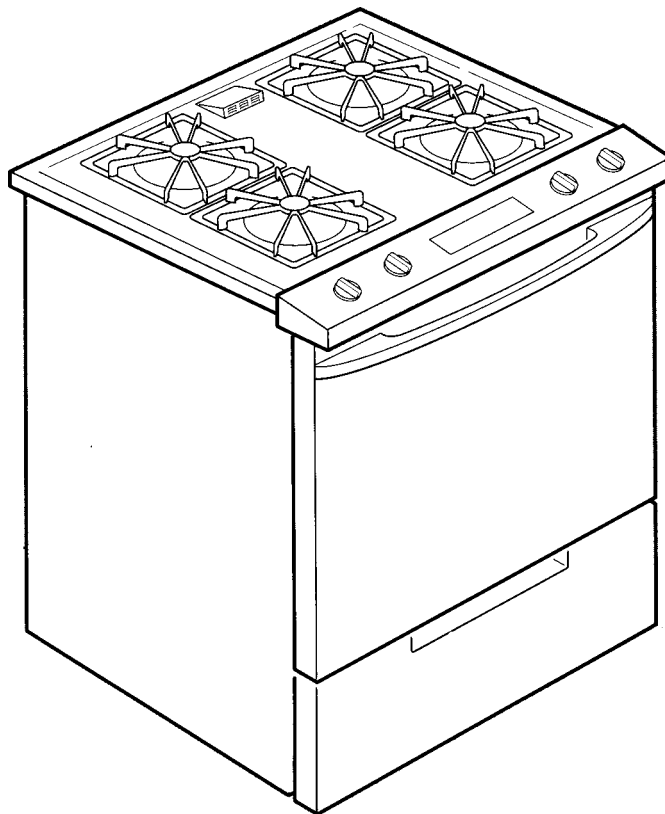


WHIRLPOOL SELF-CLEANING SLIDE-IN GAS RANGES



JOB AID
Part No. 4322500

FORWARD

This Job Aid, "Self-Cleaning Slide-In Gas Ranges," (Part No. 4322500), provides the technician with information on the installation, operation, and service of Whirlpool Self-Cleaning Slide-In Gas Ranges. It is to be used as a training Job Aid and Service Manual. For specific information on the model being serviced, refer to the "Use and Care Guide," or "Tech Sheet" provided with the range.

The Wiring Diagrams and Strip Circuits used in this Job Aid are typical and should be used for training purposes only. Always use the Wiring Diagram supplied with the product when servicing the unit.

GOALS AND OBJECTIVES

The goal of this Job Aid is to provide detailed information that will enable the service technician to properly diagnose malfunctions and repair Self-Cleaning Slide-In Gas Ranges.

The objectives of this Job Aid are to:

- Understand and follow proper safety precautions.
- Successfully troubleshoot and diagnose malfunctions.
- Successfully perform necessary repairs.
- Successfully return the range to proper operational status.

WHIRLPOOL CORPORATION assumes no responsibility for any repair made on our products by anyone other than Authorized Factory Service Technicians.

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WHIRLPOOL MODEL & SERIAL NUMBER DESIGNATIONS

MODEL NUMBER

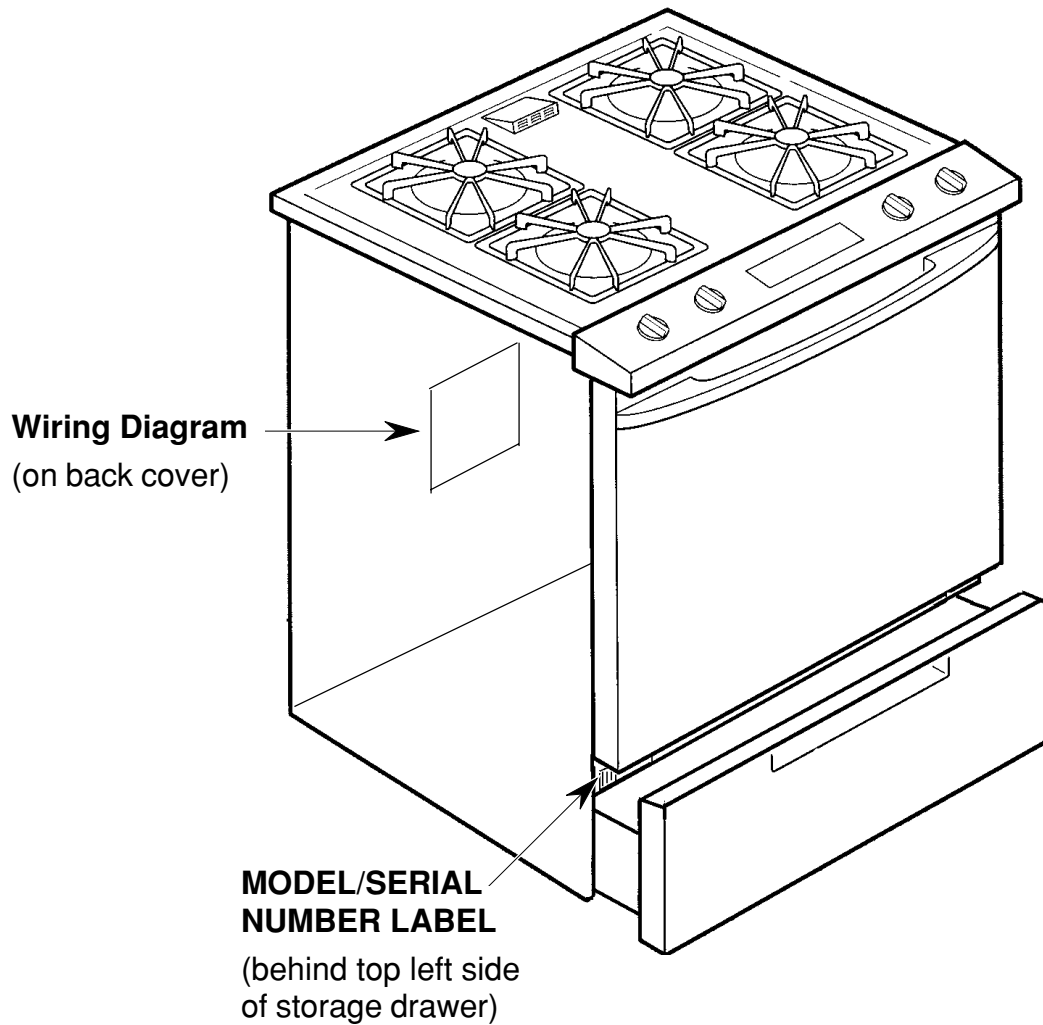
MODEL NUMBER INTERNATIONAL SALES IND. OR MARKETING CHANNEL IF PRESENT	G	W	3	9	5	L	E	G	Q
PRODUCT GROUP: R = ELECTRIC RANGES S = GAS RANGES G = WHIRLPOOL GOLD RANGE									
PRODUCT IDENTIFICATION: A = ACCESSORY K = KITS B = BUILT-IN M = MV COMBO C = COOKTOP S = SET-IN E = EYE-LEVEL W = SLIDE-IN GAS F = FREESTANDING Y = SLIDE-IN ELECTRIC H = HOODS									
MODEL SIZE: 3 = 30" SLIDE-IN 4 = 40" SLIDE-IN 5 = 36" SLIDE-IN 6 = 30" SET-IN RANGES									
OVEN TYPE: 0 THRU 3 = STANDARD PORCELAIN 4 THRU 9 = PYROLYTIC SELF-CLEAN									
FEATURE / VARIATIONS: <i>ELECTRIC</i> 0, 1, 2, 5, 7 = COIL ELEMENTS 4 = STANDARD PATTERN CERAMIC 6, 8, 9 = DELUXE PATTERN CERAMIC <i>GAS</i> 0, 1, 2, 3, 4, 6 = OPEN BURNER 5 & 7 = SEALED BURNER									
DOOR TYPE: B = SOLID BLACK GLASS L = LARGE WINDOW O = METAL OVEN DOOR P = STANDARD WINDOW GLASS									
FEATURE CODE: E = ELECTRONIC IGNITION (GAS ONLY) S = STANDING IGNITION (GAS ONLY) C = COLOR COORDINATED GLASS (BEFORE 1998) X = NOT DEFINED									
YEAR OF INTRODUCTION: G = 1998 H = 1999 J = 2000									
COLOR CODE: B = BLACK W = WHITE N = ALMOND Z = ALMOND ON ALMOND Q = WHITE ON WHITE									

SERIAL NUMBER

SERIAL NUMBER	X	H	07	1	2	3	4	5
OXFORD								
YEAR OF INTRODUCTION: H = 1998, J = 1999, K = 2000								
WEEK OF PRODUCTION (7th WEEK)								
PRODUCT SEQUENCE NUMBER								

MODEL & SERIAL NUMBER LABEL AND WIRING DIAGRAM LOCATIONS

The Model/Serial Number label and Wiring Diagram locations are shown below.



IMPORTANT SAFETY INFORMATION

Your safety and the safety of others is very important.

Important safety messages have been provided in this Job Aid. Always read and obey all safety messages.



This is the safety alert symbol.

This symbol alerts you to hazards that can kill or hurt you and others.

All safety messages will be preceded by the safety alert symbol and the word **“WARNING.”**

All safety messages will identify the hazard, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed.

WARNING: If the information in this Job Aid 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.

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.

SPECIFICATIONS

Brand	Whirlpool
US GAS MODEL #	GW395LEG Q/Z/B
CANADIAN GAS MODEL #	YGW395LEG Q/Z
GENERAL INFORMATION	
Cleaning System	Self-Clean
Burner Type	Sealed
Broiler Type	Waist High - Log
Oven Controls	EZ300
DIMENSIONS	
Height to Maintop	36"
Depth-Overall	24.5"
Door Swing	21.75"
Depth with Handle	26.75"
Approx Shipping Weight	195 lbs
CONTROL PANEL FEATURES	
Control Panel Glass Color	Wht/Alm/Blk - Glass
Control Panel Color	Wht/Alm/Blk
Panel Construction/Shape	Glass-square
Oven Control Location	Center
Oven Controls	EZ300
Oven Light US	Yes-in control
Oven Light CND	Yes-in control
Oven Heating Light Indicator	in Oven Control
Surface Unit Indicator Light	N/A
Safety Gas Shutoff	No
COOKTOP FEATURES	
Cooktop Type	Porcelain
Drip Pans	N/A
Burner Type	Sealed
Gas Valve Rotation	CCW - 210 Low
Burner BTU: Right Front	6K BTU
Burner BTU: Left Front	12K BTU
Burner BTU: Right Rear	12k BTU
Burner BTU: Left Rear	6K BTU
Burner Ignition	Electronic
L.P. Convertible	Yes-kit included
Grate Type	Q Cast-Grey/Blk/Blk
Burner Cap Type	Porcelain - Grey/Blk/Blk
OVEN FEATURES	
Oven Type	Self-Clean
Broiler Type	Waist High - Log
Broiler Output	9.5K BTU
Bake Output	15K BTU
Accubake System	Yes
Broil Pan - Storage Rails	Yes
Auto Oven Light	Yes
Manual Oven Light	Auto
Lower Storage Drawer	Yes
LITERATURE	
Tech Sheets/Wiring Diagrams	Yes
OTHER SPECIFICATIONS	
AGA/CGA approval	Yes
Anti-Tip Shipped w/ Unit	Floor Bracket

— NOTES —

INSTALLATION HIGHLIGHTS

GAS SUPPLY REQUIREMENTS

WARNING



Explosion Hazard

Use a new AGA approved gas supply line.

Install a shutoff valve.

Securely tighten all gas connections.

If connected to LP gas, have a qualified person make sure gas pressure does not exceed 14" water column.

Examples of a qualified person includes licensed heating personnel, authorized gas company personnel, and authorized service personnel.

Failure to do so can result in death, explosion, or fire.

Observe all governing codes and ordinances.

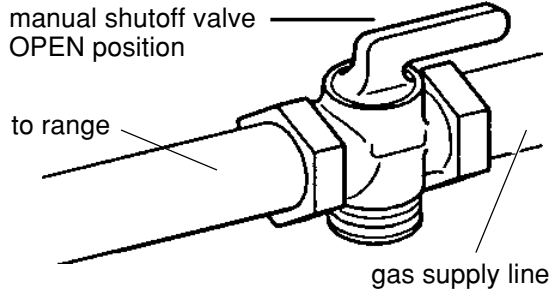
1. This installation must conform with local codes and ordinances. In the absence of local codes, installations must conform with American National Standard, National Fuel Gas Code ANSI Z223.1—latest edition* or CAN/CGA-B149—latest edition** installation codes.
2. Input ratings shown on the model/serial rating plate are for elevations up to 2,000 feet (609.6 m). For elevations above 2,000 feet (609.6 m), ratings are reduced at a rate of 4% for each 1,000 feet (304.8 m) above sea level. (Not applicable for Canada.)

3. This range is equipped for use with Natural gas. It is design-certified by A.G.A./C.G.A. for Natural and L.P. gas with appropriate conversion. Conversion to L.P. gas can be made using the kit included in the literature package. The model/serial rating plate, located on the oven frame behind the storage drawer panel, has information on the type of gas that can be used. If this information does not agree with the type of gas available, check with your dealer.
4. Provide a gas supply line of 3/4" (1.9 cm) rigid pipe to the range location. A smaller size pipe on long runs may result in insufficient gas supply. Pipe-joint compounds appropriate for use with L.P. gas must be used. With L.P. gas, piping or tubing size can be 1/2" (1.3 cm) minimum. L.P. gas suppliers usually determine the size and materials used on the system.
5. If local codes permit, a new A.G.A./C.G.A. design-certified, 4-5 foot (122 -152.4 cm) long, 1/2" (1.3 cm) or 3/4" (1.9 cm) I.D., flexible metal appliance connector is recommended for connecting this range to the gas supply line. Do Not kink or damage the flexible tubing when moving the range. A 1/2" (1.3 cm) male pipe thread is needed for connection to pressure regulator female pipe threads.

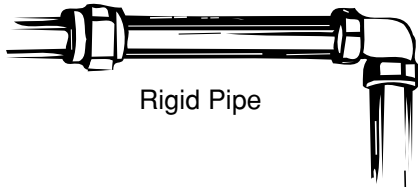
Flexible Gas Supply Line



6. The supply line shall be equipped with an approved shutoff valve. This valve should be located in the same room, but external to the range, and should be in a location that allows ease of opening and closing. Do Not block access to shutoff valve.



7. If rigid pipe is used as a gas supply line, a combination of pipe fittings must be used to obtain an in-line connection to the range. All strains must be removed from the supply and fuel lines so the range will be level and in line.



8. The regulator setting must be checked at a minimum of 1 inch water column above the manifold pressure. The inlet pressure to the regulator should be as follows for operation:

Natural gas:

- Manifold pressure — 5 inches
- Maximum pressure — 14 inches

L.P. gas:

- Manifold pressure—10 inches
- Maximum pressure—14 inches

9. **Line pressure testing:**
Testing above 1/2 psi (gauge)

The range and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures greater than 1/2 psig (3.5 kPa).

Testing at 1/2 psi (gauge) or lower

The range must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa).

Copies of the standards listed may be obtained from:

* American Gas Association
1515 Wilson Boulevard
Arlington, Virginia 22209

** Canadian Standard Association
178 Rexdale Boulevard
Etobicoke (Toronto), Ontario M9W 1R3

ELECTRICAL REQUIREMENTS

! WARNING



Electrical Shock Hazard

Plug into a grounded 3-prong outlet.
Do not remove ground prong.
Do not use an adapter.
Failure to follow these instructions can result in death, fire, or electrical shock.

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

Do Not ground to a gas pipe.

Check with a qualified electrician if you are not sure range is grounded.

Do Not have a fuse in the neutral or ground circuit.

A 120-volt, 60-Hz, AC-only, 15-ampere, fused electrical circuit is required. A time-delay fuse or circuit breaker is recommended. It is recommended that a separate circuit serving only this range be provided.

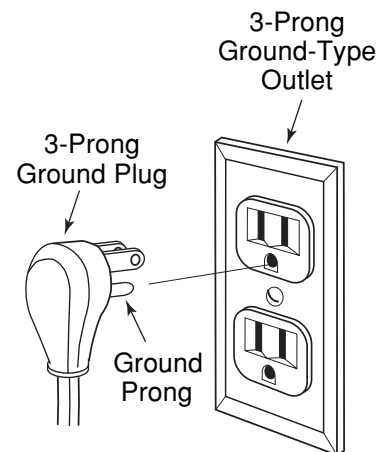
Electronic ignition systems operate within wide voltage limits, but proper grounding and polarity are necessary. In addition to checking that the outlet provides 120-volt power and is correctly grounded, the outlet must be checked by a qualified electrician to see if it is wired with correct polarity.

The wiring diagram is included in the literature package. The wiring diagram can also be found on the back of the range.

Note: The metal chassis of the range **MUST** be grounded in order for the control panel to work. If the metal chassis of the range is not grounded, **NO** keypads will operate. Check with a qualified electrician if you are in doubt as to whether the metal chassis of range is grounded.

Recommended ground method

For personal safety, this range is equipped with a power supply cord having a 3-prong ground plug. To minimize possible shock hazard, the cord must be plugged into a mating 3-prong, ground-type outlet, grounded in accordance with the National Electrical Code, ANSI/NFPA 70—latest edition* or CSA Standard C22.1, Canadian Electrical Code, Part 1,—latest edition** and all local codes and ordinances. If a mating outlet is not available, it is the personal responsibility and obligation of the customer to have a properly grounded, 3-prong outlet installed by a qualified electrician.



Copies of the standards listed may be obtained from:

- * National Fire Protection Association
Battery March Park
Quincy, Massachusetts, 02269
- ** Canadian Standard Association
178 Rexdale Boulevard
Etobicoke (Toronto), Ontario M9W 1R3

CONVERTING THE RANGE FOR USE WITH L.P. GAS

! WARNING



Explosion Hazard

Shut off gas supply line valve.

Make all conversions before turning gas supply valve back on.

Failure to follow these instructions could result in fire, explosion, or other injury.

Gas conversion must be done by a qualified installer. Examples of a qualified installer includes licensed heating personnel, authorized gas company personnel, and authorized service personnel.

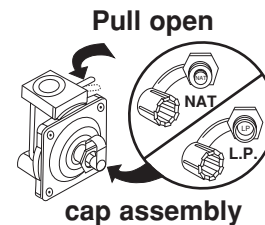
L.P. gas must not be used unless the L.P. conversion has been made using the kit that is included with this range. See the "Gas Supply Requirements" starting on page 2-1.

CONVERTING THE PRESSURE REGULATOR

1. Remove the storage drawer, oven racks, and the oven bottom from the range.

NOTE: The pressure regulator is located in the lower left rear corner of the storage drawer area.

2. Use a wrench and unscrew the plastic-coated hex nut cap assembly from the pressure regulator. Do not remove the regulator.



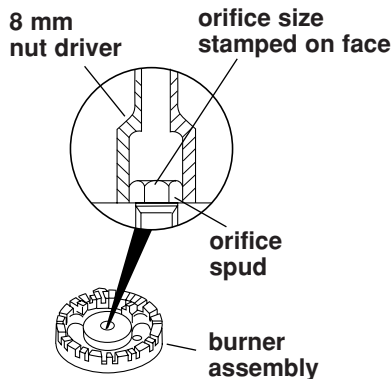
cap assembly

Do Not remove this protective cap except for conversion

3. Carefully pry the protective plastic cap and washer off the threaded metal cap.
4. Position the plastic cap so that L.P. is displayed facing up, then install the cap onto the threaded end of the metal cap.
5. Reinstall the cap assembly to the pressure regulator and tighten it firmly. Do not overtighten the cap.

CONVERTING THE COOKTOP BURNERS

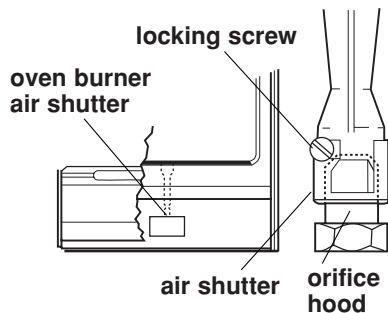
1. Remove the two screws from each of the burner heads with a Phillips or Quadrex screwdriver, and lift the burner heads off the cooktop.
2. Remove the regular gas orifice spud from each of the burners with an 8 mm socket.



3. Install the L.P. gas orifice spuds from the supplied kit into the burners as follows:
 - a) Left front & right rear = 0.93 mm (blue)
 - b) Right front & left rear = #70 (black)

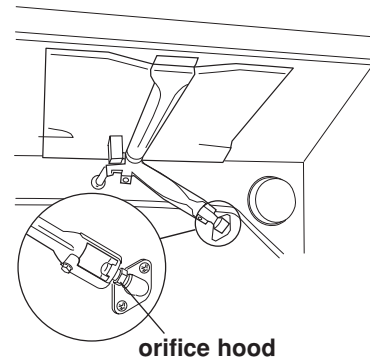
CONVERTING THE OVEN BURNER

1. In the back of the storage drawer area at the center of the range, turn the orifice hood on the bake burner safety valve clockwise until it is just snug (approximately 2-1/2 turns). Do not overtighten the orifice hood. NOTE: The oven burner flame will not be properly adjusted if this conversion is not made.



CONVERTING THE BROIL BURNER

1. From inside the oven, turn the orifice hood on the broil burner safety valve clockwise until it is just snug (approximately 2-1/2 turns). Do not overtighten the orifice hood. NOTE: The broil burner flame will not be properly adjusted if this conversion is not made.



ADJUSTING FOR A PROPER FLAME

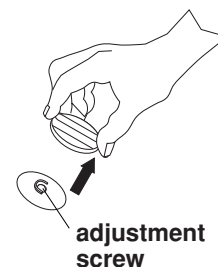
1. **Cooktop Burners:** Adjust the height of the cooktop burner flames (some models). The cooktop LOW burner flame should be a steady blue flame approximately 1/4" (0.64 cm) high.

