

# ***Thermador***<sup>®</sup>

## PROFESSIONAL RANGE SERIES

### SERVICE MANUAL

**DUAL FUEL RANGES:** PRSE36, PRSE48

**GAS RANGES:** PRG304US  
PRG364GLUS, PRG364GDUS, PRG366US,  
PRG484GDUS, PRG484GLUS, PRG484GGUS  
PRDS30, PRDS36  
PRDS38

**GAS COOKTOP:** GPS PCS36, PCS48

**WOK:** GP24WK

*Thermador assumes no responsibility for any repairs made on our products by anyone other than authorized Thermador service technicians.*

**5551 Mc Fadden · Huntington Beach, California 92649 · 1-800-735-4328**

**THIS MANUAL CONTAINS INFORMATION THAT IS  
NECESSARY FOR SERVICING THE THERMADOR®  
PROFESSIONAL RANGES,**

***DUAL FUEL MODELS: PRSE36 & PRSE48***

***GAS MODELS: PRSG304, & PRSG36***

***GAS COOKTOP: MODEL GPS***

***WOK: MODEL GP24WK***

**THIS MANUAL IS DESIGNED TO BE USED ONLY BY  
QUALIFIED SERVICE PERSONNEL. THERMADOR  
RECOMMENDS THAT CUSTOMERS DO NOT SER-  
VICE THEIR OWN UNITS, DUE TO THE COMPLEX-  
ITY AND THE RISK OF HIGH-VOLTAGE ELECTRI-  
CAL SHOCK.**

**THE INFORMATION IS ORGANIZED TO HELP THE  
SERVICER EASILY FIND WHAT IS NEEDED TO REPAIR  
THE UNIT.**

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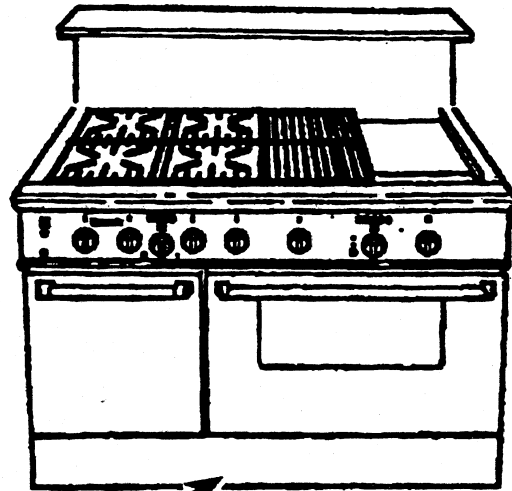
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# GENERAL

## SERIAL NUMBER/DATA STICKER LOCATIONS



Toe Panel

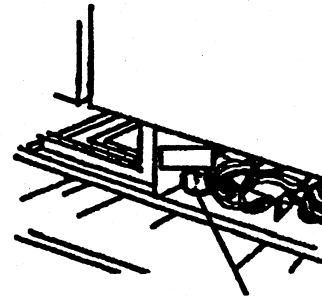
### **! WARNING**

#### **ELECTRICAL SHOCK HAZARD**

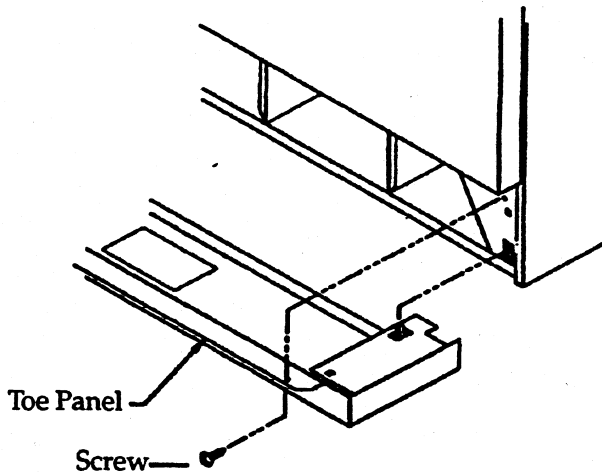
Be sure to turn off the electrical supply to the range before removing the toe panel; otherwise electrical shock could occur.

The Serial Number/Data Sticker shows the model and serial numbers of the range. It is located behind the toe panel at the bottom of the range. To access the Serial Number/Data Sticker, remove the two toe panel attachment screws and remove the panel.

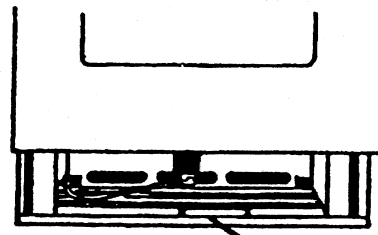
For PRSE Dual-Fuel models, the Serial Number/Data Sticker is located on the vertical panel to the left of the electrical components.



Serial Number/Data Sticker



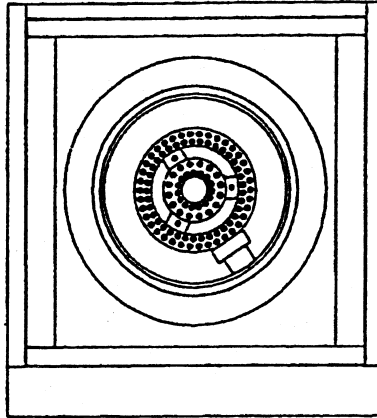
For PRSG Gas models, the Serial Number/Data Sticker is located in the U-shaped channel at the bottom front of the range.



Serial Number/Data Sticker

# 24" WOK LAYOUT

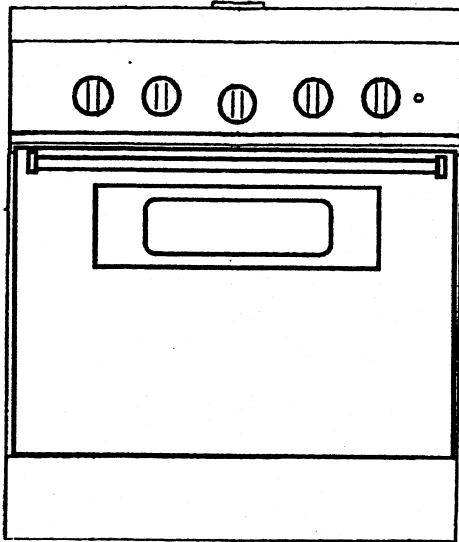
Model: GP24WK



24" WOK—Top View

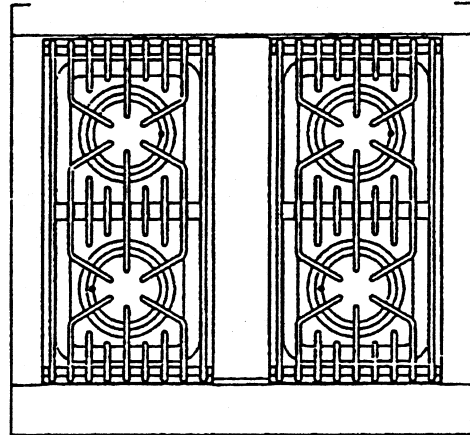
# 30" RANGE LAYOUT

Model: All Models



30" Gas Range—Front View

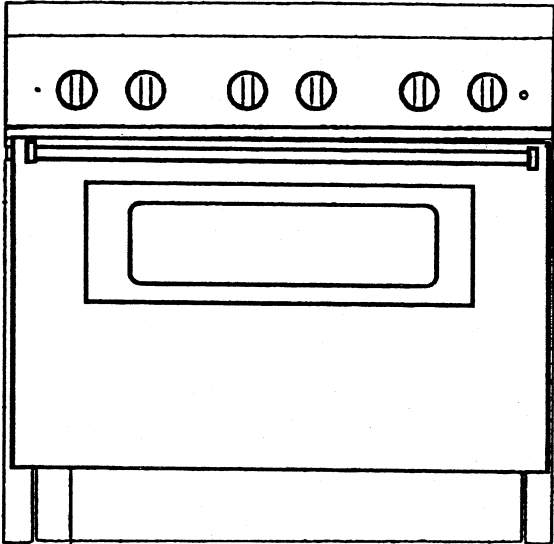
Model: PRSG304



30" Gas Range—Top View

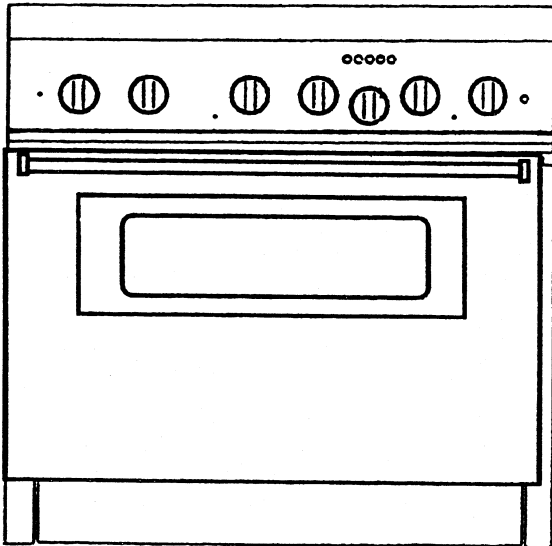
# 36" RANGE LAYOUTS

Model: All Models



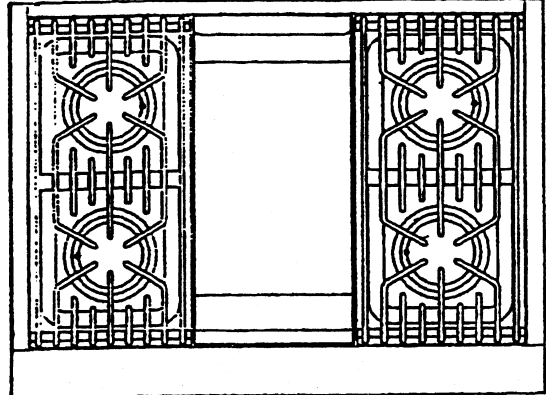
36" Gas Range — Front View

Model: All Models

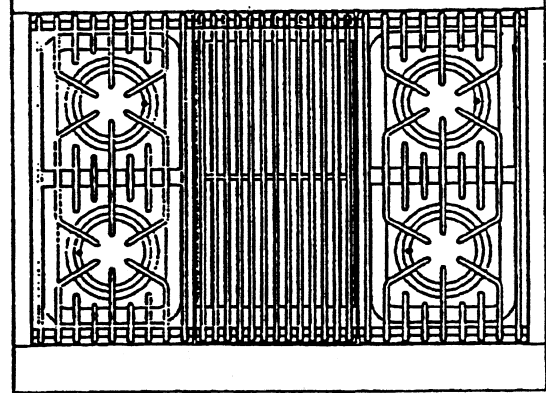


36" Dual Fuel Range — Front View

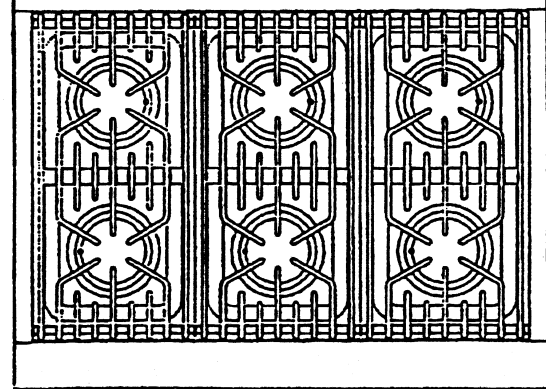
Models: PRSE 364GD & PRSG 364GD



Models: PRSE 364GL & PRSG 364GL



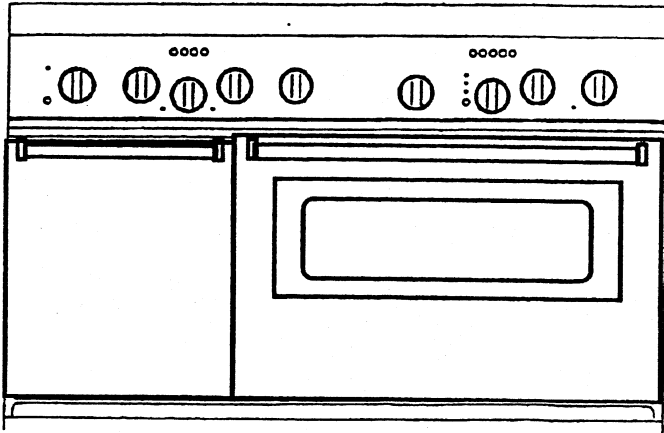
Models: PRSE 366 & PRSG 366



36" Ranges — Top Views

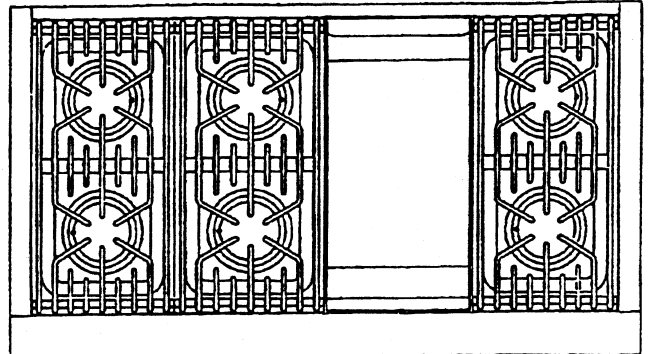
# 48" RANGE LAYOUTS

*Model: All Models*

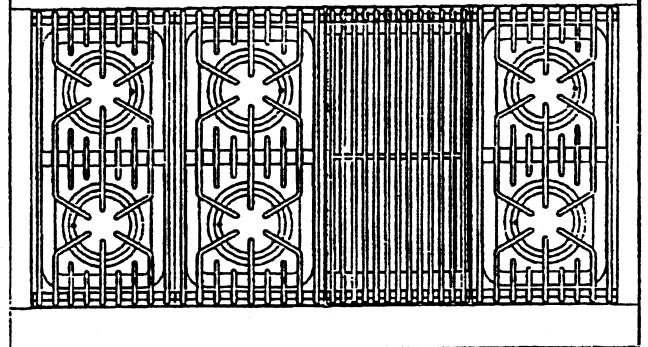


*48" Dual Fuel Range—Front View*

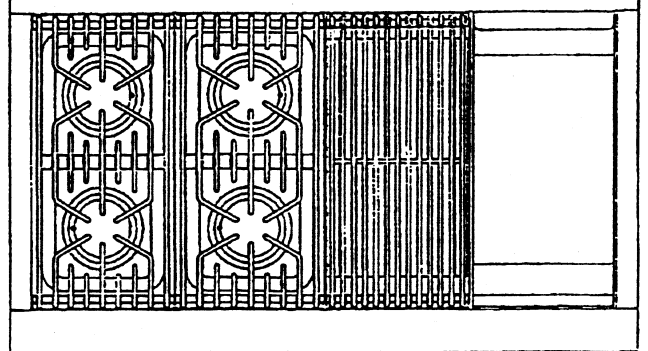
*Model: PRSE 486GD*



*Model: PRSE 486GL*



*Model: PRSE 484GG*



*48" Dual Fuel Ranges—Top Views*



## SYMBOLS YOU WILL SEE IN THE MANUAL

The following symbols are provided throughout this manual. For reasons of personal safety and

proper operation and servicing of the range, follow the instructions carefully each time you see one of the symbols.

### **WARNING**

This symbol alerts you to such dangers as personal injury, burns, fire, and electrical shock.

### **CAUTION**

This symbol alerts you to actions that could cause product damage (scratches, dents, etc.), and damage to your personal property.

## IMPORTANT SAFETY INFORMATION

### **WARNING**

Be sure to turn off all electric and gas supplies to the range before servicing; otherwise, a fire or explosion may result causing property damage, personal injury, or death.

**Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**

### **GAS RANGE—WHAT TO DO IF YOU SMELL GAS**

- Do not try to light any appliance.
- Do not touch any electrical switch.
- Do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone.
- Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

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

# THERMADOR® WARRANTY

Length of Warranty	Thermador will pay for:	Thermador will not pay for:
<p><b>FULL ONE YEAR WARRANTY</b>            Covers one year from date of installation.            Save all dated receipts or other evidence of the original purchase date.</p>	<p>All repair labor and replacement parts found to be defective due to materials and workmanship. Service must be provided by a Factory Authorized Service Agency, during normal working hours.</p>	<ol style="list-style-type: none"> <li>1. Service by an unauthorized agency. Damage or repairs by an unauthorized agency or use of unauthorized parts.</li> <li>2. Chipping of porcelain enamel, discoloration of chrome plating or the griddle plate.</li> <li>3. Service visits to:               <ul style="list-style-type: none"> <li>• Teach you how to use the appliance.</li> <li>• Correct the installation. You are responsible for providing electrical wiring and/or gas installation and other connecting facilities.</li> <li>• Reset circuit breakers or replace home fuses.</li> </ul> </li> <li>4. Damage caused from accident, abuse, alteration, misuse, incorrect installation or installation not in accordance with local codes.</li> <li>5. Repairs due to other than normal home use.</li> </ol>

This warranty applies to appliances used in residential applications; it does not cover their use in commercial situations.

This warranty is for products purchased and retained in the 50 states of the U.S.A., the District of Columbia, and Canada. The warranty applies even if you should move during the warranty period. Should the appliance be sold by the original purchaser during the warranty period, the new owner continues to be protected until the expiration of the original purchaser's warranty period.

This warranty gives you specified legal rights. You may also have other rights which vary from state-to-state.

## HOW TO OBTAIN SERVICE

For service, contact the Factory Authorized Service Agency in your area, the dealer from whom you purchased the appliance, or write us at the address shown below.

We want you to be a satisfied customer. If a problem arises that has not been resolved to your satisfaction, please let us know. Write to:

Consumer Relations Department  
 5551 McFadden Avenue  
 Huntington Beach, CA 92649

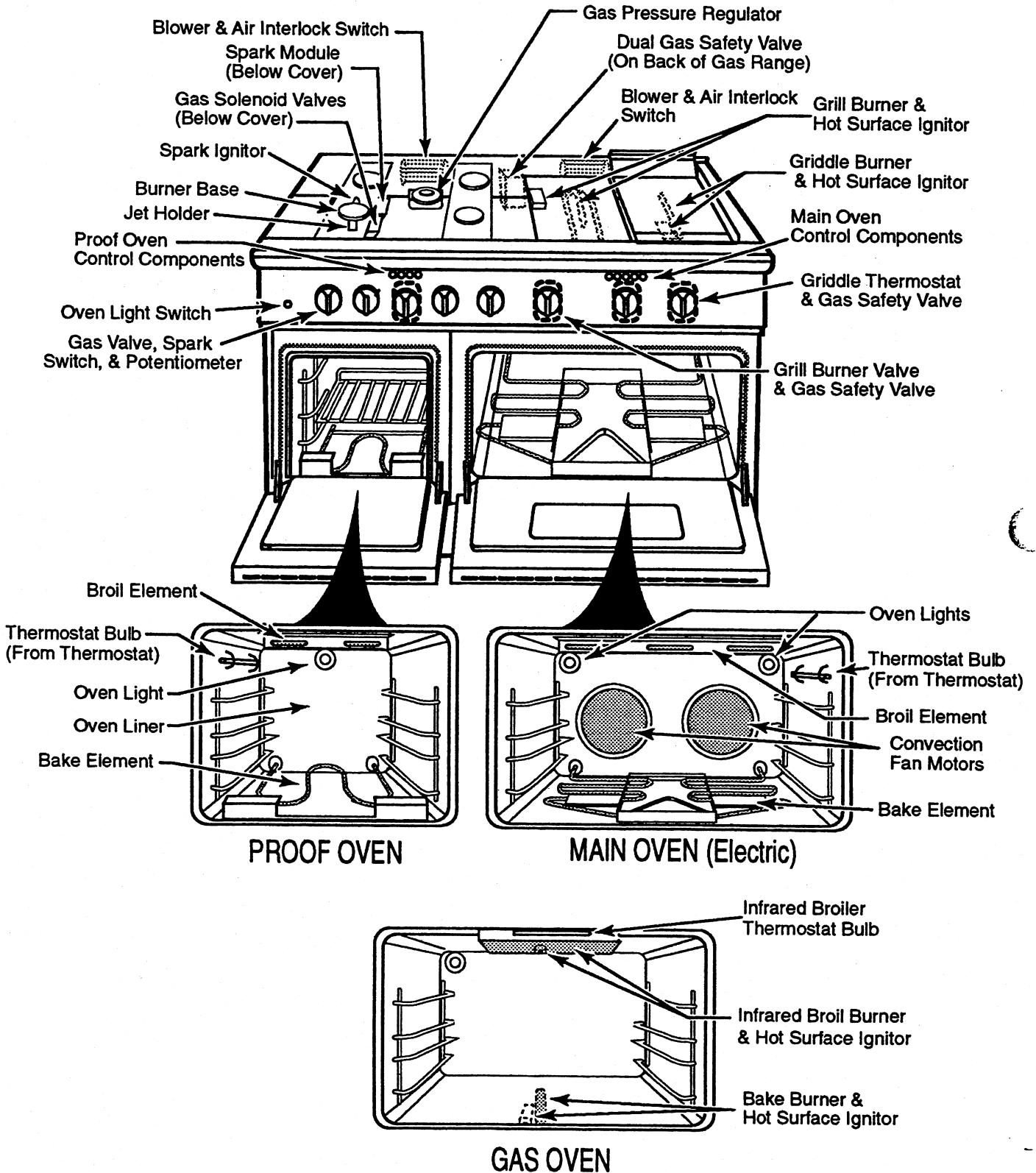
or phone:

(800) 735-4328

Please be sure to include the Model Number, Serial Number (located on the data sticker), and the Date of Original Purchase.

# SERVICING THE COMPONENTS

## RANGE COMPONENT LOCATIONS



# SERVICING THE COOKTOP AND OVEN COMPONENTS

## Removing The Burner Bases, Spill Trays, & Spark Ignitors

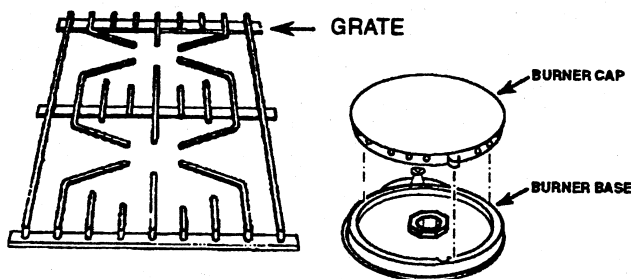
### ⚠ WARNING

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

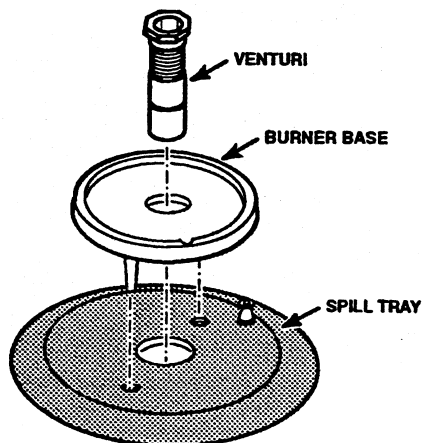
### ⚠ CAUTION

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. Remove the grates and burner caps from the range.



3. To remove a burner base, use a 25/32" (20 mm) socket, unscrew and remove the venturi from the burner base, and remove the base from the spill tray.

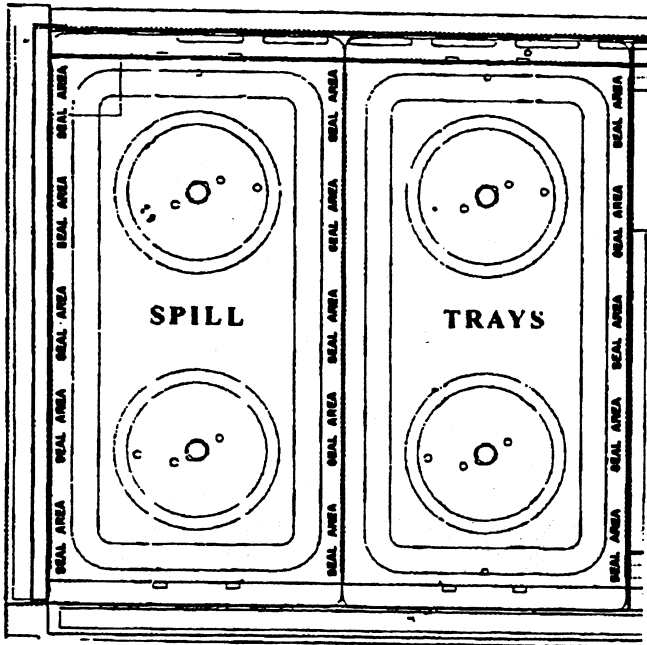


4. To remove the spill trays from the range, use a sharp knife and cut the sealant around the outside of the trays, (see the "SEAL" areas in the illustration at the top of the next page), or pry the aluminum strips out from around the "SEAL" areas of the trays with a putty knife.

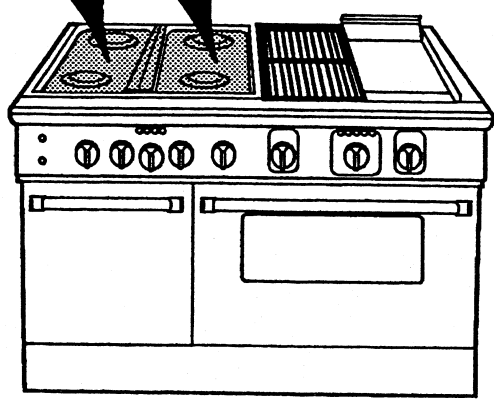
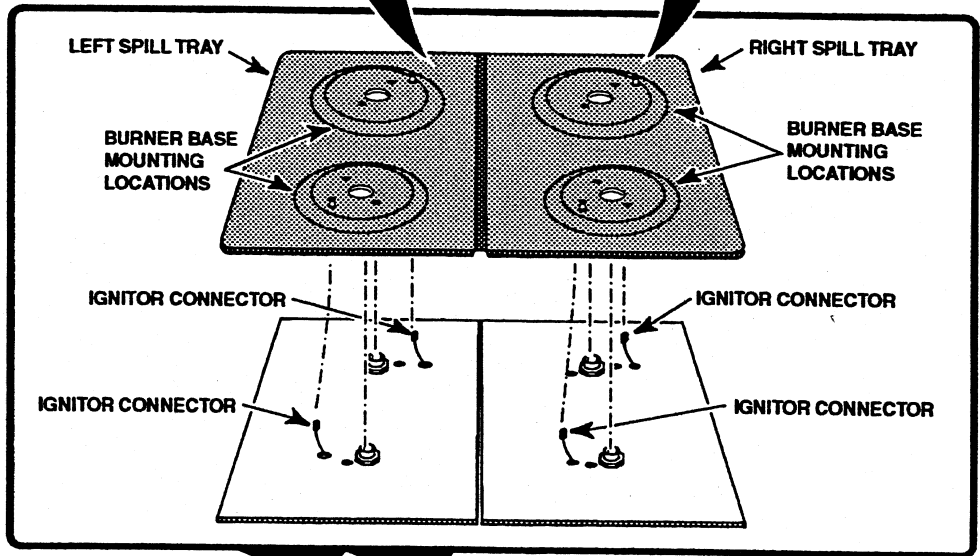
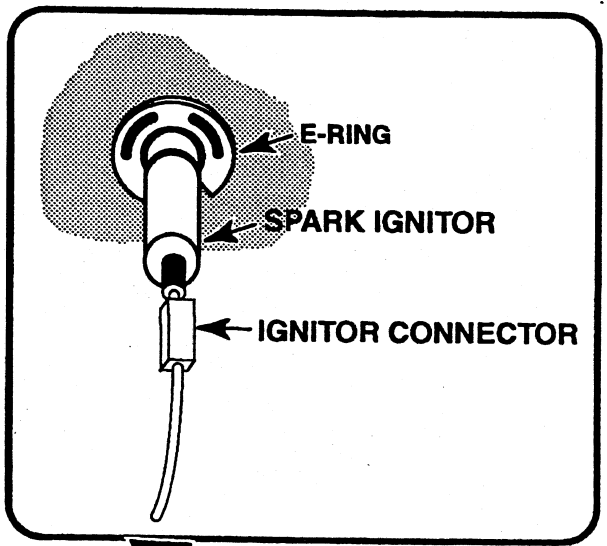
**NOTE:** Ranges prior to serial number 9605 have the spill trays secured to the sides of the range with black sealer. If you are servicing this type of range, use Sealant Kit #15-11-021. This Kit contains the older style spill tray (not interchangeable with newer ones) and a tube of sealant.

Ranges starting with serial number 9605 use aluminum trim strips to hold the trays in place.

5. To remove a spark ignitor, lift the spill trays and disconnect the wire from the spark ignitor connector, (see the illustration at the top of the next page), then un-snap the e-ring from the ignitor, and remove it.
6. Replace the spill trays. If the trays do not use the aluminum strips, reseal them using the sealant kit in the previous Note.
7. Reassemble the range.



FRONT



## Removing A Jet Holder & The Gas Pressure Regulator

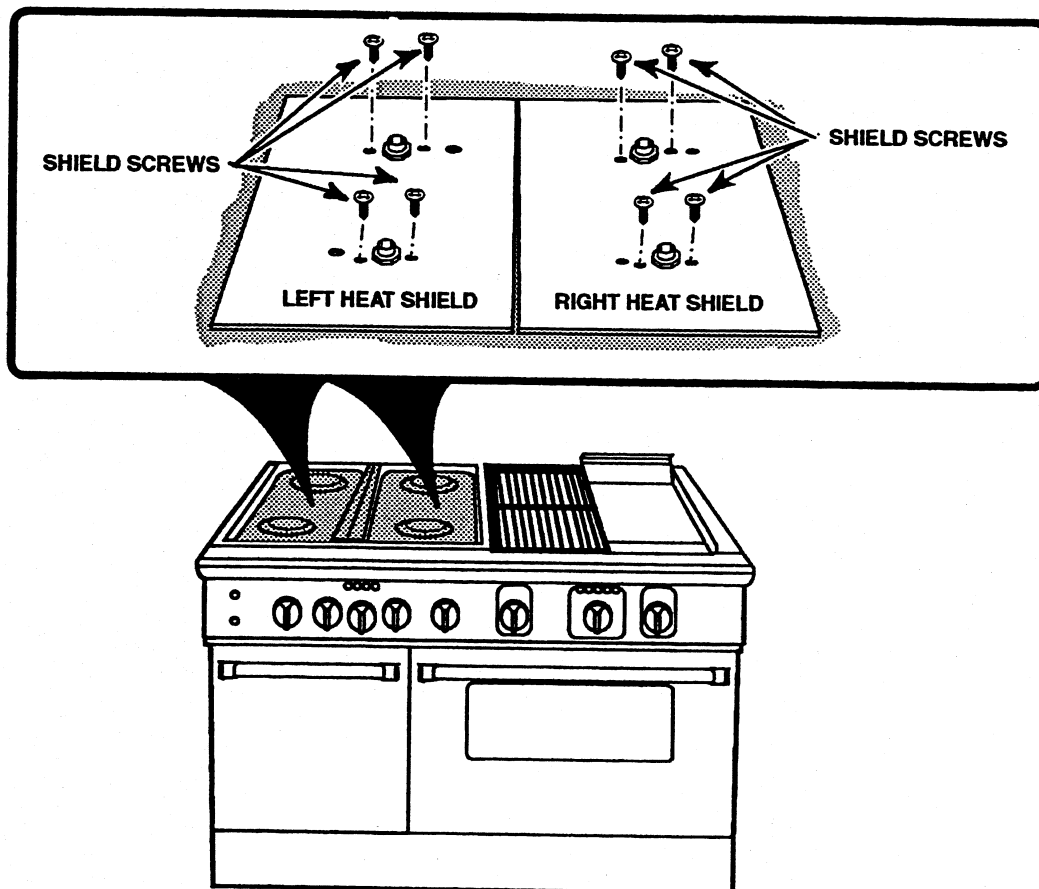
### **⚠ WARNING**

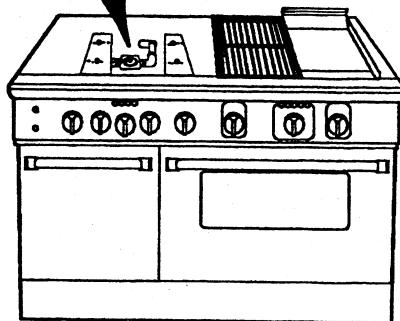
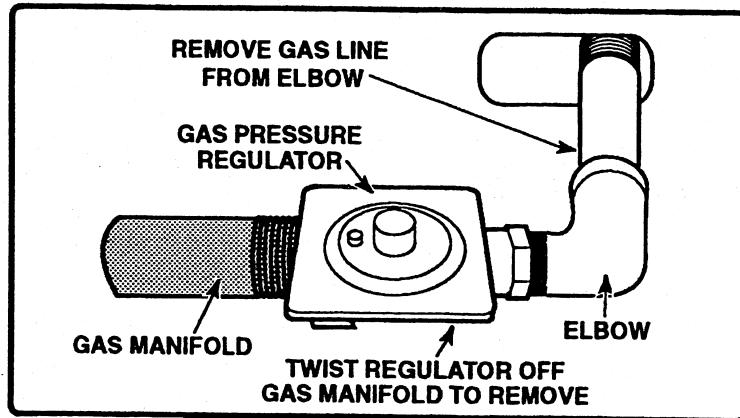
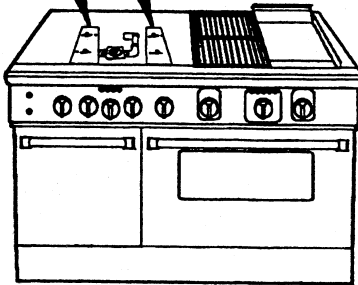
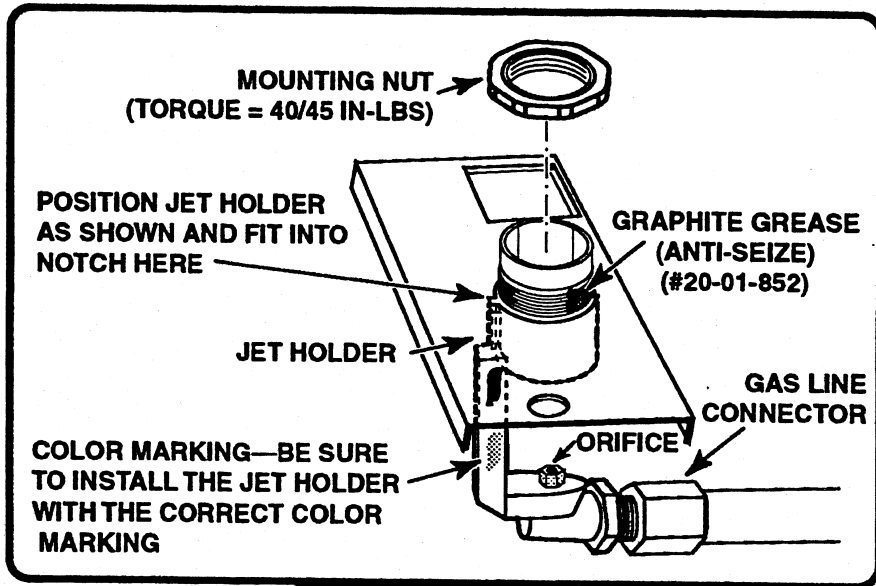
Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### **⚠ CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. Remove the burner bases, spill trays, & spark ignitors (see pages 2-2 & 2-3).
3. Remove the screws from the two heat shields and remove the shields (see the illustration).
4. To remove the orifice from the jet holder, use a 25/32" (20 mm) socket, and unscrew the old orifice from the jet holder, (see the illustration at the top of the next page), then install a new orifice in its place.
5. To remove a jet holder, unscrew the gas line fitting and the nut from the jet holder and remove it. **NOTE:** When you replace a jet holder, be sure to use a replacement with the same color marking as the old one.
6. To remove the gas pressure regulator:
  - a) Remove the gas line from the inlet of the regulator (see the illustration at the bottom of the next page).
  - b) Twist the gas pressure regulator body and remove it from the gas manifold.
7. Reassemble the range. **NOTE:** Use anti-seize lubricant (#20-01-852) when installing the mounting nuts on the jet holders.





