

SERVICE MANUAL

for the



FREESTANDING SELF-CLEAN ELECTRIC RANGE

THIS MANUAL CONTAINS INFORMATION
NECESSARY FOR INSTALLING AND SERVICING
THE FOLLOWING FREESTANDING SELF-CLEAN
ELECTRIC RANGES, MODELS:

WHIRLPOOL

RF350OXE W/N	RF376PXE W/N
RF350BXE W	RF376PXE Q
RF354BXE W	RF385PXE W/N
RF360BXE W/N	RF385PXE Q/Z
RF364BXE W/N	RF386PXE W/N
RF372BXE W/N	RF386PXE Q/Z
RF372BXE Q/Z	RF395LXE Q/Z/B
RF375PXE W/N	RF396LXE Q/Z/B
RF375PXE Q	

ROPER

FES330E W/N	
FES330E Q	FES364E W/N

ESTATE

TES325E W

THE MANUAL IS DESIGNED TO BE USED
ONLY BY QUALIFIED SERVICE PERSONNEL.
THE SERVICE INFORMATION IS ORGANIZED
TO HELP YOU EASILY FIND WHAT YOU NEED.

CHECK YOUR LOCAL BUILDING CODE FOR THE
PROPER MODE OF INSTALLATION. IN THE
ABSENCE OF LOCAL CODES, THIS UNIT
SHOULD BE INSTALLED IN ACCORDANCE WITH
*THE NATIONAL ELECTRICAL CODE, ANSI/NFPA
NO. 70 - 1990, OR LATEST EDITION, OR C22.1
CANADIAN ELECTRICAL CODE, PART 1.*



Table of Contents

	Page
Important Safety Information	iv
Installation Highlights	1-1
Range Dimensions	1-1
Cabinet Dimensions	1-2
Tools & Material You Will Need	1-3
Electrical Supply Requirements	1-4
Connecting The Range To An Electrical Supply.....	1-5
Installing The Range	1-8
Checking The Operation.....	1-11
Removing/Reinstalling The Oven door.....	1-14
Theory Of Operation	2-1
Component Access	3-1
Component Locations	3-1
Removing The Open Coil Maintop	3-2
Removing The Ceran Glass Maintop	3-4
Removing The Hot Surface Indicators	3-6
Removing A Surface Element & Limiter.....	3-8
Removing The Upper Console.....	3-10
Removing The Electronic Oven Control Or Mechanical Oven Thermostat	3-12
Removing A Surface Element Control & An Indicator Light.....	3-13
Removing An Open Coil Element & Connector Block.....	3-14
Removing The Oven Door Latch	3-15
The Latch Sensing Switch, Door Latch Solenoid, Mechanical Latch, & Actuator Rod	3-16
Removing An Oven Light Socket	3-18
Removing An Oven Light Switch	3-19
Removing The Bake Element	3-20
Removing The Broil Element	3-21
Removing The Oven Temperature Sensor & The Oven Thermal Fuse	3-22
Removing A Side Panel	3-23
Removing The Oven Door Gasket	3-24
The Oven Door Handle, Top Trim, & Outer Door Glass	3-25
Removing A Hinge Assembly.....	3-26
Removing An Inner Door Glass	3-28
Removing The Storage Drawer Glides	3-29
Component Description & Testing	4-1
Troubleshooting	4-1
Troubleshooting Chart	4-10
Oven Temperature Calibration	4-13
Error Codes	4-13
Tech Tips	5-1
Wiring Diagrams	5-1
Strip Circuits	5-3
Specifications	5-6
Model And Serial Number Explanation	5-27
Whirlpool Warranty	5-28

IMPORTANT SAFETY INFORMATION

This service manual is intended for factory-service technicians only. We recommend that customers DO NOT service their own units, because of the complexity and risk of high-voltage electrical shock.

The following information is used throughout this manual, and should be read carefully.

NOTE

Helpful information that explains a more complicated step, prior to carrying it out .

!CAUTION

Information that will help you avoid actions that could cause product damage (scratches, dents, etc.) and damage to personal property.

!WARNING

Information that alerts you to potentially dangerous conditions. These conditions can cause serious personal injury (burns, fire and electrical shock, etc.) if the suggested procedures are not observed.

!WARNING

Fire Hazard

Do not obstruct the flow of ventilation air.

Electrical Shock Hazard

It is the customer's responsibility to:

- Contact a qualified electrical installer.
- Assure that electrical installation is adequate and in conformance with the National Electrical Code, ANSI/NFPA 70—latest edition*, and all local codes and ordinances.

Failure to do so could result in fire, electrical shock, or other personal injury.

Take special care when drilling holes into the wall for venting or electrical wiring. Electrical wires may be concealed behind the wall covering.

Failure to do so could result in fire, electrical shock, or other personal injury.

* National Fire Protection Association
Batterymarch Park
Quincy, Massachusetts 02269

WHIRLPOOL ASSUMES NO RESPONSIBILITY FOR ANY
REPAIRS MADE ON OUR PRODUCTS BY ANYONE OTHER
THAN AUTHORIZED WHIRLPOOLSM SERVICE TECHNICIANS.

!WARNING

To reduce the risk of fire, electrical shock, injury to persons, or damage when using the range, follow these basic precautions:

1. Read all instructions before using the range.
2. Install or locate the range only in accordance with the provided installation instructions. It is recommended that the range be installed by a qualified installer. The range must also be properly connected to a grounded electrical supply.
3. Do not use the range for heating the room. Persons could be burned or injured, or a fire could start.
4. Do not leave children alone or unattended in area where the range is in use. They should never be allowed to sit or stand on any part of the range. They could be burned or injured.
5. Do not wear loose or hanging garments when using the range. Clothing could ignite if it touches a surface element and you could be burned.
6. Do not repair or replace any part of the range unless specifically recommended in this manual. All other servicing should be referred to a qualified technician.
7. Do not operate the range if it is not working properly, or if it has been damaged or dropped.
8. Clean your range regularly. See "Care and Cleaning" instructions that are included with the range.
9. Use the range only for its intended use as described in this manual.
10. Do not store flammable materials on or near the range. They could explode or burn.
11. Do not use water on grease fires. Never pick up a flaming pan. Smother flaming pan on range by covering with a well-fitting lid, cookie sheet or flat tray. Flaming grease outside of pan can be extinguished with baking soda, or if available, a multipurpose dry chemical or foam-type extinguisher.
12. Use only dry potholders. Moist or damp potholders on surface elements may result in burns from steam. Do not let the potholder touch a surface element. Do not use a towel or bulky cloth for a potholder. It could catch on fire.
13. Make sure the utensils you use are large enough to contain food and avoid boilovers and spillovers. Heavy splattering or spillovers left on a range can ignite and burn you. Pan size is especially important in deep fat frying.
14. Never leave elements unattended at high heat settings. A boilover could result and cause smoking and greasy spillovers that may ignite.
15. Grease is flammable and should be handled carefully. Let fat cool before attempting to handle it. Do not allow grease to collect around range or in vents. Wipe spillovers immediately.
16. Check to be sure glass cooking utensils are safe for use on the range. Only certain types of glass, glass-ceramic, earthenware or other glazed utensils are suitable for ranges. Other types may break due to the sudden change in temperature.

17. Turn pan handles inward, but not over other surface elements. This will help reduce the chance of burns, igniting of flammable materials, and spills due to bumping the pan.
18. Do not heat unopened containers. They could explode. The hot contents could cause burns and container particles could cause injury.
19. Do not use decorative covers or trivets over the surface elements.
20. Do not store things children might want above the range. Children could be burned or injured while climbing on range.
21. Do not touch hot surface elements or areas near elements. Areas near surface elements become hot enough to cause burns. During use, do not touch or let clothing or other flammable materials contact surface elements or areas near elements.
22. Do not block the ventilation.
23. Make sure that the elements are turned off when you are finished cooking , and when you are not watching.
24. Be sure all range parts are cool before cleaning.

INSTALLATION HIGHLIGHTS

RANGE DIMENSIONS

GENERAL

Proper installation is your responsibility. A qualified technician must install this range. Make sure you have everything necessary for correct installation. It is the responsibility of the installer to comply with the installation clearances specified on the model/serial rating plate. This plate is located on the frame behind the storage door panel. The range dimensions are shown below. **IMPORTANT:** Be sure to observe all governing codes and ordinances.

MOBILE HOME INSTALLATION

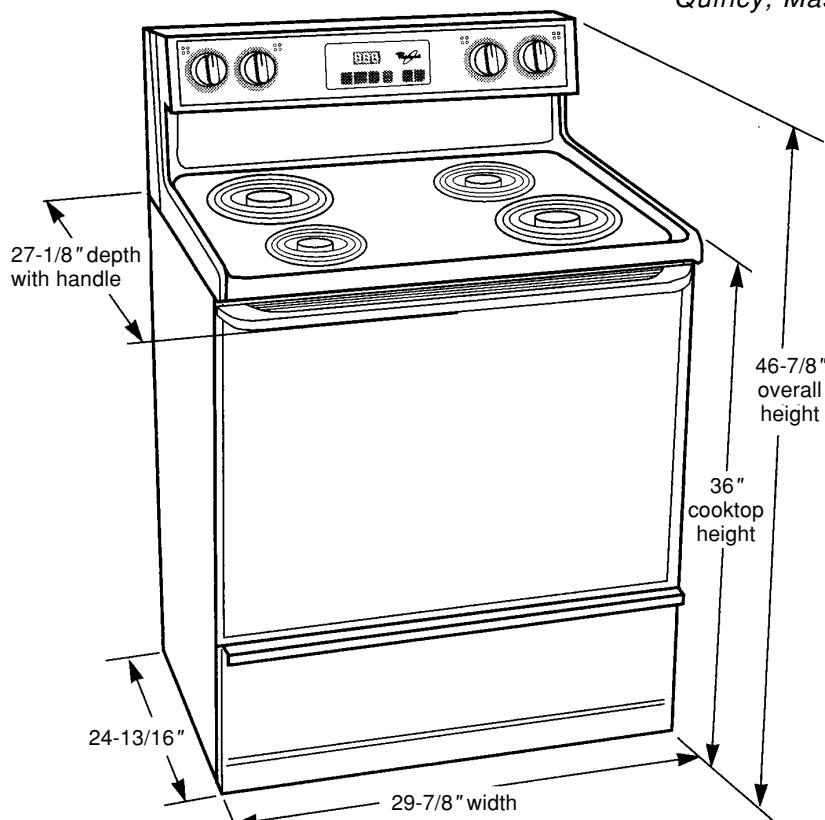
The installation of this range must conform with the Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280 (formerly the Federal Standard for Mobile Home Construction and Safety, Title 24, HUD, Part 280), or when such standard is not applicable, the Standard for Manufactured Home Installations, ANSI A225.1/NFPA 501A, or with local codes.

When this range is installed in a mobile home, it must be secured to the floor during transit. Any method of securing the range is adequate as long as it conforms to the standards listed above.

A 4-wire power supply cord or cable must be used in a mobile home installation. The appliance wiring will need to be revised (see "4-Wire Electrical Connections" on page 1-7).

Copies of standards listed may be obtained from:

*National Fire Protection Association
 Batterymarch Park
 Quincy, Massachusetts 02269*



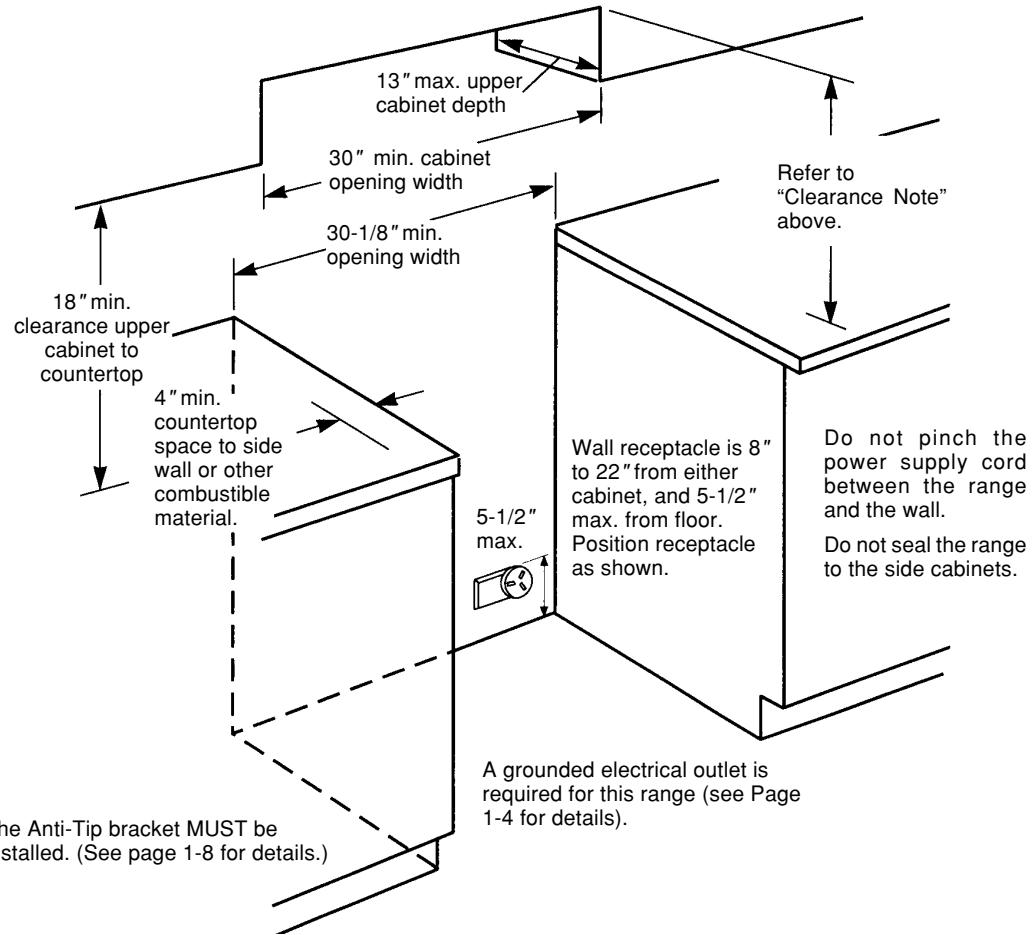
CABINET DIMENSIONS

Cabinet opening dimensions that are shown must be used. Given dimensions are minimum clearances.

Clearance Note: A clearance of 24" minimum is required when the bottom of a wood or metal cabinet is protected by not less than $\frac{1}{4}$ " of flame-

retardant millboard covered with not less than #28 MSG sheet steel, 0.015" stainless steel, 0.024" aluminum, or 0.020" copper.

A minimum clearance of 30" between the top of the cooking platform and the bottom of an unprotected wood or metal cabinet is required.



TOOLS & MATERIAL YOU WILL NEED

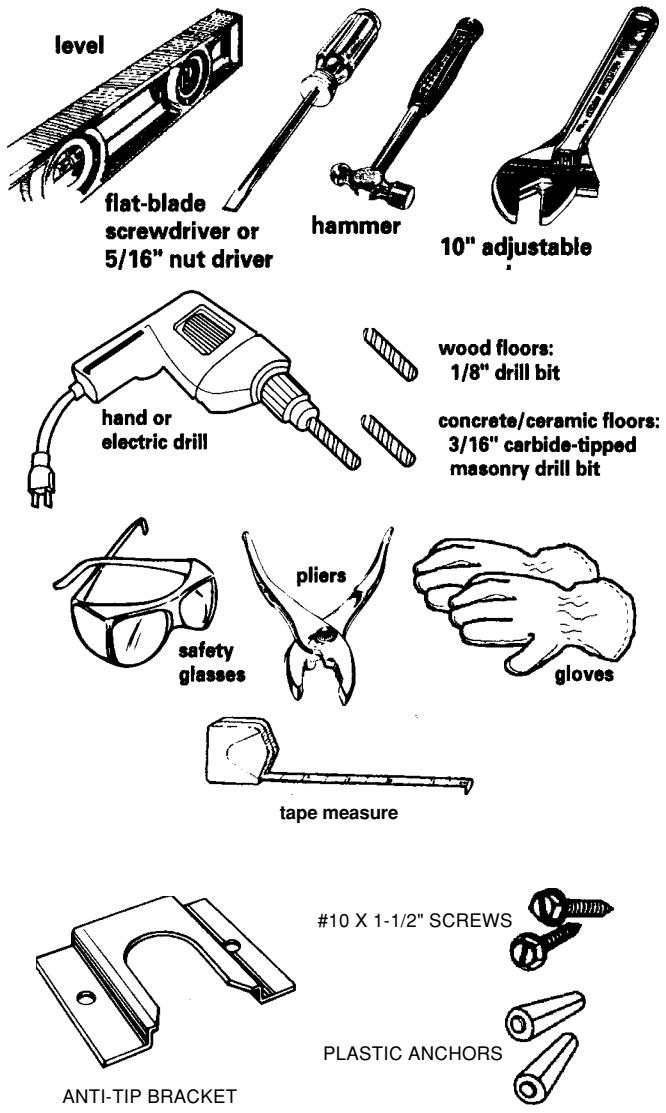
TOOLS

Spirit level
 Standard (flat-bladed) screwdriver or
 $\frac{5}{16}$ " nut driver
 Robertson (S2) screwdriver
 Torx (T10 & T20) screwdrivers
 10" hammer
 Adjustable wrench
 Hand or electric drill
 $\frac{1}{8}$ " wood drill bit or $\frac{3}{16}$ " carbide-tipped masonry drill bit
 Safety glasses
 Pliers
 Gloves
 Measuring tape

PARTS SUPPLIED

1 Anti-tip bracket
 2 Plastic anchors
 2 Screws (#10 x 1- $\frac{1}{2}$ ") NOTE: The thickness of the wall covering may require longer screws. These are available at your local hardware store.

ILLUSTRATIONS



ELECTRICAL SUPPLY REQUIREMENTS

WARNING

Electrical Shock Hazard

An electrical ground is required on this appliance.

Use only a new power supply cord kit rated at 250-volts, 40-amperes and rated for use with ranges. Do not reuse an old power supply cord.

Do not modify the power supply cord plug. If it does not fit the outlet, have a proper outlet installed by a qualified electrician.

Do Not use an extension cord with this appliance.

If a cold water pipe is interrupted by plastic, nonmetallic gaskets, or other insulating materials, do not use for grounding.

Do not ground to a gas pipe.

Do not use a fuse in the neutral or grounding circuit. It could result in an electrical shock.

Check with a qualified electrician if you are in doubt as to whether the appliance is properly grounded.

Failure to follow these instructions could result in serious injury or death.

GENERAL

If codes permit, and a separate grounding wire is used, it is recommended that a qualified electrician determine that the grounding path is adequate.

The following information applies to the electric range wiring:

- A 3- or 4-wire, single phase, 120/240-volt, 60 Hz, AC-only electrical supply, (or a 3- or 4-wire 120/208-volt, if specified on the model/serial rating plate), is required on a separate 40-ampere circuit, fused on both sides of the line. A time-delay fuse, or circuit breaker, is recommended. The fuse must be sized as per local codes in accordance with the electrical rating of the appliance specified on the model/serial rating plate, which is located behind the storage door on the left side of the oven frame.
- The range must be connected with copper wire only.
- Local codes may permit the use of a U.L.-listed, 250-volt, 40-ampere range power supply cord (pigtail). This cord contains three #10 copper wires, and matches a 3-wire receptacle of NEMA-type 10-50R. Connectors on

the appliance end must be provided at the point the power supply cord enters the appliance.

- The range should be connected directly to the fused disconnect (or circuit breaker) through flexible, armored, or nonmetallic sheathed, copper cable. The flexible, armored cable that extends from the appliance should be connected directly to the junction box.
- Locate the junction box to allow as much slack as possible between the junction box and the appliance so that the appliance can be moved if servicing is ever necessary. Do not cut the conduit.
- A U.L.-listed, 1/2" conduit connector must be provided at the junction box.
- Wire sizes (copper wire only) and connections must conform with the rating of the appliance, which is 40-amperes.
- A wiring diagram is located in the "Tech Tips" (Section 5) of this manual.

4-WIRE SYSTEM

This range is manufactured with ground connected to cabinet for mobile home, or other 4-wire installations. **The ground must be revised** so the green grounding wire of the four-wire power cord is connected to the cabinet.

For a 4-wire receptacle (NEMA Type 14-50R, shown below), a matching U.L.-listed, 4-wire, 250-volt, 40-ampere, range power supply cord (pigtail) must be used. This cord contains four copper conductors with ring terminals on the appliance end, and terminates in a NEMA Type 14-50P plug on the supply end. The fourth (grounding) conductor must be identified by a green, or green/yellow cover, and the neutral conductor by a white cover. The cord should be Type SRD or SRDT with a U.L.-listed strain relief, and be at least 4-feet long.

The **MINIMUM** conductor sizes for the copper 4-wire power supply cord are:

- 40-ampere circuit
- 2) #8 conductors
- 1) #10 white neutral
- 1) #8 green grounding



3-wire wall receptacle
(10-50R)



4-wire wall receptacle
(14-50R)

CONNECTING THE RANGE TO AN ELECTRICAL SUPPLY

! WARNING

Electrical Shock Hazard

Electrical ground is required on this range.

Do Not connect to the electrical supply until the range is permanently grounded.

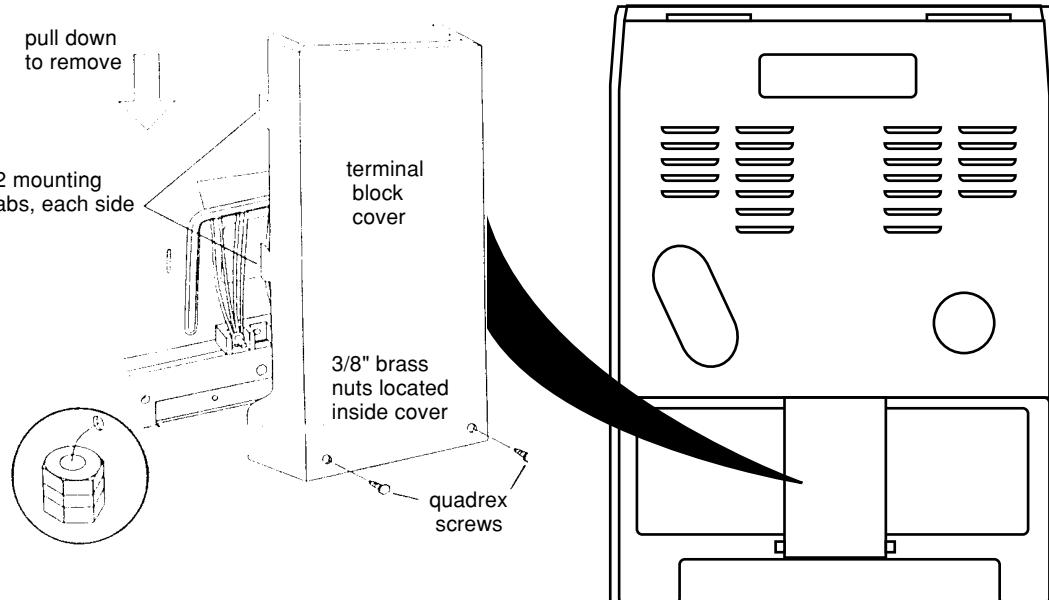
Disconnect the power to the junction box before making the electrical connection.

This range must be connected to a grounded, metallic, permanent wiring system or a grounding connector should be connected to the grounding terminal or wire lead on the range.

Failure to do so could result in death or serious injury.

1. Turn off the power to the main supply.
2. Remove the terminal block cover screws that are located on the back of the range, then lower the cover, unhook the tabs, and pull it towards you to remove it.

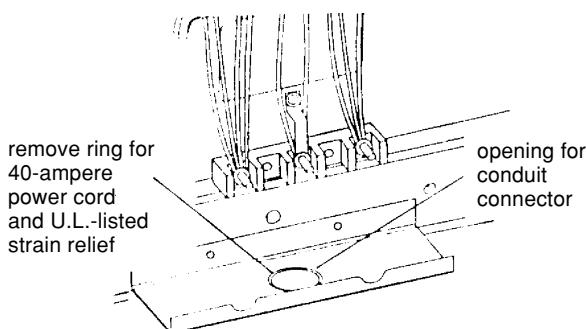
NOTE: Depending on your electrical supply, make the three-wire or four-wire connection by following the instructions for the "Power Supply Cord Method" or "Direct Wire Method" on page 1-6.



POWER SUPPLY CORD METHOD

This appliance is manufactured with the neutral terminal connected to the cabinet. Use a 3-wire, U.L.-listed, 40-ampere power supply cord. If local codes do not permit grounding through the neutral, use a 4-wire power supply cord rated at 250 volts, 40-amperes. Use only ring-type terminals to connect the power supply cord to the terminal block.

1. Turn off the power to the main supply.
2. If the opening is not large enough, remove the knockout for the power supply cord.
3. Mount a U.L.-listed strain relief in the knockout opening.
4. Insert the power supply cord through the strain relief, and allow enough slack to easily attach the wiring to the terminal block, then tighten the strain relief screws.



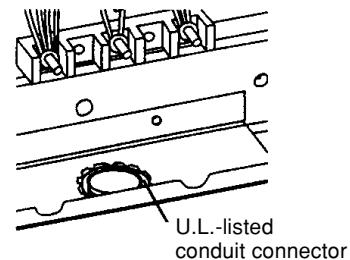
Proceed to the next page and complete the electrical connections according to the type of electrical supply cord you are using ("3-Wire Electrical Connections" or "4-Wire Electrical Connections.").