Top burner flame appearance:



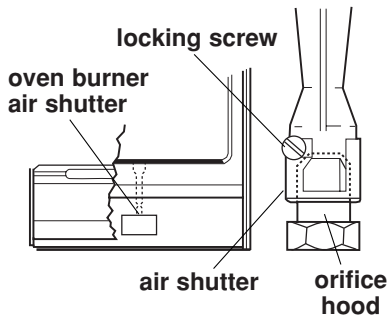
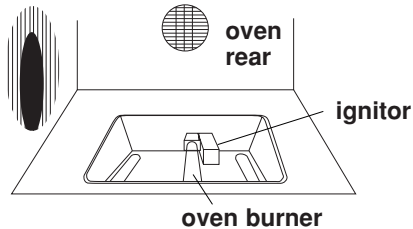
If the low flame needs to be adjusted:

- a) Remove the control knob.
- b) Holding the knob stem with a pair of pliers, use a small screwdriver and turn the adjustment screw inside the valve stem until the flame is the proper size.



- c) Replace the control knob.
- d) Test the flame by turning the control knob from LO to HI, and checking the flame at each setting.

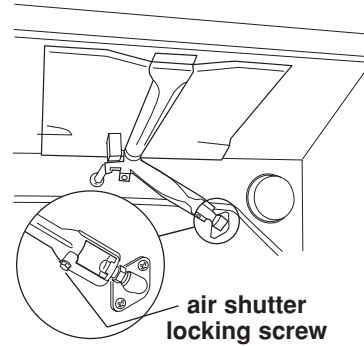
2. **Oven Burner:** To adjust the burner:
- a) Loosen the locking screw on the air shutter.
 - b) Turn the air shutter until the proper flame is obtained. The flame should be 1/2" (1.3 cm) long with a bluish-green inner cone and an outer mantle that is dark blue. The flame should have a soft, clean character. No blowing or lifting of the flame off the burner should occur. NOTE: L.P. gas will have a slightly yellow-tipped flame.



- c) Retighten the air shutter screw.

3. **Broil Burner:** Look through the oven door window and check the broil burner for the proper flame. If the flame needs to be adjusted:

- a) Loosen the locking screw on the air shutter.



- b) Turn the air shutter until the proper flame is obtained. The flame should be 1/2" (1.3 cm) long with a bluish-green inner cone and an outer mantle that is dark blue. The flame should have a soft, clean character. No blowing or lifting of the flame off the burner should occur. NOTE: L.P. gas will have a slightly yellow-tipped flame.

- c) Retighten the air shutter screw.

4. Insert a piece of wire through the natural gas orifice spuds and secure them to the gas pipe near the range in case they are needed later on.

MOVING THE RANGE

! WARNING



Tip-Over Hazard

A child or adult can tip the range and be killed.

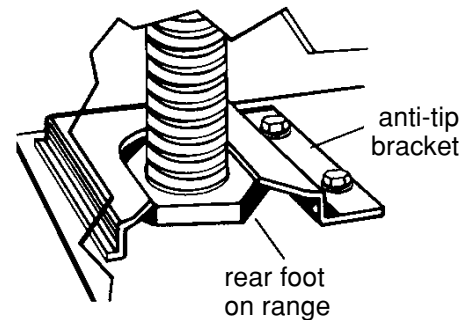
Connect anti-tip bracket to rear range foot.

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

Failure to follow these instructions can result in death or serious burns to children and adults.

Before moving the range, slide it onto a piece of cardboard, or hardboard, to prevent damaging the floor covering, and perform the following steps:

1. Disconnect the electrical supply.
2. Slide the range forward and disengage the foot with the anti-tip bracket. **IMPORTANT:** Make sure the anti-tip bracket is securely attached to floor.



3. Slide range back so the rear foot engages in the anti-tip bracket.
4. Check to see that the range is level.
5. Reconnect the electrical supply cord.

— NOTES —

PRODUCT OPERATION

ELECTRONIC IGNITION SYSTEM

Refer to Figure 3-1 for the following sequence.

SEALED BURNER

When a main burner control knob **1** is turned to the “lite” position, the gas valve **2** opens, and gas flows through the pressure regulator **3** into the manifold **4** through the open valve. As gas passes through the valve and its orifice, it is directed into the venturi **5**, where it mixes with primary air to create the proper mixture necessary for combustion.

At the same time, line voltage is applied through the ignitor switch **6**, to the spark module **7**, which produces high-voltage, low amperage pulses to all of the spark ignitors **8**. The pulses cause a spark **9** to occur between the spark ignitor electrode, and the grounded burner cap **10**. The gas and air mixture at the burner is ignited by the spark, and a flame is produced at each of the top burner ports.

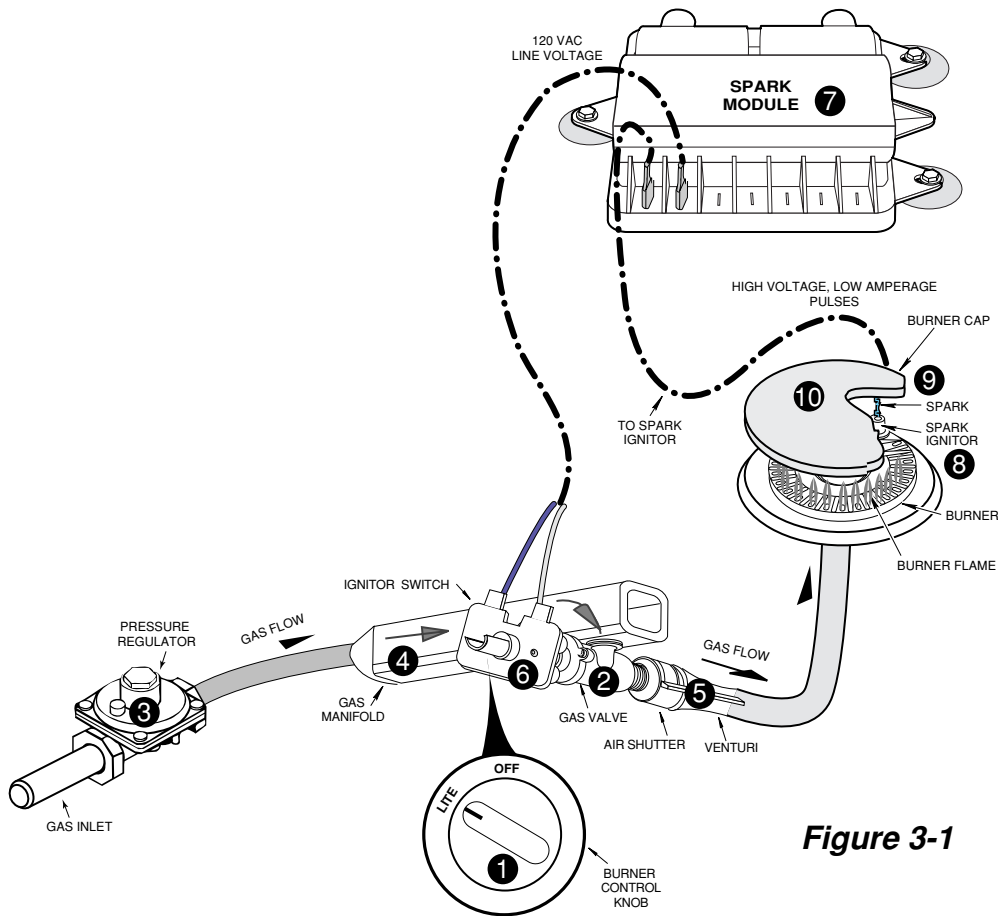


Figure 3-1

AIR FLOW — REAR PANEL

The gas range needs sufficient air to properly ignite the gas and keep it burning properly. Inside the oven, the correct air flow ensures the correct air-to-gas mixture, so the proper ignition and combustion will occur. In addition, proper air flow through the gas range also keeps the front control panel from becoming too hot while the burners are operating, and causing operational problems.

To help provide the proper air flow along the back of the range, the rear panel of the range has a spacer on each side toward the bottom (see Figure 3-2). When the range is installed, these spacers should just come in contact with the surface of the wall. If they are accidentally bent in, proper spacing will be lost, and the burners may not light, or may not stay lit, or operate at a reduced level. Also, the front control panel may become overly warm, and cause the bimetal switches to trip, shutting down the operation. If any of these problems occur, it is most likely because of air flow restrictions.

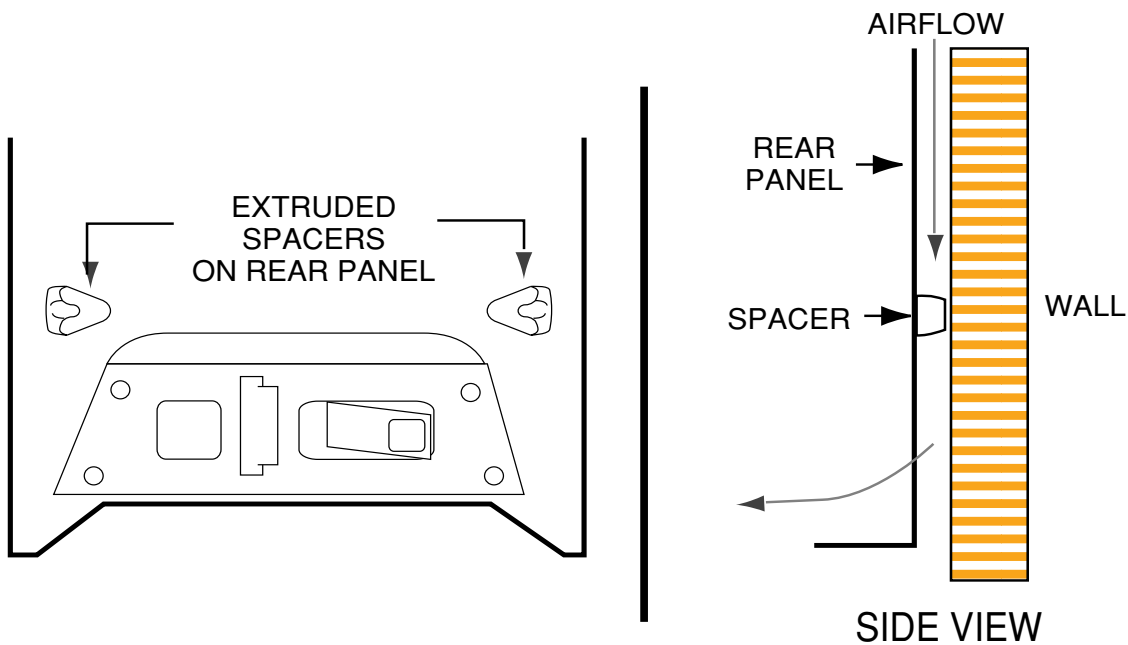


Figure 3-2

COOLING FAN AIR FLOW

Refer to Figure 3-3 while you read this description.

The cooling fan is in series with the cooling fan bimetal switch, which is located under the right side of the control panel. When the temperature of the chassis reaches 40°C (104°F), the bimetal switch closes, and turns on the cooling fan.

The cooling fan draws air from inside the base of the cabinet. It forces the air up the air chan-

nel, which is located under the left side panel, to the opening at the end of the control panel. Air then flows across the control panel, and cools it. Air enters through the series of holes in front of the range top, flows beneath the control area, and exits to the outside through slots in the rear panel. When the control panel chassis temperature drops below 40°C (104°F), the bimetal switch opens, and turns the cooling fan off.

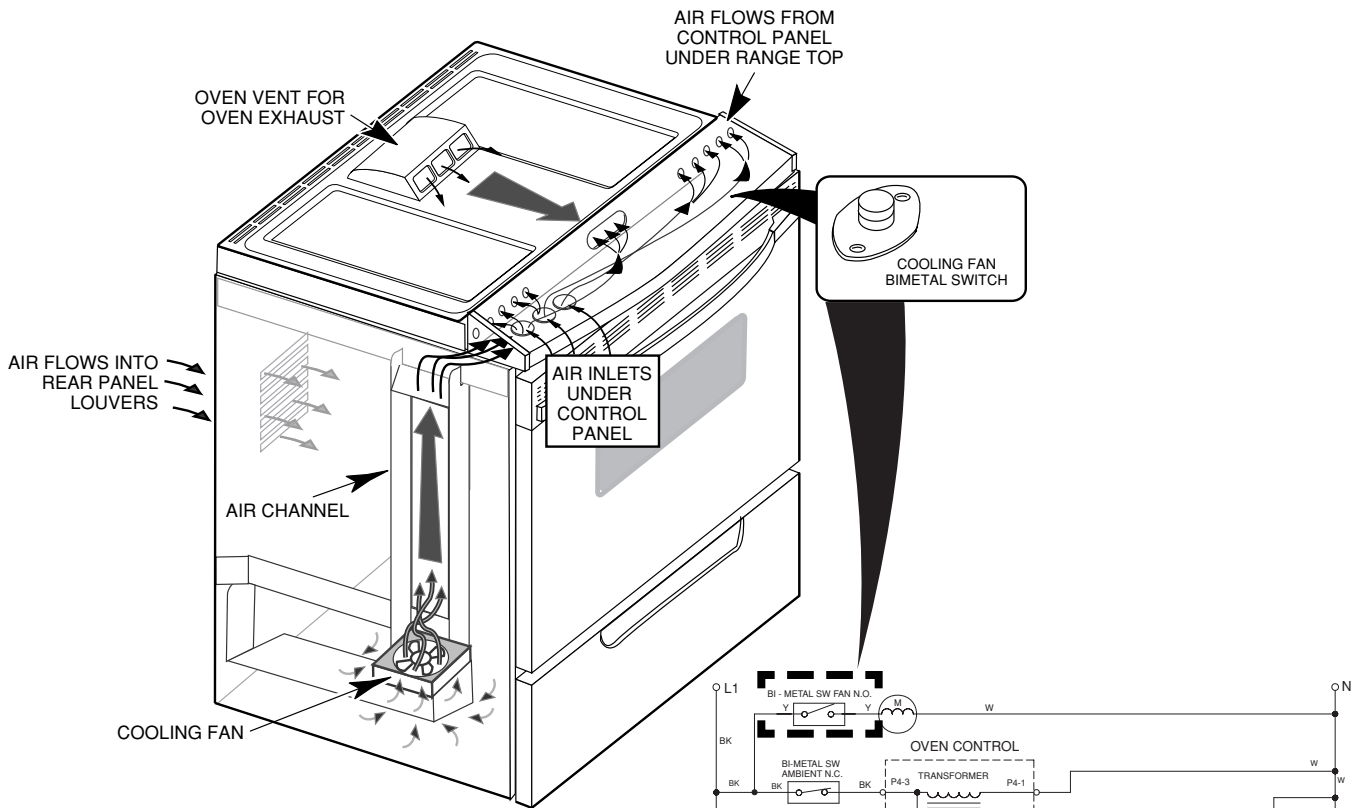


Figure 3-3

THE BIMETAL SWITCHES

There are two bimetal switches on the gas range. The switches operate as follows:

- *Ambient Bimetal Switch (N.C.)* (Inset #1) —This switch is located under the left side of the control console.

It opens the L1 circuit to the electronic control board if the console temperature reaches 95°C/203°F.

- *Cooling Fan Bimetal Switch (N.O.)* (Inset #2) —This switch is located under the right side of the control console. It turns the cooling fan on if the console temperature reaches 40°C/104°F.

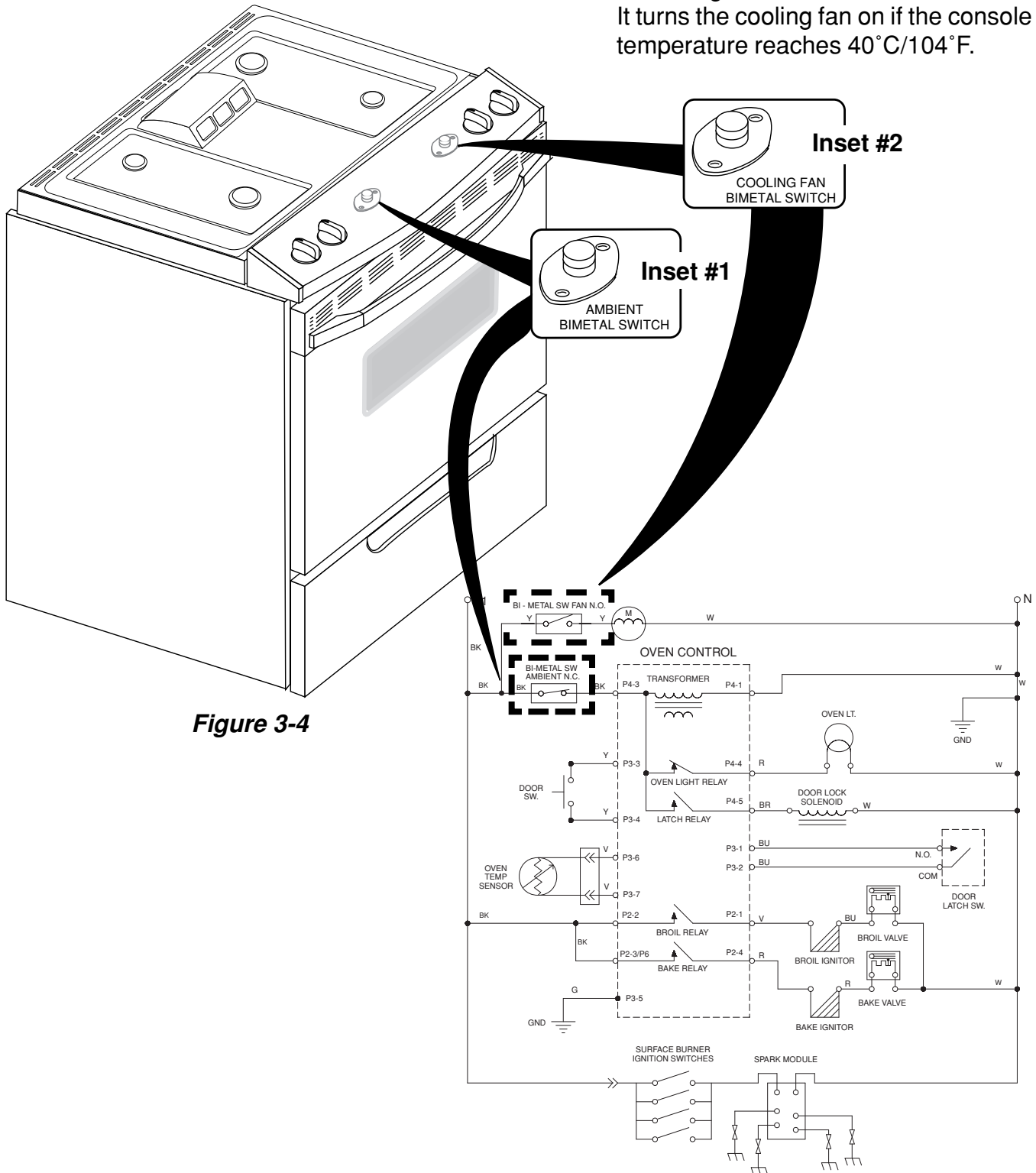


Figure 3-4

THE DOOR LOCK SOLENOID & DOOR LATCH SWITCH

The door lock solenoid operates on a 120-volt pulse from the electronic control board. When the door is in the unlocked position, (Figure 3-5A), the plunger is extended. When the door latch switch is open, the control senses that the door is unlocked. When the door latch switch closes, the control senses that the door is locked. The door latch switch, mounted on the solenoid bracket, is in the N.O. (normally-open) position. During the self-clean cycle, the

control board sends a 120-volt pulse to the solenoid windings, which pulls the plunger in, and moves the latch actuator rod to lock the oven door (Figure 3-5B). The movement of the rod also actuates the door latch switch and closes it. When the self-clean cycle is over, the control board sends a 120-volt pulse to the solenoid, the plunger is pushed out, the latch actuator rod releases the door, and the door latch switch opens.