# Removing The Spark Module & Gas Solenoid Valves

## **WARNING**

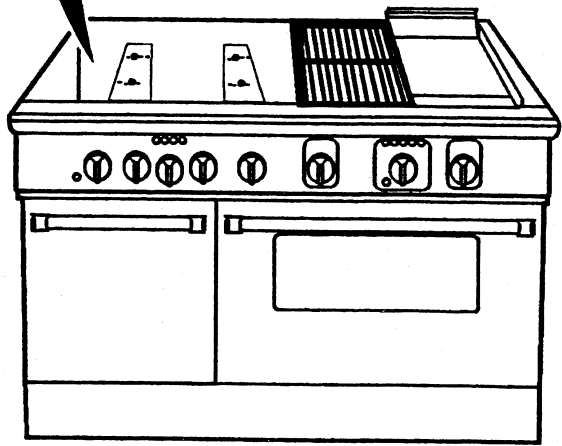
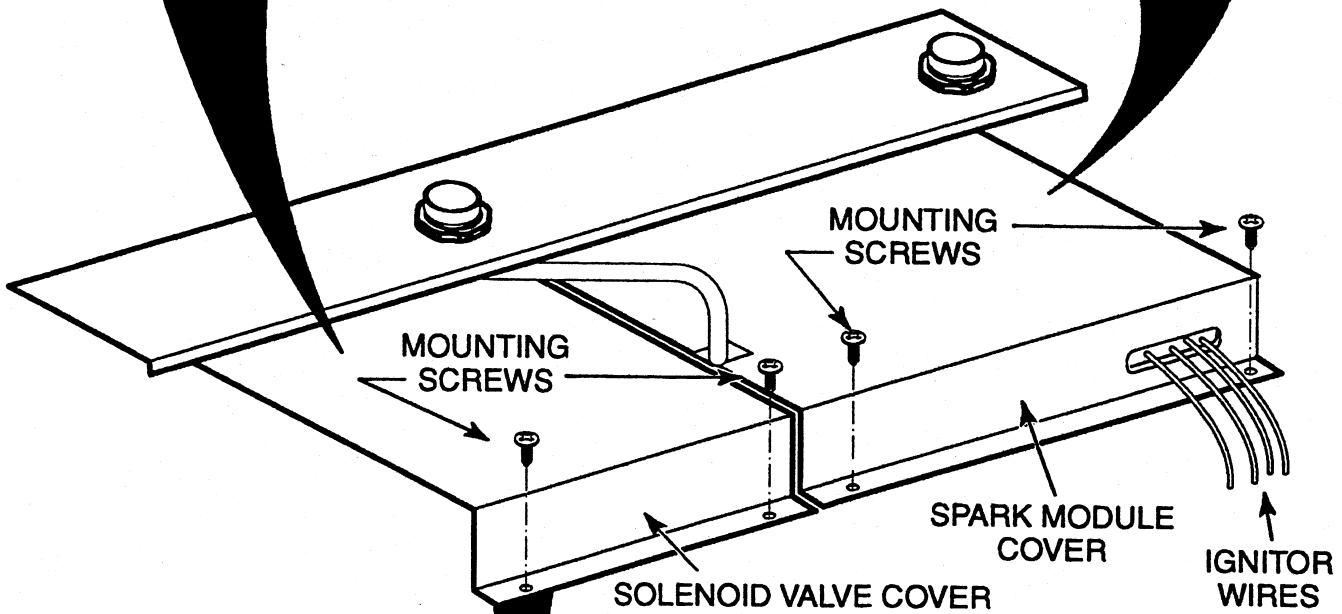
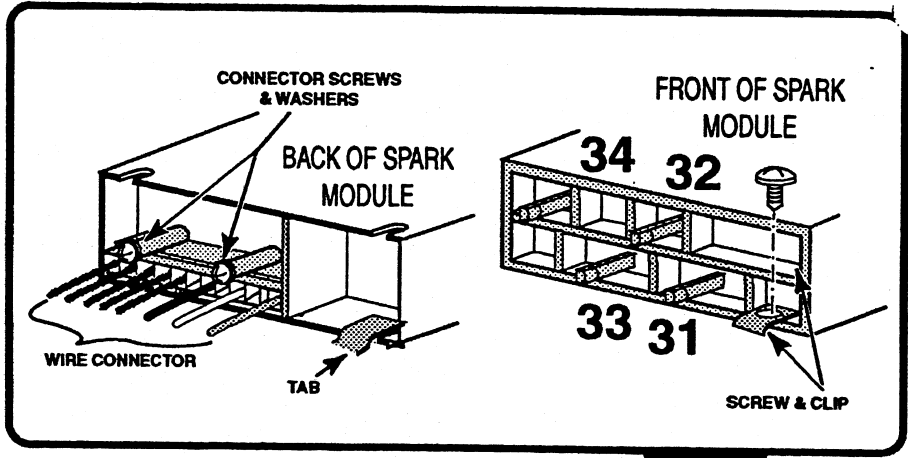
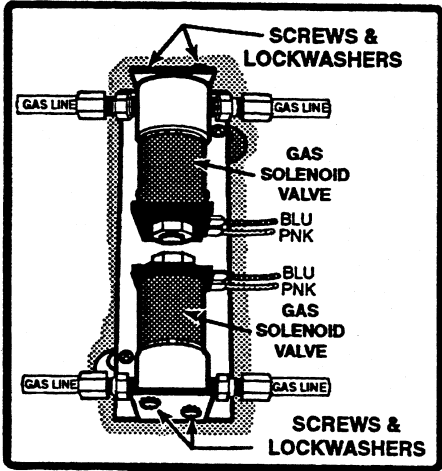
Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

## **CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. Remove the burner bases, spill trays, & spark ignitors (see pages 2-2 & 2-3).
3. Remove the screws from the two heat shields and remove the shields (see the illustration on page 2-4).
4. **To remove the spark module:**
  - a) Remove the two screws from the module cover and remove the cover from the range.
  - b) Remove the screw and clip from the front of the spark module and pull the module forward to release it from the tab at the back (see the illustration).
  - c) Disconnect the four ignitor wires from the terminals at the front of the module, and the screws, washers, and wire connector at the back of the module.
  - d) Install the connector over the pins of the spark module and secure it to the range with the screws and washers, then connect the four ignitor wires to the terminals as shown.
5. **To remove a gas solenoid valve:**
  - a) Remove the two screws from the solenoid valve cover and remove the cover from the range (see the illustration).
  - b) Unscrew the gas line fittings from the inlet and outlet of the gas solenoid valve you wish to remove, then disconnect the two wire connectors from the terminals. **NOTE:** If necessary, remove the two bracket screws and remove the entire gas solenoid valve assembly from the range.
  - c) Remove the two mounting screws and lockwashers from the gas solenoid valve and remove the valve from the bracket.
  - d) Install the new gas solenoid valve on the bracket, and mount the bracket assembly to the range (if removed).
  - e) Connect the blue and pink wires to the gas solenoid valve terminals and the gas line fittings to the inlet and outlet.
6. Reassemble the range.





## Removing A Blower & Air Interlock Switch

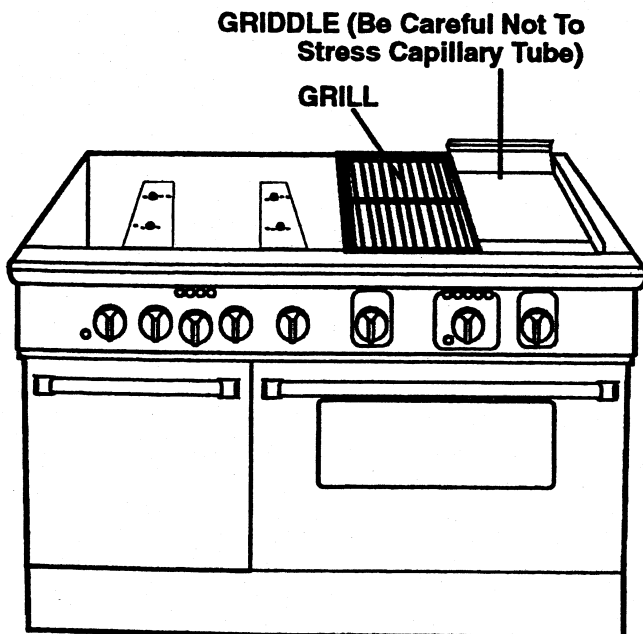
### **⚠ WARNING**

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

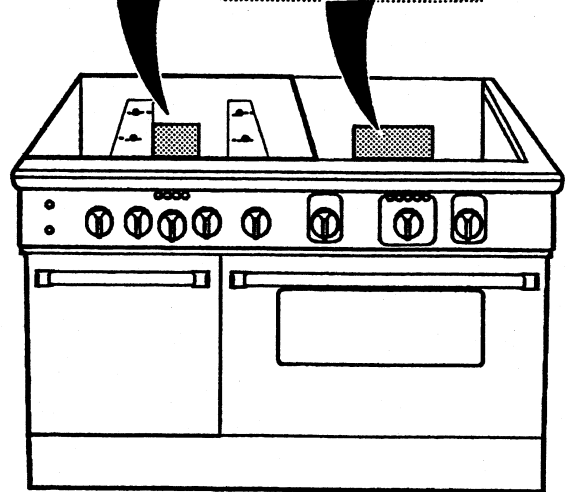
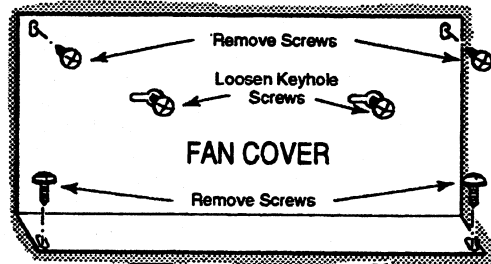
### **⚠ CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

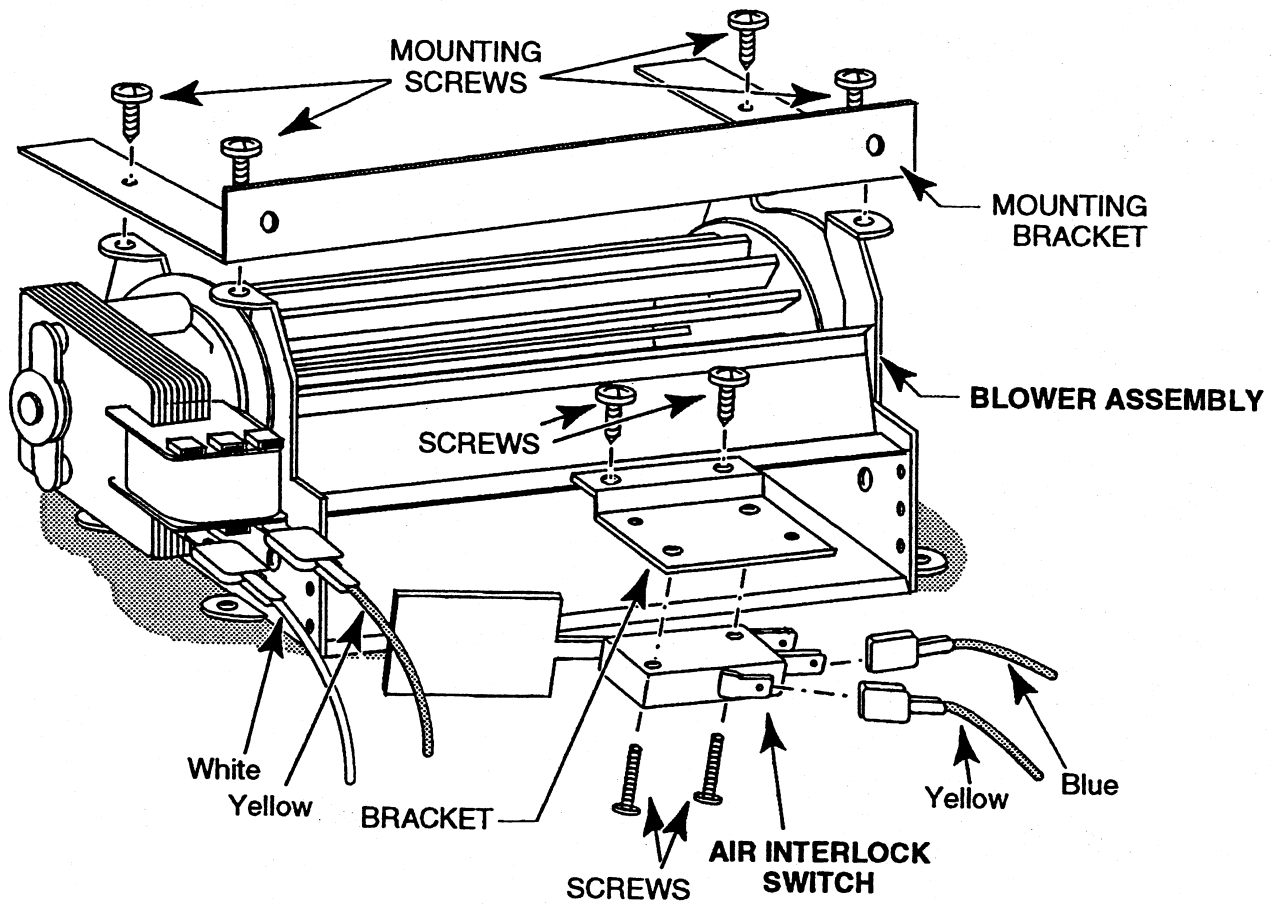
1. Turn off the gas supply and the electrical power going to the range.
2. **To access the left blower**, remove the burner bases, spill trays, & spark igniters (see pages 2-2 & 2-3).
3. **To access the right blower**, remove the grates from the grill and lift the grill and griddle boxes out of the range and set them on top. **NOTE:** Be careful not to scratch the trim or stress the capillary tube at the back of the griddle when you remove the griddle.



4. Remove the four corner screws from the blower panel and loosen the two center screws over the keyhole slots, then slide the panel screws out of the keyhole slots, pull the panel forward, and remove it from the range.



5. Depending on which component you are servicing, disconnect the wires from the blower motor or the air interlock switch terminals.
6. **To remove the air interlock switch**, remove the two screws from the switch body and remove it from the bracket.
7. **To remove the blower**, remove the four screws from the blower's mounting bracket and remove the bracket from the blower.
8. Install the new air interlock switch and blower motor to the bracket.
9. Reassemble the range.



## Removing The Grill Hot Surface Ignitor

### **⚠ WARNING**

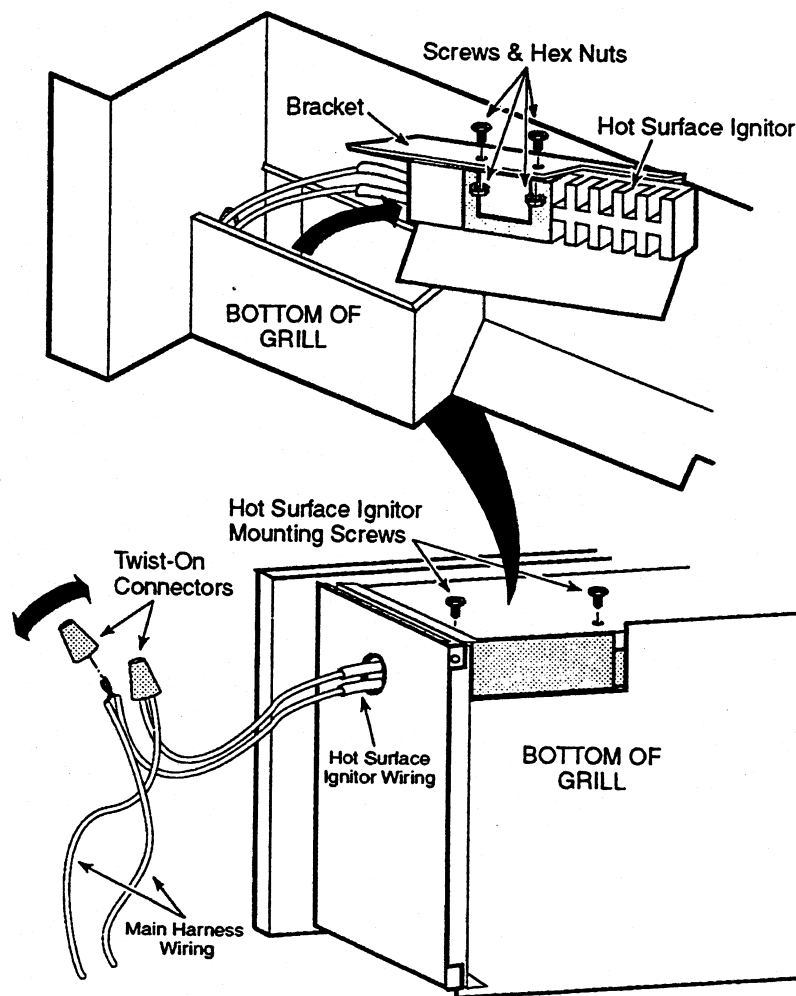
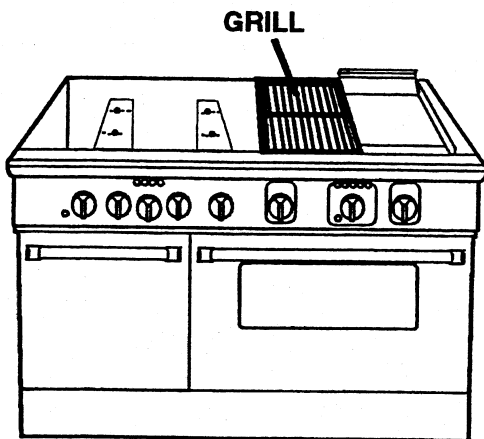
Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### **⚠ CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. Remove the grate from the grill and lift the grill box out of the range, then lay the grill box on its right side.

3. Remove the two screws from the hot surface ignitor bracket and remove the assembly.
4. Remove the two twist-on connectors from the hot surface ignitor wires and remove them from the main harness wires.
5. Remove the screws and hex nuts from the old hot surface ignitor and remove it from the bracket.
6. Install the new grill hot surface ignitor to the bracket and connect the wires to the harness with the twist-on connectors.
7. Reassemble the range.



# Removing The Control Panel, Trim Strip, & Bullnose Trim

## ⚠ WARNING

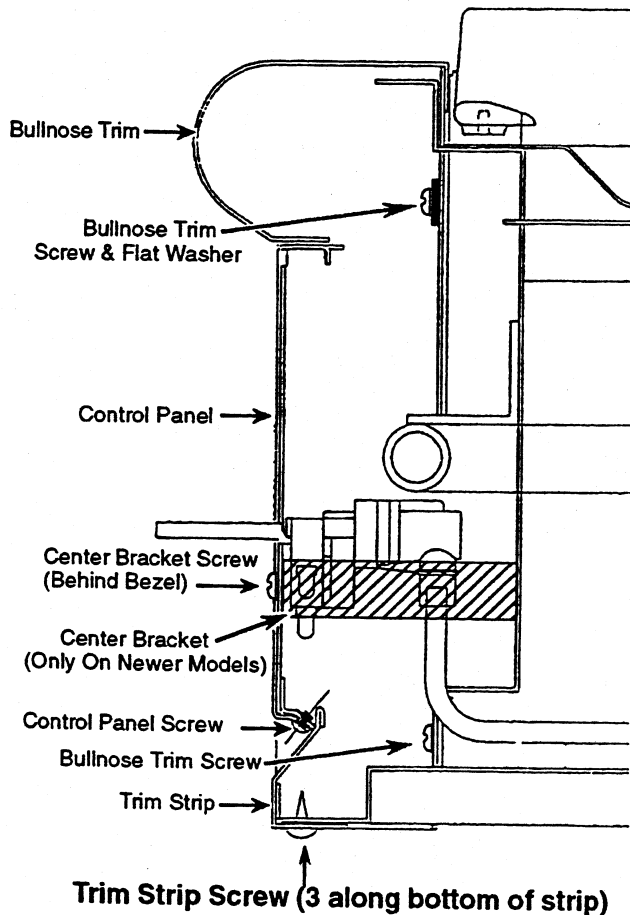
Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

## ⚠ CAUTION

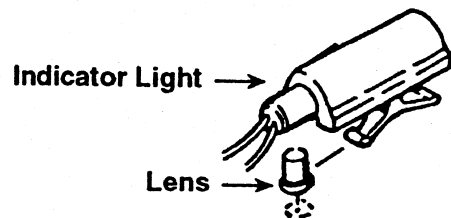
When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. **To remove the control panel:**
  - a) Remove the knobs from the control shafts.
  - b) Remove the two screws from each of the two oven thermostat bezels and remove the bezels from the control panel.

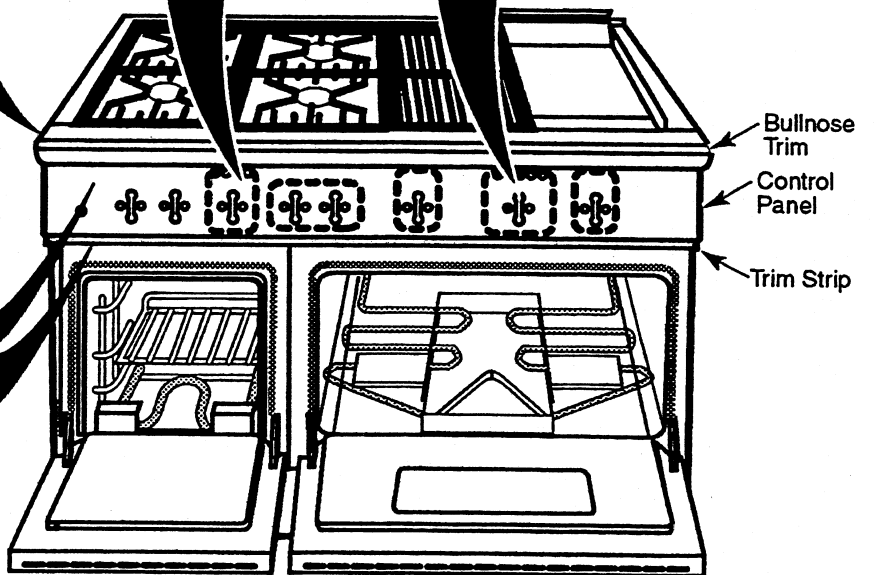
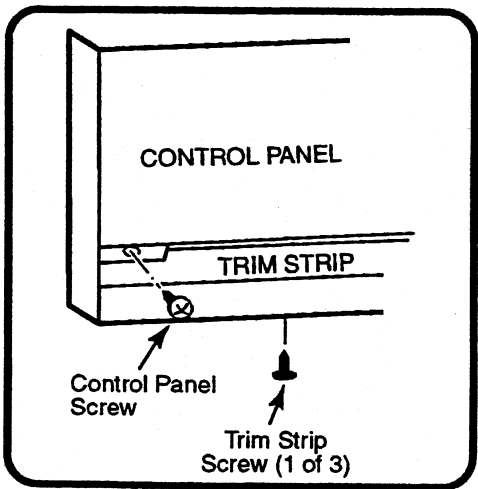
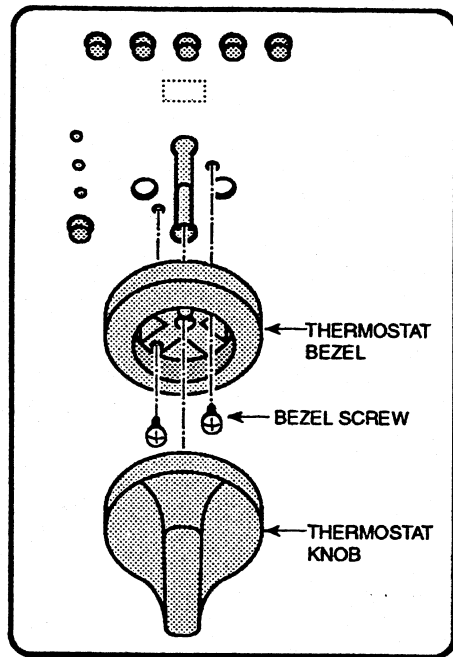
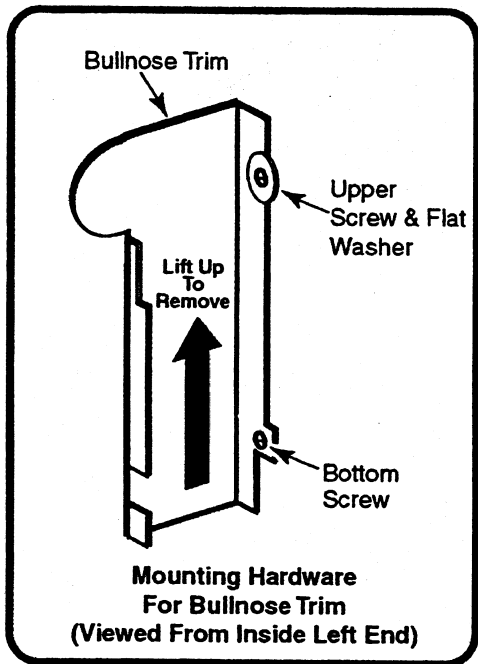
- c) Remove the two control panel screws from each of the oven thermostat locations. **NOTE:** Some newer models have three mounting screws at the center (Proof Oven) bezel location. This third screw is mounted to a bracket which provides added support for the control panel.
- d) Remove the screw from the bottom of each corner of the control panel.
- e) Open the oven door(s) to the "broil" position and lay a cloth over the tops to protect them.
- f) Pull the panel down and unhook the slots at the top corners, then rotate the panel forward and allow it to rest on the top of the oven door(s). Be careful that the indicator lights do not snap off their lenses.
- g) If you are replacing the control panel, slide the indicator lights off the lenses and remove the two screws from each bezel and remove them.



Side View



3. **To remove the trim strip,** (located below the control panel), open the oven door(s) and remove the three screws from the bottom of the strip, then pull the strip forward and remove it.
4. **To remove the bullnose trim,** remove the upper screws and flat washers and two bottom screws from each end, lift the trim straight up, and remove it.
5. Reassemble the range.



## Removing The Griddle Thermostat

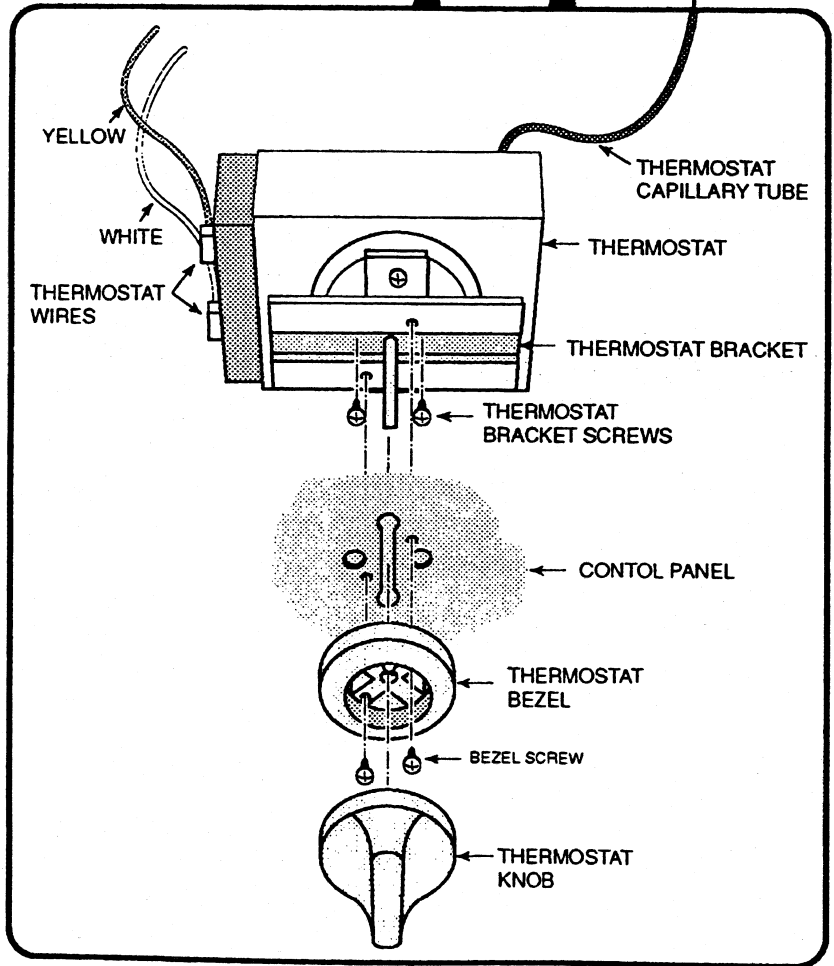
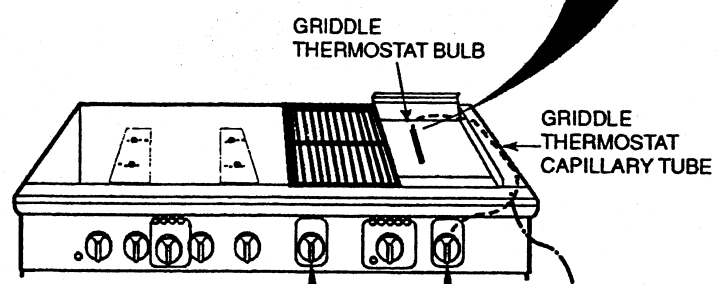
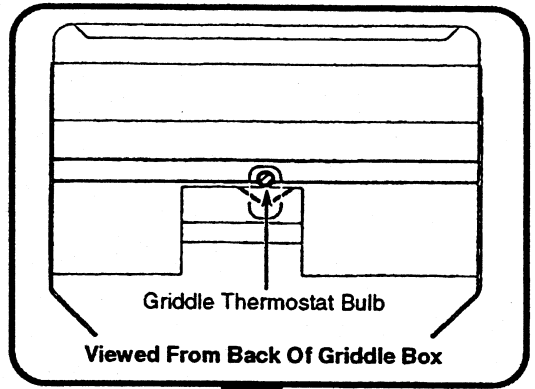
### **WARNING**

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### **CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. Remove the control panel from the range and rotate it forward (see page 2-12).
3. Remove the two screws from the thermostat bezel and remove the bezel.
4. Remove the mounting screws from the thermostat bracket and remove the thermostat from the control panel.
5. Disconnect the yellow and white wires from the terminals of the old thermostat.
6. Remove the mounting bracket from the old thermostat and mount it to the new thermostat with the two screws.
7. Lift the griddle out of the range, and lay it on its right side.
8. Pull the thermostat bulb out the back of the griddle box, then pull the capillary tube and thermostat bulb out the front of the range.
9. Carefully route the thermostat bulb and capillary tube to the back of the griddle box, (be careful not to kink the tube, or the thermostat will not operate properly), and insert the bulb into the slotted hole at the back of the box. Push the bulb into the opening as far as it will go.
10. Position the griddle thermostat capillary tube against the right side of the range so it will be as far away as possible from the heat of the griddle, then reinstall the griddle.
11. Reassemble the range.





