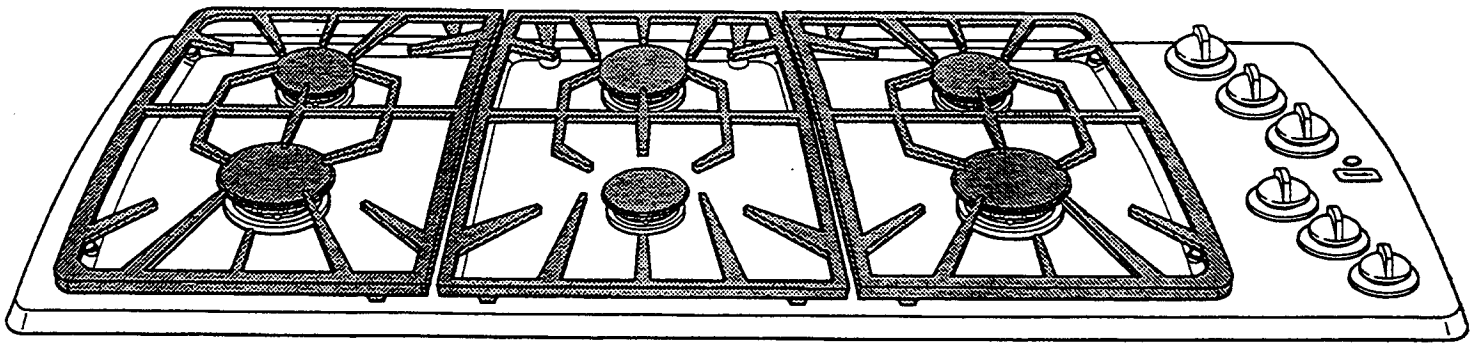
Thermador®

THE SCIENCE OF COOKING.™

GAS COOKTOP

MODELS: SGC304R & SGCS304R
SGC365R & SGCS365R
SGC456R & SGCS456R



SERVICE MANUAL

Thermador®

5551 MCFADDEN • HUNTINGTON BEACH, CALIFORNIA 92649 • TELEPHONE: 1(800) 735-4328

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THIS MANUAL CONTAINS INFORMATION THAT IS NECESSARY FOR SERVICING THE THERMADOR® 30" 36" & 45" GAS COOKTOPS, MODELS: *SGC304R & SGCS304R*
SGC365R & SGCS365R
SGC456R & SGCS456R

THIS MANUAL IS DESIGNED TO BE USED ONLY BY QUALIFIED SERVICE PERSONNEL. THERMADOR RECOMMENDS THAT CUSTOMERS DO NOT SERVICE THEIR OWN UNITS, DUE TO THE COMPLEXITY AND THE RISK OF HIGH-VOLTAGE ELECTRICAL SHOCK.

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

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GENERAL

SERIAL NUMBER/DATA STICKER & DIAGRAM LOCATIONS

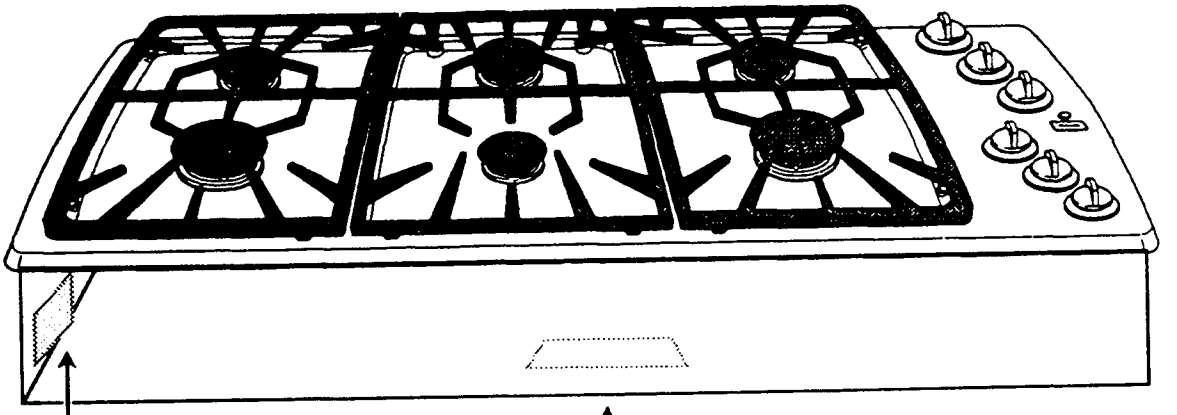


DIAGRAM
(TAPED TO INSIDE OF BURNER BOX)

SERIAL NUMBER/ DATA STICKER
(LOCATED ON RIGHT FRONT UNDERSIDE)

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.

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

THERMADOR® GAS COOKTOP WARRANTY

Length of Warranty	Thermador will pay for:	Thermador will not pay for:
FULL ONE YEAR WARRANTY For one year from date of installation or date of occupancy for a new previously unoccupied dwelling, any part which fails in normal home use will be repaired or replaced free of charge. Save all dated receipts or other evidence of date of installation/ occupancy date.	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.	1. Service by an unauthorized agency. Damage or repairs by an unauthorized agency or use of unauthorized parts. 2. Service visits to: • Teach you how to use the appliance. • Correct the installation. You are responsible for providing electrical wiring and/or gas installation and other connecting facilities. • Reset circuit breakers or replace home fuses. 3. Damage caused from accident, abuse, alteration, misuse, incorrect installation or installation not in accordance with local codes, or improper storage of the appliance. 4. Repairs due to other than normal home use. 5. Any service visits and labor costs during the limited warranty.

This warranty applies to appliances used in normal family households; 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

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

Consumer Relations Department
Thermador, P.O. Box 22129
Los Angeles, CA 90022

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/ Installation.

— NOTES —

SERVICING THE COMPONENTS

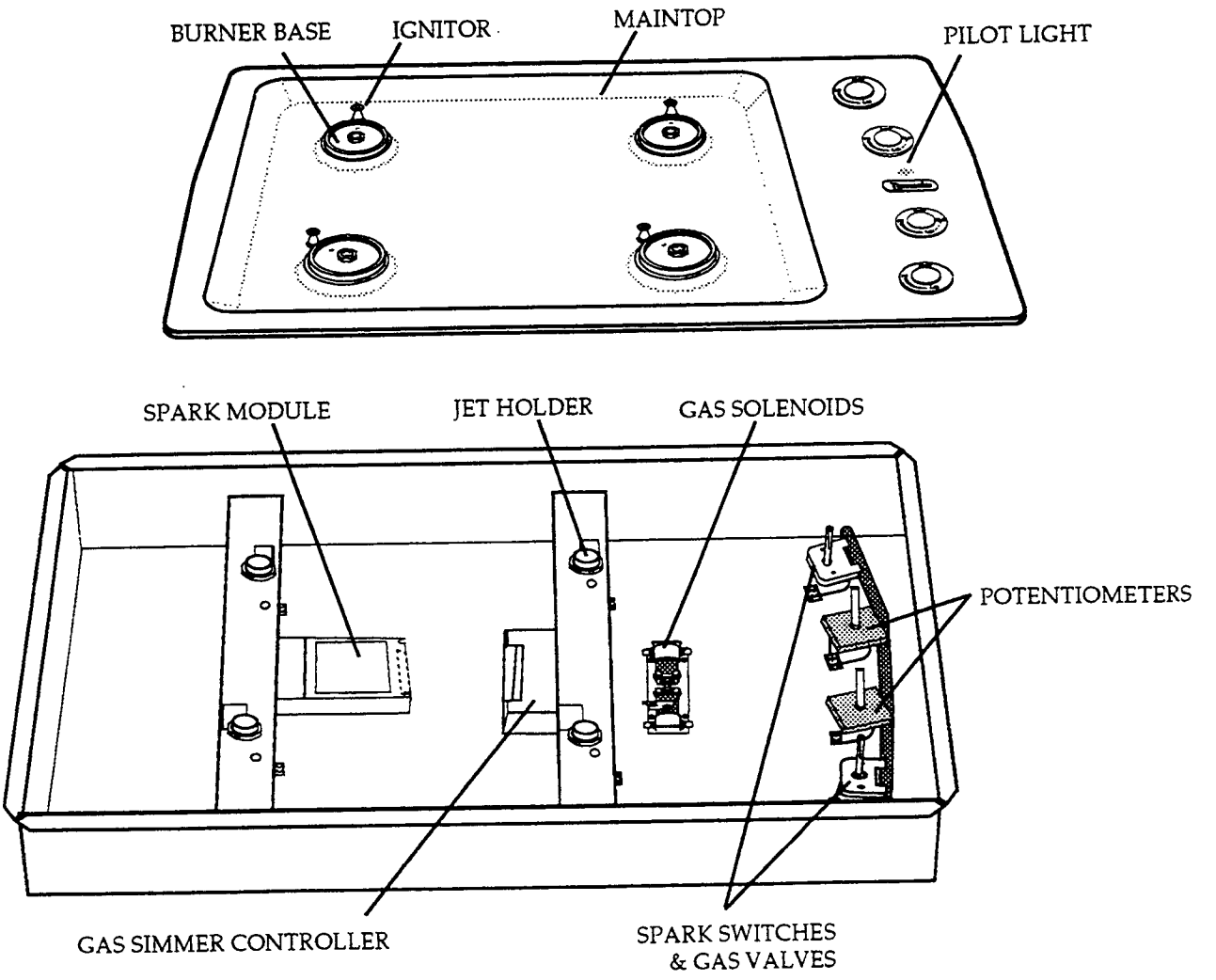
The serviceable components inside the 30", 36", and 45" cooktops are included in this section of the manual, which is divided into two parts. The first part contains service procedures for all of the components that are common to each of the cooktops. The second part contains procedures for the XLO (gas simmer controller) model cooktops. Refer to the section that deals with the component you wish to servive. The component locations for each of the three model cooktops are shown on the following pages.

MODELS SGC304R & SGCS304R COOKTOP COMPONENTS

The serviceable components included in the SGC304R & SGCS304R Cooktops are as follows (see the illustration for the locations):

- Maintop
- Burner Base
- Ignitor
- Gas Valve
- Spark Switch
- Spark Module
- Jet Holders
- Potentiometers—SGCS304R Only
- Gas Solenoids—SGCS304R Only
- Gas Simmer Controller—SGCS304R Only
- Pilot Light—SGCS304R Only

Refer to the section on the following pages for the component you wish to service.

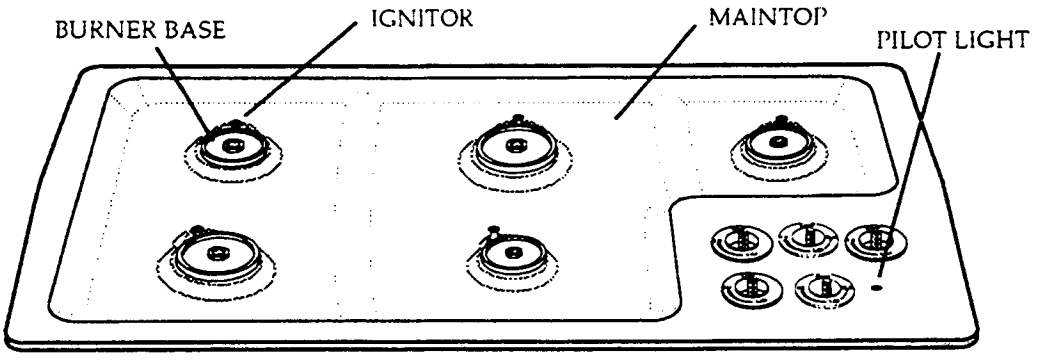


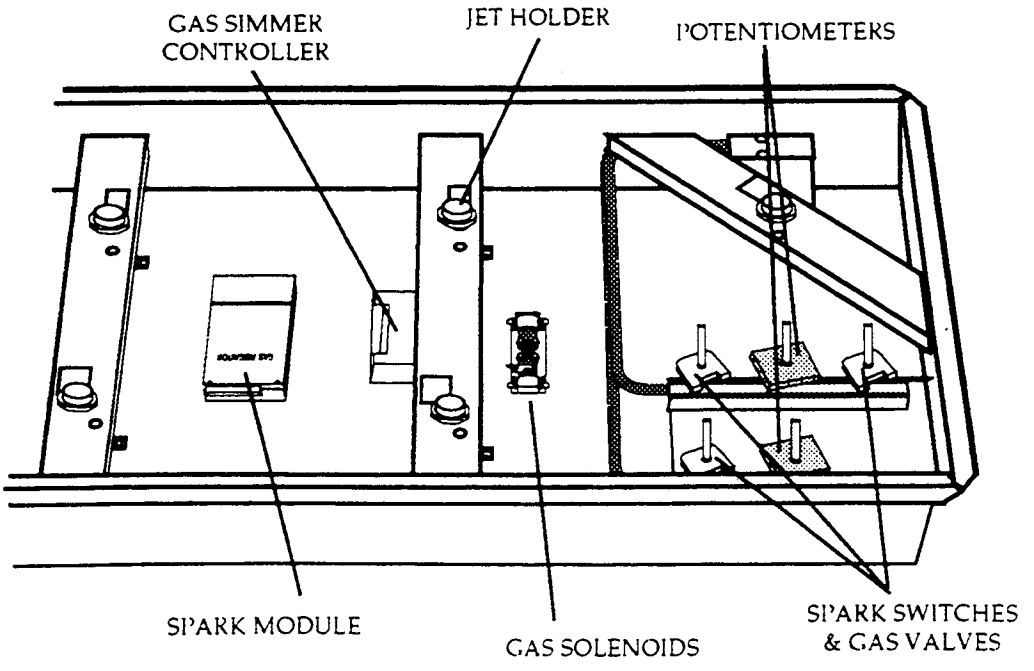
MODELS SGC365R & SGCS365R
COOKTOP COMPONENTS

The serviceable components included in the SGC365R & SGCS365R Cooktops are as follows (see the illustration for the locations):

- Maintop
- Burner Base
- Ignitor
- Gas Valve
- Spark Switch
- Spark Module
- Jet Holders
- Potentiometers—SGCS365R Only
- Gas Solenoids—SGCS365R Only
- Gas Simmer Controller—SGCS365R Only
- Pilot Light—SGCS365R Only

Refer to the section on the following pages for the component you wish to service.



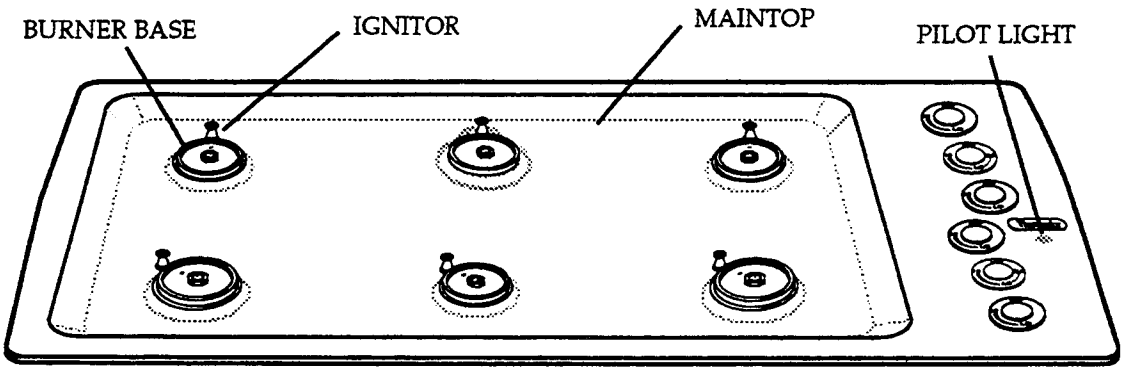


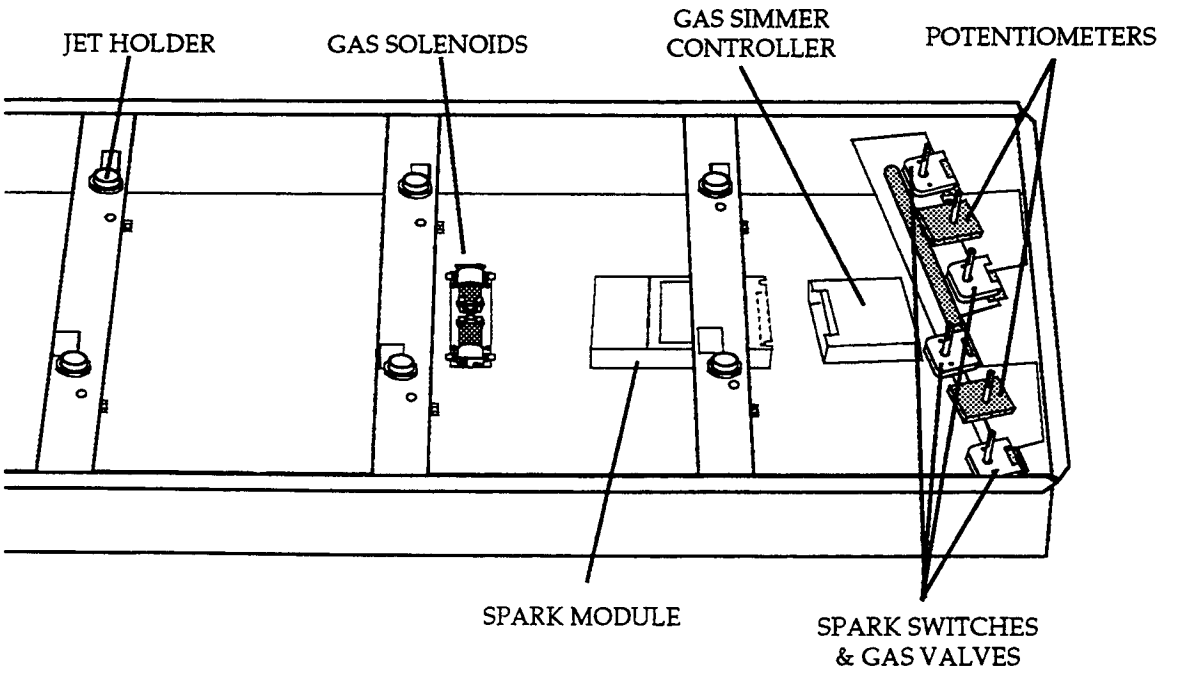
MODELS SGC456R & SGCS456R COOKTOP COMPONENTS

The serviceable components included in the SGC456R & SGCS456R Cooktops are as follows (see the illustration for the locations):

- Maintop
- Burner Base
- Ignitor
- Gas Valve
- Spark Switch
- Spark Module
- Jet Holders
- Potentiometers—SGCS456R Only
- Gas Solenoids—SGCS456R Only
- Gas Simmer Controller—SGCS456R Only
- Pilot Light—SGCS456R Only

Refer to the section on the following pages for the component you wish to service.