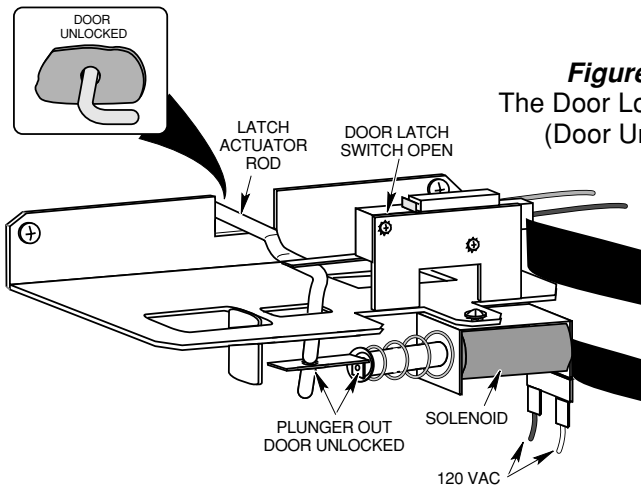


Figure 3-5A
The Door Lock Solenoid
(Door Unlocked)

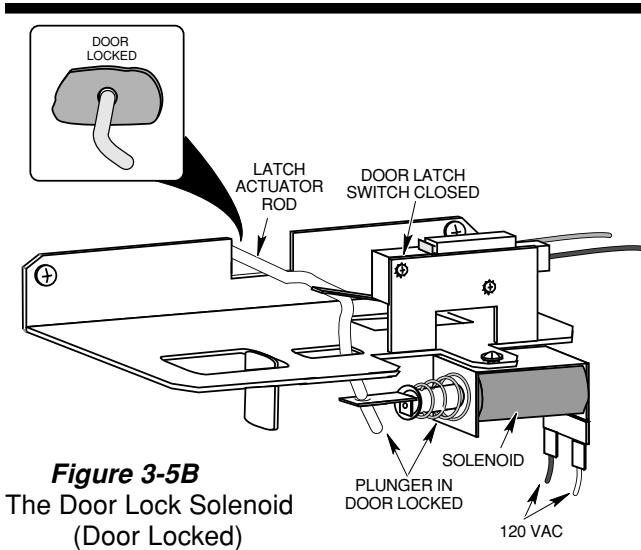
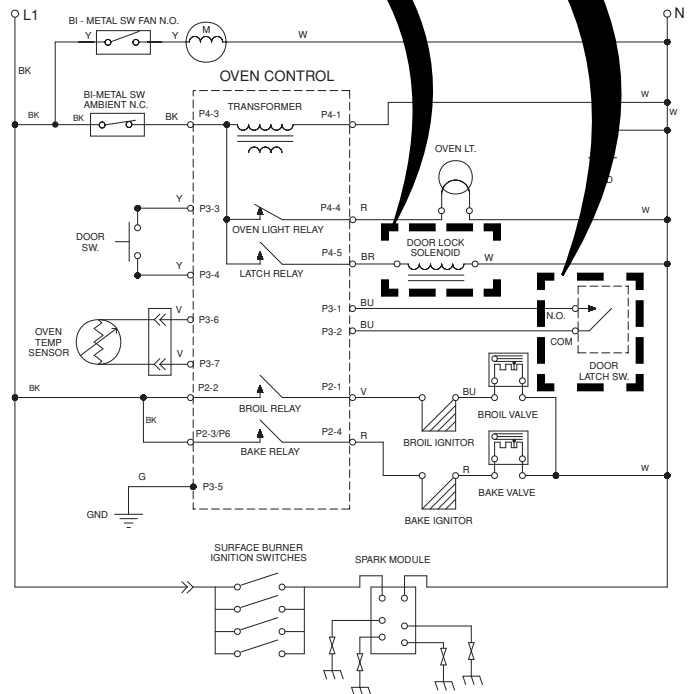
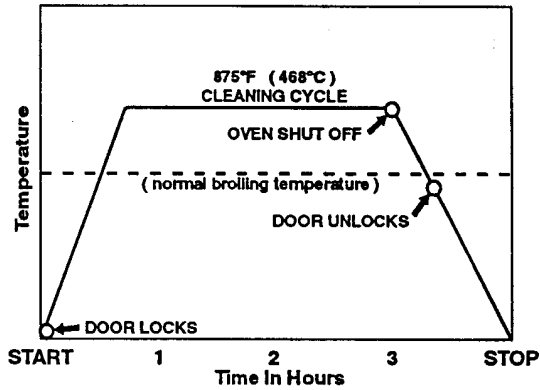


Figure 3-5B
The Door Lock Solenoid
(Door Locked)



HOW THE SELF-CLEAN CYCLE WORKS

The Self-Clean cycle uses high heat to burn away soil and grease from inside the oven. During this cycle, the oven will get much hotter than it does under normal baking and broiling conditions (see the following chart).



The oven is preset for a 3-1/2 hour Self-Clean cycle. However, you can adjust this cycle time to between 2-1/2 and 4-1/2 hours. The chart shows a normal 3-1/2 hour Self-Clean cycle. Note that although the heating turns off after 3-hours, the door will remain locked for an additional 1/2 hour so the oven can cool sufficiently.

During the Self-Clean cycle, the broil burner is on for the first 30-minutes (see Figure 3-6A). The rest of the clean cycle is completed using the bake burner only (see Figure 3-6B). If the door latch switch is not activated during the clean operation, the cycle is terminated and the display will show "close door."

FIRST 30-MINUTES OF CLEAN

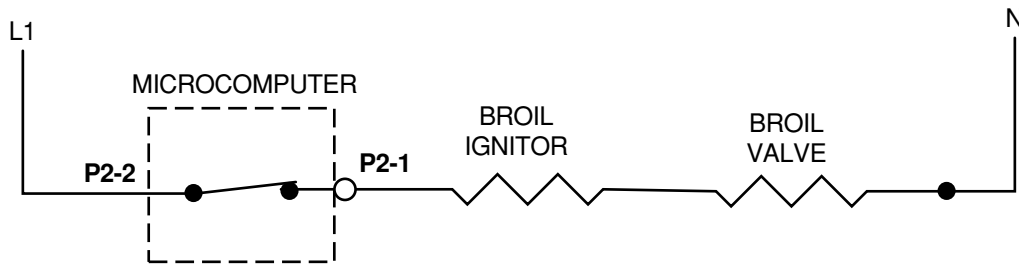


Figure 3-6A

AFTER 30-MINUTES OF CLEAN

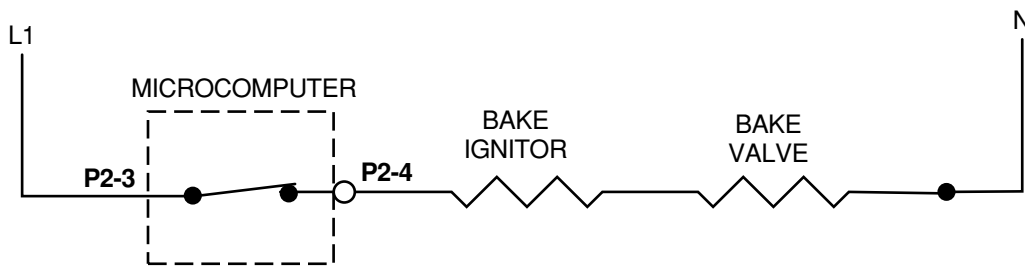


Figure 3-6B

COMPONENT ACCESS

COMPONENT LOCATIONS

This section instructs you on how to service each component inside the self-cleaning slide-in gas ranges. The components and their locations are shown in Figure 4-1.

NOTE: The Whirlpool Model GW395LEG range is shown below. The other slide-in range components are identical, and are serviced in the same manner.

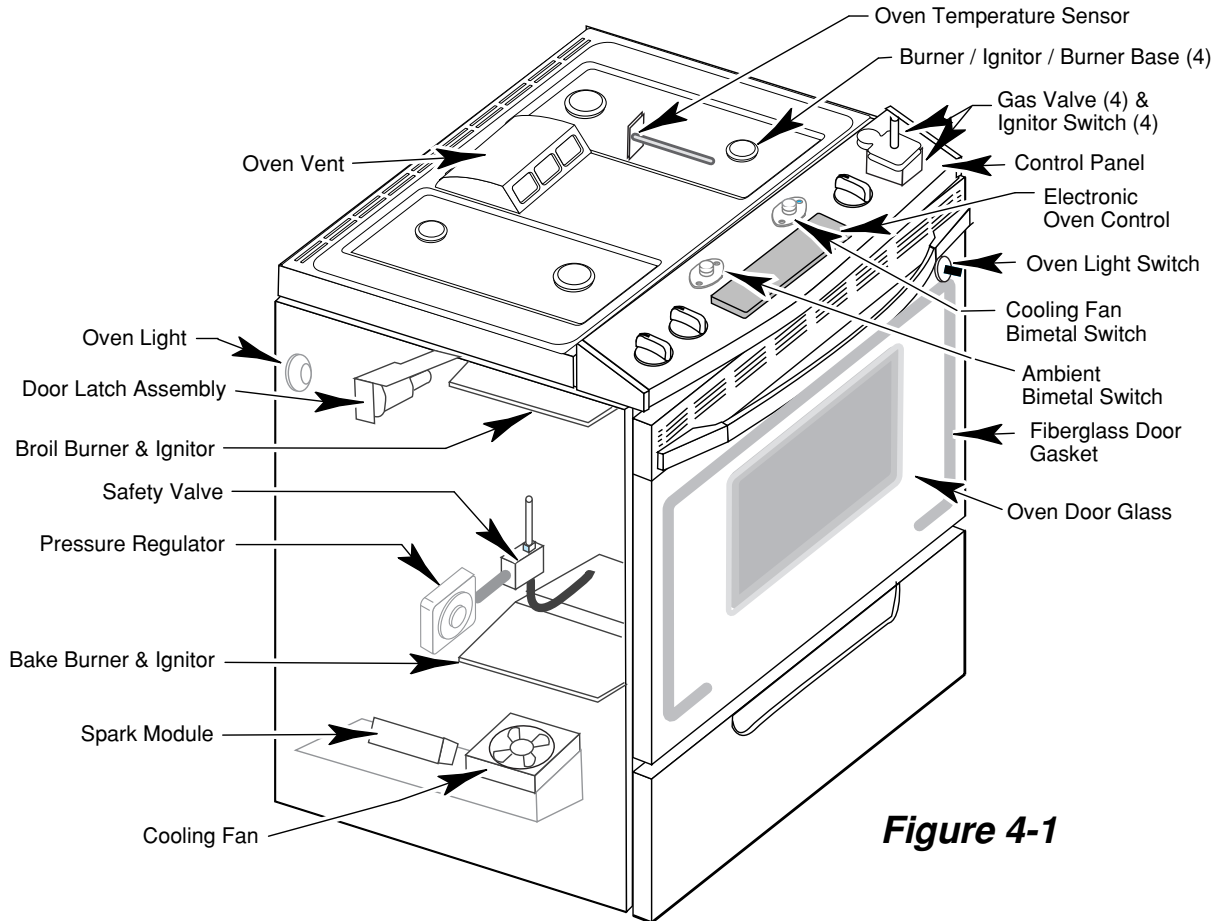


Figure 4-1

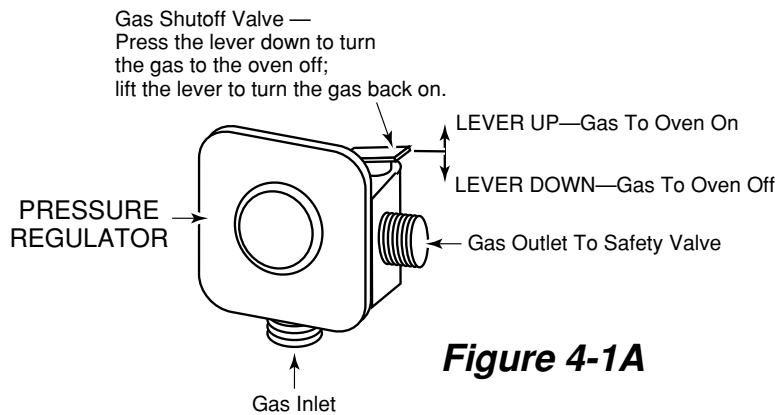


Figure 4-1A

REMOVING THE MAINTOP

WARNING

Electrical Shock Hazard

Disconnect from electrical and gas supplies before servicing unit.

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

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

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

Refer to Figure 4-2 for the following steps.

3. Remove all of the burners by removing their screws and lifting them off the maintop.
4. Remove the two maintop screws that are below each of the burners you just removed.
5. Remove the knobs from the controls.
6. Unsnap the two clips at the inner control locations and lift the front edge of the control panel glass, then slide the top edge of the glass out of the control panel flange, and remove it.
7. Remove the two screws from the maintop flanges.
8. Lift the maintop off the range by lifting it at the back and sliding it back.
9. If you are replacing the oven vent, remove the two screws and lockwashers from the underside of the maintop, and remove it from the maintop.

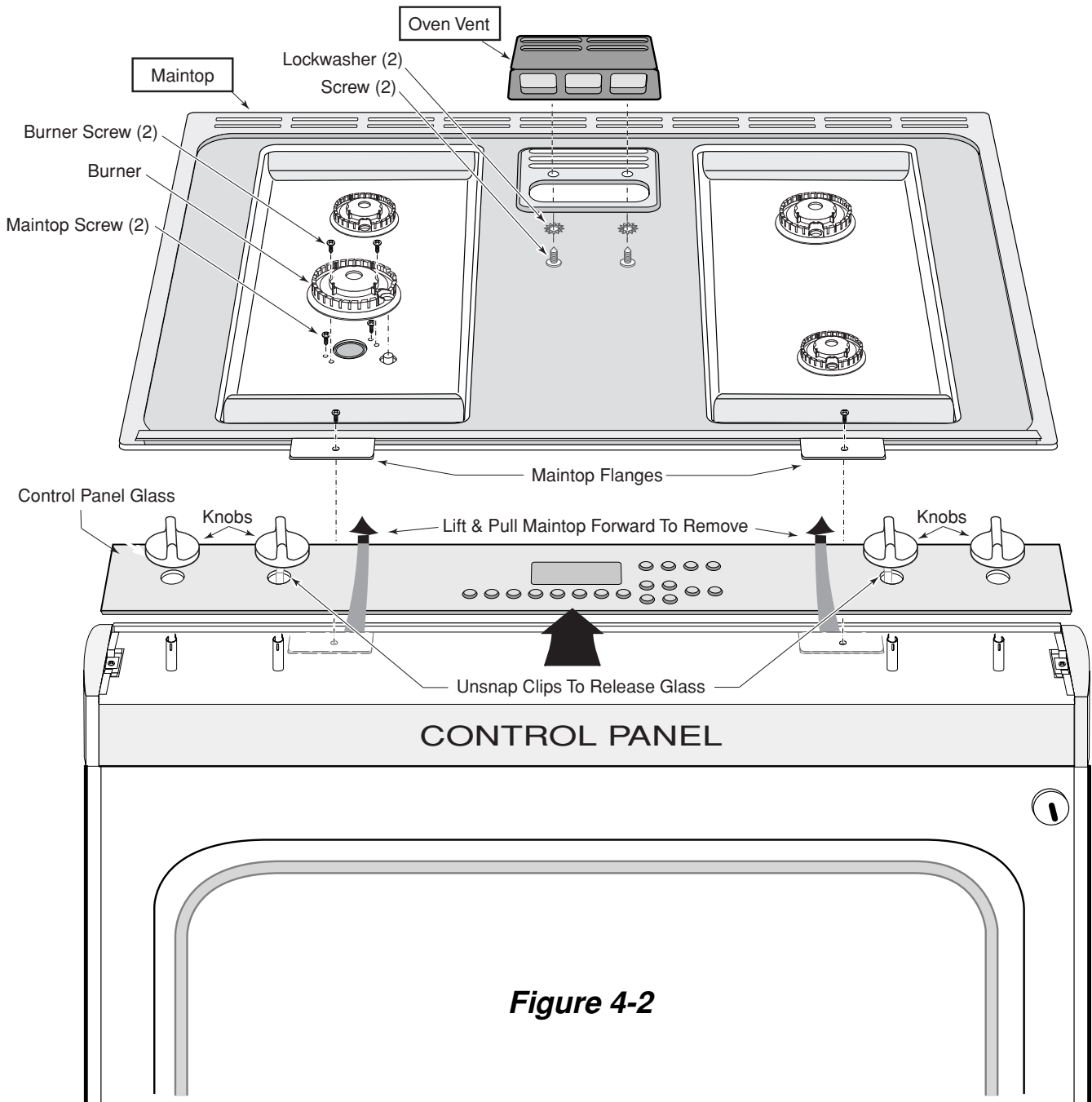


Figure 4-2

REMOVING THE ELECTRONIC OVEN CONTROL & THE CONTROL PANEL

WARNING

Electrical Shock Hazard

Disconnect from electrical and gas supplies before servicing unit.

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

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

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

Refer to Figure 4-3 for the following steps.

4. Unsnap the two clips at the inner control locations and lift the front edge of the control panel glass, then slide the top edge of the glass out of the control panel flange, and remove it.

5. **To remove the electronic oven control:**

- a) Remove the two screws from the bezel and window and remove them from the control panel.
- b) Remove the two screws from the bracket, lift the electronic oven control assembly off the control panel, and rotate it back so you can access the connectors.
- c) Disconnect the three connectors from the electronic oven control (see the inset).

6. **To remove the control panel:**

- a) Remove the ten (10) screws (5 on each side), and the two side screws in the end caps, from the control panel.
- b) Open the oven door and remove the three screws holding the bottom of the control panel to the range.
- c) Remove the control panel from the range by pulling it forward and lifting it at the front.
- d) To remove an end cap, remove the two mounting screws (1 top & 1 bottom).

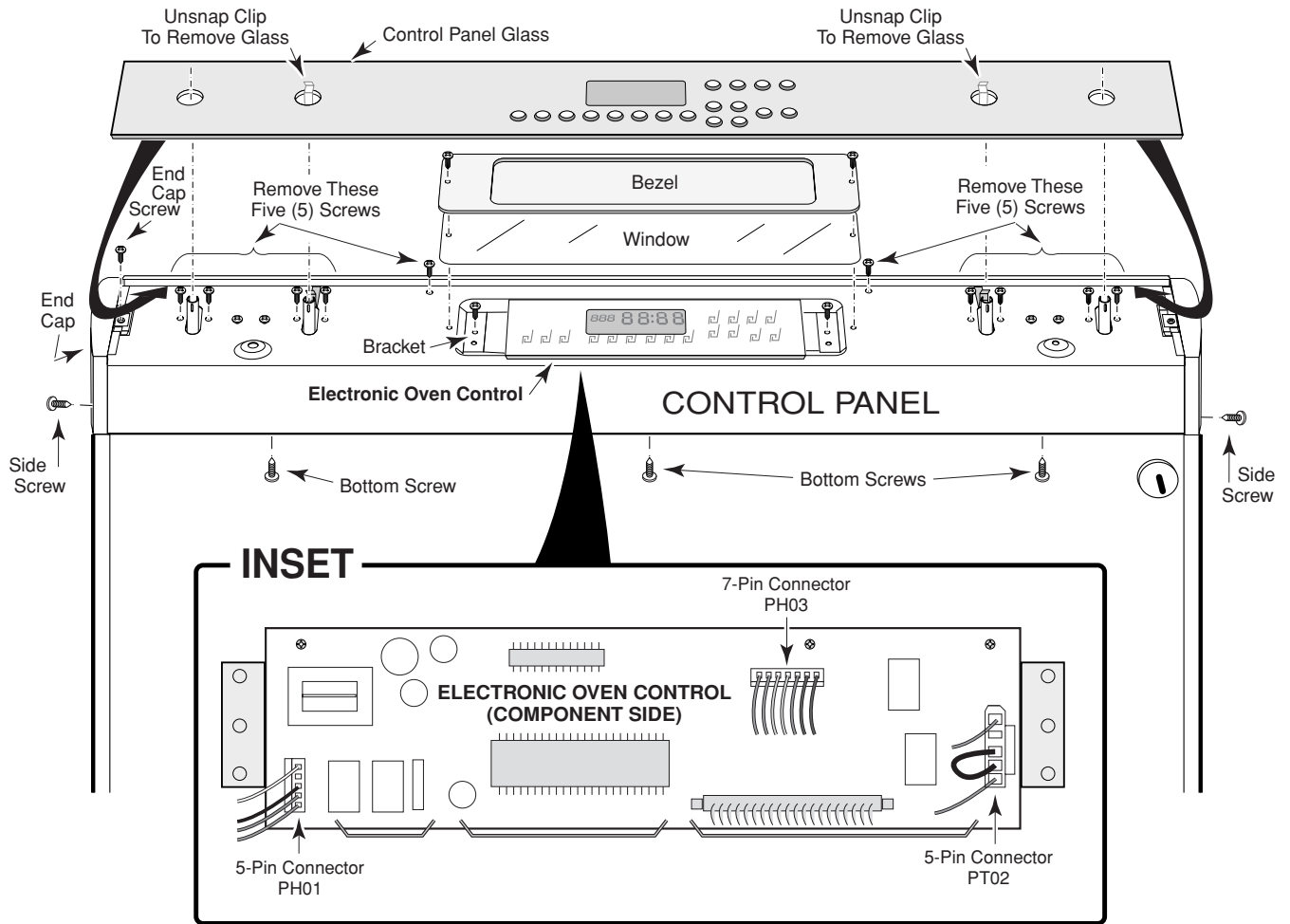


Figure 4-3

REMOVING A GAS VALVE, AN IGNITOR SWITCH, & A BIMETAL SWITCH

WARNING

Electrical Shock Hazard

Disconnect from electrical and gas supplies before servicing unit.

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

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

1. Turn off the gas supply and electrical power to the range.
2. Remove the control panel and rotate it back on top of the maintop so it is out of the way (see page 4-4 for the removal procedure). NOTE: You do not have to remove the electronic oven control from the panel.

Refer to Figure 4-4 for the following steps.

NOTE: If one ignitor switch is defective, all of the switches must be replaced as an assembly.

3. **To remove an ignitor switch:**

- a) Pull up firmly on the switch body, un-snap it from the mounting screw heads of the gas valve, and slide it off the valve stem.
- b) When all of the switches are removed, unplug the connectors.

4. **To remove a gas valve:**

- a) Remove the ignitor switch (see step 3).
- b) Remove the gas line tubing, and the mounting screw and rubber grommet from the gas valve, and remove the valve from the manifold.

5. **To remove a bimetal switch:**

- a) Remove the mounting screw.
- b) Disconnect the wires from the terminals.

6. Install the new component. REASSEMBLY NOTE: If you are replacing a gas valve, make sure that you reinstall the rubber grommets on both the gas valve and the mounting screw, (see the illustration), otherwise the valve will leak gas.