# Removing A Grill & Griddle Gas Safety Valve

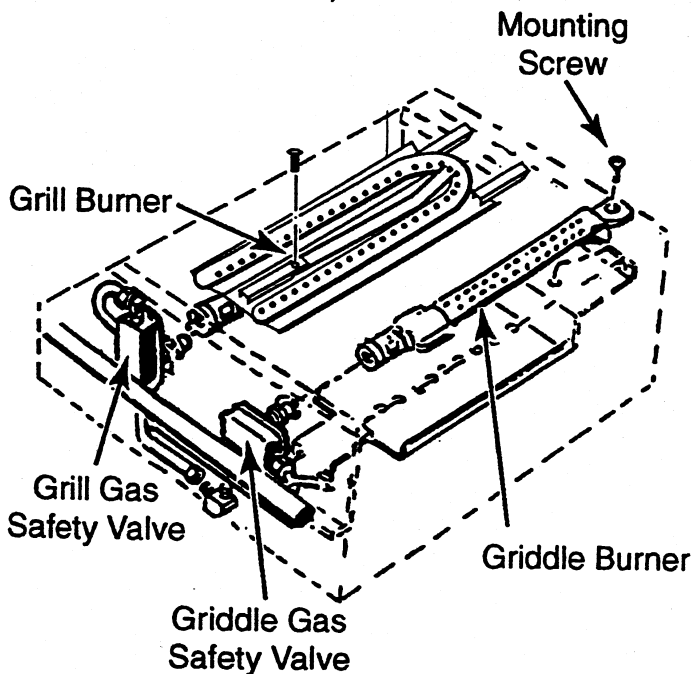
## ⚠️ WARNING

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

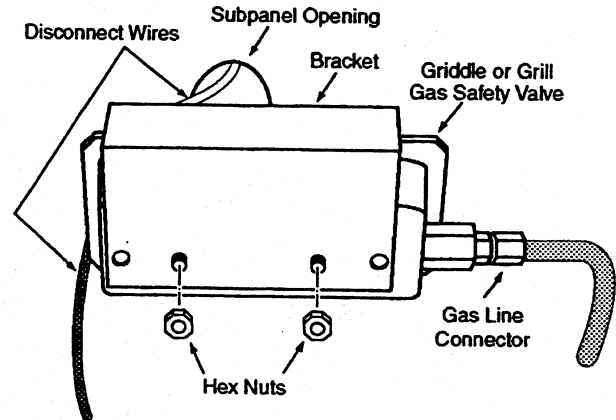
## ⚠️ CAUTION

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

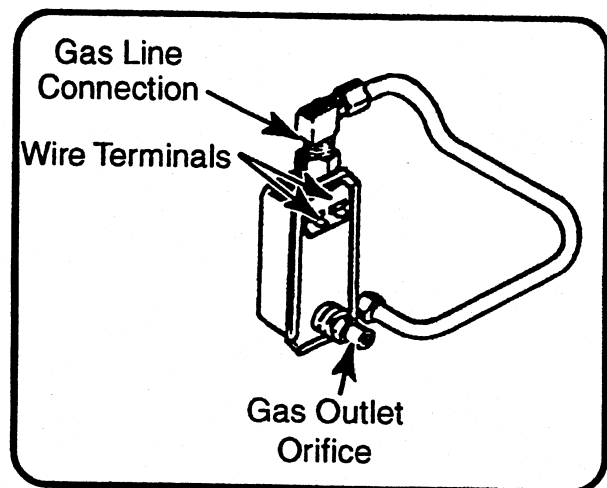
1. Turn off the gas supply and the electrical power going to the range.
2. Remove the control panel from the range and rotate it forward (see page 2-12).
3. Depending on which gas safety valve you are servicing, carefully remove the grill or griddle from the range. Be careful not to stress the wiring or capillary tube at the back of the units when you remove them.
4. Remove the screw from the burner and remove it from the grill or griddle (see the illustration below).



5. From the front of the range, remove the gas line fitting and two hex nuts from the gas safety valve, and remove it from the mounting bracket.



6. Disconnect the two wires from the terminals of the gas safety valve.
7. Connect the two wires to the terminals of the new gas safety valve and mount it to the bracket with its two hex nuts.
8. Connect the gas line fitting to the gas safety valve.
9. Reassemble the range and check the connections for leaks.



# Removing The Oven Light Switch

## **⚠ WARNING**

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

## **⚠ CAUTION**

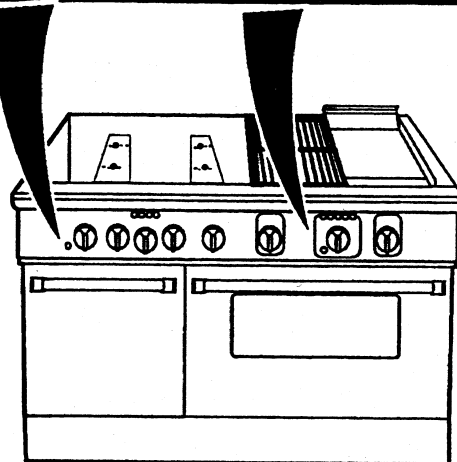
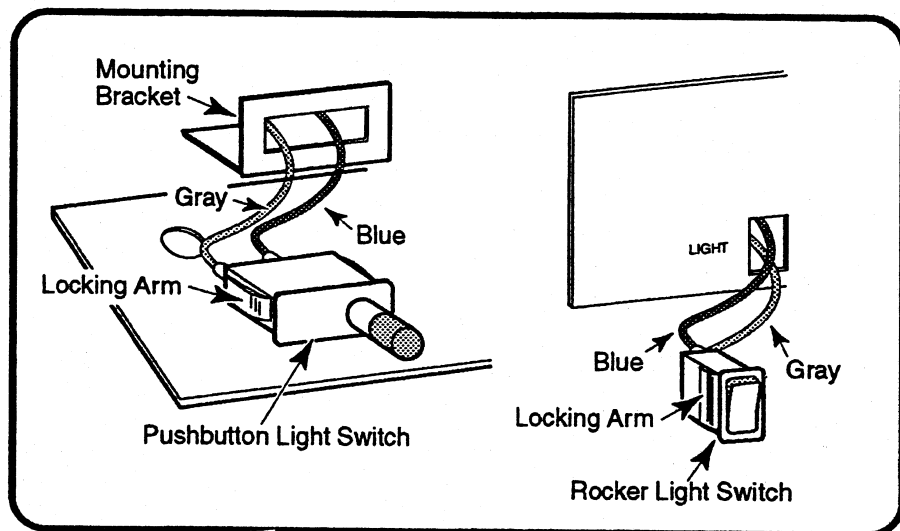
When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and electrical power to the range before you proceed.
2. Remove the control panel from the range and rotate it forward (see page 2-12).

**NOTE:** Depending on the unit you are servicing, the oven light switch may be a pushbutton-

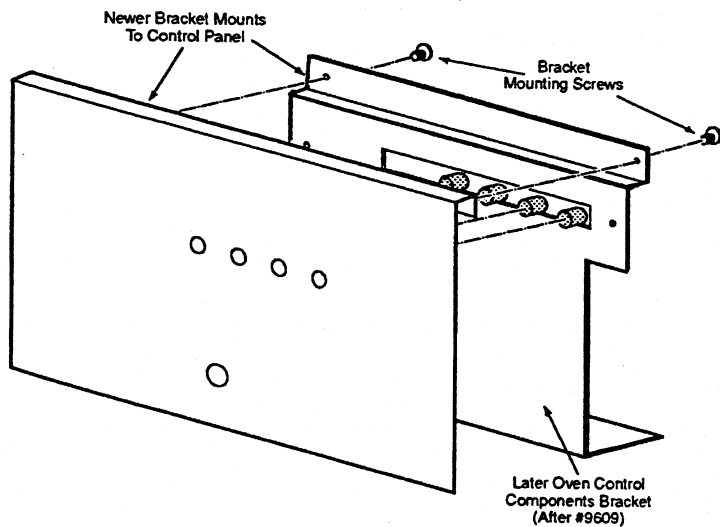
type switch (mounted to a bracket), or a rocker-type switch (mounted to the control panel). In either case the switches are removed in the same manner.

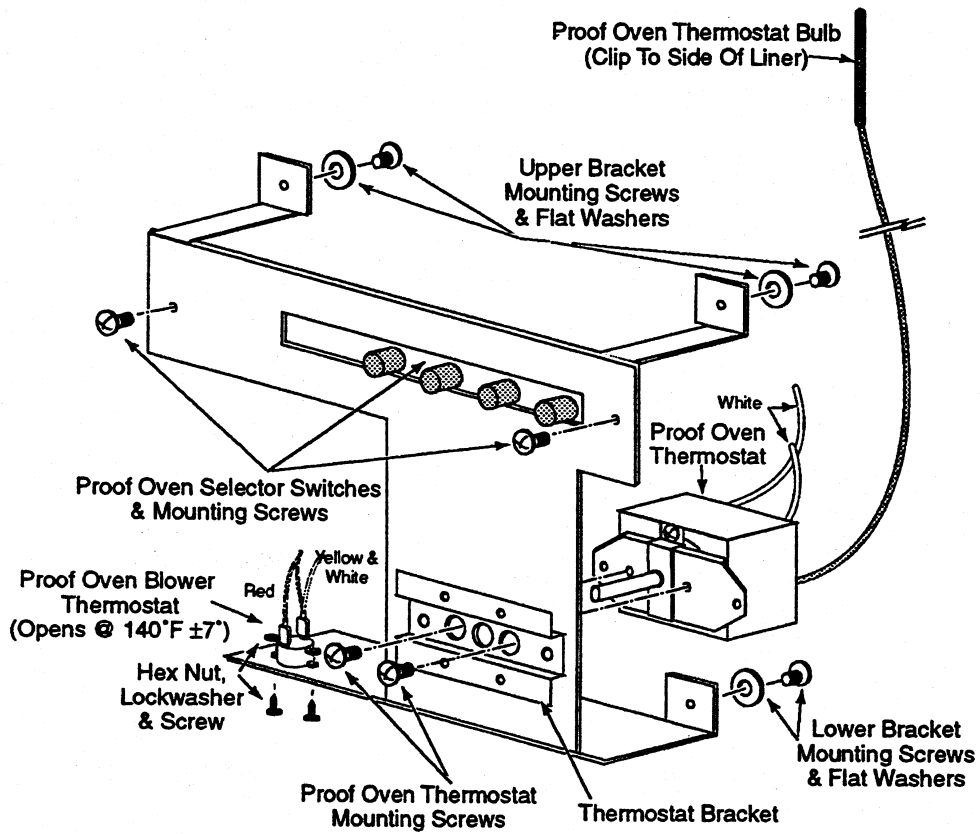
3. Press the locking arms in on the switch body and push the switch out of the bracket/control panel, then disconnect the blue and gray wires from the terminals.
4. Connect the wires to the terminals of the new switch.
5. Position the pushbutton switch with the plunger to the right, or the rocker switch (on models starting with serial #9605) with the terminals toward the bottom, and press the switch into the bracket/control panel cutout until the locking arms snap into place.
6. Reassemble the range.



# Removing The Proof/Main Oven Control Components (Selector Switches, Thermostat, & Blower Thermostat)

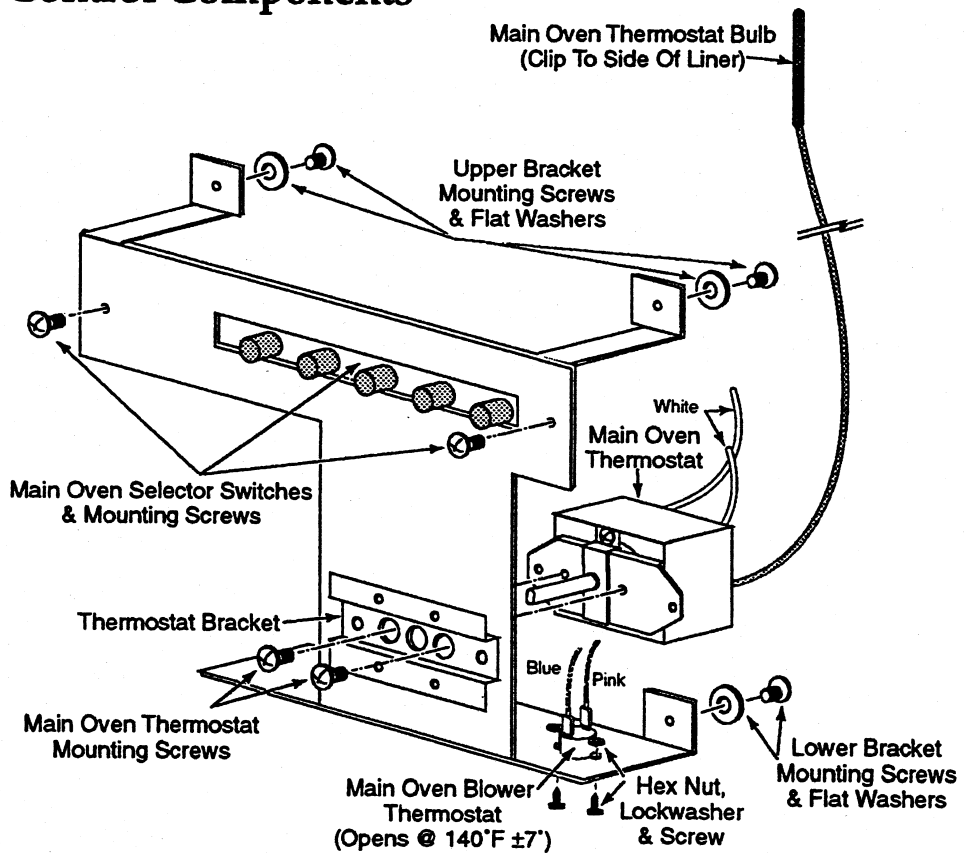
1. Turn off the gas supply and the electrical power going to the range.
2. Remove the control panel from the range and rotate it forward (see page 2-12).
3. **Models With Serial Numbers Prior To #9609:**
  - a) **Proof Oven Only:** Remove the spill trays from the range (see page 2-2 ).
  - b) **Main Oven Only:** Lift the grill and griddle boxes from the range and set them on top. **NOTE:** Be careful not to stress the capillary tube coming from the back of the griddle when you lift it out of the range well.
  - c) Remove the four screws and flat washers from the inside of the range front that secure the component bracket, then slide the two bottom bracket tabs under the front subpanel, and pull the component bracket forward as far as possible.
4. **Models With Serial Numbers Starting With #9609:** Remove the two screws from the oven control components bracket (see the following illustration) and tip it back so that you can access the front.
5. **To remove the selector switches,** remove the two screws, then one at a time, disconnect the wires from the terminals of the old switches, and reconnect them to the same terminal callouts on the new switches.
6. **To remove the oven thermostat:**
  - a) Remove the mounting screws from the thermostat and position it to the side out of the way. **IMPORTANT: DO NOT remove the capillary tube and oven thermostat bulb, or disconnect the wires from the thermostat terminals yet.**
  - b) Mount the new oven thermostat to the mounting bracket with the screws you removed from the old one.
  - c) Disconnect the wires from the old thermostat and reconnect them to the new one at the same terminal callout locations as the old one.
  - d) Route the capillary tube and thermostat bulb from the new thermostat to the inside of the oven. Route the capillary tube along the same route as the old one, and be careful not to kink the tube, or the thermostat may not operate properly.
  - e) Unclip the old thermostat bulb from the side of the oven liner and clip the new one in its place, then remove the old thermostat bulb and capillary tube from the range. Make sure that the new capillary tube remains routed the same as the old one.
7. **To remove the oven blower thermostat:**
  - a) Remove the two screws, lockwashers, and hex nuts, and disconnect the wires from the terminals.
  - b) Mount the new oven blower thermostat to the bracket and connect the wires to the terminals.
8. Reassemble the range.





## Proof Oven Control Components

## Main Oven Control Components



# Removing A Spark Switch, Potentiometer, & Gas Valve

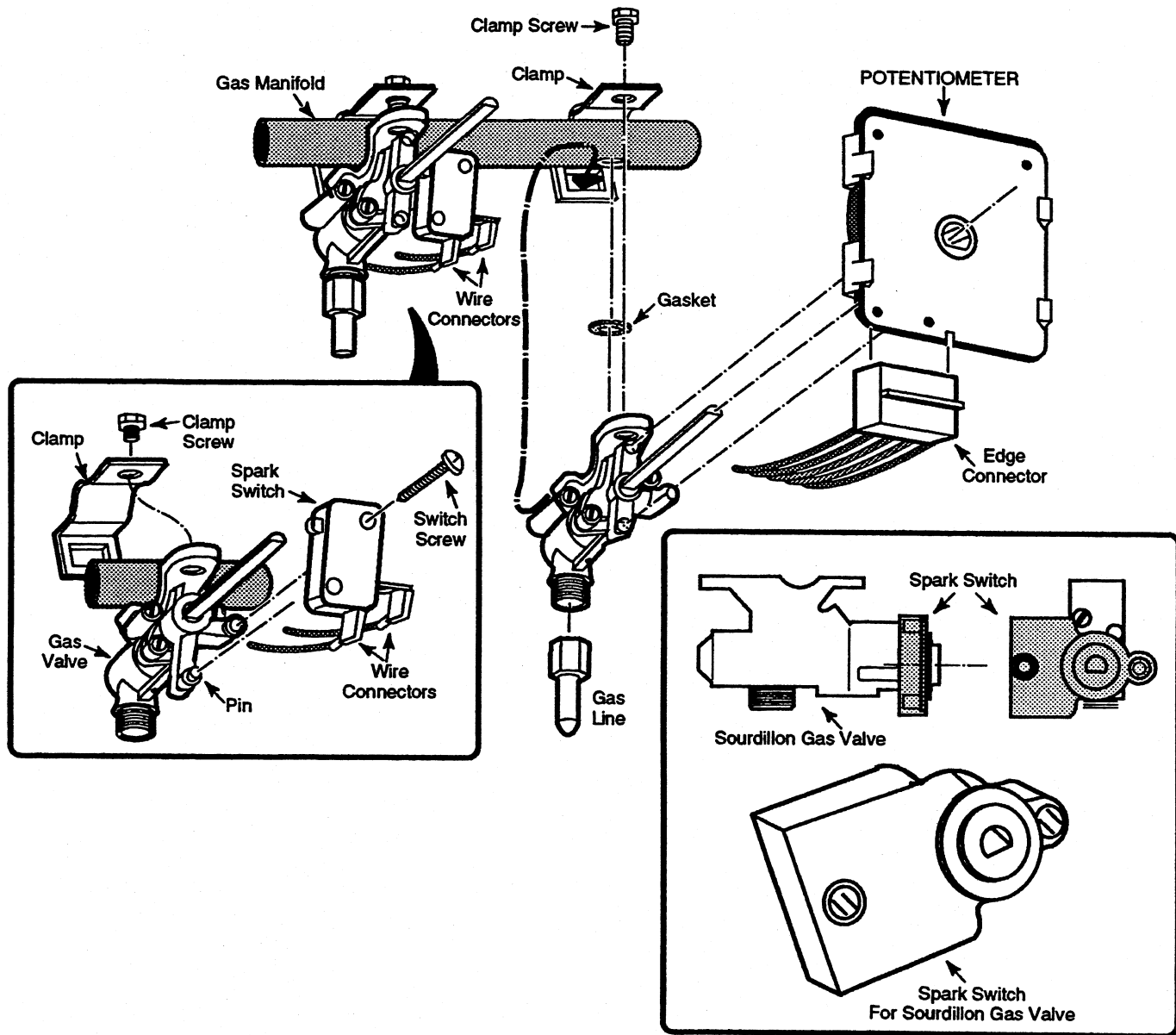
## **WARNING**

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

## **CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. Remove the control panel from the range and rotate it forward (see page 2-12).
3. **To remove a spark switch:**
  - a) Remove the mounting screw and slide it off the alignment pin on the valve, then disconnect the two wires from the terminals.
  - b) Connect the wires to the terminals of the new spark switch and mount it to the gas valve with its mounting screw.
4. **To remove a potentiometer:**
  - a) Pull it forward and unsnap it from the valve, then remove it from the shaft and pull the edge connector from the board.
  - b) Push the edge connector onto the circuit board of the new potentiometer, then slide the potentiometer onto the gas valve so that it snaps into place over the shoulder screws.
5. **To remove a gas valve:**
  - a) Remove the spark switch, or potentiometer, then remove the two screws from the clamp, and remove the valve.
  - b) Install the spark switch or potentiometer on the new gas valve and reconnect the wires, then mount the gas valve to the manifold with the clamp and two screws.
  - c) Check the new connections for leaks.
6. Reassemble the range.



# Removing An Oven Bake Element (Electric)

## ⚠ WARNING

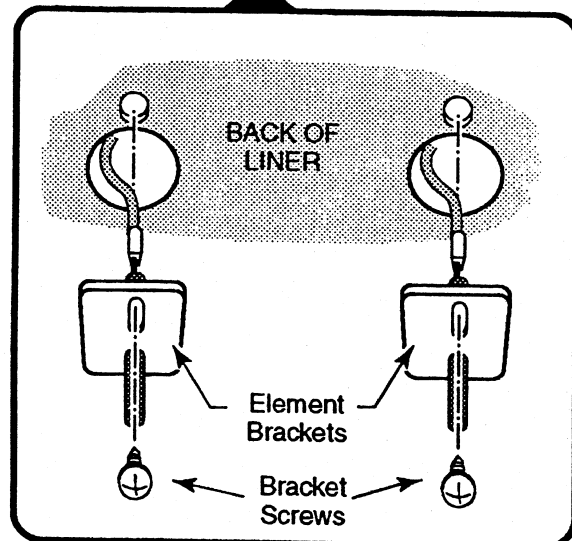
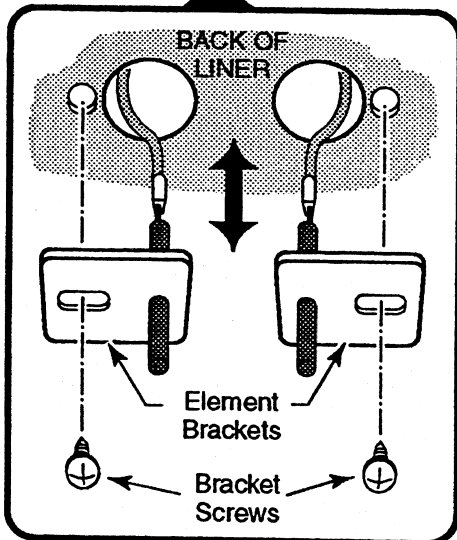
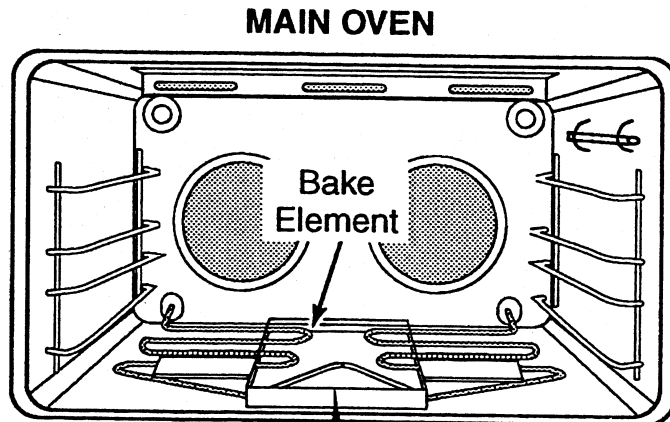
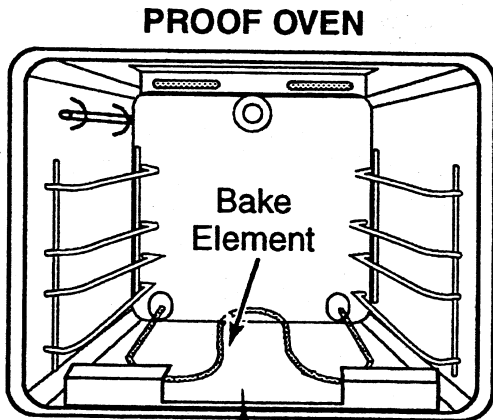
Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

## ⚠ CAUTION

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. Open the oven door for the bake element you are servicing and remove the racks.

3. Remove the two screws from the bake element brackets on the back of the oven liner.
4. Pull the bake element forward so you can access the wires, then tie a 12" piece of string around each of the wire connectors so you can retrieve the wires if they should slide back inside the liner.
5. Disconnect the wires from the terminals.
6. Connect the wires to the terminals of the new bake element, remove the string, and mount the element to the liner with its two screws. **NOTE:** Do not allow the wires to "bunch up" inside the insulation material when pushing them into the liner holes.
7. Reassemble the range.



## Removing An Oven Broil Element (Electric)

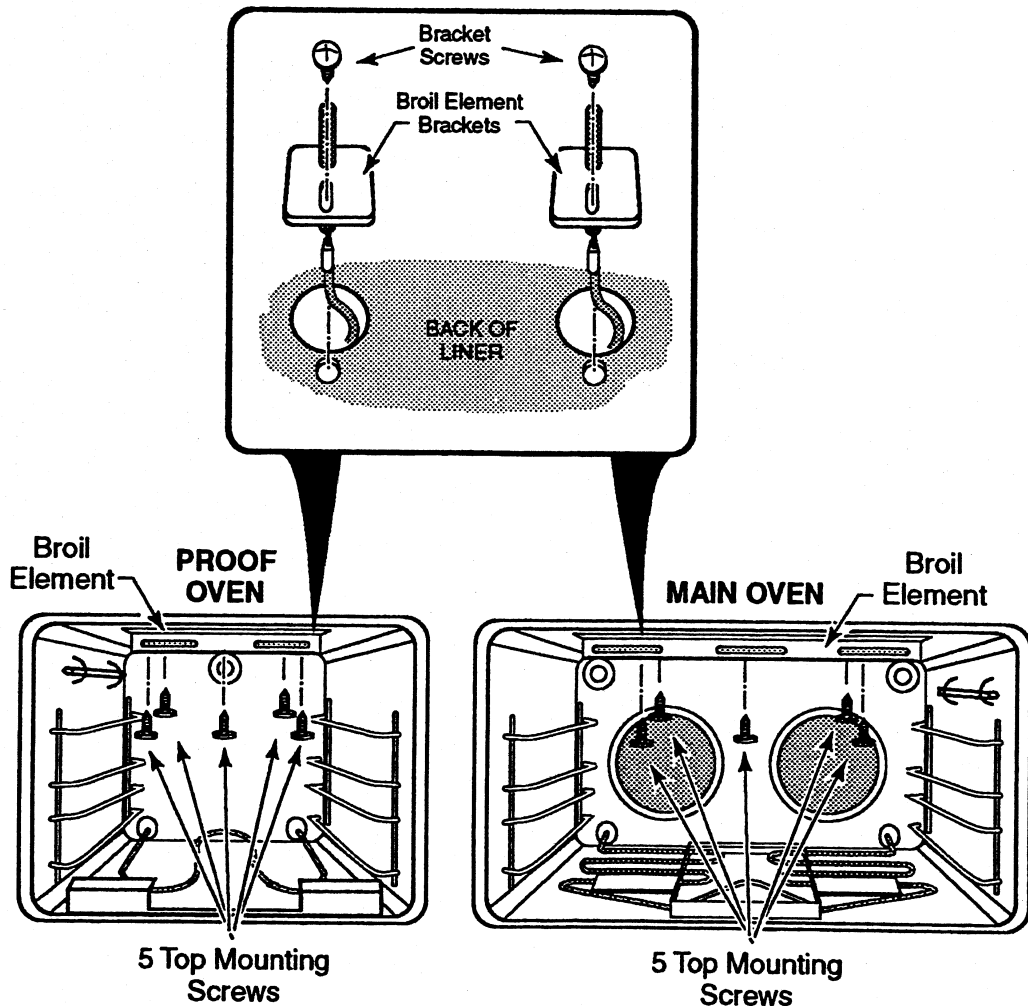
### ⚠ WARNING

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### ⚠ CAUTION

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
  2. Open the oven door for the element you are servicing and remove the racks.
  3. Remove the two screws from the broil element brackets on the rear of the oven
4. Tie a 12" piece of string around each of the wire connectors so you can retrieve the wires if they should slide back inside the liner.
  5. Disconnect the wires from the broil element terminals.
  6. Connect the wires to the terminals of the new broil element, remove the string, and mount the element to the liner with its seven screws. **NOTE:** Do not allow the wires to "bunch up" inside the insulation material when pushing them into the liner holes.
  7. Reassemble the range.





## Removing The Infrared Broil Burner, Hot Surface Ignitor, & Thermostat (30 " & 36 " Gas Ranges)

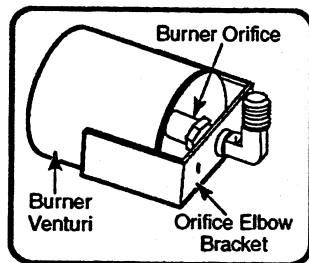
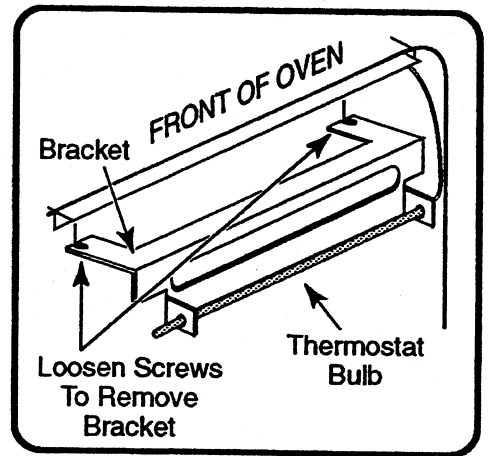
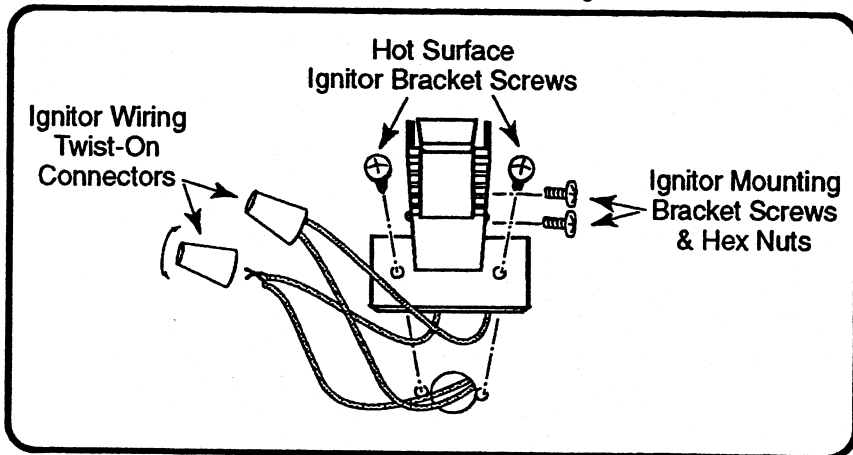
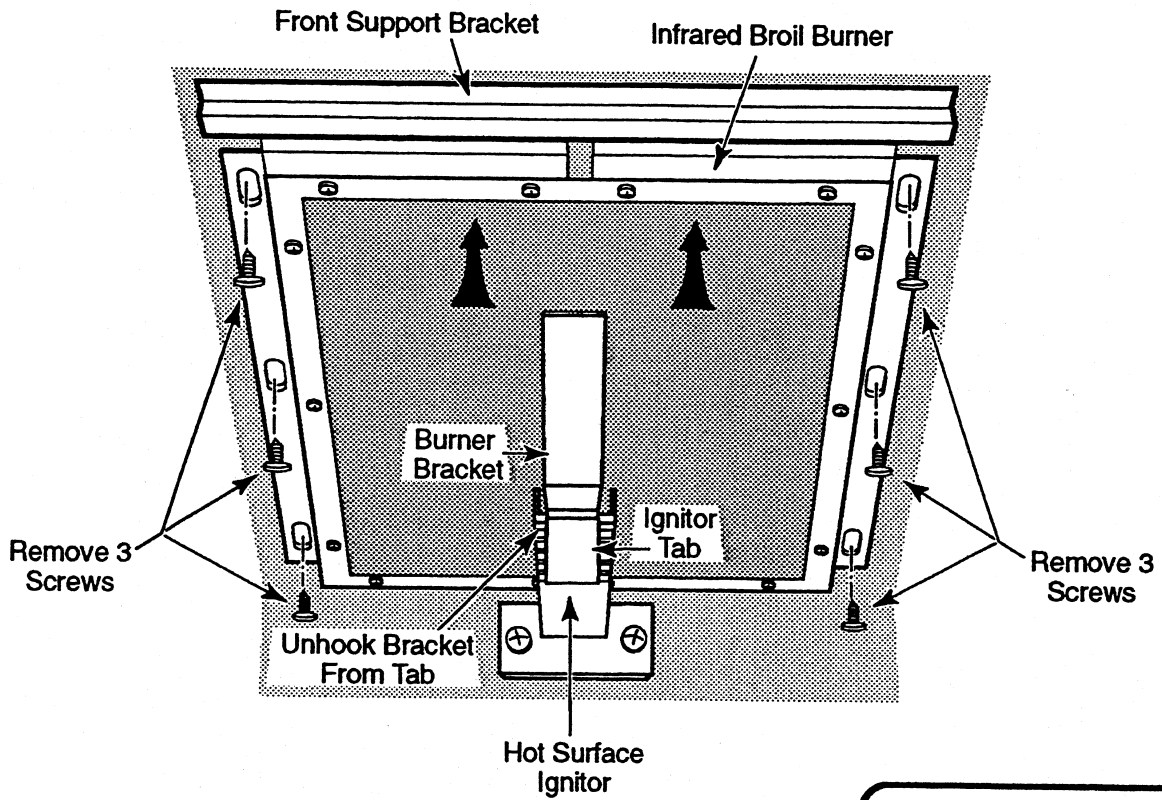
### **WARNING**

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### **CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. Open the oven door and remove the racks.
3. To remove the infrared broil burner:
  - a) Remove the six screws from the broil assembly, then pull back on the assembly to unhook it from the hot surface ignitor, and remove it from the oven.
  - b) To remove the burner gas orifice, unscrew it from the gas valve (see the small inset at the bottom of the next page).
4. To remove the hot surface ignitor:
  - a) Remove the two screws and hex nuts from the bracket.
  - b) Remove the two ceramic twist-on connectors from the hot surface ignitor wires and disconnect the wires from the harness.
5. To remove the thermostat, loosen the two bracket screws and pull the bracket out from the front of the oven, then slide the thermostat bulb out of the bracket.
6. Reassemble the range.