SERVICING THE GENERAL COMPONENTS

This section is for servicing components that are included in both the SGC and SGCS Model Cooktops. Although a 45" model cooktop is illustrated, the components for the 30" and 36" models are the same and are serviced in the same manner.

Replacing The Maintop

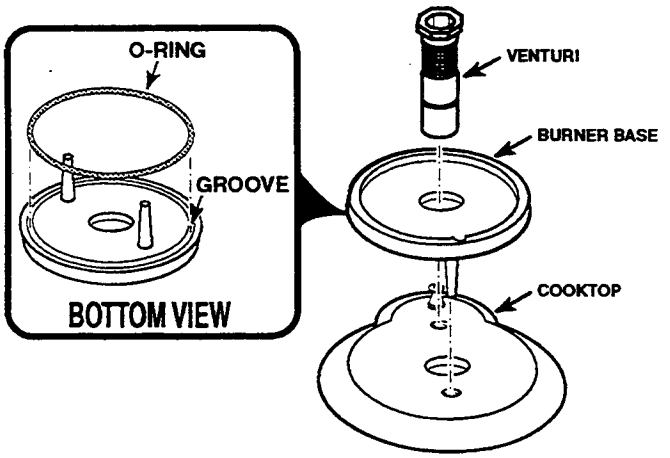
⚠ WARNING

Turn off the gas supply and the power circuit to the cooktop at the main (house) junction box before servicing this unit.

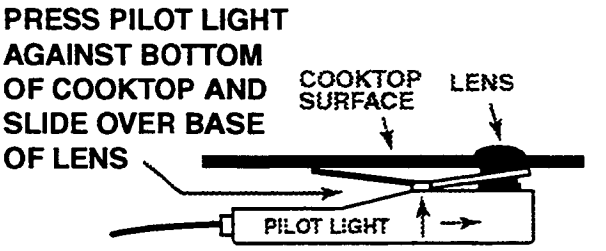
⚠ CAUTION

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

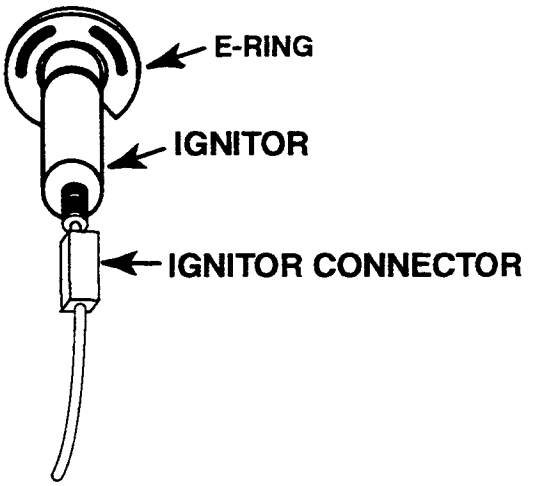
1. Turn off the gas supply and the electrical power going to the cooktop.
2. Remove the grates and burner caps from the cooktop.
3. Remove the knobs from the controls.
4. Using a $^{25}/_{32}$" (20 mm) socket, unscrew and remove the venturi from each of the burner bases, then lift the burner bases and rubber o-rings from the maintop.



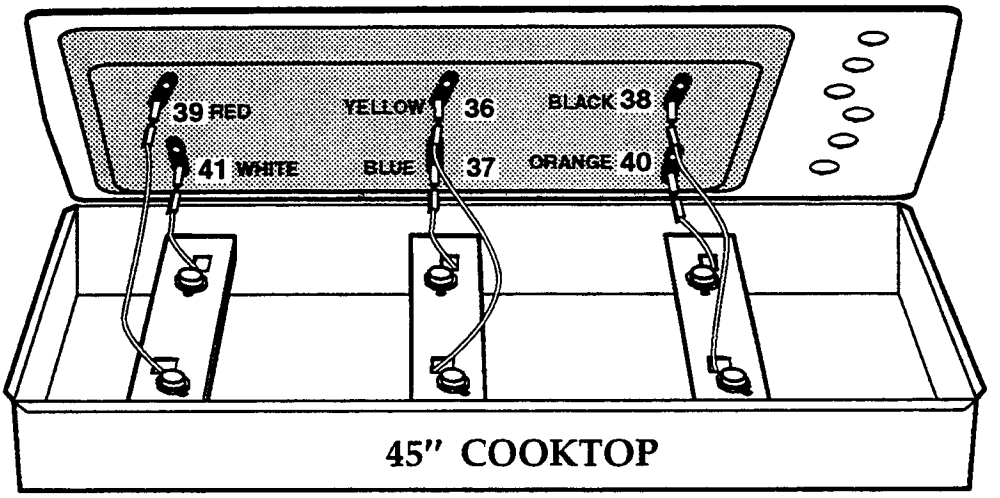
5. SGCS Models Only: Carefully lift the front of the maintop several inches and slide the pilot light holder off the red lens.



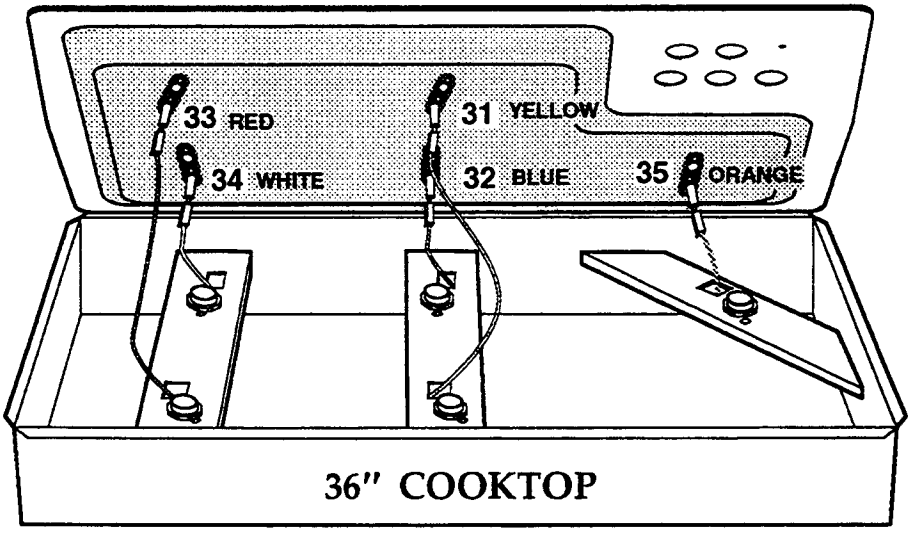
6. Unplug the ignitor wires from the ignitor pins and remove the maintop (refer to the next page for the ignitor wire connections).



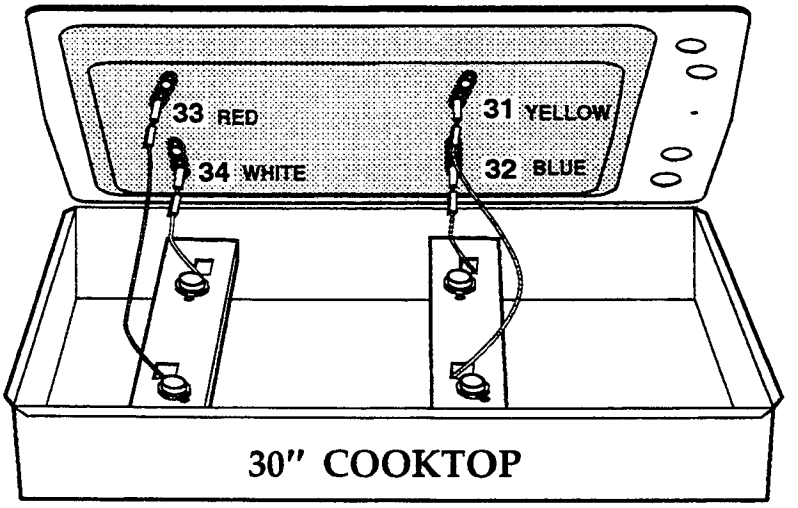
7. Unsnap the e-ring from the groove in each of the ignitors, and remove the ignitors from the cooktop.
8. Unsnap and remove the bezels from the maintop.
9. Reverse the previous steps and install the new maintop.



45" COOKTOP



36" COOKTOP



30" COOKTOP

Replacing A Burner Base & O-Ring

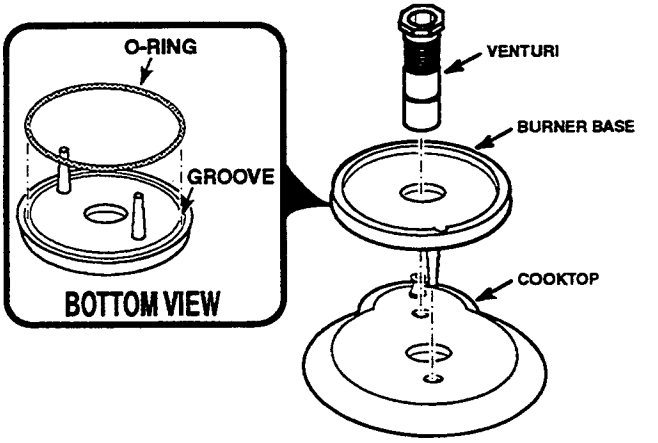
⚠ WARNING

Turn off the gas supply and the power circuit to the cooktop at the main (house) junction box before servicing this unit.

⚠ CAUTION

When you work on the cooktop, 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 cooktop.
2. Remove the grates and burner caps from the cooktop.
3. Using a $^{25}/_{32}$" (20 mm) socket, unscrew and remove the venturi from the burner base you wish to replace, then lift the burner base and rubber o-ring from the maintop.



4. Install the new o-ring in the new burner base and reassemble the cooktop.

Replacing An Ignitor

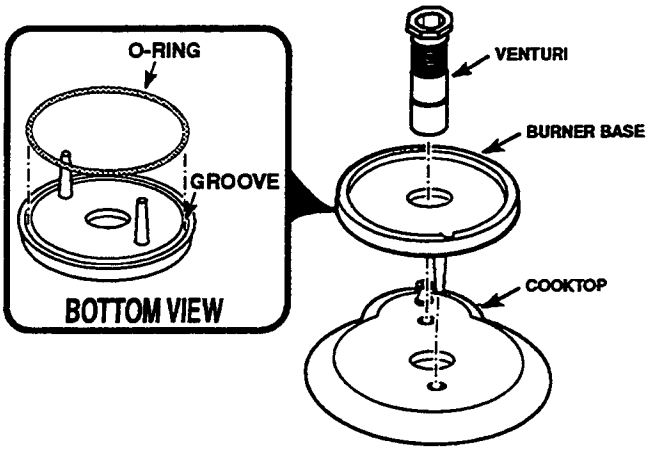
⚠ WARNING

Turn off the gas supply and the power circuit to the cooktop at the main (house) junction box before servicing this unit.

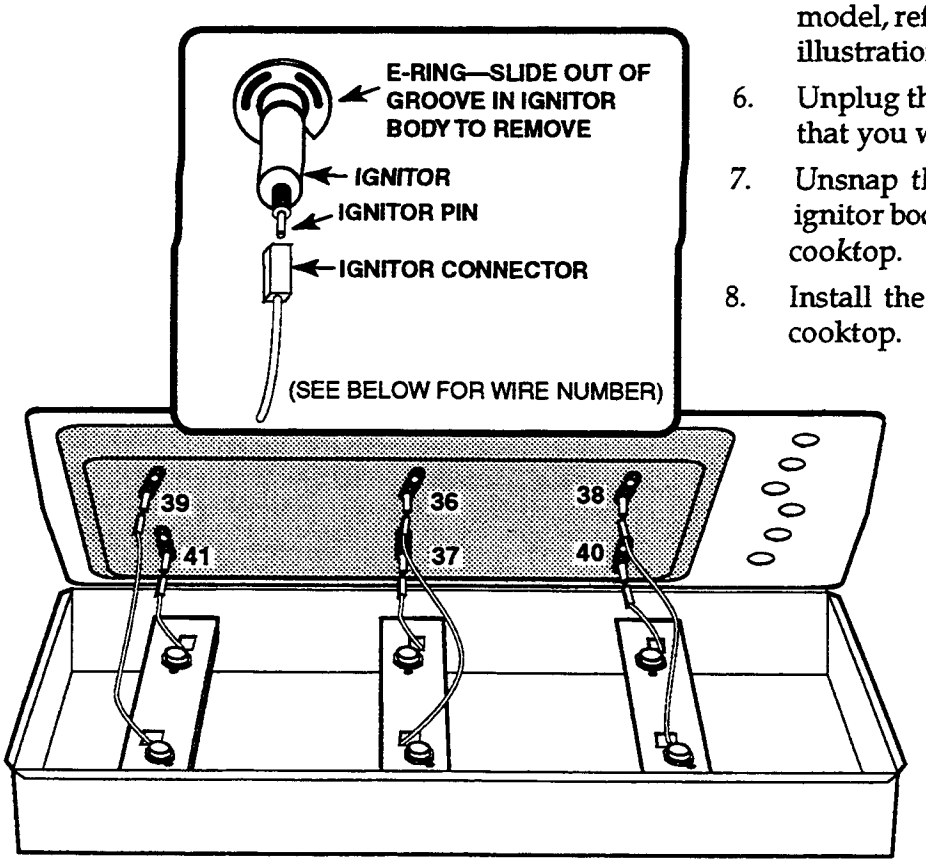
⚠ CAUTION

When you work on the cooktop, 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 cooktop.
2. Remove the grates and burner caps from the cooktop.
3. Remove the knobs from the controls.
4. Using a $^{25}/_{32}$" (20 mm) socket, unscrew and remove the venturi from each of the burner bases, then lift the burner bases and rubber o-rings from the maintop.



5. Carefully lift the front of the maintop several inches and prop it up with a board or a hammer handle. **NOTE:** The 45" cooktop is shown below. If you have a 30" or a 36" model, refer to page 2-5 for the ignitor wiring illustration of those models.
6. Unplug the ignitor wire from the ignitor pin that you wish to replace.
7. Unsnap the e-ring from the groove in the ignitor body and remove the ignitor from the cooktop.
8. Install the new ignitor and reassemble the cooktop.



Replacing A Gas Valve & Spark Switch

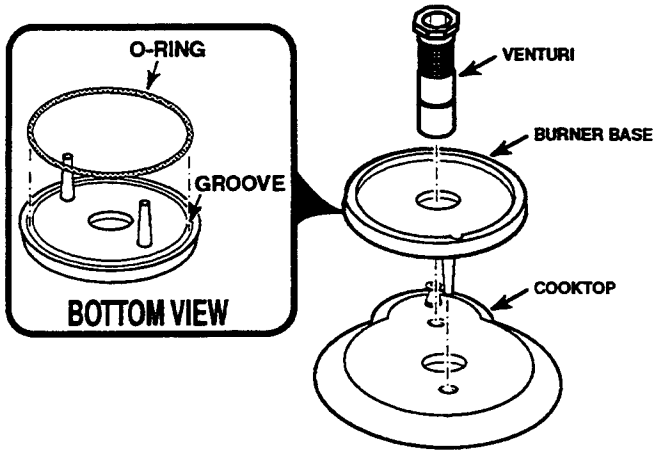
⚠ WARNING

Turn off the gas supply and the power circuit to the cooktop at the main (house) junction box before servicing this unit.