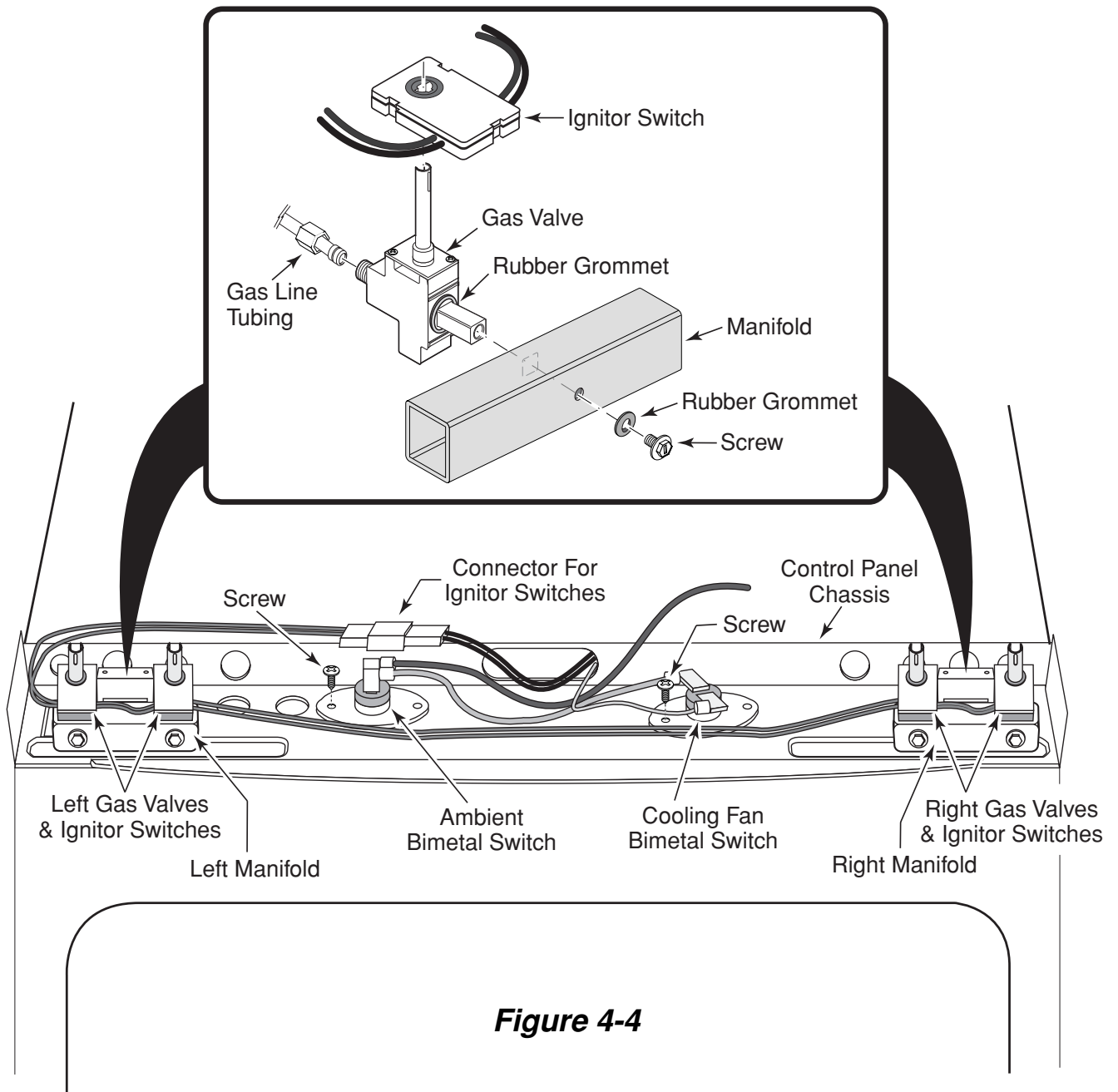


Figure 4-4

REMOVING A SPARK IGNITOR & A BURNER BASE

WARNING

Electrical Shock Hazard

Disconnect from electrical and gas supplies before servicing unit.

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

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

1. Turn off the gas supply and electrical power to the range.
2. Remove the grates and burner caps.
3. Remove the maintop from the range (see page 4-2 for the procedure).
4. Remove the control panel (see page 4-4 for the procedure) and unplug the three connectors from the board, then set the control panel aside.

Refer to Figure 4-5 for the following steps.

5. Remove the four screws from the control panel frame (2 on each end).
6. Lift the control panel frame and burner base as high as necessary to access the mounting screws and gas tubing for the burner base or spark ignitor, and prop the frame up.
7. **To remove a spark ignitor**, remove the mounting screw from the bracket and the ignitor wire from the electrode.
8. **To remove a burner base**, remove the gas line tubing.

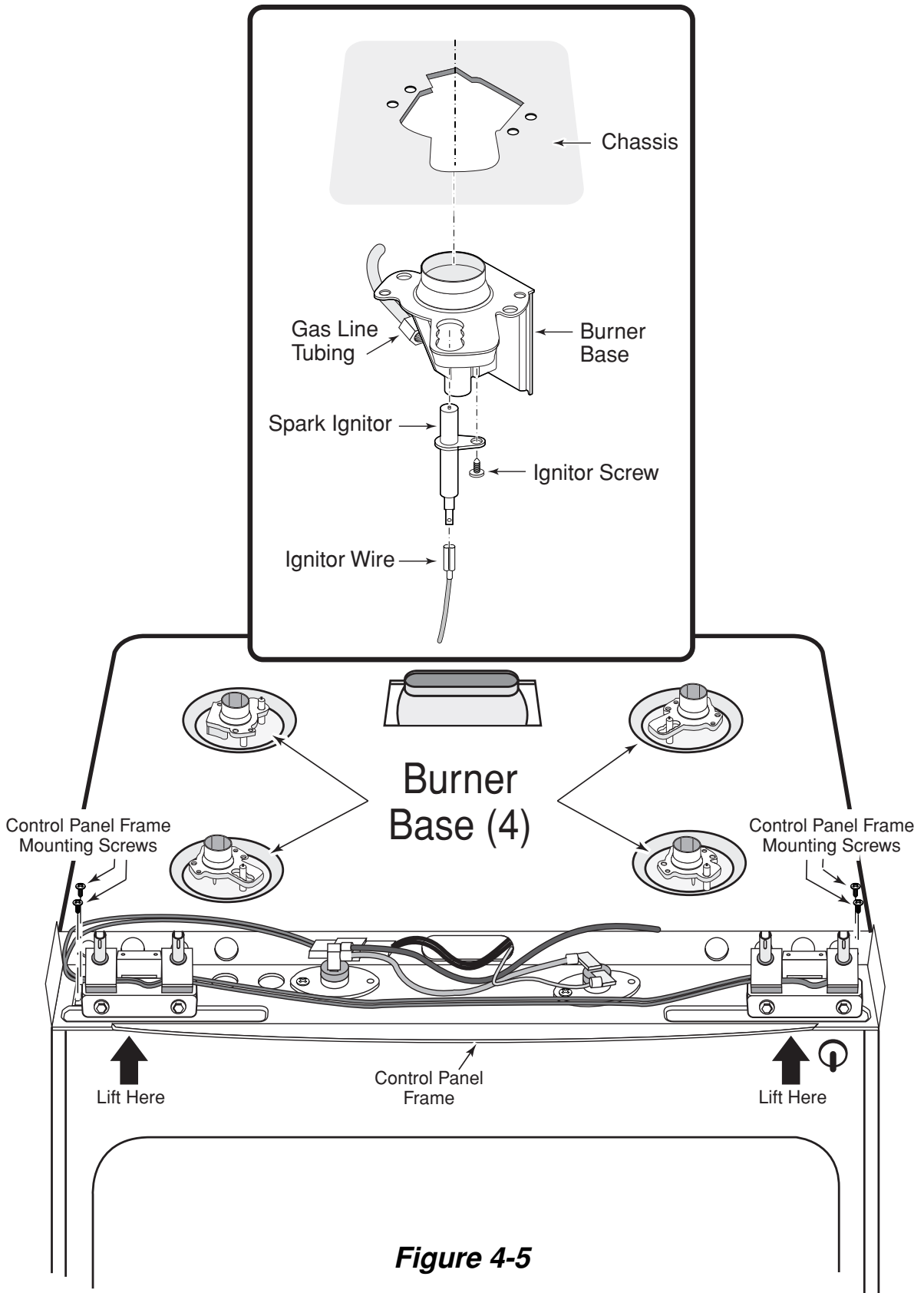


Figure 4-5

REMOVING THE OVEN BAKE AND BROIL BURNERS & IGNITORS

! WARNING

Electrical Shock Hazard

Disconnect from electrical and gas supplies before servicing unit.

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

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

1. Turn off the gas supply and electrical power to the range.
2. Pull the range out from the cabinet far enough to easily access the back panel.
3. Open the oven door and remove the oven racks.
4. Remove the three screws from the component cover on the rear panel and remove the cover (see Figure 4-6).

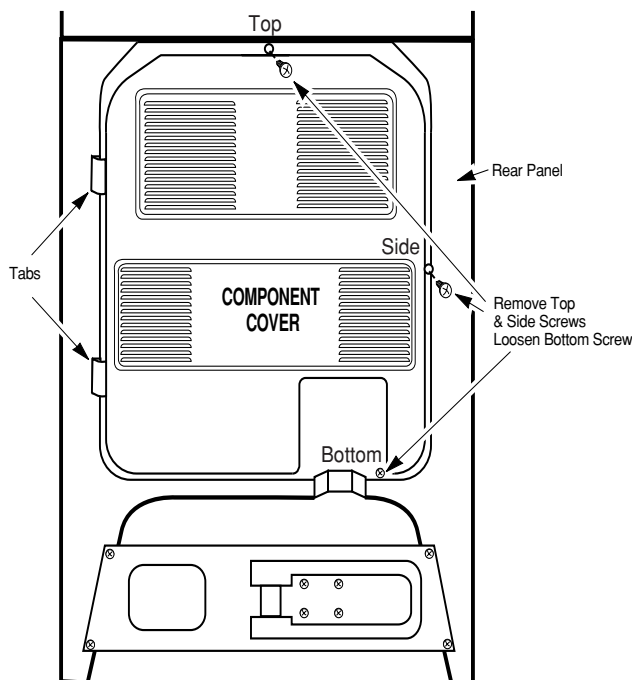


Figure 4-6

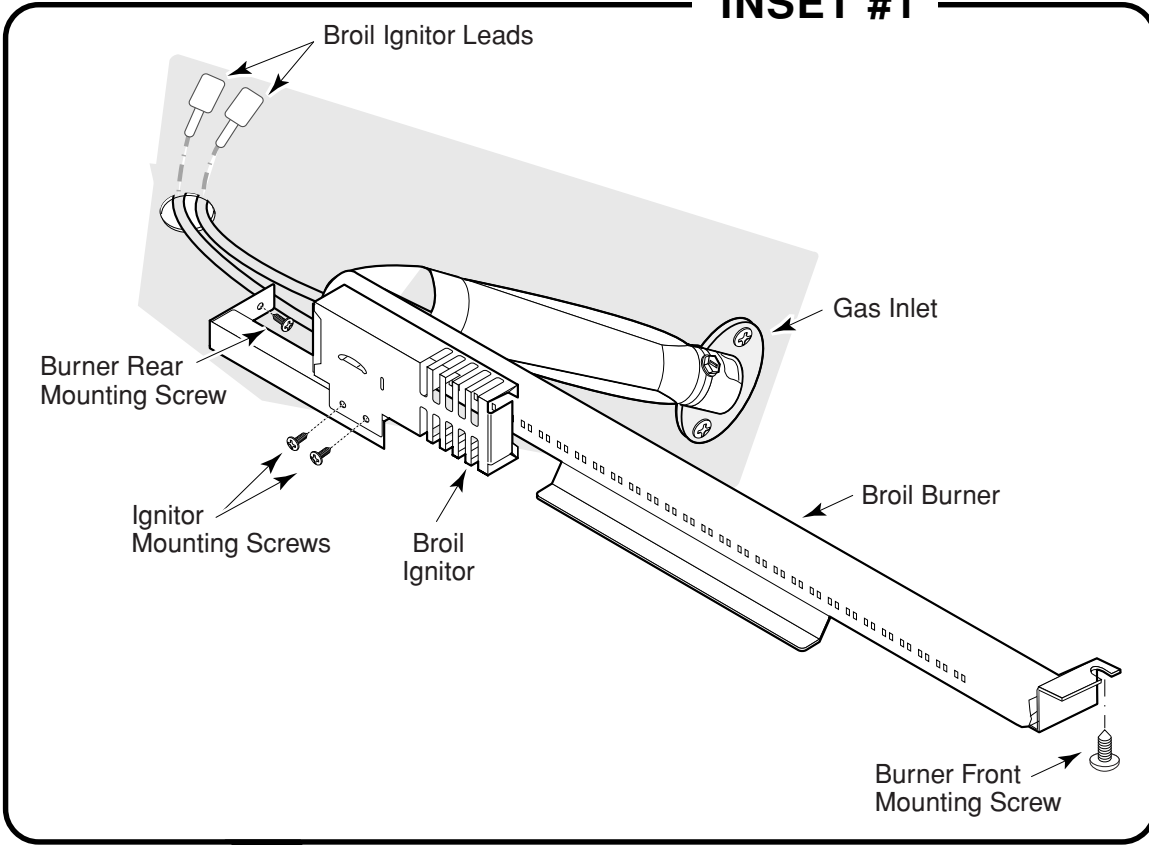
Refer to Figure 4-7 and inset #1 for the following steps.

5. **To remove the broil ignitor:**
 - a) From the back of the oven, disconnect the two broil ignitor leads from the harness wires.
 - b) From inside the oven, remove the two ignitor mounting screws from the bracket and pull the ignitor leads out of the access hole.
6. **To remove the broil burner:**
 - a) Remove the front and rear screws from the broil burner mounting brackets and remove the burner.
 - b) Remove the two screws from the broil ignitor bracket and remove the ignitor from the burner.

Refer to Figure 4-7 and inset #2 for the following steps.

7. **To remove the bake ignitor:**
 - a) From the back of the oven, disconnect the bake ignitor leads.
 - b) From inside the oven, remove the oven bottom.
 - c) Remove the four screws from the flame spreader and remove the spreader.
 - d) Remove the two screws from the bake ignitor mounting bracket, pull the two leads out of the oven access hole, and remove the old ignitor.
8. **To remove the bake burner,** remove the two indicated screws from the rear bake burner mounting bracket, push the burner back to unhook the front bracket from the oven liner slot, and remove the burner.

INSET #1



INSET #2

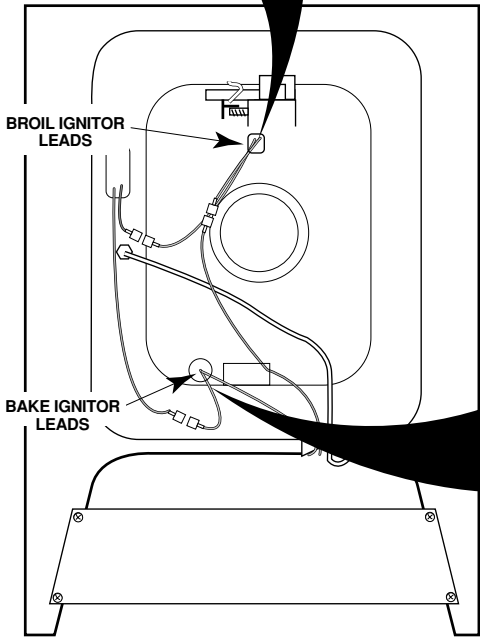
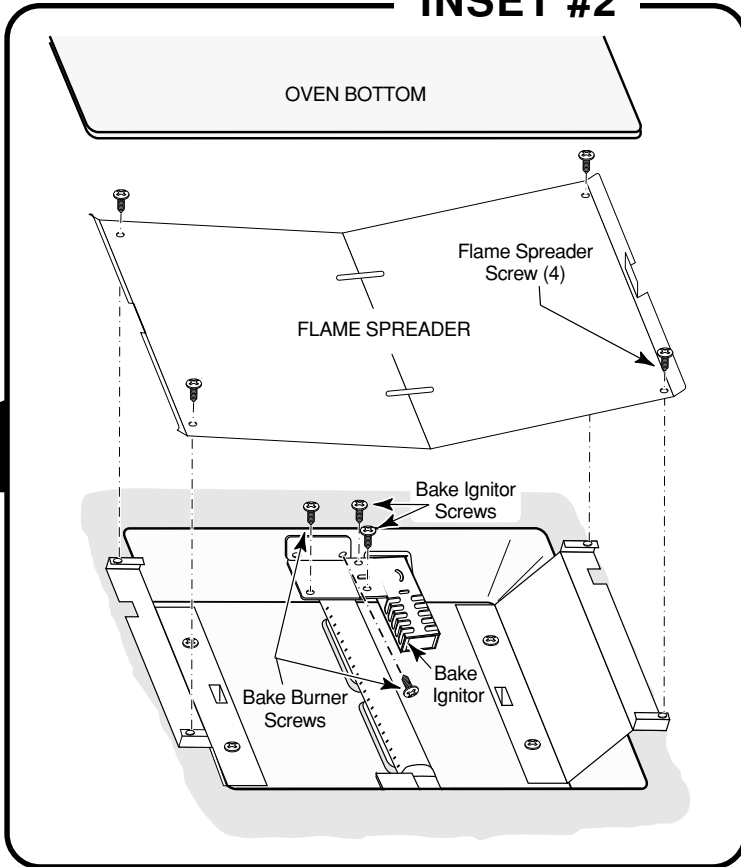


Figure 4-7



REMOVING THE OVEN LIGHT ASSEMBLY

! WARNING

Electrical Shock Hazard

Disconnect from electrical and gas supplies before servicing unit.

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

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

1. Turn off the gas supply and electrical power to the range.
2. Open the oven door and remove the oven racks.

Refer to Figure 4-8 for the following steps.

3. Unscrew the oven light lens and remove the lens and the gasket.
4. Unscrew the light bulb and set it aside.
5. Use a screwdriver blade and pry the old light socket assembly out of the oven opening and pull it forward as far as the wiring will allow.
6. Remove the wires from the light socket terminals.
7. Connect the wires to the new light socket terminals and then press the socket assembly into the opening until it snaps into place.

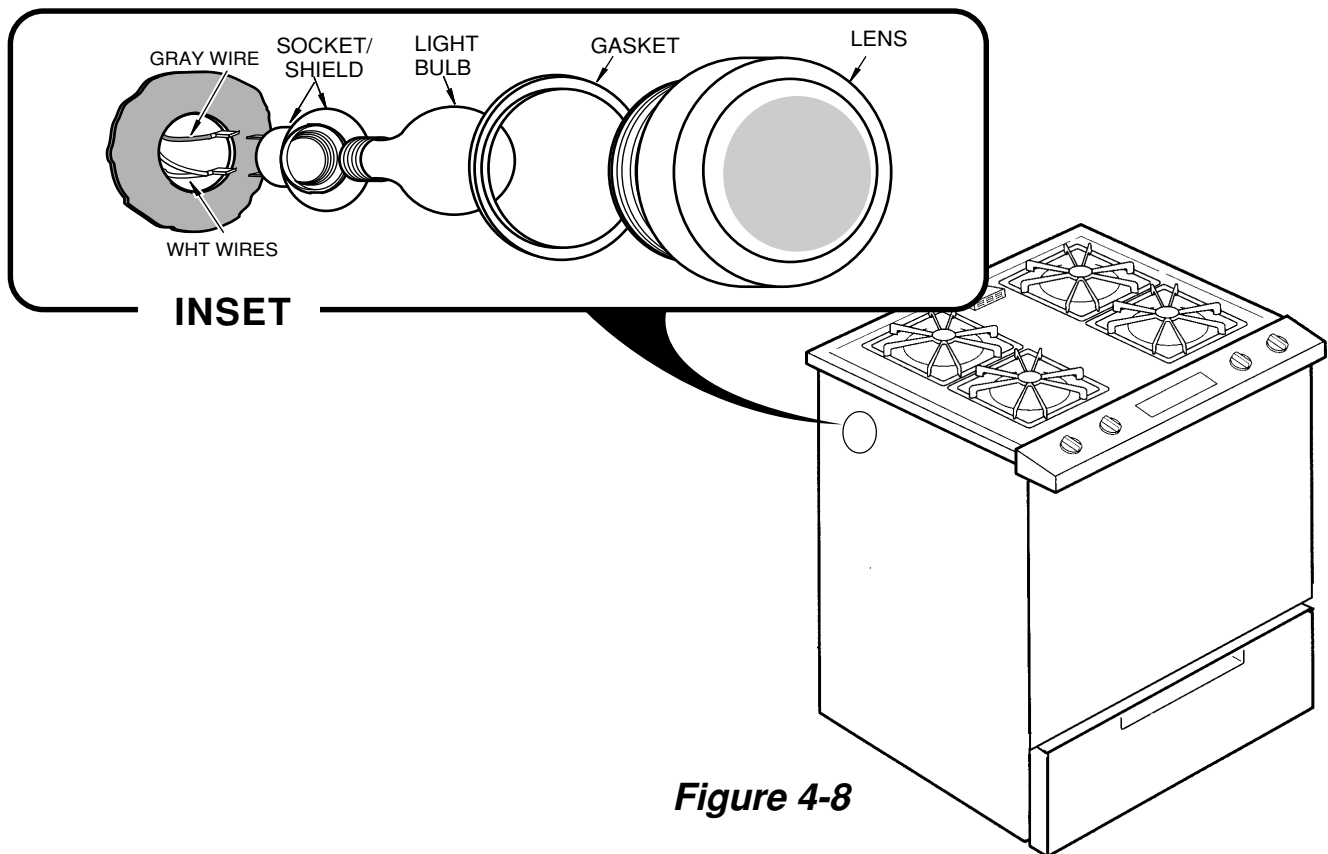


Figure 4-8

REMOVING THE OVEN DOOR GASKET

! WARNING

Electrical Shock Hazard

Disconnect from electrical and gas supplies before servicing unit.

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

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

1. Turn off the gas supply and electrical power to the range.
2. Pull the range out from the cabinet far enough to access the back panel.
3. Loosen (do not remove) the two gasket retaining screws (see Figure 4-9) so they extend approximately 1" from the rear panel.

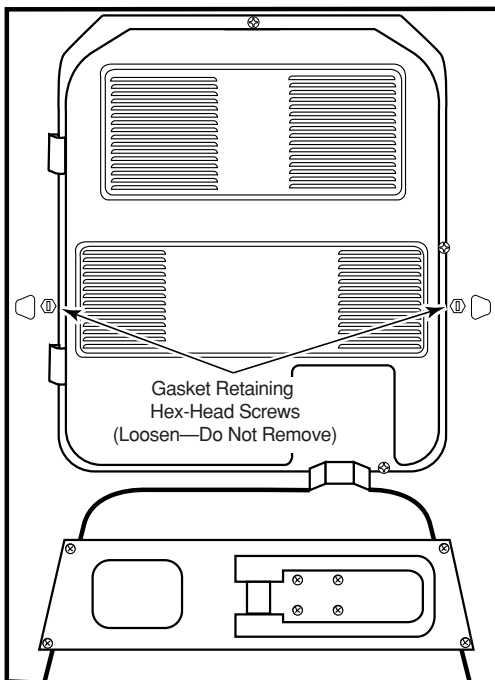


Figure 4-9

5. Pull the oven liner forward as far as possible so that the gap in the track for the door gasket is open.
6. Pull the old door gasket out of the track and remove the ends from the two holes in the front.