## Removing The Bake Burner & Hot Surface Ignitor (30" & 36" Gas Ranges)

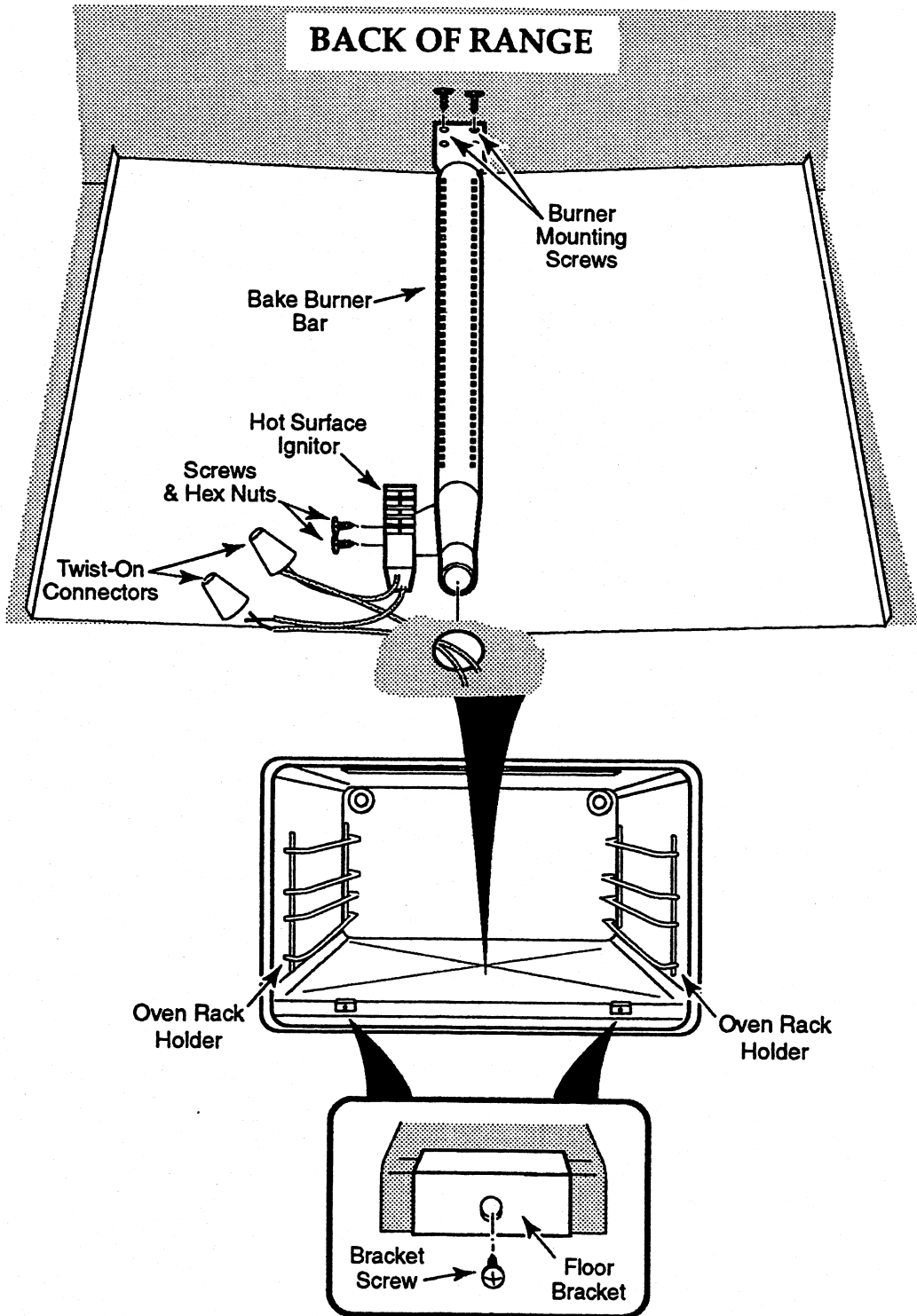
### **WARNING**

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### **CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. Open the oven door and remove the racks.
3. Remove the oven rack holders and the two front brackets.
4. Pull the oven floor forward slightly and lift up on the front so that the baffle on the bottom clears the oven frame, and remove the floor.
5. To remove the bake burner assembly, remove the two screws from the back of the bar and remove the burner by lifting the back and pulling it off the front orifice.
6. To remove the hot surface ignitor:
  - a) Remove the two screws and hex nuts from the bracket.
  - b) Remove the two ceramic twist-on nuts from the hot surface ignitor wires and disconnect the wires from the harness.
7. Reassemble the range.



## Removing The Dual Gas Safety Valve

### **⚠ WARNING**

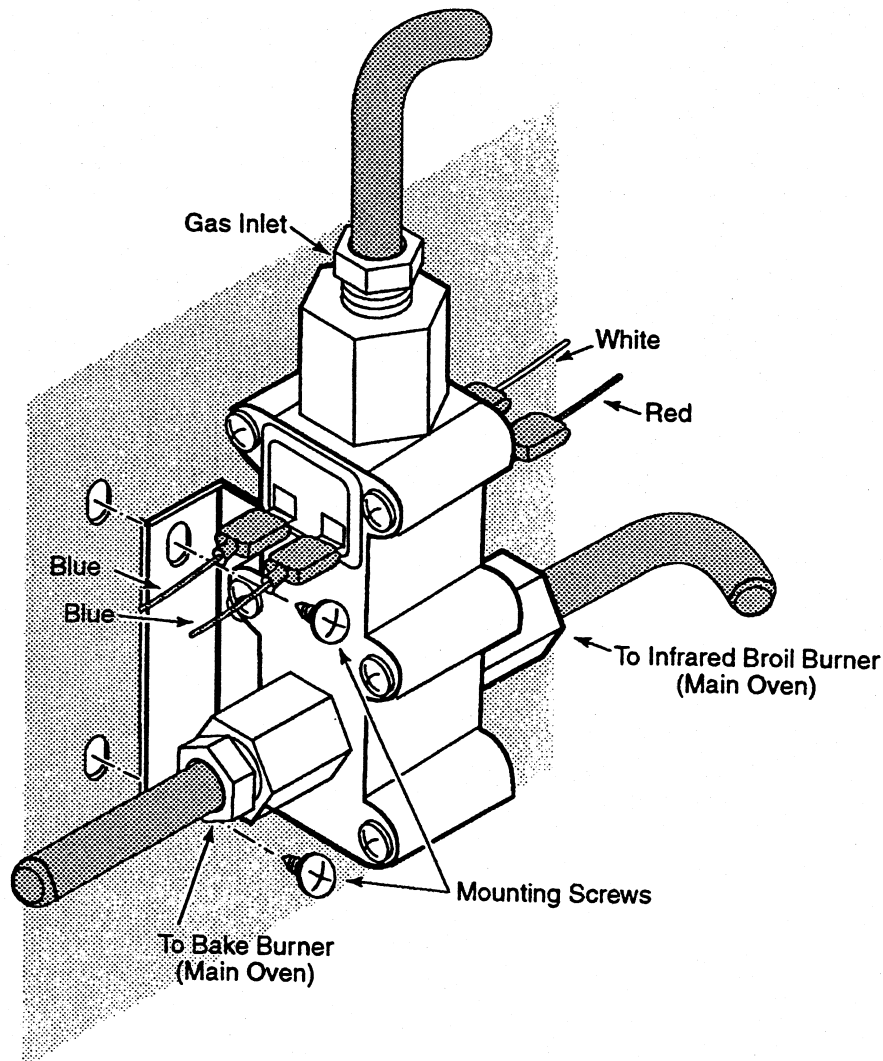
Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### **⚠ CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.

2. Remove the access panel for the dual gas safety valve, located under the top burners.
3. Remove the gas line fittings from the inlet and outlets of the valve.
4. Disconnect the four wires from the terminals of the dual gas safety valve.
5. Remove the mounting screws from the dual gas safety valve bracket and remove the valve.
6. Install the new dual gas safety valve and reconnect the wires and gas lines.
7. Install the access panel.
8. Reassemble the range.



## Removing An Oven Light Socket

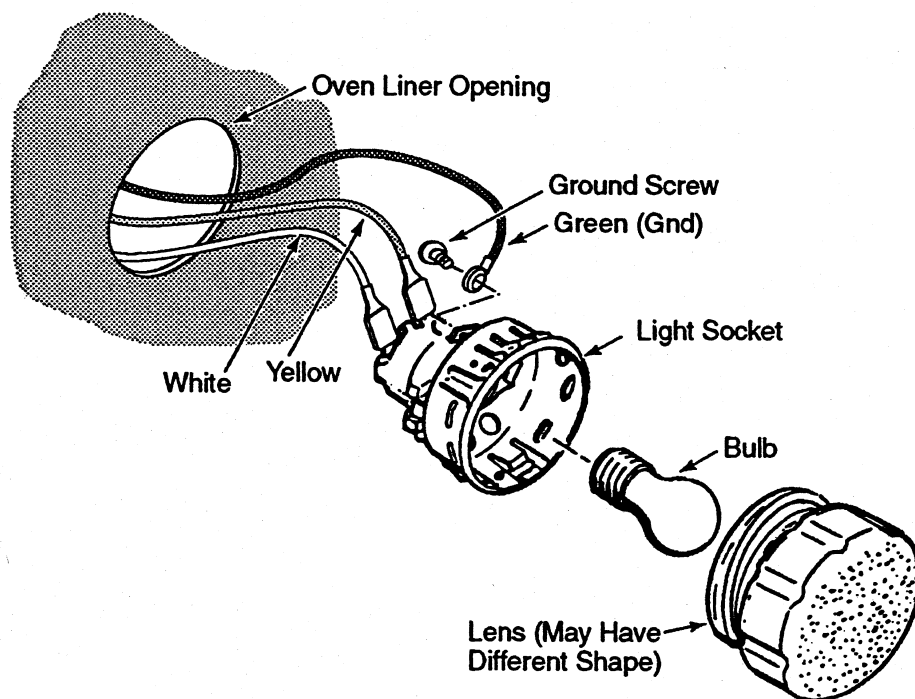
### **⚠ WARNING**

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### **⚠ CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. Open the oven door for the light socket you are servicing and remove the racks.
3. Unscrew the light lens and bulb from the light socket.
4. Pry the light socket out of the liner cutout and disconnect the wires from the terminals.
5. Connect the wires to the terminals of the new light socket and push the socket into the liner cutout as far as it will go and turn it 1/4-turn to lock it in place.
6. Reassemble the range.



## Removing A Convection Fan Motor

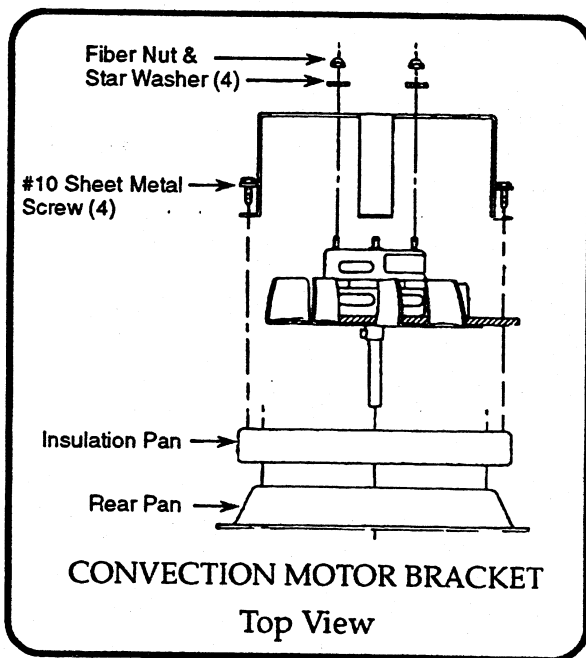
### **⚠ WARNING**

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### **⚠ CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

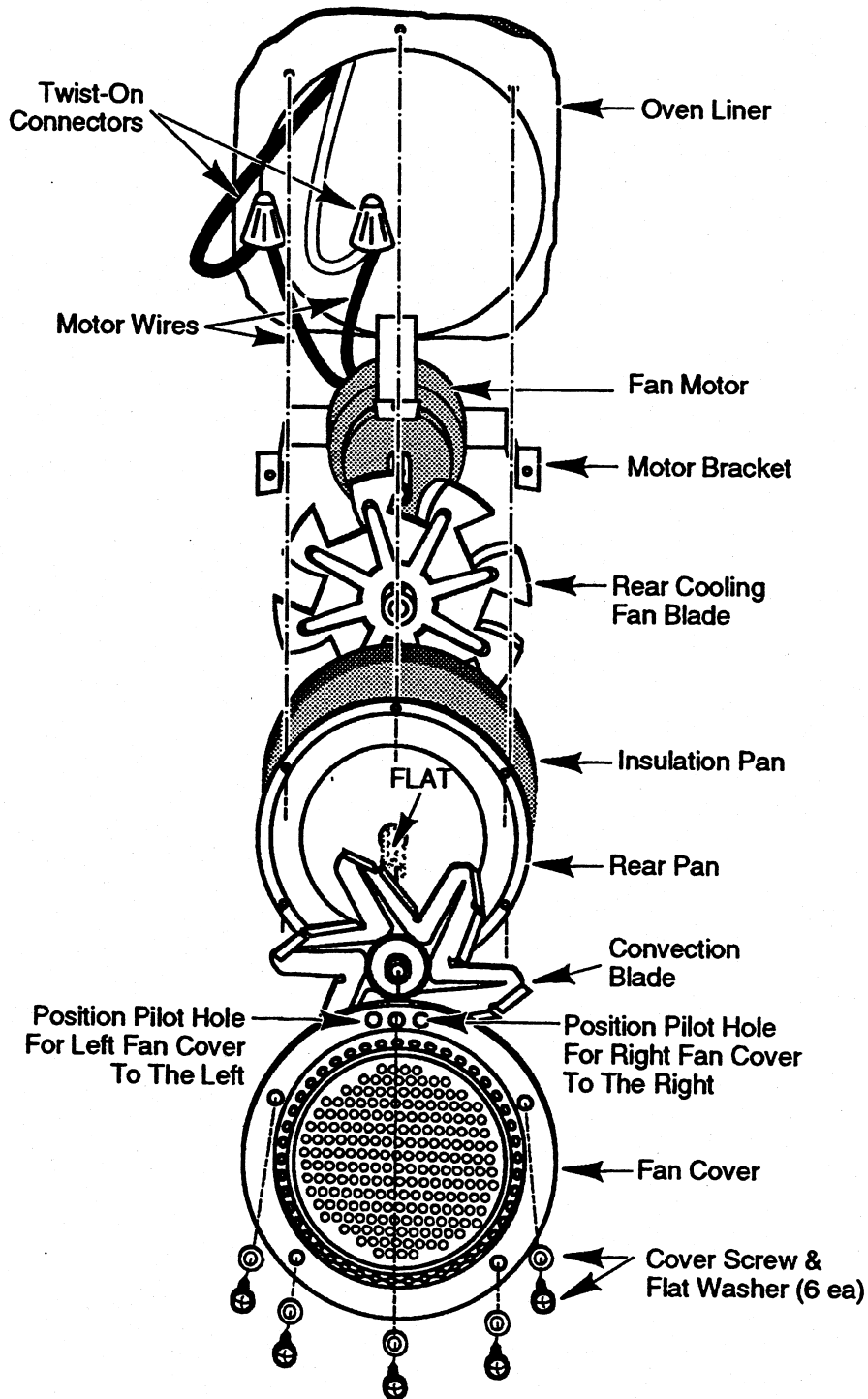
1. Turn off the gas supply and the electrical power going to the range.
2. To make servicing the convection fan motor easier, remove the oven door.
3. Remove the racks from the oven.
4. Remove the screws from the convection fan cover.
5. Pull the convection fan motor assembly forward into the oven and perform the following steps to remove the fan motor:
  - a) Remove the two ceramic twist-on nuts and untwist the fan motor wires from the harness.



- b) Remove the front fan blade from the motor shaft.
- c) Remove the four phillips screws from the motor bracket and remove the front and rear pans and the insulation.
- d) Remove the four locknuts from the fan bracket and remove the fan motor.
- e) Remove the rear fan blade from the motor shaft.

**IMPORTANT REASSEMBLY NOTE:** Be careful not to pinch the wires coming from the fan motor between the fan bracket and the oven chassis when you reinstall the assembly. Also, position the fan cover with the small hole at the top of the oven.

6. Install the new convection fan motor (reverse the procedure in step 5). Reconnect the fan motor wires and install the front fan blade as follows:
  - a) Either black fan motor wire to white harness wire.
  - b) Other black fan motor lead to two yellow harness wires.
  - c) Install the front fan blade so that the front edge of the collar is just past the front of the motor shaft and tighten the setscrews.
7. Reassemble the range.





# Removing The Oven Door Latch Assembly

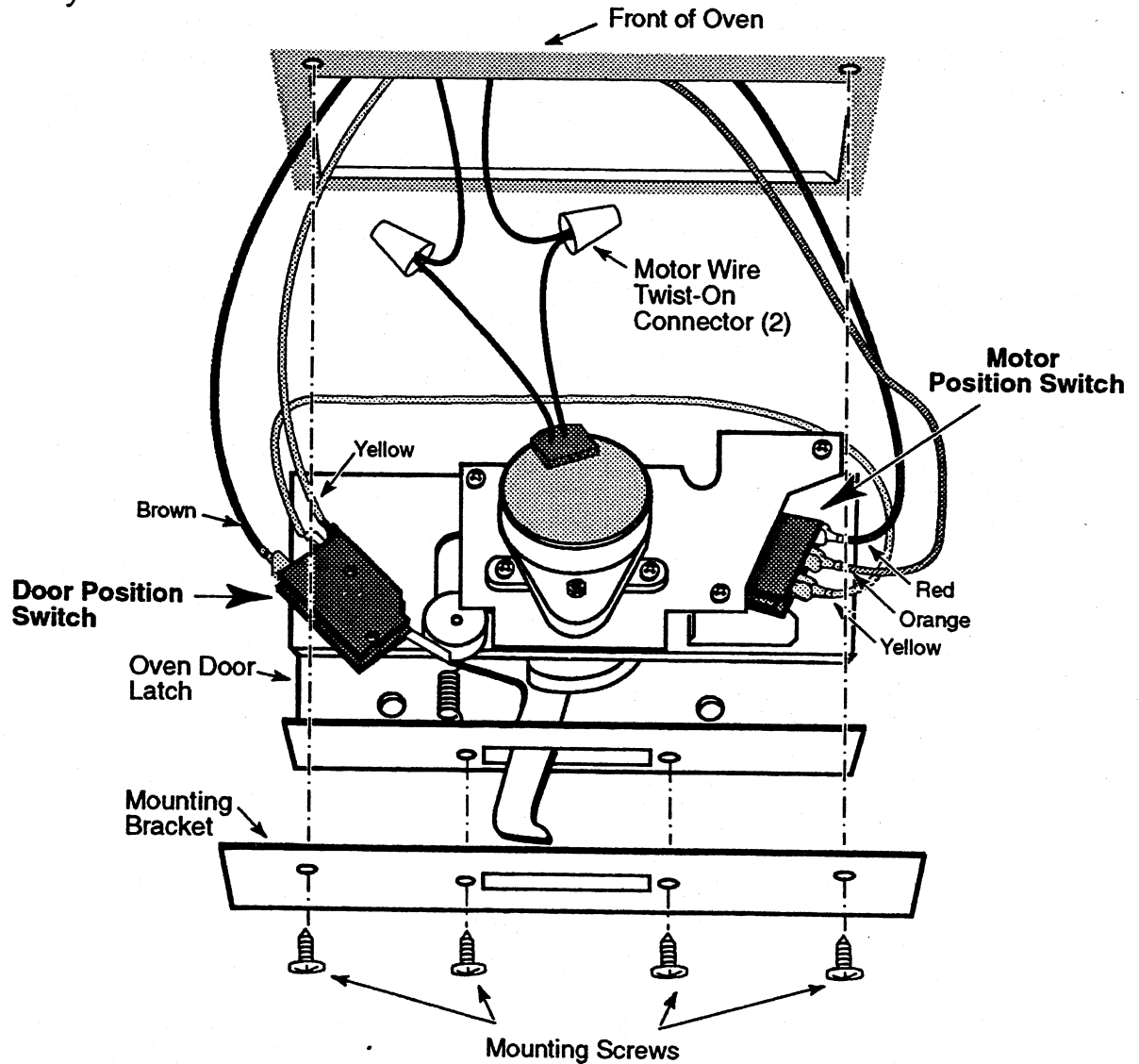
## **⚠ WARNING**

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

## **⚠ CAUTION**

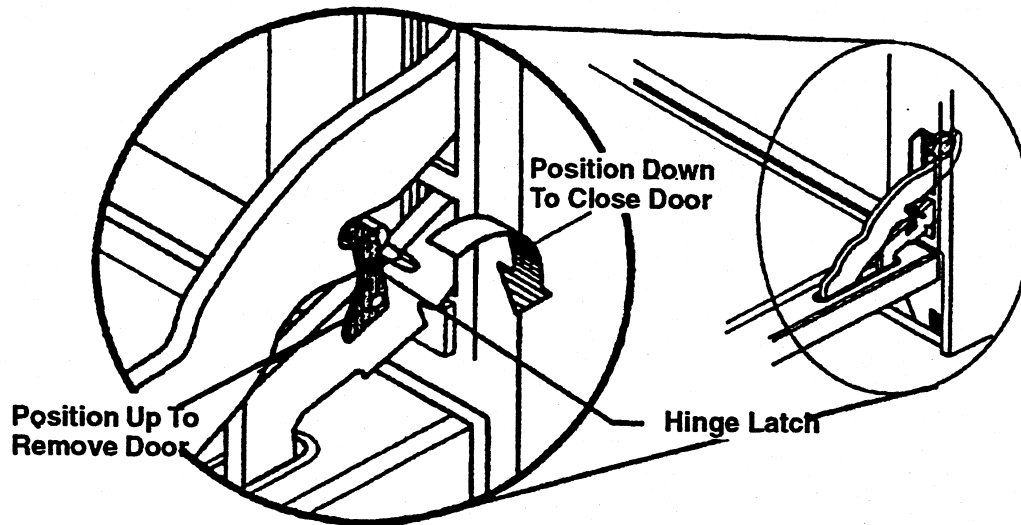
When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. Open the main oven door and remove the two bracket screws for the oven door latch assembly.
3. Pull the oven door latch assembly forward and disconnect the wires from the switch terminals.
4. Remove the two ceramic twist-on connectors from the motor wires and untwist them from the main harness.
5. Remove the two phillips screws from the oven door latch assembly bracket and remove the assembly.
6. Install the new oven door latch assembly on the bracket and connect the two wires to the harness with the two ceramic twist-on nuts.
7. Reassemble the range.



## Removing The Oven Door

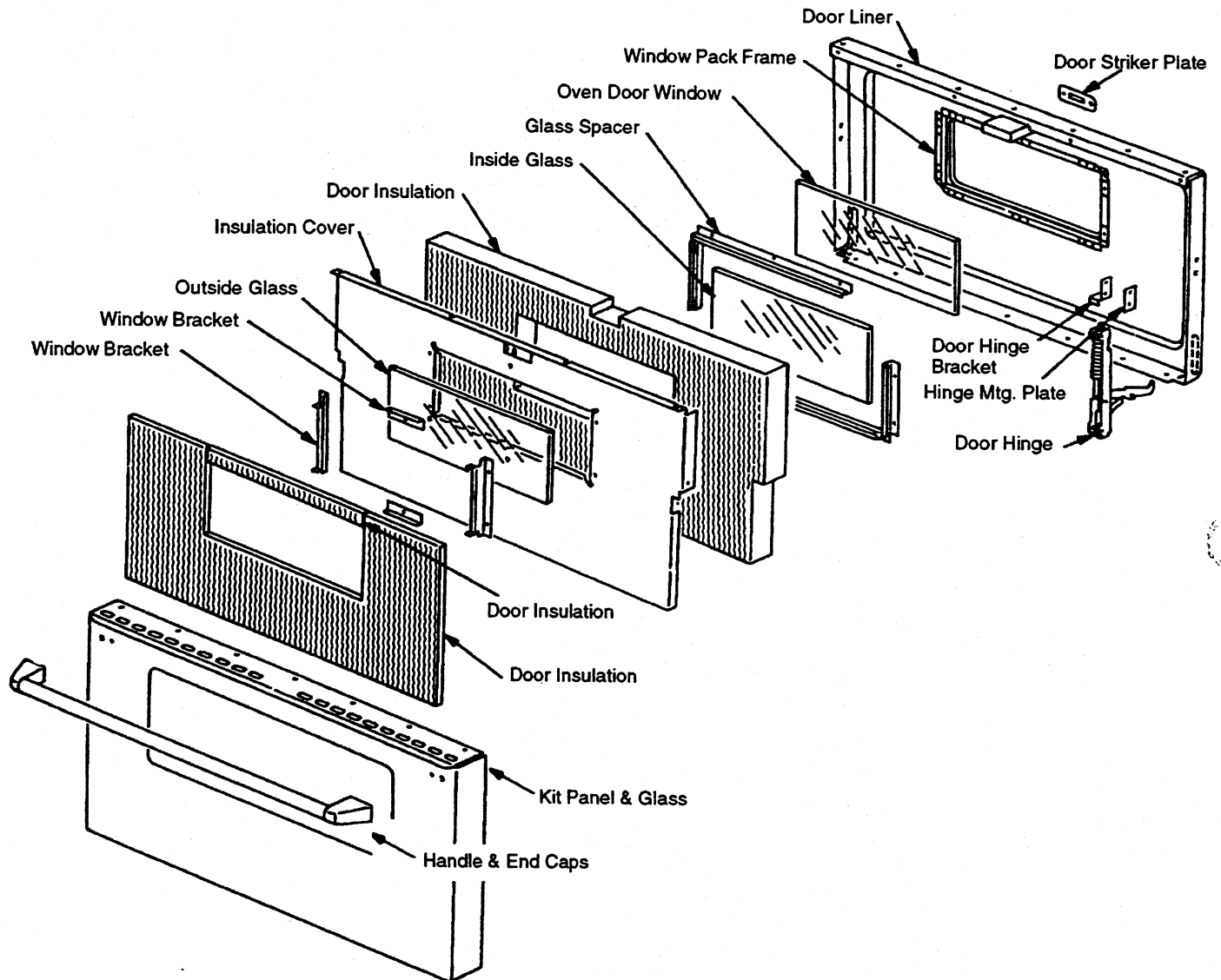
1. Open the door to its fully open position.
2. Raise the hinge latch over the hook on each of the hinges (see the illustration).
3. Grasp the door by the sides toward the back, then raise the front of the door several inches (there will be some resistance in the spring mechanism because the hinge is locked). When the door is high enough, lift the door until the hinges clear the indents, and pull it out of the slots in the front frame.



# Removing The Oven Door Components

**Models: PRSE36-6, -4GD, -4GL & PRSE48-4GG, -6GD, -6GL**

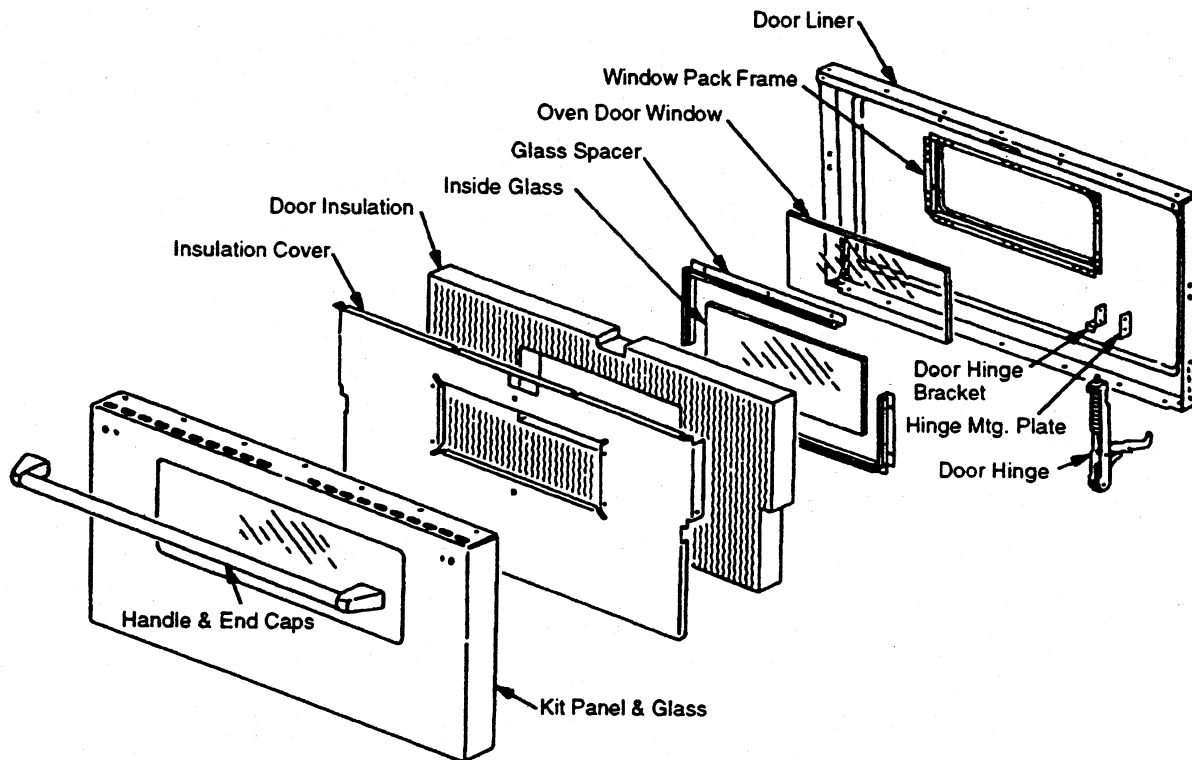
1. To remove any of the oven door components, remove the oven door from the oven (see page 2-33).
2. Use the illustration shown below to remove the door components. The illustration shows the order of removal.



# Removing The Oven Door Components

## Models: PRSG304 & PRSG36-6, -4GD, -4GL

1. To remove any of the oven door components, remove the oven door from the oven (see page 2-33).
2. Use the illustration shown below to remove the door components. The illustration shows the order of removal.



## Removing The Oven Door Gasket & Oven Liner (Electric Range Liners Only)

### **WARNING**

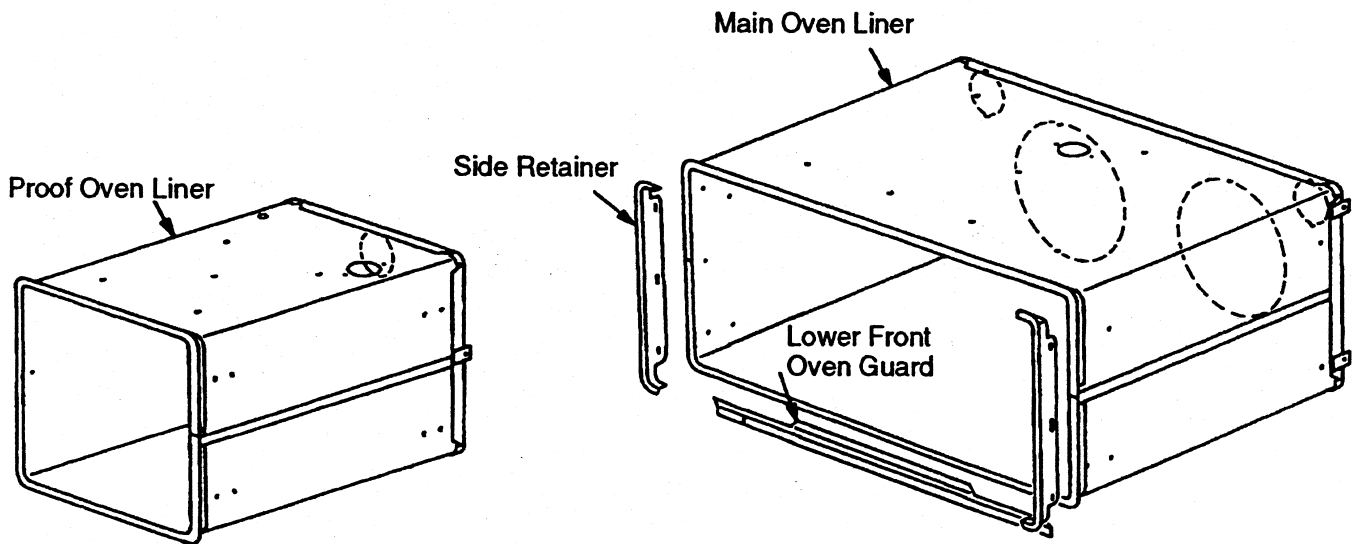
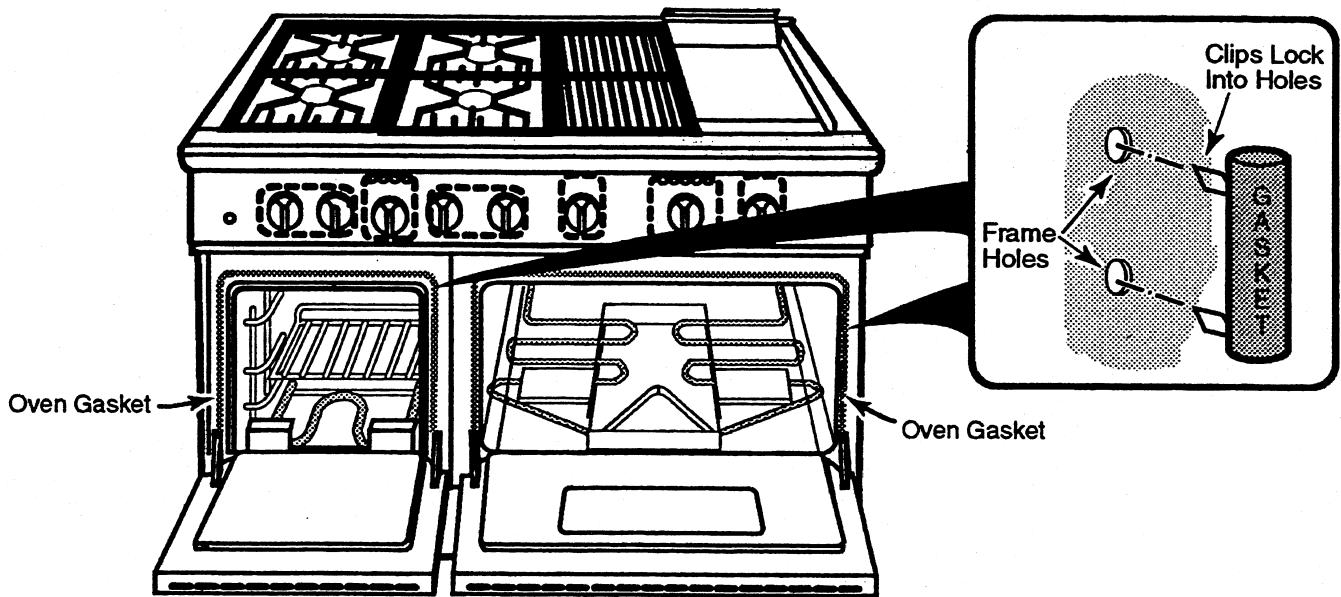
Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### **CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

**IMPORTANT NOTE:** It is advisable to self-clean the oven twice before removing the oven liner.

1. Turn off the gas supply and the electrical power going to the range.
2. To remove the oven door gasket, open the oven door and pull the clips out of the holes in the frame, then pull the ends of the gasket out of their holes.
3. To remove the oven door for the liner you are removing, see page 2-33.
4. From inside the oven, remove the following components from the liner (refer to the previous pages for the removal procedures):
  - Oven Racks with Side Racks & Brackets
  - Oven Light(s)
  - Bake & Broil Elements
  - Convection Fan Assembly
  - Oven Thermostat Thermal Bulb & Clips
5. Remove the side retainers and lower front oven guard from the main oven liner (see the illustration on the next page).
6. Remove the liner mounting screws (six for the proof oven and eight for the main oven).
7. Pull the oven liner out of the range and install the new liner in its place.
8. Reassemble the range.