DIRECT WIRE METHOD

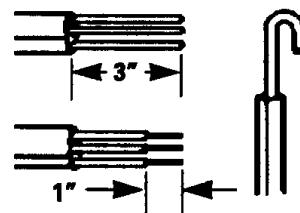
This appliance is manufactured with the neutral terminal connected to the cabinet. Use a 3-wire, U.L.-listed, 40-ampere power supply cord. If local codes do not permit grounding through the neutral, use a 4-wire power supply cord rated at 250 volts, 40-amperes.

This appliance can be connected directly to the fuse disconnect, to a circuit breaker box, or with a U.L.-listed, 40-ampere range power supply cord with pigtail wires. To prepare the pigtail wires for connection to the terminal block screws, perform the following steps.

1. Turn off the power to the main supply.
2. Remove the knockout for the power supply cable.
3. Mount a U.L.-listed conduit connector in the power supply cable knockout opening.



4. Strip 3-inches of the outer covering from the end of the power supply cable and expose the wires.
5. Strip 1-inch of insulation from the end of each of the wires.
6. Form the bare wires into "U"-shaped hooks.



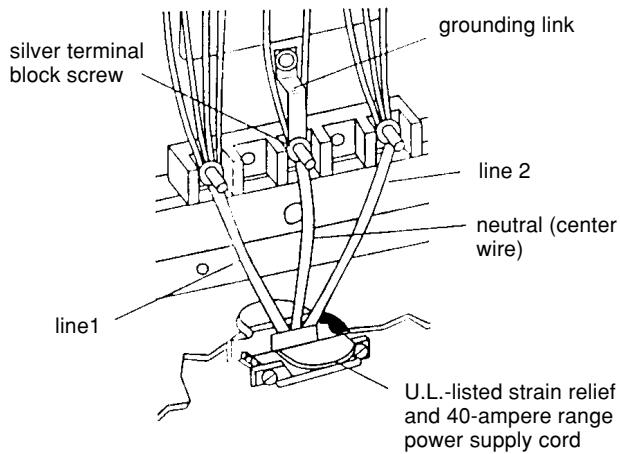
7. Insert the power supply cable through the conduit connector. Allow enough slack so that you can easily attach the power supply cord wiring to the terminal block screws, then tighten the locking ring and clamping screws on the conduit connector.

Proceed to the next page and complete the electrical connections according to the type of power supply cable you are using ("3-Wire Electrical Connections" or "4-Wire Electrical Connections.").

3-WIRE ELECTRICAL CONNECTIONS

Use this method only if the local codes permit connecting a cabinet-grounding conductor to the neutral wire of the power supply cable.

1. Connect the neutral (white) wire to the silver terminal at the center of the terminal block with one of the brass nuts that are attached to the terminal block cover.
2. Connect wires 1 & 2 of the power supply cable to the outer screws on the terminal block with the brass nuts.

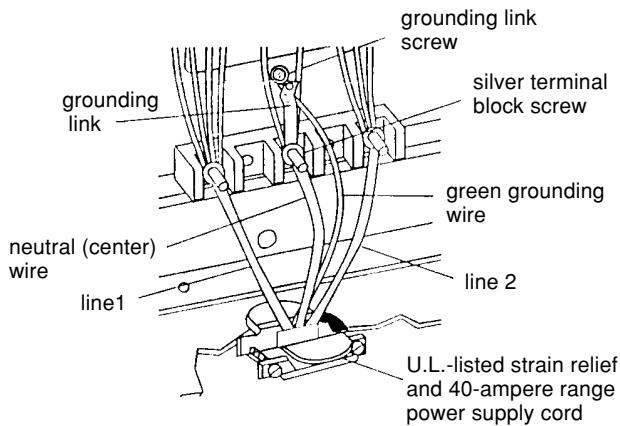
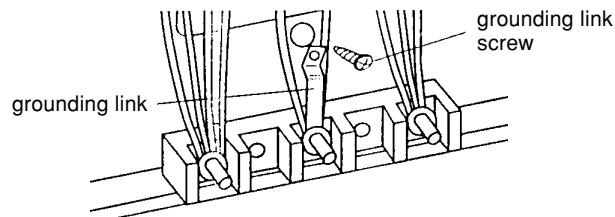


3. Tighten the terminal block nuts securely with a $\frac{3}{8}$ " nut driver.
4. Reinstall the terminal block cover.

4-WIRE ELECTRICAL CONNECTIONS

Use this method for mobile homes, and whenever 4-wire installation is required.

1. Remove the grounding-link screw from the range, and bend the grounding link up so that it does not contact the range (see the illustration below).
2. Connect the bare grounding wire from the power supply cable to the range with the grounding-link screw. Make sure that the grounding wire does not contact any other terminal.
3. Connect the neutral (white) wire to the silver terminal at the center of the terminal block with one of the brass nuts that were attached to the terminal block cover.



4. Connect the remaining two wires to the outer terminals on the terminal block with the brass nuts.
5. Tighten the terminal block nuts securely with a $\frac{3}{8}$ " nut driver.
6. Reinstall the terminal block cover.

INSTALLING THE RANGE

PREPARATION



WARNING

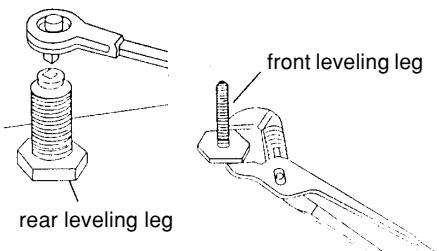
Injury Hazard

Because of the weight and size of this range, two or more people are required to move it.

Do not use the handle for lifting.

Failure to do so can result in injury.

1. Put on safety glasses and gloves.
2. Remove the oven racks and parts package from inside the oven.
3. Remove all of the shipping materials, tape, and protective film from the range. NOTE: Do not remove the cardboard shipping base at this time.
4. Remove the storage drawer.
5. Use a $\frac{3}{8}$ " drive ratchet and lower the rear leveling legs by $\frac{1}{2}$ -turn. Use channel lock pliers to lower the front leveling legs $\frac{1}{2}$ -turn.



INSTALLING THE ANTI-TIP BRACKET



WARNING



Tip Over Hazard

Connect the anti-tip bracket to the range feet. Reconnect the anti-tip bracket, if the range is moved.

Do not push down on the open oven door.

Follow the Installation Instructions.

Do not let children climb onto the oven door.

Failure to do so can result in death, burns, or other injury.



WARNING

Electrical Shock Hazard

Take special care when drilling holes in the floor or wall. Electrical wires may be located beneath the floor or behind the wall.

Locate the electrical circuits that could be affected by the installation of the anti-tip bracket and turn off power to these circuits.

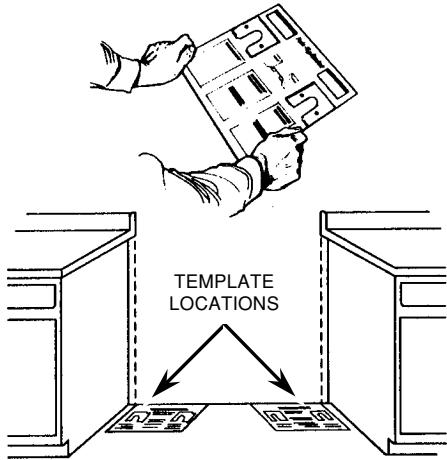
Failure to do so can result in death or serious injury.

Contact a qualified floor covering installer for the best procedure for drilling mounting holes through the floor covering.

1. Locate the anti-tip bracket hardware and the template that were supplied with the range.

NOTE: The anti-tip bracket can be installed to secure either the right or the left rear leg of the range.

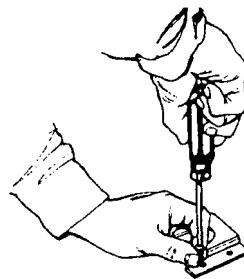
2. Determine the location for the anti-tip bracket, then place the bracket template on the floor at the left or right rear cabinet leg position so that the top edge is against the rear wall molding, or cabinet, and tape the template in place.
NOTE: If the countertop is not flush with the cabinet opening edge, align the template to allow for the overhang.



3. Use a pencil and mark the hole locations for the anti-tip bracket, and then remove the template.
4. Secure the bracket to a solid floor as follows:
 - a) Wood floor: Drill $\frac{1}{8}$ " (0.3 cm) diameter holes at the two hole locations you marked.
 - b) Concrete or ceramic floor: Drill $\frac{3}{16}$ " (0.5 cm) diameter holes at each mounting hole location, then tap the plastic anchors (supplied with range) into the two holes.



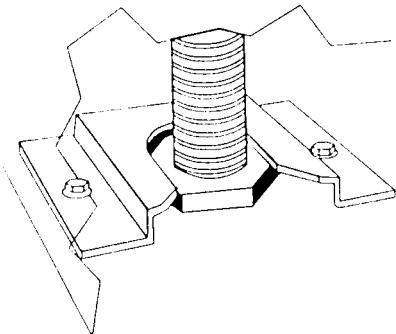
5. Mount the anti-tip bracket to the floor at the two holes with the two screws that were provided with the range.



LEVELING THE RANGE

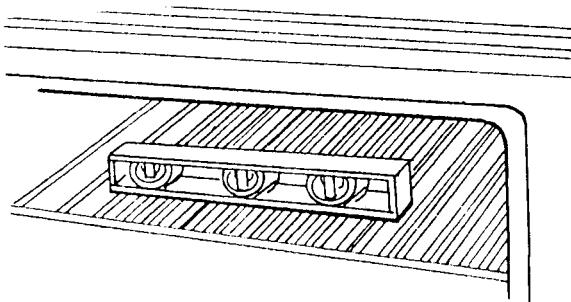
IMPORTANT: When moving the range, slide it onto a piece of cardboard (use a section of the shipping carton for this purpose), to prevent damaging the floor covering.

1. If not already done, connect the range's power supply cord to an appropriate AC supply, then carefully slide the range into position until it is approximately 2" from the rear wall. Remove the shipping base cardboard from under the range. As you push the range into place, make sure that the rear foot engages in the anti-tip bracket. Make sure that the range is secure in the bracket by pulling forward on the top of the range.

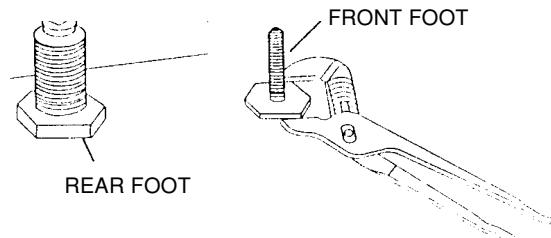


For proper baking results, the range must be level. The height of the range must also be adjusted to the height of the counter. To do this, use the following steps.

2. Install an oven rack in the lower track and place a spirit level on the rack.



3. Use an adjustable wrench, and turn the leg levelers in the direction necessary to level the range from side-to-side and from front-to-back. The range should rest flat on the floor.

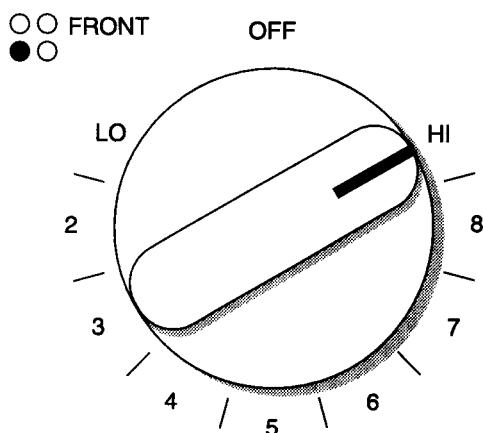


4. Reinstall the storage drawer in the range.

CHECKING THE OPERATION THE COOKTOP ELEMENTS

To check the operation of the cooktop elements on the range, perform the following steps.

1. Push and turn each cooktop element control knob to the HI position. The element indicator light should turn on, and the cooktop elements should heat up and begin to glow after several minutes.
2. Turn the cooktop element knobs to OFF.



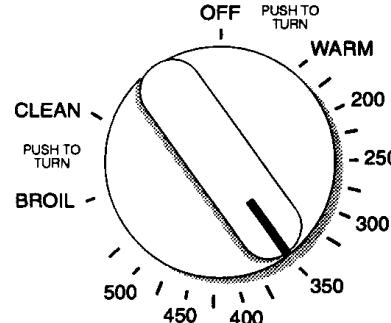
THE BAKE & BROIL ELEMENTS

NOTE: Depending on the model, the oven bake and broil elements can be controlled by one or two control knobs, or by one of two types of electronic controls. Refer to the section that applies to the oven you are using.

One Control Knob

If your range has one oven temperature control knob, perform the following procedure to operate the bake and broil elements.

1. Set the oven temperature control knob to 350°F, and the following events should occur:
 - The Oven On and Oven Heating indicators will light and the bake element will glow red after several minutes.
 - The broil element will become hot but will not glow red.
 - When the oven has preheated to 350°F, the Oven Heating indicator light will turn off.



2. Turn the oven temperature control knob to the BROIL position, and the following events should occur:
 - The Oven On and Oven Heating indicators will light and the broil element will glow red after several minutes.
3. Turn the control knob to the OFF position.

Electronic Control Without Timer

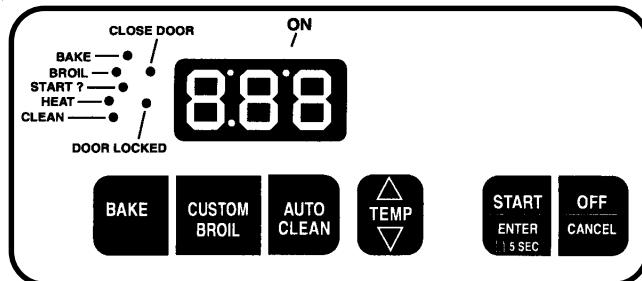
If your oven has an electronic control without a timer, perform the following procedure to operate the bake and broil elements.

1. Press the BAKE keypad, and the following events will occur:
 - The BAKE indicator will light.
 - 350°F will appear in the display.
 - The START ? indicator will begin to flash after 5-seconds.
2. Press the START/ENTER keypad, and the following events will occur:
 - The HEAT and ON indicators will light.
 - The display will show the automatic count-down time (6-minutes) needed to preheat the oven for selected temperature.
 - The bottom element will glow red after several minutes.

- The upper element will become hot, but not glow red.

- The oven is preheated when the HEAT indicator light goes off, you hear a 1-second tone, and the countdown changes to 350.

3. Press the OFF/CANCEL keypad.
4. Press the CUSTOM BROIL keypad, and the following events will occur:
 - 500°F will appear in the display.
 - The BROIL indicator will light.
 - The START ? indicator will begin to flash after 5-seconds.
5. Press the START/ENTER keypad, and the following events will occur:
 - The HEAT and ON indicators will light.
 - The upper element will glow red after several minutes.
6. Press the OFF/CANCEL keypad.

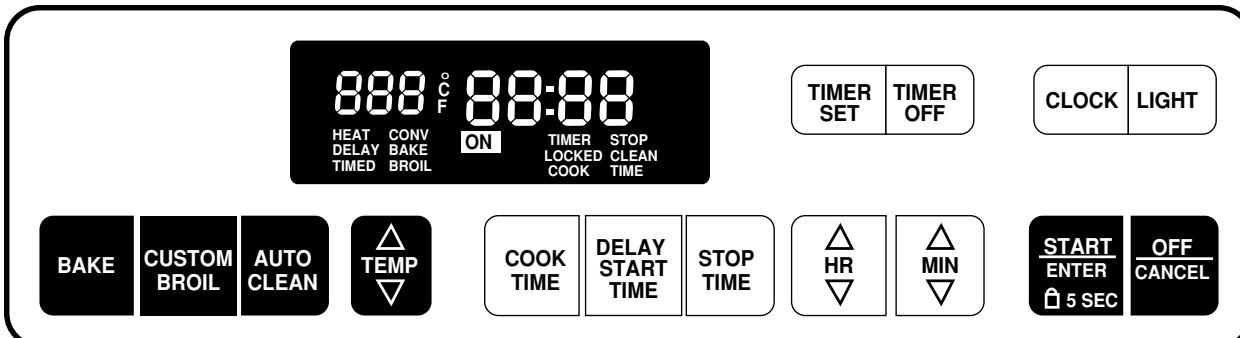
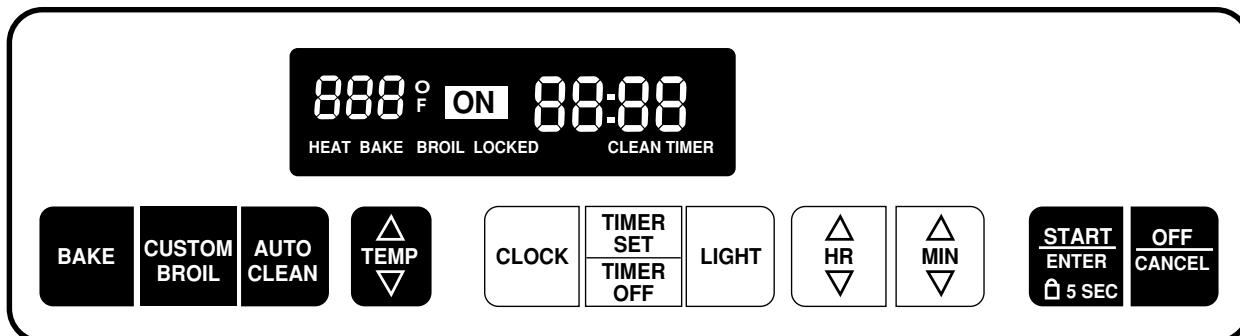


Electronic Control With Timer

If your oven has an electronic control with a timer, perform the following procedure to operate the bake and broil elements.

1. Press the BAKE keypad, and the following events will occur:
 - The BAKE indicator will light.
 - 350°F will appear in the display.
 - The START? indicator will begin to flash after 5-seconds (lower control only).
2. Press the START/ENTER keypad, and the following events will occur:
 - PrE, and 4:15 will appear in the display.
 - The HEAT and ON indicators will light.
 - The bottom element will glow red after several minutes.

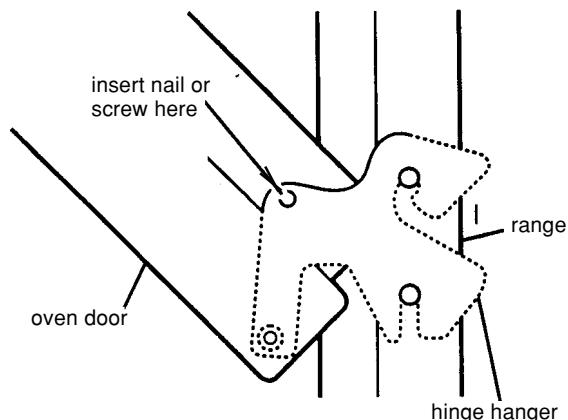
- The upper element should become hot but not glow red.
- The oven is preheated when the time in the display counts down to 0:00, you hear a 1-second tone, and PrE changes to 350°F.
- 3. Press the OFF/CANCEL keypad.
- 4. Press the CUSTOM BROIL keypad, and the following events will occur:
 - 500°F will appear in the display.
 - The BROIL indicator will light.
 - The START? indicator will begin to flash after 5-seconds (lower control only).
- 5. Press the START/ENTER keypad, and the following events will occur:
 - The HEAT and ON indicators will light.
 - The upper element will glow red after several minutes.
- 6. Press the “OFF/CANCEL” keypad.



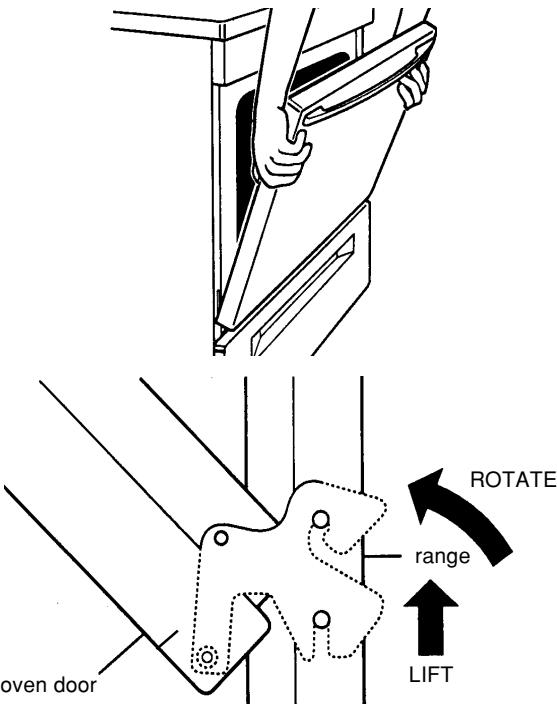
REMOVING/REINSTALLING THE OVEN DOOR

To remove the oven door:

1. Open the door approximately half way and install a nail or screw into the hinge hangers on each side of the door. **Do not remove them while the door is removed from the range.**

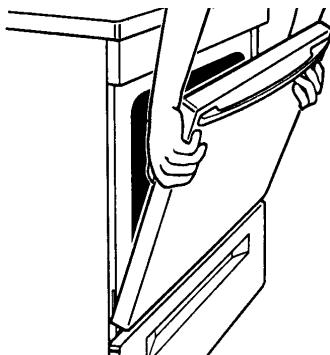


2. Close the oven door as far as the nails or screws will allow.
3. Grasp the sides and lift the door until it stops, then rotate the door toward the floor, and pull it toward you. **IMPORTANT: Do not use the door handle to lift the door.**

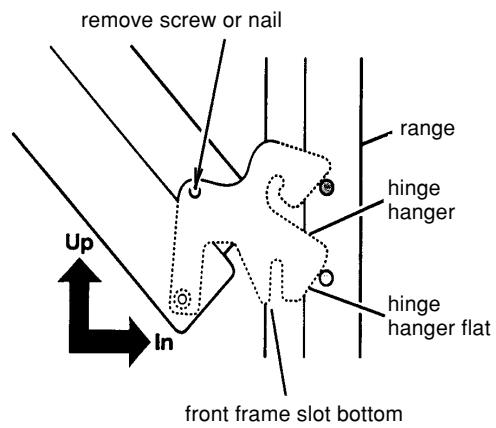


To reinstall the oven door:

1. Grasp the sides of the door with your fingers on the front of the door and your thumbs on the inside surface.



2. Rest the bottom of the hinge hanger on the bottom of the slot in the range.
3. Position the door with the hinge hanger slots almost parallel to the front frame.
4. Push up and in until the hinge hanger slots become fastened to the range, then lower the door, and rotate it slightly from the front to the back until the slots are fully fastened. The hinge hanger will be close to the bottom of the front frame slot.



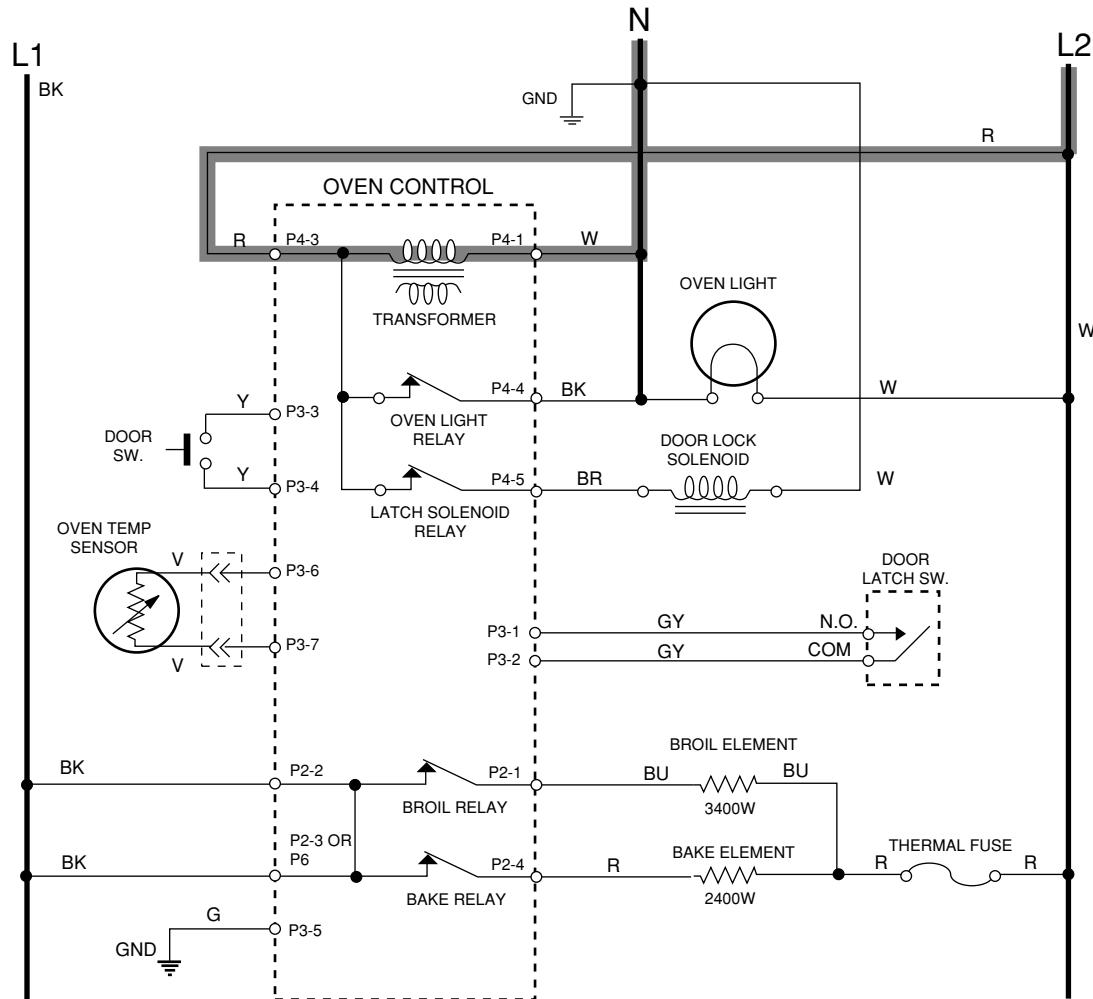
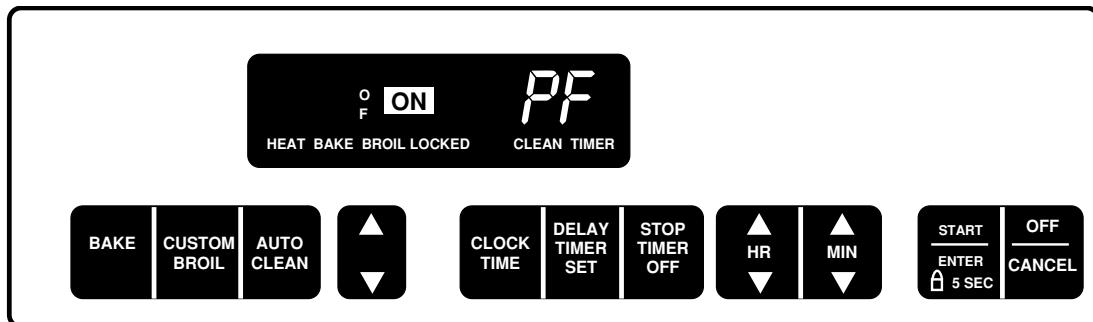
5. Pull the door open about half way and remove the nails or screws.
6. Close the door.