NOTE: The door gasket is divided into two segments along its length. The smaller segment has a piece of rope inside it, and the larger segment is hollow. Install the smaller segment with the rope into the track in the next step.

7. Use a screwdriver blade and insert 5" at one end of the new gasket into either hole in the front of the oven. Work the smaller segment of the gasket into the track around the three sides of the door. When you are finished, insert the remaining gasket into the front hole. Make sure that the gasket is evenly installed all the way around the door, otherwise a poor seal could result.
8. Tighten the two hex-head screws at the rear of the range to secure the gasket.
9. Install the screw in the floor of the oven liner.

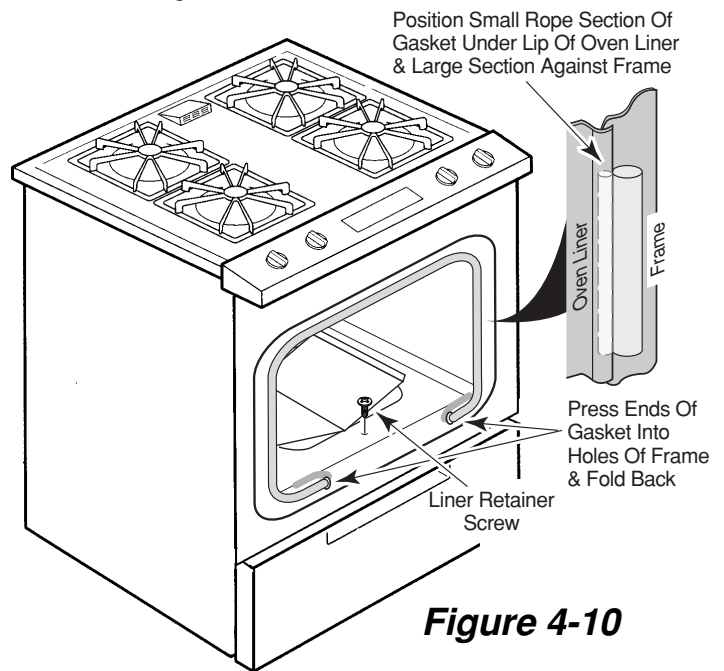


Figure 4-10

Refer to Figure 4-10 for the following steps.

4. Remove the oven liner retainer screw from the front floor of the oven.

REMOVING THE OVEN LIGHT SWITCH

WARNING

Electrical Shock Hazard

Disconnect from electrical and gas supplies before servicing unit.

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

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

1. Turn off the gas supply and electrical power to the range.
 2. Pull the range out from the cabinet far enough to access the back panel.
- Refer to Figure 4-11 for the following steps.
3. Remove the right side panel as follows (see inset #1). NOTE: The inset shows installation of the left side panel, however, the right side panel mounts to the range in the same manner:
 - a) Remove the two screws from the rear panel mounting tabs for the right side panel.
 - b) From the back, push the side panel forward as far as it will go and unhook it from the screw at the top front corner.
 - c) Pull the top away from the range several inches, then lift the panel free of the retaining clips at the bottom.
 4. Press in on the locking arms while you push out on the body of the oven light switch, and remove the switch (see inset #2).
 5. Unplug the three wires from the terminals of the oven light switch.

INSET #1

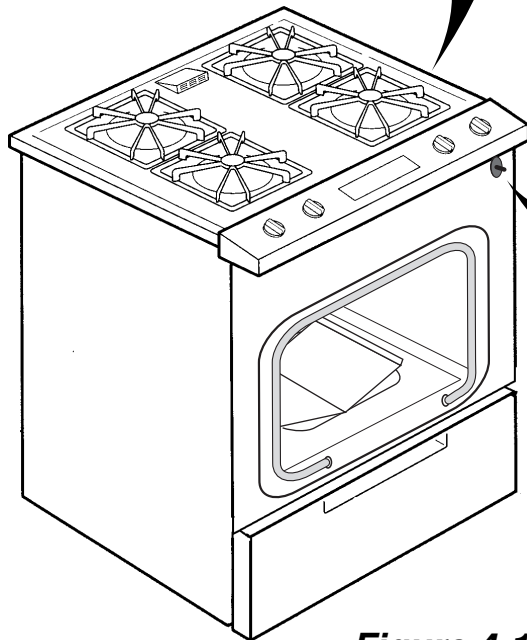
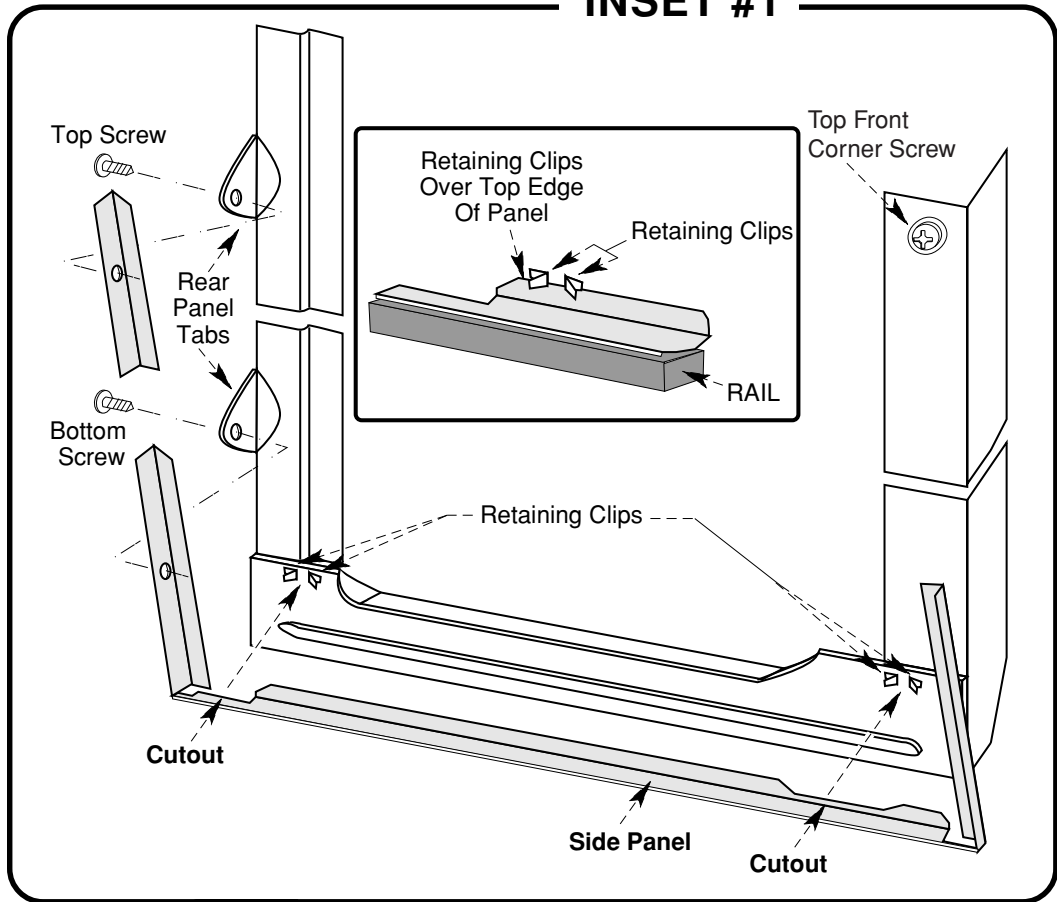
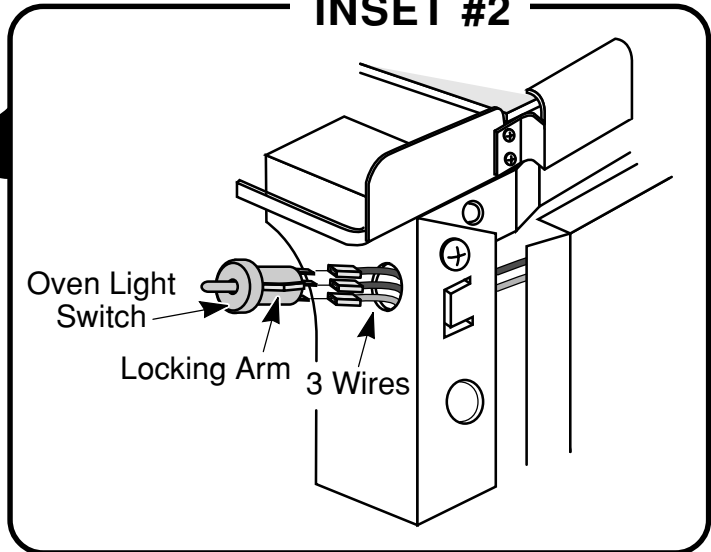


Figure 4-11

INSET #2



REMOVING THE SPARK MODULE & THE COOLING FAN

WARNING

Electrical Shock Hazard

Disconnect from electrical and gas supplies before servicing unit.

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

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

1. Turn off the gas supply and electrical power to the range.
2. Pull the range out from the cabinet far enough to access the back panel.
3. Remove the left side panel from the range (see step 3 on page 4-14 for the procedure).

Refer to Figure 4-12 for the following steps.

4. **To remove the spark module:**
 - a) Disconnect the six wires from the terminals of the spark module.
 - b) Remove the mounting screw from the spark module and remove it from the housing.
5. **To remove the cooling fan:**
 - a) Remove the storage drawer from the range and set it aside.
 - b) From inside the storage drawer area, remove the screw from the front of the housing.
 - c) From outside the range, remove the remaining screw from the front of the housing, and lower the housing so you can access the cooling fan mounting screws.
 - d) Unplug the wires from the terminals of the cooling fan.
 - e) Remove the three flat-head screws from the cooling fan and remove the fan from the housing.

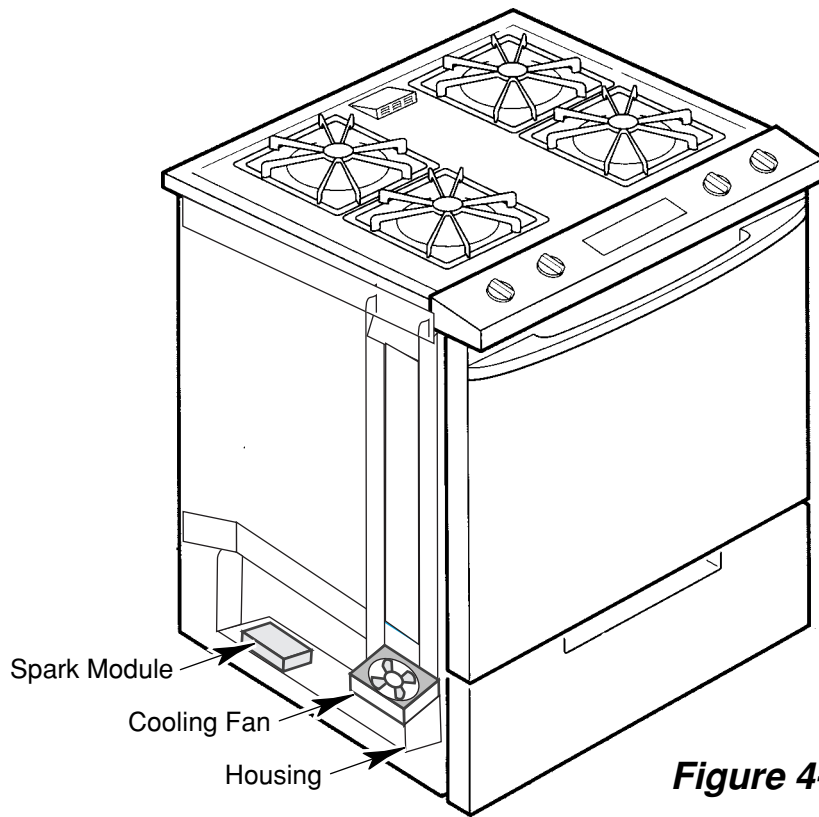
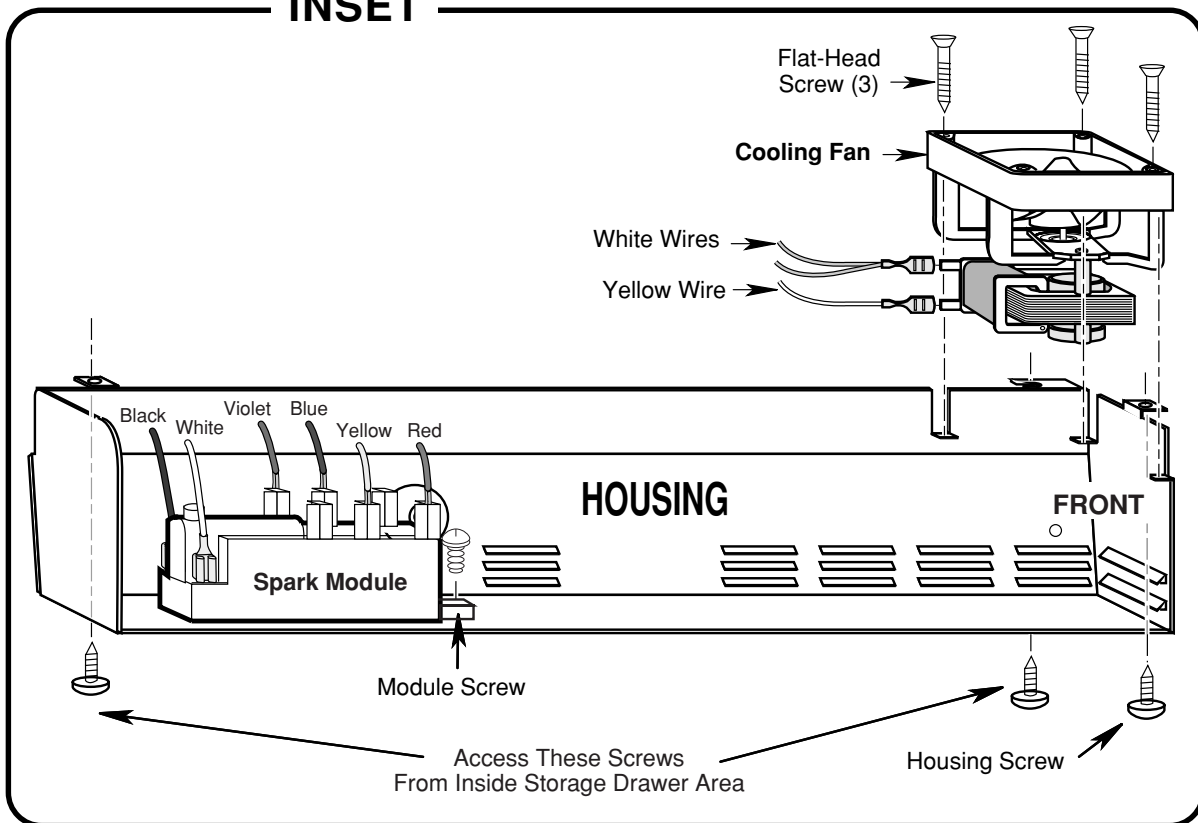


Figure 4-12

INSET



REMOVING THE OVEN TEMPERATURE SENSOR & THE DOOR LATCH ASSEMBLY COMPONENTS

! WARNING

Electrical Shock Hazard

Disconnect from electrical and gas supplies before servicing unit.

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

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

1. Turn off the gas supply and electrical power to the range.
2. Pull the range out from the cabinet far enough to access the back panel.
3. Remove the top and side screws from the component cover on the rear panel and loosen the bottom screw, then remove the cover (see Figure 4-13).

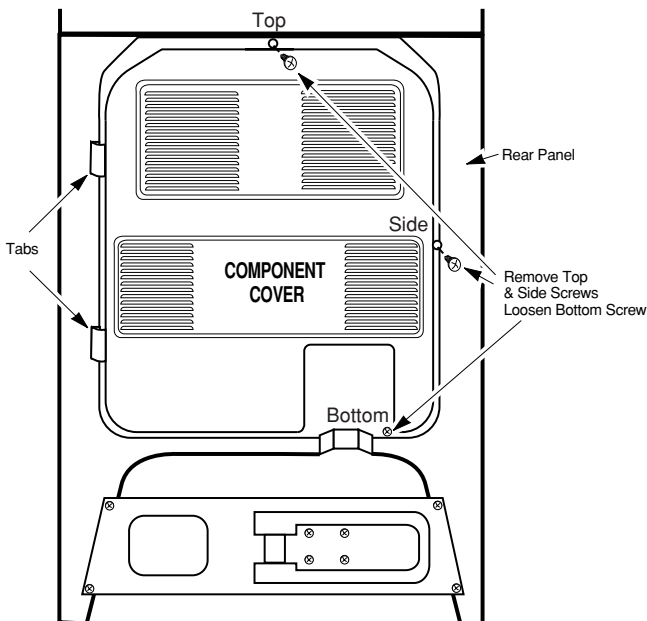


Figure 4-13

Refer to Figure 4-14 for the following steps.

4. **To remove the oven temperature sensor (Inset #1):**
 - a) Remove the mounting screw and pull the sensor out of the oven opening.
 - b) Unplug the connector from the sensor harness.
5. **To remove the door latch switch from the door latch assembly (Inset #2):**
 - a) Remove the 2-wire connector from the door latch switch terminals.
 - b) Remove the two screws and hex nuts with lockwashers from the body of the door latch switch and remove the switch from the bracket.
6. **To remove the solenoid from the door latch assembly (Inset #2):**
 - a) Remove the screw and star washer from the solenoid, then unhook and remove it from the bracket. **NOTE:** The plunger and spring are separate from the solenoid. Remove them from the old solenoid, and install them on the new one.
 - b) Disconnect the wires from the terminals of the solenoid.

INSET #1

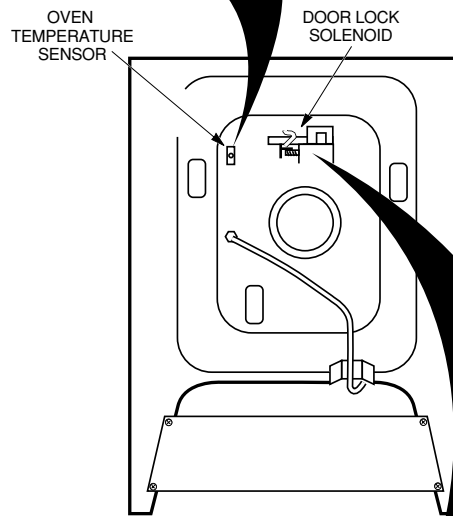
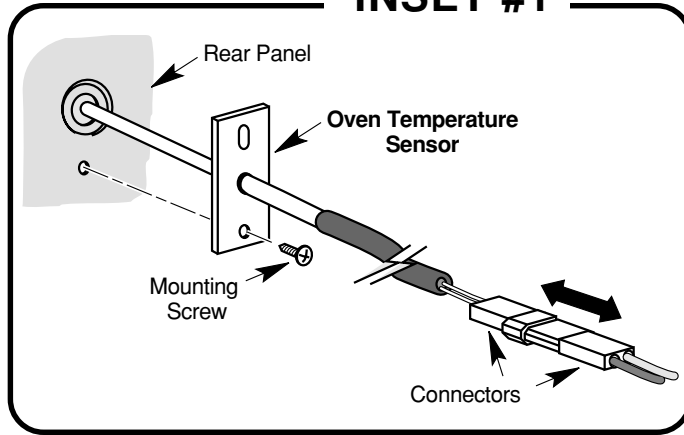
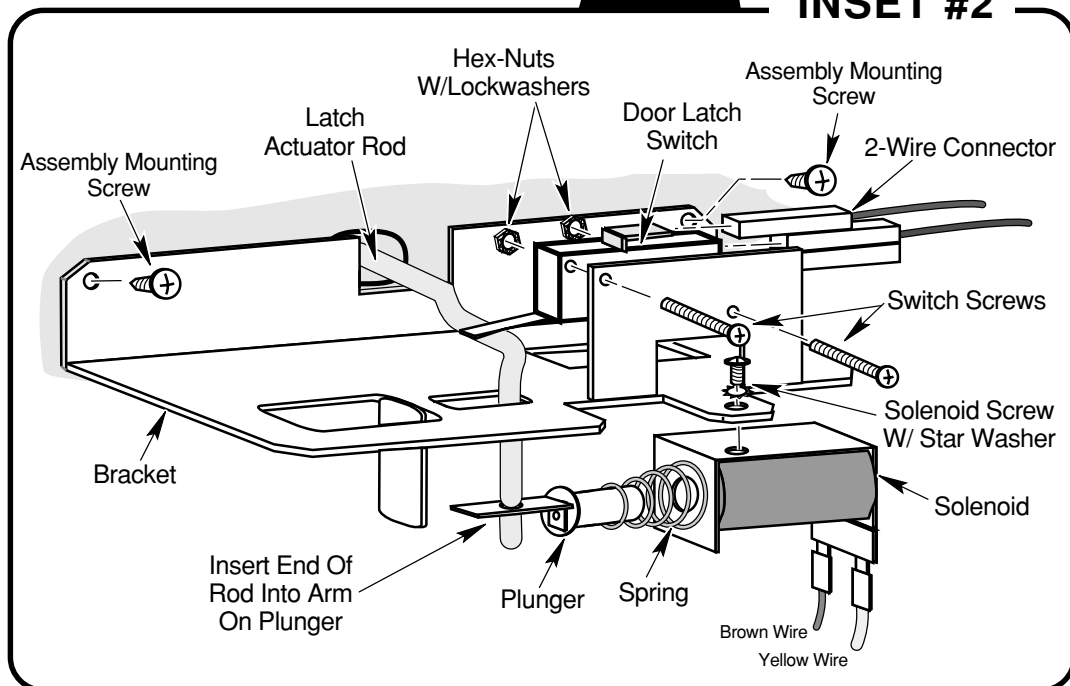


Figure 4-14

INSET #2



REMOVING THE GAS PRESSURE REGULATOR & SAFETY VALVE

WARNING

Electrical Shock Hazard

Disconnect from electrical and gas supplies before servicing unit.