# SERVICING THE ELECTRONIC SWITCHING COMPONENTS

The electronic switching components are located in a compartment behind the toe panel. The two hi-temperature cutout switches are located on the bottom of the chassis below the proof and main ovens (see the illustration below).

## ⚠ WARNING

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

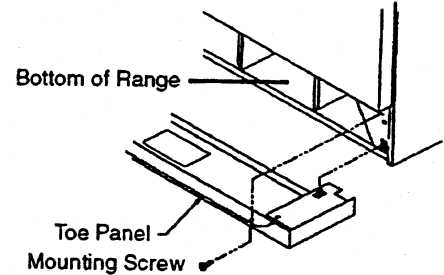
## ⚠ CAUTION

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

To access the electronic switching components, perform the following steps.

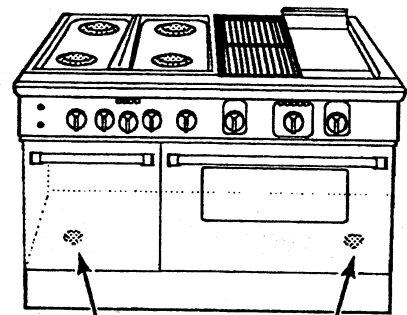
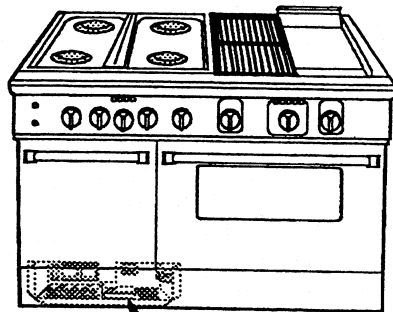
1. Turn off the gas supply and the electrical power going to the range.

2. To remove the toe panel, remove the two screws from the top of the panel and un-snap it at the bottom.



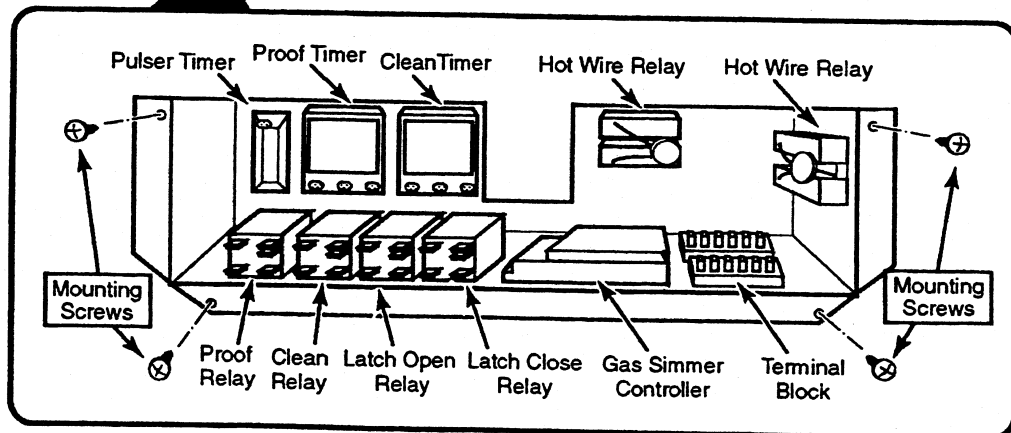
3. Remove the four screws from the mounting compartment and pull it forward as far as it will go.

**NOTE:** To remove the main oven hi-temp cutout switch, you do not need to remove the electronic switching components compartment.



Hi-Temp Cutout  
Proof Oven

Hi-Temp Cutout  
Main Oven



## Removing The Timers (Pulser, Proof , & Clean)

### ⚠ WARNING

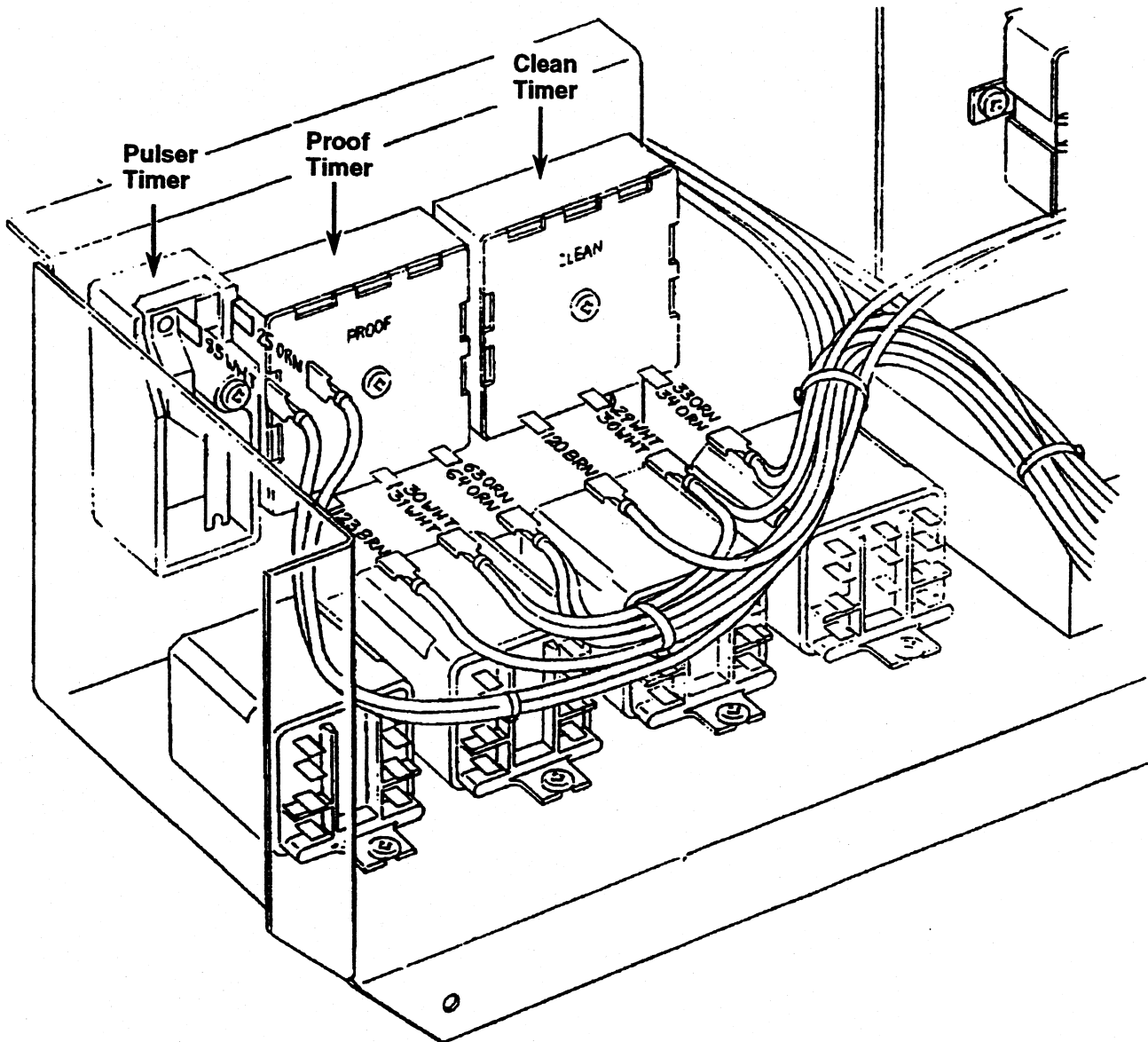
Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### ⚠ CAUTION

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.

2. Remove the toe panel and the mounting compartment from the bottom of the range (see page 2-38).
3. To remove a timer, disconnect the wires from the terminals and remove the mounting screw.
4. Connect the wires to the terminals of the new timer (refer to the illustration for the wire colors and numbers) and mount it to the back side of the compartment with its mounting screw.
5. Mount the compartment in the range and reinstall the toe panel.





## Removing The Hot Wire Relays

### **⚠ WARNING**

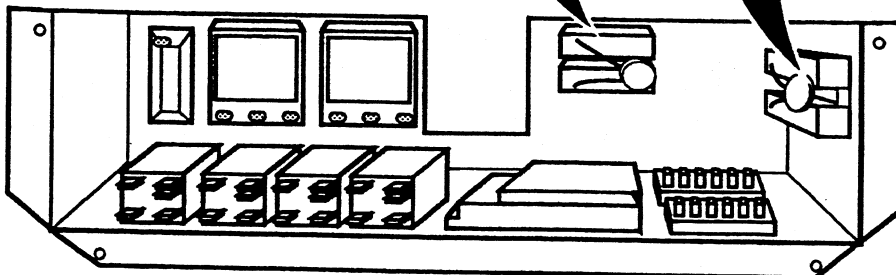
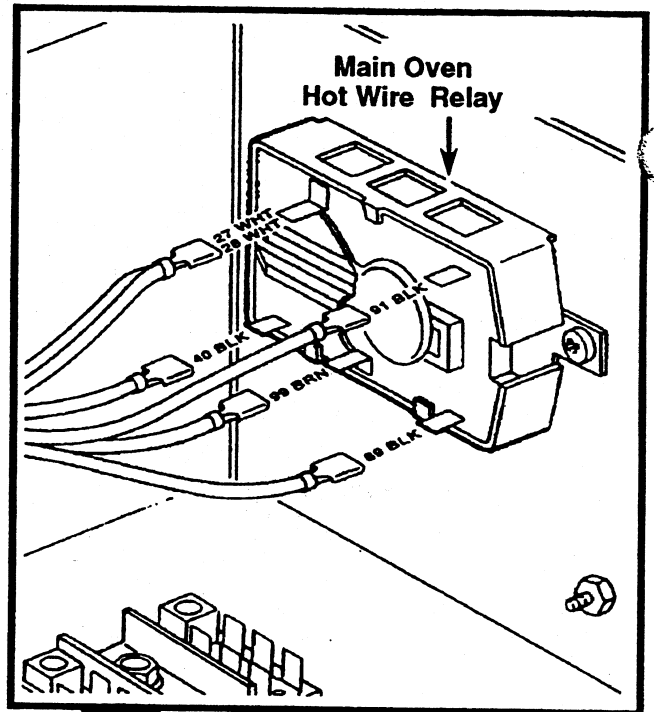
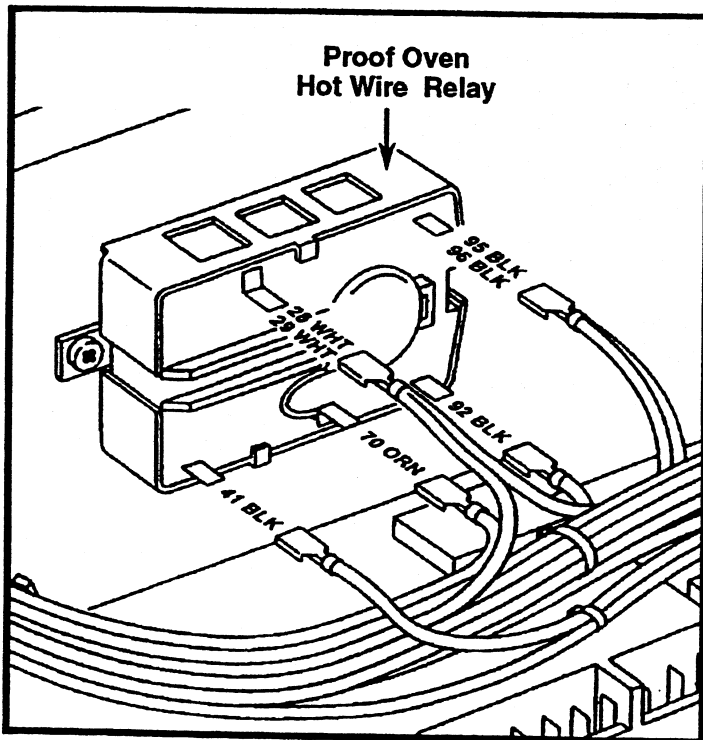
Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### **⚠ CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.

2. Remove the toe panel and the mounting compartment from the bottom of the range (see page 2-38).
3. To remove a hot wire relay, disconnect the wires from the terminals and remove the mounting screws.
4. Connect the wires to the terminals of the new hot wire relay (refer to the illustration for the wire colors and numbers) and mount it to the back or right side of the compartment with its mounting screws.
5. Mount the compartment in the range and reinstall the toe panel.



## Removing The Proof & Clean Relays

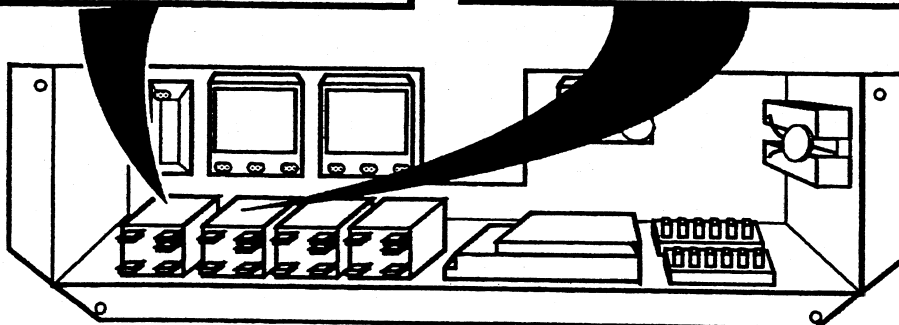
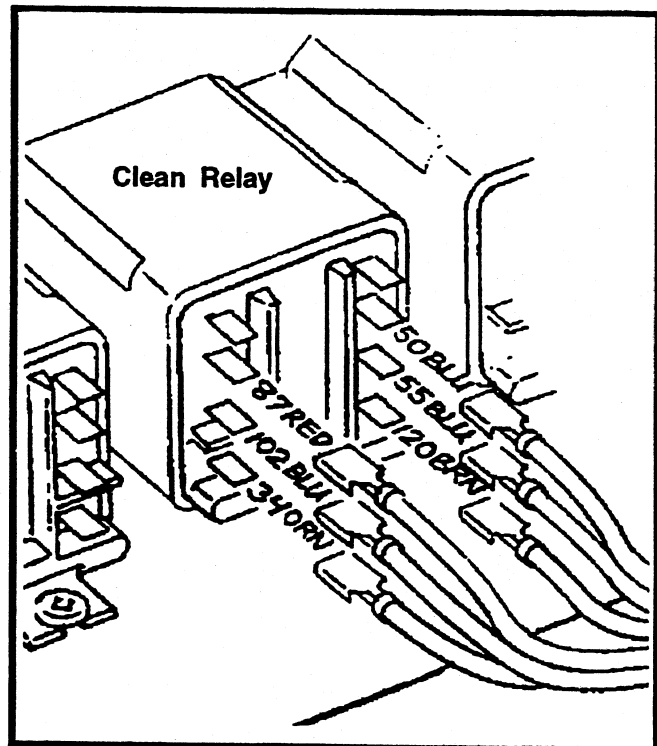
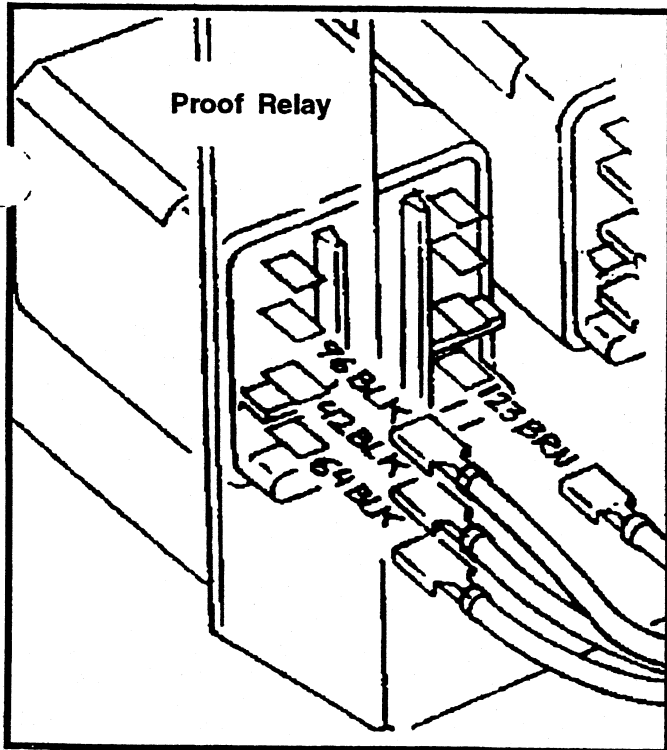
### **⚠ WARNING**

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### **⚠ CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. Remove the toe panel and the mounting compartment from the bottom of the range (see page 2-38).
3. To remove a proof or clean relay, disconnect the wires from the terminals and remove the mounting screws.
4. Connect the wires to the terminals of the new proof or clean relay (refer to the illustration for the wire colors and numbers) and mount it to the floor of the compartment with its mounting screws.
5. Mount the compartment in the range and reinstall the toe panel.



## Removing The Latch Open & Latch Close Relays

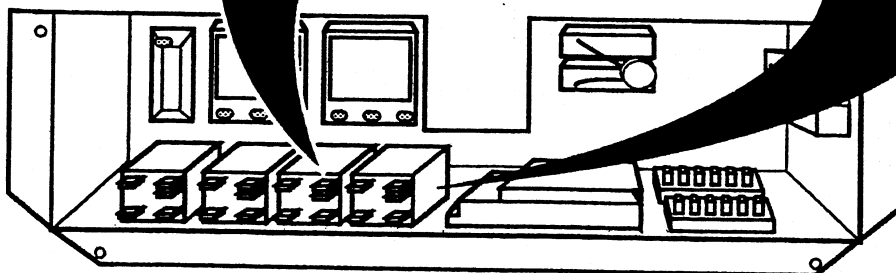
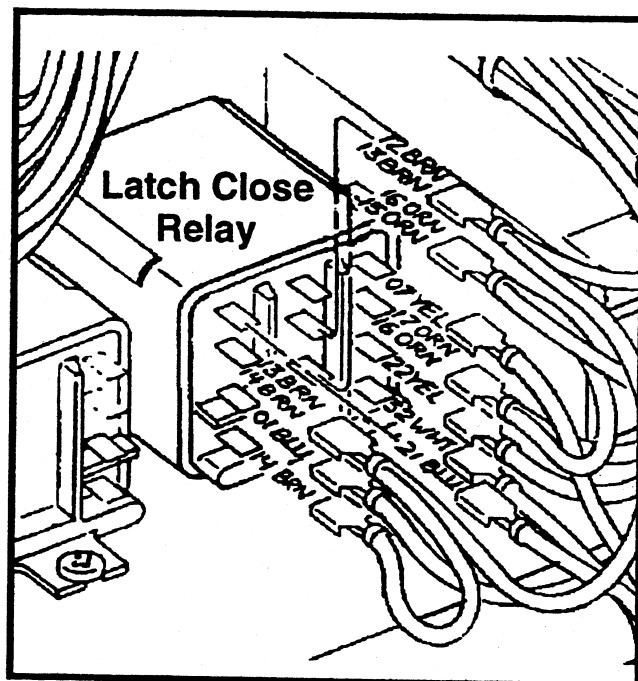
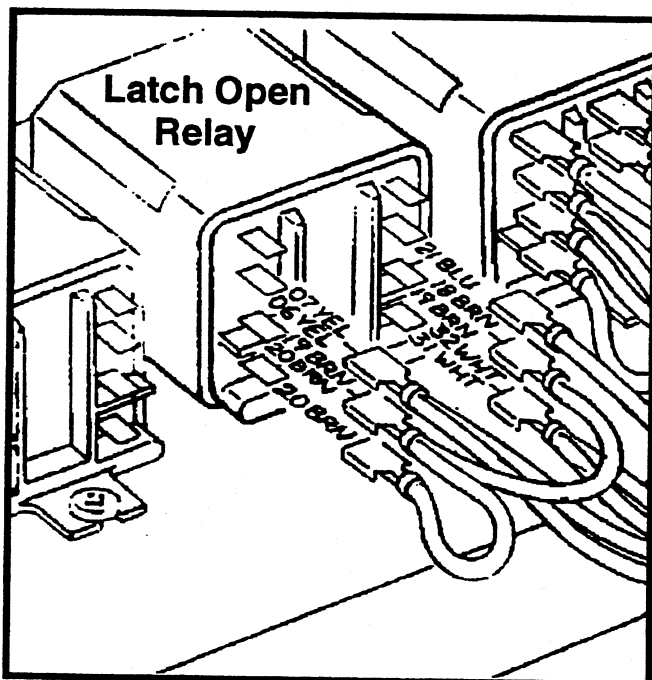
### **⚠ WARNING**

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### **⚠ CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. Remove the toe panel and the mounting compartment from the bottom of the range (see page 2-38).
3. To remove a latch open or latch close relay, disconnect the wires from the terminals, and remove the mounting screws.
4. Connect the wires to the terminals of the new latch open or latch close relay (refer to the illustration for the wire colors and numbers) and mount it to the floor of the compartment with its mounting screws.
5. Mount the compartment in the range and reinstall the toe panel.



## Removing The Terminal Block

### **⚠ WARNING**

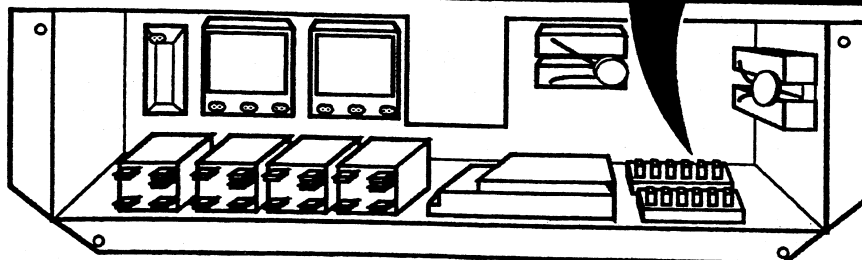
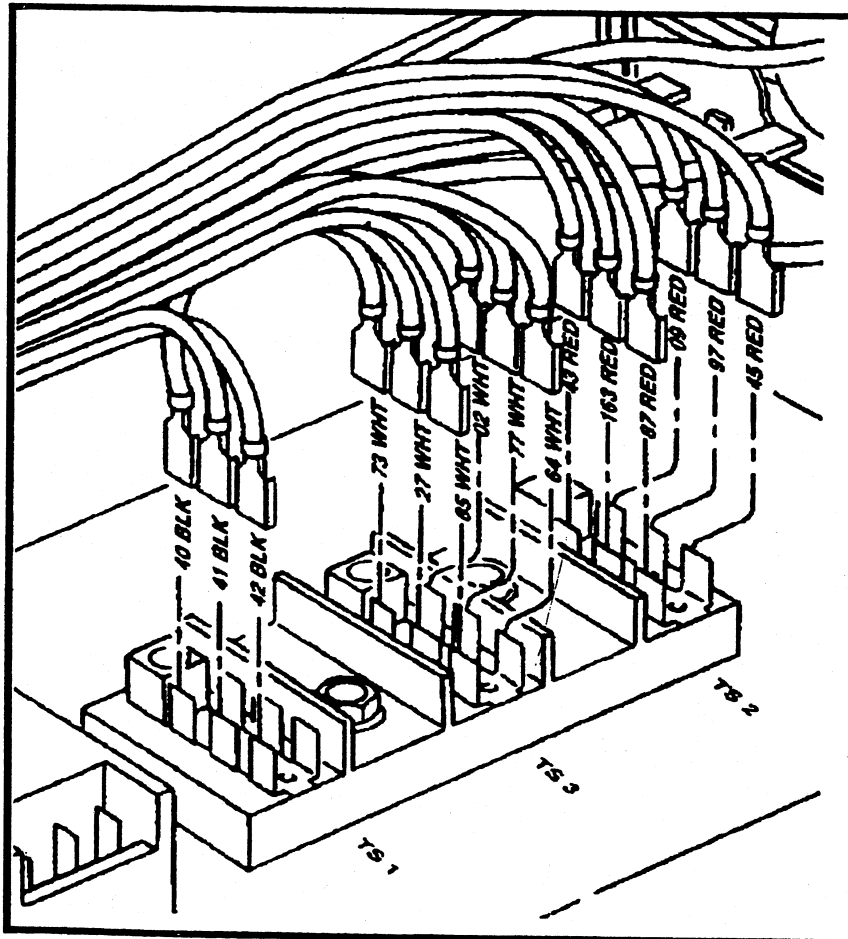
Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### **⚠ CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.

2. Remove the toe panel and the mounting compartment from the bottom of the range (see page 2-38).
3. To remove the terminal block, disconnect the wires from the terminals and remove the mounting screws.
4. Connect the wires to the terminals of the new terminal block (refer to the illustration for the wire colors and numbers) and mount it to the floor of the compartment with its mounting screws.
5. Mount the compartment in the range and reinstall the toe panel.



## Removing The Gas Simmer Controller (36" & 48" Models)

### **WARNING**

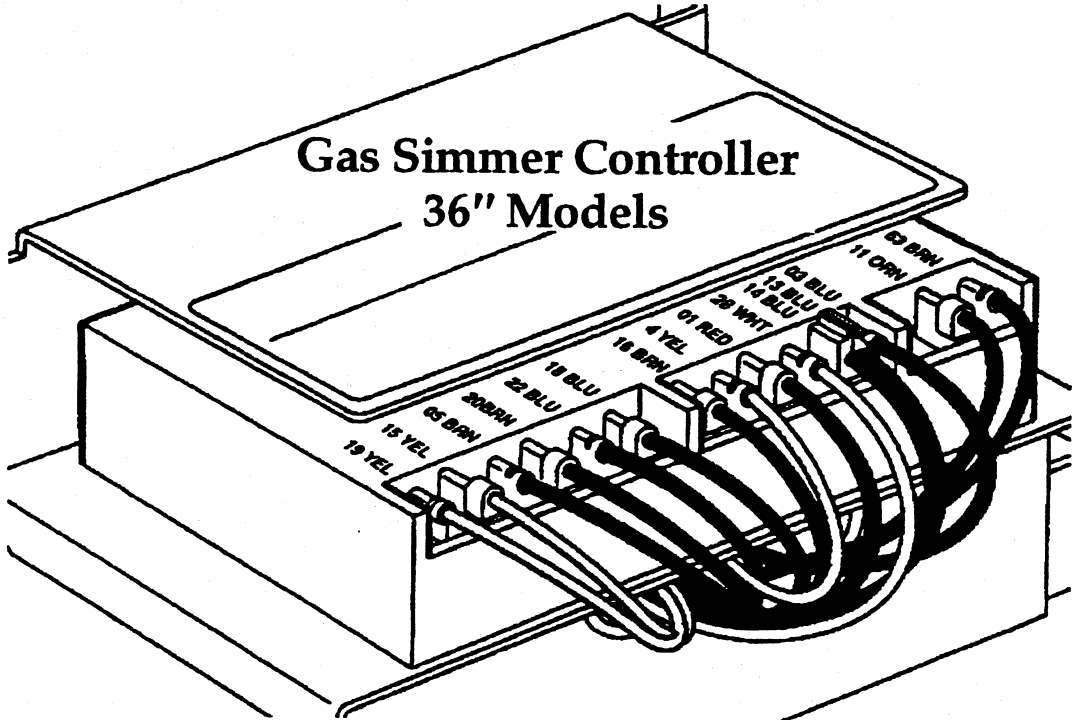
Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### **CAUTION**

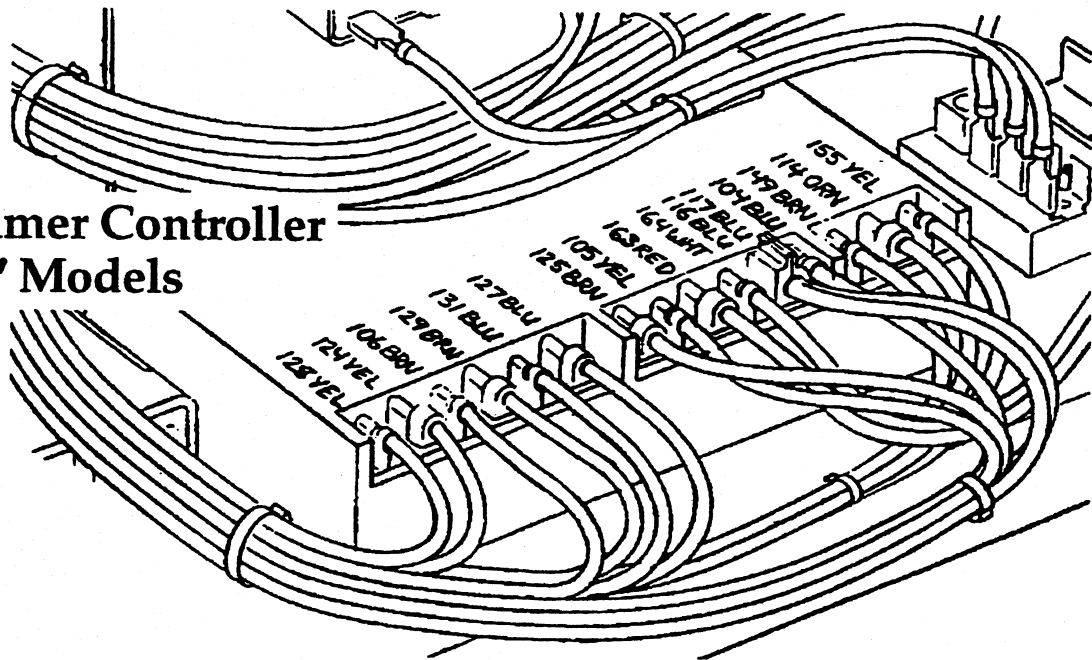
When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. Remove the toe panel and the mounting compartment from the bottom of the range (see page 2-38).
3. To remove the gas simmer controller, disconnect the wires from the terminals and remove the mounting screws.
4. Connect the wires to the terminals of the new gas simmer controller (refer to the illustration for the wire colors and numbers) and mount it to the floor of the compartment with its mounting screws.
5. Mount the compartment in the range and reinstall the toe panel.

## Gas Simmer Controller 36" Models



## Gas Simmer Controller 48" Models



# Removing The Oven High-Temp Cutout Switch

## **⚠ WARNING**

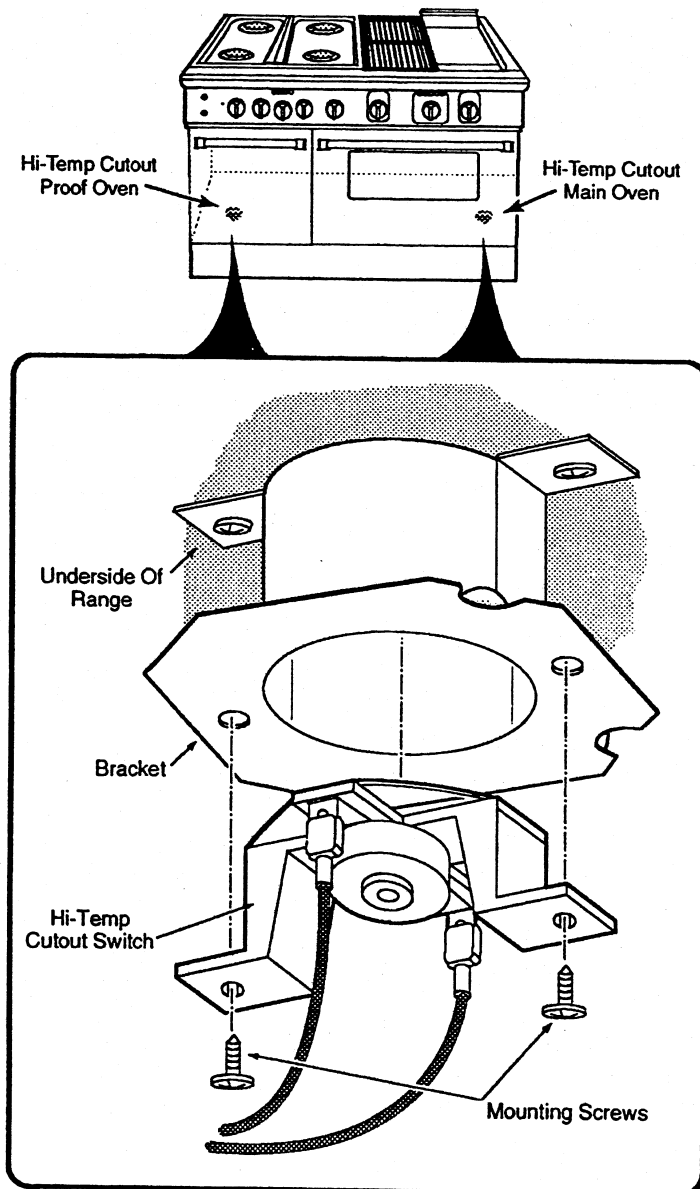
Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

## **⚠ CAUTION**

When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.