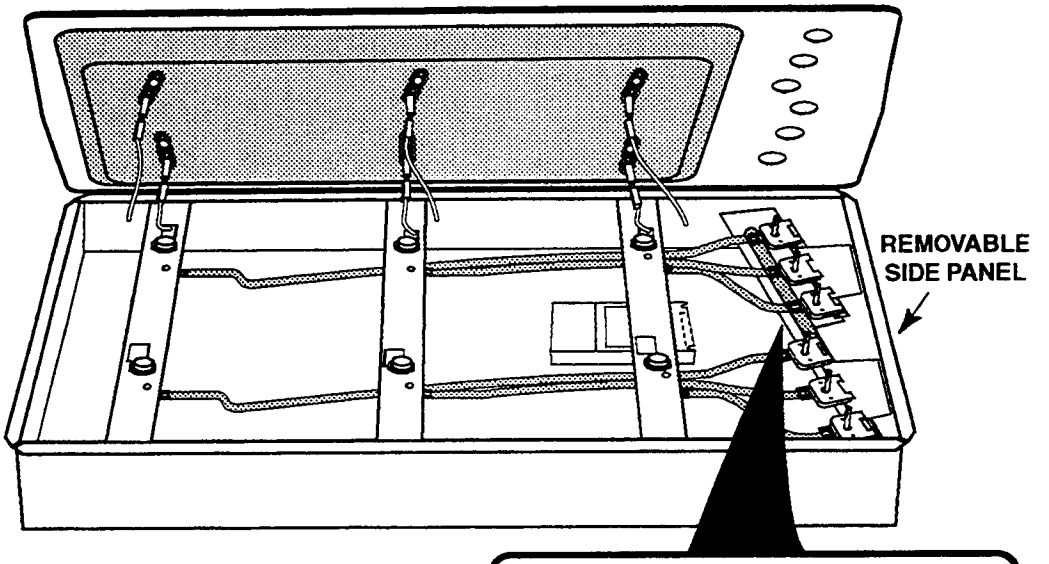
⚠ CAUTION

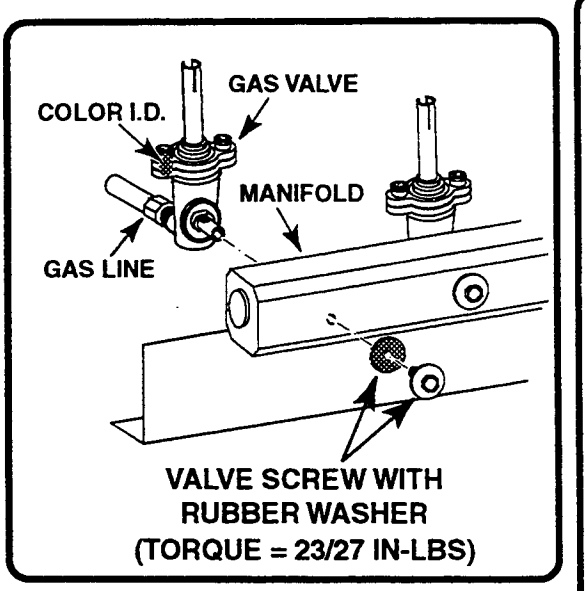
When you work on the cooktop, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

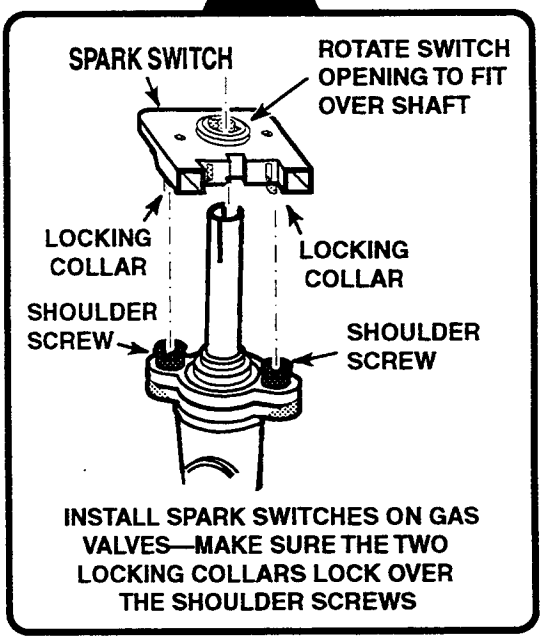
1. Turn off the gas supply and the electrical power going to the cooktop.
2. Remove the grates and burner caps from the cooktop.
3. Remove the knobs from the controls.
4. Using a $^{25}/_{32}$" (20 mm) socket, unscrew and remove the venturi from each of the burner bases, then lift the burner bases and rubber o-rings from the maintop.

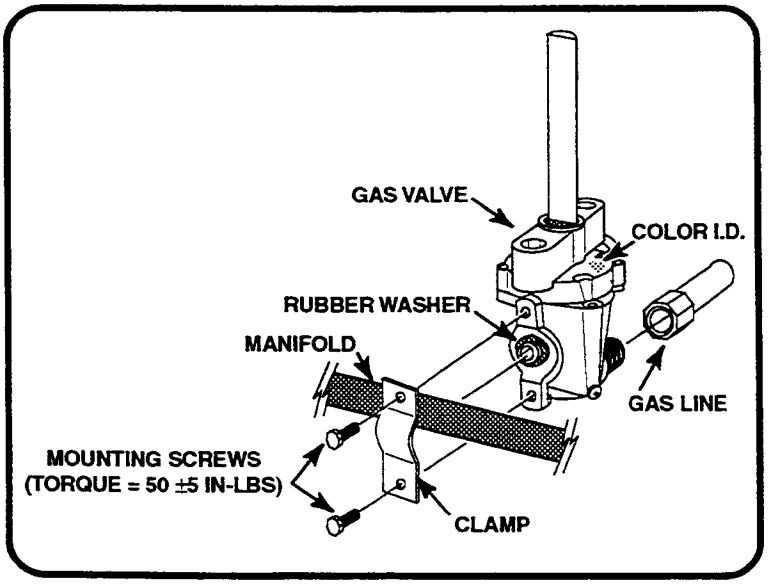


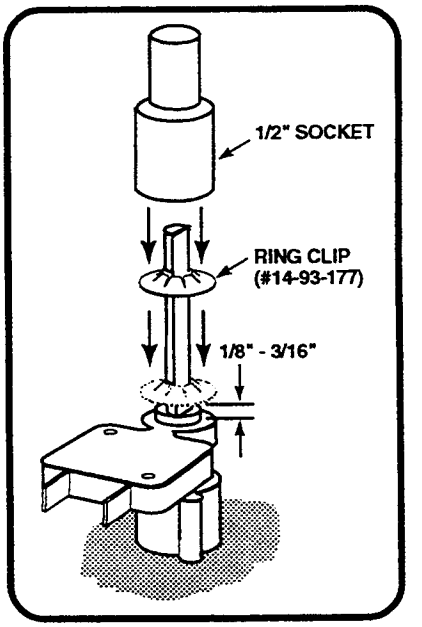
5. Carefully lift the front of the maintop several inches and prop it up with a board or a hammer handle. **NOTE:** Although a 45" cooktop is shown on the next page, all of the cooktops use one of the two types of gas valves shown.
6. Lift the spark switch and unsnap it from the gas valve that you wish to service.
7. <u>To replace a spark switch:</u>
   a) Use a small-bladed screwdriver and insert the blade into the wire removal slots of the switch, then press in on the locking tabs of the switch while you pull out on the wires, and remove them.
   b) Insert the wires into the holes of the new switch so they lock in place (pull out on the wire firmly to make sure it is locked), and install the switch on the gas valve so the locking collars snap over the screws on the valve.
8. If necessary, remove the right side panel on the rough-in box to access the gas valves for service.
9. <u>To replace a gas valve,</u> remove the gas line and mounting screw with rubber washer, (or clamp, depending on the type of valve that is installed), and remove the valve.
10. Install the new gas valve (make sure that the replacement valve has the same color I.D. marking as the old one), and reassemble the cooktop. **NOTE:** Make sure that you torque the screw with rubber washer to a value of <u>23 to 27 in-lbs</u>, or the clamp screw to a value of <u>50 ±5 in-lbs</u>, then leak-check the gas line connections before you secure the maintop. (Refer to the "Gas Valve Color ID Charts" on pages 3-28 & 3-29 for valve specifications.)


REMOVABLE
SIDE PANEL


COLOR I.D.
GAS VALVE
MANIFOLD
GAS LINE
VALVE SCREW WITH
RUBBER WASHER
(TORQUE = 23/27 IN-LBS)


SPARK SWITCH
ROTATE SWITCH
OPENING TO FIT
OVER SHAFT
LOCKING
COLLAR
LOCKING
COLLAR
SHOULDER
SCREW
SHOULDER
SCREW
INSTALL SPARK SWITCHES ON GAS
VALVES—MAKE SURE THE TWO
LOCKING COLLARS LOCK OVER
THE SHOULDER SCREWS


GAS VALVE
COLOR I.D.
RUBBER WASHER
MANIFOLD
GAS LINE
MOUNTING SCREWS
(TORQUE = 50 ±5 IN-LBS)
CLAMP


1/2" SOCKET
RING CLIP
(#14-93-177)
1/8" - 3/16"

Replacing The Spark Module

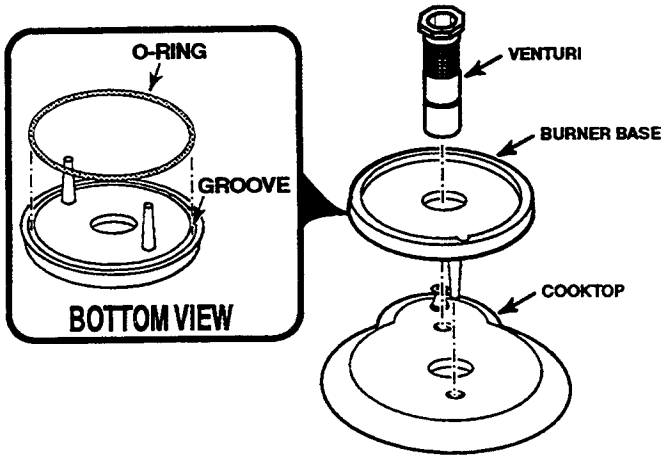
⚠ WARNING

Turn off the gas supply and the power circuit to the cooktop at the main (house) junction box before servicing this unit.

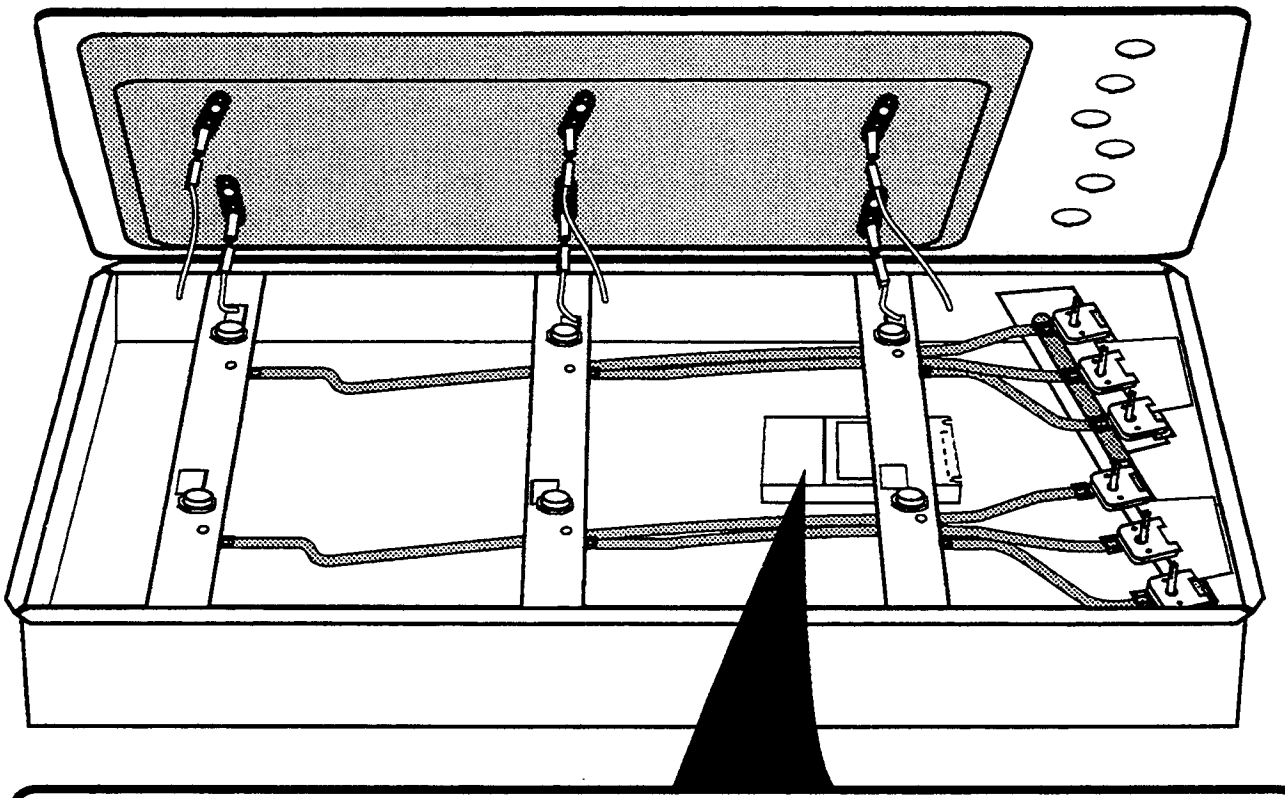
⚠ CAUTION

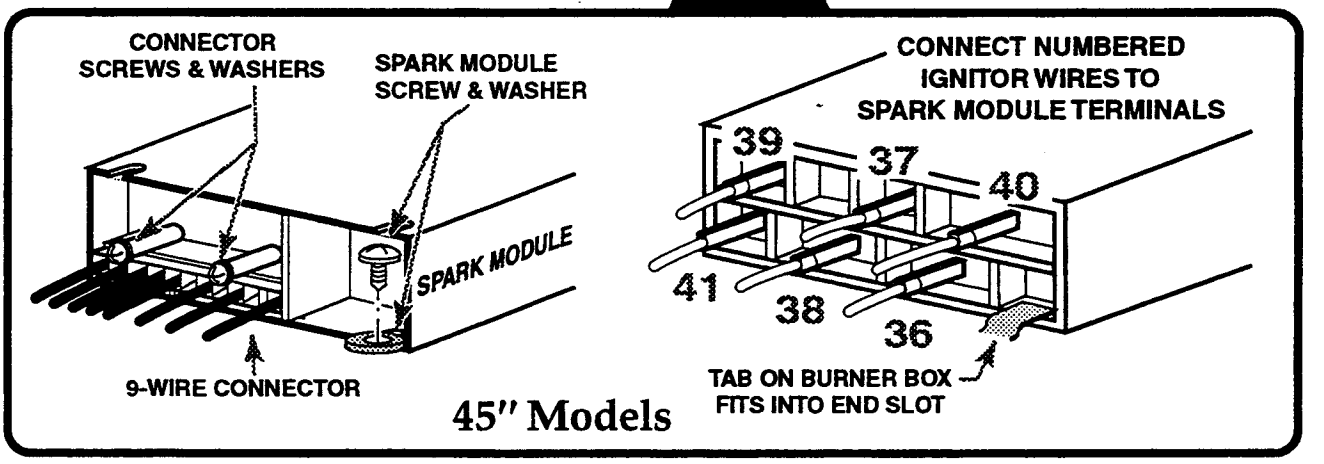
When you work on the cooktop, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

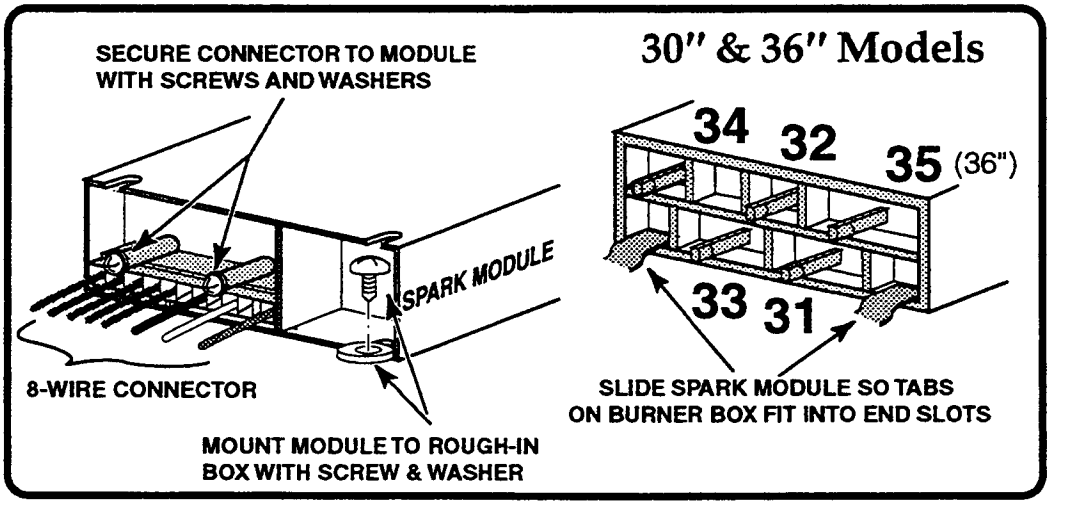
1. Turn off the gas supply and the electrical power going to the cooktop.
2. Remove the grates and burner caps from the cooktop.
3. Remove the knobs from the controls.
4. Using a $^{25}/_{32}$" (20 mm) socket, unscrew and remove the venturi from each of the burner bases, then lift the burner bases and rubber o-rings from the maintop.



5. Carefully lift the front of the maintop several inches and prop it up with a board or a hammer handle.
6. Remove the two screws and shoulder washers from the connector and unplug it from the spark module.
7. Unplug the ignitor wires from the other end of the spark module.
8. Remove the screw and flat washer from the spark module and unhook it from the tab in the burner box, then remove the module.
9. Install the new spark module, and reassemble the cooktop. **NOTE:** The illustrations show spark ignitor wire terminals for the 45" and the 36" cooktops. The 30" cooktop wires are connected to terminals 31, 32, 33, & 34, as shown in the 36" model wiring illustration.




CONNECTOR SCREWS & WASHERS
SPARK MODULE SCREW & WASHER
SPARK MODULE
9-WIRE CONNECTOR
CONNECT NUMBERED IGNITOR WIRES TO SPARK MODULE TERMINALS
39
37
40
41
38
36
TAB ON BURNER BOX FITS INTO END SLOT
45" Models


SECURE CONNECTOR TO MODULE WITH SCREWS AND WASHERS
30" & 36" Models
34
32
35 (36")
SPARK MODULE
33
31
8-WIRE CONNECTOR
SLIDE SPARK MODULE SO TABS ON BURNER BOX FIT INTO END SLOTS
MOUNT MODULE TO ROUGH-IN BOX WITH SCREW & WASHER

Replacing A Jet Holder

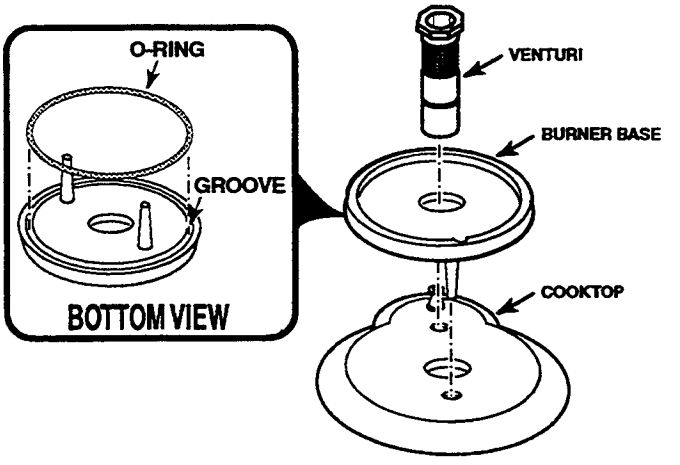
⚠ WARNING

Turn off the gas supply and the power circuit to the cooktop at the main (house) junction box before servicing this unit.

