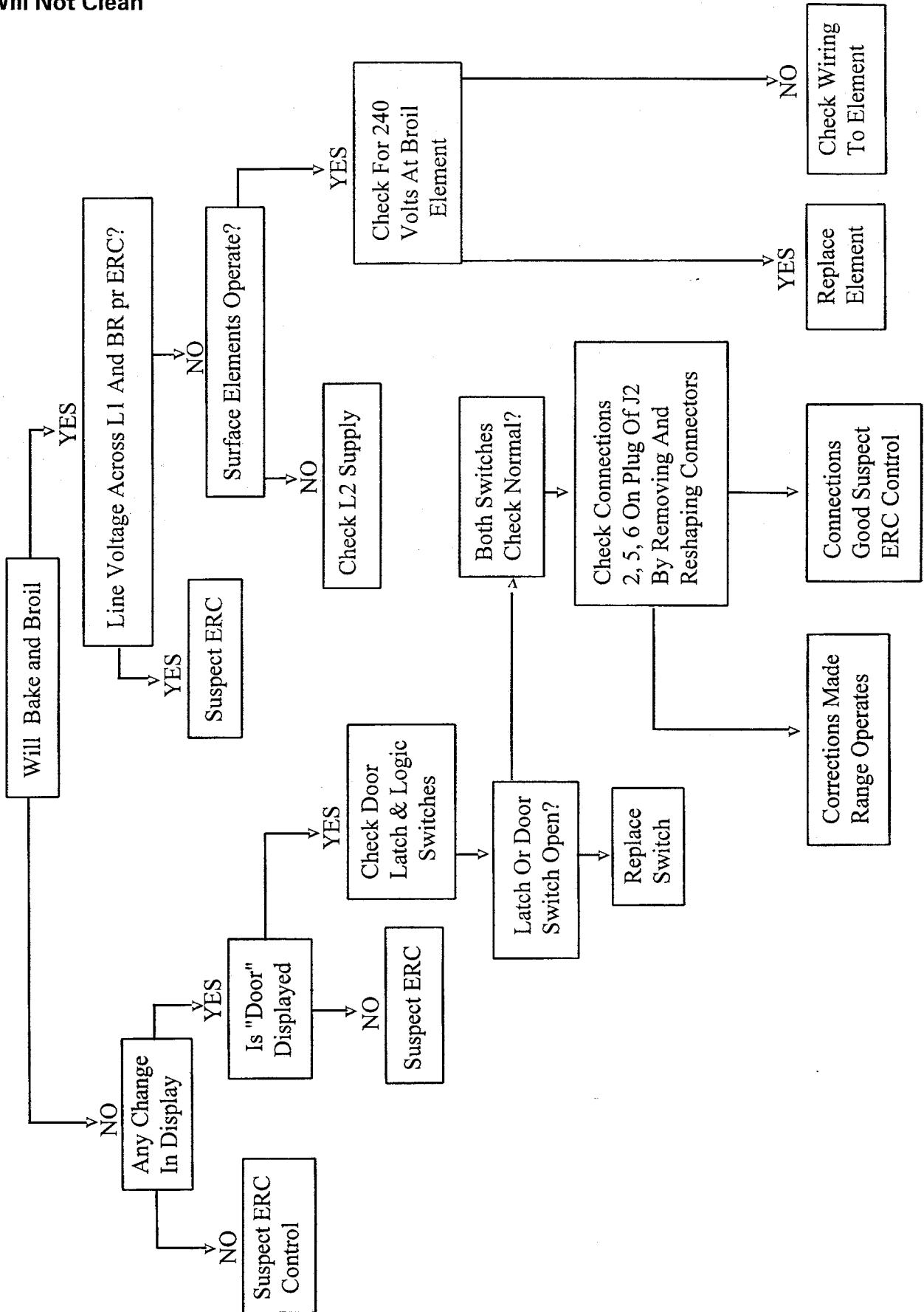
FLOW CHARTS

Will Not Bake

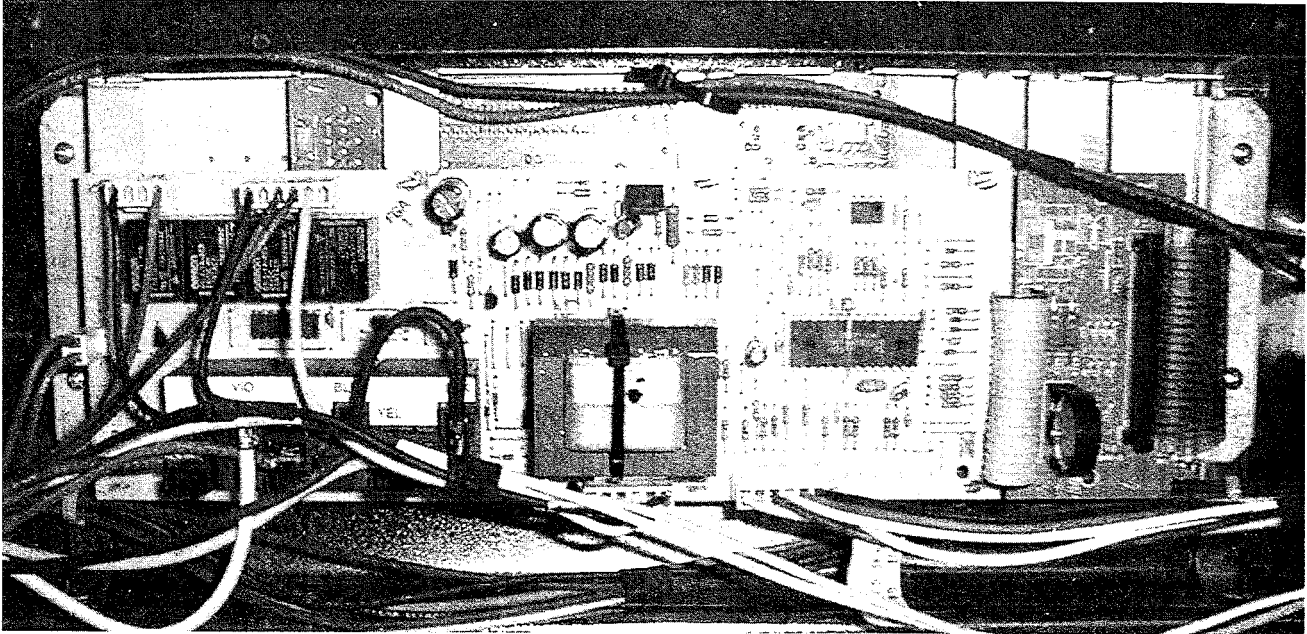


Will Not Broil





ELECTRONIC RANGE CONTROL



ELECTRONIC CONTROL

ELECTRONIC TEST FOR ELECTRONIC RANGE CONTROL

ELECTRICAL TEST FOR ELECTRONIC RANGE CONTROL				
Programmed for BAKE	Check Voltage	YEL to WHT 120 Volts	BLU to WHT 120 Volts	
Programmed for LO or HI BROIL	BLU to WHT 120 Volts			
Programmed for Main Dish	Check Voltage	YEL to WHT 120 Volts	BLU to WHT 120 Volts	1 to 2* 24 VDC
Programmed for Baked Goods	Check Voltage	YEL to WHT 120 Volts	BLU to WHT 120 Volts	1 to 2* 0 Volts
Programmed for DEFROST (60 Min. or Less)	Check Voltage	YEL to WHT 120 Volts	BLU to WHT 120 Volts	1 to 2* 24 VDC
Programmed for DEFROST (Over 60 Min.)	Check Voltage	YEL to WHT 0 Volts	BLU to WHT 0 Volts	1 to 2* 24 VDC

* 1 to 2 on the two pin connector on the electronic control.