THEORY OF OPERATION

THE OVEN CONTROL

When the range is plugged in, line voltage is applied to the electronic oven control. The voltage travels through the low voltage trans-

former to the neutral side of the line, and turns the oven control on. "PF" is displayed on the control display.



THE BAKE FUNCTION

Refer to the illustrations on the next page.

When the unit is plugged in and line voltage is applied to the electronic oven control, the following keyboard actions are used to set the BAKE function:

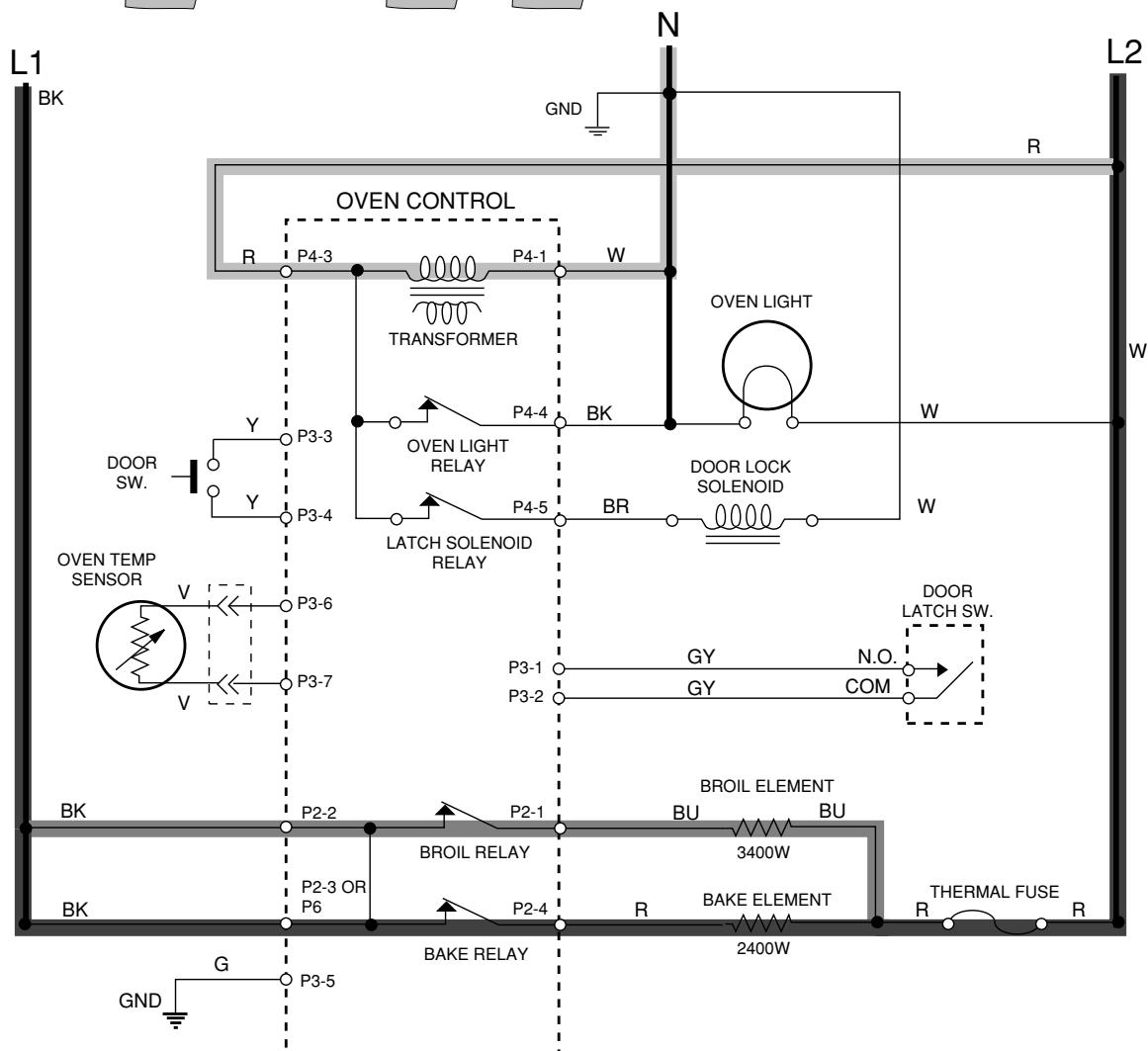
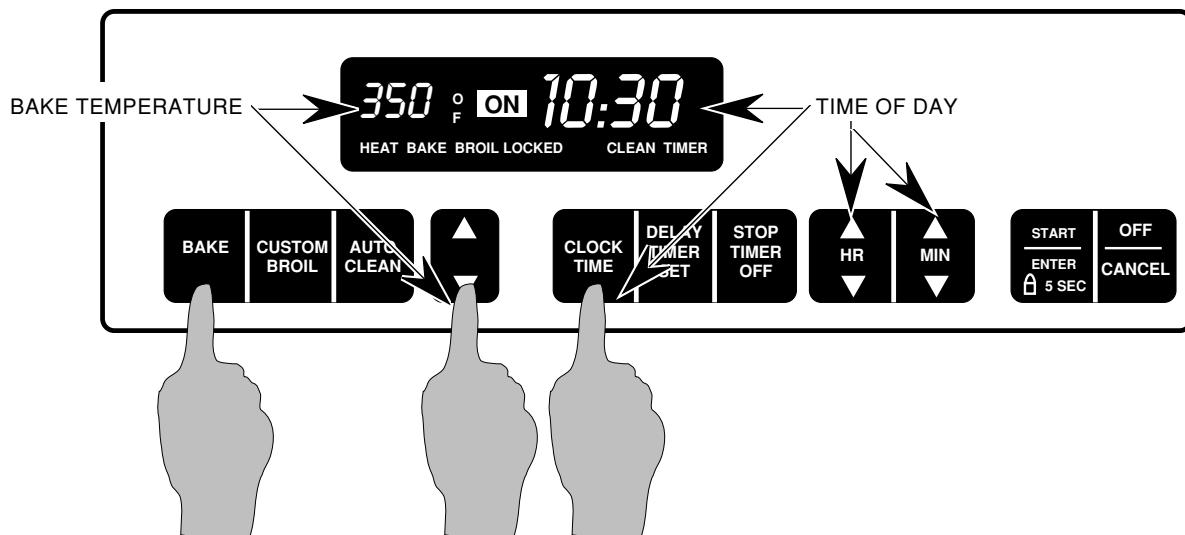
- The clock is set to the time-of-day.
- The BAKE keypad is selected.
- The BAKE temperature is selected.

When the preceding events occur, the BAKE relay energizes, and its contacts close. This provides an electrical circuit through the BAKE element and the thermal fuse to the neutral side of the line*.

As electrical current flows through the BAKE element, it heats up. The temperature in the oven is regulated by the temperature sensor. If the temperature at the back of the oven exceeds 360°F, the thermal fuse will open, and terminate the BAKE function.

The BROIL relay will also close to provide top heat during the BAKE cycle. The BROIL relay will cycle on approximately 20% of the bake operation time.

To preheat the oven before a BAKE cycle, the BAKE relay is closed for 100% of the preheat time, and the BROIL relay closes for approximately 40% of the preheat time.



- Oven Control On
- Broil Circuit (On approximately 20%)
- Bake Circuit

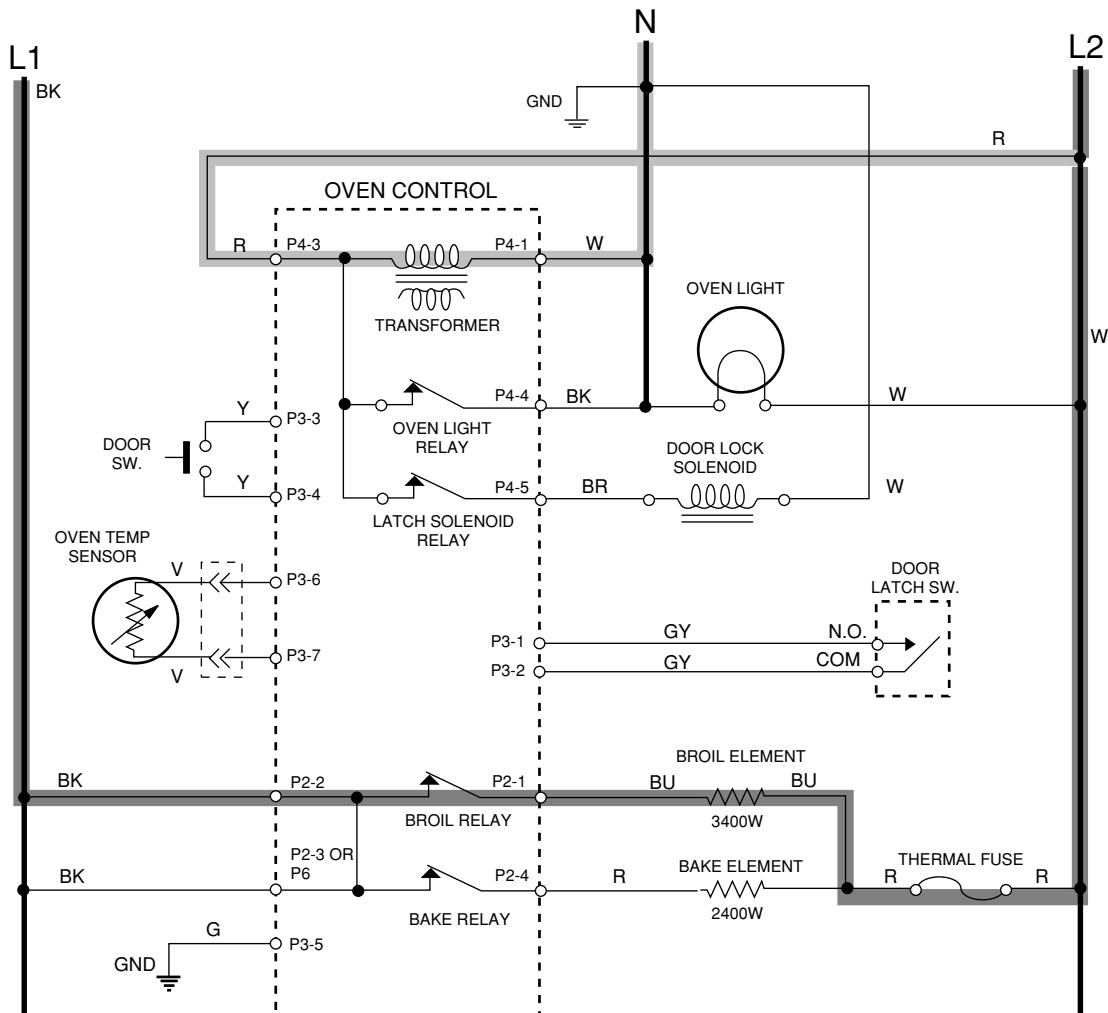
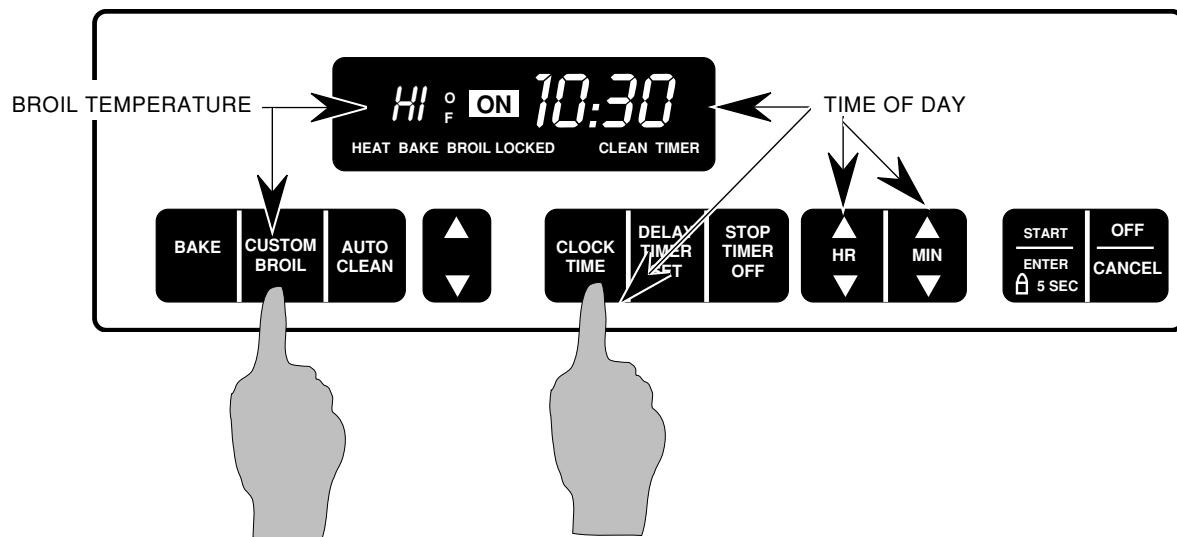
THE BROIL FUNCTION

Refer to the illustrations on the next page.

When the unit is plugged in and line voltage is applied to the electronic oven control, the following keyboard actions are used to set the BROIL function:

- The clock is set to the time-of-day.
- The CUSTOM BROIL keypad is selected.
- Close the oven door.

When the preceding events occur, the BROIL relay energizes, and its contacts close. This provides an electrical circuit through the BROIL element and the thermal fuse to the neutral side of the line.



— Oven Control On
 — Broil Circuit

THE CLEAN FUNCTION

Refer to the illustrations on the next page.

When the unit is plugged in and line voltage is applied to the electronic oven control, the following keyboard actions are used to set the oven CLEAN function:

- The CLEAN function is selected.
- The desired cleaning time is selected (if other than 3:30 hrs.).

When the preceding events occur, the BAKE relay energizes, and its contacts close. This provides an electrical circuit through the BAKE element and the thermal fuse to the neutral side of the line.

The BROIL relay also closes to provide a heat circuit. To control the heat build-up at the beginning of the CLEAN cycle, the BAKE relay closes for 60% of the preheat time, and the BROIL relay closes for 40% of the time until the oven temperature reaches 550°F. To provide the increased self-clean temperatures after the preheat time has concluded, the relay will cycle as follows:

Bake = 60%

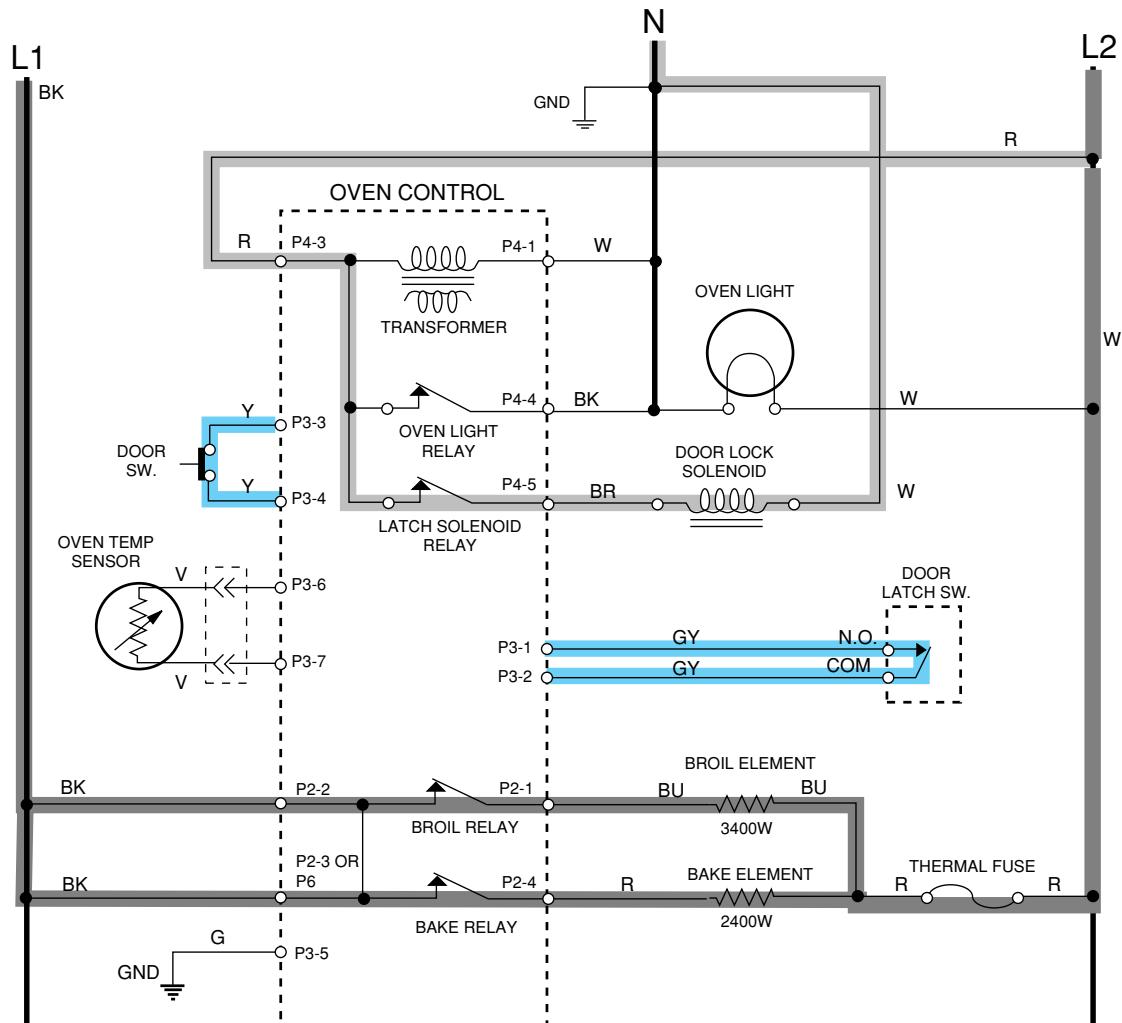
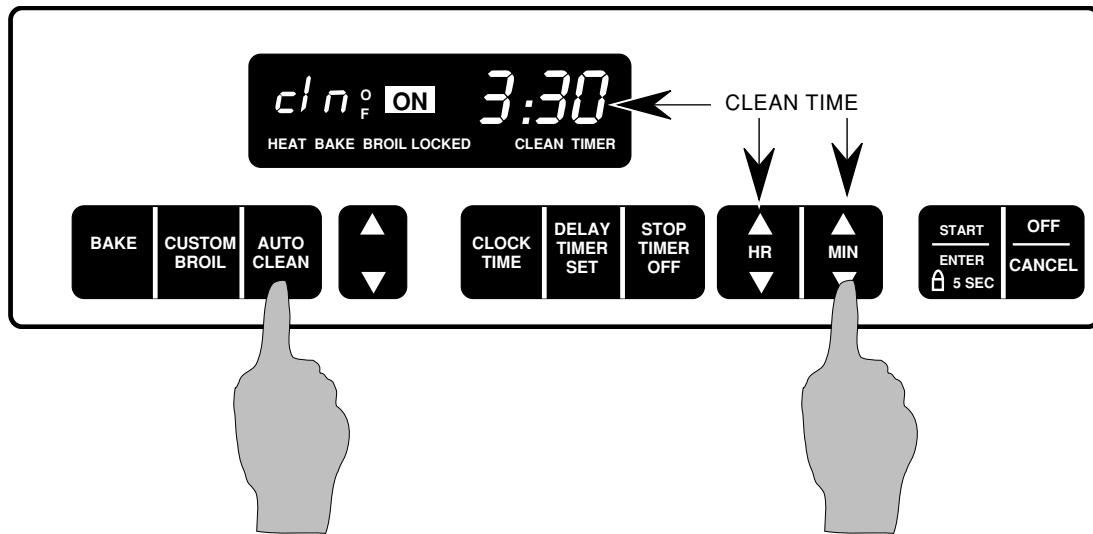
Broil = 70%

Temperatures inside the oven will reach 875°F to 900°F during the CLEAN cycle. If the temperature at the back of the oven reaches 363°F, the thermal fuse will open, and the CLEAN cycle will be terminated.

Because the oven reaches extremely hot temperatures, the oven door is latched during the CLEAN cycle, and remains latched until the oven has cooled to a safe temperature.

The door latching operation occurs when the LATCH SOLENOID relay closes, and electrical current flows through the LATCH SOLENOID.

After the CLEAN cycle has been completed, the door latch will release when the oven temperature drops below 400°F.



— Bake & Broil Circuit

— Oven Control On & Latch Circuit

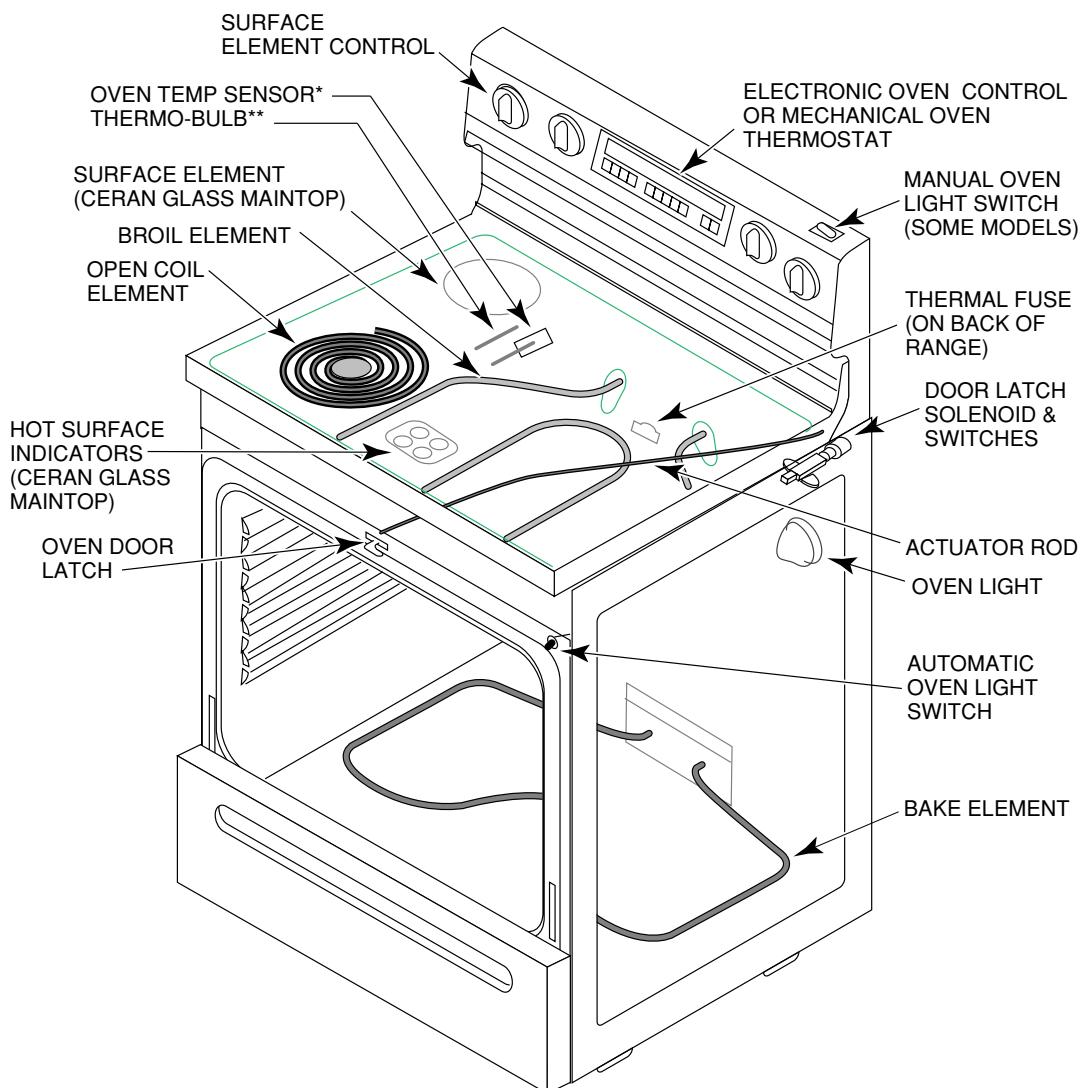
— NOTES —

COMPONENT ACCESS

COMPONENT LOCATIONS

This section of the manual instructs you on how to service the individual components inside the self-

clean electric range. The components and their locations are shown below.