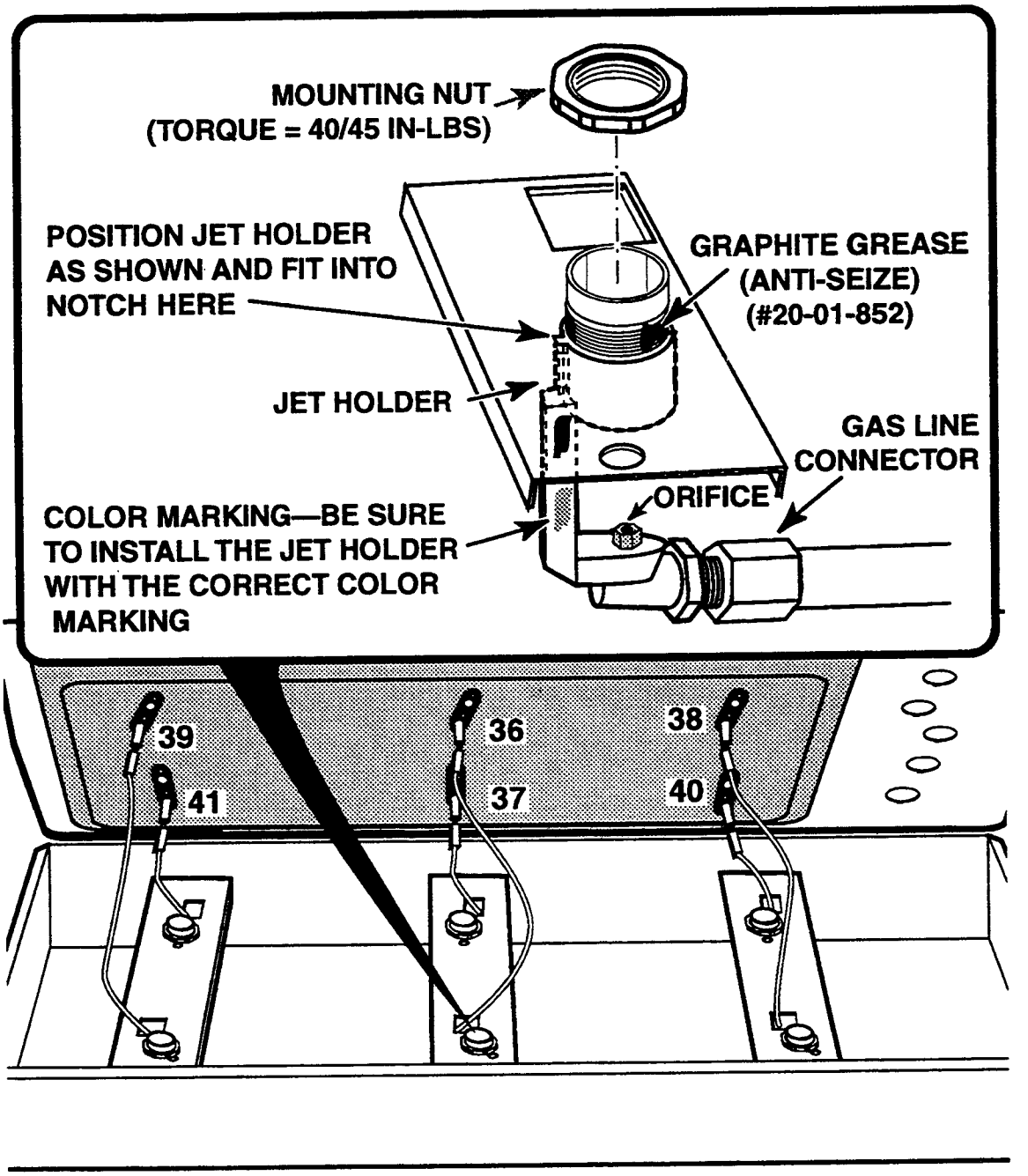
⚠ CAUTION

When you work on the cooktop, 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 cooktop.
2. Remove the grates and burner caps from the cooktop.
3. Remove the knobs from the controls.
4. Using a $^{25}/_{32}$" (20 mm) socket, unscrew and remove the venturi from each of the burner bases, then lift the burner bases and rubber o-rings from the maintop.



5. Carefully lift the front of the maintop several inches and prop it up with a board or a hammer handle. **NOTE:** Although a 45" model cooktop is shown, the jet holders are serviced the same for the 30" and 36" models.
6. Remove the gas line from the jet holder you wish to replace.
7. Remove the mounting nut from the jet holder and remove the jet holder from the support bracket.
8. Install the new jet holder (make sure that the replacement jet holder has the same color marking as the old one), and reassemble the cooktop. **NOTE:** Make sure that you leak-check the gas line connections before you secure the maintop. (Refer to "Jet Holder Color I.D. Chart" on page 3-29 for jet holder specifications.)


MOUNTING NUT
(TORQUE = 40/45 IN-LBS)
POSITION JET HOLDER
AS SHOWN AND FIT INTO
NOTCH HERE
GRAPHITE GREASE
(ANTI-SEIZE)
(#20-01-852)
JET HOLDER
GAS LINE
CONNECTOR
ORIFICE
COLOR MARKING—BE SURE
TO INSTALL THE JET HOLDER
WITH THE CORRECT COLOR
MARKING
39
41
36
37
38
40

SERVICING THE SIMMER (XLO) COMPONENTS

This section is for servicing components that are found only in the SGCS Model Cooktops. Although a 45" model cooktop is shown in the illustrations, the XLO components for the 30" and 36" models are serviced in the same manner. Refer to the section for the component you wish to service.

Replacing A Potentiometer

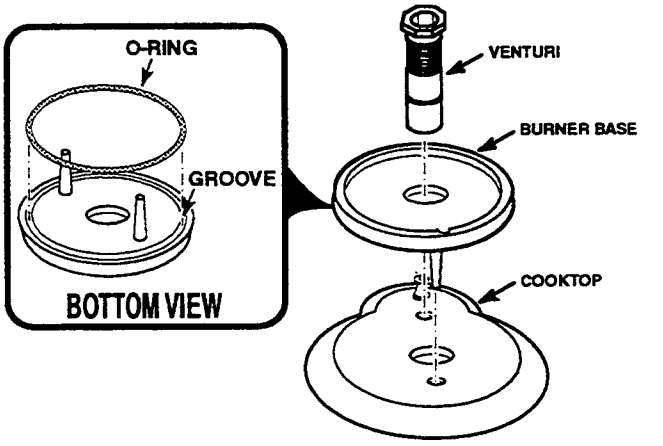
⚠ WARNING

Turn off the gas supply and the power circuit to the cooktop at the main (house) junction box before servicing this unit.

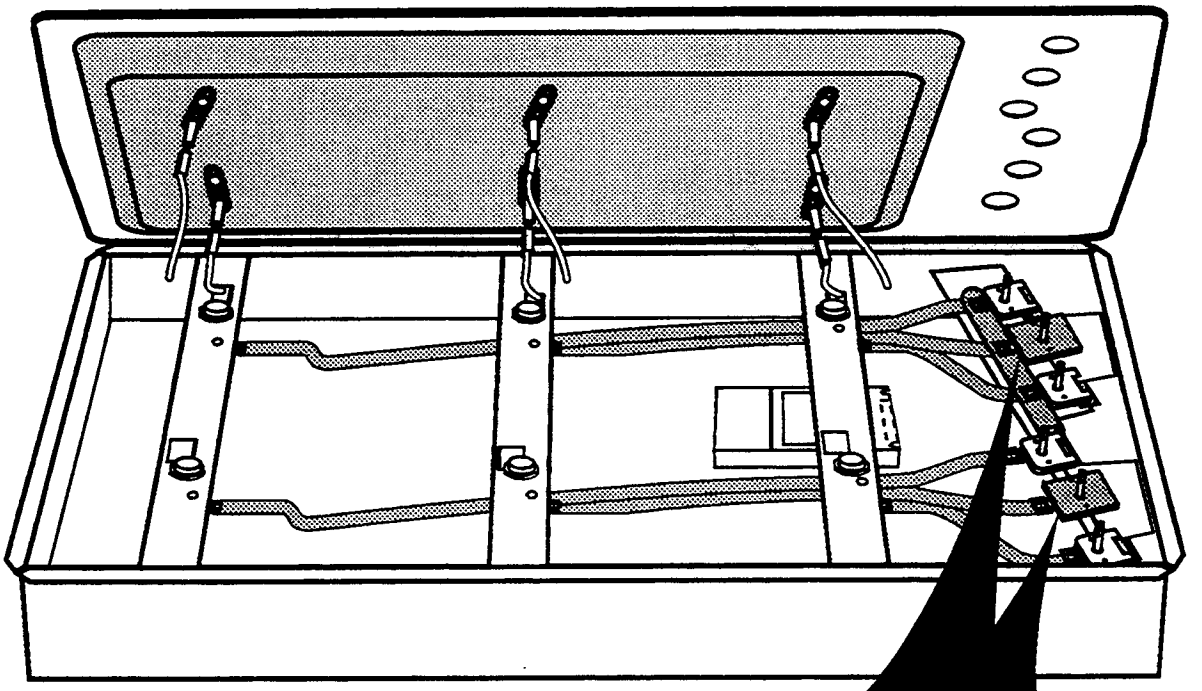
⚠ CAUTION

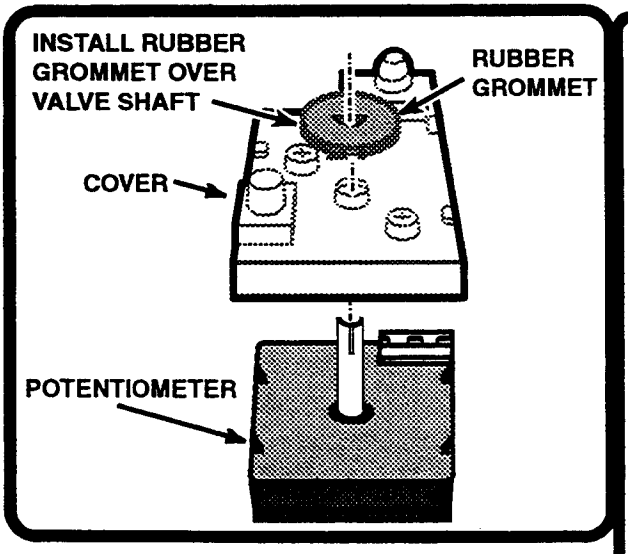
When you work on the cooktop, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

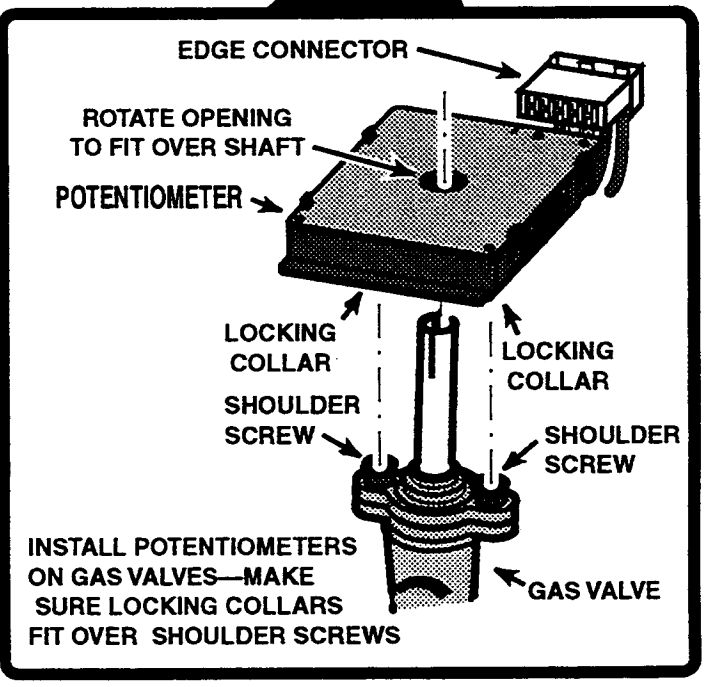
1. Turn off the gas supply and the electrical power going to the cooktop.
2. Remove the grates and burner caps from the cooktop.
3. Remove the knobs from the controls.
4. Using a $^{25}/_{32}$" (20 mm) socket, unscrew and remove the venturi from each of the burner bases, then lift the burner bases and rubber o-rings from the maintop.



5. Carefully lift the front of the maintop several inches and prop it up with a board or a hammer handle.
6. Remove the cover and rubber grommet from the potentiometer (see the illustration on the next page).
7. Unplug the edge connector from the potentiometer, then lift the potentiometer straight up, and unsnap it from the gas valve.
8. Install the new potentiometer and reassemble the cooktop.




INSTALL RUBBER GROMMET OVER VALVE SHAFT
RUBBER GROMMET
COVER
POTENTIOMETER


EDGE CONNECTOR
ROTATE OPENING TO FIT OVER SHAFT
POTENTIOMETER
LOCKING COLLAR
LOCKING COLLAR
SHOULDER SCREW
SHOULDER SCREW
INSTALL POTENTIOMETERS ON GAS VALVES—MAKE SURE LOCKING COLLARS FIT OVER SHOULDER SCREWS
GAS VALVE

Replacing A Gas Solenoid

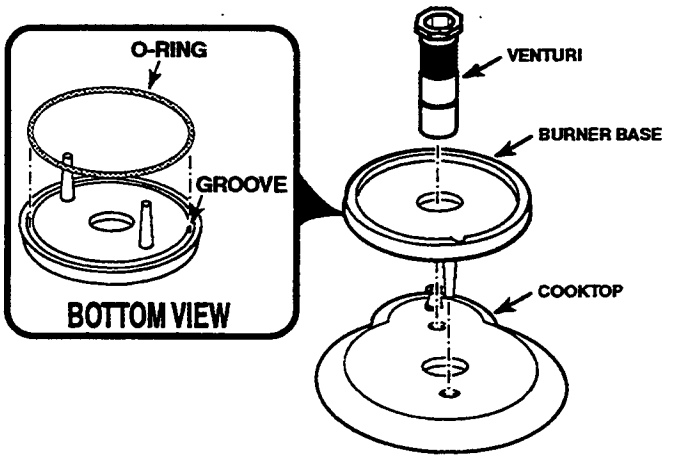
⚠ WARNING

Turn off the gas supply and the power circuit to the cooktop at the main (house) junction box before servicing this unit.

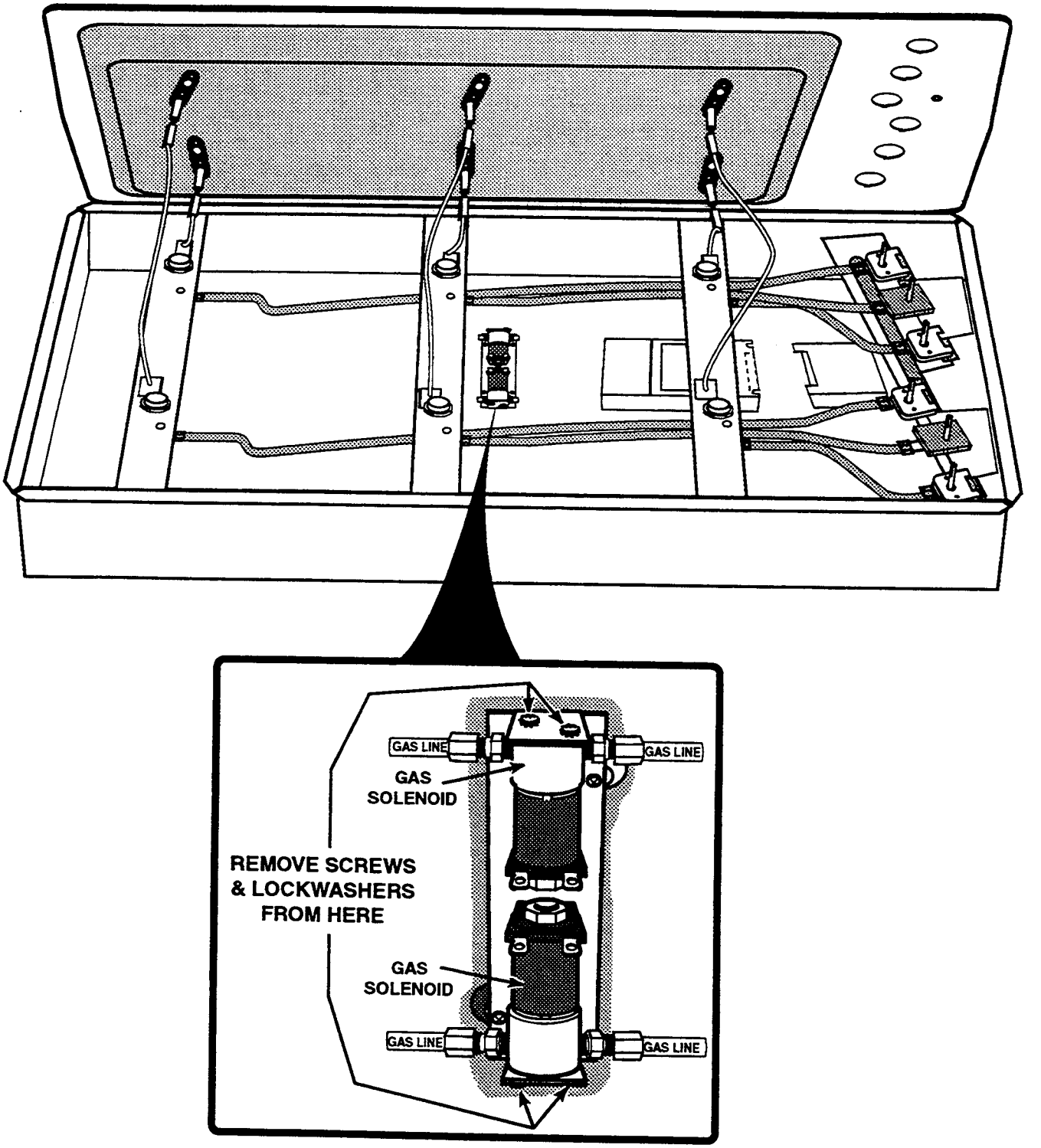
⚠ CAUTION

When you work on the cooktop, 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 cooktop.
2. Remove the grates and burner caps from the cooktop.
3. Remove the knobs from the controls.
4. Using a $^{25}/_{32}$" (20 mm) socket, unscrew and remove the venturi from each of the burner bases, then lift the burner bases and rubber o-rings from the maintop.