2. Remove the toe panel and the mounting compartment (proof oven only) from the bottom of the range (see page 2-38).
3. To remove the oven high-temp cutout switch, disconnect the wires from the terminals and remove the mounting screws from the bracket.
4. Connect the wires to the terminals of the new high-temp cutout switch and mount it to the bracket on the underside of the range with its two mounting screws.
5. Mount the compartment in the range and reinstall the toe panel.



## SERVICING THE WOK

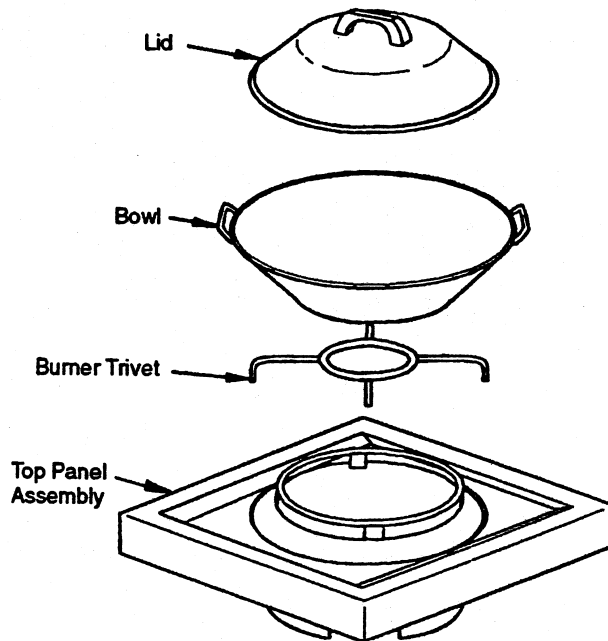
### **⚠ WARNING**

Turn off the gas supply and the power circuit to the range at the main junction box before servicing this unit.

### **⚠ CAUTION**

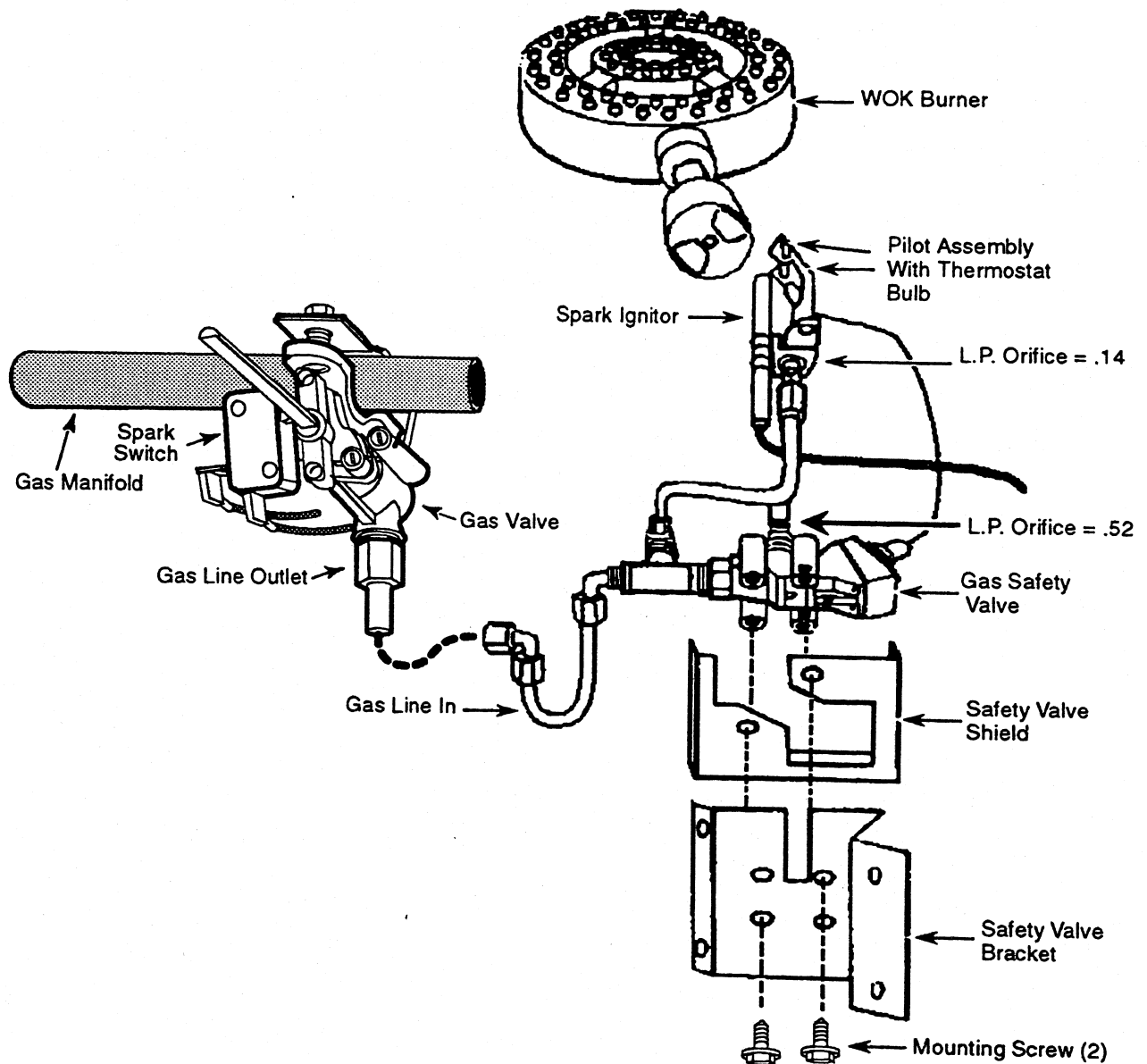
When you work on the range, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

1. Turn off the gas supply and the electrical power going to the range.
2. Remove the lid, bowl, burner trivet, and top panel assembly.





3. Remove the burner from the Wok.
4. **To remove the spark switch**, remove the screw and slide it off the the alignment pin on the valve body and disconnect the wires from the terminals.
5. **To remove the gas valve**, remove the spark switch, the two bracket screws and the fitting from the gas line, and remove the valve.
6. **To remove the spark ignitor**, remove the screw from the bracket and remove it from the pilot assembly, then disconnect the ignitor wire from the spark module.
7. **To remove the gas safety valve & thermostat bulb from the pilot assembly**, remove the four mounting screws from the safety valve bracket, and loosen the screw for the thermostat bulb. Slide the bulb out of the pilot assembly holes and remove the gas safety valve.
8. **To remove the pilot assembly**, unscrew it from the gas line fitting, and remove the bracket screw and nut.
9. Reassemble the Wok.



# TROUBLESHOOTING

## TESTING THE COMPONENTS

### **⚠ WARNING**

TO AVOID ELECTRICAL SHOCK

- DISCONNECT THE POWER TO THE APPLIANCE BEFORE SERVICING.
- FOR THOSE CHECKS REQUIRING THE USE OF ELECTRICAL POWER, EXERCISE EXTREME CARE.
- DO NOT PERFORM HIGH-VOLTAGE TESTS.

### THE BLOWER MOTOR

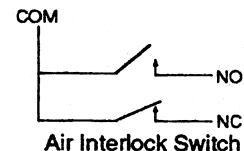
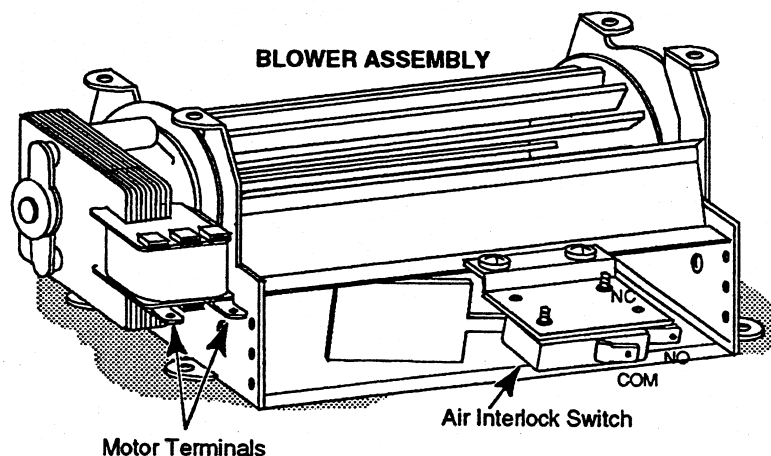
Refer to page 2-8 to access the blower motor.

1. With no power applied, disconnect the motor wire connectors from their terminals.
2. Set the ohmmeter to the R x 1 scale.
3. Touch the ohmmeter leads to the motor terminals. The meter should indicate 20  $\Omega$  to 28  $\Omega$ .
4. If the reading is not within this range, remove and replace the blower motor.

### THE AIR INTERLOCK SWITCH

Refer to page 2-8 to access the air interlock switch.

1. With no power applied, remove the wire connectors from the terminals.
2. Set the ohmmeter to the R x 1 scale.
3. Connect one of the ohmmeter leads to the common (C) terminal of the switch (the terminal callouts are stamped on the switch).
4. Touch the other ohmmeter lead to the N.C. (normally-closed) switch terminal. The meter should indicate continuity with the switch in its normal position, and no continuity when it is activated.
5. Touch the free ohmmeter lead to the N.O. (normally-open) switch terminal. The meter should show no continuity with the switch in its normal position, and continuity when it is activated.
6. If the readings are not correct, remove and replace the switch.



## THE BLOWER THERMOSTAT

The blower thermostat contacts close at  $140^{\circ}\text{F} \pm 7^{\circ}$  and turn the blower motor on. The blower thermostat contacts open at  $110^{\circ}\text{F} \pm 6^{\circ}$  and turn the blower motor off. Refer to page 2-18 to access the blower thermostat.

1. With no power applied, disconnect the wires from the blower thermostat terminals.
2. Set the ohmmeter to the R x 1 scale.
3. Use an ohmmeter and check for continuity at the blower thermostat terminals.
4. If the blower thermostat shows continuity, remove and replace it.

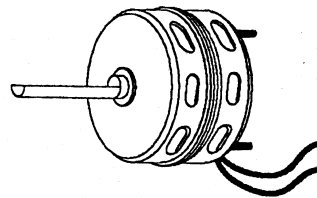


Blower Thermostat

## THE CONVECTION FAN MOTOR

Refer to page 2-30 to access the convection fan motor.

1. With no power applied, disconnect the motor wire connectors from their terminals.
2. Set the ohmmeter to the R x 1 scale.
3. Touch the ohmmeter leads to the motor terminals. The meter should indicate  $55 \Omega$  to  $80 \Omega$ .
4. If the reading is not within this range, remove and replace the convection fan motor.



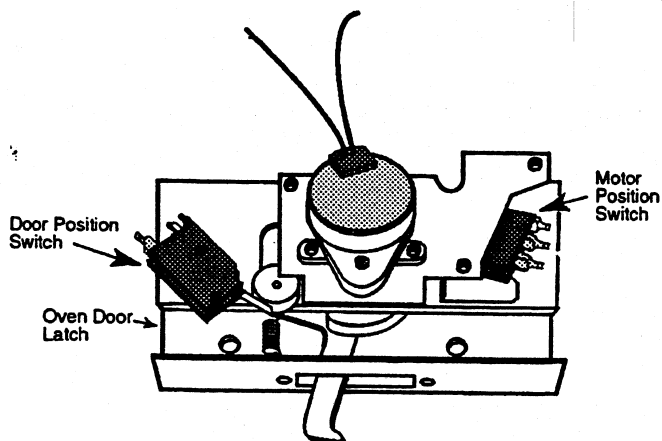
Convection Fan Motor

## THE OVEN DOOR LATCH ASSEMBLY

The oven door latch locks the oven door during the *CLEAN* cycle (see the illustration at the bottom of the next column for the various latch positions). Refer to page 2-32 to access the oven door latch assembly.

To test one of the latch switches:

1. With no power applied, remove the wire connectors from the switch terminals.
2. Set the ohmmeter to the  $R \times 1$  scale.
3. Connect one of the ohmmeter leads to the common (C) terminal of the switch.
4. Touch the other ohmmeter lead to the N.C. (normally-closed) switch terminal. The meter should indicate continuity with the switch in its normal position, and no continuity when it is activated.

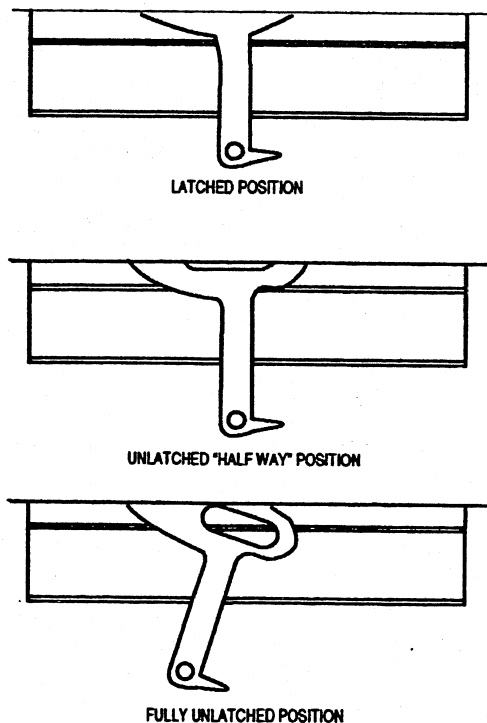


5. Touch the free ohmmeter lead to the N.O. (normally-open) switch terminal. The meter should show no continuity with the switch in its normal position, and continuity when it is activated.
6. If the reading is not correct, remove and replace the switch.

To test the door latch motor windings:

1. With no power applied, disconnect the motor wires from the terminal block and main harness connector.
2. Set the ohmmeter to the  $R \times 1$  scale.
3. Touch the ohmmeter leads to the motor wire connectors. The meter should read between  $835 \Omega$  and  $870 \Omega$ .
4. If the reading is not within this range, remove and replace the door latch assembly.

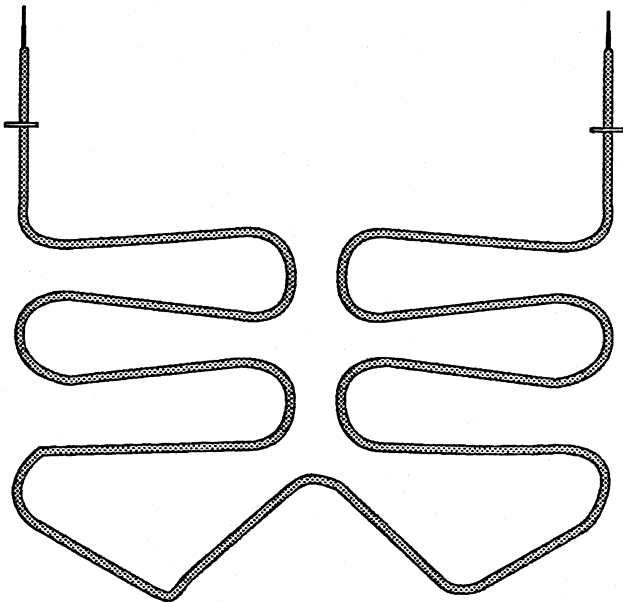
### Door Latch Positions



## THE MAIN OVEN BAKE ELEMENT

Refer to page 2-22 to access the main oven bake element.

1. With no power applied, remove the wires from the terminals of the main oven bake element.
2. Set the ohmmeter to the R x 1 scale.
3. Touch the ohmmeter leads to the bake element terminals. The meter should indicate between 18  $\Omega$  and 26  $\Omega$ .
4. If the reading is not within this range, remove and replace the bake element.

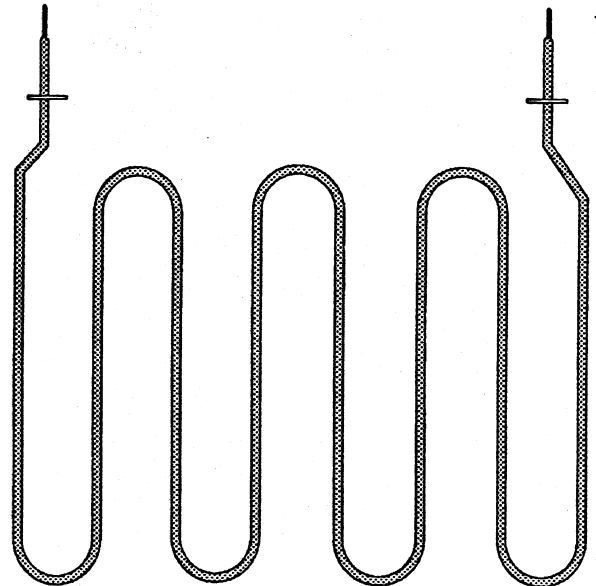


Main Oven Bake Element

## THE MAIN OVEN BROIL ELEMENT

Refer to page 2-23 to access the main oven broil element.

1. With no power applied, remove the wires from the terminals of the main oven broil element.
2. Set the ohmmeter to the R x 1 scale.
3. Touch the ohmmeter leads to the broil element terminals. The meter should indicate between 12  $\Omega$  and 20  $\Omega$ .
4. If the reading is not within this range, remove and replace the broil element.

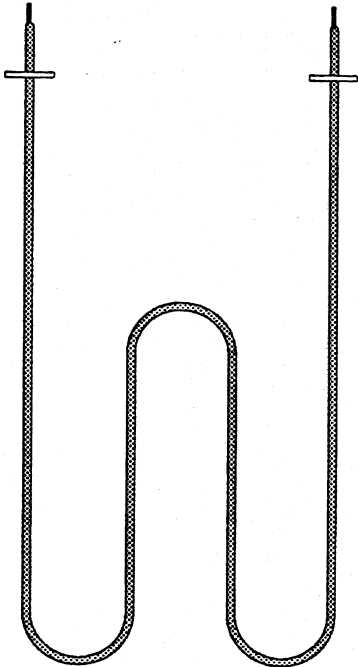


Main Oven Broil Element

## THE PROOF OVEN BAKE ELEMENT

Refer to page 2-22 to access the proof oven bake element.

1. With no power applied, remove the wires from the terminals of the proof oven bake element.
2. Set the ohmmeter to the R x 1 scale.
3. Touch the ohmmeter leads to the bake element terminals. The meter should indicate between 18  $\Omega$  and 26  $\Omega$ .
4. If the reading is not within this range, remove and replace the bake element.

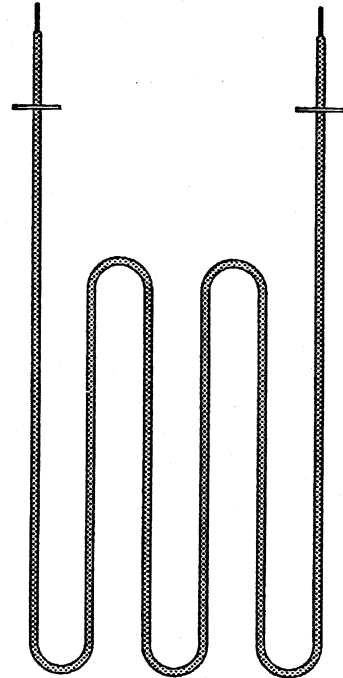


Proof Oven Bake Element

## THE PROOF OVEN BROIL ELEMENT

Refer to page 2-23 to access the proof oven broil element.

1. With no power applied, remove the wires from the terminals of the proof oven broil element.
2. Set the ohmmeter to the R x 1 scale.
3. Touch the ohmmeter leads to the broil element terminals. The meter should indicate between 12  $\Omega$  and 20  $\Omega$ .
4. If the reading is not within this range, remove and replace the broil element.

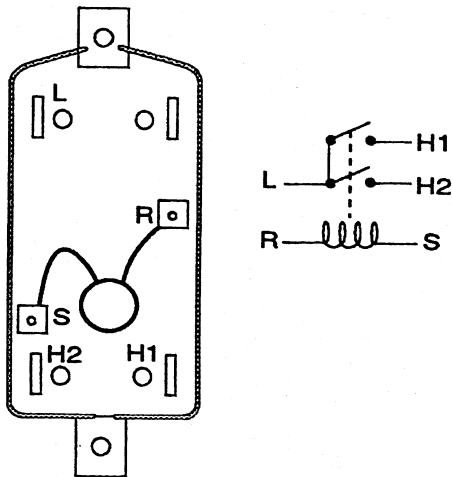


Proof Oven Broil Element

## MAIN & PROOF OVEN HOT WIRE RELAYS

Refer to page 2-40 to access the hot wire relay.

1. With no power applied, remove the wires from the terminals of the hot wire relay.
2. Set the ohmmeter to the R x 1 scale.
3. Touch the ohmmeter leads to terminals L and H1. The meter should show no continuity (the contacts are normally open, as shown in the circuit below).
4. Touch the ohmmeter leads to terminals L and H2. The meter should show no continuity.
5. Touch the ohmmeter leads to terminals R and S. The meter should show a small resistance (less than 1  $\Omega$ ).
6. If the readings are not correct, remove and replace the hot wire relay.



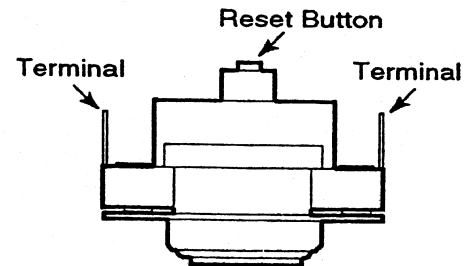
Hot Wire Relay

## THE HI-TEMP CUTOUT SWITCH

The hi-temp cutout switch contacts open at above 350 °F  $\pm$ 8°, and are manually reset by pressing the reset button on top of the switch.

Refer to page 2-46 to access the hi-temp cutout switch.

1. With no power applied, remove the wires from the terminals of the hi-temp cutout switch.
2. Set the ohmmeter to the R x 1 scale.
3. Touch the ohmmeter leads to the switch terminals. The meter should indicate a closed circuit (continuity).
4. If the reading is not correct, remove and replace the hi-temp cutout switch.

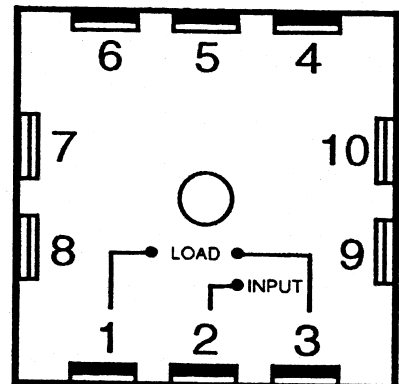


Hi-Temp Cutout Switch

## THE PROOF & CLEAN TIMERS

Refer to page 2-39 to access the timers.

1. With no power applied, remove the wire connectors from the timer terminals.
2. Set the ohmmeter to the R x 1 scale.
3. Touch the ohmmeter leads to the load terminals. The meter should indicate continuity.
4. If the reading is not correct, remove and replace the timer.

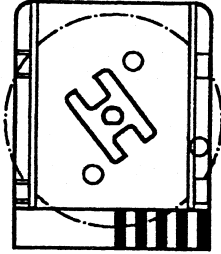


## POTENTIOMETER

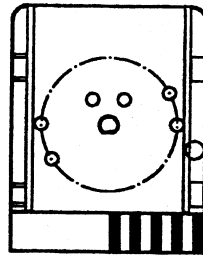
Refer to page 2-20 to access a potentiometer.

1. With no power applied and the valve set at OFF, unplug the wire connector from the circuit board.

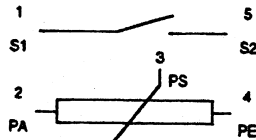
2. Set the ohmmeter to the R x 1 scale.
3. Touch the ohmmeter leads to edge terminals 1 and 5. The meter should indicate an open circuit (infinity).
4. If the reading is not correct, remove and replace the potentiometer.



Sourdillion

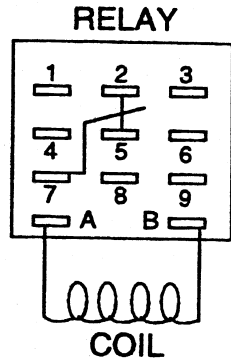


Isphording





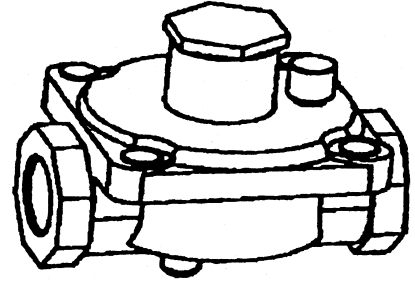
## THE RELAYS



Refer to pages 2-41 and 2-42 to access the relays.

1. With no power applied, remove the relay and unplug the connector from the terminals.
2. Set the ohmmeter to the  $R \times 1$  scale.
3. Touch the ohmmeter leads to coil terminals A and B. The meter should show less than  $1 \Omega$ .
4. Touch one ohmmeter lead to the COM (7) terminal and the other lead to the normally-open (N.O. or #5) terminal. The meter should indicate an open circuit (no continuity).
5. Leave the ohmmeter lead at the COM (7) terminal and connect the other lead to the normally-closed (N.C. or #2) terminal. The meter should indicate a closed circuit (continuity).
6. If the readings are not correct, remove and replace the relay.

## THE GAS PRESSURE REGULATOR



Refer to page 2-4 to access the gas pressure regulator.

1. Turn off the gas to the pressure regulator.
2. Disconnect the gas line from the output of the regulator.
3. Attach one side of a manometer to the output of the pressure regulator.
4. Turn on the gas and allow the pressure to move the water column. When the water column has stopped, the gas pressure can be determined from the scale. The reading should be as follows:

### *Natural Gas*

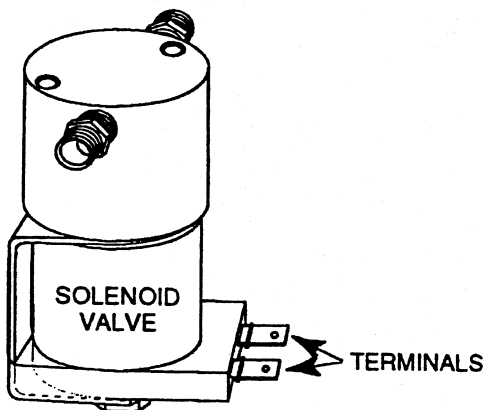
Minimum pressure = 5 inches WCP

### *L.P. Gas*

Minimum pressure = 10 inches WCP

5. If the reading is not correct, the pressure regulator is defective and should be replaced.

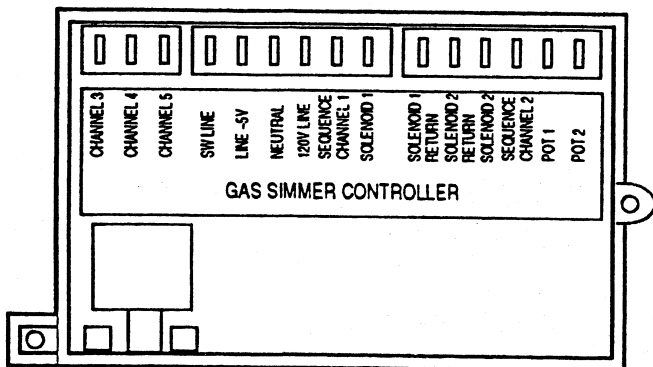
## THE GAS SOLENOID VALVE



Refer to page 2-6 to access the solenoid valve.

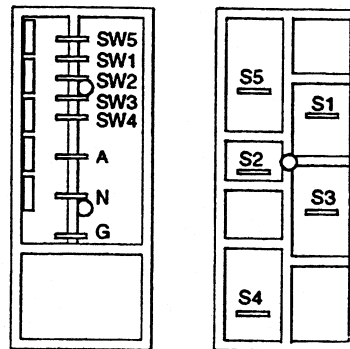
1. Turn off the gas to the range.
2. Remove the solenoid valve from the range and disconnect the wires from the terminals.
3. Set the ohmmeter to the R x 10K scale.
4. Touch the ohmmeter leads to the solenoid coil terminals. The meter should read 1760  $\Omega$ .
5. If the reading is not correct, remove and replace the solenoid.

## THE GAS SIMMER CONTROLLER

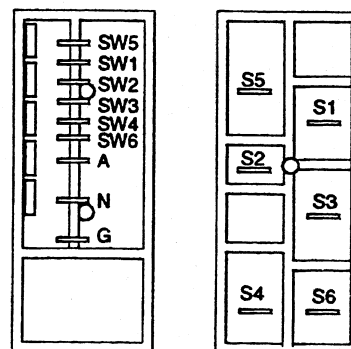


Refer to page 2-44 to access the gas simmer controller. To test the gas simmer controller, refer to Troubleshooting Charts A & C on pages 3-16 & 3-13.

## THE SPARK MODULE



MODELS 324 & 325



MODEL 326

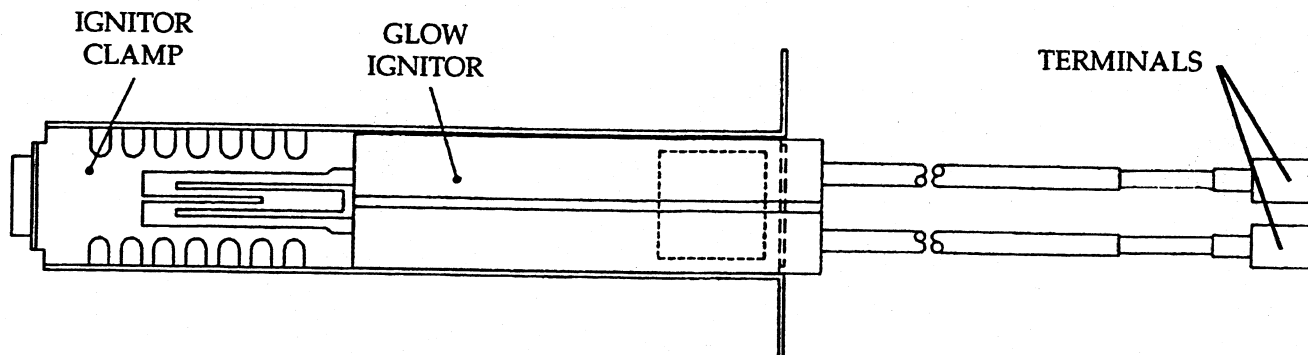
Part Number	Model Number	Label Color
20-01-924-04	RI324	Yellow
20-01-924-03	RI325	Orange
20-01-924-02	RI324	Yellow
20-01-924-01	RI324	Orange
20-01-323	RI326	Blue

Refer to page 2-6 to access the spark module. To test the spark module, refer to "Troubleshooting Chart B" on page 3-17.

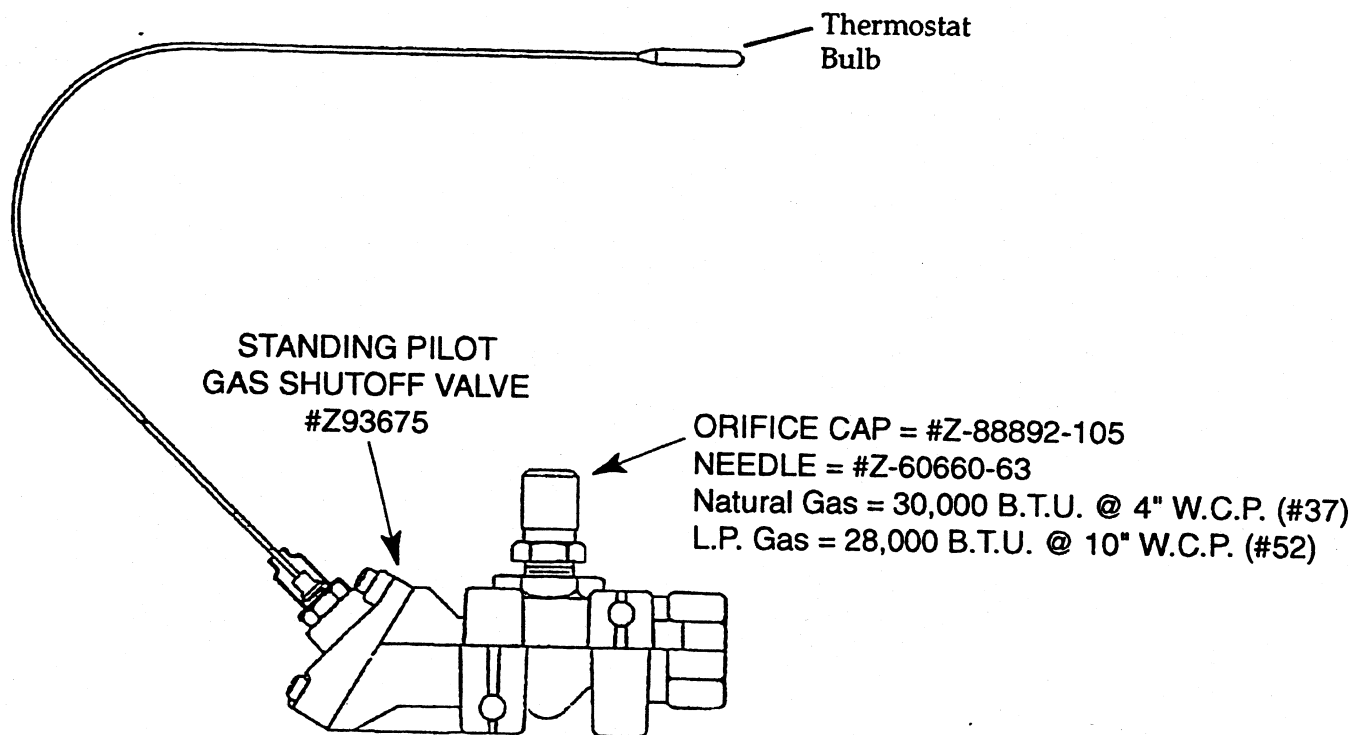
## THE HOT SURFACE IGNITOR

NOTE: All of the hot surface ignitors used in the gas model ranges are tested in the same manner. The resistance range shown in the test procedure is the same for all of the ignitors.