- Electronic Oven Control

** Mechanical Thermostat

REMOVING THE OPEN COIL MAINTOP

!WARNING

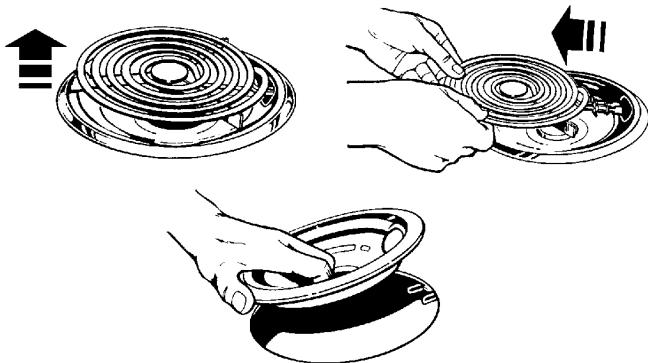
Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

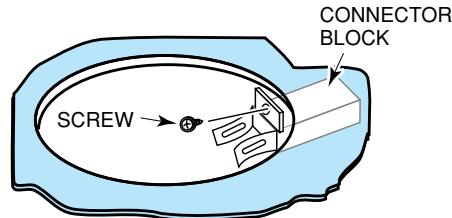
CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Turn off the electrical supply to the range.
2. Make sure that the coil elements are cool before you handle them.
3. Push and lift the coil elements and unplug them from the connector blocks, then remove them from the maintop.

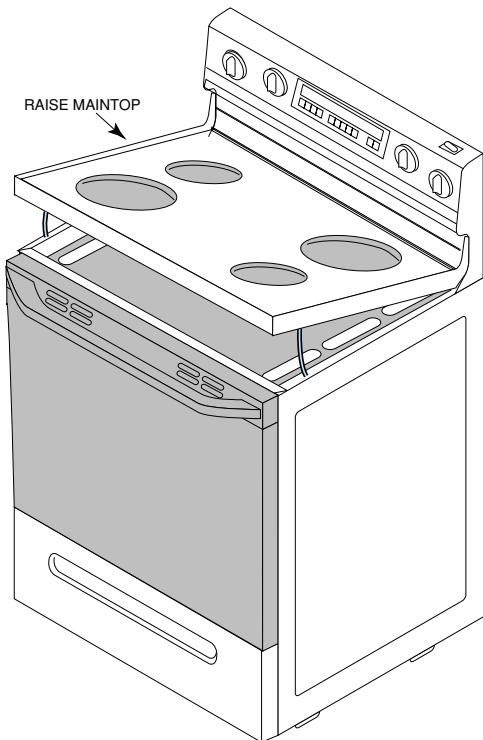


4. Remove the drip pans from the maintop.

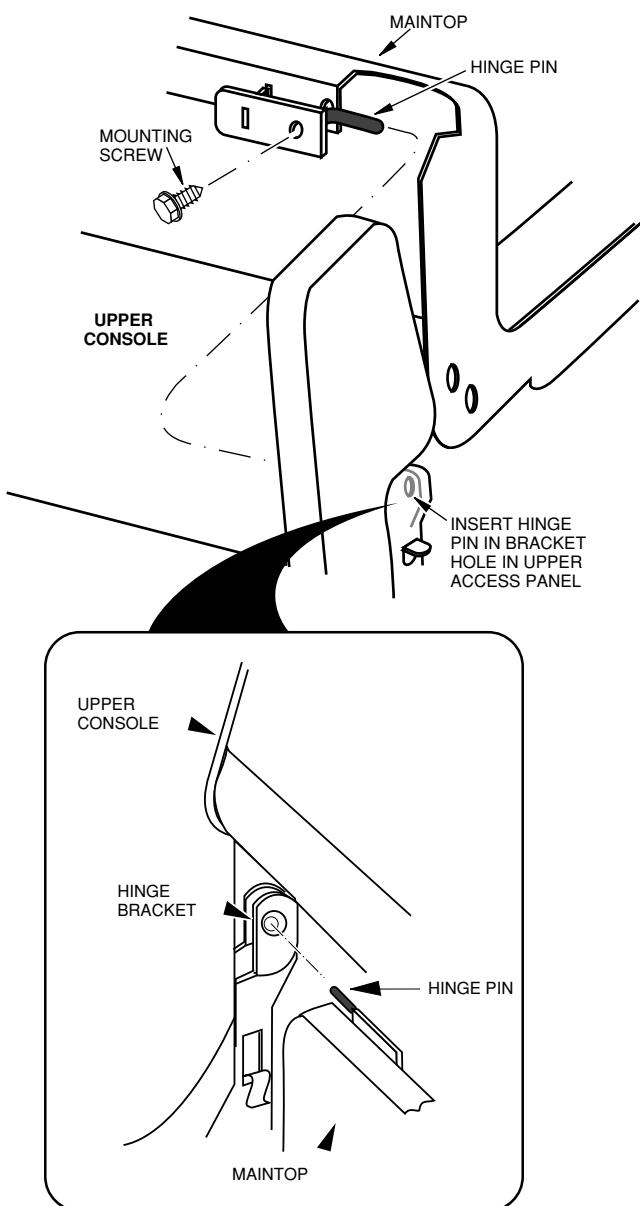
5. Remove the screws from the element connector blocks and lay the blocks on the burner box.



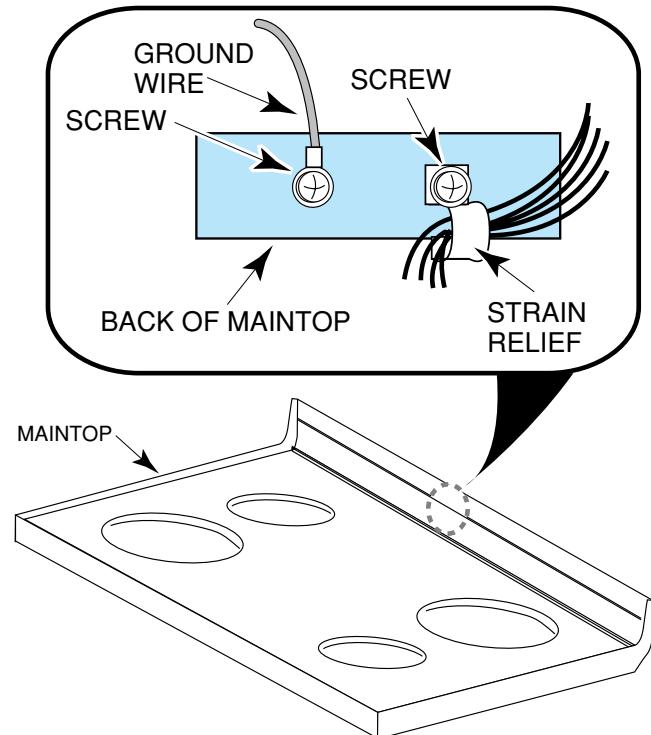
6. Lift the maintop and remove the ends of the support rods from the sides of the body. Be careful not to scratch the body sides.



7. Slide the maintop to the left so that the hinge pin is free of the right hinge bracket, (see the inset below), and to the right so that it is free of the left bracket, then pull the maintop forward so that you can access the back.



8. Remove the harness strain relief and the ground wire from the back of the maintop and remove the maintop from the range.



9. Remove the hinge pins from the old maintop (see the illustration under step 7) and mount them to the new one.
10. Install the new maintop and reassemble the range. REASSEMBLY NOTE: When reinstalling the maintop, make sure that it is centered on the range, and that the rear side flanges fit into the end caps before lowering it into place.

REMOVING THE CERAN GLASS MAINTOP

WARNING

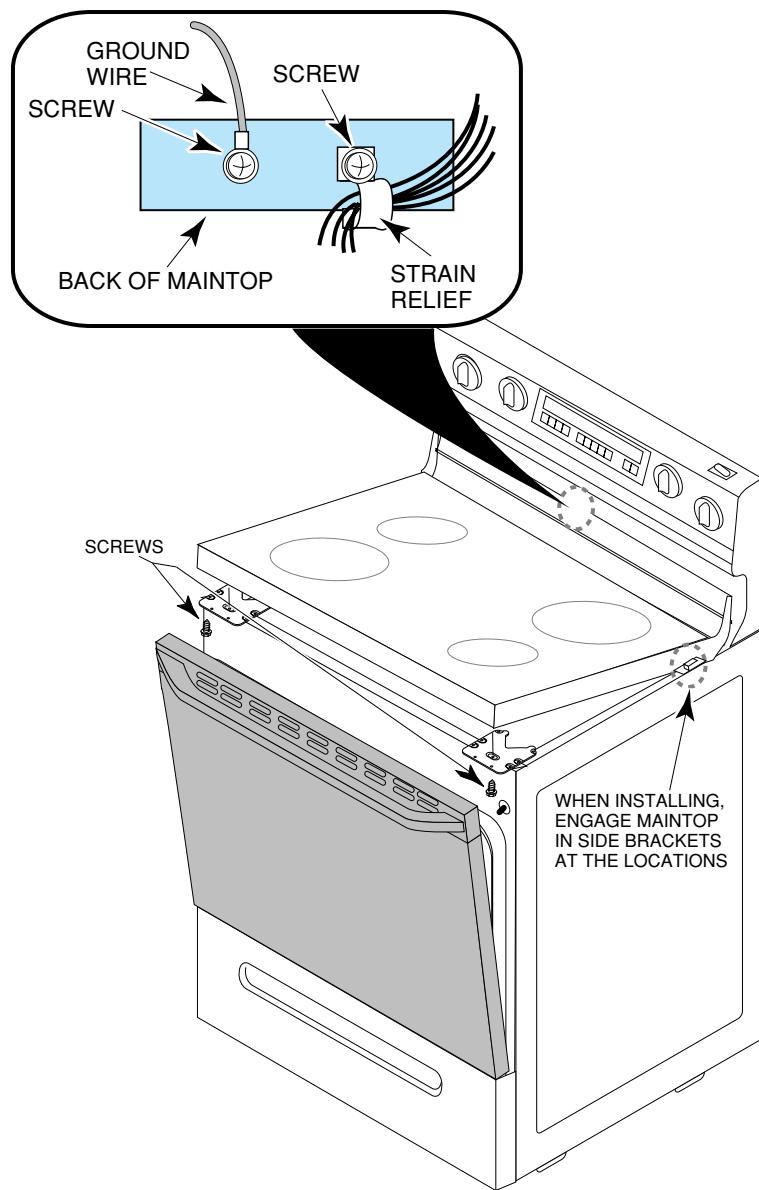
Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

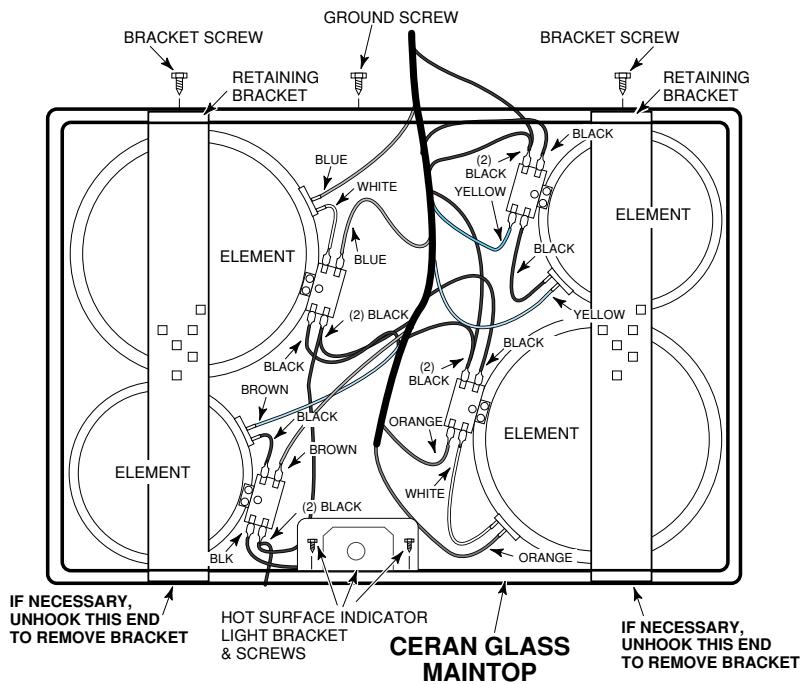
CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Turn off the electrical supply to the range.
2. Open the oven door and remove the screws from under the front of the maintop, then close the oven door.
3. Slide the maintop forward as far as possible and remove the ground wire and main harness strain relief from the rear of the maintop.
4. Lay a protective covering between the maintop and the range to protect the finish, then turn the maintop over and lay it on the covering so that you can access the components.

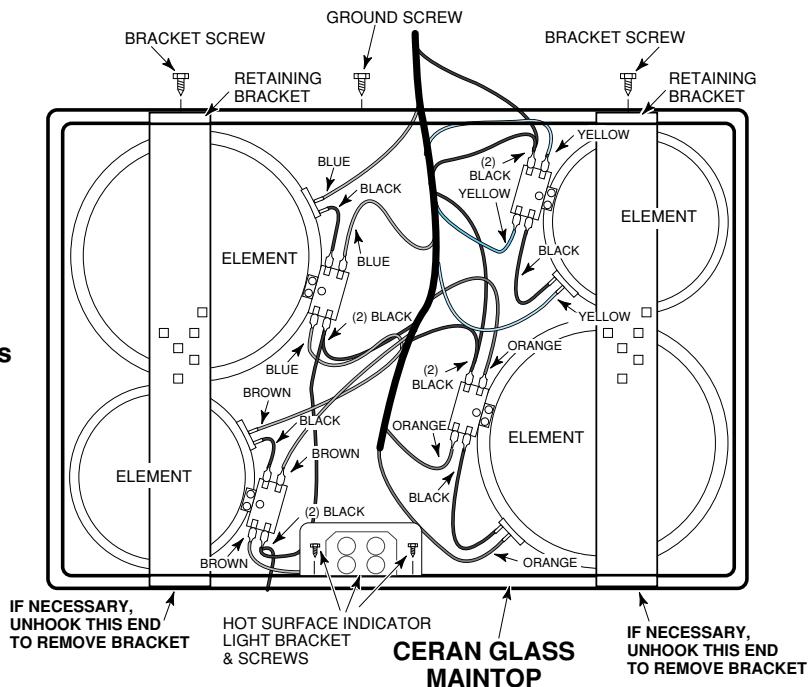


5. Remove the two screws from the bracket of the hot surface indicator light.
6. Remove the screws from the element retaining brackets, unhook them from the maintop, and remove them.
7. Clean the bottom glass of the new maintop and remove any debris.
8. Lift the elements off the old maintop and place them on the new maintop at the same locations.
9. Install the new maintop and reassemble the range. REASSEMBLY NOTE: When reinstalling the maintop, make sure that it is centered on the range, that the side brackets are engaged, and that the rear side flanges are inside the end caps.

Wiring With One Hot Surface Indicator



Wiring With Four Hot Surface Indicators



REMOVING THE HOT SURFACE INDICATORS

!WARNING

Electrical Shock Hazard

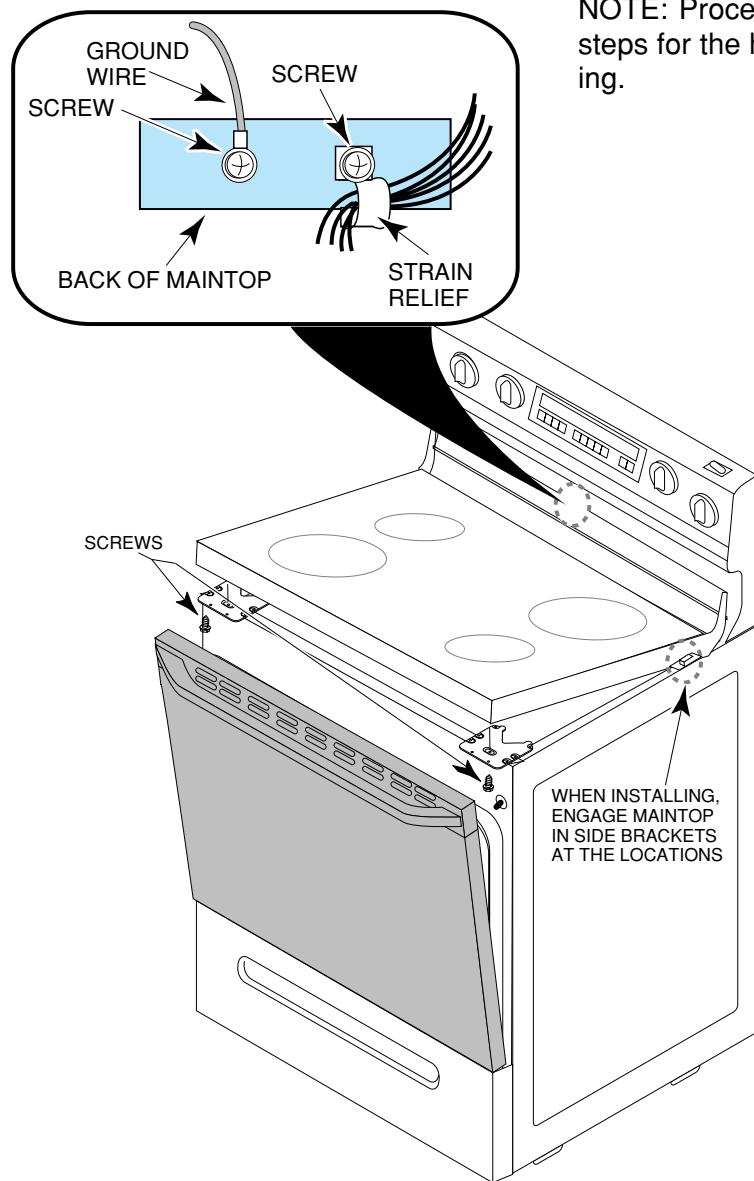
Disconnect from electrical supply before servicing unit.

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

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

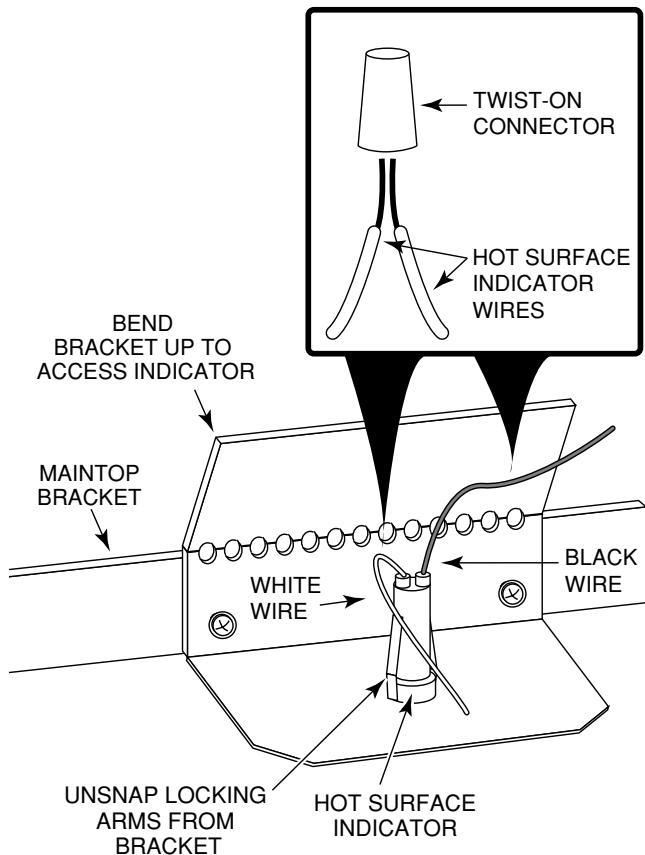
1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.
3. Open the oven door and remove the screws from under the front of the maintop, then close the oven door.
4. Slide the maintop forward as far as possible and remove the ground wire and main harness strain relief from the rear of the maintop.
5. Lay a protective covering between the maintop and the range to protect the finish, then turn the maintop over and lay it on the covering so that you can access the components.

NOTE: Proceed to the next page and follow the steps for the hot surface indicator you are servicing.



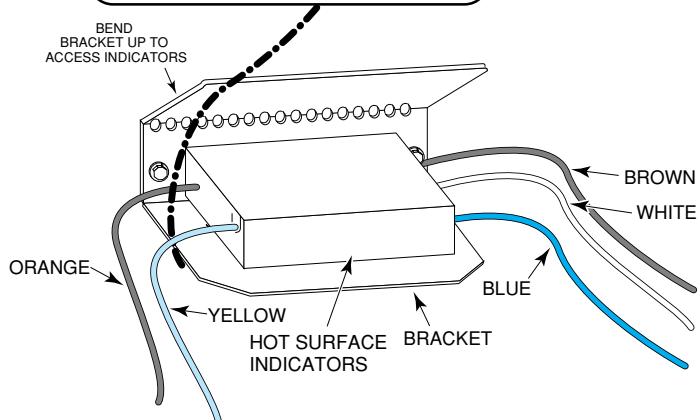
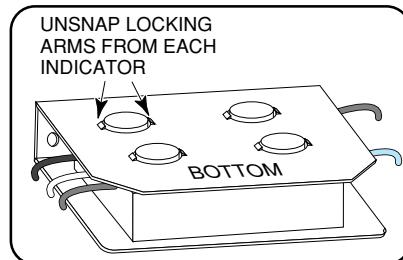
REMOVING THE HOT SURFACE INDICATOR (1)

1. Bend the bracket up just far enough to access the hot surface indicator, then press the two locking arms against the indicator body, and unsnap it from the bracket.
2. Cut the white and black wires coming from the old hot surface indicator, and splice the wires to the same color wires of the new indicator with twist-on connectors.
3. Snap the new hot surface indicator into the bracket hole and bend the bracket back into place.
4. Reinstall the maintop and reassemble the range. REASSEMBLY NOTE: When reinstalling the maintop, make sure that it is centered on the range, that the side brackets are engaged, and that the rear side flanges are inside the end caps.



REMOVING THE HOT SURFACE INDICATORS (4)

1. Bend the bracket up just enough to access the hot surface indicator lights.
2. Press on the locking arms of the indicators and unsnap the assembly from the bracket. Do not disconnect the wires at this time.
3. Snap the new hot surface indicator assembly into the bracket and bend the bracket back into position.
4. Disconnect the brown, white, blue, orange, and yellow wires, coming from the old hot surface indicators, and connect the same color wires coming from the new assembly to the maintop terminal locations.
5. Reinstall the maintop and reassemble the range. REASSEMBLY NOTE: When reinstalling the maintop, make sure that it is centered on the range, that the side brackets are engaged, and that the rear side flanges are inside the end caps.