5. Carefully lift the front of the maintop several inches and prop it up with a board or a hammer handle.
6. Remove the gas lines from the gas solenoid you wish to replace.
7. Remove the mounting screws and lockwashers from the gas solenoid and remove the solenoid from the bracket.
8. Install the new solenoid and reassemble the cooktop. **NOTE:** Make sure that you leak-check the gas line connections before you secure the maintop.


GAS LINE
GAS LINE
GAS
SOLENOID
REMOVE SCREWS
& LOCKWASHERS
FROM HERE
GAS
SOLENOID
GAS LINE
GAS LINE

Replacing The Gas Simmer Controller

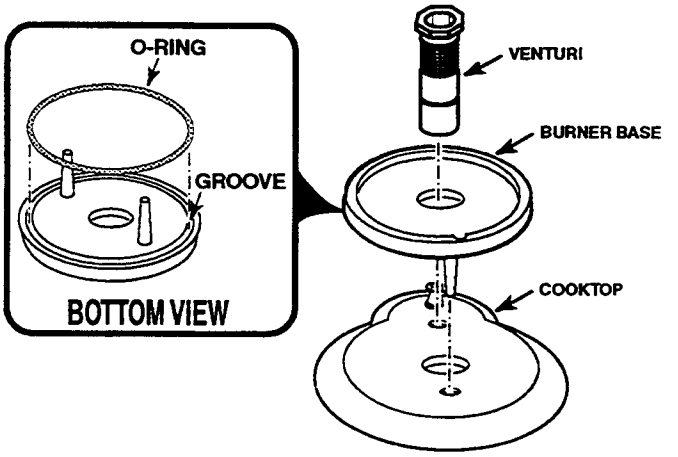
⚠ WARNING

Turn off the gas supply and the power circuit to the cooktop at the main (house) junction box before servicing this unit.

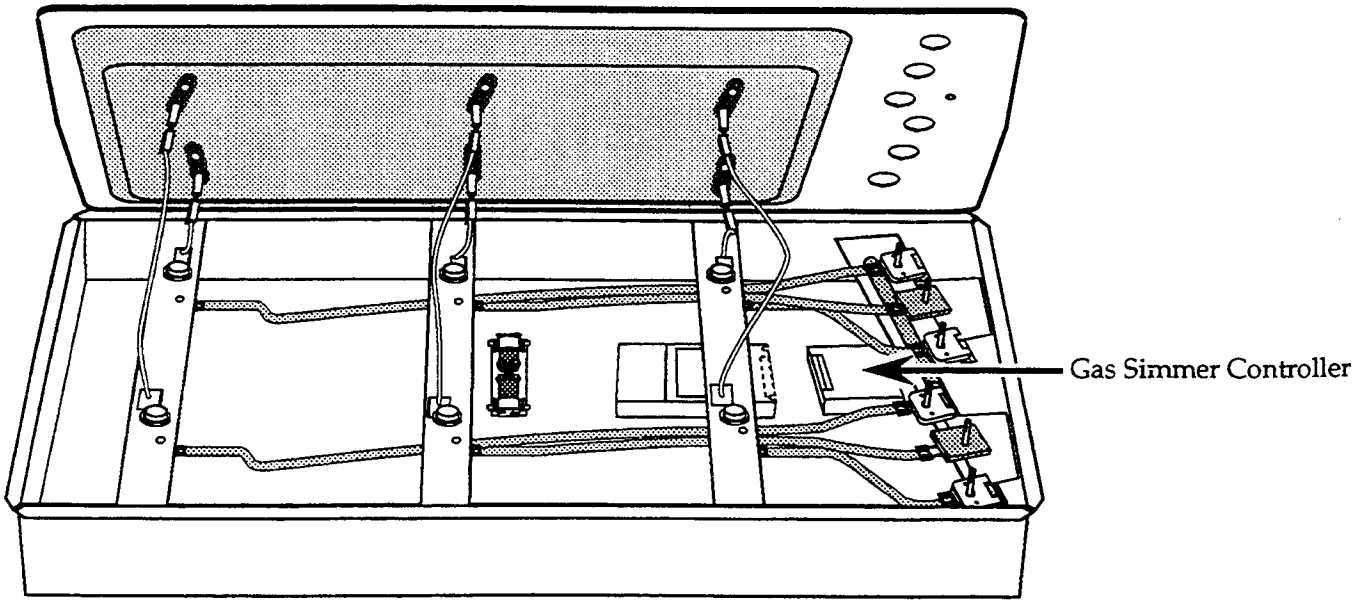
⚠ CAUTION

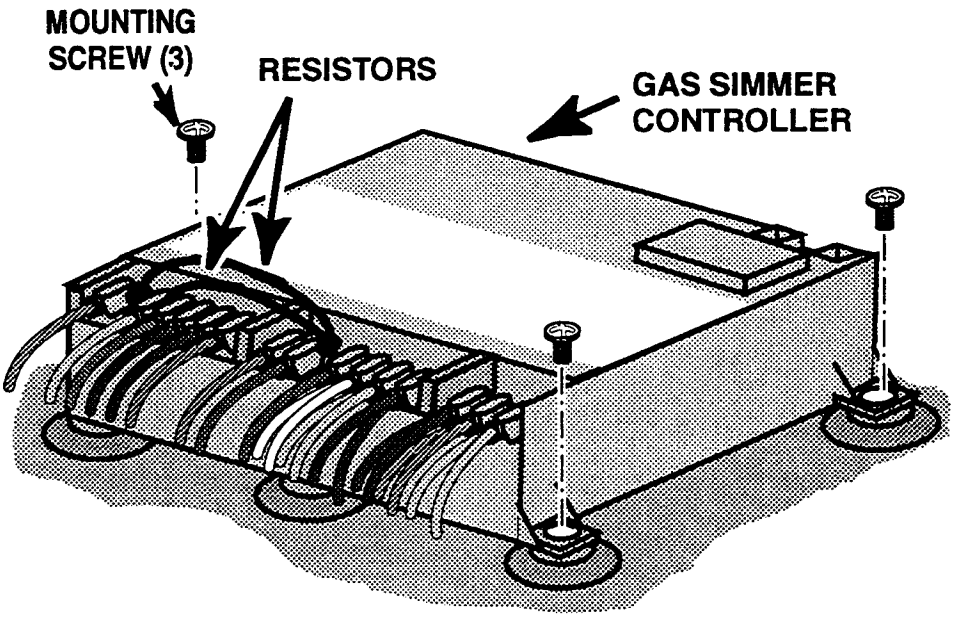
When you work on the cooktop, be careful when handling the sheet metal parts. There are sharp edges present and you can cut yourself if you are not careful.

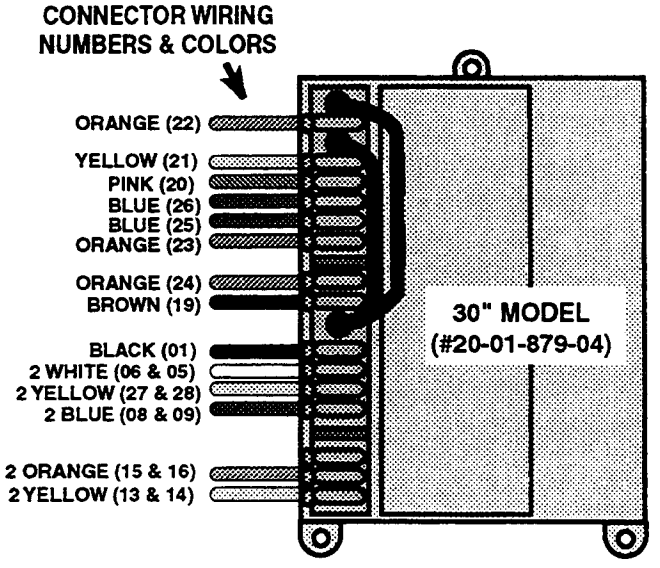
1. Turn off the gas supply and the electrical power going to the cooktop.
2. Remove the grates and burner caps from the cooktop.
3. Remove the knobs from the controls.
4. Using a $^{25}/_{32}$" (20 mm) socket, unscrew and remove the venturi from each of the burner bases, then lift the burner bases and rubber o-rings from the maintop.

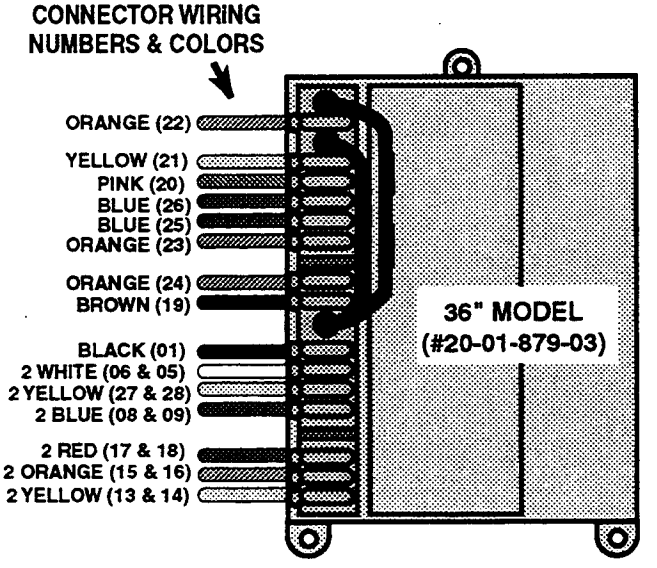


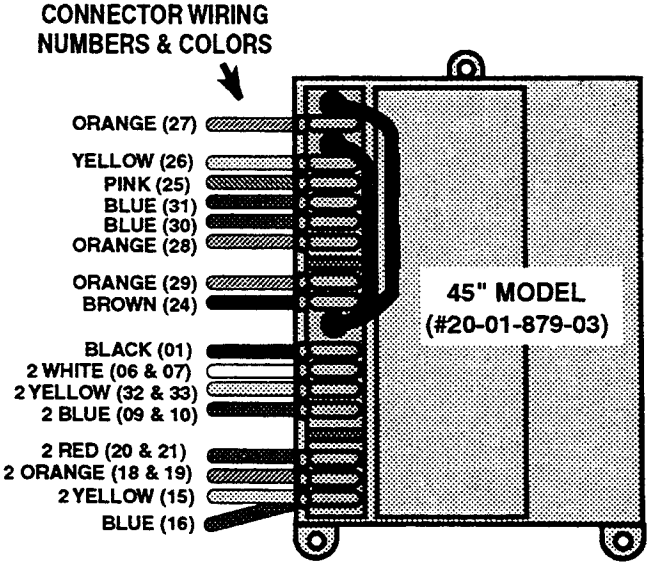
5. Carefully lift the front of the maintop several inches and prop it up with a board or a hammer handle.
6. Remove the wire connectors from the gas simmer controller.
7. Remove the mounting screws from the gas simmer controller and remove the controller (see the following page).
8. Install the new gas simmer controller and reassemble the cooktop. NOTE: Make sure that you reconnect the wiring to the correct terminals as shown in the illustration.




MOUNTING
SCREW (3)
RESISTORS
GAS SIMMER
CONTROLLER


CONNECTOR WIRING
NUMBERS & COLORS
ORANGE (22)
YELLOW (21)
PINK (20)
BLUE (26)
BLUE (25)
ORANGE (23)
ORANGE (24)
BROWN (19)
BLACK (01)
2 WHITE (06 & 05)
2 YELLOW (27 & 28)
2 BLUE (08 & 09)
2 ORANGE (15 & 16)
2 YELLOW (13 & 14)
30" MODEL
(#20-01-879-04)


CONNECTOR WIRING
NUMBERS & COLORS
ORANGE (22)
YELLOW (21)
PINK (20)
BLUE (26)
BLUE (25)
ORANGE (23)
ORANGE (24)
BROWN (19)
BLACK (01)
2 WHITE (06 & 05)
2 YELLOW (27 & 28)
2 BLUE (08 & 09)
2 RED (17 & 18)
2 ORANGE (15 & 16)
2 YELLOW (13 & 14)
36" MODEL
(#20-01-879-03)


CONNECTOR WIRING
NUMBERS & COLORS
ORANGE (27)
YELLOW (26)
PINK (25)
BLUE (31)
BLUE (30)
ORANGE (28)
ORANGE (29)
BROWN (24)
BLACK (01)
2 WHITE (06 & 07)
2 YELLOW (32 & 33)
2 BLUE (09 & 10)
2 RED (20 & 21)
2 ORANGE (18 & 19)
2 YELLOW (15)
BLUE (16)
45" MODEL
(#20-01-879-03)

Replacing The Pilot Light

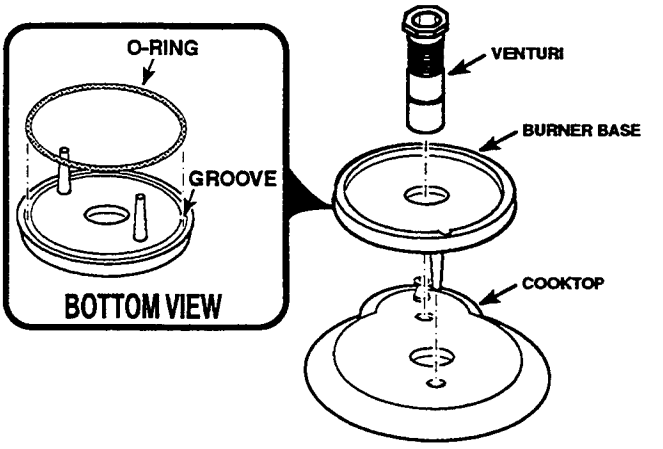
⚠ WARNING

Turn off the gas supply and the power circuit to the cooktop at the main (house) junction box before servicing this unit.

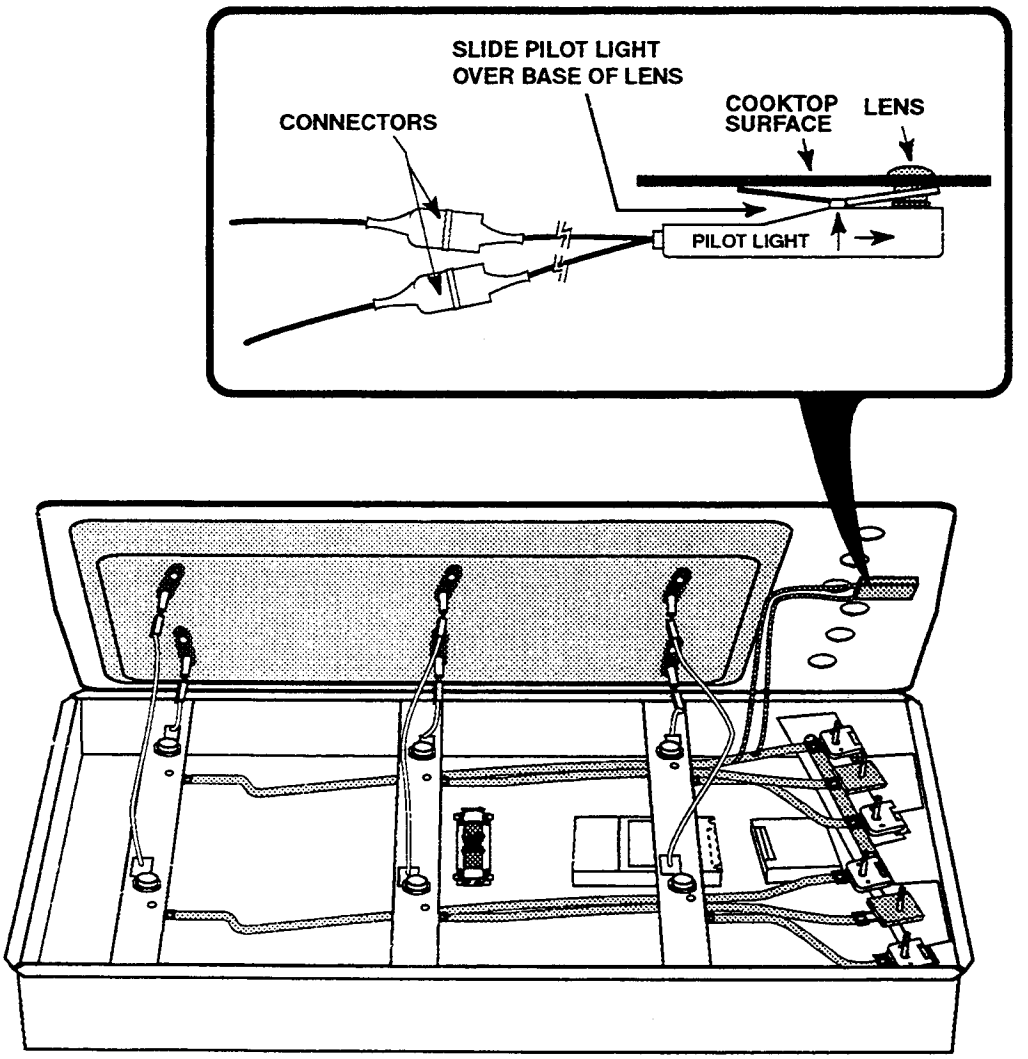
⚠ CAUTION

When you work on the cooktop, 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 cooktop.
2. Remove the grates and burner caps from the cooktop.
3. Remove the knobs from the controls.
4. Using a $^{25}/_{32}$" (20 mm) socket, unscrew and remove the venturi from each of the burner bases, then lift the burner bases and rubber o-rings from the maintop.