OPERATING PARAMETERS

Bake	170° F - 550° F ($\pm 25^\circ$ F)
Lo Broil	450° F ($\pm 15^\circ$ F)
Hi Broil	550° F ($\pm 15^\circ$ F)
Maximum Bake or Broil Temperature	550° F
Clean	865° F ($\pm 15^\circ$ F)
Maximum Clean Temperature	950° F
Door Locks	400° F
Door Unlocks	Temperature Below 400° F
Controller Requires	120 VAC, 60 Hz

Fault Code Information

Fault	Suspect Failure Area	Correction	Fault	Suspect Failure Area	Correction
F0:0	None		F1:9	Control not Calibrated	Replace control
F1:1	Oven temperature >650° F	Check sensor, harness, and connections	F1:A	Latch Switch	Check door lock switches
F1:2	Oven temperature >950° F	Check sensor, harness, and connections	F1:C	Door Switch	Check door switch
F1:3	Shorted key in membrane switch	Check membrane switch for debris or damage. If ok, replace control	F1:E	Control not calibrated	Replace control
F1:4	Membrane disconnected	Check membrane switch tail for connection or damage. If ok, replace control	F1:F	Jumper wire disconnected	Check jumper wire connection replace control
F1:5	Cancel key not responding	Check membrane switch for connection or damage. If ok, replace control.	F1:H	EEPROM, Read, Control	Replace control
F1:7	Slave microprocessor not functioning	Replace control	F1:N	VCC, Control	Replace control
F1:8	EEPROM error	Replace control	F2:1	Door state input circuitry failure	Check position of lock and unlock switches
F3:1	*Sensor is shorted or open	Check sensor, harness, and connections	F9:1	Door lock will not lock	Check door lock harness, connections, and motor for rotation

Oven Temperature Adjustment

1. Press the BAKE pad and select 550°F.
2. **Press and hold** the BAKE pad for several seconds until 00° appears in the display
 - If 00° does not appear in the display, press the CANCEL pad and begin again.
 - If the oven temperature was previously adjusted, the change will be displayed. For example, if the temperature was reduced by 15° - 15° will be displayed.
3. Press the AUTASET Pad to select the temperature change desired. The oven temperature can be increased up to 35° or reduced by as much as 35° (-35°) in 5° increments.

Note: If you delay in selecting a temperature, the program will automatically cancel and 00° will disappear. Begin again if the program cancels.

4. Press the CANCEL pad and the time of day will reappear in the display. The oven will now bake at the adjusted temperature.
5. It is not necessary to readjust the oven temperature if there is a power interruption. This adjustment will not affect broil, clean, Main Dish, or Baked Goods operations.

ELECTRONIC CONTROL - DC VOLTAGE CHECKS

Description - Voltage Readings at ERC Connectors (All Readings Are DC Voltage)								
DC Voltage	1	2	3	4	5	6	7	
Speed Bake Selected	7.0	0.7	0.7/8.0	8.6	8.6	-.07	NC	-0-
No Program Selected	-7/-19*	+15	+10	+10	+10	-.01	NC	-0-
No Signal J2 Harness Unplugged From Control Measured from J2 on Electronic Control	-15/-20*	0.3*	0.3*	10.6*	0.3*	-.02	NC	-0-
Speed Bake Selected J2 Unplugged Measured From J2 On Electronic Control	-15/-20*	0.5	0.2/0.5	8.9	0.4	-.03	NC	-0-

Note: Voltage with * vary depending on meter load. An analog meter will have lower meter readings even to the point of zero on the 0.3 readings at J2 with harness unplugged with no program.

Remote Relay Connection	J1 Harness Connection	Wire Connections	J2 Harness Connection	ERC Control Connection
Mag Feedback	1	-----	1	Mag Feedback
Mag On/Off	2	-----	2	Mag On/Off
Stirrer	3	-----	3	Stirrer
VR (Relay Voltage)	4	-----	4	VR (Relay Voltage)
Door Lock	5	-----	5	Door Lock
AC Power	6	-----	6	AC Power
	7		7	
Ground	8	-----	8	Ground

Note: These voltages will hold true if test is made at J1 on Relay Board.

SURFACE ELEMENT – Ceran

Disconnect the appliance from power source before servicing.

Verify there is proper voltage applied to the oven (the range may have blown a fuse or circuit breaker). A quick check is to see if the other elements heat. If not, check the voltage at the electrical outlet and check to see that the power cord is wired correctly.

Utensils with uneven, warped, or grooved bottoms do not make good contact, reduce heat conductivity, and result in slower, less even heating, and may not get enough heat to bring water to a boil.

To Check Surface Element:

1. **Disconnect the appliance from power source before servicing.**
2. Remove screws securing top to burner box. Once the screws are removed the top may be raised for testing.

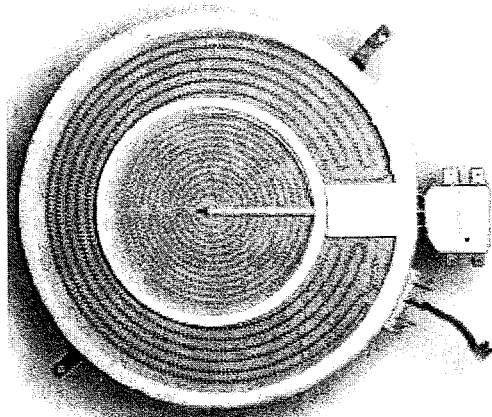
Size/wattage	Voltage	Amps	Ohms
6"/1200W	240 V	5	48Ω
8"/2200W Dual/2200W	240 V	9.3	26Ω
(Outer) Dual/750W	240 V	9.3	26Ω
(Inner)	240 V	3.3	73Ω

Utensils with uneven, warped, or grooved bottoms do not make good contact. Reduce heat conductivity, which results in slower, less even heating, and may not get enough heat to bring water to a boil.

To Check Surface Element:

1. **Disconnect the appliance from power source before servicing.**
2. Remove screws securing top to burner box. Once the screws are removed the top may be raised for testing.
3. With power to the unit reconnected, set the control switch for this element on the high setting. With a voltmeter set on 250 or 300-volt scale, check for voltage at the terminal block, then check the surface element.