REMOVING A SURFACE ELEMENT & LIMITER

!WARNING

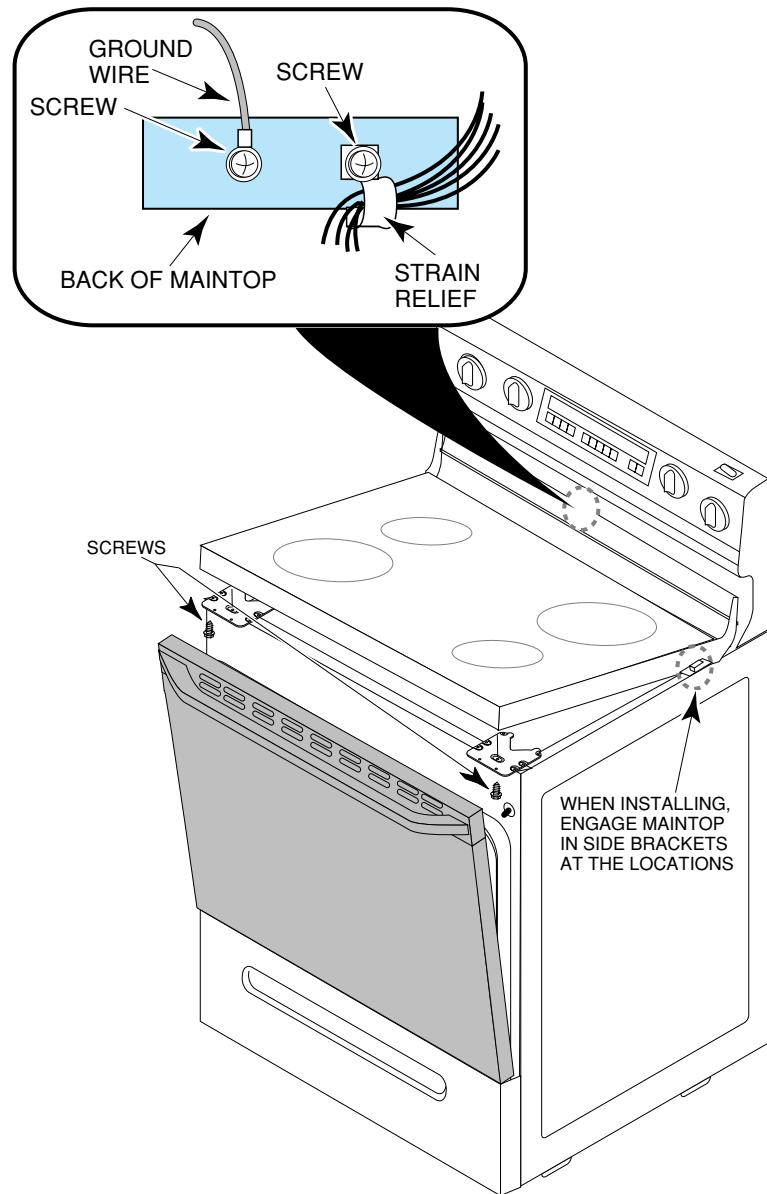
Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

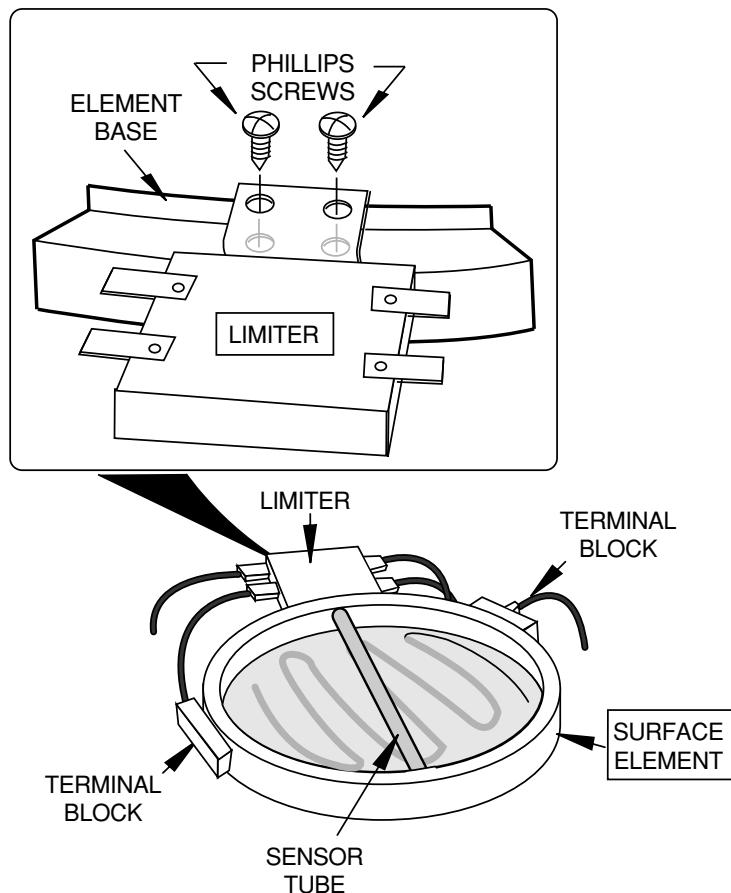
CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Turn off the electrical supply to the range.
2. Open the oven door and remove the screws from under the front of the maintop, then close the oven door.
3. Slide the maintop forward and remove the ground wire and main harness strain relief from the rear of the maintop.
4. Lay a protective covering between the maintop and the range to protect the finish, then turn the maintop over and lay it on the covering so that you can access the components.



NOTE: If necessary, refer to the illustration on page 3-5 for the wiring of the ceran glass maintop.

5. Disconnect the wires from the terminals of the limiter, and remove the screws (see the inset below), then pull the sensor tube out of the element, and remove the limiter. If you are only replacing the limiter, carefully install the new limiter in the element, and reconnect the wires to the terminals (see page 3-5).
6. At the back of the maintop, remove the screw from the retaining bracket that contains the defective surface element and limiter, then carefully raise the end of the bracket, and lift the element and limiter from the maintop.
7. If you are replacing a surface element, disconnect the wires from the terminals and reconnect them to the new element, (see page 3-5), then carefully install the limiter in the new surface element.
8. Remove the old element, clean the glass of any debris, and install the new element.
9. Reinstall the maintop and reassemble the range. REASSEMBLY NOTE: When reinstalling the maintop, make sure that it is centered on the range, that the side brackets are engaged, and that the rear side flanges are inside the end caps.



REMOVING THE UPPER CONSOLE

WARNING

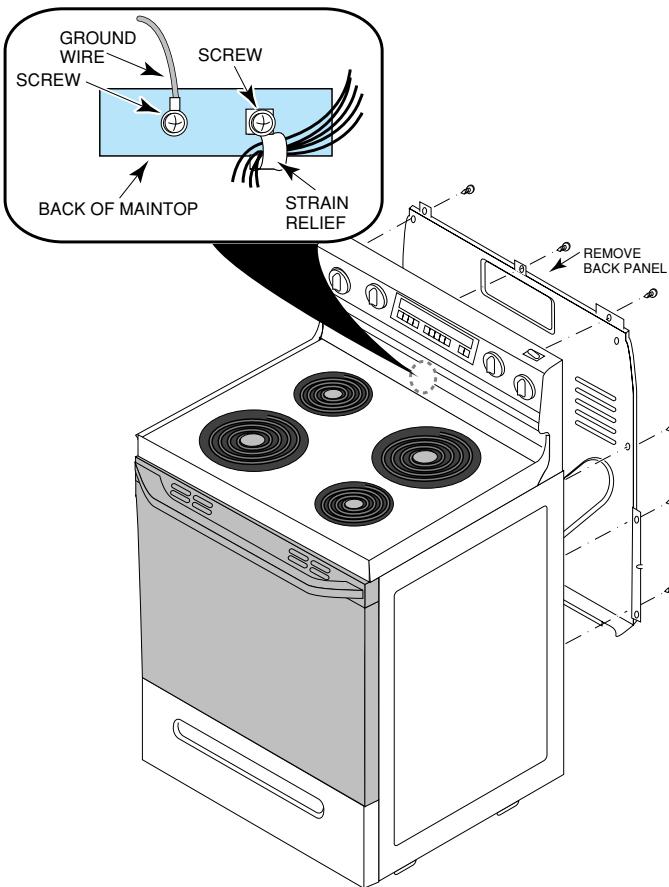
Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

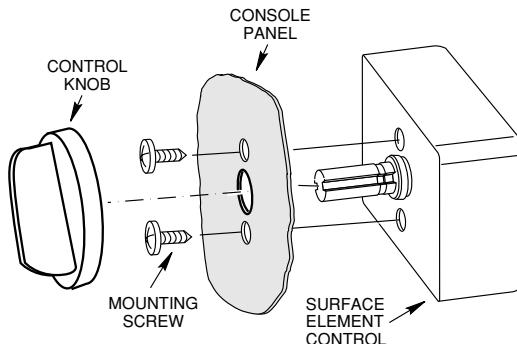
CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.
3. Remove the screws from the back panel and remove the panel.

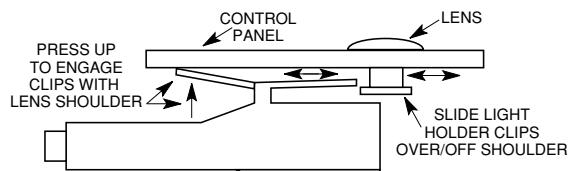


4. From behind the range, remove the oven control from the console panel and let it hang loose.

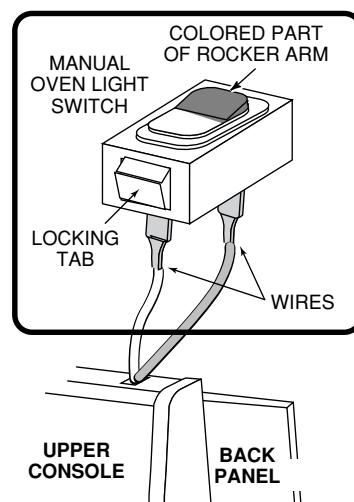
5. Remove the knobs and the two mounting screws from each of the element controls, then remove the controls from the console panel and let them hang loose.



6. Slide the two indicator lights off the lenses and remove the lenses from the console panel.



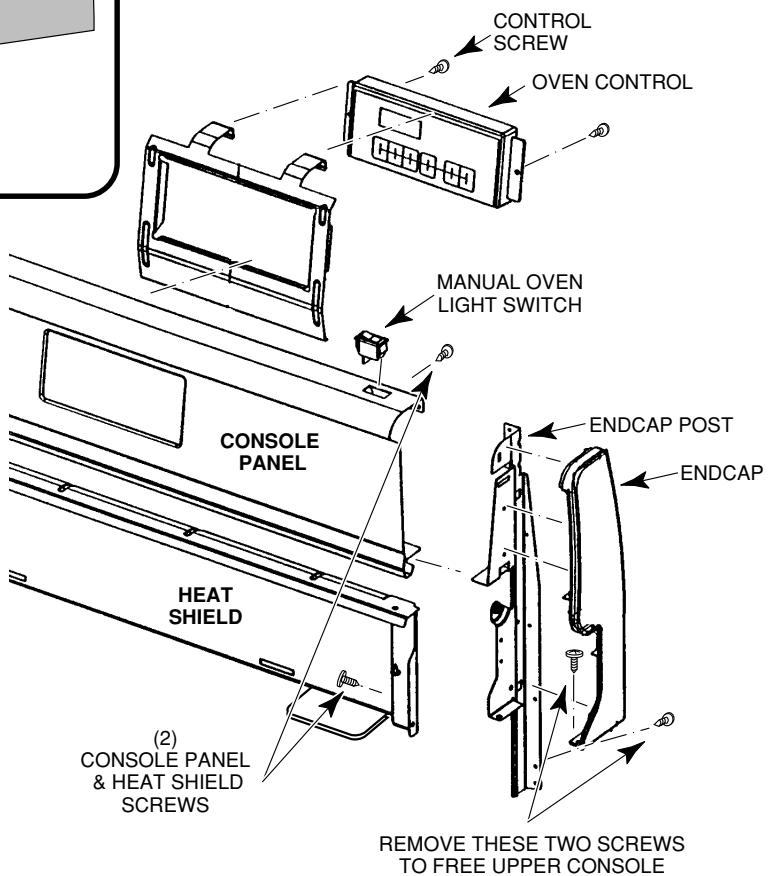
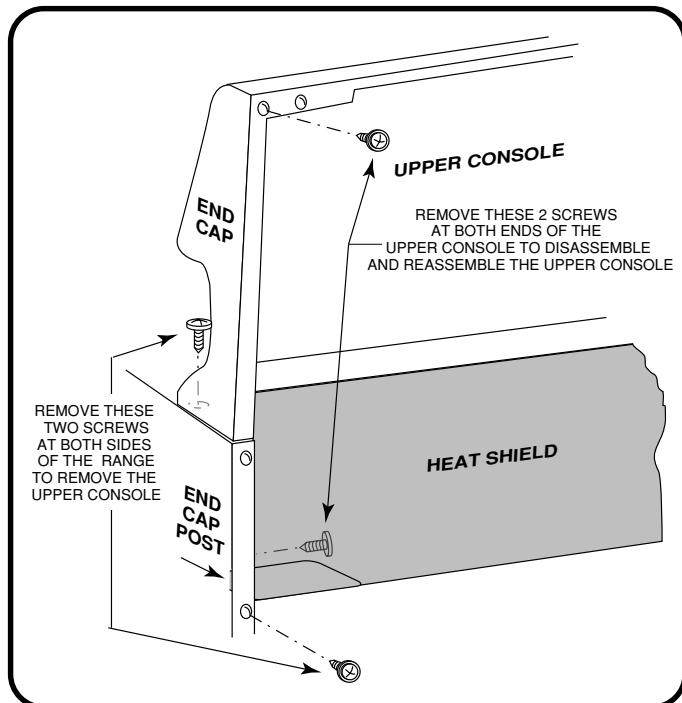
7. **Manual Oven Light Switch (Some Models):** Disconnect the wires from the manual oven light switch terminals. Note the orientation of the rocker arm color on the switch, and then press the locking arms against the body of the switch, and push it out of the upper console.



8. Remove the maintop from the upper console, then remove the ground wire and the wire harness strain relief, and set the maintop on the range (use the procedure on page 3-2 or 3-4).

Refer to the inset and main illustration for the following steps.

9. Remove the upper console screws from the back and the two screws from the endcaps that secure the upper console to the side panels.
10. Lift the upper console assembly straight up and off the range.



REMOVING THE ELECTRONIC OVEN CONTROL OR MECHANICAL OVEN THERMOSTAT

WARNING

Electrical Shock Hazard

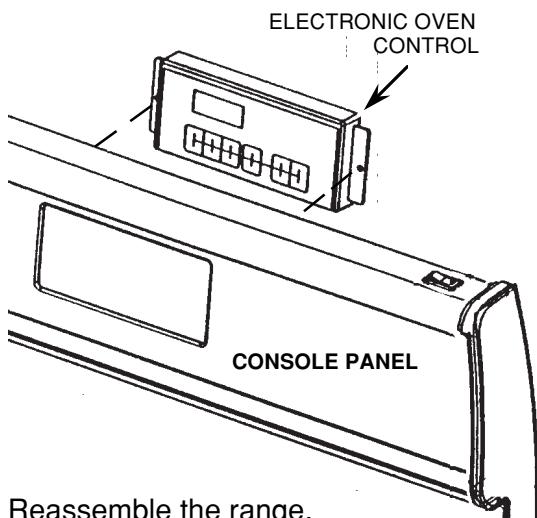
Disconnect from electrical supply before servicing unit.

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

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

REMOVING THE ELECTRONIC OVEN CONTROL

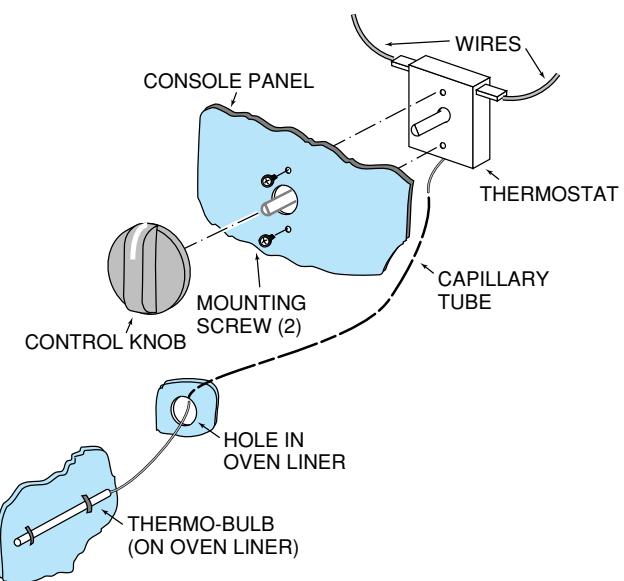
1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.
3. Remove the screws from the back panel and remove the panel.
4. Remove the mounting screws from the old electronic oven control and remove the control. **Do not disconnect the wires yet.**
5. Mount the new electronic oven control to the console panel.
6. One at a time, disconnect each wire and connector from the old electronic oven control, and connect it to the same terminal location on the new control.



7. Reassemble the range.

REMOVING THE MECHANICAL OVEN THERMOSTAT

1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.
3. Remove the screws from the back panel and remove the panel.
4. Pull the knob off the thermostat control shaft.



5. Remove the mounting screws from the thermostat and remove it from the back of the control panel.
6. Disconnect the two wires from the oven thermostat terminals.
7. From inside the oven, unclip the thermo-bulb from the liner and push it and the capillary tube through the hole in the back of the liner.
8. Mount the new thermostat and thermo-bulb to the range.
9. Reassemble the range.

REMOVING A SURFACE ELEMENT CONTROL & AN INDICATOR LIGHT

WARNING

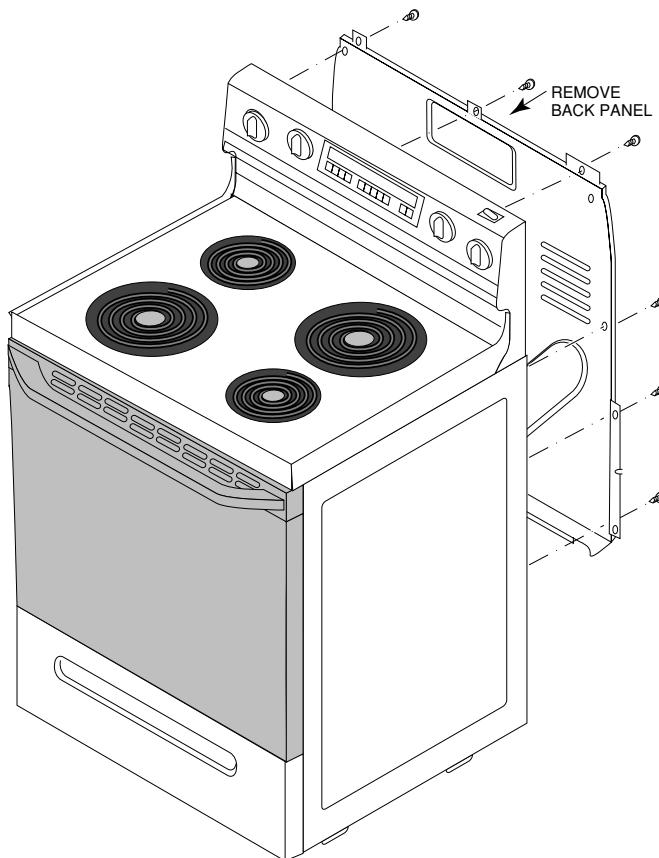
Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

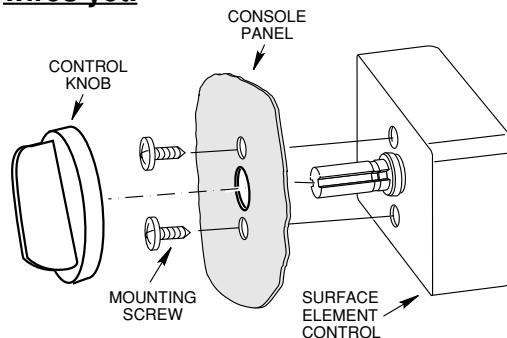
Failure to do so could result in death or electrical shock.

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

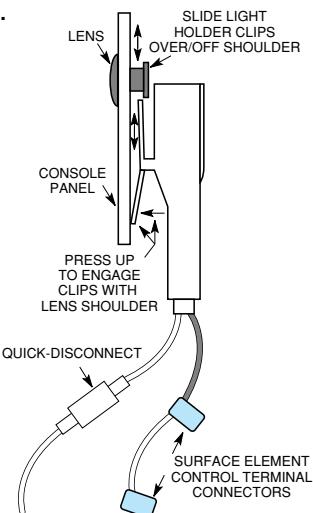
1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.
3. Remove the screws from the back panel and remove the panel.



4. Remove the knob and the two screws from the defective surface element control. Note the orientation of the control and remove it from the console panel. **Do not disconnect the wires yet.**



5. Verify that the new surface element control is rated the same as the old one.
6. Position the new control the same as the old one you just removed, mount it to the console panel, and install the knob on the shaft.
7. Disconnect each wire, one at a time, from the terminals of the defective surface element control, and reconnect it to the same terminal location on the new control.
8. Slide the old indicator light off the lens on the console panel, disconnect the wires, and remove it.
9. Install the new indicator light to the console panel lens and connect the wires to the quick-disconnect and the surface element control terminals.



9. Reassemble the range.

REMOVING AN OPEN COIL ELEMENT & CONNECTOR BLOCK



WARNING

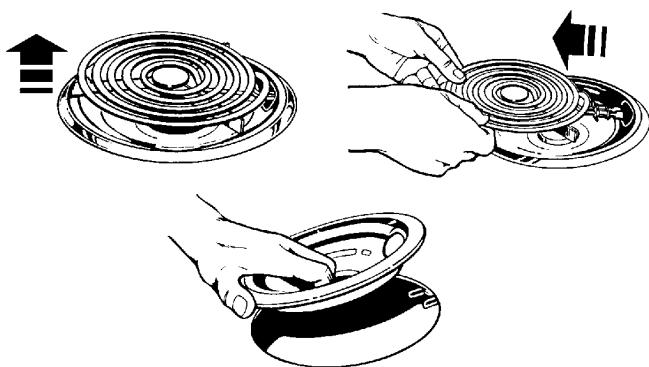
Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

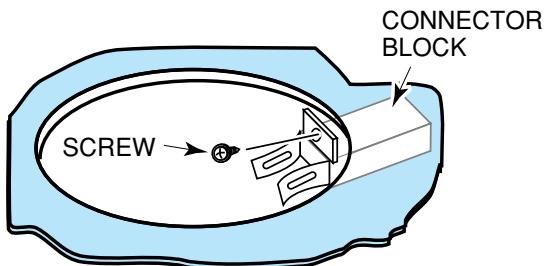
Failure to do so could result in death or electrical shock.

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Turn off the electrical supply to the range.
2. Make sure that the coil elements are cool before you handle them.
3. Push and lift the defective coil element and unplug it from the connector block, then plug in the new element.



4. If you are replacing a connector block, remove the drip pan from the maintop for the defective connector block.
5. Remove the screw from the defective connector block and lay the blocks on the burner box.



6. Disconnect the connector block wires from the element control terminals and untape the wires from the main harness.
7. Install the new connector block and retape the wires to the main harness.
8. Reassemble the range.

REMOVING THE OVEN DOOR LATCH

! WARNING

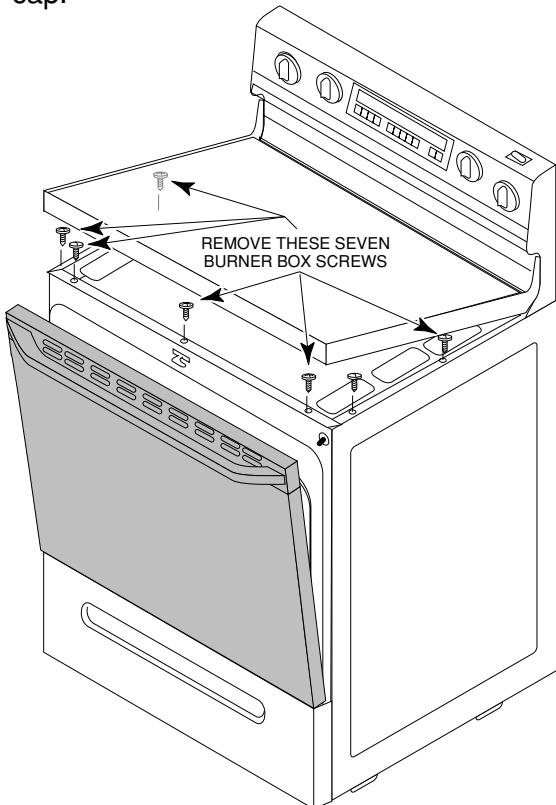
Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

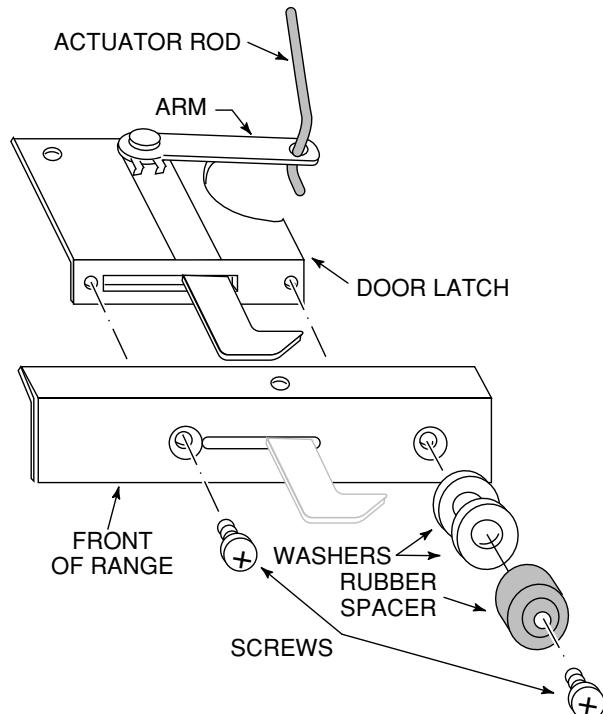
Failure to do so could result in death or electrical shock.

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.
3. Lift the front of the maintop and prop it up (see pages 3-2 or 3-4, depending on the model).
4. **Open Coil Models Only:** Remove the three front and four side screws from the top of the burner box. NOTE: It is not necessary to remove the two screws from the top of the end cap.



5. Remove the screws, rubber spacer, and two washers from the oven door latch.



6. **Open Coil Models Only:** Carefully lift the front of the burner box just high enough to access the oven door latch and prop it up. **IMPORTANT: Be careful not to overbend the burner box at the back or you will crack the porcelain finish.**
7. Unhook the end of the actuator rod from the arm of the old oven door latch, and hook it onto the arm of the new latch. NOTE: Be careful not to bend the actuator rod when you install it or it could affect the door latch function.
8. Reassemble the range.

THE LATCH SENSING SWITCH, DOOR LATCH SOLENOID, MECHANICAL LATCH, & ACTUATOR ROD

WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

REMOVING A LATCH SENSING SWITCH

1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.
3. Remove the screws from the back panel and remove the panel.
4. Disconnect the wires from the defective latch sensing switch.
5. Note the side of the actuator pin that the switch arm is positioned, and remove the defective latch sensing switch from the bracket.
6. Mount the new latch sensing switch to the bracket with the switch arm positioned on the same side of the actuator pin as the old switch.
7. Reassemble the range.

REMOVING THE DOOR LATCH SOLENOID

1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.

3. Remove the screws from the back panel and remove the panel.
4. Note the side of the actuator pin that the switch arm is positioned, then disconnect the wires and remove the solenoid from the bracket. NOTE: The plunger is separate from the solenoid. If you wish to use the old plunger with the new solenoid, leave it connected to the latching assembly, otherwise remove the pin, and disconnect it.
5. If you are using the old plunger, insert it into the body of the new solenoid. If not, connect the plunger of the new solenoid to the latching assembly, place the actuator pin between the arms of the two sensing switches, and mount the new solenoid to the bracket.
6. Connect the wires to the new solenoid.
7. Reassemble the range.