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

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

1. Turn off the gas supply and electrical power to the range.
2. Pull the range out from the cabinet far enough to access the back panel.
Refer to Figure 4-15 for the following steps.
3. Remove the four mounting panel screws, the single pressure regulator screw, and the four safety valve screws, then remove the panel and set it aside.
4. Remove the three gas lines going to the pressure regulator and the safety valve.
5. Remove the four wire connectors from the safety valve and remove the pressure regulator and the safety valve. **NOTE:** The pressure regulator and the safety valve are serviced as one assembly.

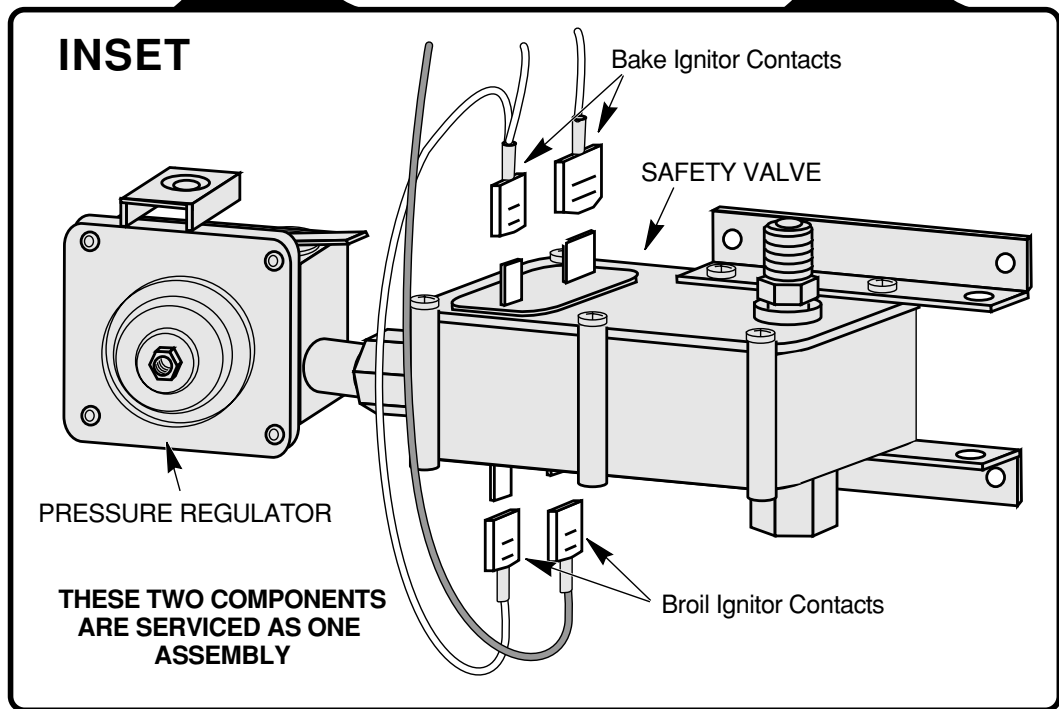
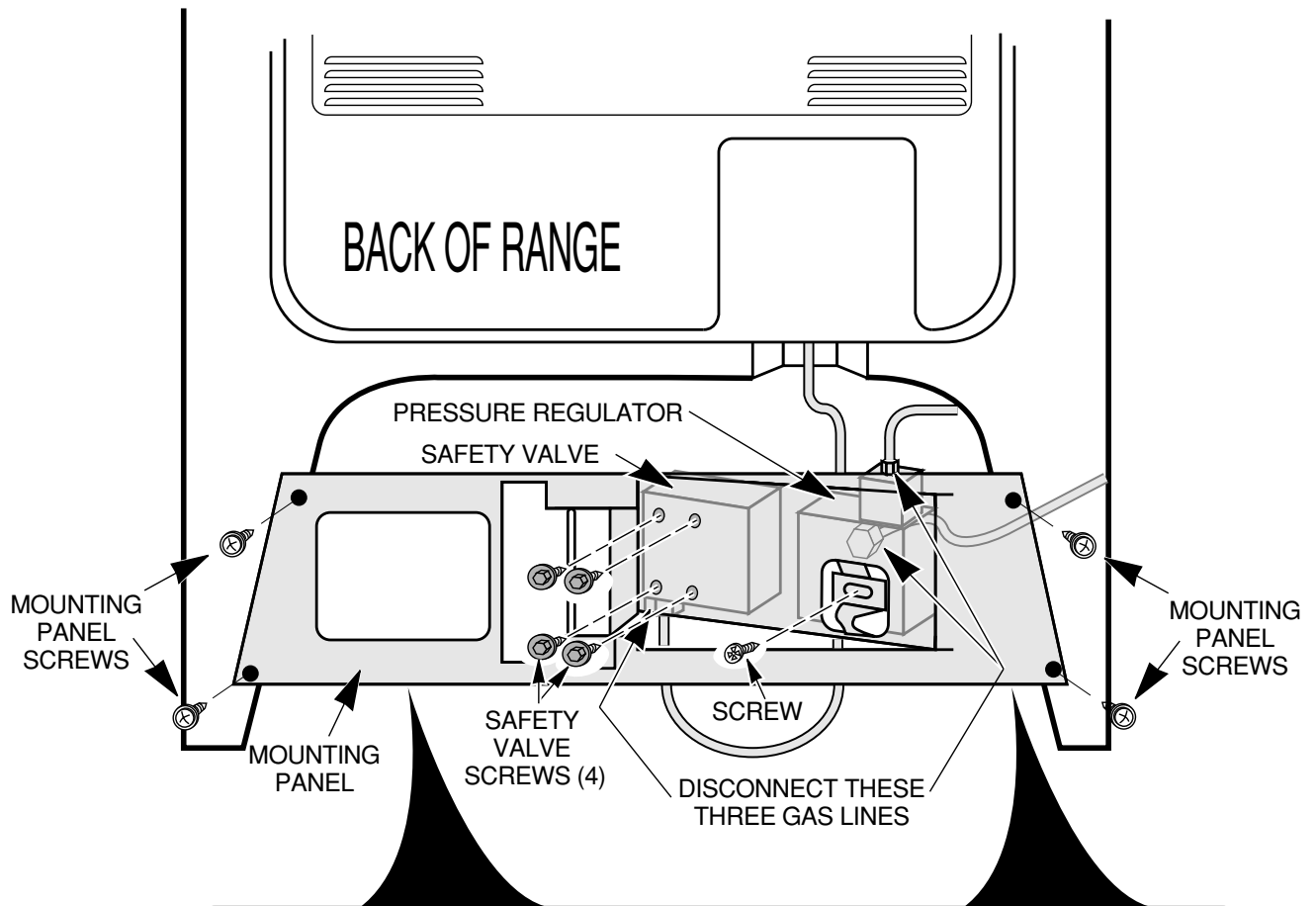


Figure 4-15

REMOVING THE OVEN DOOR GLASS

! WARNING

Electrical Shock Hazard

Disconnect from electrical and gas supplies before servicing unit.

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

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

NOTE: The oven door has three glass panels (see Figure 4-16). To replace the oven glass panels inside the door, you must first remove the door glass. To replace the inner oven glass, you have to first remove the door glass and the outer oven glass panels. Refer to the section(s), as necessary.

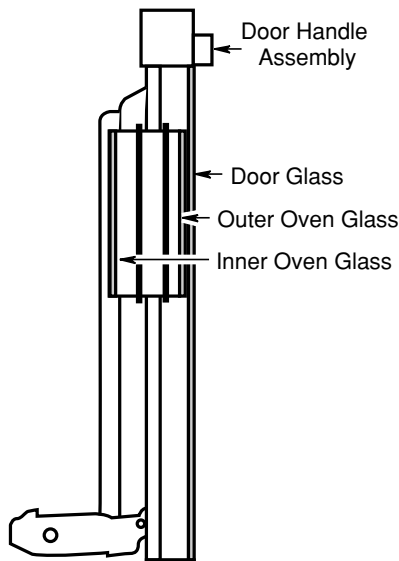


Figure 4-16

Refer to Figure 4-17 for the following steps.

1. Open the oven door to the first (broil) stop.
2. Grasp the oven door on both sides. Simultaneously lift straight up and pull out on the door approximately 2-inches to release the hinge brackets from their stop.

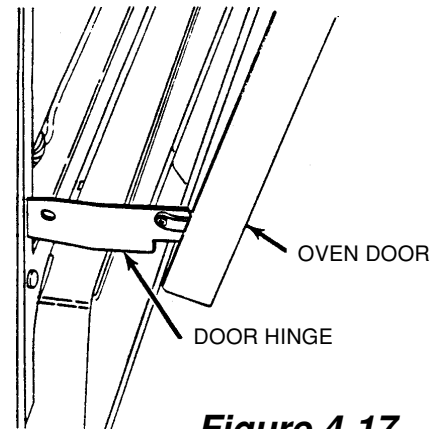


Figure 4-17

3. Close the door completely so it is perpendicular to the floor, then pull the door out of the oven tracks, and place it on a clean padded surface.
4. Position the door upside down so that it rests on the top of the handle assembly, (see Figure 4-18), and remove the four screws from the door glass retainer.

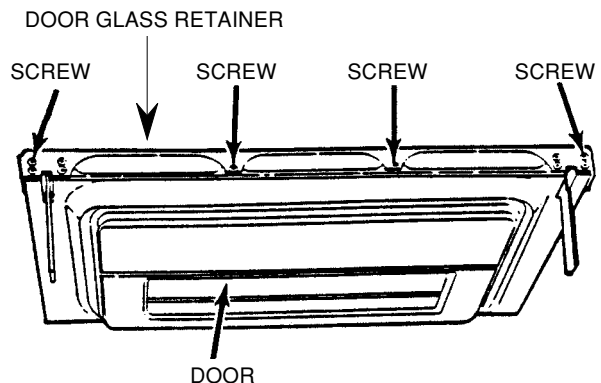


Figure 4-18

5. Lift the bottom of the door glass and slide the top out from under the two tabs in the door handle assembly (see Figure 4-19).

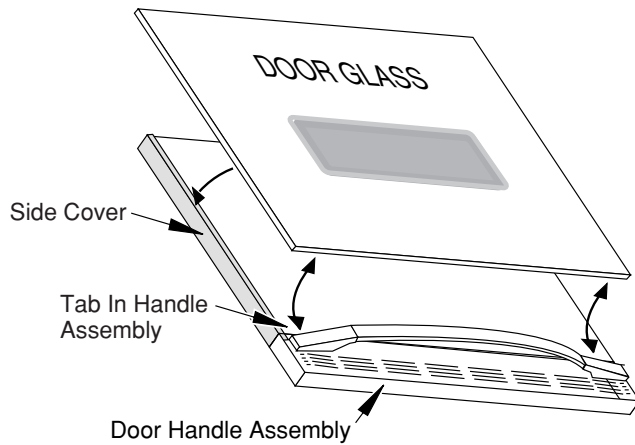


Figure 4-19

6. Install the new door glass and the retainer. **NOTE:** Make sure that the glass is over the front edges of the side covers and not under them.
7. Reinstall the oven door on the range as follows:
 - a) Grasp the door by the sides, and slide the two door hinges into the tracks in the range slots as far as the stop.
 - b) Pull the oven door open to the first (broil) stop.
 - c) Lift the door straight up, and push in until the hinges are over the stop and are fully in place.
 - d) Close the oven door.

REMOVING THE OUTER OVEN GLASS

1. Refer to "Removing The Oven Door Glass" on page 4-22 and remove the door glass, then proceed with the following steps.
2. Position the oven door as shown in the illustration.
3. Remove the two screws from the door handle assembly and remove the assembly.
4. Remove the two side covers.
5. Remove the two screws from the retaining panel, then unhook the panel from the outer oven glass and remove it.
6. Unhook the glass from the door tabs and remove it.
7. Install the new outer oven glass in the door.
8. Reassemble the oven door.
9. Reinstall the oven door on the range as follows:
 - a) Grasp the door by the sides, and slide the two door hinges into the tracks in the range slots as far as the stop.
 - b) Pull the oven door open to the first (broil) stop.
 - c) Lift the door straight up, and push in until the hinges are over the stop and are fully in place.
 - d) Close the oven door.

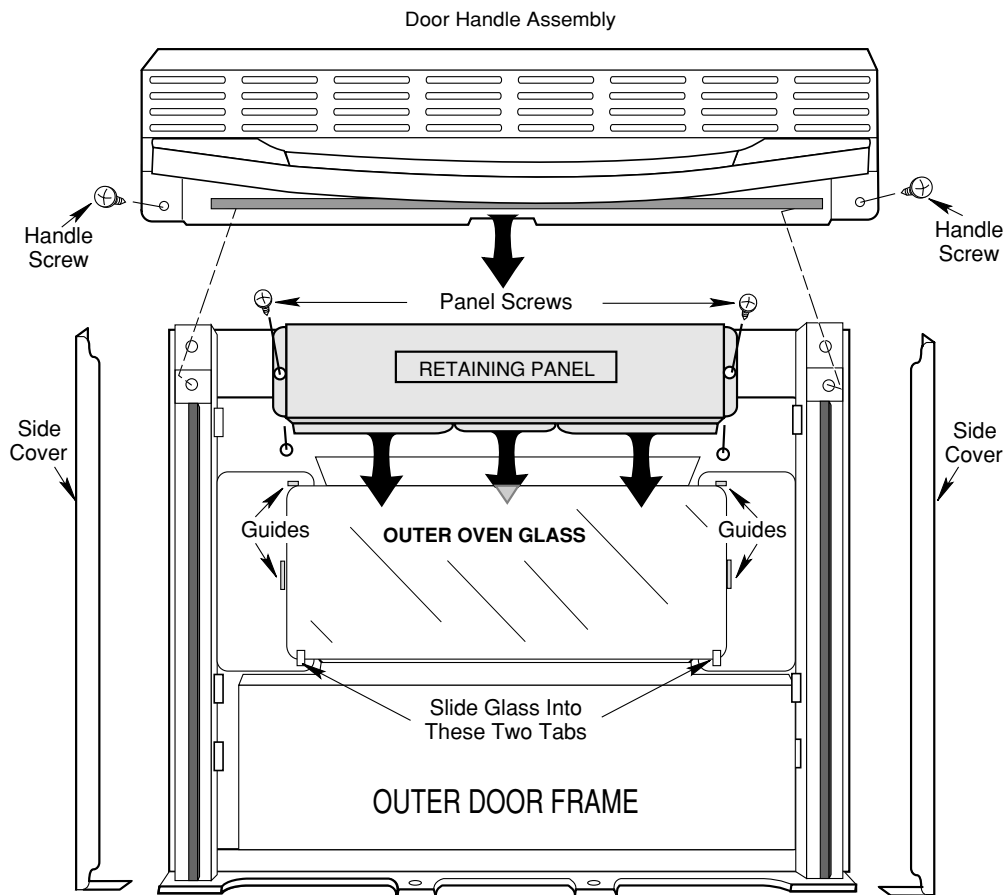


Figure 4-20

REMOVING THE INNER OVEN GLASS

1. Remove the door glass and the outer oven glass, as instructed on pages 4-22 through 4-24, then proceed with the following steps.
2. Position the oven door with the inner oven glass facing up.
3. Remove the two bottom screws from the right hinge, then lift the bottom of the hinge assembly and unhook the top tab from the slot in the panel, and remove the hinge.
4. Lift the right side of the inner door panel. Slide the panel out from under the lip at the bottom of the door, and from under the three tabs on the left hinge assembly, and remove the panel.
5. Remove the door insulation blanket.
6. Lift the inner oven glass and frame assembly off the door.
7. If you are replacing the fiberglass gasket from around the window opening in the door, remove and replace it at this time.
8. Install the new inner oven glass over the fiberglass gasket.
9. Reassemble the oven door.
10. Reinstall the oven door on the range as follows:
 - a) Grasp the door by the sides, and slide the two door hinges into the tracks in the range slots as far as the stop.
 - b) Pull the oven door open to the first (broil) stop.
 - c) Lift the door straight up, and push in until the hinges are over the stop and are fully in place.
 - d) Close the oven door.

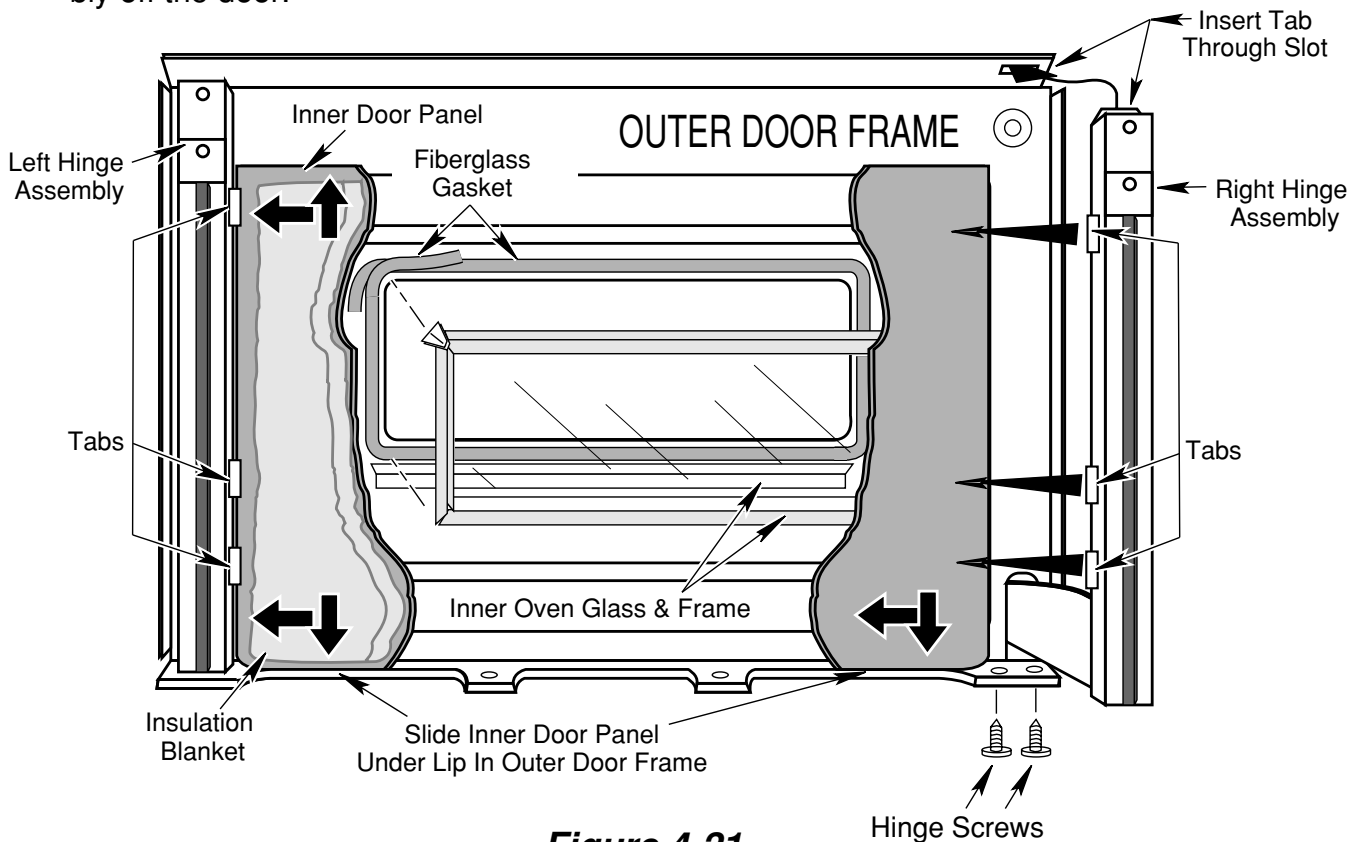


Figure 4-21

— NOTES —

COMPONENT TESTING

! WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

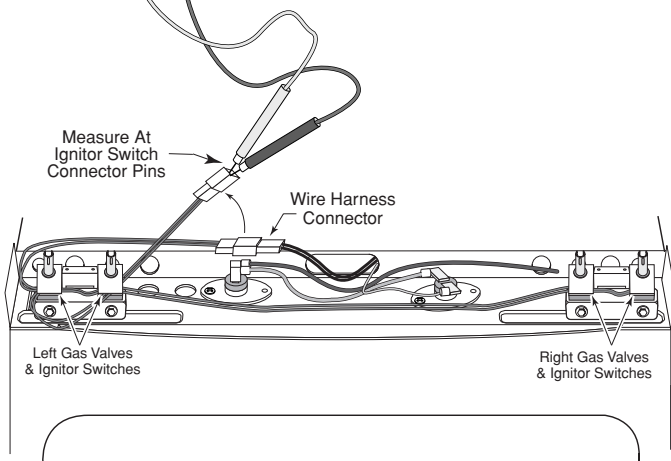
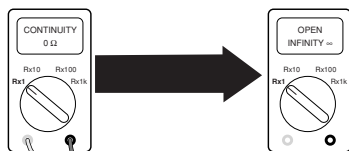
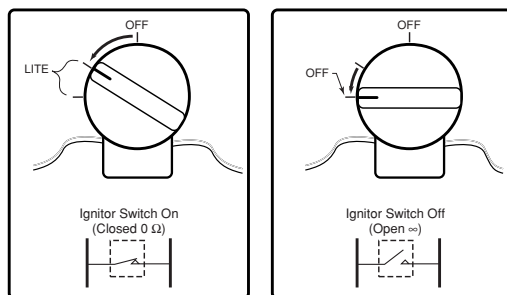
Failure to do so could result in electrical shock or other personal injury.