5. Carefully lift the front of the maintop several inches and prop it up with a board or a hammer handle.
6. Unplug the two wire connectors from the pilot light.
7. Slide the pilot light off the red lens on the maintop.
8. Install the new pilot light and reassemble the cooktop.


SLIDE PILOT LIGHT
OVER BASE OF LENS
CONNECTORS
COOKTOP
SURFACE
LENS
PILOT LIGHT

REPLACING THE GAS PRESSURE REGULATOR

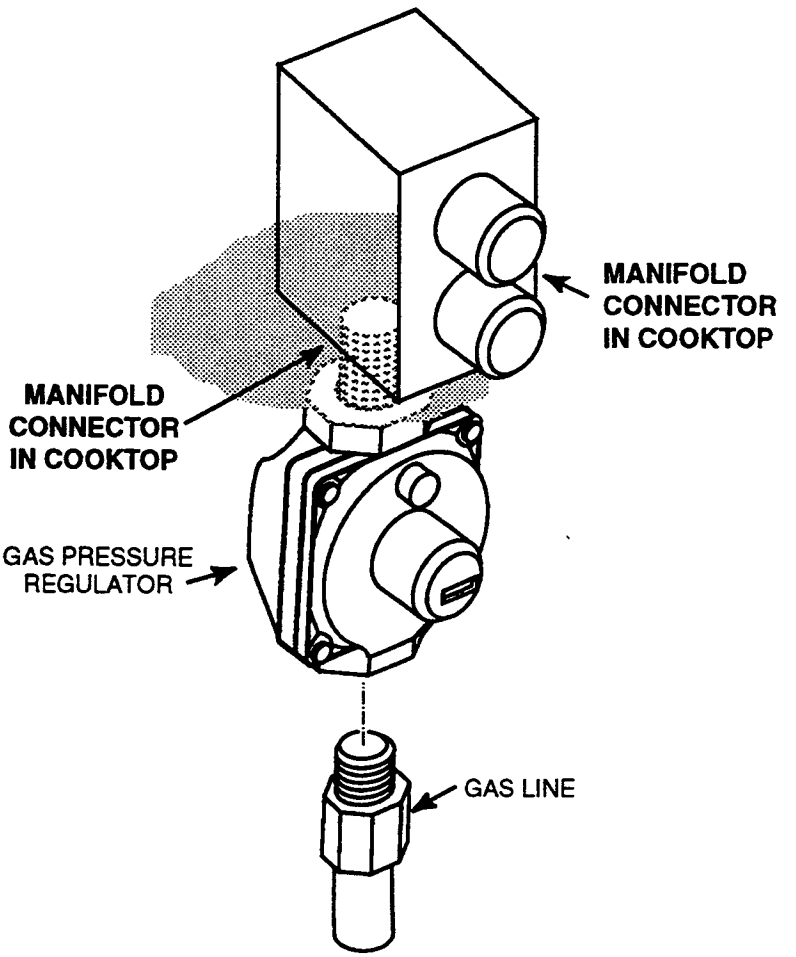
⚠ WARNING

Turn off the gas supply and the power circuit to the cooktop at the main (house) junction box before servicing this unit.

⚠ CAUTION

When you work on the cooktop, 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 cooktop.
2. From inside the cabinet, disconnect the gas line going to the gas pressure regulator.
3. Hold the gas line connector coming from the cooktop manifold with a pipe wrench so that it cannot turn, then unscrew the gas pressure regulator from the line.
4. Install the new gas pressure regulator on the cooktop connector and reconnect the gas line.
5. Turn on the gas and leak-check the regulator connections.



TROUBLESHOOTING

THEORY OF OPERATION

The following information describes the basic operating theory and the functions for all of the major components and the associated features used in the gas cooktops. It is suggested reading to help in understanding the components prior to troubleshooting them.

The Gas Distribution System

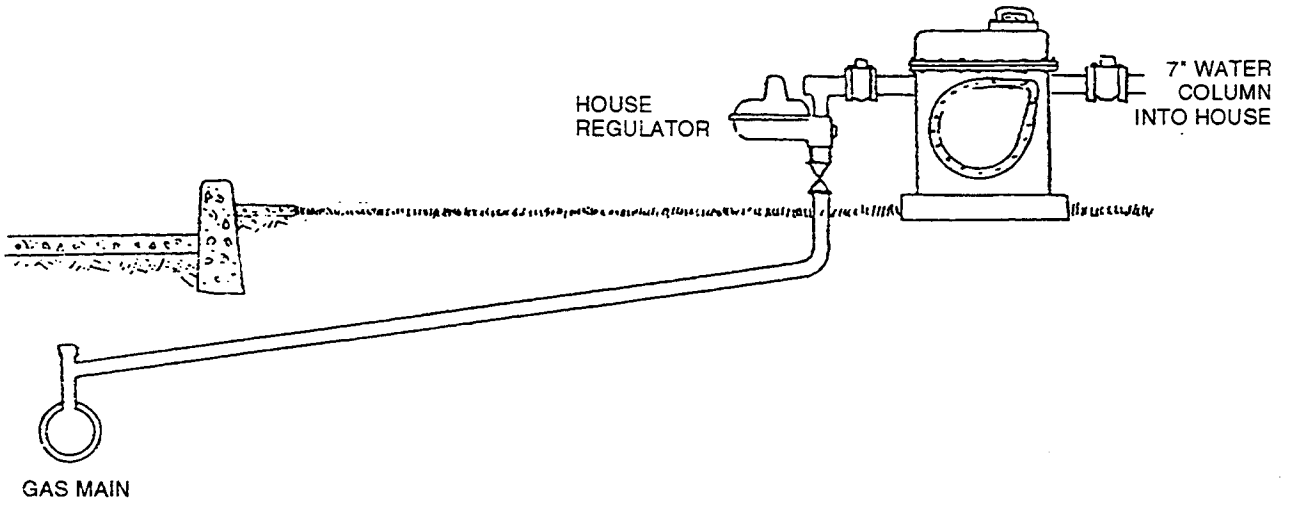
A pipe that delivers gas from the main supply to the customer s gas meter is known as a "service." Service lines can vary in size from 1/2" in diameter for domestic consumers, to 8" for industrial consumers.

Gas from the supply line is piped to each of the cooktop burners where it is mixed with air and allowed to escape from a series of small holes, located in the burner cap. Gas is ignited as it flows out of the burner holes. The rate of its flow is regulated so that it burns completely and cleanly with flames that can range in size from 1/4" to 3/4" in length, depending on the application. Applications include: gas input, gas pressure, air mixture, and spark for lighting the burner.

Gas pressure is usually maintained at medium pressures of 10 to 55 psi (pounds-per-square-inch) to the pressure regulator ahead of the house meter.

The house regulator reduces pressures from PSI to inches water column. It is larger than the pressure regulator that comes with the cooktop. Although the principle is the same, the action is different.

To convert gas pressures in water column and PSI, remember that 27.74 inches water column is equal to one pound-per-square-inch. The house water regulator regulates the gas pressure to the house at about 7" water column. Natural gas cooktops require 4" water column to operate efficiently.



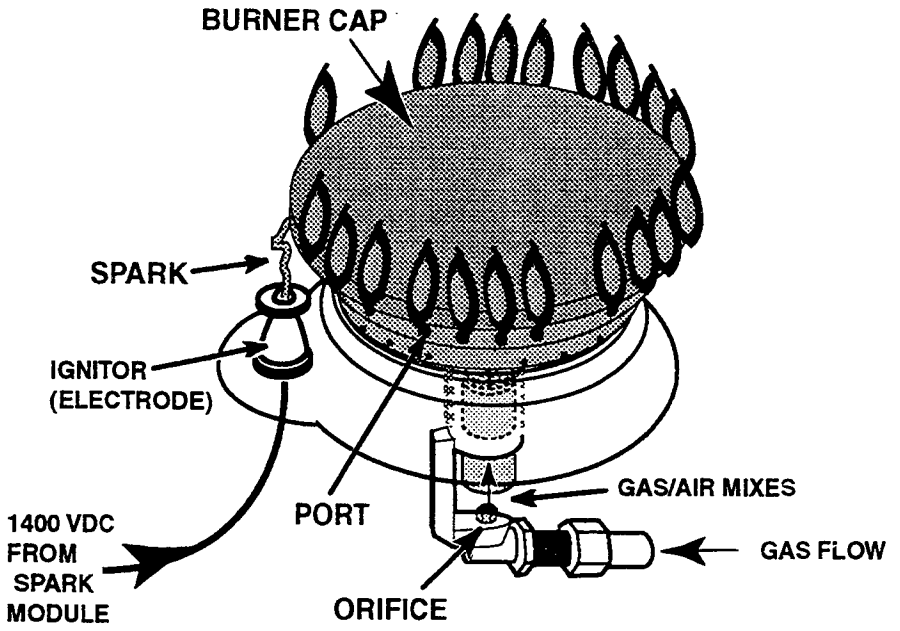
Principles Of The Isophording Gas System

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 this mixture is provided in two ways (see the following illustration). Air mixed with the gas as it enters the injector sleeve is called primary air. This air cannot be adjusted. There is no air shutter. The flame characteristic is determined by the distance between the bottom of the injector sleeve 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 injector sleeve 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 into this area of low pressure through the gap between the injector sleeve and the orifice. The air and gas travel through the narrow injector sleeve. The injector sleeve size increases causing the volume of air and gas to increase. 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 injector sleeve into the burner base. The burner base is a hollow chamber from which the gas and air mixture flows to the burner cap where it is ignited by the spark ignitor and produces a flame. The burner cap 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.



Isophording Sealed Gas 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.

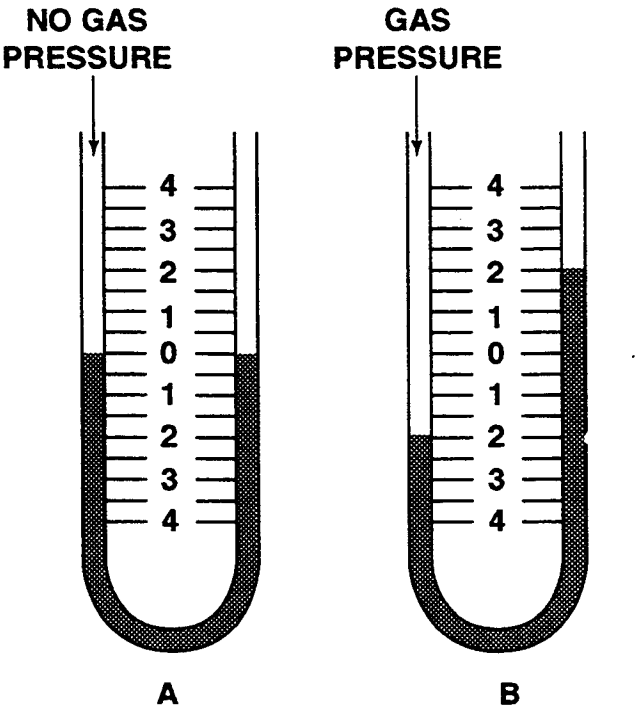
How To Measure Gas Pressure

When checking a cooktop for improper burner operation, it is often necessary to measure gas pressure beyond the gas valve. Two devices are commonly used to measure gas pressures in an appliance: a spring gauge and a U-tube manometer. We recommend using the manometer.

Gas pressure in inches water column is read directly from the manometer. A manometer is simply a U-shaped tube that is made of a transparent material. Both legs of the tube are filled about half way with tap water. The water level in the manometer with both ends of the tube open is the zero point.

To measure gas pressure in the cooktop, the rubber tubing from one end of the manometer is connected to the threaded outlet of the gas valve, the other end of the manometer is left open. Turn the gas tube to the "High" position, the water in the gas side of the tube is pushed down, while the water in the open end rises. This indicates the gas pressure. The pressure reading is obtained by adding the height of water column <u>above</u> the zero on one side and below the zero on the other.

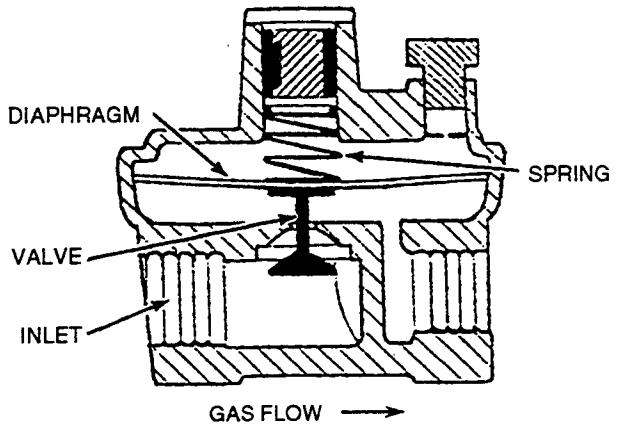
Illustration A shows the water level at zero in both legs. This indicates no gas pressure entering the manometer. Illustration B shows gas pressure applied to the manometer. The left leg of the manometer is 2" below the zero point. The right leg is 2" above the zero point. Adding the gas pressure in both legs indicates that the head pressure is 4" water column.



The Gas Pressure Regulator

A 5" water column gas pressure regulator is required for all natural gas applications (10" L.P.). The gas will enter the regulator at about 7" water column (14" L.P). The regulator will not operate effectively if the required pressure is below 5" water column, or if it exceeds 14" water column.

Gas flow should be in the direction of the arrow. If there is a surge of line pressure, the diaphragm will flex upward, reducing the valve opening to a point where the gas pressure counteracts the spring weight above the valve and diaphragm.

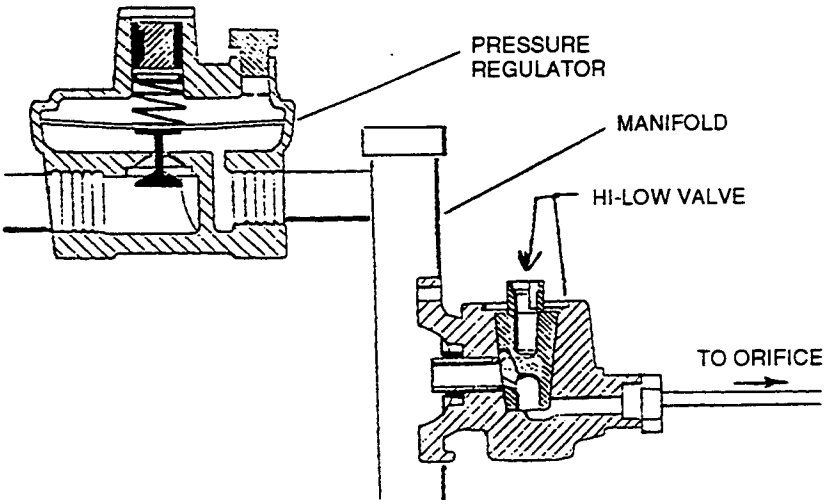


Pressure Regulator

Manifold And Gas Valves

Gas travels through the regulator at a regulated pressure. There are two types of gas valves: a regular type and an extra low (XLO) type.

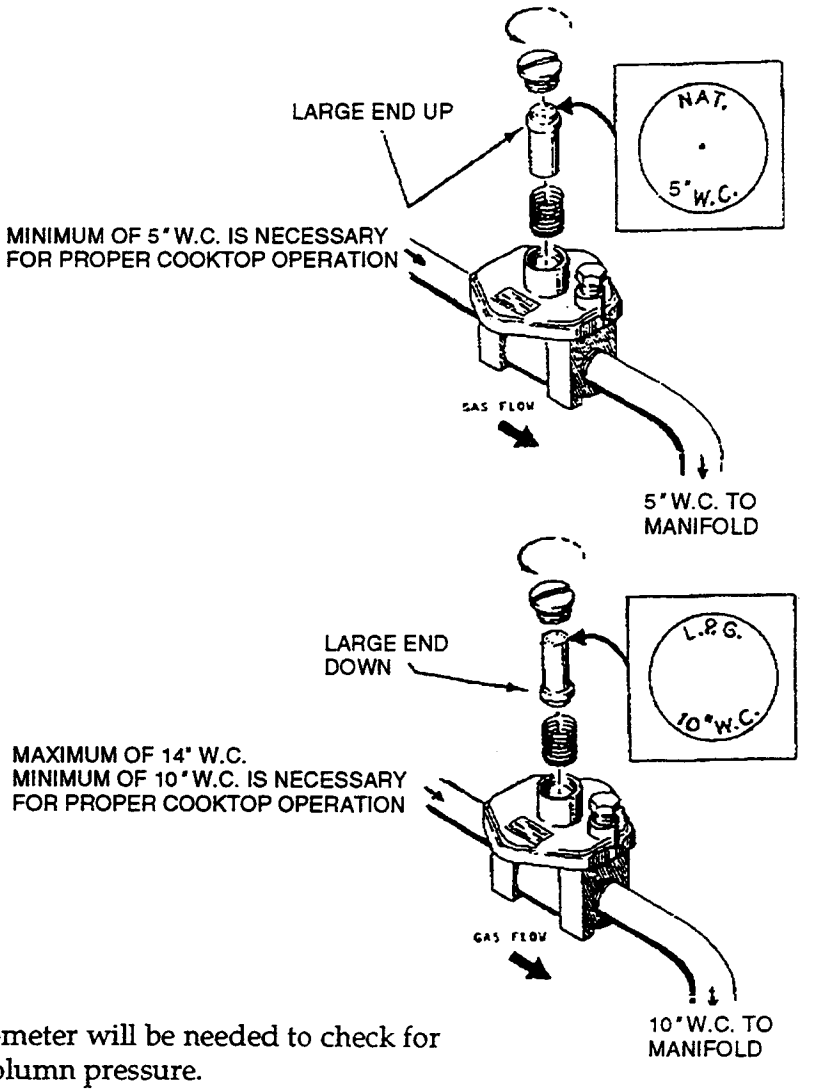
The gas valve is used to control the amount of gas that is sent to the orifice, thereby controlling the heat output. The valves consist of a housing, an internal plug, and a needle valve. The internal plug regulates the Low, Medium, and High settings. The needle valve controls the Low setting. The valve has an inversion that wraps around the manifold. This is were the gas leaves the manifold and enters the gas valve. There is a rubber seal in the inversion to seal the valve against the manifold and prevent gas leaks. The gas exits the valve at the threaded end. A gas line is attached to the threaded end to direct the gas to the orifice.