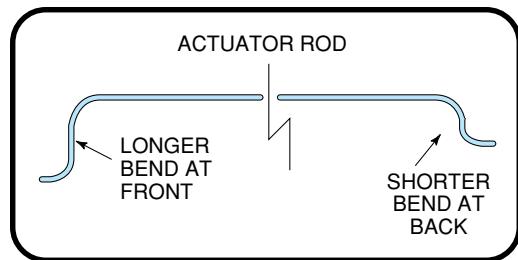
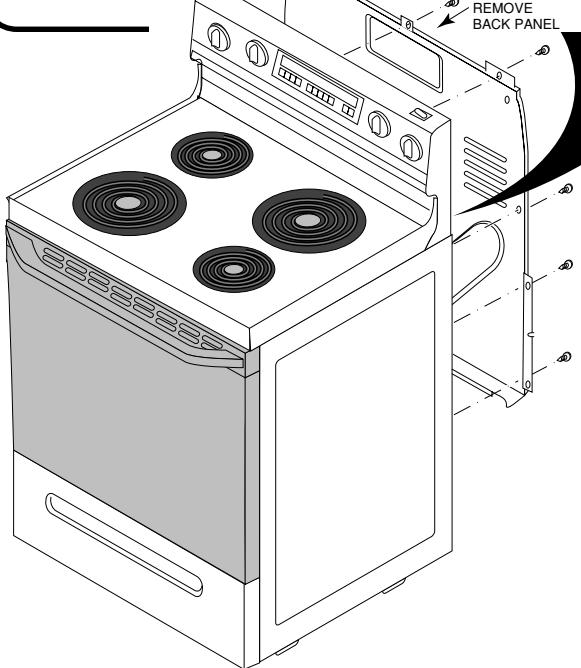
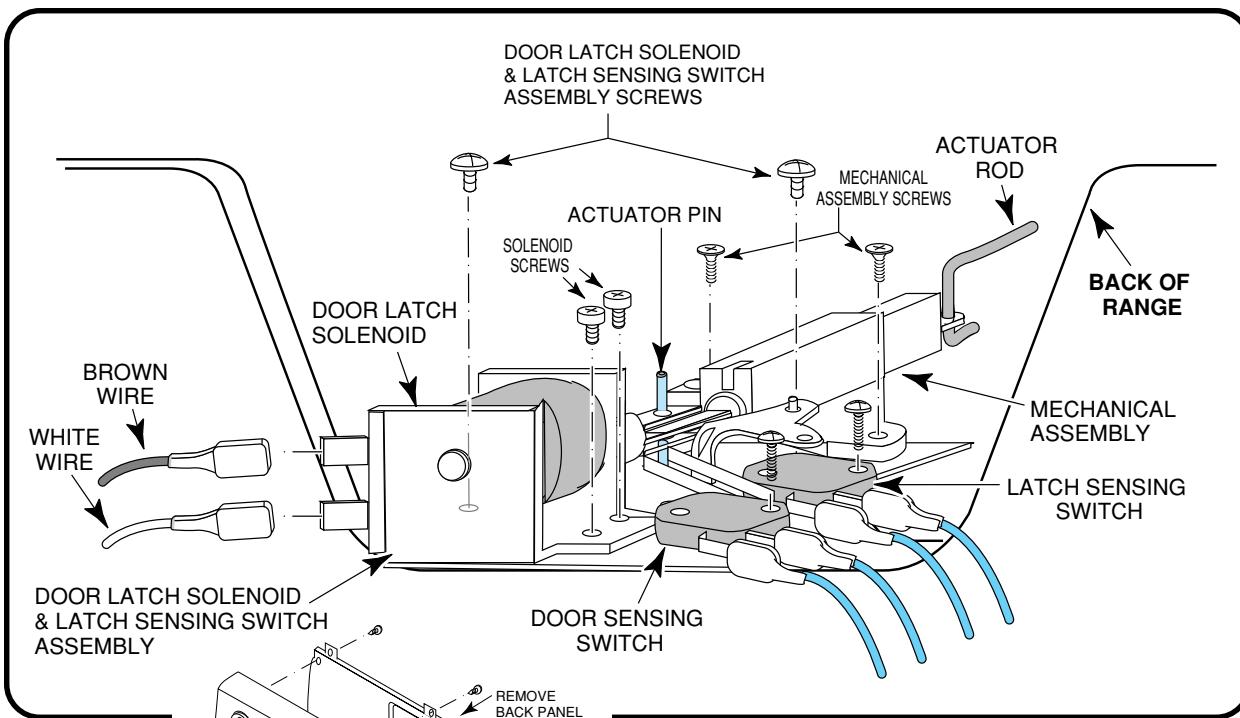
REMOVING THE MECHANICAL LATCH

1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.
3. Remove the screws from the back panel and remove the panel.
4. Remove the two screws from the mechanical latch and remove it and the solenoid plunger from the bracket.
5. Hook the arm of the mechanical latch over the actuator rod on the bracket.
6. Mount the solenoid to the bracket and slide the solenoid plunger into the solenoid body.
7. Place the actuator pin between the arms of the two sensing switches and mount the latch assembly to the bracket.
8. Reassemble the range.

REMOVING THE ACTUATOR ROD

1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.
3. Remove the screws from the back panel and remove the panel.
4. Remove the oven door latch (see page 3-15 for the procedure).

5. Remove the two mounting screws from the door latch solenoid & latch sensing switch assembly, then remove the assembly and the actuator rod from the back of the range.
6. Unhook the end of the actuator rod with the shorter bend from the door latch solenoid & latch sensing switch assembly, and hook the similar end of the new rod in its place (see the small inset below).
7. Reassemble the range.



REMOVING AN OVEN LIGHT SOCKET

!WARNING

Electrical Shock Hazard

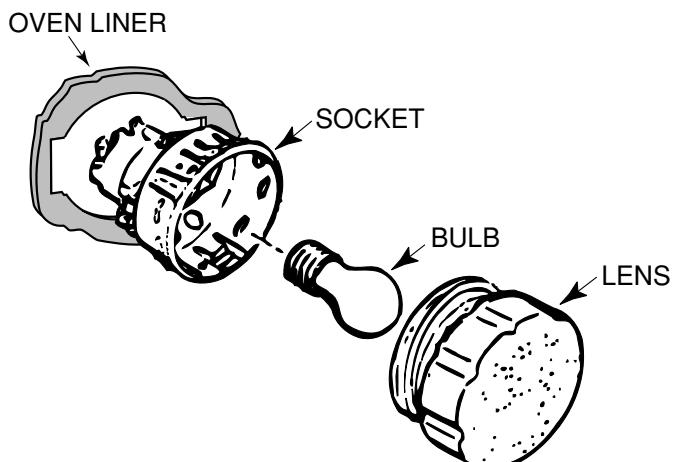
Disconnect from electrical supply before servicing unit.

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

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Turn off the electrical supply to the range.
2. Remove the oven door from the range (use the procedure shown on page 1-14).

3. Remove the racks from inside the oven.
4. Put on a pair of safety glasses.
5. Unscrew the lens and the light bulb from the old oven light socket.
6. Pry the tabs on the oven light socket out of the oven liner cutout and disconnect the wires from the terminals.
7. Connect the wires to the new oven light socket.
8. Pull the insulation around the oven liner cutout so that the socket will fit against it when it is installed in the next step.
9. Align the extrusion on the base of the oven light socket with the notch in the oven liner cutout and snap the socket into the liner.
10. Screw the bulb and lens into the light socket.



REMOVING AN OVEN LIGHT SWITCH

WARNING

Electrical Shock Hazard

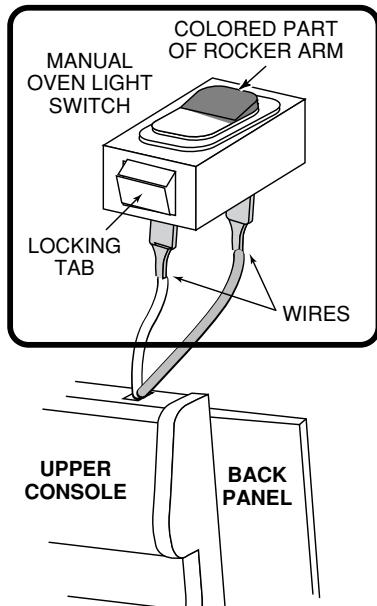
Disconnect from electrical supply before servicing unit.

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

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

REMOVING THE MANUAL OVEN LIGHT SWITCH

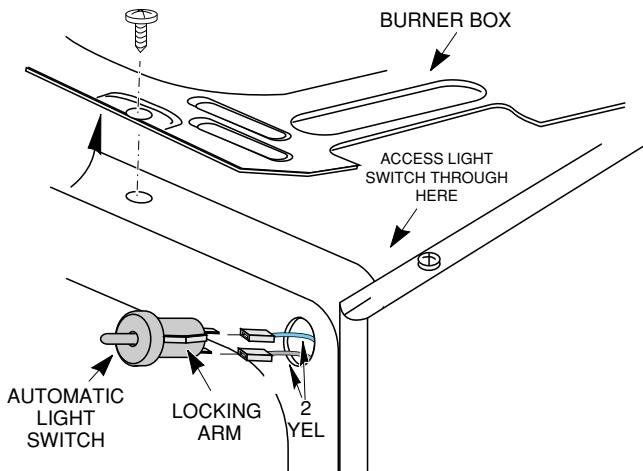
1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.
3. Remove the screws from the back panel and remove the panel.
4. Unplug the wires from the manual oven light switch terminals.
5. Note the orientation of the rocker arm color on the manual oven light switch, and then press the locking arms against the body of the switch, and push it out of the upper console.



6. Connect the wires to the terminals of the new manual oven light.
7. Position the switch with the rocker arm color in the same direction as the old one, and snap the manual oven light switch into the upper console opening.
8. Reassemble the range.

REMOVING THE AUTOMATIC OVEN LIGHT SWITCH

1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.
3. Lift the maintop and prop it up (use the procedure on page 3-2 or 3-4, depending on the model).
4. If necessary, remove the seven screws from the front and sides of the burner box and prop it up just enough so you can access the automatic oven light switch. **IMPORTANT:** Do not overbend the burner box at the back or you will crack the enamel finish.



5. Push the old automatic oven light switch out of the cutout, disconnect the wires from the terminals, and reconnect them to the new switch, then press the oven light switch into the oven cutout so that it snaps into place. NOTE: The automatic oven light switch can have two or four terminals. The 4-terminal switch has different size terminals so that the wiring cannot be interchanged.
6. Reassemble the range.

REMOVING THE BAKE ELEMENT

!WARNING

Electrical Shock Hazard

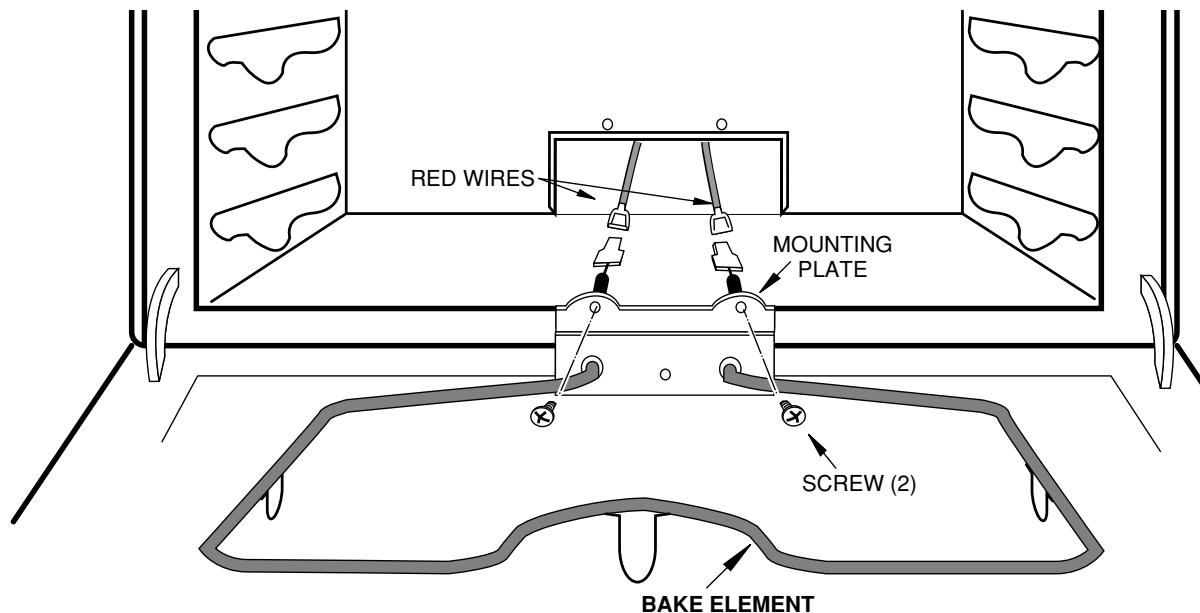
Disconnect from electrical supply before servicing unit.

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

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Turn off the electrical supply to the range.
2. Remove the oven door (use the procedure shown on page 1-14).

3. Remove the oven racks.
4. Remove the two screws from the bake element mounting plate and pull the element forward just enough to access the terminals.
5. Unplug the two wires from the old bake element and remove the element.
6. Connect the two red wires to the new bake element terminals, push the element back into place, and mount it to the liner with its mounting screws. NOTE: Do not overtighten the screws or you will strip the threads. Also, make sure that the element lays flat on the floor of the liner.
7. Reassemble the range.



REMOVING THE BROIL ELEMENT

WARNING

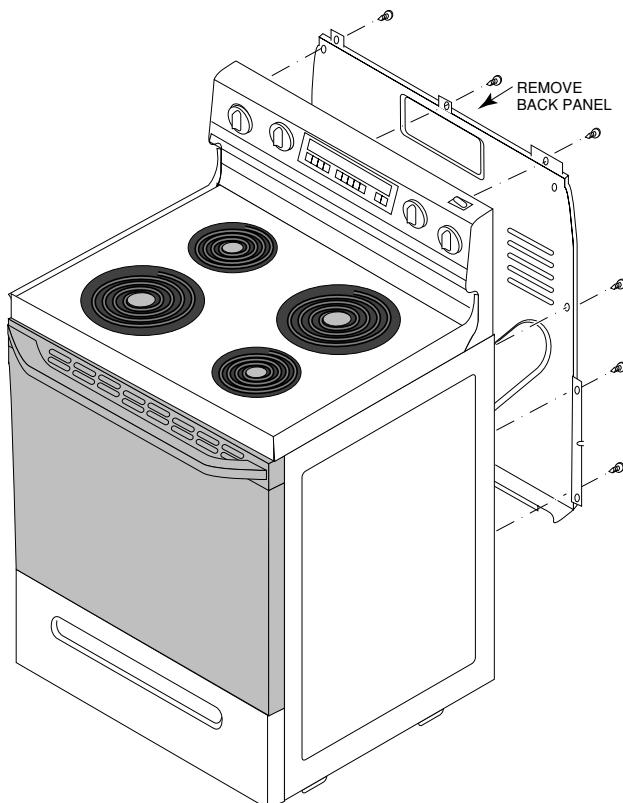
Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

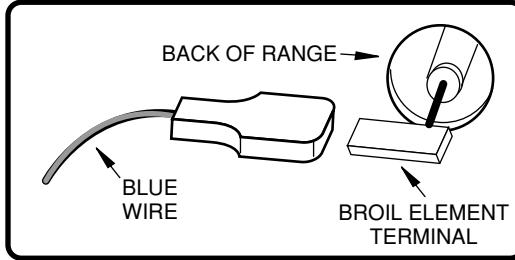
Failure to do so could result in death or electrical shock.

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

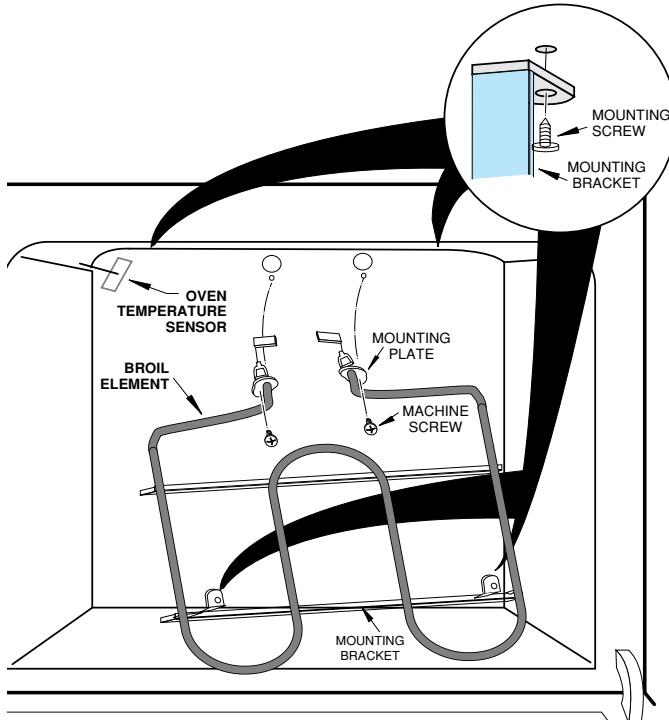
1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.
3. Open the oven door and remove it (use the procedure shown on page 1-14).
4. Remove the oven racks.
5. Remove the screws from the back panel and remove the panel.



6. From behind the range, disconnect the wires from the broil element terminals.



7. From inside the oven, remove the two screws from the broil element mounting brackets and the two screws from the mounting plate, then pull the element forward and remove it.



8. Mount the new broil element to the back of the oven liner with its mounting screws. NOTE: Do not overtighten the screws or you will strip the threads.
9. From behind the range, connect the wires to the broil element terminals.
10. Reassemble the range.

REMOVING THE OVEN TEMPERATURE SENSOR & THE OVEN THERMAL FUSE

WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

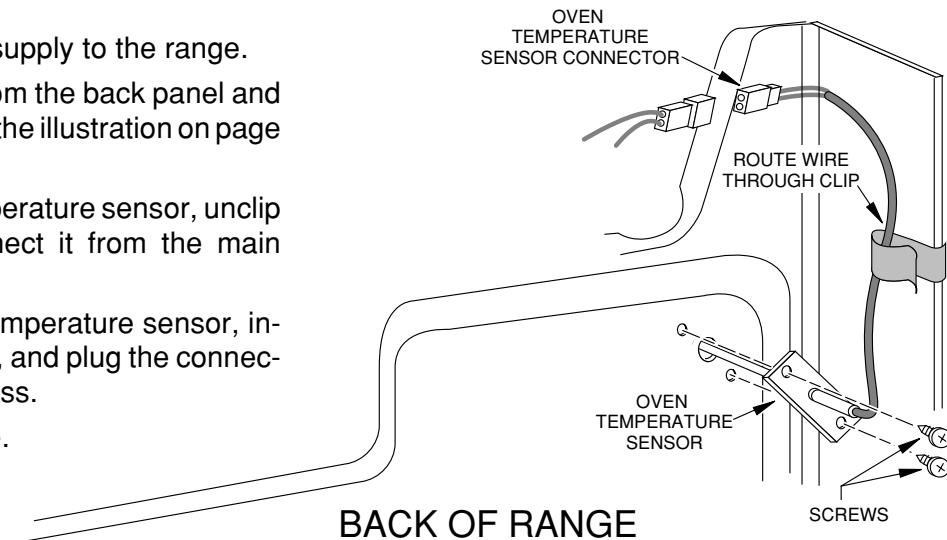
CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

REMOVING THE OVEN TEMPERATURE SENSOR

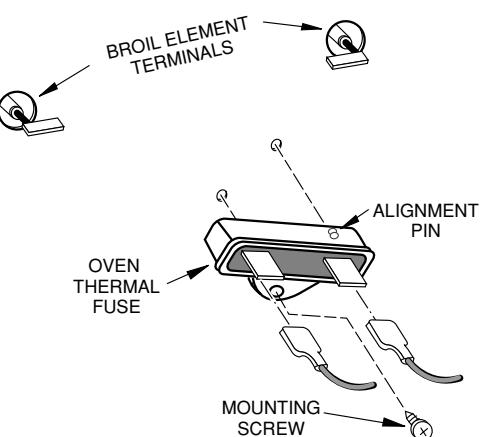
1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.
3. Remove the screws from the back panel and remove the panel (see the illustration on page 3-21).
4. Remove the oven temperature sensor, unclip the lead, and disconnect it from the main wiring harness.
5. Install the new oven temperature sensor, install the lead in the clip, and plug the connector into the main harness.
6. Reassemble the range.

REMOVING THE OVEN THERMAL FUSE

1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.
3. Remove the screws from the back panel and remove the panel (see the illustration on Page 3-21).
4. Disconnect the two wires from the terminals of the oven thermal fuse and remove the fuse from the back of the range.
5. Mount the new oven thermal fuse to the range with its mounting screws so the alignment pin fits into its mounting hole, and reconnect the two wires to the terminals.
6. Reassemble the range.



BACK OF RANGE



REMOVING A SIDE PANEL

WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

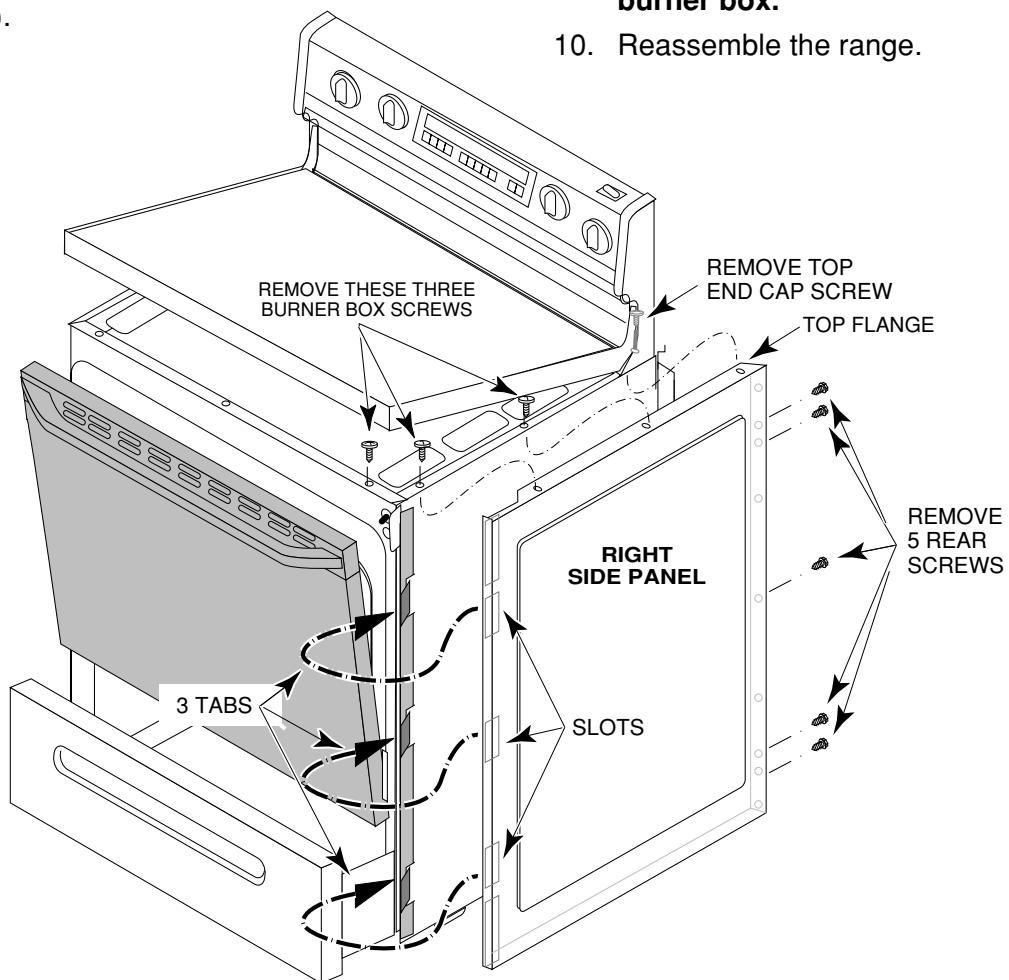
Failure to do so could result in death or electrical shock.

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Pull the range away from the wall so that you can access the back.
2. Turn off the electrical supply to the range.
3. Lift the maintop and prop it up (use the procedure on page 3-2 or 3-4, depending on the model).

NOTE: The right side panel is shown removed. The left side panel is removed in the same manner.

4. Remove the five screws that secure the back of the side panel to the range.
5. Remove the top screw from the end cap, depending on the side panel you are removing.
6. Remove the two screws from the burner box that secure the side panel to the top of the range.
7. Open the oven door and pull the storage drawer out several inches.
8. Pull the rear of the side panel away from the range, push it forward, and unhook the three tabs from the slots at the front of the range.
9. Replace the side panel. **IMPORTANT REASSEMBLY NOTE:** When you install the side panel, position the top flange under the burner box.
10. Reassemble the range.