THE IGNITOR SWITCHES

Test Procedure

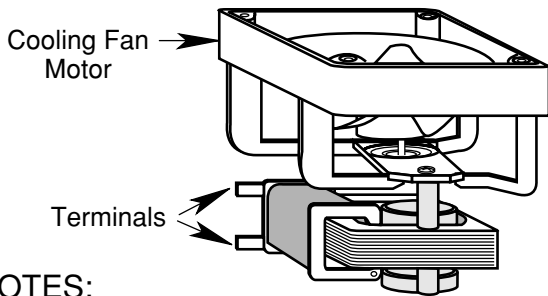
NOTE: The ignitor switches are connected to each other in a parallel circuit so that if one switch fails, the others will still operate. To check each of the ignitor switches for proper operation, perform the following steps.

1. Remove the knobs and control panel glass (see steps 5 and 6 on page 4-2).



2. Reinstall the knobs back on the valve stems.
3. Remove the two screws from the cover bracket and remove the bracket and window from the electronic oven control.
4. Remove the two screws from the electronic oven control and lift it off the control panel (see page 4-5). You will now be able to access the ignitor switch connector.
5. Disconnect the ignitor switch connector from the wire harness (see the illustration).
6. Connect the leads of an ohmmeter to the pins of the spark module connector.
7. Set the ohmmeter to the R x 1 scale.
8. Press and turn one of the gas valve knobs to the LITE position. At that point, the switch should close, and the meter should indicate continuity.
9. Continue to turn the knob away from the LITE position. The switch should open, and the meter should indicate an open (infinite ∞) circuit.
10. Repeat steps 8 & 9 for all of the other ignitor switches. If the readings are not as stated, replace the entire ignitor switch assembly (they are supplied as an assembly and cannot be changed individually).

COOLING FAN MOTOR



NOTES:

1. FAN RATING IS 120 VAC, 50/60 HZ, 2.5-WATTS.

! WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

Test Procedure

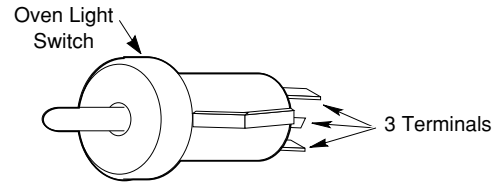
Refer to page 4-16 for the location of the cooling fan motor and the procedure for servicing it.

To test the cooling fan motor windings, perform the following steps:

1. Use an ohmmeter and set the range switch to R x 1.
2. With no power applied, touch the leads of the ohmmeter to the terminals of the fan motor (you do not have to remove the wires from the terminals). You should obtain a reading of between 55 Ω and 80 Ω .

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

OVEN LIGHT SWITCH



! WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

Test Procedure

Refer to page 4-14 for the location of the oven light switch and the procedure for servicing it.

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

1. Use an ohmmeter and set the range switch to R x 1.
2. With no power applied, remove the wires from the switch terminals.
3. Touch the leads of the ohmmeter to the following terminal wires of the switch. NOTE: A closed circuit = continuity (0 Ω), an open circuit = infinite (∞):

Black & Red:

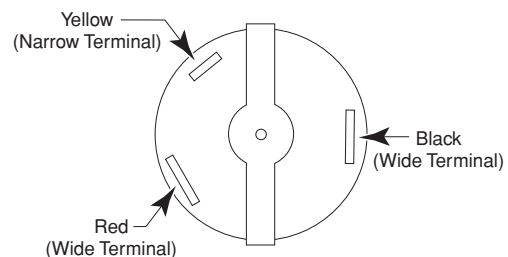
Door Closed = infinite.

Door Open = continuity.

Black & Yellow:

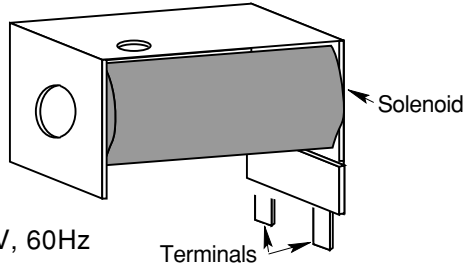
Door Closed = continuity.

Door Open = infinite.



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

DOOR LOCK SOLENOID



Rating: 120V, 60Hz

! WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

Test Procedure

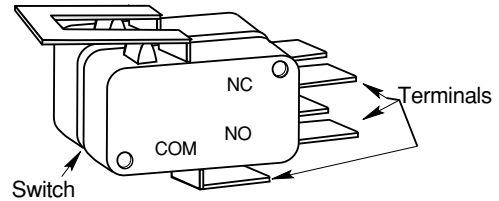
Refer to page 4-18 for the location of the door lock solenoid and the procedure for servicing it.

To test the solenoid windings, perform the following steps:

1. Use an ohmmeter and set the range switch to R x 1.
2. With no power applied, remove the wire from either solenoid terminal.
3. Touch the leads of the ohmmeter to the terminals of the solenoid. You should obtain a reading of between 40 Ω and 65 Ω .

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

DOOR LATCH SWITCH



! WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

Test Procedure

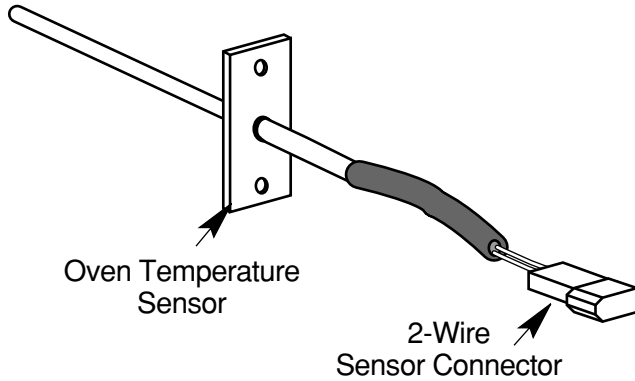
Refer to page 4-18 for the location of the door latch switch and the procedure for servicing it.

To test the switch, perform the following steps:

1. With no power applied, remove the wires from the door latch switch terminals.
2. Touch one of the ohmmeter leads to the COM terminal and leave it there for steps 3 and 4.
3. Touch the other ohmmeter lead to the NO terminal. The meter should indicate an open (infinite ∞) circuit. Close the switch and the ohmmeter should indicate 0 Ω (closed circuit).
4. Touch the ohmmeter lead to the NC terminal. You should obtain a meter reading of 0 Ω . Close the switch and the meter should indicate an open (infinite ∞) circuit.

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

OVEN TEMPERATURE SENSOR



! WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

Test Procedure

Refer to page 4-18 for the location of the oven temperature sensor and the procedure for servicing it.

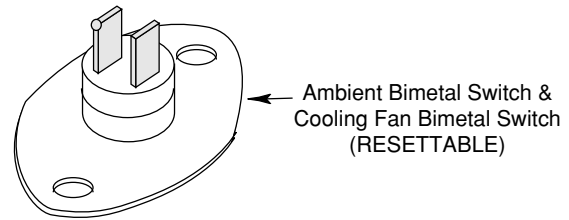
To test the oven temperature sensor, perform the following steps:

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

Temperature (°F)	Resistance (Ω)
32 ± 1.9	1000 ± 4.0
75 ± 2.5	1091 ± 5.3
250 ± 4.4	1453 ± 8.9
350 ± 5.4	1654 ± 10.8
450 ± 6.9	1853 ± 13.5
550 ± 8.2	2047 ± 15.8
650 ± 8.6	2237 ± 18.5
800 ± 13.6	2667 ± 24.4

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

BIMETAL SWITCH



! WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

Test Procedure

Refer to page 4-6 for the location of the bimetal switches and the procedure for servicing them.

To test the two bimetal switches, perform the following steps:

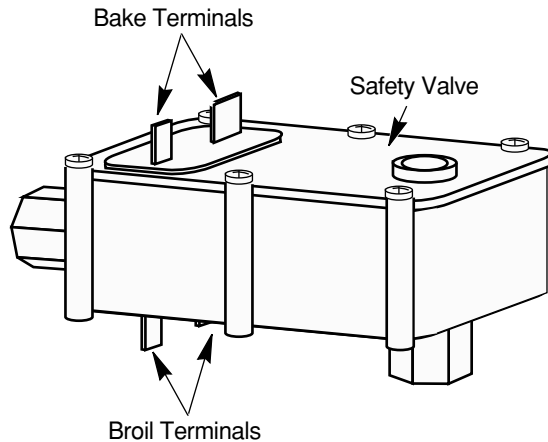
1. Use an ohmmeter and set it to the R x 1 scale.
2. With no power applied, touch the ohmmeter leads to the switch terminals as follows. You should obtain the following readings at the indicated temperatures:

Ambient Bimetal Switch = continuity below the trip temperature of 203°F.

Cooling Fan Bimetal Switch = open below the trip temperature of 104°F.

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

SAFETY VALVE



! WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

Test Procedure

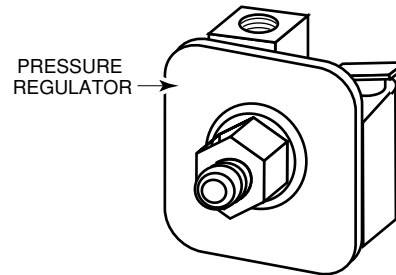
Refer to page 4-20 for the location of the safety valve and the procedure for servicing it.

To test a valve, perform the following steps:

1. Use an ohmmeter and set the range switch to R x 1.
2. With no power applied, disconnect the wires from the valve terminals. You should obtain readings on both the bake and broil terminals of less than $1 \Omega \pm 20\%$.

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

PRESSURE REGULATOR



! WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

Test Procedure

Refer to page 4-20 for the location of the pressure regulator and the procedure for servicing it.

The pressure regulator must be checked at a minimum of 1-inch water column above the set pressure. If the readings are not within the range shown, the regulator is defective and should be replaced. The inlet pressure to the regulator should be as follows for operation:

Natural Gas—Set the pressure @ 5-inches, maximum pressure = 14-inches.

L.P. Gas—Set the pressure @ 11-inches, maximum pressure = 14-inches.

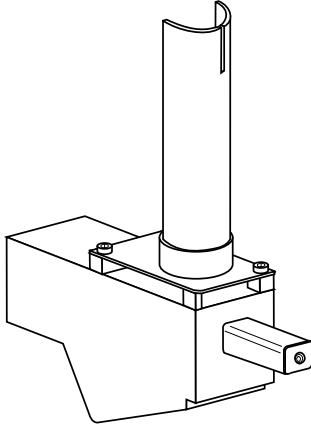
Line Pressure Test above 1/2 lb psi (gauge):

The range and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing at test pressures greater than 1/2 psig (3.5 kPa).

Line Pressure Test @ 1/2 lb psi (gauge):

The range and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing at test pressures equal to or less than 1/2 psig (3.5 kPa).

GAS VALVE



! WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

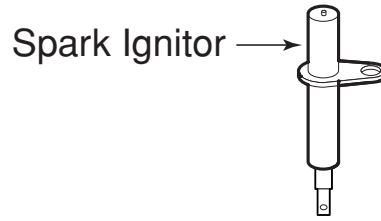
Test Procedure

Refer to page 4-6 for the location of the gas valves and the procedure for servicing them.

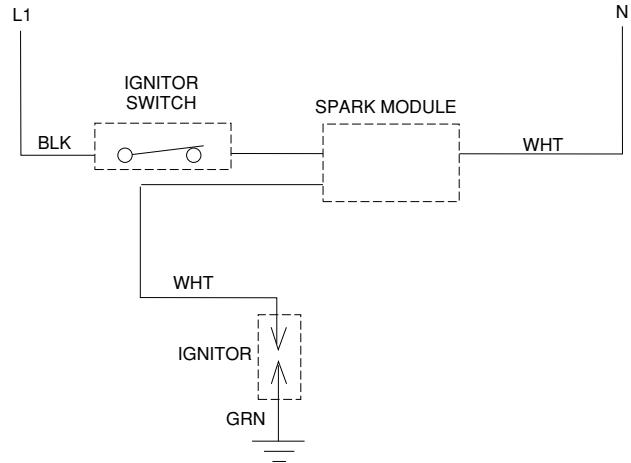
To test a gas valve, perform the following step:

Use a low-pressure manometer, and measure the inlet and outlet pressure across the valve. There should be no pressure drop. If there is a pressure drop, the valve should be replaced.

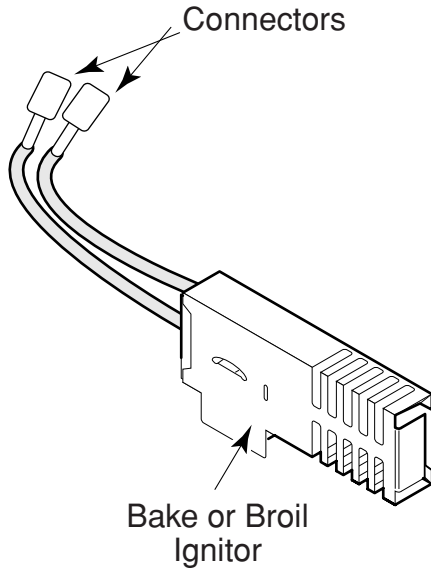
SPARK IGNITOR



NOTE: All of the ignitors should spark at the same time, regardless of which valve is turned on.



BAKE & BROIL IGNITORS



! WARNING

Electrical Shock Hazard

Disconnect from electrical supply before servicing unit.

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

Test Procedure

Refer to page 4-10 for the location of the bake and broil burner ignitors and the procedure for servicing them.

To test a burner ignitor, perform the following steps:


1. Use an ohmmeter and set the range switch to R x 1.
2. With no power applied, disconnect the burner wires from the wiring harness. You should obtain readings on both the bake and broil wires of approximately 200 Ω

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

— NOTES —

DIAGNOSIS & TROUBLESHOOTING

TROUBLESHOOTING CHART


WARNING

Electrical Shock Hazard

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

PROBLEM	POSSIBLE CAUSE	SOLUTION
Oven will not operate.	Electronic oven control is not set properly. A delay start has been programmed.	Reset the oven control (see the Use & Care Guide for instructions describing the function you are operating). Wait for the start time to be reached.
Burner fails to light.	Range is not plugged in. A household fuse or circuit breaker has opened. Burner ports are clogged.	Plug power cord into a live AC outlet. Replace fuse or reset the breaker. Clean burner ports with straight pin.
Burner flames are uneven.	Burner ports are clogged.	Clean burner ports with straight pin.
Burner flames lift off ports, are yellow, or are noisy when turned off.	The air-to-gas mixture is incorrect.	Adjust air shutters for bake or broil burners. Top burner ports are clogged. Clean or replace burner.
Burner makes "popping" noise when on.	Burner is wet.	Allow burner to dry.
Burners spark.	It is normal for all four burners to spark briefly when: <ul style="list-style-type: none"> • A draft is blowing on the burners. • A very large pot on burner causes flame to be unstable. • The burner is turned on but has not ignited. Continuous sparking may be caused when: <ul style="list-style-type: none"> • A switch contact is wet. • There is a faulty spark module. • The wall outlet wiring is not correct. 	Allow switch to dry. Replace the spark module. Rewire wall outlet.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Control knob will not turn.	Press in on the knob before turning.	If knob is still hard to turn, replace the gas valve.
The self-clean cycle will not operate.	A delay start time has been programmed. The cooling fan is not running.	Wait for the start time to be reached. Check the cooling fan wiring. Test the control panel shutdown switch. Replace the motor.
"PF" shows on the display.	There has been a power failure.	Reset the clock.
A failure code (E3, F1, etc.) is showing on the display.	Press the CANCEL/OFF keypad.	If the code does not disappear, refer to page 6-4, and identify the cause of the error message to help you correct the problem.
The keypads do not operate.	The Control Lock has been set.	Press and hold the Control Lock keypad for 5-seconds to unlock the keypads. The range is not properly grounded.

OVEN TEMPERATURE CALIBRATION

1. Press and hold the BAKE keypad for five (5) seconds. The current offset, if any, will be shown in the 3-digit display. CAL is shown in the 4-digit display (3 digits on right).
2. Pressing the TEMP keypad ▲ up arrow adjusts the temperature in 10°F increments in the following sequence: 0°, 10°, 20°, 30°, -30°, -20°, -10°, 0°, and so on.
3. Press the START/ENTER keypad to activate the desired temperature adjustment. If the START/ENTER keypad is not pressed within 5 minutes, the adjustment is ignored.

NOTE: The BAKE temperature adjustment cannot result in operating temperatures higher than 525°F, or lower than 170°F, as measured at oven cavity center. Once the BAKE temperature has been adjusted, BROIL temperatures are automatically offset to the same degree.

The CLEAN temperature is also offset automatically when the BAKE temperature is adjusted. If the BAKE temperature has been raised, the CLEAN temperature is offset by +5°F. If the BAKE temperature has been lowered, the CLEAN temperature is offset to -5°F.

OVEN CIRCUIT DIAGNOSIS CHART

NOTES:

1. All diagnoses of this range must begin with normal check of line voltage, blown fuses, and failed components.
2. All units that have failed during the first few days of use should be checked for loose connections or miswiring.

3. All checks should be made with a meter having a sensitivity of 20,000 ohms-per-volt or greater.

FAILURE / ERROR DISPLAY CODES

4-DIGIT DISPLAY	3-DIGIT DISPLAY	LIKELY FAILURE CONDITION	SUGGESTED CORRECTIVE ACTION PROCEDURE
F1	<i>E0</i>	EEPROM communications	<ol style="list-style-type: none"> 1. Verify failure if not displayed, using CANCEL/OFF key. Press key for 5 seconds until last error code is displayed 2. Disconnect power from oven for longer than 30 seconds. 3. Reapply power and observe for longer than 1 minute. 4. If failure remains, disconnect power, replace control, then go back to step 3.
	<i>E1</i>	EEPROM checksum failure	
	<i>E2</i>	UL A/D error(s)	
F2	<i>E0</i>	Shorted key	<ol style="list-style-type: none"> 1. Verify failure if not displayed, using CANCEL/OFF key. 2. Disconnect power. 3. If applicable, insure membrane tail seated in connector on back of control. 4. Reapply power and observe for longer than 1 minute. 5. If failure remains, disconnect power, replace control, then go back to step 4..
	<i>E1</i>	Keytail unplugged	
F3	<i>E0</i>	Oven sensor opened	<ol style="list-style-type: none"> 1. Measure sensor value (between connector pins) between 1000 Ω@ 32° F and 2697 Ω@ 900° F (approximately 1080 Ω@ room temperature). If measurement does not correlate to real temperature, disconnect power, replace sensor and refer to steps 3-5. Also measure from sensor connector to sensor casing for possible short. 2. Trace wires and connectors to sensor, from control, then from sensor back to control. If all connections made and no wire damage, refer to step 3. 3. Disconnect power for longer than 30 seconds. 4. Reapply power and observe for longer than 1 minute. 5. If failure remains, disconnect power, replace control, then go back to step 4.
	<i>E1</i>	Oven sensor shorted	
	<i>E2</i>	Bake range over temp	
	<i>E3</i>	Clean range over temp	
F5	<i>E0</i>	Door and latch switches do not agree	<ol style="list-style-type: none"> 1. If door latched: <ol style="list-style-type: none"> A) Disconnect power from unit. B) Check wires and connectors from control to door switch, then from door switch to control. If no damage to wires and all connectors okay, proceed to step C. C) Replace door switch. D) Reapply power. E) Press and hold any key down for 1 minute to clear -F5- failure code from memory. -F2- will appear. Press CANCEL and observe for 1 minute to ensure operation is correct. 2. If door not latched: <ol style="list-style-type: none"> A) Disconnect power from unit. B) Check wires and connectors from control to latch switch, then from latch switch to control. If no damage to wires and all connectors okay, proceed to step C. C) Repeat steps A) and B) for door switch. 3. Measure door switch (door open = switch open small low voltage terminals). 4. Measure latch switch (unlatch = switch open, <i>CAUTION</i> - oven light contacts are closed). 5. If corrections are made in any step, reconnect power to control. Press and hold any key for 1 minute to clear -F- failure code from memory. -F2- will appear. Press CANCEL and observe for 1minute to ensure operation is correct. 6. If failure remains, disconnect power, replace control.
	<i>E1</i>	Solenoid not operating or latch switch failure	
	<i>E2</i>	Latch during CLEAN error	

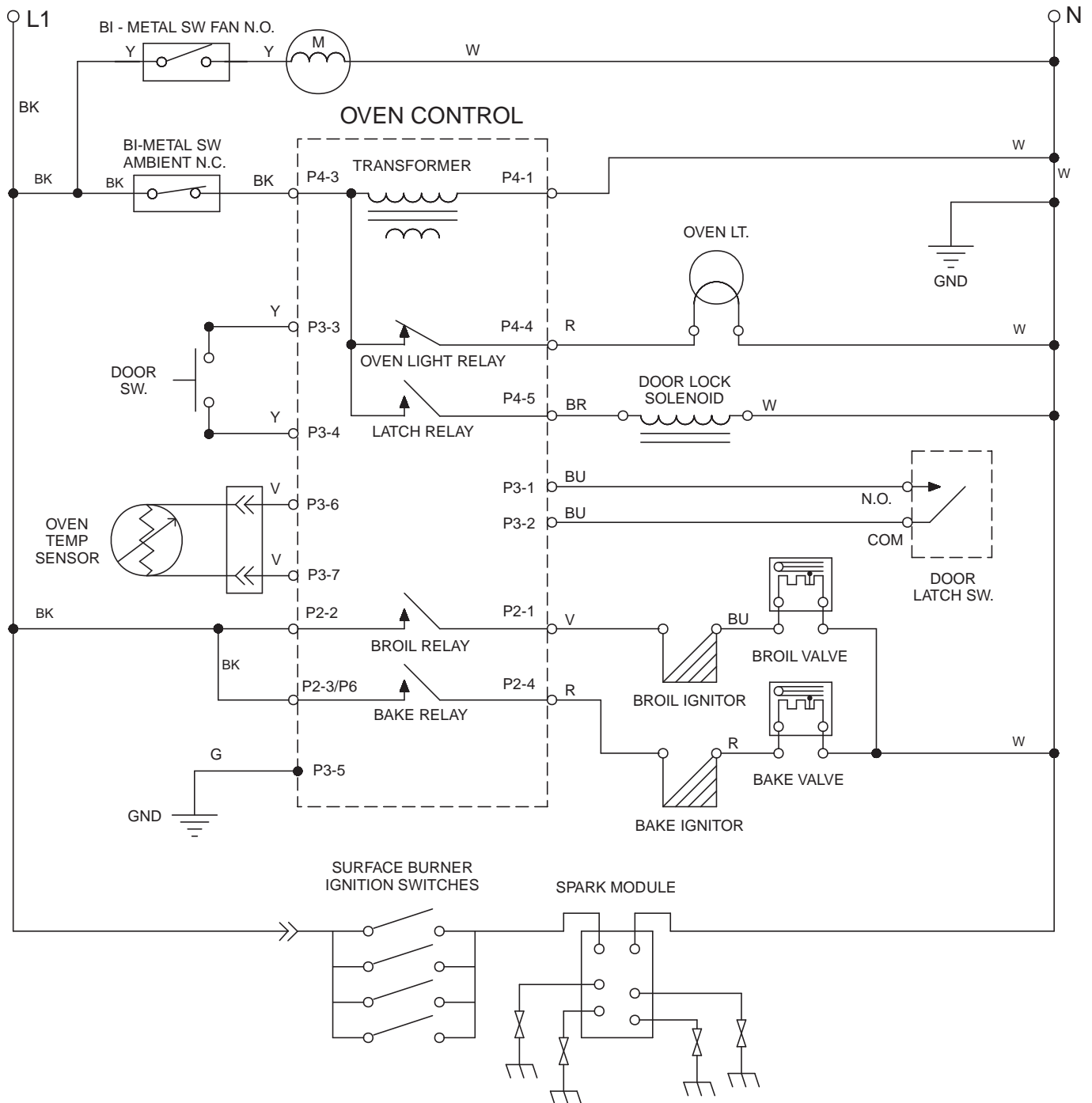
WARNING



Electrical Shock Hazard
Disconnect power before servicing.
Replace all panels before operating.
Failure to do so can result in death or electrical shock.