4. Visually check the element for evidence of damage or shorting. Then check the element for continuity with an ohmmeter connected to the element terminals. With ohmmeter set at RX1, resistance will normally be below 28 ohms on left front and right rear, below 48 ohms on left rear, and below 75 ohms on the right front dual element.



DUAL ELEMENT

Each heating element is equipped with a temperature limiter, which prevents heat surges and ensures that the heating elements will not overheat.

The "Hot Surface" Light will come on indicating when Ceran surface is 150°F ±50°F. The Hi-Limit will shut burner off at 1050°F ±60°F.

BAKE/BROIL UNIT

Disconnect the appliance from power source before servicing.

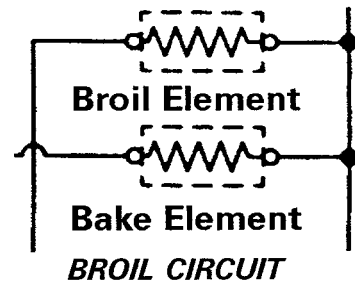
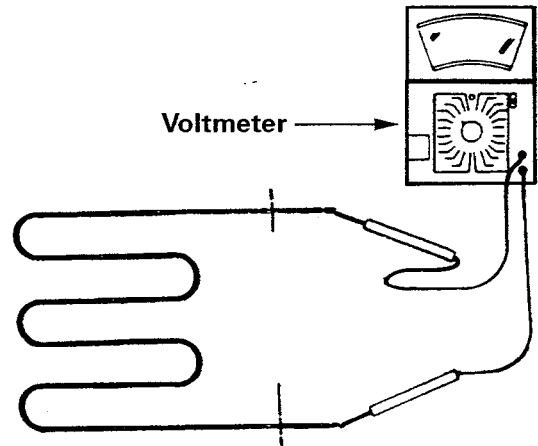
Visually check for burned spots (or results of arching) then carefully remove the element and check for continuity.

With wires removed from unit, check continuity using ohmmeter set at RX1. Read ohmmeter with probes placed as shown in illustration.

Reading should be approximately 19 ohms. No reading indicates element is faulty and should be replaced.

Broil rating: 3000 watts, 12.5 Amps @ 240 V.

Bake rating: 3000 watts, 12.5 Amps @ 240 V.

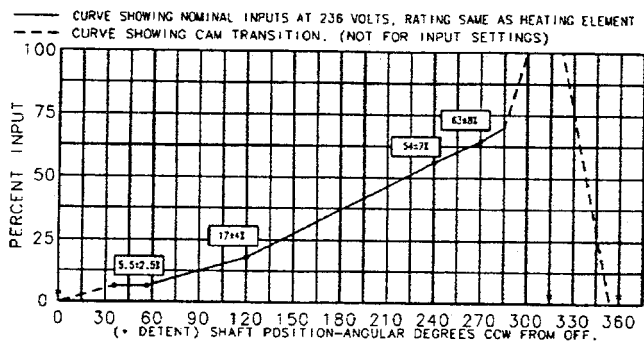


BROIL CIRCUIT

INFINITE SWITCH

Infinite control (current sensing) switches are the most common control switch used to control surface units. This type switch is not serviceable and must be replaced if not functioning properly. This type switch "cycles" to maintain switch setting.

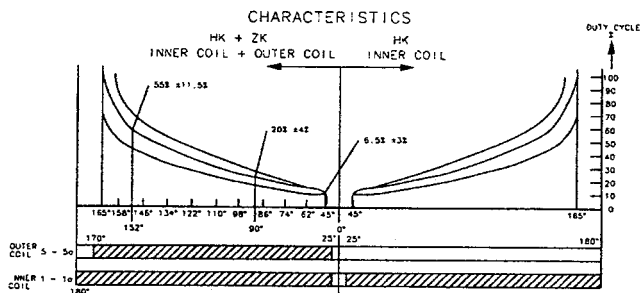
Note: A current sensing switch will not cycle at any setting if the load is disconnected.



Infinite Switch (1)

Infinite switches that are current sensing must be matched to appropriate element.

Silver Shaft	1200 Watts
Silver Shaft with Red Dot	2600 Watts
Brass Shaft	2600 Watts (Outer)/750 Watts (Inner)



Infinite Switch (2)

Disconnect the appliance from power source before servicing.

With ohmmeter set at RX1, switch set at high position, and the outer element chosen, there should be continuity reading between terminal 5 and 5a, and terminal 2 and 2a.

NO reading between 5 and 5a, and/or 2a and 2 indicates and inoperative switch.

With ohmmeter set at RX1, switch set at high position, and the inner element chosen, there should be continuity reading between terminal 1 and 1a, and terminal 2 and 2a.

NO reading between 1 and 1a, and /or 2 and 2a indicates and inoperative switch.

With power to range, the voltmeter reading of switch from L1 terminal to L2 (terminal 5 to 2 on the dual switch) should read approximately 240VAC.

With power connected to range and switch turned to high setting, the voltmeter reading from H1 terminal to H2 terminal (5a terminal to 2a terminal on the outer element and 1a terminal to 2a terminal on the inner element of the dual switch) should read approximately 240VAC.

OVEN SENSOR

The oven sensor is located inside the oven cavity, attached to the rear wall of the cavity. As the oven temperature increases, the resistance of the oven sensor increases. The resistance is measured by the electronic control to determine the oven temperature.

To Test the Oven Sensor (Continuity)

1. Disconnect the appliance from power before servicing.
2. Allow the oven and oven sensor to cool to room temperature.
3. Remove the sensor probe cover located at the rear of the range directly behind the mounting location of the oven sensor.
4. Disconnect the oven sensor at the connector blocks.
5. Connect an ohmmeter across the terminals of the oven sensor connector block.

6. At room temperature of between 60° to 80° F, the resistance should be between 1060 and 1100 ohms.
7. Connect one ohmmeter lead to one of the terminals of the oven sensor connector block and the other lead to the ground on the range.
8. If any resistance other than infinite resistance (open) is indicated, the oven sensor could be defective.
9. Reattach the connector block and sensor probe cover.

INTERLOCK SWITCHES MODE OF OPERATION

The Accellis 2x range electronic control has four (4) wire harness connectors. P4 is a seven-pin connector with pin #6 not used. It is used for the oven sensor and self clean door latch. P5 is a four-pin connector and pin #2 and #6 are not used. It is used to supply power to the ERC. P10 is a six-pin connector and pin #2 is not used. It is used to control the door lock motor, fan, and stirrer. P11 is a five-pin connector and pin #2 is not used. It controls the high voltage relay and halogen light transformer.

Connector P4 has the oven sensor connected to pin #1 and #4.

Pin #2 and #7 are connected to the door logic switch located on the left side of the range. This switch is closed any time the door is closed.

Pin #2, #3, and #5 are connected to the latch logic switches located under the maintop. These switches are used for the self-clean motorized latch.