1. Turn off the gas to the range.
2. Disconnect the wires from the terminals of the hot surface ignitor.
3. Set the ohmmeter to the R x 1 scale.
4. Touch the ohmmeter leads to the terminals of the hot surface ignitor. The meter should read between 45  $\Omega$  and 400  $\Omega$  @ 75°F ambient temperature.
5. If the reading is not within this range, remove and replace the hot surface ignitor.



## ROBERTSHAW GAS SHUTOFF VALVE

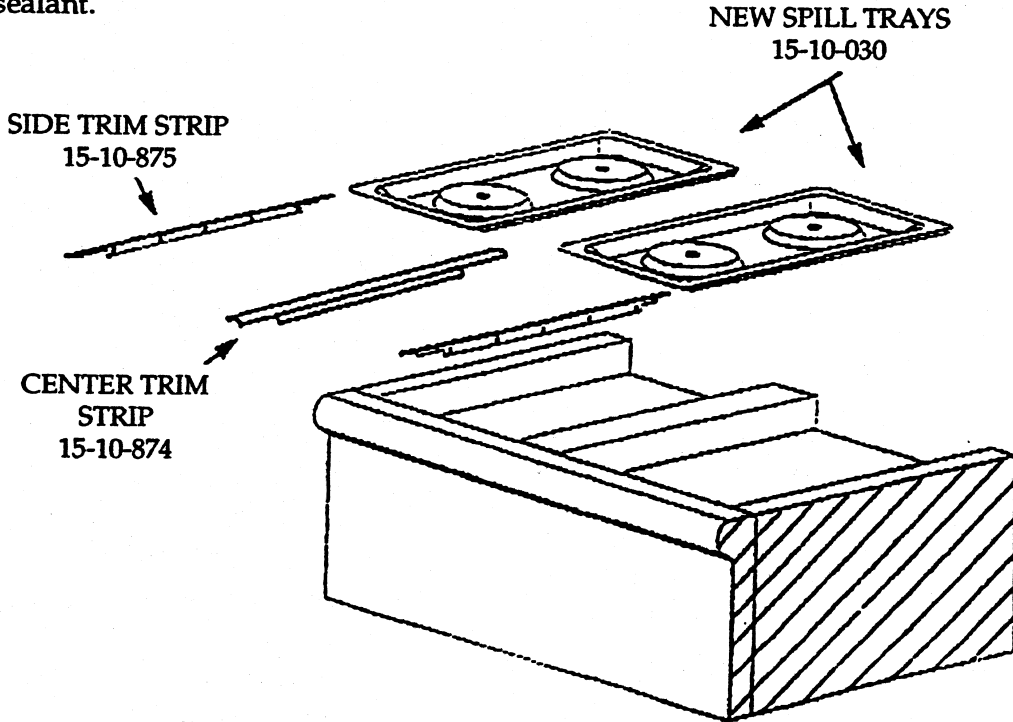


# SERVICE UPDATES

## REDESIGNED SPILL TRAY WITH ALUMINUM TRIM STRIPS

The spill trays require a seal to keep spills and splashes from accumulating under the cooktop sections. Starting with serial #9605, all Pro-Series Ranges and Cooktops will be assembled with a redesigned spill tray that uses aluminum trim strips along the sides and center edges instead of the black sealant.

The spill trays on Pro-Series Ranges and Cooktops prior to serial #9605 are not interchangeable with the redesigned parts. For these model units, order Kit #15-10-030-01 which contains the older spill trays and sealant. The newly designed spill trays use Kit #15-11-040, which contains the new spill trays and aluminum trim strips (1 side and 1 center).



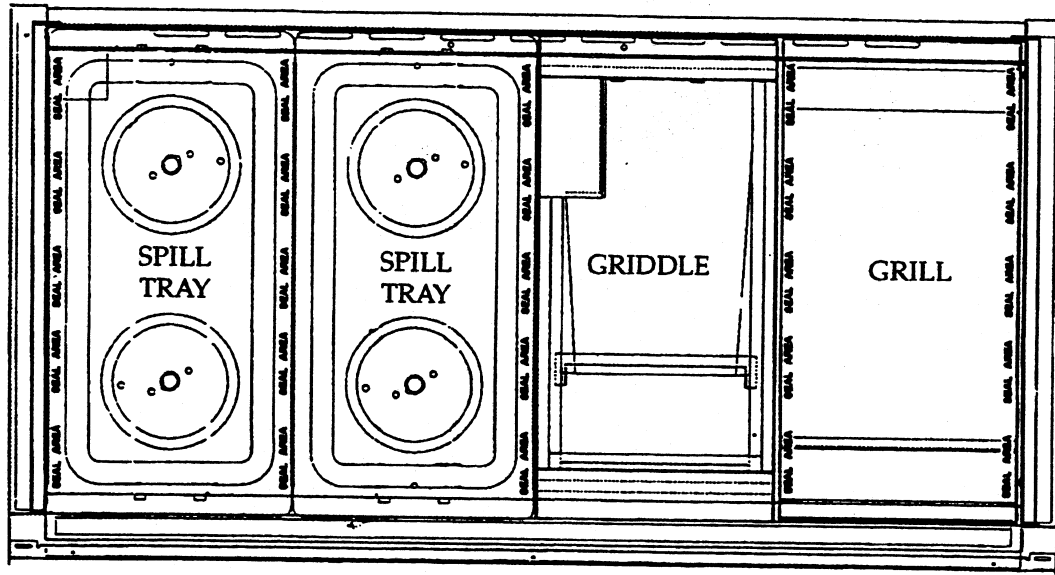
## SEALER KITS FOR PRO-SERIES RANGES & COOKTOPS—Models Prior To Serial #9605

The 30", 36", and 48" Pro-Series Ranges and Cooktops have all joints sealed between and around the spill trays, griddle, grill, and the sides of the cooktop. The seal is required to keep spills and splashes from accumulating under the cooktop area. The front and back edges are sealed with

foam tape that is permanently mounted to the cooktop chassis. The joints between sections are sealed with silicon. The seal areas are shown below.

If repair requires that the spill trays, griddle, or grill be removed, the joints must be resealed after service is completed. Order Kit #15-11-025, which contains the sealer, a spatula, and instructions for reassembly. Also refer to page 2-2 in this manual for removal of the spill trays.

SEAL AREAS



(TOP VIEW)

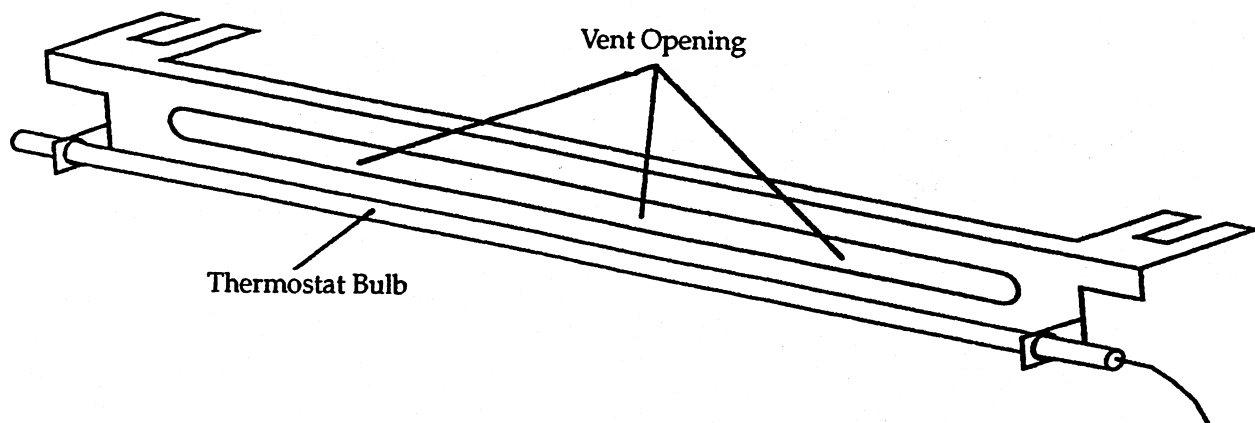
## INFRARED BROIL BURNER THERMOSTAT HOLDER (30" & 36" Gas Pro-Series Ranges)

**Problem:** During the first "Broil" cycle, the infrared broil burner cycles off in 4-minutes, or less instead of the normal 7-minutes.

**Cause:** The thermostat bulb holder is distorted, or the thermostat is bent. The holder is supposed to

shield the bulb from radiant heat from the infrared burner. It also allows air to flow over the tube and out the flue, or oven door when it is in the "broil" position.

**Correction:** Replace the thermostat holder (#15-10-065) with the new holder (#15-10-089). The newer holder is stiffer. **NOTE:** Make sure that the thermostat holder is straight between the mounting holes in the holder, as shown below.

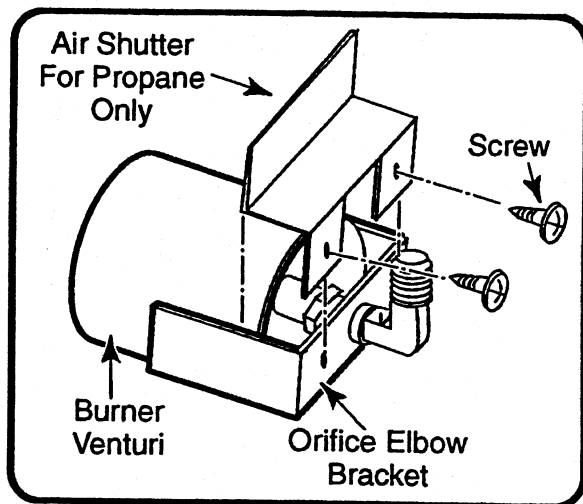


## CONVERTING THE INFRARED BROIL BURNER FOR USE WITH PROPANE (L.P.) GAS

1. To convert the infrared broil burner for use with L.P. gas, remove the infrared burner from the oven (see page 2-24 in this manual for the procedure). **NOTE:** The orifice hoods and the models they are used with are shown below.

<u>Propane Orifice Hood</u>	<u>Used On Model</u>
52	PRSG36
53	PRSG304

2. Mount the air shutter on the infrared broil burner, as shown below using two screws.



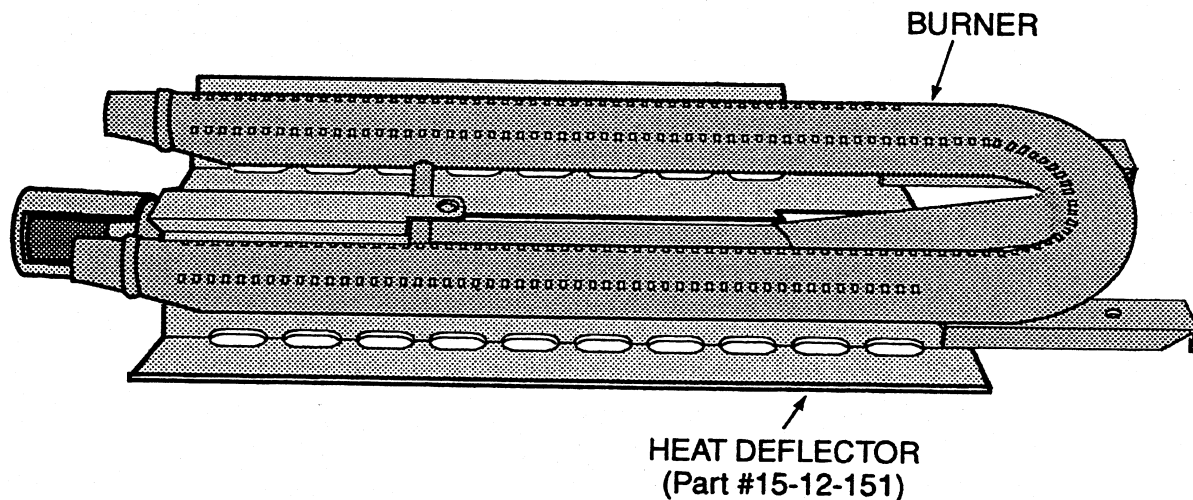
3. Reassemble the range.

## GRILL BURNER HEAT DISTRIBUTION

**Problem:** The grill burner's heat is not being evenly distributed along the grate and is causing uneven cooking (the front area is hotter than the back area).

**Cause:** Too many lava rocks placed on the tray is causing the burner heat to be uneven.

**Correction:** A stainless steel heat deflector and a package of ceramic briquettes are available by ordering the "Heat Deflector & Ceramic Briquette Kit (#15-11-044)" that will correct the uneven heat problem. The heat deflector will help to apply the burner's heat more evenly, while the ceramic briquettes, which the customer will be instructed to place uniformly on the tray, will allow better heat transfer to the food. The kit contains instructions for installing the deflector and the briquettes.



## PRO-SERIES COOKTOPS & RANGES

Models: PRSE364GL, PRSE486GL,  
PRSG364GL, GPS486GL, & GPS364GL

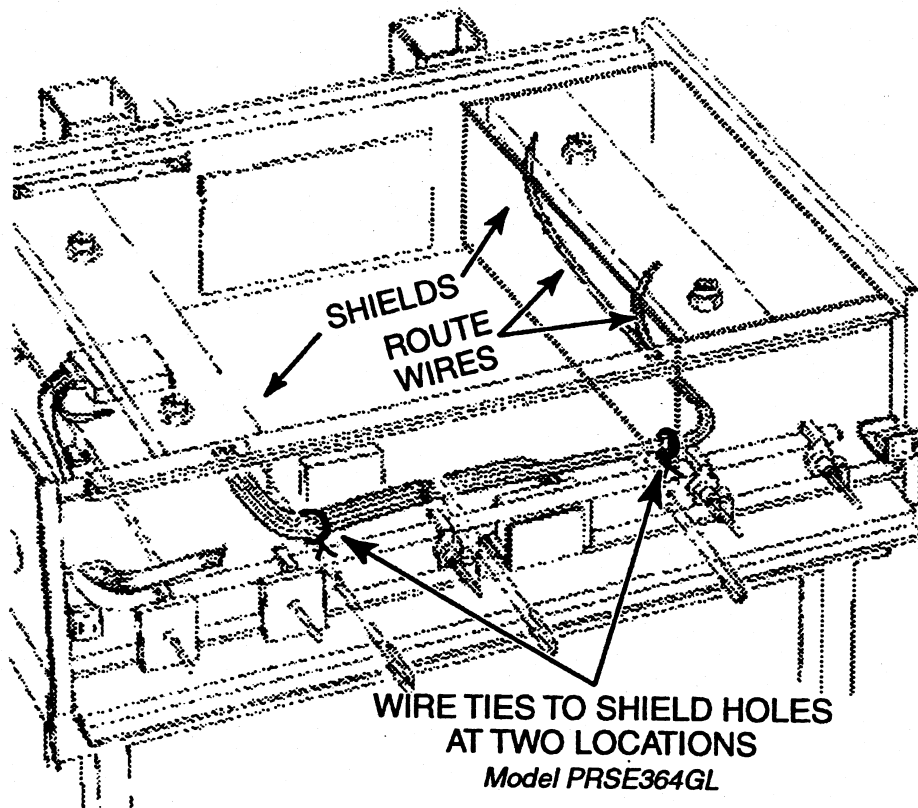
**Condition:** The insulation on the ignition wires coming from the two right burners is melting.

**Cause:** The ignition wires are looped under the grill and are being exposed to the heat.

**Correction:** Remove the two damaged wires and replace them with wires from the Pro-Series Ignition Wire Kit (#15-11-042). The kit contains:

- 1 Pack of six wires (#15-12-076)
- 2 Copper wire ties (#15-10-113).

Refer to the instructions that are supplied with the kit to install the new wiring.



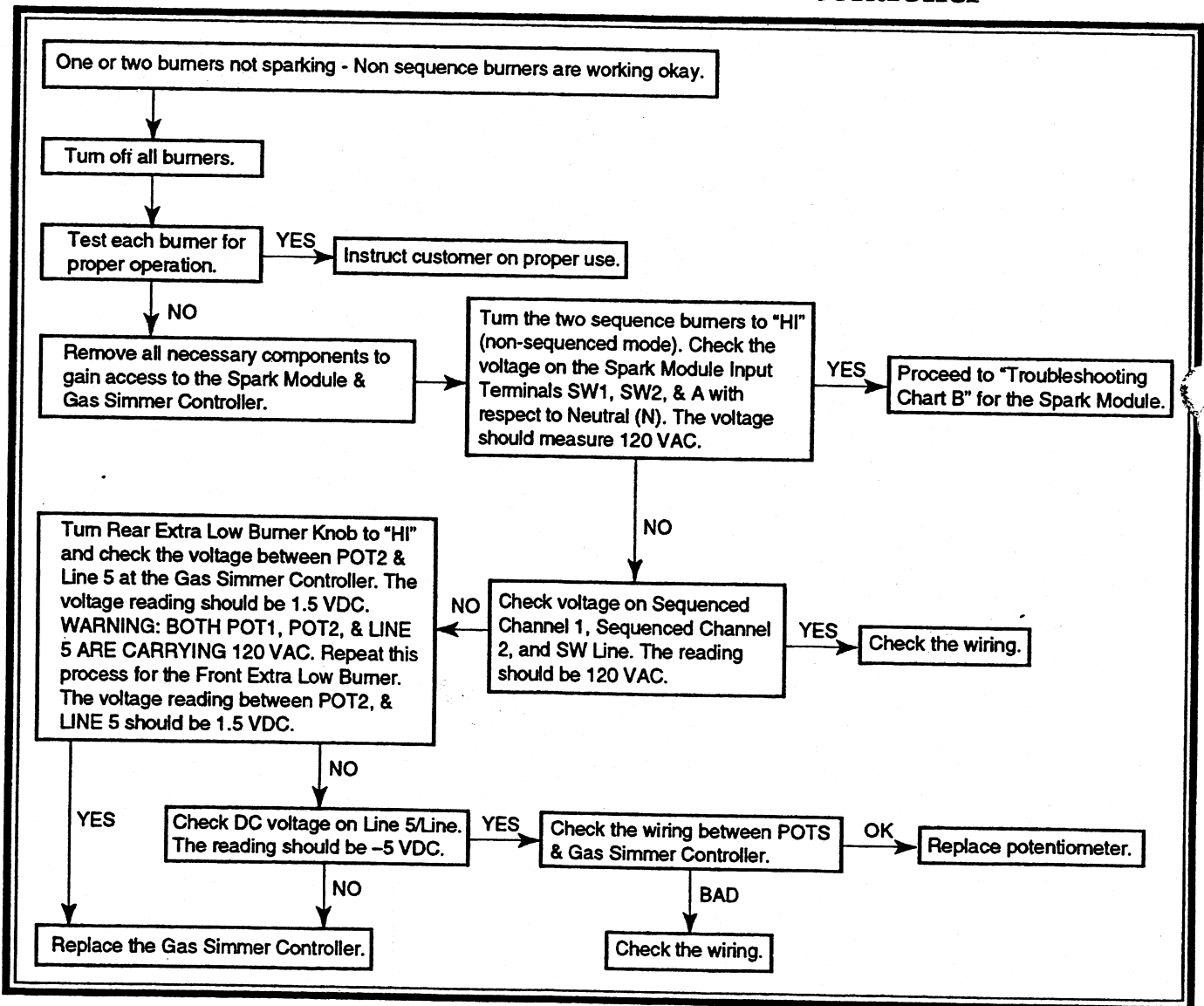


# TROUBLESHOOTING CHARTS FOR GAS RANGES

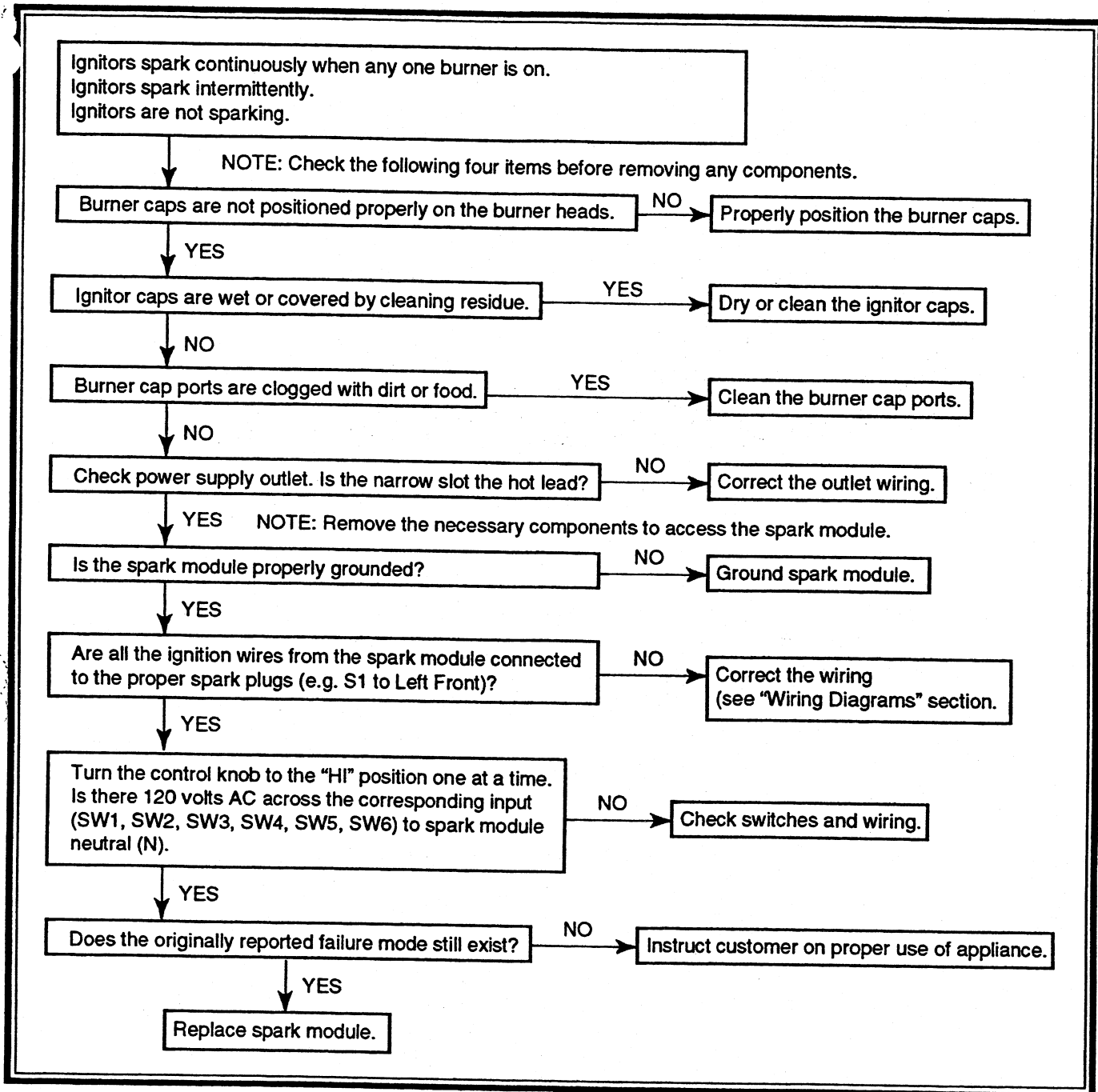
The troubleshooting charts are intended to help correct the following conditions on all gas ranges equipped with the Sequential Burner System:

1. One or two burners are not sparking, but the non-sequence burners are working properly.
2. Igniters spark continuously when any one burner is on.
3. Igniters are sparking intermittently.
4. None of the igniters are sparking.
5. The gas solenoid valve is not opening, but the sequence burner igniters are sparking.

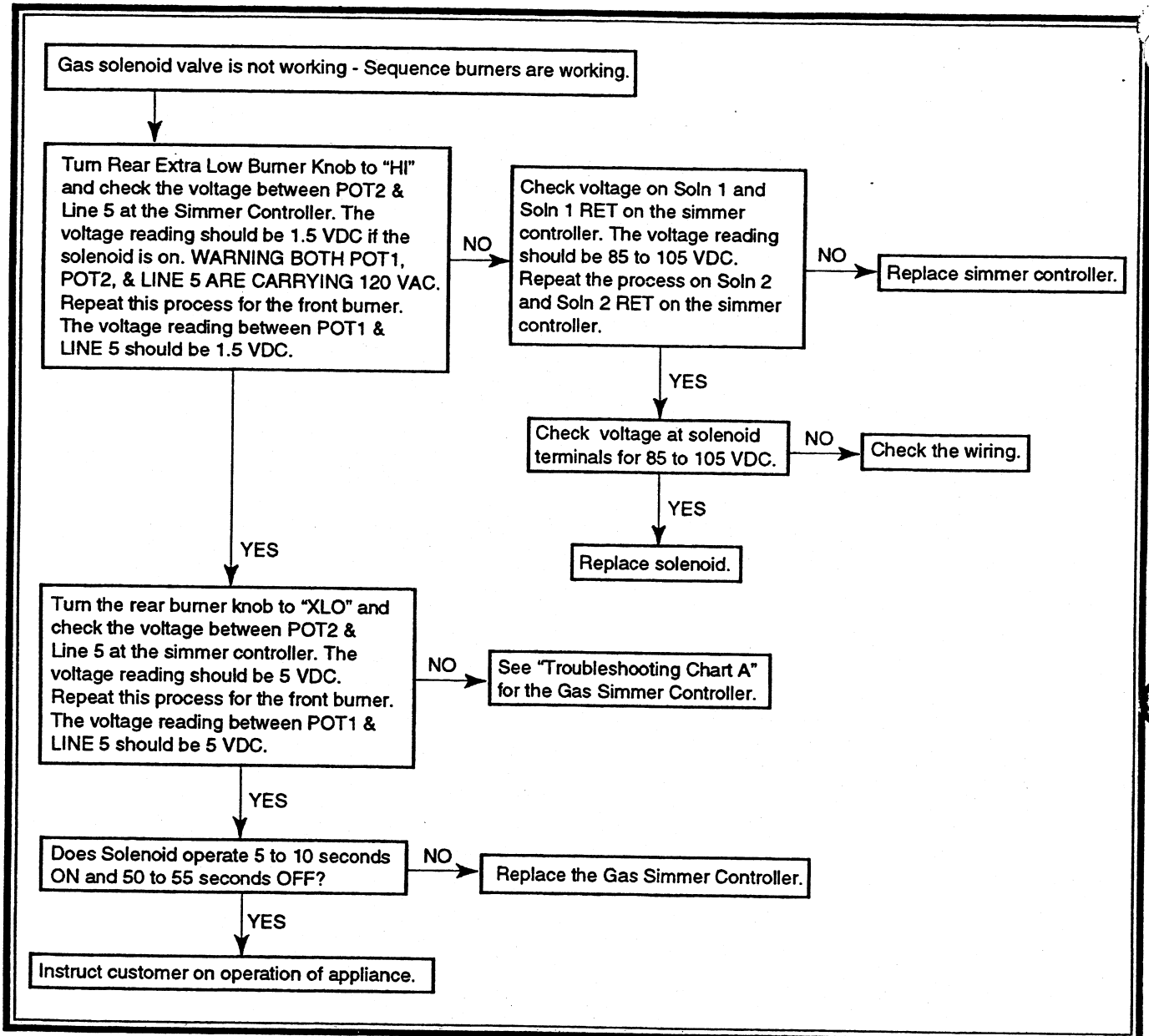
## Chart A—Extra Low Gas Simmer Controller



## Chart B—Spark Module



## Chart C—Low Simmer Solenoid



## **Star Burner Overview**

- **Sealed System**

This is the same sealed system that is featured in all of our sealed system designs.

- **Flame Rectification**

This is the same flame rectification design that is featured in all of our flame rectification system.

- **Electronics**

The potentiometer, spark module, controller, and solenoids are the same design as featured in our other designs, the troubleshooting and tests are the same.

- **Conversion Kit**

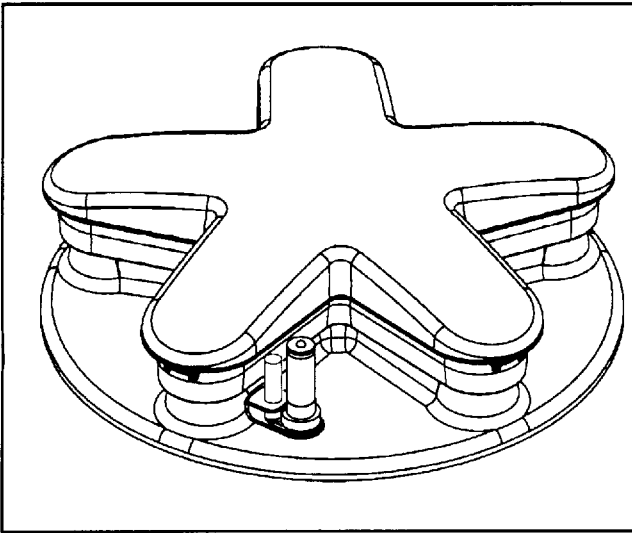
The star burner design can be converted to LP With the STARLPKIT. The orifices in the star LP kit are smaller in size compared to the regular PROLPKIT.

- **Gas Tubing**

The star burner design features 3/8" gas tubing from the gas valves to the gas solenoids. The previous design had 1/4" gas tubing.

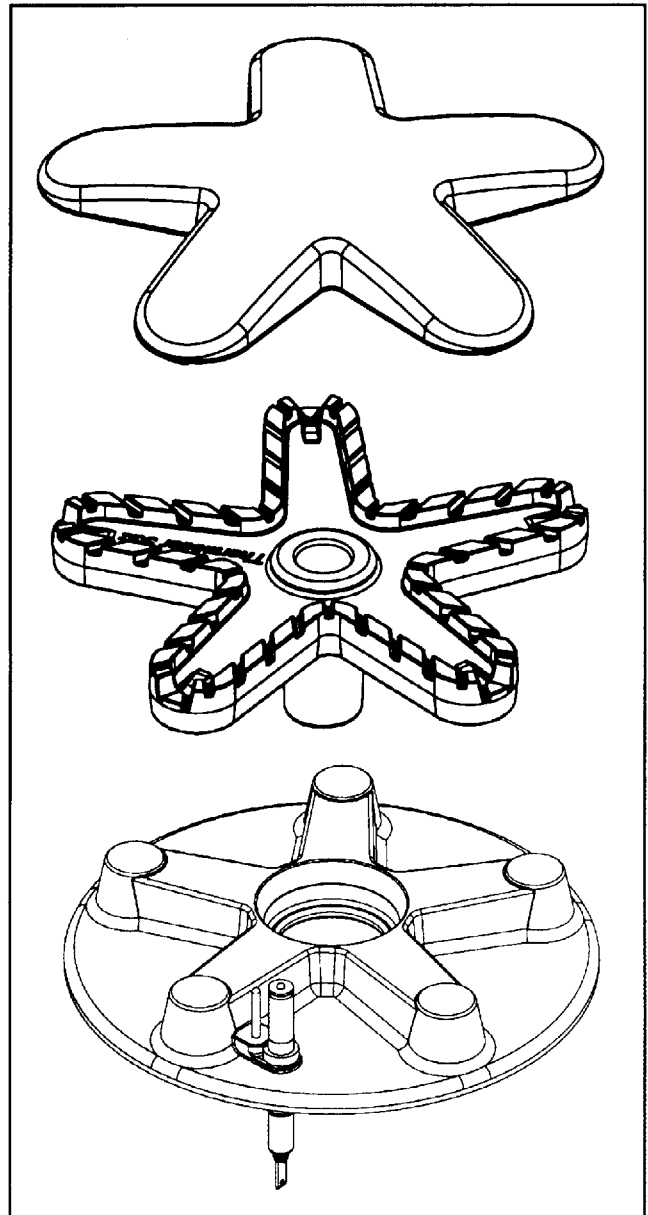
## Introduction

### Star Burner



The star burner is more efficient than the round burners, which direct the flame to the outside of the pan, the star burner directs the flame closer to the center of the pan. This heats the whole pan evenly, thereby eliminating the need to constantly manage the flame. Another result: quicker heat-up times. But greater efficiency is only part of the story. With its unique five-fingered design, the star burner creates a more stable flame, as well that's an important advantage, especially when you're cooking over a very low heat for an extended period of time.

Dual fuel ranges and professional series gas cooktops come equipped with our advanced star burner technology. Our pro gas cooktops dual fuel ranges feature either 4 or 6 sealed star burner with 15,000 btu/hr capacity. Two of the star burners feature extra-low porcelain coated cast iron grates



make it easy to slide heavy pots from burner to burner the all gas pro ranges do not feature the star burner design.

## Symbols You Will See In The Manual

The following symbols are provided throughout this manual. For reasons of personal safety and proper operation and servicing of the cooktop, follow the instructions carefully each time you see one of the symbols.