REMOVING THE OVEN DOOR GASKET

WARNING

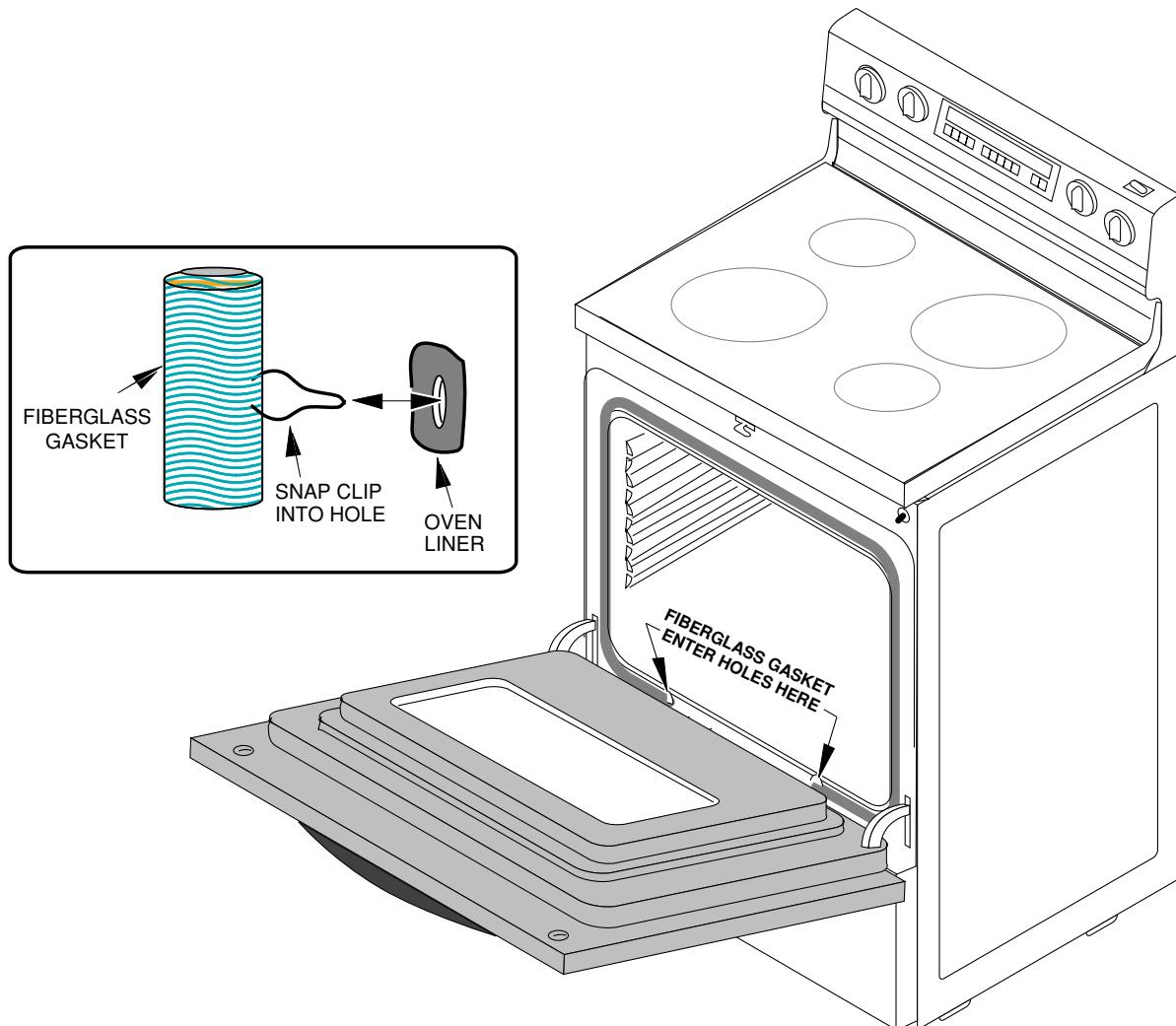
Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Turn off the electrical supply to the range.
2. Open the oven door, pull the clips on the old fiberglass gasket out of the holes in the front of the oven (you may need pliers to do this).
3. Remove any kinks from the new oven door gasket and clip it to the front of the range.
4. Close the oven door and check to make sure that the gasket seal is tight and even around the door.



THE OVEN DOOR HANDLE, TOP TRIM, & OUTER DOOR GLASS

WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

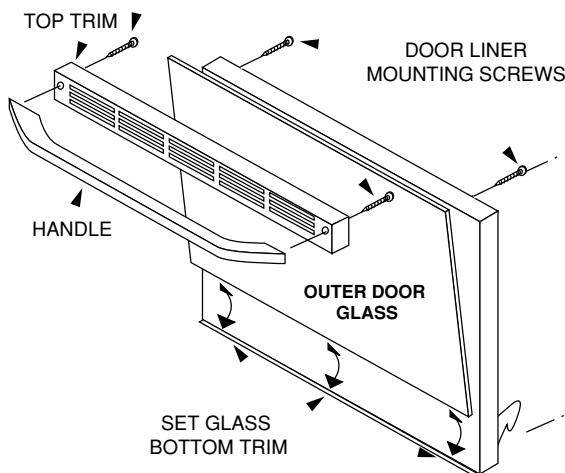
Failure to do so could result in death or electrical shock.

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

REMOVING THE OVEN DOOR HANDLE & TOP TRIM

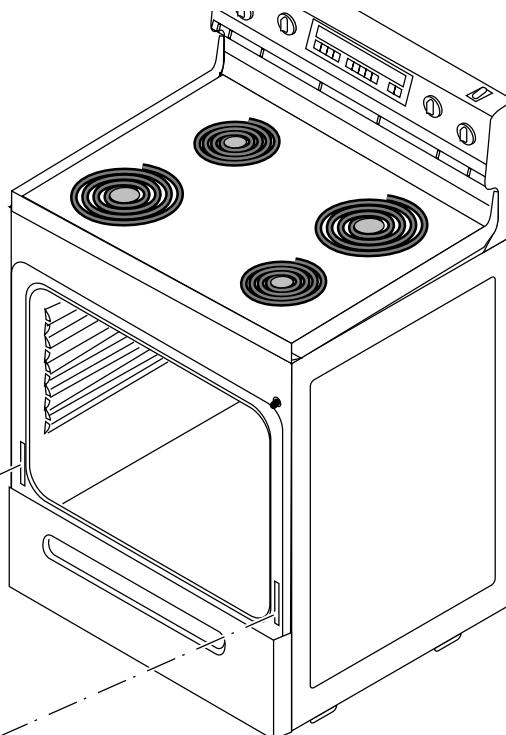
1. Turn off the electrical supply to the range.
2. Open the oven door, remove it (refer to page 1-14 for the procedure), and position it on a protected floor with the handle and outer door glass facing up.
3. Remove the two door mounting screws from the liner side of the door.
4. Lift the door liner and remove the two screws from the old door handle and top trim.
5. Mount the new handle and top trim to the oven door.
6. Reinstall the oven door on the range.

HANDLE & TRIM MOUNTING SCREWS



REMOVING THE OUTER DOOR GLASS

1. Turn off the electrical supply to the range.
2. Remove the oven door (see page 1-14 for the procedure), and position it on a protected floor with the handle and outer door glass facing up.
3. Raise the top of the door and remove the two screws that secure the top of the door trim and the handle to the door liner, then remove the handle and top trim.
4. Slide the outer door glass out of the bottom trim channel and install the new glass in its place.
5. Install the top trim and handle on the oven door and secure them in place with their two mounting screws. REASSEMBLY NOTE: The side trim on Whirlpool oven doors fits under the top edge of the outer door glass, and the side trim on Roper models fits over the top edge of the glass. Make sure that the trim is seated properly when you tighten the screws.
6. Reinstall the oven door on the range.



REMOVING A HINGE ASSEMBLY

WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

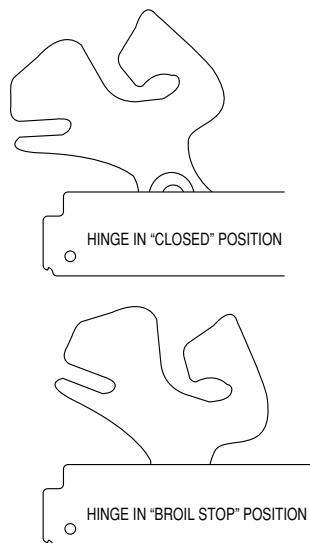
Failure to do so could result in death or electrical shock.

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

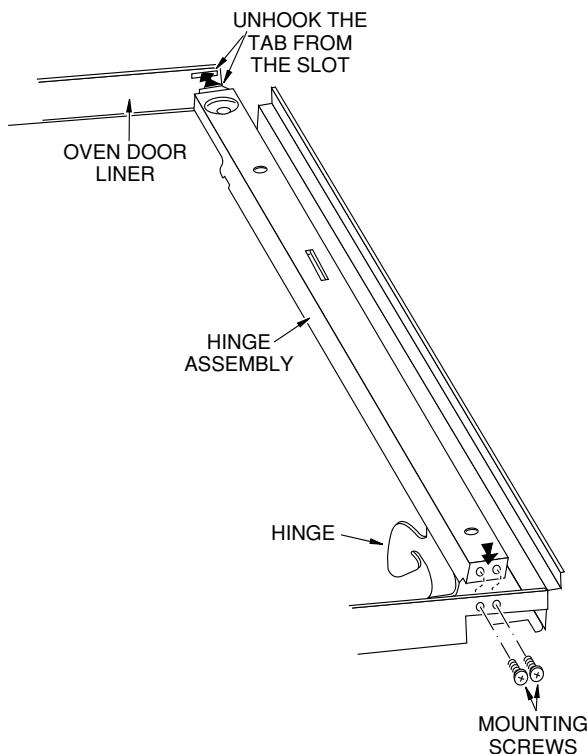
1. Turn off the electrical supply to the range.
2. Remove the oven door (see page 1-14 for the procedure).

CAUTION: Personal Injury Hazard—The hinge assembly arms are spring-loaded and can snap back when the arm screws or nails are removed. Keep your fingers clear of the space between the oven door liner and the arms when you perform the following steps.

3. On the hinge assembly that you wish to remove, place the bottom of your shoe against the end of the hinge, and move it just enough to remove the screw or nail, then slowly allow the spring to move the hinge back to the "broil stop" position, and leave it there. **IMPORTANT:** Be careful not to disturb the arm when you remove the hinge assembly.

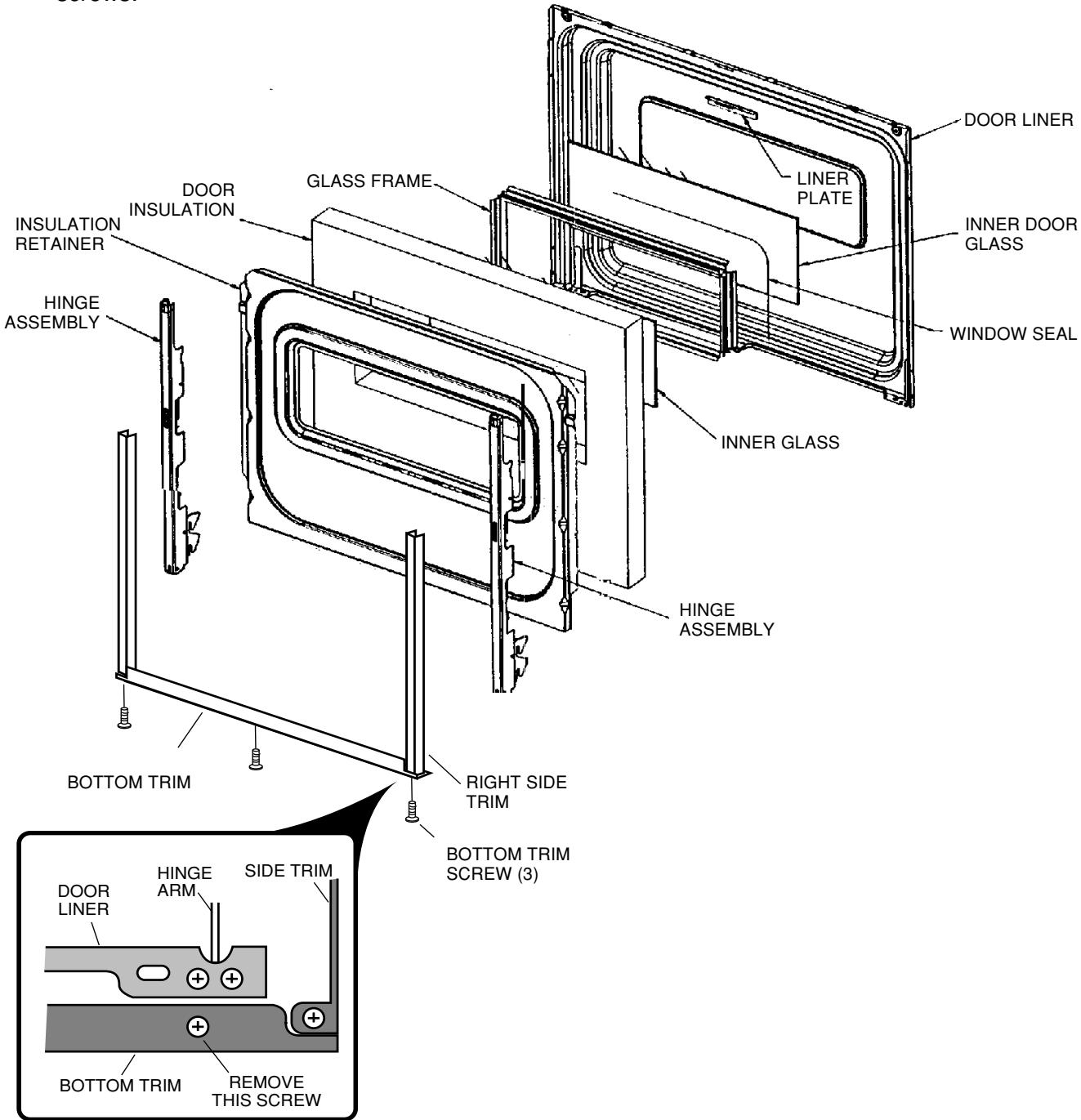


4. Remove the door handle, top trim, and outer door glass from the oven door (see page 3-25 for the procedure).
5. Position the oven door with the hinge assembly arms facing up.
6. Remove the three screws from the bottom trim, (see the illustration and inset on the next page), and remove the bottom and both side trim from the oven door.
7. Remove the two screws from the bottom of the hinge assembly.
8. Without disturbing the arm, carefully push back on the hinge and unhook the tab from the top slot, then lift the top on the hinge assembly, and remove it from the oven door.



9. Use the bottom of your shoe, and move the arm on the defective hinge assembly from the "broil position" to the "fully closed" position so that it cannot snap closed accidentally and cause an injury.

10. With the hinge arm in the "broil stop" position, install the new hinge assembly in the oven door liner. Insert the arm into the slot, and rotate the assembly into position. Hook the tab at the top of the assembly into the slot in the door liner, and secure the bottom with two screws.
11. Using the bottom of your shoe, press down on the hinge assembly arm that you just installed, and insert the screw or nail into the hole in the arm.
12. Reassemble the rest of the door and install it on the range.



BOTTOM VIEW

REMOVING AN INNER DOOR GLASS

WARNING

Electrical Shock Hazard

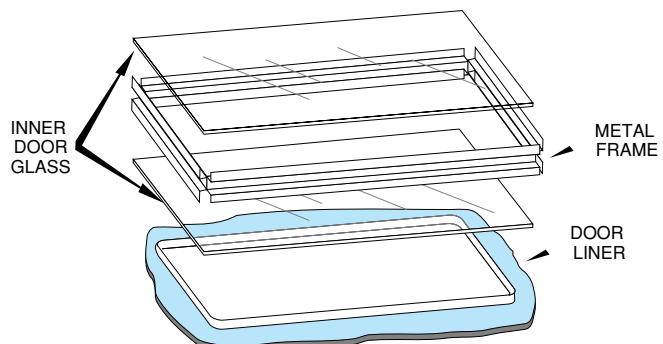
Disconnect from electrical supply before servicing unit.

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

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Turn off the electrical supply to the range.
2. Remove the oven door (see page 1-14 for the procedure).
3. Remove the door handle, top trim, and outer door glass from the oven door (see page 3-25).
4. Remove the three screws from the bottom trim (see the inset on page 3-27) and remove the bottom and side trim from the oven door.
5. Remove one of the hinge assemblies from the oven door (see page 3-26).
6. Lift the side of the insulation retainer and slide it out from under the remaining hinge assembly.
7. Fold back the door insulation, remove the defective inner door glass and frame from the door liner.

8. If you are replacing the window seal, (the rope-type seal around the metal frame), remove and replace it at this time. NOTE: Join the rope ends at either top corner of the metal frame.
9. Install the new inner door glass in the metal frame.



10. Position the insulation around the metal frame.
11. Reinstall the insulation retainer in the door so the edge is under the hinge assembly.
12. Position the arm on the hinge assembly to be installed to the "broil stop" position, then mount it to the oven door with its two screws. Make sure that the tab at the top of the hinge fits into the slot in the door liner before you mount the screws.
13. Mount the bottom and side trim to the oven door.
14. Mount the outer door glass, the top trim, and the door handle to the door.
15. Using the bottom of your shoe, press down on the hinge assembly arm, and insert the pin into the hole in the arm.
16. Reinstall the oven door on the range.

REMOVING THE STORAGE DRAWER GLIDES

WARNING

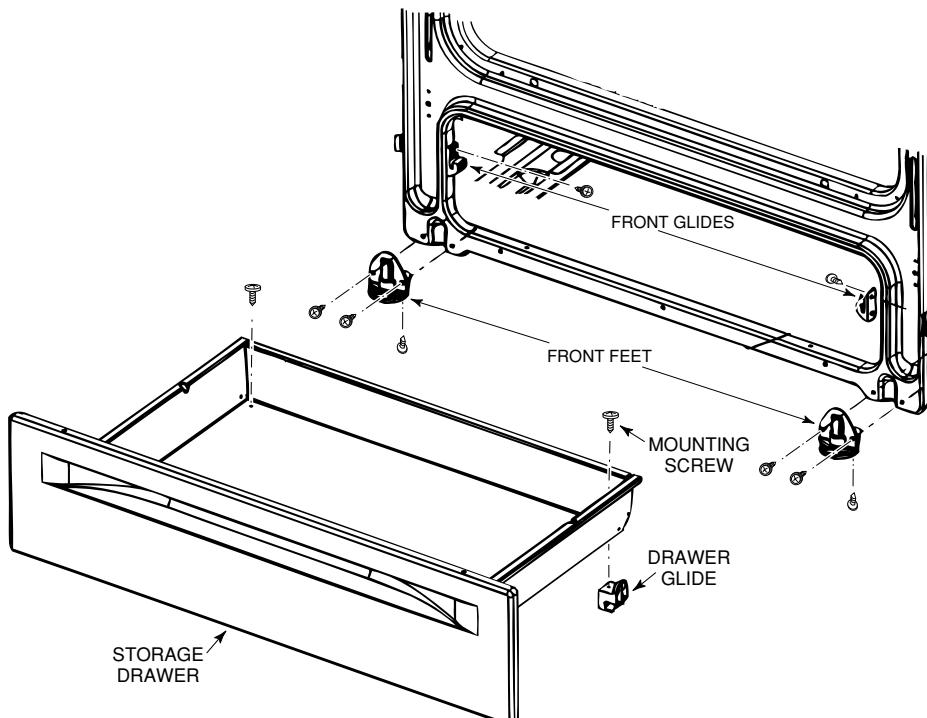
Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

CAUTION: When you work on the electric range, be careful when handling the sheet metal parts. Sharp edges may be present, and you can cut yourself if you are not careful.

1. Turn off the electrical supply to the range.
2. Slide the storage drawer out of the range.
3. To replace a drawer glide, remove the screw from the old drawer glide, remove the glide, and replace it with a new one.
4. To replace a front glide, remove the screw from the old glide, remove the glide, and replace it with a new one.
5. To replace a front foot, remove the screws from the old foot, remove the foot, and replace it with a new one.
6. Reinstall the storage drawer in the range and make sure that it operates smoothly.

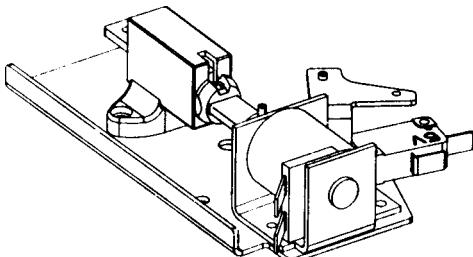


— NOTES —

COMPONENT DESCRIPTION & TESTING

TROUBLESHOOTING

DOOR LATCH ASSEMBLY



Description

The purpose of the door latch is to lock the oven door during the self-clean cycle. The door latch assembly consists of a solenoid and a switch.

The latch assembly prevents the oven door from being opened during the self-clean cycle, when the oven temperature is above 600°F.

The door latch solenoid operates on a 120-volt dc pulse from the oven control. When the door is in the unlocked position, the solenoid plunger is extended. When the latch sensing switch is open, the control senses that the door is unlocked. When the latch sensing switch closes, the oven control senses that the door is locked. The latch sensing switch, mounted on the solenoid bracket, is in the N.O. (normally-open) position. During the self-clean cycle, the oven control sends a 120-volt dc pulse to the solenoid windings, which pulls the plunger in, and moves the latch actuator rod to lock the oven door. The movement of the rod also activates the latch sensing switch and closes it. When the self-clean cycle is over, and the oven temperature reaches approximately 600°, the oven control sends a 120-volt dc pulse to the solenoid, the plunger is pushed out, the latch actuator rod releases the door and unlocks it, and the sensing switch opens. There are no adjustments for the latch.

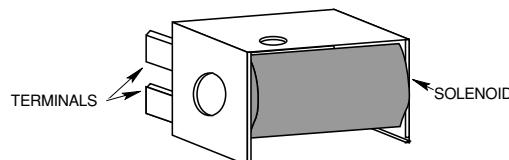
Test Procedure

WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

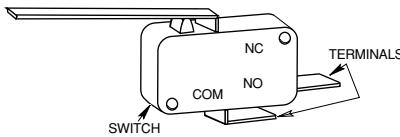


To test the solenoid windings, perform the following steps:

1. Use an ohmmeter and set the range switch to R x 1.
2. With no power applied, remove the wire from either solenoid terminal.
3. Touch the leads of the ohmmeter to the terminals of the solenoid. You should obtain a reading of between 45 Ω and 65 Ω.

If the reading is not within the range shown, the solenoid is defective and should be replaced.

Latch Sensing Switch



To test the latch sensing switch, perform the following steps:

1. With no power applied, touch the ohmmeter leads to the two switch terminals. The meter should indicate an open circuit (infinity ∞).
2. Close the switch and the ohmmeter should indicate 0 Ω (short circuit).

If the above results are not obtained, the switch is defective and should be replaced.

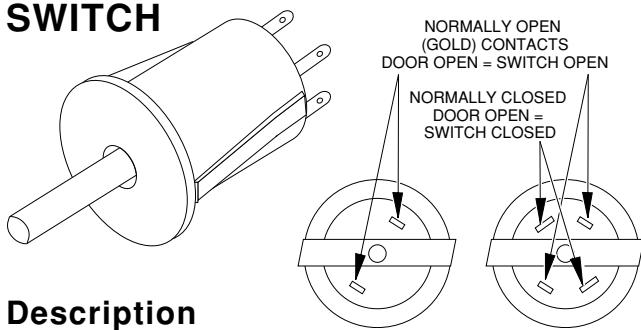
WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

AUTOMATIC OVEN LIGHT SWITCH



Description

The automatic oven light switch contacts are normally open when the oven door is closed and the plunger is pushed in. When the door opens, the plunger is pushed out, the contacts close, and 120-volts is applied to the light, which then turns on.

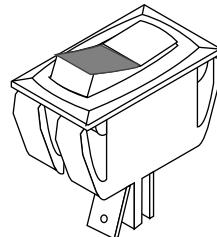
Test Procedure

To test the automatic oven light switch, perform the following steps:

1. Use an ohmmeter and set the range switch to R x 1.
2. With no power applied, remove the wires from the switch terminals.
3. Touch the leads of the ohmmeter to the gold terminals of the switch and the meter should indicate an open circuit (infinity ∞).
4. Press in on the switch button, and the meter should indicate continuity.
5. Touch the leads of the ohmmeter to the silver terminals of the switch and the meter should show continuity.
6. Press in on the switch button and the meter should indicate an open circuit (infinity ∞).

If the above results are not obtained, the switch is defective and should be replaced.

MANUAL OVEN LIGHT SWITCH (SOME MODELS)



Description

The manual oven light switch has two positions: one position is off, and the other is on. When the switch is pushed to on, the colored area of the switch rocker is exposed, and 120-volts is applied to the oven light, which then turns on.

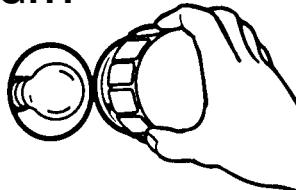
Test Procedure

To test the manual oven light switch, perform the following steps:

1. Use an ohmmeter and set the range switch to R x 1.
2. With no power applied, remove the wires from the switch terminals.
3. Press the switch rocker so the colored part is exposed (On).
4. Touch the leads of the ohmmeter to the terminals of the switch and the meter should show continuity.
5. Press in on the switch rocker so that the colored area is not visible, and the meter should indicate an open circuit (infinity ∞).

If the above results are not obtained, the switch is defective and should be replaced.

OVEN LIGHT



Test Procedure



WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

If the oven light does not work:

1. Remove the oven light bulb and test it for continuity. If the meter reads infinity, the bulb is defective. If the meter shows continuity, reinstall the light bulb, and go to the next step.
2. Disconnect power from the range, and check the automatic oven light switch (and the manual light switch, if one is installed) for continuity with the switch contacts closed. Also make sure that none of the wire terminals are loose or shorted to the chassis.