Note: *Actual operation of the electronic control is not dependent on the position of primary or secondary interlock switches. The primary interlock switch normally open terminal is connected to line via the inner chassis connectors and the microwave fuse located on the lower microwave chassis.*

Switch action of the primary interlock switch can be checked by opening/closing the door and measuring for 120 VAC between the COM and NO terminals of the primary switch. The primary switch is located on the right side of the range behind the side panel. Voltage should be present between these terminals any time the door is open.

The secondary interlock switch is located on the left side of the range behind the side panel and is closed any time the door is closed. The secondary switch provides the neutral path for the high voltage transformer primary. The NO terminal is connected directly to neutral and the COM terminal is connected to the transformer primary.

NOTE: *Actual operation of the electronic control is not dependent on the position of the secondary switch.*

Switch action of the secondary interlock switch can be checked by measuring for zero ohms between neutral and Pin #12 of the inner chassis connector with the door closed or by measuring across the COM and NO terminals of the switch. It is imperative that the oven NOT be programmed when making this test to avoid damage to the ohmmeter. For additional meter safety, remove one wire from the magnetron high limit switch when making this test.

Interlock Switches - Testing

To Test the Primary Interlock Switch

1. **Disconnect the appliance from power source before servicing.**
2. Raise the maintop and remove the right side panel.

3. Remove the wires from the terminals of the primary interlock switch.
4. Connect an ohmmeter to the C and NO terminals of the switch. Infinite resistance should be indicated when the switch lever is not depressed. Continuity should be indicated when the switch is depressed.

Note: *If infinite resistance is not indicated when the switch lever is not depressed the operation of the interlock monitor switch should also be tested.*

5. Reconnect wires.

To Test the Secondary Interlock Switch

1. **Disconnect the appliance from power source before servicing.**
2. Raise the maintop and remove the left side panel.
3. Remove the wires from the terminals of the secondary interlock switch.
4. Connect an ohmmeter to the C and NO terminals of the switch. Infinite resistance should be indicated when the switch lever is not depressed. Continuity should be indicated when the switch is depressed.

Note: *If infinite resistance is not indicated when the switch lever is not depressed the operation of the interlock monitor switch should also be tested.*

5. Reconnect wires.

Interlock Monitor Switch

If the primary and secondary interlock fails to open when the door is opened, then the circuit from the power side of the line, through the fuse, primary interlock, the monitor switch, and secondary interlock switch to neutral is completed. The result is

short circuit, which causes the fuse to rupture. Operation of the microwave section with the door open is then prevented.

To Test the Interlock Monitor Switch

1. **Disconnect the appliance from power source before servicing.**
2. Raise the maintop and remove the right side panel.
3. Remove the wires from the terminals of the monitor interlock switch.
4. Connect an ohmmeter to the C and NC terminals of the switch. Continuity should be indicated when the switch lever is not depressed. Infinite resistance should be indicated when the switch is depressed.

Monitored Switch Replacement

If the unit does not operate due to a fault of the primary interlock switch, secondary interlock switch, or monitor switch, then the primary, secondary, and monitor switches must be replaced. Any unexplained failure of the fuse "F1" will require the replacement of the primary, secondary, and monitor switches.

To Test the Door Logic Switch

1. **Disconnect the appliance from power source before servicing.**
2. Raise the maintop and remove the left side panel.
3. Remove the wires from the terminals of the door logic switch.
4. Connect an ohmmeter to the C and NO terminals of the switch. Infinite resistance should be indicated when the switch lever is not depressed. Continuity should be indicated when the switch is depressed.

SECTION 6. MICROWAVE THEORY AND GENERAL OPERATIONAL TESTING

GENERAL

Radio frequency of the microwave oven is 2450 MHz, this is the radio broadcast band, not in the x-ray band. Food is cooked by agitation when RF energy strikes the molecules. This agitation is caused by the molecules in the food trying to align with the 2450 MHz RF energy. Since the energy of 2450 MHz will change polarity every half cycle, due to its half-wave doubling/rectifying circuit, the food molecules will also change every half second; therefore, the food molecules will oscillate 4,900,000,000 times a second – this molecular oscillation produces heat, and this heat cooks the food.

Basic Theory And Operation

The High Voltage (H.V.) section in all microwave ovens is the part that does the cooking (See Figure 1). In this H.V. section the H.V. Transformer has an output voltage at its secondary of approximately 2,000 VAC; however, the magnetron will not cook unless it also receives at least 2.9 VAC to its filament winding. The filament transformer normally provides 3.0 – 3.6 VAC. To increase the 2,000 VAC to 4,000 VDC, a half-wave doubler circuit is used. It consists of the capacitor and diode (often referred to as a rectifier). To accomplish this, the following sequence of events occur:

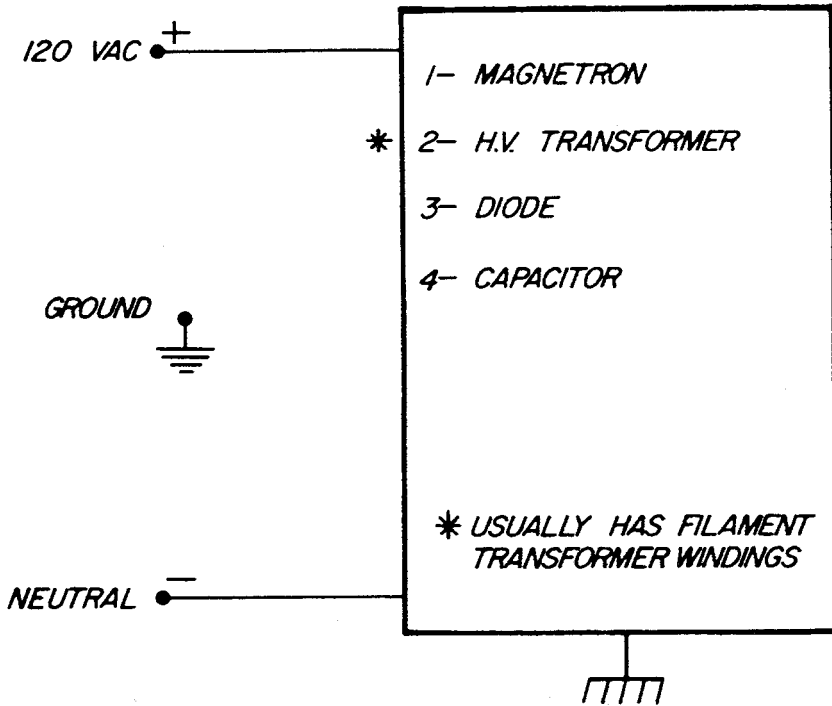
1. The 120 VAC is increased to 2,000 VAC by the windings on the H.V. Transformer (Figure 1.B and Figure 1.C).
2. On the positive cycle of the sine wave (Figure 1.C (2)) the capacitor in Figure 1.B is charged because the diode (rectifier) will conduct one way, to chassis ground, allowing a completed circuit. This half-wave action will also leave a 2,000 V (-)

charge at the capacitor, on the magnetron side. If you have positive (+) voltage on one side of the capacitor the other side must be negative (-).