### **Warning**

This symbol alerts you to such dangers as personal injury, burns, fire, and electrical shock.

### **Caution**

This symbol alerts you to actions that could cause product damage (scratches, dents, etc.), And damage to your personal property.

## Important Safety Information

### **Warning**

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

**Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**

### **Gas Cooktops What To Do If You Smell Gas**

- do not try to light any appliance.
- do not touch any electrical switch.
- do not use any phone in your building.
- immediately call your gas supplier from a neighbor's phone.
- follow the gas supplier's instructions.
- if you cannot reach your gas supplier, call the fire department.

**Installation and service must be performed by a Qualified installer, service agency or the gas supplier.**

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**Thermador assumes no responsibility for any repairs made on our products by anyone other than authorized Thermador service technicians.**

---

## **The following parts comprise the star burner system:**

### **Potentiometer**

There is no change in the potentiometer. It functions the same as the previous design and is tested and diagnosed in the same manner.

### **Controller**

There is no change to the controller it also functions the same as the previous design and is tested and diagnosed in the same manner.

### **Spark module**

There is no change to the spark module. It functions the same as the previous design and is tested and diagnosed in the same manner.

### **Spark switch**

There is no change to the spark switch. It functions the same as the previous design and is tested and diagnosed in the same manner.

### **Gas solenoid**

There is no change to the gas solenoid. It functions the same as the previous design and is tested and diagnosed in the same manner the tubing to the gas solenoids from the gas valves is now 3/8" instead of 1/4".

### **Gas valve**

There is no change to the defendi gas valves used. We use sequenced (two extra low valves) and non-sequenced valves. They function the same as the previous design and are tested and diagnosed in the same manner.

### **Jet holder**

There are several changes to the jet holder. First, it is now shorter than the previous design. The gap between the orifice and the bottom of the venturi is smaller than the previous design. Secondly, the mounting nut that secures the jet holder to the burner base now has 2 slots instead of a 22 mm hex nut. The mounting nut can be removed by placing an 1-inch open end wrench in the slots to remove the mounting nut. The inner part of the jet holder has five slots to locate the five bosses on the venturi/burner head.

### **Orifice**

There is a change to the orifice. It is smaller than the previous design. It will be necessary to apply a piece of foam tape to the inside of the 7-mm socket to retain the orifice in the socket when removing or installing the orifice.

### **Burner Base**

The burner base has changed dramatically. It is a cast part that sits on top of the spill tray. It has five raised fingers in the shape of a star. The top of each finger has a locating boss for locating the burner head correctly on the burner base instead of the spill tray. A grounding plug is now pressed into the burner base.

## **Spark Igniter**

The spark igniter is now mounted on the burner head instead of the spill tray. The new spark igniter is now longer. However, it serves the same purpose as the previous design. It send a spark to the burner and senses the absence of a flame.

## **Ground Plug**

The ground plug is pressed into the burner base. It is an addition to the design of the star burner. The grounding plug is designed to provide a good path to ground to assure good spark and combustion.

## **Burner Head/Venturi**

The burner head is a cast part in the shape of star. The venturi is part of the burner head. The outer part of the venturi has five bosses that slide into the five slots on the inside of the jet holder. These slots and bosses locate the burner head properly on the burner base. The top of the burner head has angled slots where the gas ignites and the flame exits and contacts the burner cap. The top of the burner head has five slots to accomodate the five locating pins on the burner cap. These slots and pins locate the burner cap properly on the burner head. The slots on the burner head must be kept clean or the flame will be distorted.

## **Burner Cap**

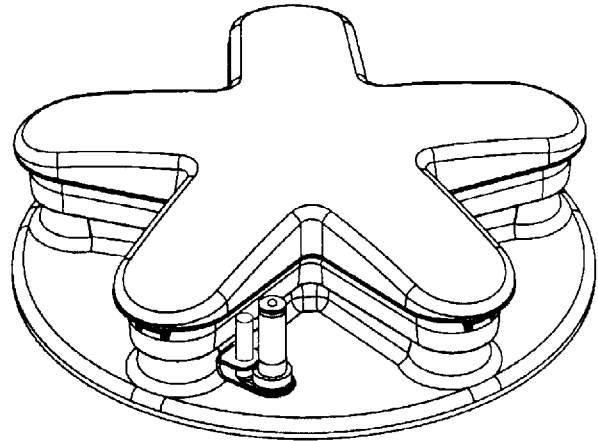
The burner cap is a cast part in the shape of a star. The underside of the cap has five locating pins that fit into the five slots on the burner head. These locating pins and slots locate the cap properly on the burner head. Correct burner cap placement is crucial to proper ignition. The underside of the cap has scallops to improve port to port carryover of gas for good ignition and recognition on ExtraLow®.



## Principles of the Star Burner System

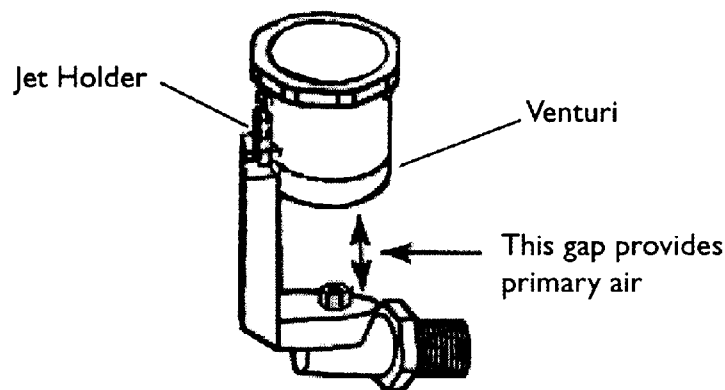
Natural or liquefied petroleum gas (propane), if burned in the proper mixture with air, provides a hot flame that is odorless and entirely free of dangerous gases. Air for the mixture is provided in two ways (see illustration). Air as it enters the venturi is called primary air. This air cannot be adjusted. There is no air shutter to adjust. The flame characteristic is determined by the distance between the bottom of the venturi and the top of the orifice. The air surrounding the burner cap is called secondary air. The design of the burner assembly provides an ample supply of secondary air for proper flame characteristics. Gas is injected into the venturi through the orifice. The orifice raises the velocity of the gas. The high velocity from the stream of gas causes a drop in pressure around the stream. Primary air enters the area of low pressure through the gap between the venturi and the orifice.

The gas and air travel through the narrow venturi. As the air and gas expand into the increased volume, their velocity is reduced and they become thoroughly mixed. The gas mixture passes from the venturi into the burner head. The burner head is a hollow chamber from which the gas and air mixture

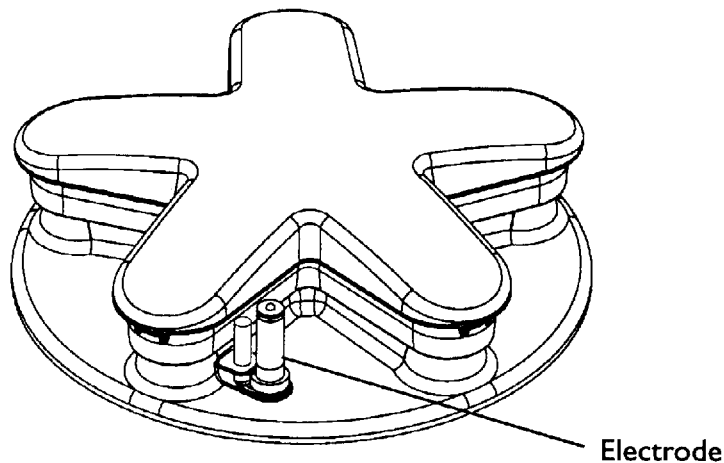


flows to the burner cap and where it is ignited by the spark igniter and produces a flame.

The burner head has ports which are designed with sufficient depth and correct angle to further reduce the velocity of the mixture and provide a stream of gas of the proper size to combine with the secondary air to provide combustion. The burner cap is designed to provide unrestricted secondary air to the flame.



## Star Burner Flame Rectification System



Flame rectification is a process of correcting the flame characteristics with the electronic module and the electrode.

When the burner is on, the flame creates a current path. The same electrode that sparks to light the burner also senses that current path. When the flame goes out, or wavers away from the electrode, the current path is broken. The electrode senses the absence of the current path and sends a

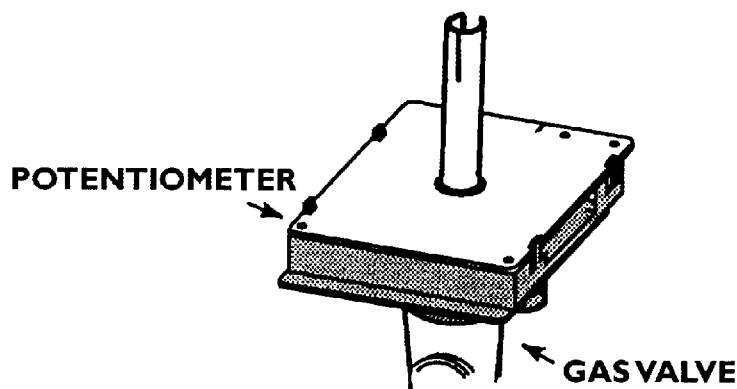
message to the module. The module then sparks until the burner lights and the current path is restored.

The purpose of the module is to send 1400 volts dc to the electrode and light the burner. The electrode has a dual purpose: it sparks and lights the burner, and acts as a sensor to detect the presence or absence of a flame.

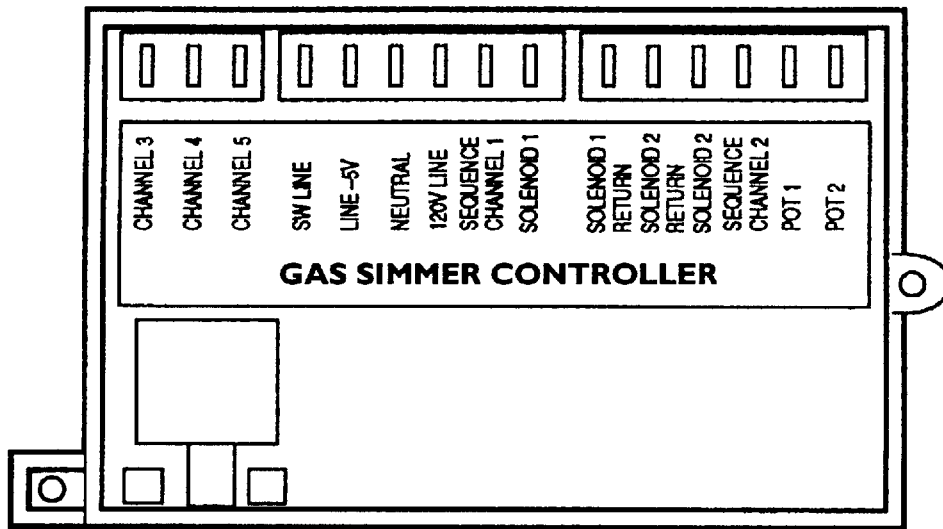
## Potentiometer

The potentiometer is a dual-purpose, valve-mounted switch that acts as a solenoid switch and as a voltage divider. The higher the resistance of the potentiometer as it is turned, the less current flows through it. Conversely, the less resistance, the higher

the current flow. The position of the knob will determine the amount of current that flows through the potentiometer to the controller, and the controller will measure the current to determine the rotation of the valve.

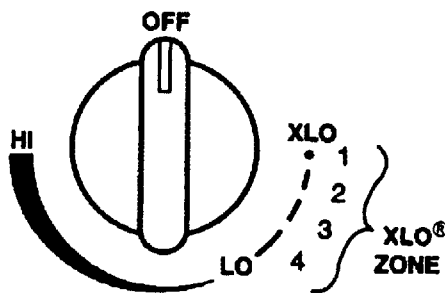


# Simmer Controller



The simmer controller is a sophisticated electronic control with programmed software that:

- a) Sends current to the module to activate the igniter.
- b) Sends current to the gas solenoids (85 – 105 vdc).
- c) Controls the timing of the XLO (extra-low) feature



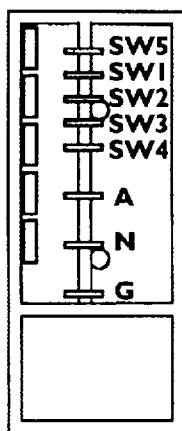
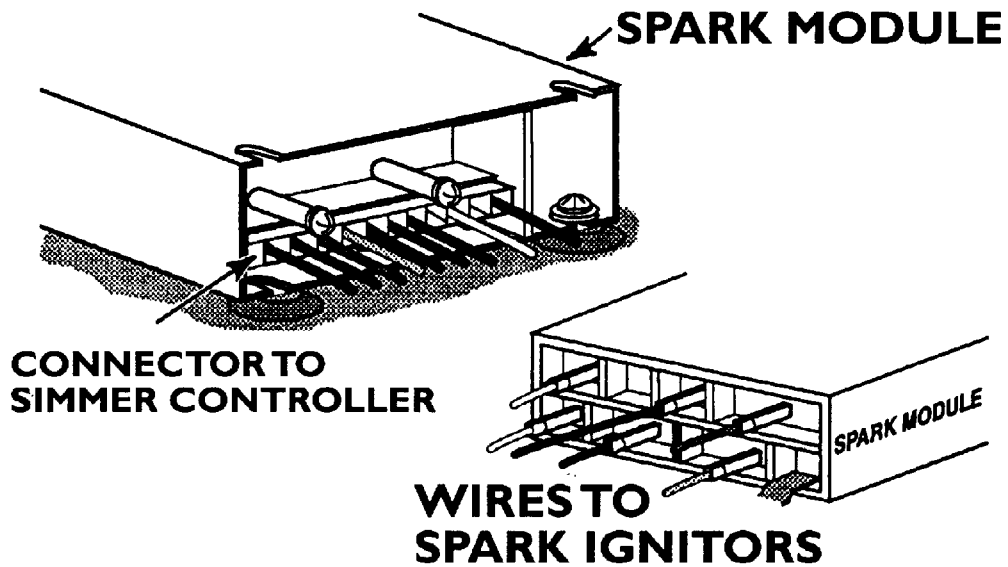
## XLO® Burners

**IMPORTANT:** The two XLO® burners cannot be used during a power failure. Be sure to turn the knobs to OFF if a power failure occurs.

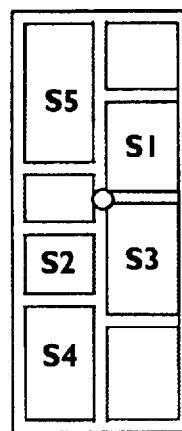
The burners will not turn back on until both control knobs are turned OFF and back ON again after power has been restored.

## Spark Module

The spark module is an electronic module that acts as a step-up transformer. It converts the 120-volt AC line from the spark switch to 14,000-volts DC and sends it to the spark igniter.

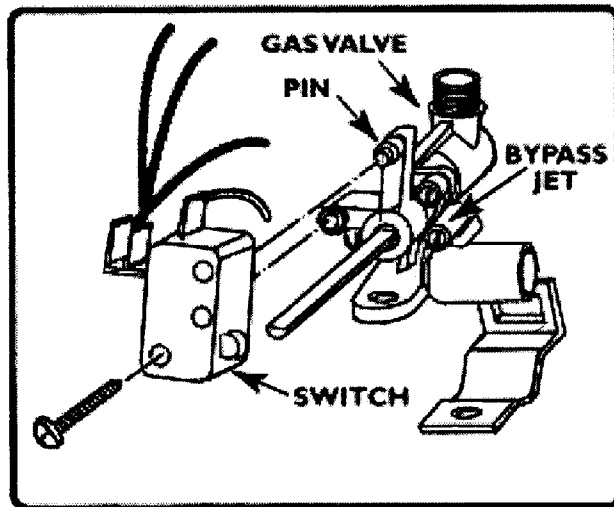


**INPUTS**



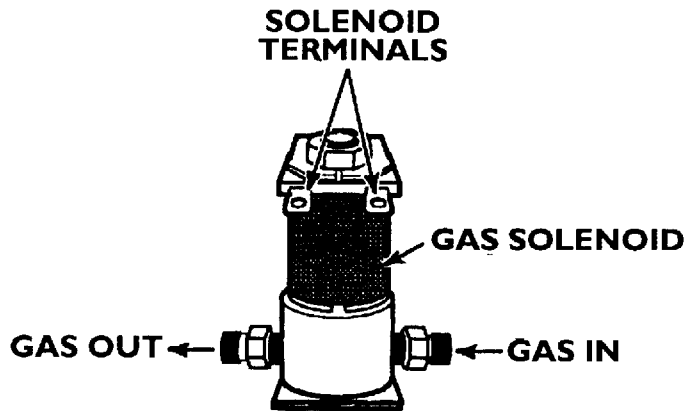
**OUTPUTS**

## Spark Switch



The spark switch is a valve-mounted switch that fastens to the two shoulder screws on the valves. It is a single-pole, single throw switch. The switch closes when the valve knob is turned to ON or LIGHT.

## Gas Solenoid



The gas solenoids are closed until they are activated by 105-volts dc from the controller. They have a coil that energizes a diaphragm and allows gas to flow to the burners. The solenoids are closed until the manual valve is turned to "HIGH." It stays open when the valve is between HIGH and LOW, and cycles closed & open in the ExtraLow<sup>®</sup> (XLO<sup>®</sup>) position to allow a very low heat output to the burner.

## Gas Valve Operation

The gas valve provides two settings: one for high heat, and one for low heat, with infinite variations in between. There are two passages that feed gas from the manifold to the burner. These passages are created by slots in the valve plug. Turning the knob counterclockwise approximately 90° allows a maximum flow of gas to the burner. As the valve is turned to a lower position, less of the opening in the plug is exposed to the opening in the valve housing.

To reach the Low setting, the valve is turned counterclockwise approximately 180° away from the Off position, which is the full extent of the valve's adjustment capacity. In this position, the gas enters an auxiliary passage in the valve. The gas volume is controlled by the spacing around and through the bypass screw. This flow continues on sequencing valves for an additional 90° of rotation.



In "High," all of the opening in the plug is exposed to the opening in the valve housing.

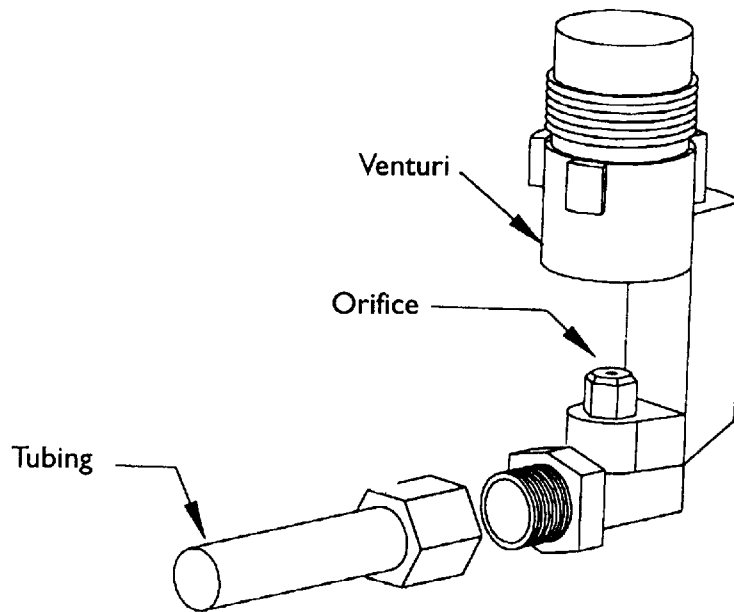


In "Medium," less of the opening in the plug is exposed to the opening in the valve housing.



In "Low," a minimum amount of the opening in the plug is exposed to the opening in the valve housing.

## Jet Holder



Since there is no air adjustment and all the orifices are fixed, the venturi plays a crucial part in the design of the gas system. Gas is injected into the burner through the venturi of the jet holder. Air from the outside flows into the venturi through the gap between the venturi and the top of the orifice. The gas travels through the venturi to the burner for ignition.

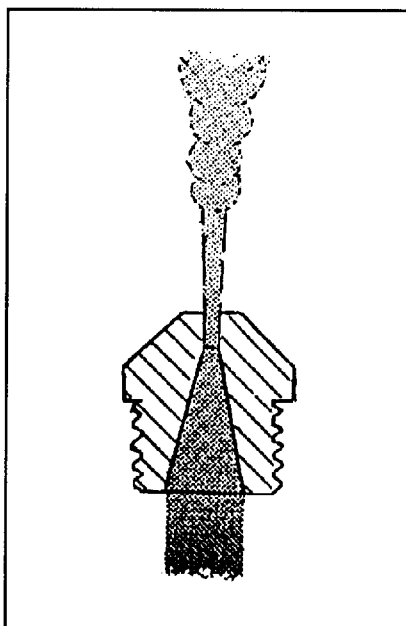


## Orifices

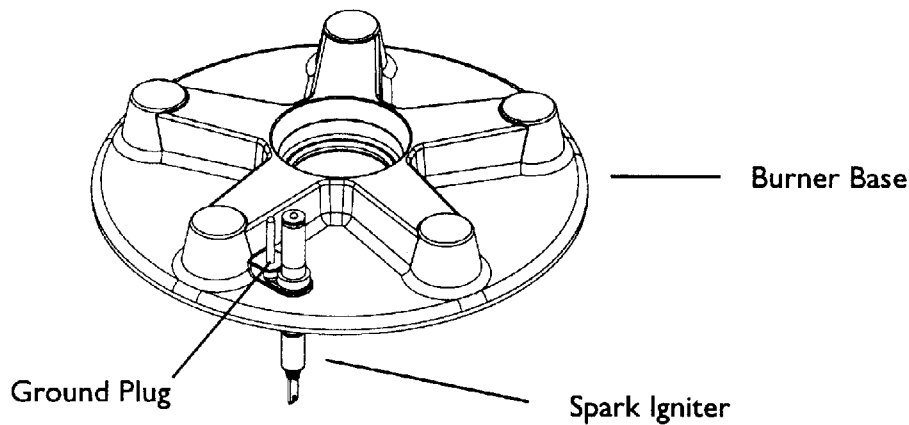
The purpose of an orifice is to control gas flow and to increase the velocity of the gas flowing so as to draw in air. When any gas is restricted and then allowed to flow freely it will spray gas that will mix with air. This can be seen when you restrict the flow from a garden hose. The water comes out of the hose and draws in air creating a water spray as opposed to just water.

The amount of air drawn in is dependent upon the pressure of the gas and the size of the orifices, the size of the tube after the orifice, the size of the

air intake hole, and any back pressure created by the burner head. The natural gas system has less pressure and needs less air for a given amount of gas, and therefore has larger orifices. The L.P. gas system has greater pressure and needs more air for a given amount of gas, and therefore has smaller orifices. On an average, with the same pressure and orifice size, two and one-half times more natural gas will flow than propane. However, propane needs more air and will produce more heat for a given volume of gas than the natural gas. The size of the orifice controls the heat output of the burner.



## Burner Base



### Burner Base

The burner base has changed dramatically. It is a cast part that sits on top of the spill tray. It has five raised fingers in the shape of a star. The top of each finger has a locating boss for locating the burner head correctly on the burner base. The ignitor is now mounted on the burner base instead of the spill tray. A grounding plug is now pressed into the burner base.

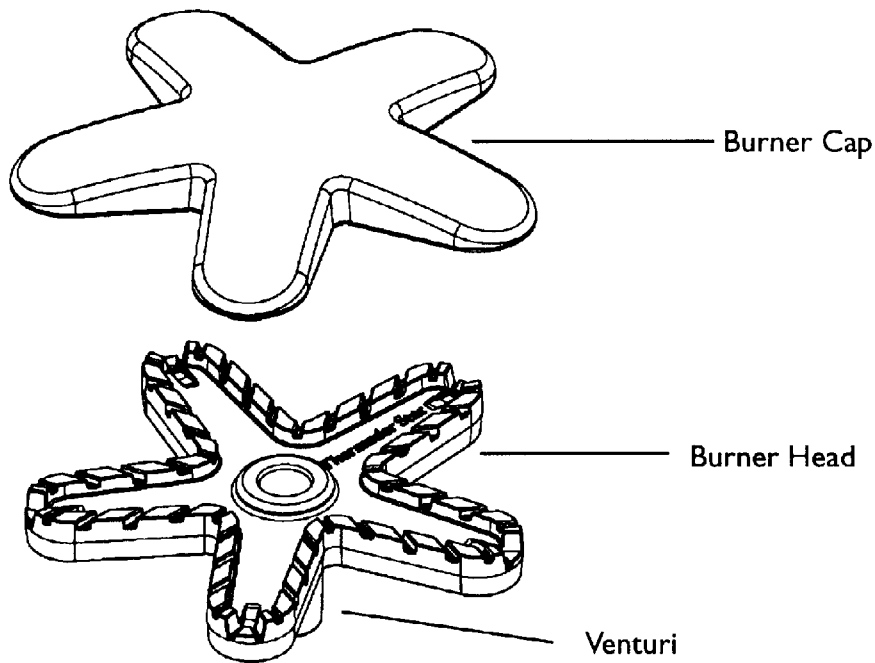
### Ground Plug

The ground plug is pressed into the burner base. It is an addition to the design of the star burner. The grounding plug is designed to provide a good path to ground to assure good spark and combustion.

### Spark Igniter

The spark igniter is now mounted on the burner head instead of the spill tray. The new spark igniter is now longer. However, it serves the same purpose as the previous design. It sends a spark to the burner and senses the absence of a flame.

## Burner Head/Venturi and Burner Cap



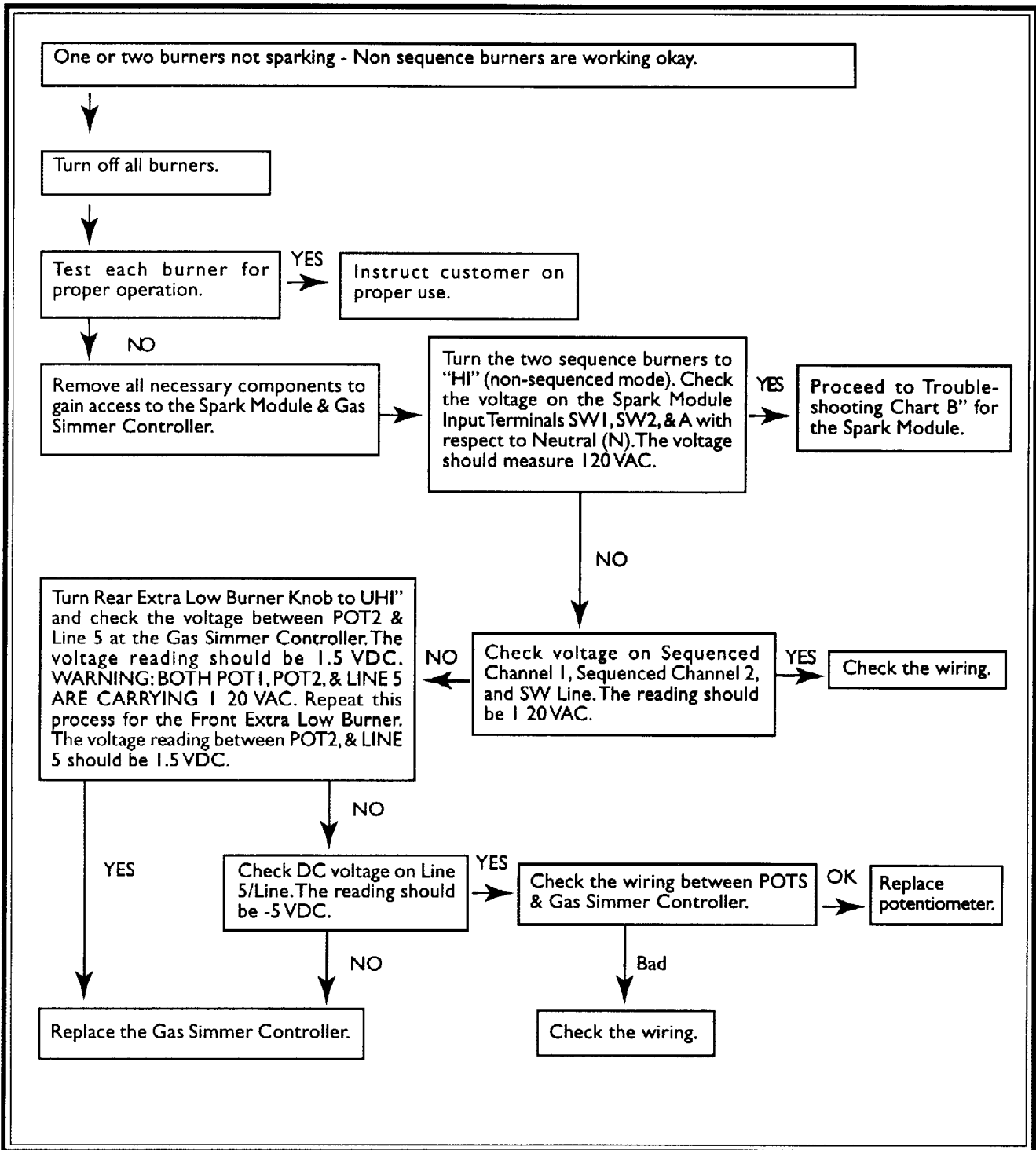
### Burner Head/Venturi

The burner head is a cast part in the shape of star. The venturi is part of the burner head. The outer part of the venturi has five bosses that slide into the five slots on the inside of the jet holder. These slots and bosses locate the burner head properly on the burner base. The top of the burner head has angled slots where the gas ignites and the flame exits and contacts the burner cap. The top of the burner head has five slots to accommodate the five locating pins on the burner cap. These slots and pins locate the burner cap properly on the burner head. The slots on the burner head must be kept clean or the flame will be distorted.

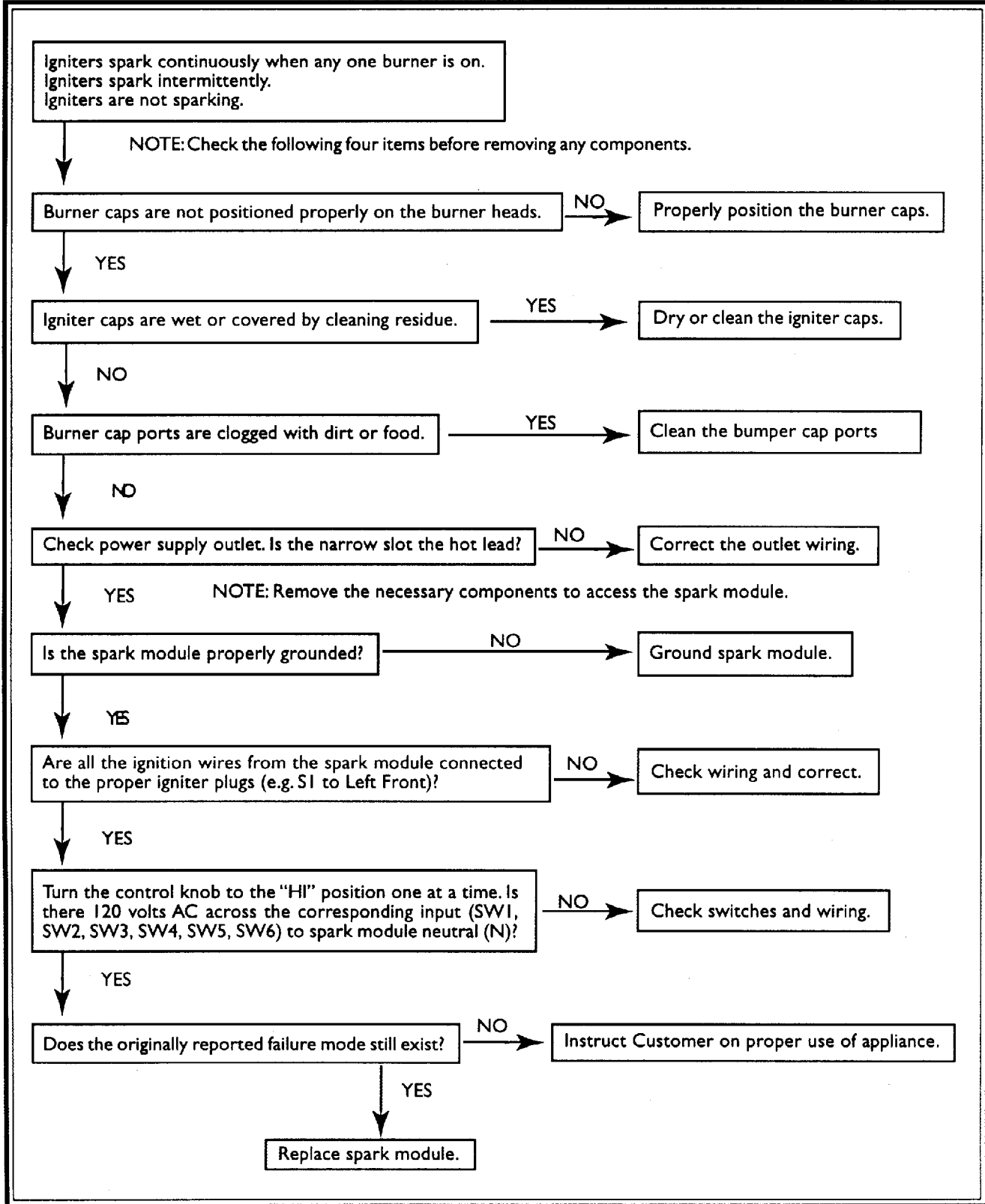
### Burner Cap

The burner cap is a cast part in the shape of a star. The underside of the cap has five locating pins that fit into the five slots on the burner head. These locating pins and slots locate the cap properly on the burner head. Correct burner cap placement is crucial to proper ignition. The underside of the cap has scallops to improve port to port carryover of gas for good ignition and recognition on ExtraLow®.

# Chart A — ExtraLow® (XLO®) Gas Simmer



## Chart B — Spark Module



## Chart C Low Simmer Gas Solenoid