Caution: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

NOTE: Drawing shows door latch switch in the cook position with oven door open, oven off and light on.



DIAGNOSTICS

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

FAILURE/ERROR DISPLAY CODES

4-DIGIT DISPLAY	3-DIGIT DISPLAY	LIKELY FAILURE CONDITION	SUGGESTED CORRECTIVE ACTION PROCEDURE
F1	E0	EEPROM communications	<ol style="list-style-type: none"> 1. Verify failure if not displayed, using CANCEL/OFF key. 2. Disconnect power from oven for longer than 30 seconds. 3. Reapply power and observe for longer than 1 minute. 4. If failure remains, disconnect power, replace control, then go back to step 3.
	E1	EEPROM checksum failure	
	E2	UL A/D error(s)	
F2	E0	Shorted key	<ol style="list-style-type: none"> 1. Verify failure if not displayed, using CANCEL/OFF key. 2. Disconnect power. 3. If applicable, insure membrane tail seated in connector on back of control. 4. Reapply power and observe for longer than 1 minute. 5. If failure remains, disconnect power, replace control.
	E1	Keytail unplugged	
F3	E0	Oven sensor opened	<ol style="list-style-type: none"> 1. Measure sensor value (between connector pins) between 1000 Ω @ 32° F and 2697 Ω @ 900° F (approximately 1080 Ω @ room temperature). If measurement does not correlate to real temperature, disconnect power, replace sensor and refer to steps 3-5. Also measure from sensor connector to sensor casing for possible short. 2. Trace wires and connectors to sensor, from control, then from sensor back to control. If all connections made and no wire damage, refer to step 3. 3. Disconnect power for longer than 30 seconds. 4. Reapply power and observe for longer than 1 minute. 5. If failure remains, disconnect power, replace control, then go back to step 4.
	E1	Oven sensor shorted	
	E2	Bake range over temp	
	E3	Clean range over temp	
F5	E0	Door and latch switches do not agree	<ol style="list-style-type: none"> 1. If door latched: <ol style="list-style-type: none"> A) Disconnect power from unit. B) Check wires and connectors from control to door switch, then from door switch to control. If no damage to wires and all connectors okay, proceed to step C. C) Replace door switch. D) Reapply power. E) Press and hold any key for 1 minute to clear -F5- failure code from memory. -F2- will appear. Press CANCEL and observe for 1 minute to ensure correct operation. 2. If door not latched: <ol style="list-style-type: none"> A) Disconnect power from unit. B) Check wires and connectors from control to latch switch, then from latch switch to control. If no damage found, proceed to step C. C) Repeat steps A) and B) for door switch. 3. Measure door switch (door open = switch open small low voltage terminals). 4. Measure latch switch (unlatch = switch open, <i>CAUTION</i> - oven light contacts are closed). 5. If corrections are made in any step, reconnect control. To verify correction, reconnect power control. Press and hold any key for 1 minute to clear -F5- failure code from memory. -F2- will appear. Press CANCEL and observe for 1 minute to verify problem has been corrected. 6. If failure remains, disconnect power, replace control.
	E1	Solenoid not operating or latch switch failure	
	E2	Latch during CLEAN error	

Temperature Adjustment

- Press and hold BAKE pad for five (5) seconds. Current offset, if any, is shown in 3-digit display. CAL is shown in 4-digit display (3 digits on right).
- Pressing the TEMP pad “up” arrow (▲) adjusts the temperature in 10°F increments in the following sequence: 0°; 10°; 20°; 30°; -30°; -20°; -10°; 0°; and so on.
- Press START/ENTER pad to activate the desired temperature adjustment. If the START/ENTER pad is not pressed within 5 minutes, adjustment is ignored.

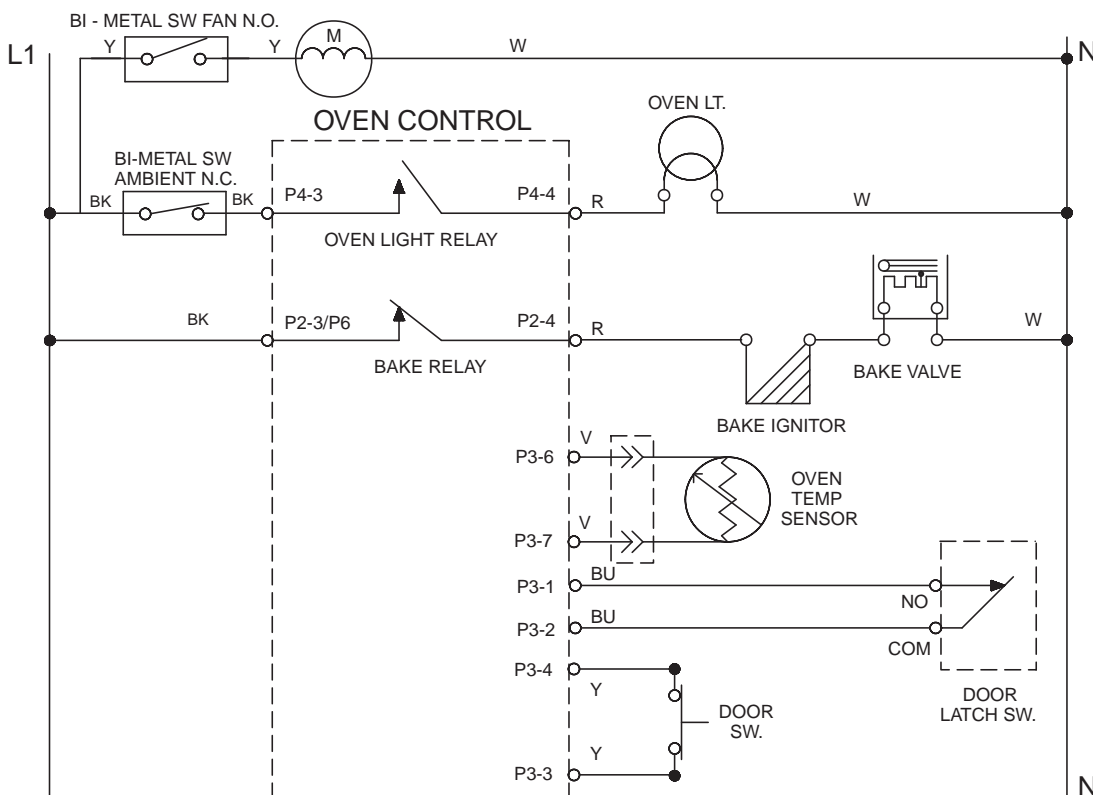
- BAKE temperature adjustment cannot result in operating temperatures higher than 525° F or lower than 170° F, as measured at oven cavity center.
- Once the BAKE temperature has been adjusted, BROIL temperatures are automatically offset to the same degree.
- CLEAN temperature is also offset automatically when BAKE temperature is adjusted. If BAKE temperature has been raised, CLEAN temperature is offset +5° F. If BAKE temperature has been lowered, CLEAN temperature is offset -5° F.

STRIP CIRCUITS

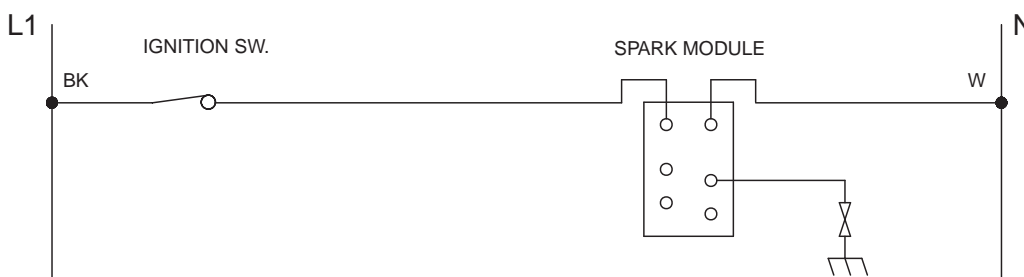
The following individual circuits are for use in diagnosis.

Before starting diagnosis, check the line voltage and for blown fuses.

CLEAN



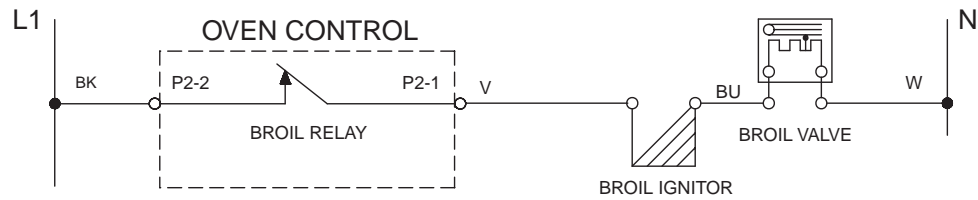
SURFACE BURNER (TYPICAL)



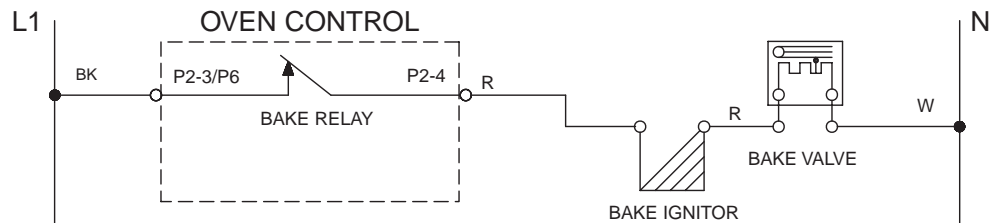
STRIP CIRCUITS - continued

The following individual circuits are for use in diagnosis.
Before starting diagnosis, check the line voltage and for blown fuses.

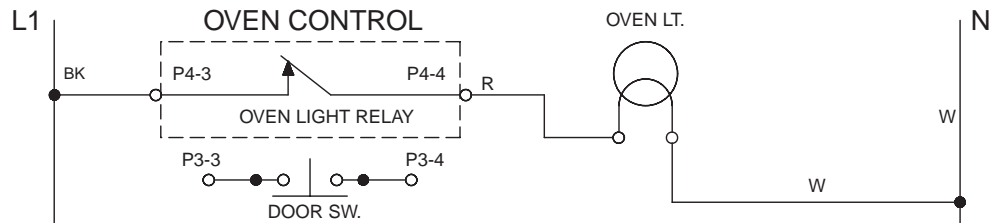
BROIL



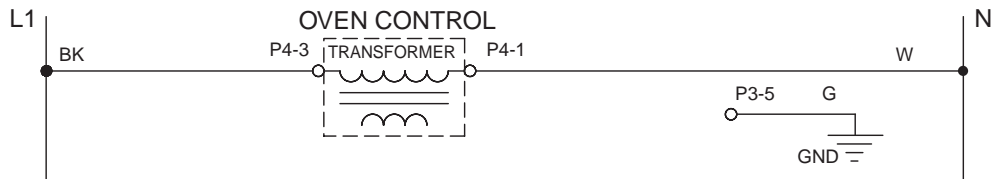
BAKE



OVEN LIGHT (IF EQUIPPED)



CONTROL POWER



PART NO. 9753053

NOTE: This sheet contains important
 Technical Service Data

**FOR SERVICE TECHNICIAN ONLY
 DO NOT REMOVE OR DESTROY**

TECH TIPS

CLEANING THE SURFACE BURNERS

Refer to Figure 8-1.

The burner caps should be routinely removed and cleaned. Keeping the burner caps clean prevents improper ignition and an uneven flame.

For the proper flow of gas and ignition of the burner, **DO NOT ALLOW SPILLS, FOOD, CLEANING AGENTS, OR ANY OTHER MATERIAL TO ENTER THE GAS TUBE (VENTURI) OPENING.**

Gas must flow freely through the gas tube opening for the burner to light properly. You must keep this area free of any soil and protect it from boilovers or spillovers. Always keep the burner cap in place whenever a surface burner is in use.

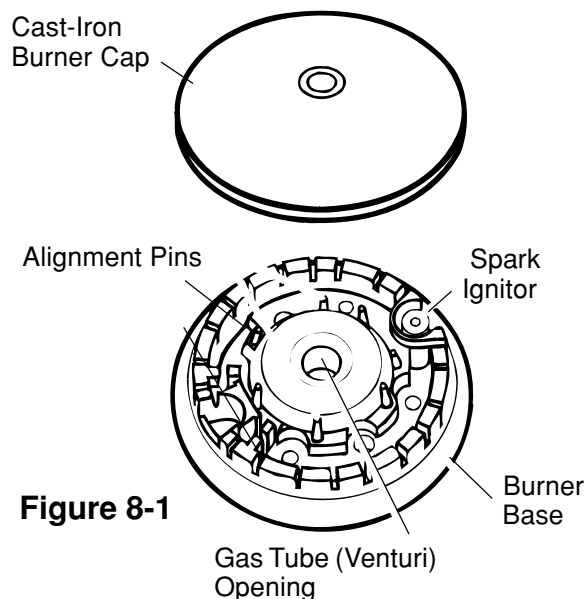


Figure 8-1

Allow the maintop to cool before cleaning it. Do not use oven cleaners, bleach, or rust removers, or obstruct the flow of combustion and ventilation air to the burners.

If the knobs are removed while cleaning, be careful not to spill liquids through the holes in the control area. Moisture can cause the ignitor switches to fail.

Occasionally check the burner flames for proper size and shape, as shown in Figure 8-2. A good flame is blue in color. If the flames are uneven, you may need to clean the burners.

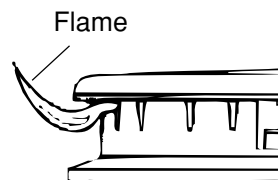


Figure 8-2

To clean the burners:

1. Lift the burner caps off the burner base.
2. Clean the burner caps with warm, soapy water and a sponge. You can also clean the caps with a mildly abrasive plastic scrubbing pad and powdered cleanser. Do not clean the burner caps in a dishwasher or self-cleaning oven.
3. If the gas tube opening has become soiled or clogged, use a cotton swab or a soft cloth to clean the area.
4. If the ports are clogged, clean them with a straight pin (see Figure 8-3). Do not enlarge, or distort the port. Do not use a wooden toothpick. If the burner needs to be adjusted, call a qualified technician for service.

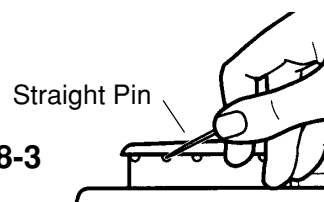


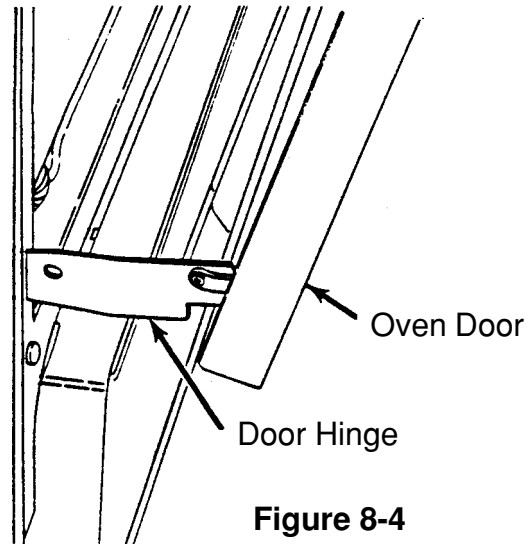
Figure 8-3

5. After cleaning the gas tube opening and ports, replace the burner caps. To replace the burner caps, make sure the alignment pins on the burner base are properly aligned with the cap.
6. Turn on the burner to make sure that it lights properly.

REMOVING THE OVEN DOOR

Refer to Figure 8-4 for the following steps.

1. Open the oven door to the first (broil) stop.
2. Grasp the oven door on both sides. Simultaneously lift straight up and pull out on the door for approximately two inches to release the hinge brackets from the hinge stops.
3. Close the door completely so it is perpendicular to the floor, then pull the door out of the oven tracks.



REQUESTING ASSISTANCE OR SERVICE

To avoid unnecessary service calls, please check the “Troubleshooting” section of your Use and Care Guide. It may save you the cost of a service call. If you still need help, follow the instructions below.

1. If the problem is not due to one of the items listed in the “Troubleshooting” section of your Use and Care Guide*:

Call the Whirlpool or Inglis Limited Consumer Assistance Center telephone number. Dial toll-free from anywhere:

In the U.S.A. — Call 1-800-253-1301

In Canada — Call 1-800-461-5681
8:30 a.m. - 6:00 p.m. (EST)

One of our trained consultants can instruct you in how to obtain satisfactory operation from your appliance or, if service is necessary, recommend a qualified service company in your area.

If you prefer, write to:

In the U.S.A. — Whirlpool Brand Home Appliances Consumer Assistance Center

c/o Correspondence Department
2000 North M-63
Benton Harbor, MI 49022-2692

In Canada — Consumer Relations Department
Inglis Limited
1901 Minnesota Court
Mississauga, Ontario L5N 3A7

Please include a daytime phone number in your correspondence.

2a. If you need service in the U.S.A.*:

Whirlpool has a nationwide network of designated Whirlpool service companies. Whirlpool designated service technicians are

trained to fulfill the product warranty and provide after-warranty service, anywhere in the United States. To locate the designated Whirlpool service company in your area, call our Consumer Assistance Center telephone number (see Step 1) or look in your telephone directory Yellow Pages under:

- APPLIANCE-HOUSEHOLD MAJOR, SERVICE & REPAIR (See “Whirlpool Appliances or Authorized Whirlpool Service—Example: XYZ Service Co.)
- WASHING MACHINES & DRYERS, SERVICE & REPAIR (See “Whirlpool Appliances or Authorized Whirlpool Service—Example: XYZ Service Co.)

2b. If you need service in Canada*:

Contact “Inglis Limited Appliance Service” from anywhere in Canada at — **1-800-807-6777**.

3. If you need FSP® replacement parts:

FSP® is a registered trademark of Whirlpool Corporation for quality parts. Look for this symbol of quality whenever you need a replacement part for your whirlpool appliance. FSP replacement parts will fit right and work right because they are made to the same exacting specifications used to build every new Whirlpool appliance.

To locate FSP replacement parts in your area, refer to Step 2 or call the Consumer Assistance Center number (see Step 1).

* When asking for help or service: Please provide a detailed description of the problem, your appliance’s complete model and serial numbers, and the purchase date. (See the “A Note to You” section of your Use and Care Guide.) This information will help us respond properly to your request.

WHIRLPOOL GAS RANGE WARRANTY

LENGTH OF WARRANTY:	WHIRLPOOL WILL PAY FOR:	WHIRLPOOL WILL NOT PAY FOR:
<p>ONE-YEAR FULL WARRANTY FROM DATE OF PURCHASE.</p>	<p>FSP® replacement parts and repair labor costs to correct defects in materials or workmanship. Service must be provided by an authorized Whirlpool service company.</p>	<p>A. Service calls to:</p> <ol style="list-style-type: none"> 1. Correct the installation of the range. 2. Instruct you how to use the range. 3. Replace house fuses or correct house wiring. 4. Replace owner-accessible light bulbs. 5. Correct house plumbing. <p>B. Repairs when the range is used in other than normal, single-family household use.</p> <p>C. Pickup and delivery. The range is designed to be repaired in the home.</p> <p>D. Damage to the range caused by accident, alteration, misuse, abuse, fire, flood, acts of God, or use of products not approved by Whirlpool.</p> <p>E. Repairs to parts or systems resulting from unauthorized modifications made to the appliance.</p> <p>F. In Canada, travel or transportation expenses for customers who reside in remote areas.</p> <p>G. Replacement parts or repair labor costs for units operated outside the United States and Canada.</p>

WHIRLPOOL CORPORATION AND INGLIS LIMITED SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so this exclusion or limitation may not apply to you. This warranty gives specific legal rights and you may also have other rights which vary from state to state or province to province.

Outside the United States and Canada, a different warranty may apply. For details, please contact your authorized Whirlpool dealer.

If you need service, refer to the “Requesting Assistance or Service” section on the previous page. After checking “Requesting Assistance or Service,” additional help can be found by calling the Whirlpool Consumer Assistance Center telephone number, **1-800-253-1301**, from anywhere in the U.S.A. In Canada, contact your authorized Inglis Limited Appliance Service company, **1-800-807-6777**.