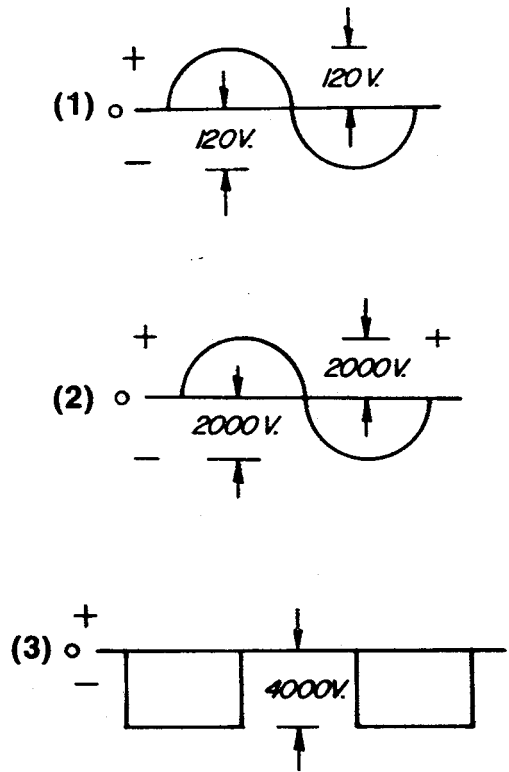
On the negative cycle of the sine wave (Figure 1.C (2)), the polarity of the 2,000 V secondary winding has now reversed, positive (+) is now negative and negative (-) is now positive. Also the capacitor at Figure 1.D still has its negative charge of 2,000 V (-). As the sine wave goes negative, see Figure 1.C (2), the 2,000 VAC is added to the 2,000 V stored on the capacitor and the combined 4,000 V now is sufficient to fire the magnetron. The voltage to fire the magnetron is 4,000 DC (-), see Figure 1.C (3) and figure 1.D.

The diode and magnetron plate causes the AC voltage to be rectified, which is changed to DC voltage every one-half cycle, per Figure 1.C (3). However, in actuality we do not get perfect voltage doubling action from the half-wave doubler circuit, this voltage is usually 3,400 to 3,800 VDC. Because Terminal 6 on the H.V. Transformer is usually 1,750 V (+) or (-) 50 V and Terminal 7 is usually 1,850 V (+) or (-) 50 V, as an example 1,700 V (+) on the low tap (terminal 6) doubled would be converted to 3,400 VDC (-).

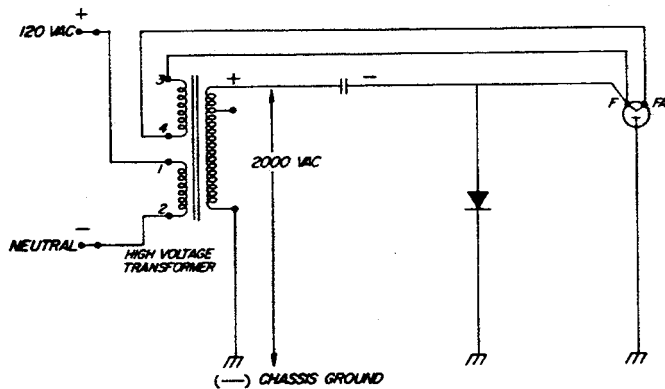
1.A
H.V. SECTION



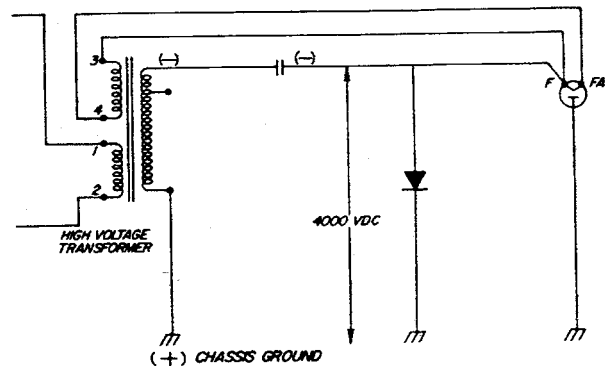
1.C
HALF-WAVE DOUBLER
SINE WAVE



1.B
PLUS CYCLE OF
DOUBLING ACTION

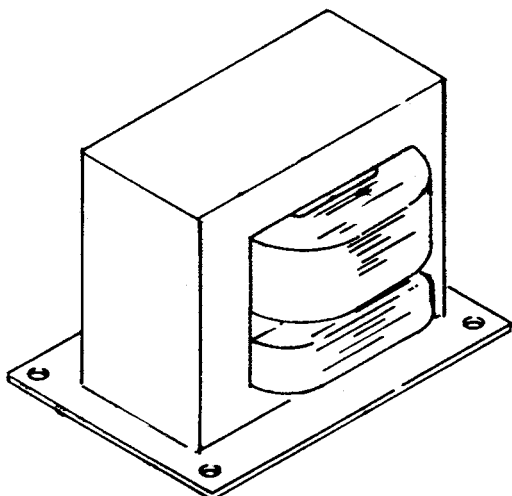


1.D
NEGATIVE CYCLE OF
DOUBLING ACTION



MICROWAVE ART WORK

HIGH VOLTAGE COMPONENT TEST



TRANSFORMER

The high voltage section consists of the transformer, diode, capacitor, and magnetron.

Transformer

The transformer is used to produce two separate voltages. It consists of a primary winding and two secondary windings.

The primary winding is connected to the line voltage circuit. A secondary winding (Filament winding) is connected to the magnetron cathode and supplies the voltage necessary to heat the cathode filament.

The other secondary (high voltage winding) supplies the voltage necessary to power the magnetron.

Note: *No attempt should be made to check either the filament voltage or high voltage produced by the transformer. Operate the transformer only when it is mounted in position.*

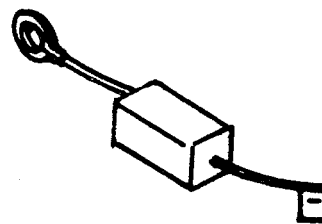
To Check the Transformer

1. **Disconnect the appliance from power source and discharge the capacitor before servicing.**

2. Remove the wires from the transformer connections, noting the location.
3. Check for continuity across the transformer primary terminals. Continuity in the range of approximately 0.5 ohms should be indicated.
4. Check for continuity across the filament secondary, terminals F and FA. Resistance in the range approximately 0.1 ohms should be indicated. Check for resistance from the HV terminal to chassis ground. Resistance in the range of approximately 100 ohms should be indicated.
5. Reconnect wires.

Diode

The diode is used in the process of converting (rectifying) the AC voltage produced by the transformer to a DC voltage sufficient for operation of the magnetron.



DIODE

CAUTION

No attempt should be made to check the voltage across the diode. Do not contact the diode or diode leads when the unit is in operation.