Testing A Gas Pressure Regulator

The gas pressure regulator is set to deliver 5" W.C. of natural gas and 10" W.C. of L.P. gas to the cooktop manifold. To check the gas regulator for proper operation:

1. Remove the cap from the pressure regulator.
2. Remove the plunger and reinstall it in the correct position for natural, or L.P. gas, as shown in the illustration.

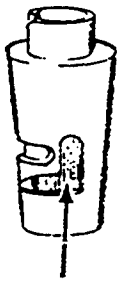


NOTE: A manometer will be needed to check for proper water column pressure.

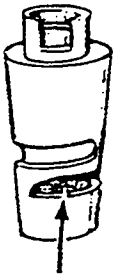
Gas Valve Operation

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.

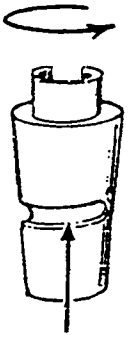
To reach the Low setting, the valve is turned counterclockwise approximately 180° away from the Off position, which is the full extent of the valve's adjustment capacity. In this position, the gas enters an auxilary passage in the valve. The gas volume is controlled by the spacing around and through 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.



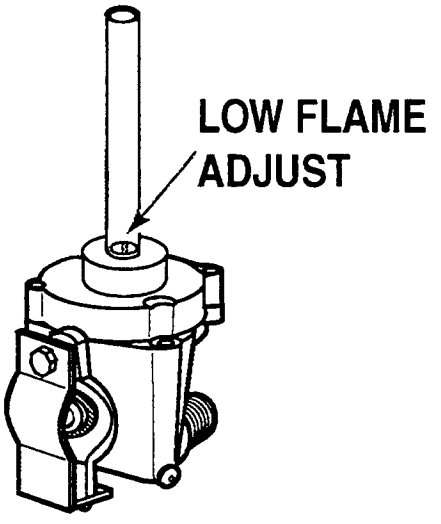
In "Medium," less of the opening in the plug is exposed to the opening in the valve housing.



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

Gas Valve Bypass Screw

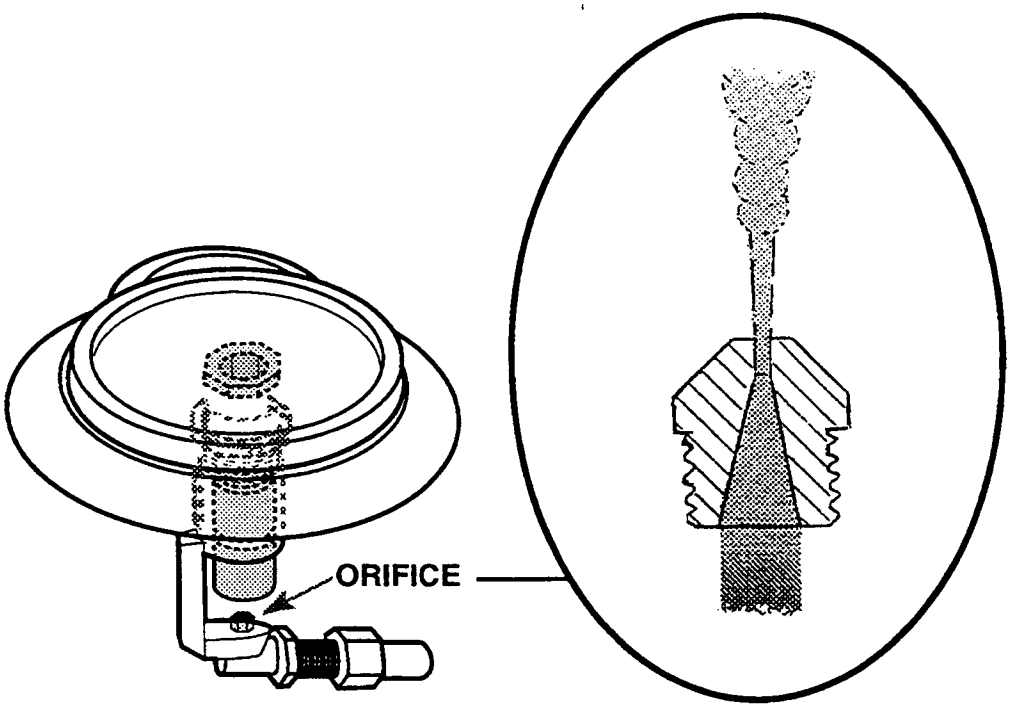
The gas valve bypass screw is located in the center of the shaft. This screw controls the flame height of the low setting. The screw position is adjusted by the manufacturer for the proper flow of natural gas. For use with L.P. gas, the screw has to be turned fully clockwise until it is fully seated. This closes the spacing around the screw, and the flow is then controlled by the hole in the screw.



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.

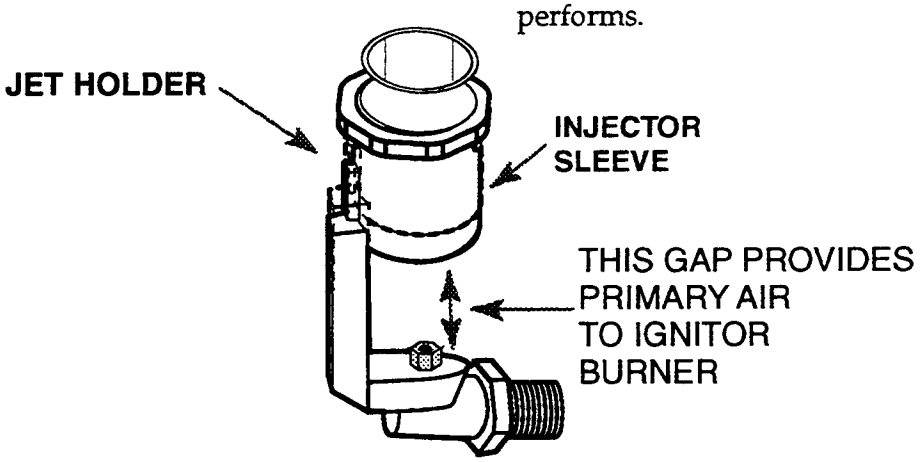
The amount of air drawn in is dependent upon the pressure of the gas and the size of the orifices, the size of the tube after the orifice, the size of the air intake hole, and any back pressure created by the burner head. The natural gas system has less pressure and needs less air for a given amount 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.



The Injector Sleeve

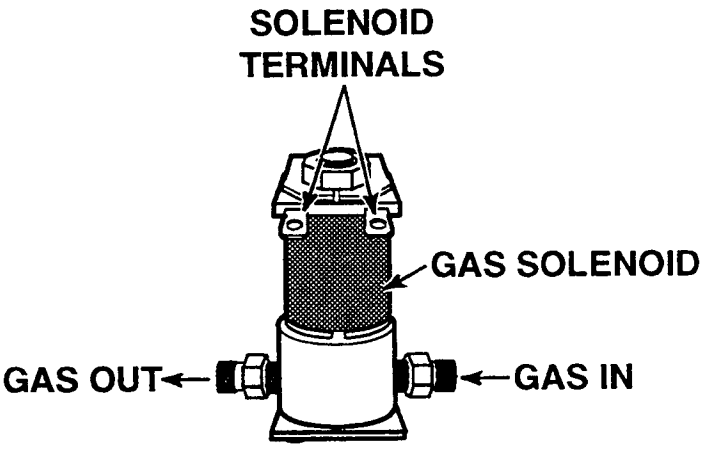
Since there is no air adjustment and all the orifices are fixed, the injector sleeve plays a crucial part in the design of the isphording system.

Gas is injected into the burner through the injector sleeve of the jet holder. Air from outside flows into the injector sleeve through the gap between the injector sleeve and the top of the orifice. The gas travels through the injector sleeve to the burner for ignition. There is not enough air at this point to allow the mixture to burn. The injector sleeve is also called a "venturi," since that is the function it performs.



Gas Solenoid

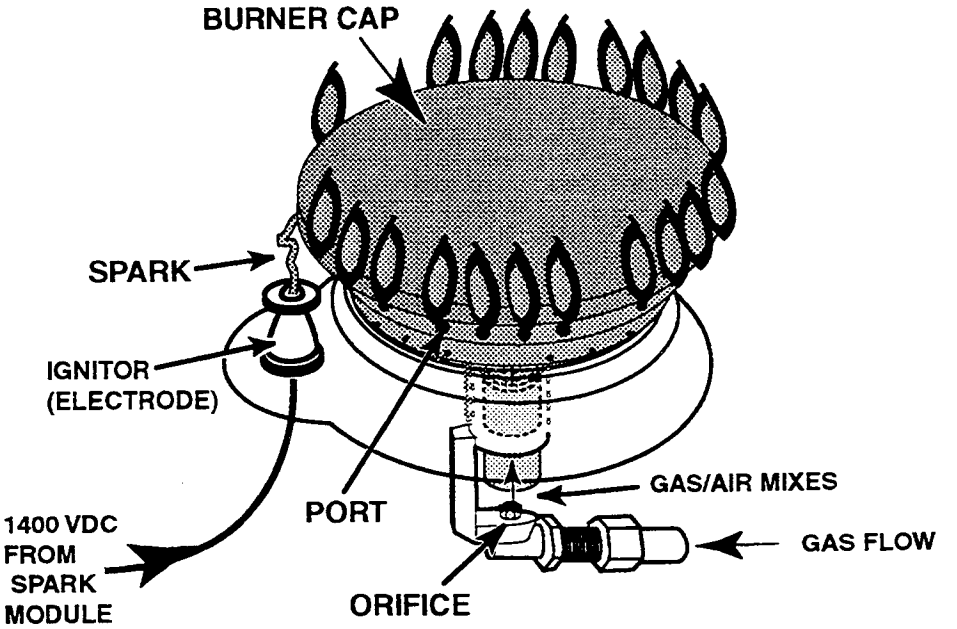
The gas solenoids are closed until they are activated by 105-volts dc from the controller. They have a coil that energizes a diaphragm and allows gas to flow to the burners. The solenoids are closed until the manual valve is turned to "HIGH." It stays open when the valve is between HIGH and LOW, and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



Burner Assembly

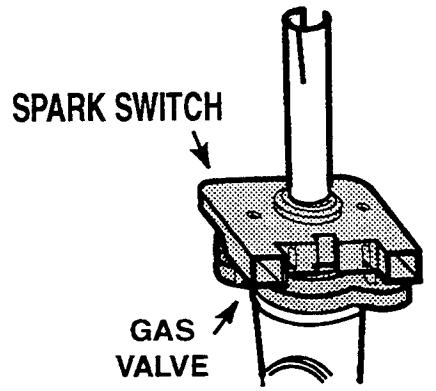
The burner assembly consists of the burner base and the burner cap. The air and gas mixture passes from the injector sleeve assembly into the burner base. The burner base is a hollow chamber from which the air and gas mixture flows to the burner cap.

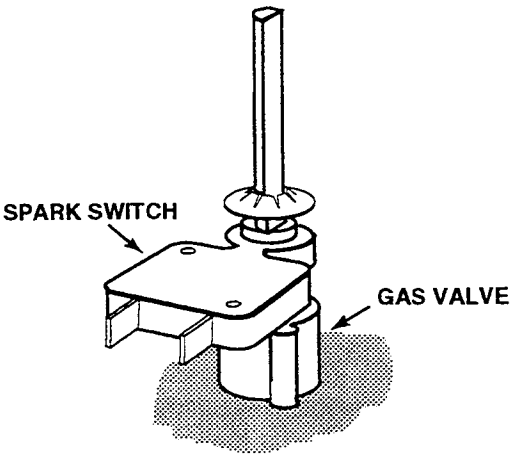
The burner cap contains small holes which are called "ports." The air and gas mixture flows from the burner base ports which distribute the flames evenly to provide good heat output. They spread the flames so that they can consume secondary air. Secondary air is the air that mixes with the gas outside the ports where the gas burns.



Spark Switch

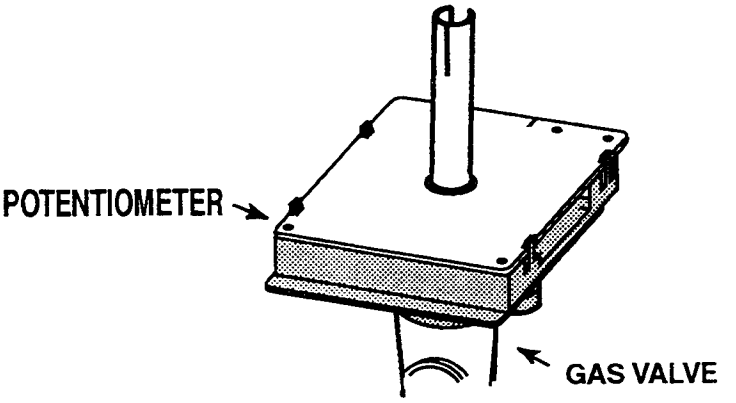
The spark switch is a valve-mounted switch that fastens to the two shoulder screws on the valves. It is a single-pole, single throw switch. The switch closes when the valve knob is turned to ON or LIGHT.





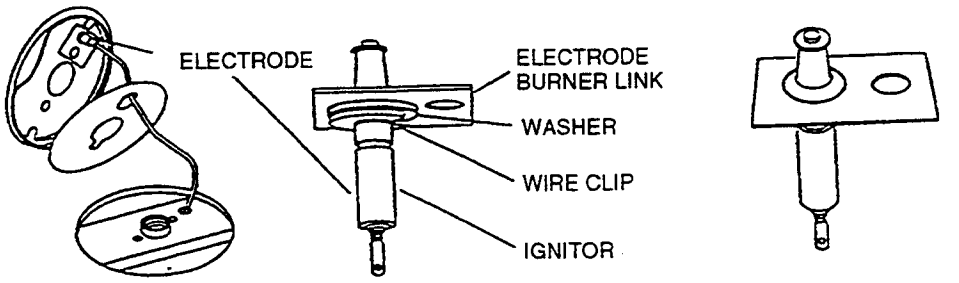
Potentiometer

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.



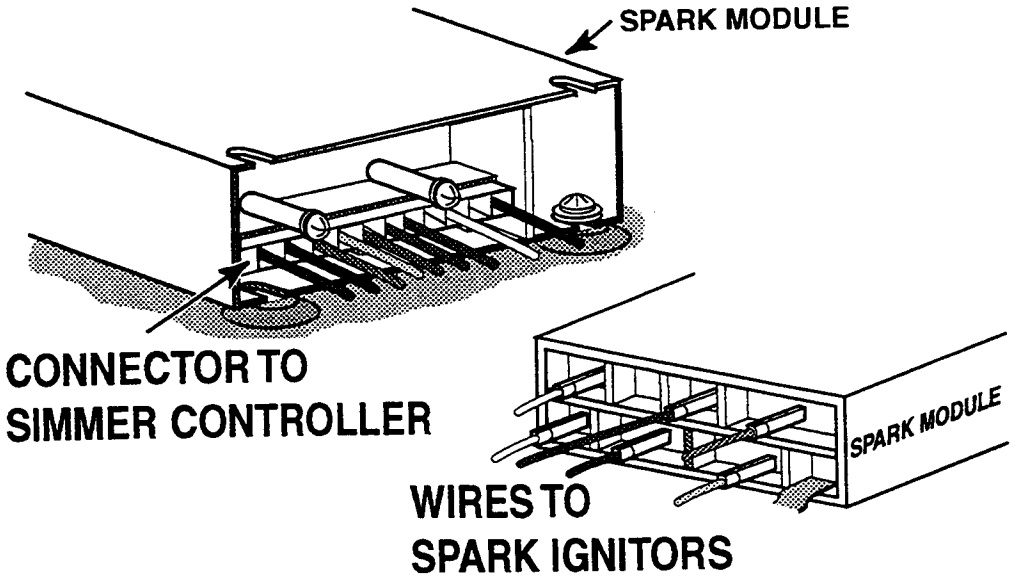
The Spark Ignitor (Electrode)

The spark ignitor (electrode) makes the spark that ignites the gas from the burner and senses the presence or absence of a flame. When a flame is missing, it detects the absence of the electrical rectification, which is present in the flame, and it sends a signal to the module to spark and regulate the flame. The ignitor does not detect heat, or millivolts. It detects a DC current path.



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 10,000-volts DC and sends it to the spark ignitor.