3. Reconnect power to the range and touch the AC voltmeter leads to one of the light switch terminals and the neutral side of the line. If the meter reads zero, the wire from the terminal block of the switch is open. If the meter reads 120-volts AC, go to the next step.
4. Turn the light switch on and touch the AC voltmeter leads to the other light switch terminal and the neutral side of the line. If the meter reads zero, the switch is open. If the meter reads 120-volts AC, go to the next step.
5. Disconnect power to the range, and remove the rear panel.
6. Reconnect power to the range and touch the AC voltmeter leads to the red lead at the light socket terminals and neutral side of the line. If the meter reads zero, the wire from the light switch to the socket is open. If the meter reads 120-volts AC, go to the next step.
7. Touch the AC voltmeter leads to the white lead at the light socket terminals and neutral side of the line. If the meter reads zero, the socket is defective. If the meter reads 120-volts AC, the neutral line is open.

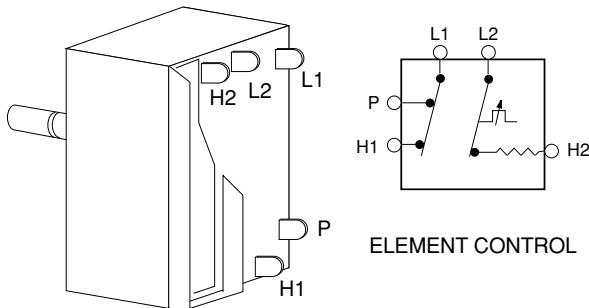
WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

ELEMENT CONTROL



Test Procedure

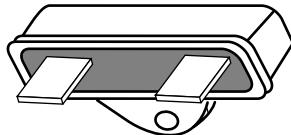
To test an element control, perform the following steps:

1. Use an ohmmeter and set the range switch to R x 1.
2. With no power applied, disconnect the wires from the control terminals. Turn the control on, and you should obtain continuity readings between the following terminals:

L1 and P
L1 and H1
P and H1
L2 and H2

If the reading is not within the range shown, the control is defective and should be replaced.

THERMAL FUSE



Current Rating = 25 amp @ 120 VAC & 20 amp @ 250 VAC.

Trip Point = 184°C (363°F).

Fuse is normally closed and is not resettable.

Description

The thermal fuse is located on the back of the range and senses heat buildup around the electronic oven control. When temperatures reach approximately 184°C (363°F), the fuse opens and cuts the electrical supply to the oven control. The thermal fuse cannot be reset, and must be replaced when open.

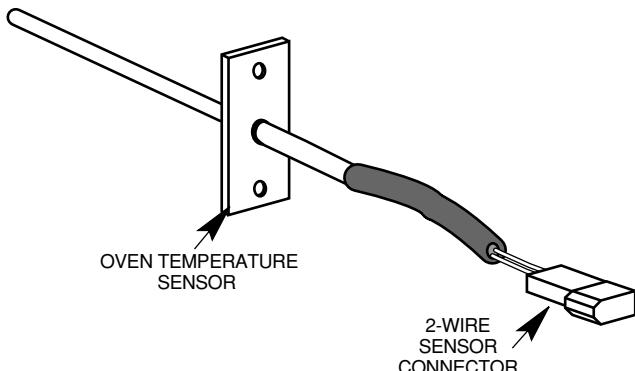
Test Procedure

To test the thermal fuse, perform the following steps:

1. Use an ohmmeter and set the range switch to R x 1.
2. With no power applied, remove the wires from the thermal fuse terminals.
3. Touch the leads of the ohmmeter to the terminals of the thermal fuse and the meter should show continuity.

If the above results are not obtained, the thermal fuse is defective and should be replaced.

OVEN TEMPERATURE SENSOR



Description

The operation of the Bake, Broil, and Self-Clean cycles is controlled by the oven control and the oven temperature sensor. The oven temperature sensor is a "Resistance Temperature Detector" (RTD), and is composed of a stainless steel tube with a thin film of platinum at the end. It is located at the upper left rear corner of the oven cavity. The RTD is a nonadjustable assembly, but may be checked at room temperature, or at 350°F. A sensor resistance of less than 550 ohms is regarded as a shorted sensor, and a resistance greater than 3000 ohms is regarded as an open sensor. When the oven control senses a resistance of less than 550 ohms, and greater than 3000 ohms, the bake and broil functions will be turned off.

WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

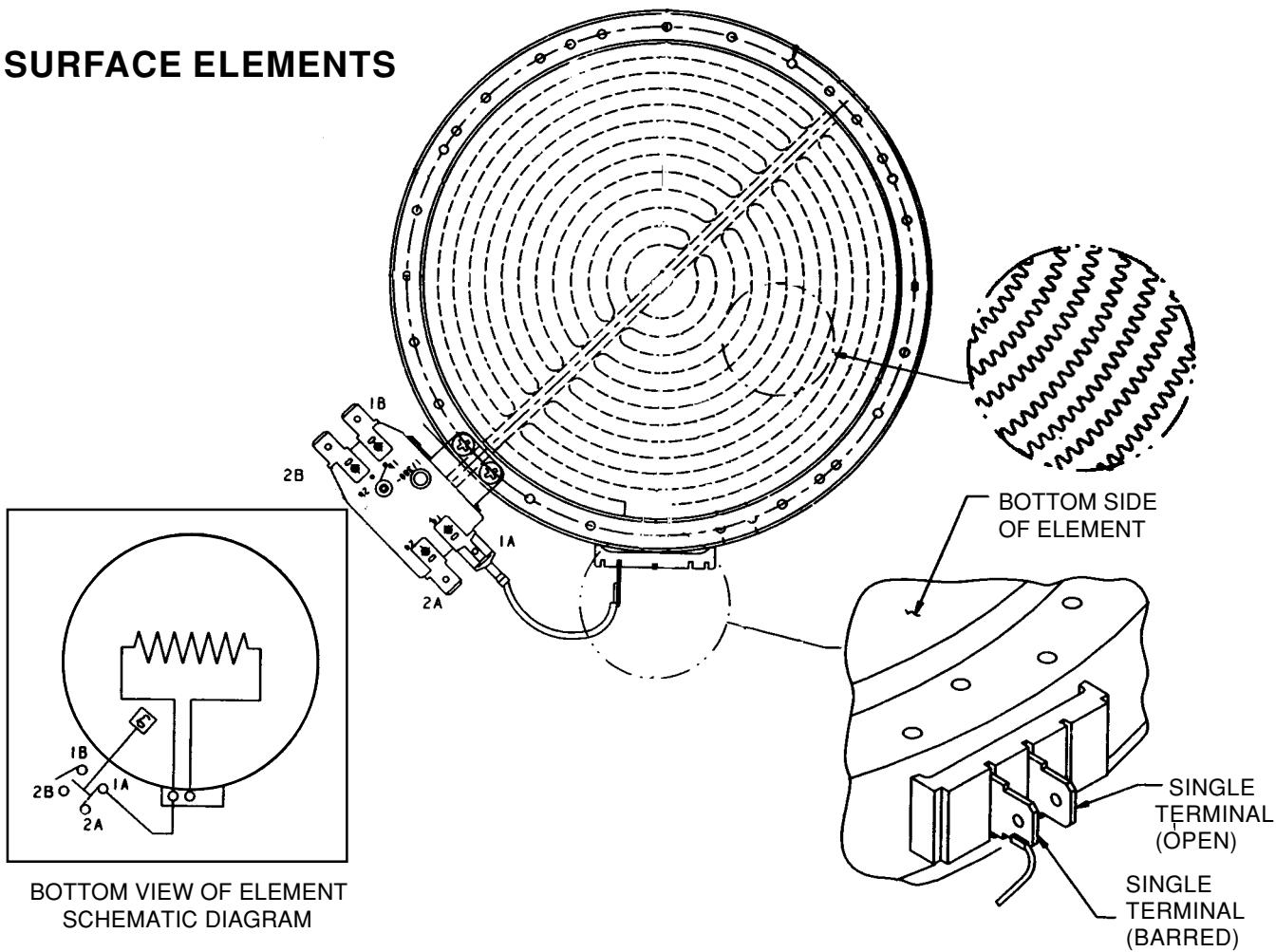
To test the oven temperature sensor, perform the following steps:

1. Use an ohmmeter and set the range switch to R x 10.
2. With no power applied, touch the leads of the ohmmeter to the connector pins of the sensor (you do not have to separate the connectors). Depending upon the oven temperature, you should obtain the corresponding reading:

Temperature (°F)	Resistance (Ω)
32 ± 1.9	1000 ± 4.0
75 ± 2.5	1091 ± 5.3
250 ± 4.4	1453 ± 8.9
350 ± 5.4	1654 ± 10.8
450 ± 6.9	1853 ± 13.5
550 ± 8.2	2047 ± 15.8
650 ± 8.6	2237 ± 18.5
900 ± 13.6	2697 ± 24.4

NOTE: If the readings vary more than 25°F from the selected setting, the oven control should be calibrated, as described on page 4-13.

SURFACE ELEMENTS



Test Procedure



WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

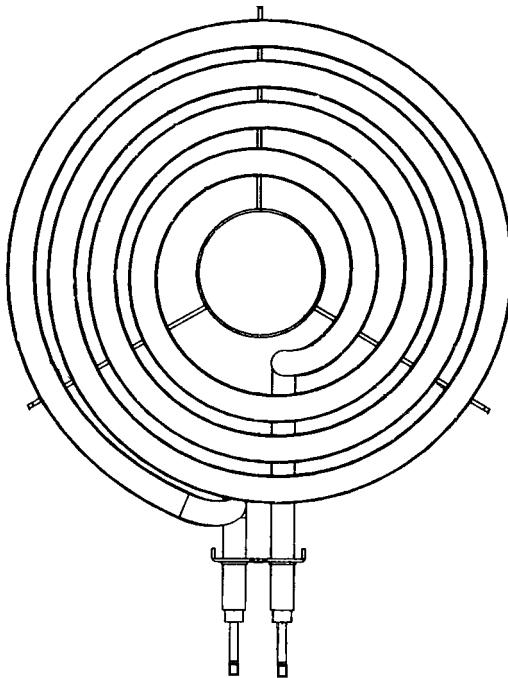
To test a surface element, perform the following steps:

1. Use an ohmmeter and set the range switch to R x 1.
2. With no power applied, disconnect one wire from the element terminals.
3. You should obtain the reading for the element as listed in the following chart.

If the resistance reading is not within the range shown, the element is defective and should be replaced.

Whirlpool Part No.	Voltage Rating	Total Wattage	Resistance (Cold)
3196428	240 VAC	1200 ±5%	40 Ω ±5
3196429	240 VAC	2000 ±5%	27 Ω ±5

6" & 8" COIL ELEMENTS



Test Procedure

!WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

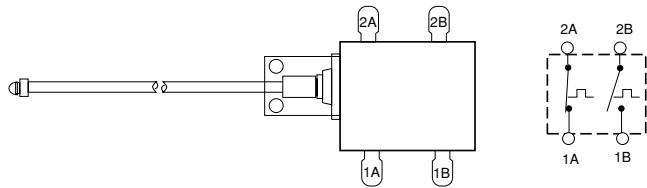
To test a coil element, perform the following steps:

1. Use an ohmmeter and set the range switch to R x 1.
2. With no power applied, unplug the coil element from the terminal block.
3. Touch the leads of the ohmmeter to the terminals of the coil element and measure the resistance (see the chart below for the correct reading for the coil you are testing).

If the above results are not obtained, the element is defective and should be replaced.

<i>Whirlpool Part No.</i>	<i>Number of Turns</i>	<i>Wattage (Nom.)</i>	<i>Voltage 208/240</i>	<i>Element Size</i>	<i>Hot Watts @ 240V -10% +5%</i>	<i>Cold Ohms Resistance</i>
3195919	3	940 / 1250	208 / 240	6"	1125 - 1312	42 - 50
3196204	4	1130 / 1500	208 / 240	6"	1350 - 1575	35 - 41
3195918	4	1575 / 2100	208 / 240	8"	1890 - 2205	25 - 30
3196205	5	1955 / 2600	208 / 240	8"	2340 - 2730	20 - 24

LIMITER



Test Procedure



WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

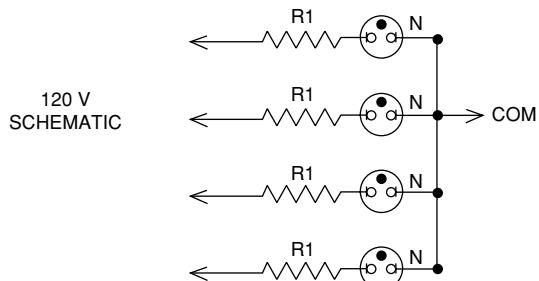
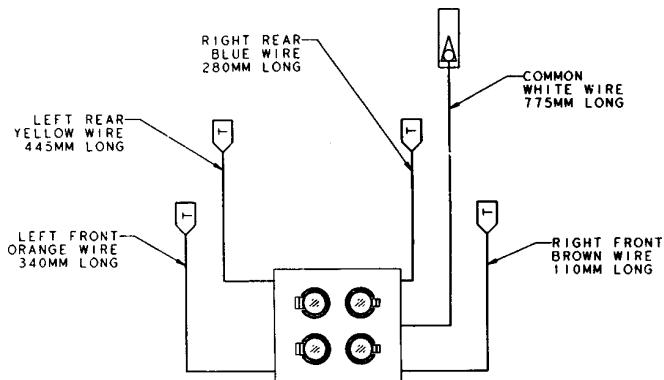
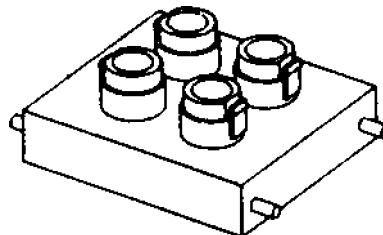
To test a limiter, perform the following steps:

1. Use an ohmmeter and set the range to R x 1.
2. With no power applied, touch the ohmmeter leads to the following terminals. You should obtain the following readings at the indicated temperature:

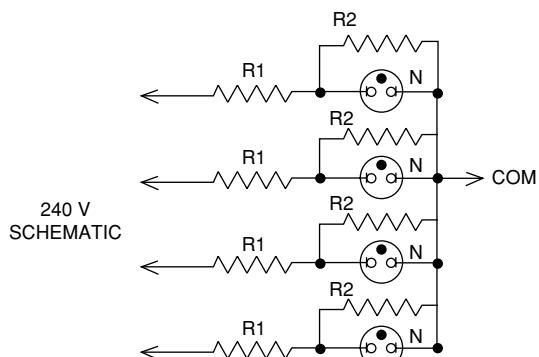
1A and 2A opens @ 1025°F
1B and 2B closes @ 275°F

If the readings are not within the range shown, the limiter is defective and should be replaced.

HOT SURFACE INDICATORS



N = NEON LAMP
R1 = 30 kΩ .33W ±5%



N = NEON LAMP
R1 = 68 kΩ .5W ±5%
R2 = 470 kΩ .5W ±5%

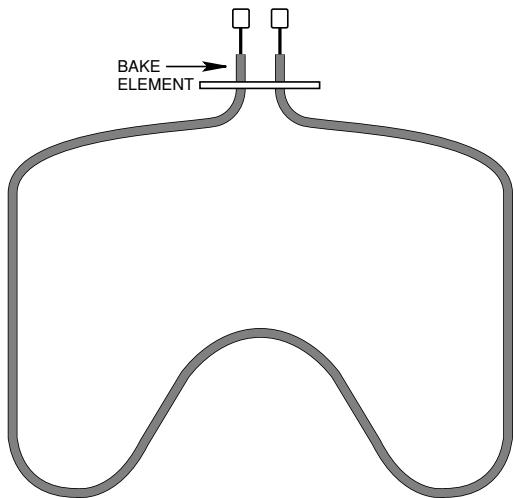
!WARNING

Electrical Shock Hazard

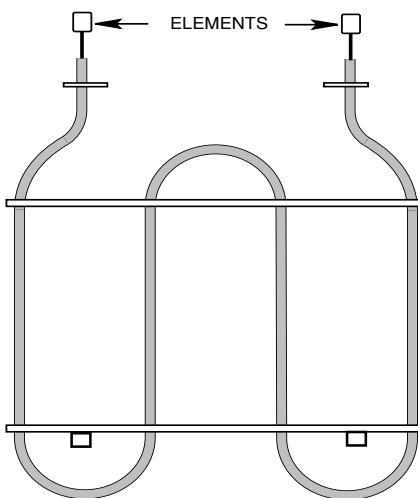
Disconnect from electrical supply before servicing unit.

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

BAKE ELEMENT



BROIL ELEMENT



Test Procedure

To test the bake element, perform the following steps:

1. Use an ohmmeter and set the range switch to R x 1.
2. With no power applied, disconnect one wire from the element terminals. You should obtain a reading of approximately $25\ \Omega$.

If the reading is not within the range shown, the element is defective, and should be replaced.

Test Procedure

To test the broil element, perform the following steps:

1. Use an ohmmeter and set the range switch to R x 1.
2. With no power applied, disconnect one wire from the inner and the outer element terminals. You should obtain a reading of approximately $16\ \Omega$.

If the readings are not within the ranges shown, the element is defective, and should be replaced.

WARNING

Electrical Shock Hazard

Certain procedures in this section require electrical tests or measurements while power is applied to the range. Exercise extreme caution at all times. If test points are not easily accessible, disconnect power, attach test equipment, and reapply power to test.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Clock display does not display 4 number eights after power-on test.	Loose or bad wiring. Burned out or missing segment in clock display. Broken or missing terminal on microcomputer.	Check wiring (see wiring diagrams). Make sure clock display is properly seated. Check microcomputer board.
Oven cooks but display does not count down in cooking cycle.	Loose or bad wiring to harness. Failed microcomputer board.	Check wiring (see wiring diagrams). Check microcomputer board.
Oven element emits black smoke when first turned on.	This is normal on a new range. The factory-applied protective coating is burning off. Substance (e.g. food or other material) has spilled onto the element.	Protective coating will burn off in several minutes. Fumes are non-toxic. Let element cool then clean according to Use & Care instructions.
Oven element does not heat.	No line voltage. Loose or bad wiring. Defective element.	Check circuit breaker. Check wiring (see wiring diagrams). Check element.
Cooktop element barely heats.	Low line voltage. Loose or bad wiring connection at element or terminal block. Defective cooktop control switch.	Line voltage should be minimum 240-volts. If necessary, electrician should repair cause for low line voltage. Check wiring (see wiring diagrams). Check switch.



PROBLEM	POSSIBLE CAUSE	SOLUTION
Cooktop element will not heat higher than low-medium.	Low line voltage. Defective cooktop element.	Line voltage should be minimum 240-volts. Electrician should repair cause for low line voltage. Check element.
Cooktop element heats up normally, but drops to lower setting automatically.	Customer using improper cookware. Defective cooktop control switch.	Evaluate suitability of cookware. Check switch.
Indicator light does not light up.	Loose or bad wiring to indicator light. Defective indicator light. Defective cooktop control switch.	Check wiring (see wiring diagrams). Check indicator light. Check switch.
Hot surface indicator light does not work.	Loose or defective light. Loose or bad wiring to indicator light assembly.	Check indicator light. Check indicator light assembly and wiring.
Oven light fails to operate.	Bulb burned out. Circuit breaker or fuse is open. Defective switch.	Check bulb. Check circuit breaker or replace fuse. Check continuity and/or replace switch.
Door locks but indicator lights do not light. Oven does not begin clean cycle.	Defective indicator light. Defective latch safety switch. Controls not set properly.	Check indicator light. Check switch. See "Theory Of Operation" in section 2.
Electronic timer will not accept programming.	Failed electronic board.	Replace timer.
Timer relay(s) do not close.	Loose or bad wiring to timer. Failed electronic board.	Check wiring (see wiring diagrams). Replace timer.
Oven will not bake (selection is set for BAKE).	If indicator light lights up bake element is defective. Defective latch safety switch. Loose or bad wiring.	Check and/or replace bake element. Check continuity and/or replace switch. Check wiring (see wiring diagrams).
Oven will not bake (selection is set for TIMED BAKE).	Defective electronic clock.	Check continuity and/or replace clock (see wiring diagrams).

PROBLEM	POSSIBLE CAUSE	SOLUTION
Oven does not broil.	If indicator light lights up broil element is defective. Defective latch safety switch. Loose or bad wiring.	Check and/or replace broil element. Check continuity and/or replace switch. Check wiring (see wiring diagrams).
Oven door will not open or latch.	Defective latch mechanism. Defective (bent) door latch lever. Cool-down period after self-clean cycle not complete.	Check mechanism. Check lever. Wait until LOCK light goes out.
Overheating or "runaway" oven.	Loose or bad wiring to latch safety switch. Thermostat sensor bulb missing.	Check wiring (see wiring diagrams). Replace bulb.
Premature burnout of bake element.	Improper use of oven (e.g. being used to heat the home).	Use oven for baking only.
Oven door difficult to open.	Worn or broken broil stop rollers.	Check rollers.
Door sagging on one side.	Hinge loose or out of position to oven liner.	Adjust hinges.
Door does not close completely at top.	Broken or misadjusted door spring. Door fits too tight at bottom.	Adjust or replace spring. Adjust hinges outward.
Door glass breaks.	Broiling with door closed. Oven racks covered with foil. Glass installed backward.	Open door to broil stop position. Do not cover racks with foil. Install tempered glass toward the heat.
Damaged oven door gasket.	Improper cleaning.	Do not use harsh abrasives or scouring pads. See Use & Care instructions.
Chipped oven liner.	Damaged in shipping.	Repair or replace liner. To repair smooth porcelain bronzetone, order P/N 242756.
Oven racks fit too tight.	Tolerance buildup in oven liner.	Notify Customer Assurance Department.



OVEN TEMPERATURE CALIBRATION Models RF385PXE, RF386PXE, RF395PXE, & RF396PXE

DIAGNOSTICS

1. All diagnoses of this range must begin with a normal check of the line voltage, blown fuses, and defective components.
2. All units that are defective the first few days of use should be checked for loose, or miswired connections.
3. All checks should be made with a meter that has a sensitivity of 20,000 ohms-per-volt, or greater.

TEMPERATURE ADJUSTMENT

- Press and hold the BAKE keypad for 5-seconds. The current offset, if any, is shown in the 3-digit display. CAL is shown in the 4-digit display (3 digits on the right).
- Pressing the TEMP keypad up arrow ▲ adjusts the temperature in 10°F increments in the following sequence: 0°; 10°; 20°; 30°; -30°; -20°; -10°; 0°; and so on.

- Press the START/ENTER keypad to activate the desired temperature adjustment. If the START/ENTER keypad is not pressed within 5-minutes, the adjustment is ignored.
- The BAKE temperature adjustment cannot result in operating temperatures higher than 500°F, or lower than 170°F, as measured at the center of the oven cavity.
- Once the BAKE temperature has been adjusted, the BROIL temperatures are automatically offset by the same degree.
- The CLEAN temperature is also offset automatically when the BAKE temperature is adjusted. If the BAKE temperature has been raised, the CLEAN temperature is offset by +5°F. If the BAKE temperature has been lowered, the CLEAN temperature is offset by -5°F.

ERROR CODES

NORMAL CODES

The microcomputer contains self-diagnostic codes that will be displayed on the control panel whenever a failure occurs when using

the range. Each code can be cancelled by pressing the CANCEL/OFF keypad. The code will return if the user attempts to use the range before the failure has been corrected. All error code data is shown on the next page.

4-Digit Display	3-Digit Display	Likely Cause	Corrective Action
F1	E0	EEPROM communications.	1. Use the CANCEL/OFF keypad and verify the failure (if not displayed). 2. Disconnect the power for at least 30-seconds and re-check.
	E1	EEPROM checksum failure.	
	E2	UL A/D error(s).	
F2	E0	Shorted keypad.	1. Use the CANCEL/OFF keypad and verify the failure (if not displayed). 2. Disconnect the power for at least 30-seconds and re-check. 3. Make sure that keypad cable is plugged in and seated in connector on back of control. 4. Reapply power and observe for a minimum of 1-minute. 5. If failure remains, replace the control.
	E1	Keypad cable unplugged.	
F3	E0	Oven sensor opened.	1. Measure the sensor value between the connector pins. You should measure between 1000Ω @ $32^\circ F$ and 2697Ω @ $900^\circ F$. If the measurement does not correlate to real temperature, replace the sensor, and reference steps 3 through 5. Also measure from the sensor connector to the sensor casing for a possible short.
	E1	Oven sensor shorted.	
	E2	Bake range overtemp.	2. Trace the wires and connectors to the sensor from the control, then from the sensor back to the control. If all connections are okay and there is no wire damage, reference step 3 through 5.
	E3	Clean range overtemp.	3. Disconnect the power for at least 30-seconds. 4. Reapply power and observe for a minimum of 1-minute. 5. If failure remains, replace the control, and then repeat step 4.
F5	E0	Door & latch switches do not agree.	1. If the door is latched: a) Disconnect power and check wires and connectors from the control to the door switch, then from the door switch to the control. If okay, proceed to step b). b) Replace the door switch. c) Reapply power and observe for a minimum of 1-minute.
	E1	Solenoid not operating or latch switch failure.	2. If the door is not latched: a) Disconnect power and check wires and connectors from the control to the latch switch, then from the latch switch to the control. If okay, proceed to step b). b) Repeat step a) for the door switch.
	E1	Latch during clean error.	3. Measure the door switch. The door open = switch open small low voltage terminals. 4. Measure the latch switch. Unlatch = switch open. CAUTION: The oven light contacts are closed. 5. If corrections are made, reconnect the control and verify the operation. 6. If the failure remains, replace the control.