To Check the Diode:

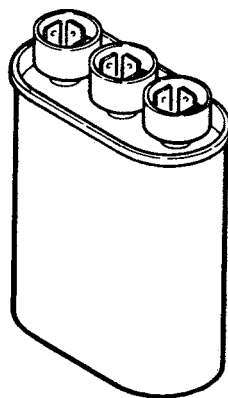
1. Disconnect the appliance from power source and discharge the capacitor before servicing.
2. Disconnect one lead of the diode.
3. Connect an ohmmeter across the diode terminals and note the reading.
4. Reverse the ohmmeter connections and note the readings.
5. Resistance in one direction should be in the approximate range of 50,000 to 200,000 ohms (50K – 200K ohms). Infinite resistance (open) should be indicated in the other direction.

Note: *A lower power digital or analog ohmmeter may not provide sufficient voltage in the resistance ranges to produce an accurate indication.*

6. Reconnect the diode.

Capacitor

The capacitor is used in the process of converting the voltage produced by the transformer to a voltage sufficient for operation of the magnetron.



CAPACITOR

Note: *No attempt should be made to check the voltage across the capacitor.*

The capacitor contains an internal bleeder resistor. The resistor allows the capacitor to discharge after the appliance is turned off.

CAUTION

Never assume that the bleeder resistor has discharged the capacitor. After disconnecting the appliance from power and prior to service, discharge the capacitor with the blade of an insulated screwdriver connected across the capacitor terminals.

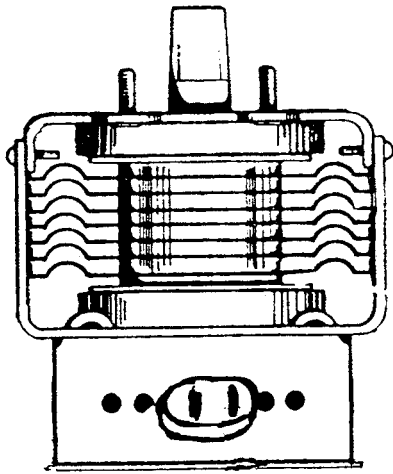
To Check the Capacitor:

1. Disconnect the appliance from power and discharge the capacitor.
2. Remove the wire(s) from one terminal of the capacitor.
3. Connect an ohmmeter set to a high resistance range (RX10,000) across the capacitor terminals.
4. The meter needle should quickly move towards zero then back, to the value of the bleeder resistor, near infinity.
5. Connect one lead of the ohmmeter to the capacitor case. Infinity (open) should be indicated.
6. If the capacitor is suspected then substitute a replacement capacitor and test operation.

Magnetron

The magnetron produces the electromagnetic energy (microwave RF cooking power).

The magnetron is a power oscillator diode vacuum tube, which consists of a cathode and a plate. The cathode contains the filament (F, FA) and the plate is connected to ground. Current flow in the magnetron is from the cathode to the plate when sufficient plate voltage is applied from the cathode to the plate. When current flows in the



MAGNETRON

magnetron, microwave frequency energy is developed. This energy is coupled from inside the magnetron and is radiated into the wave-guide in the form of radio waves at microwave frequency. The radio waves are then directed to the stirrer and to the oven cavity to produce the microwave cooking results.

IMPORTANT

No attempt should be made to measure the voltages at the magnetron filaments or the plate voltage. Operate the magnetron only when properly mounted in position.

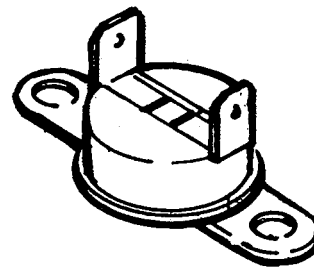
To Check Continuity of the Magnetron:

1. **Disconnect the appliance from power source and discharge the capacitor before servicing.**
2. Disconnect the magnetron filament wires (F and FA), noting the location.
3. Connect an ohmmeter to the filament terminals. Continuity in the range of approximately 0.1 ohms should be indicated.

4. Connect one lead of the ohmmeter to chassis ground. Infinite resistance (open) should be indicated. If infinite resistance (open) is not indicated then suspect the magnetron.
5. Reconnect wiring, insuring that the terminals are not loose or corroded.

Limit Switch

The temperature limit switch is located on the side of the magnetron. The switch is a normally closed automatic reset with an operating temperature of 230°F.



LIMIT SWITCH

The limit switch completes the circuit to the primary of the transformer. When the operating temperature of the switch is reached, the switch opens and prevents microwave operation.

To Check Limit Switch Continuity:

1. **Disconnect the appliance from power source and discharge the capacitor before servicing.**
2. Remove the wires from the terminals of the switch.
3. Connect an ohmmeter to the switch terminals.
4. Continuity should be indicated when the switch is below operating temperature.
5. Reconnect wires.

DC Load Test Procedure

With power removed from the range and after discharging the capacitors, with all wires connected and using an ohmmeter, measure from the anode of the high voltage diode to chassis ground. The resistance should be a standard front to back ratio.

- If an analog meter is used set the meter scale for RX10,000, a resistance reading in one direction and close to infinite the other direction should be made. With a digital meter the resistance will be close to infinite in both directions.
- Set ohmmeter to RX1 scale or lowest scale on digital meter and connect ohmmeter from chassis ground to the center terminal of the high voltage capacitor, the resistance reading should be approximately 100 ohms.
- If the DC Load test checks good measure primary winding of the transformer. Resistance measurement should be less than one ohm.
- Remove the heavy red wire from the capacitor terminal the diode is connected on. With an ohmmeter measure from that terminal to the wire just removed, the resistance should be less than one ohm.
- Measure the filament winding. If these measurements are made and if the 120VAC is present on terminal VIO of the electronic control and the microwave does not operate the magnetron is suspected.

Magnetron Plate Current Test

It is necessary for the serviceman to have a 10-ohm, 10-watt wire-wound resistor to perform the magnetron plate current test. This resistor is available from an authorized parts distributor.

To order, ask for plate current test kit, part number: P/N 605-0005.

IMPORTANT

Do not attempt to check the magnetron plate current without this resistor. Do not attempt to check the magnetron plate current without following the instructions below.

1. **Disconnect the oven from the AC power source and use a screwdriver with an insulated handle to short the terminal of the power supply capacitor.**
2. Remove the screw connecting the ground terminal of the diode. Attach a 10-ohm, 10-watt wire-wound resistor between the diode ground terminal and oven ground.
3. Connect the positive lead of a multi-meter, set to (+) 10 VDC scale, to the junction of the diode and 10 ohm resistor. Connect the negative lead to the oven ground side of the resistor.

CAUTION

Be certain polarity is correct, or damage to the meter may result.

4. Connect the oven to the AC power source. Place a cup of water in the oven cavity and close the oven door. Program the oven for Main Dish for 10 minutes.
5. The meter should indicate between 1.5 and 2.0 volts. This reading is the voltage drop across the 10-ohm resistor, installed in step (2). If you divide the voltage reading you get, by ten, the resulting answer will be the plate current in milliamps.

EXAMPLE: Meter reads 2 volts, 2 divided by 10 = .20 which is 200 milliamps.

This simple test is an application of Ohm's Law which states that $I=E/R$. In this case we have put a resistor (R) in series with the magnetron plate. Since in a series circuit the current flow (I) is the same through any component in the circuit, when we measure the voltage (E) and complete Ohm's Law calculations, the result, which is the current flow through the resistor, is also the magnetron plate current.

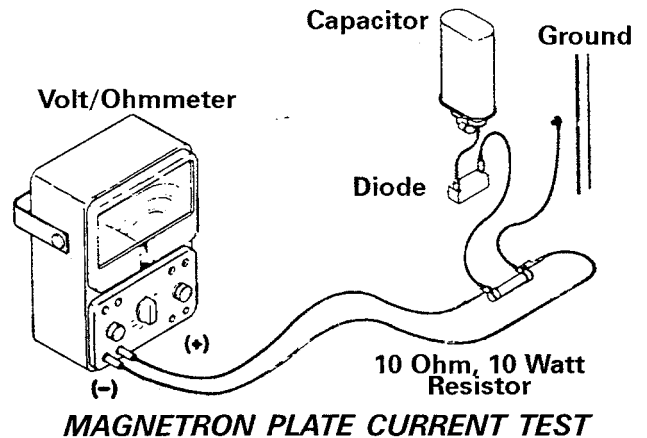
EXAMPLE:

- A. Basic Ohm's Law $I=E/r$
- B. Substitute resistor value $I=E/10$
- C. Substitute voltage reading $I=2/10$
- D. Divide voltage by resistance $2/10=.20A$
- E. Convert amps to milliamps

(1 Ampere =1,000 mA)
 $.20 \times 1,000=200 \text{ mA}$

- 1. Use the following indications to determine if a magnetron is defective and needs replacement.
 - a. Fluctuating plate current, or extremely low current.
 - b. A reading excessively higher than 400 milliamps indicates the magnetron is possibly shorted and should be replaced.
 - c. A reading that varies between 100 and 400 milliamps with quite a bit of fluctuation indicates the magnetron is moding, and should be replaced. Also, if a magnetron gets very hot in a short period of time it is moding.
 - d. When the test is completed open the oven door and disconnect the oven from the AC power source. Using a screwdriver with an insulated handle, discharge capacitor.

- e. Remove the 10 ohms, 10-watt resistor and **reconnect the ground lead of diode to oven ground.**
- f. If a magnetron is determined to be defective, replace it according to the procedure outlined in SECTION 3.



INTERLOCK MONITOR FUSE FAILURE

Any unexplained failure of the interlock monitor fuse, will require the replacement of the primary interlock switch, secondary switch, and monitor switch. Replacement procedures for these switches are outlined in SECTION 3.

COMPONENT TEST PROCEDURES

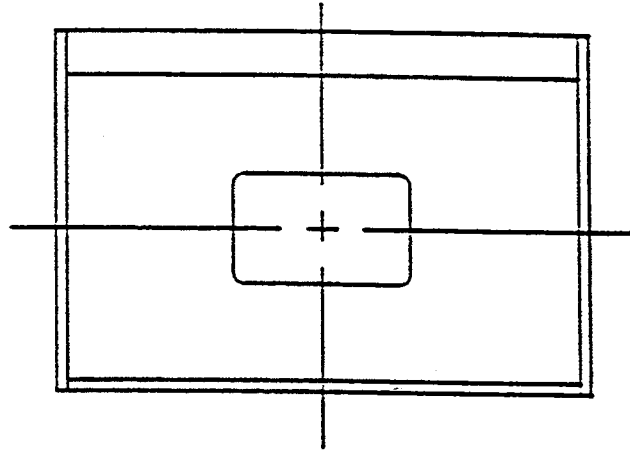
Most testing of the microwave oven consists of resistance and/or continuity test. The appliance must be disconnected from the AC power source of these tests. A resistance test will usually suffice for a motor or transformer. However, qualified service personnel may prefer other methods. If a voltage test must be performed, connect the voltmeter BEFORE energizing the microwave oven. In any event, the manufacturer recommends no attempt be made to **measure high voltage within the microwave oven cavity. Make certain controls are set correctly for the test being performed.**

Testing For Microwave Leakage

Perform the microwave leakage test using an approved RF measuring device and following the steps outlined below:

1. Fill a 600-cc glass beaker with 275 ml of water and place in the approximate center of oven cavity.
2. Program control for Main Dish for 10 minutes and lock oven door.
3. While the oven is operating, check around the perimeter of the oven with the RF meter probe. Move the probe no faster than one (1) inch per second.
 - Check around the door.
 - Check across the wire cover and pedestal.
 - Check horizontally across the door.
 - Check vertically across the door.
 - Check diagonally across the door.
 - Check across the air vents and main top.
 - Check across the rear air louvers on main back.

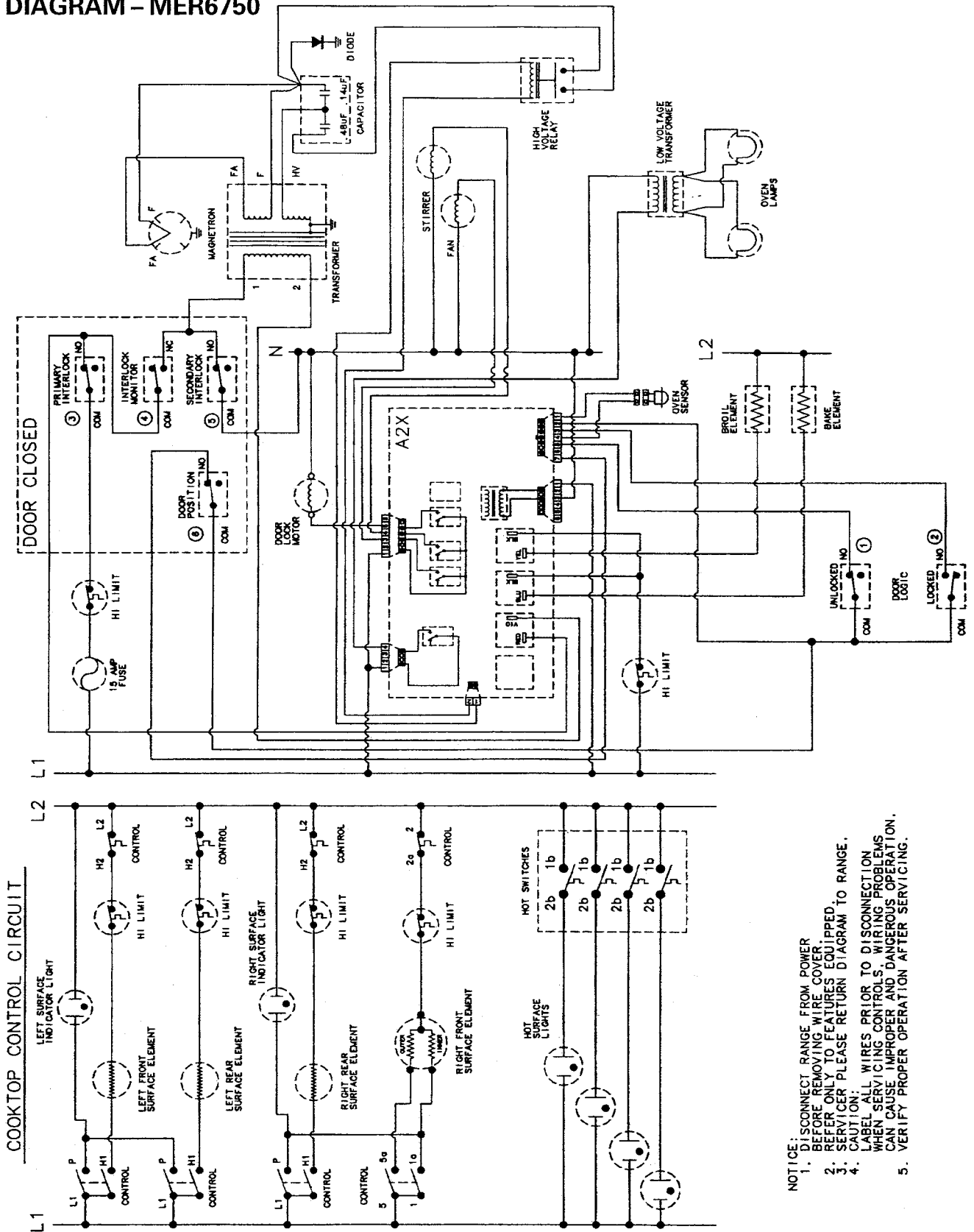
When the point of maximum leakage is found, rotate the probe until a peak reading is obtained. Then apply pressure to the door edge to see if the reading increases. The maximum leakage shall not exceed 5 mW/cm² for any microwave tested in the field. All surface and vent openings should be checked. If the test indicates the leakage is below 5 mW/cm², the oven is operating normally and no repairs or adjustments are required. If the test indicates leakage in excess of the 5 mW/cm² limit, the oven should be repaired at once. The owner should be instructed not to use the unit until the oven has been brought into compliance. If the test indicates leakage in excess of 5 mW/cm², then a report must be filed immediately with the manufacturer.



RF LEAKAGE TEST (DOOR)

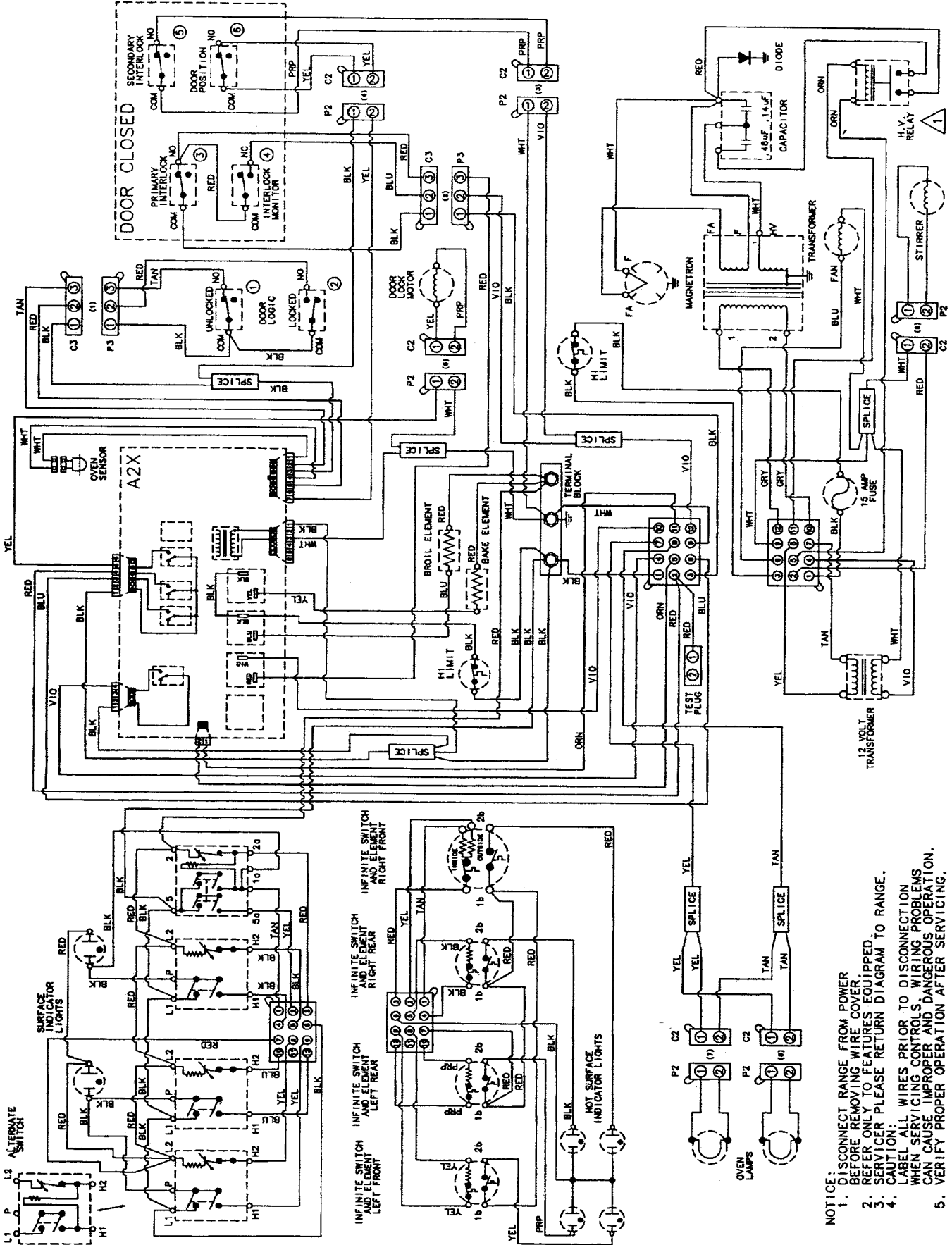
SECTION 7. WIRING DIAGRAMS

DIAGRAM - MER6750



- NOTICE:**
1. DISCONNECT RANGE FROM POWER BEFORE REMOVING WIRE COVER. REFER ONLY TO FEATURES EQUIPPED TO RANGE.
 2. SERVICER PLEASE RETURN DIAGRAM TO RANGE.
 3. CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING PROBLEMS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.
 4. VERIFY PROPER OPERATION AFTER SERVICING.

SCHEMATIC - MER6750



NOTICE:

1. DISCONNECT RANGE FROM POWER BEFORE REMOVING WIRE COVER.
2. REFER ONLY TO FEATURES EQUIPPED.
3. SERVICER PLEASE RETURN DIAGRAM TO RANGE.
4. CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING PROBLEMS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.
5. VERIFY PROPER OPERATION AFTER SERVICING.

MAYTAG

Maytag Appliances Sales Company

Customer Service
240 Edwards St.
Cleveland, TN 37311