Simmer Controller

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

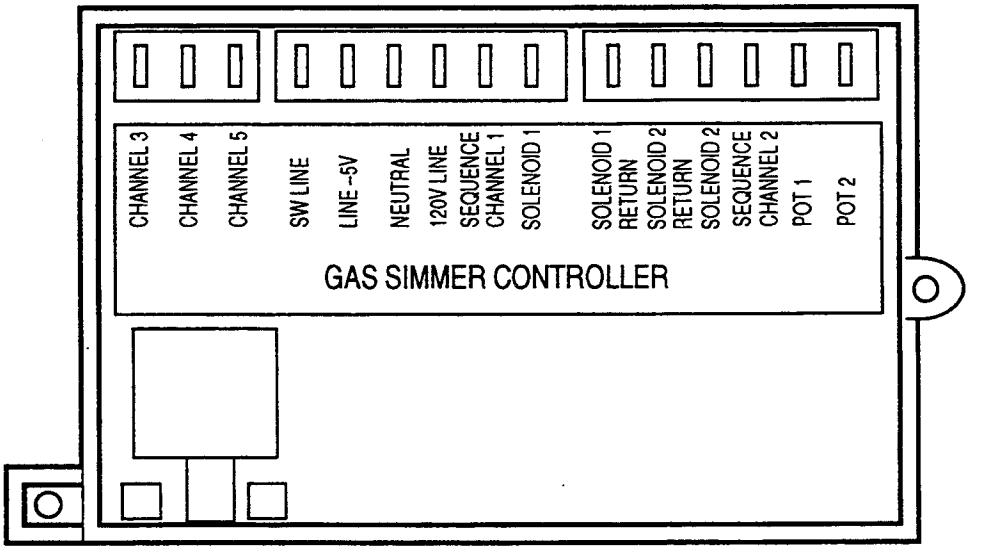
a) Sends current to the module to activate the ignitor.

b) Sends current to the gas solenoids (85 - 105 vdc).

c) Controls the timing of the XLO (extra-low) feature.

PROBLEM: Sequenced gas cooktops & 30" ranges have noisy (chattering) solenoid valve.

Correction: Replace the SQ001 Simmer Controller (#20-01-879). with a new SQ003 Simmer Controller (shown below—#20-01-879-03). Do not replace the spark module or the gas solenoid valve.



The Gas Electronics System
Potentiometer Operation

CAUTION: Electrical Shock Hazard: There is 120 VAC (line voltage) along with the low DC voltage in all of the potentiometer wires.

BURNER OFF

With the knob in the Off position, there is low resistance across normally-closed potentiometer contacts 3 and 4, which sends 5-volts DC to the controller. Contacts 1 and 5 are normally-open.

REMEMBER: The lower the resistance at the potentiometer, the higher the voltage.

Knob in Off position = 5-volts DC (low resistance).

BURNER ON HIGH

With the knob in the High position, normally-open contacts 1 and 5 close, and there is low resistance across potentiometer contacts 3 and 4. The potentiometer sends approximately 4-volts DC to the controller.

REMEMBER: The lower the resistance at the potentiometer, the higher the voltage.

Knob in High position = 4-volts DC (low resistance).

BURNER ON LOW

With the knob in the Low position, there is higher resistance across potentiometer contacts 3 and 4. The potentiometer sends approximately 1-volt DC to the controller.

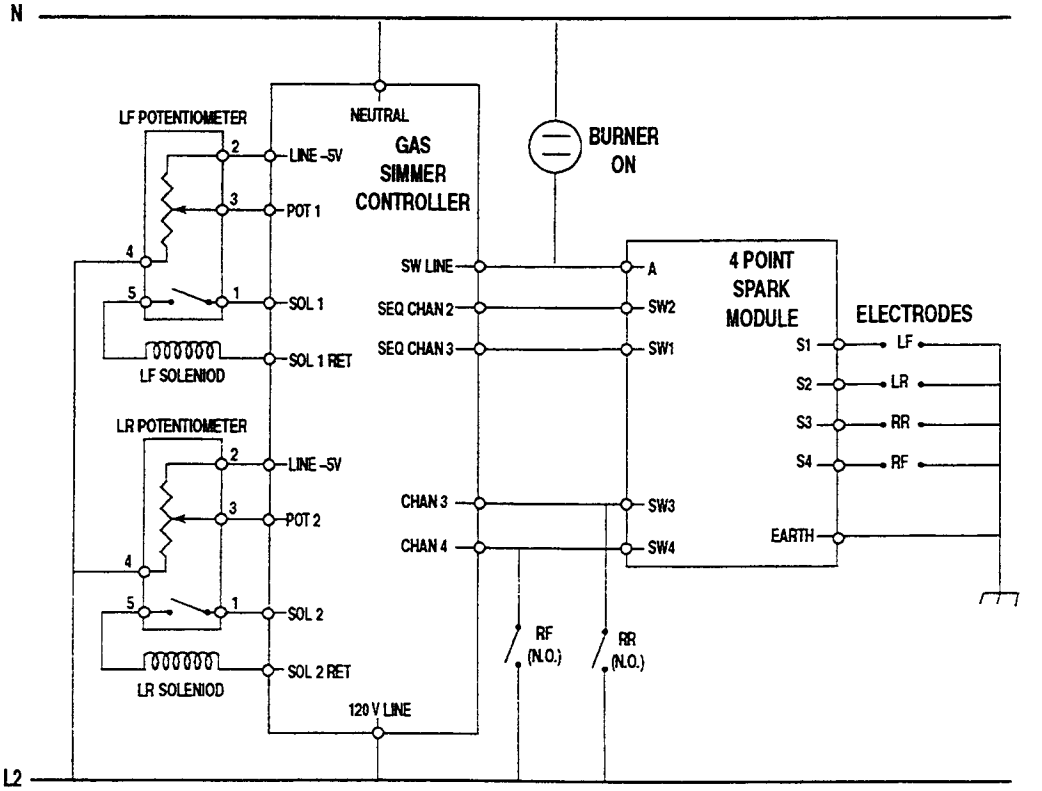
REMEMBER: The higher the resistance at the potentiometer, the lower the voltage.

Burner at Low = 1-volt DC (high resistance).

BURNER ON XLO (XTRA LOW)

With the knob in the XLO position, there is high resistance across potentiometer contacts 3 and 4. The potentiometer sends 0-volts DC to the controller.

Burner at XLO = 0-volts DC (high resistance).



The Gas Simmer Controller Operation

CAUTION: Electrical Shock Hazard: There is 120 VAC (line voltage) along with the low DC voltage in all of the potentiometer wires.

BURNER OFF

With the knob in the Off position, the controller receives 5-volts DC from the potentiometer, which causes it to do nothing.

REMEMBER: The mode of operation is dependent on what voltage the controller receives from the potentiometer.

BURNER ON HIGH

With the knob in the High position, the controller receives 4-volts DC from the potentiometer.

The controller uses this voltage to:

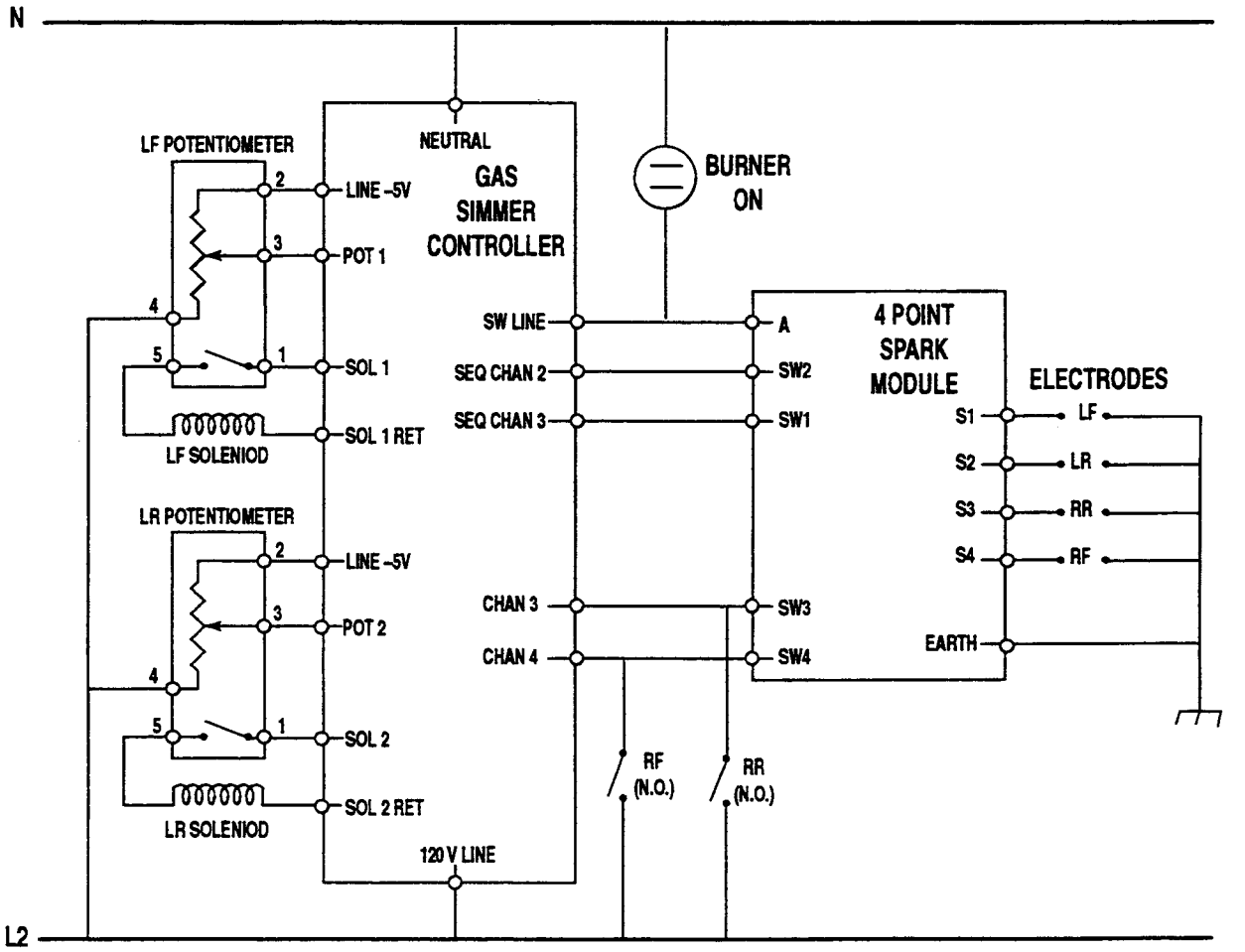
- Turn on the spark module.
- Activate the gas solenoid constantly.

BURNER BETWEEN HIGH & LOW

With the knob in the Low position, the controller receives between 1- and 4-volts DC from the potentiometer.

The controller uses this voltage to:

- Turn on the spark module.
- Activate the gas solenoid constantly.



BURNER ON XLO

With the knob in the XLO (Xtra Low) position, the controller receives 0-volts DC from the potentiometer.

The controller uses this voltage to:

- Cycle the spark module On for 7-seconds and Off for 53-seconds.
- Cycle the gas solenoids On for 7-seconds and Off for 53-seconds.

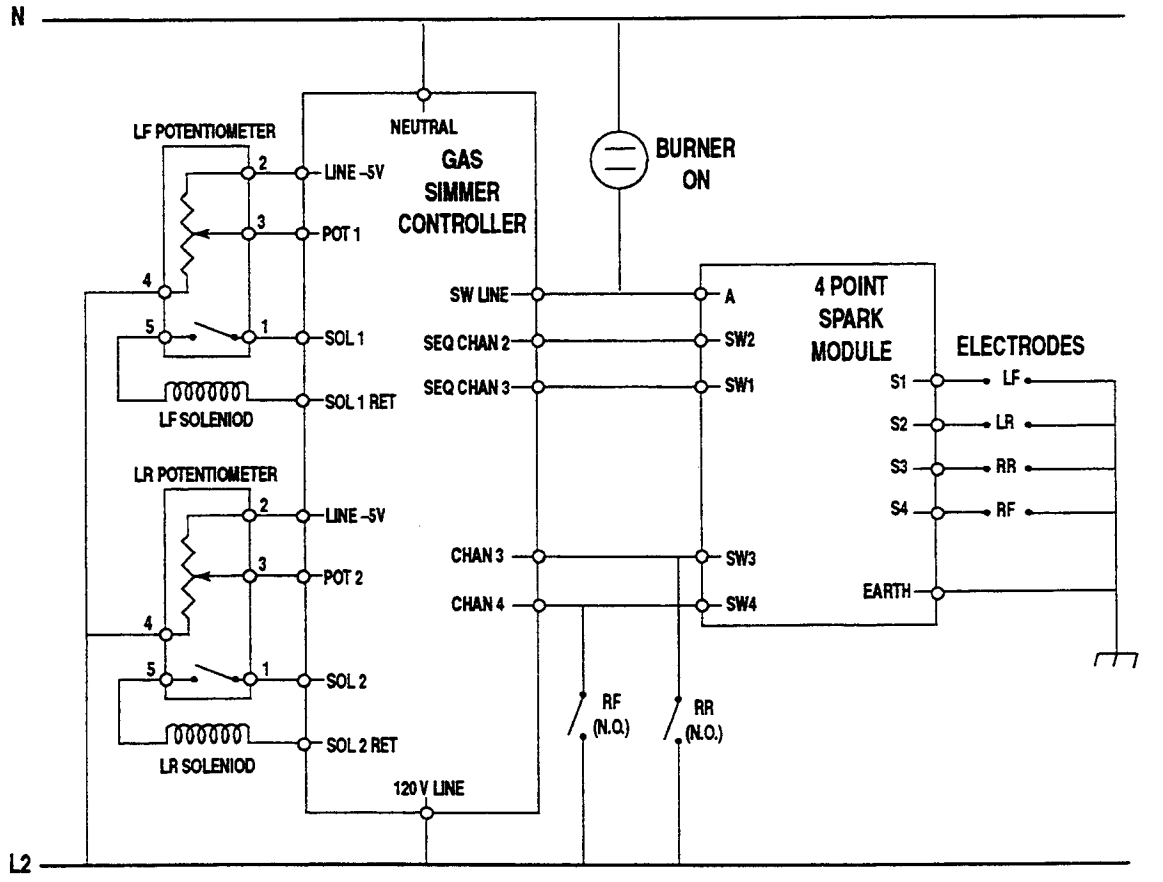
Between Low and XLO the "on" time for the gas is changed gradually from 53-seconds to 7-seconds.

BURNER ON HIGH OR LOW

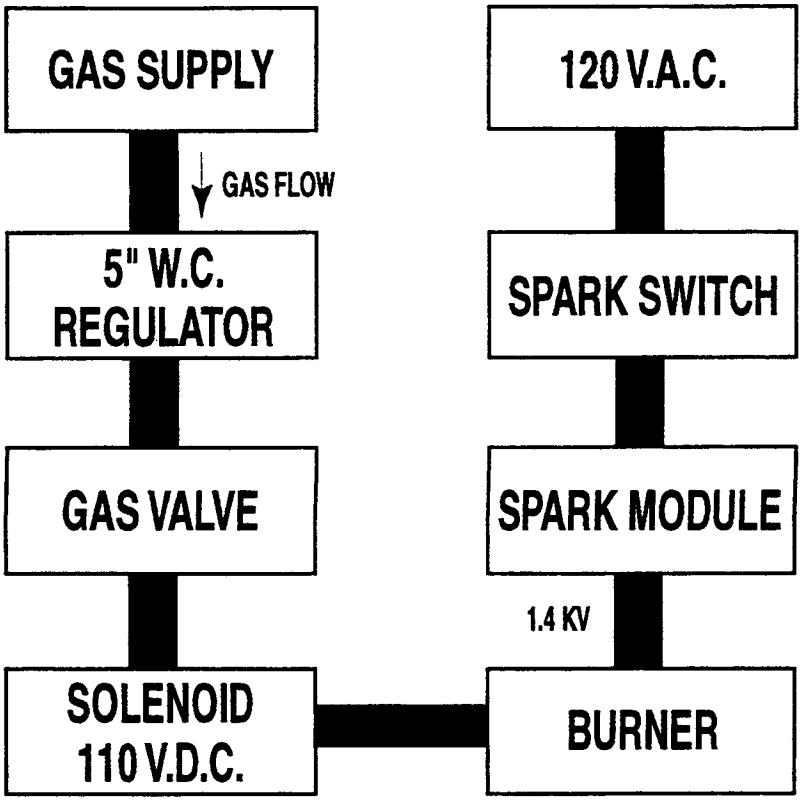
In the High or Low position, the controller sends 120-volts AC to the spark module.

The controller also sends 110-volts DC to activate the gas solenoids.

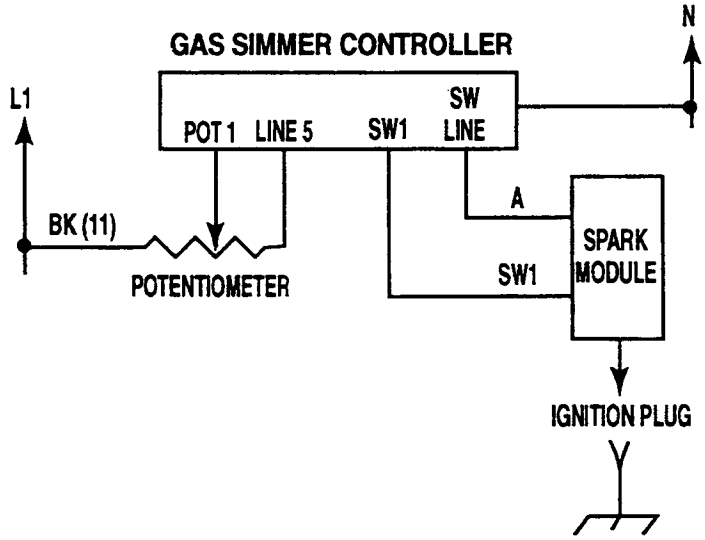
The burners will be on constantly.



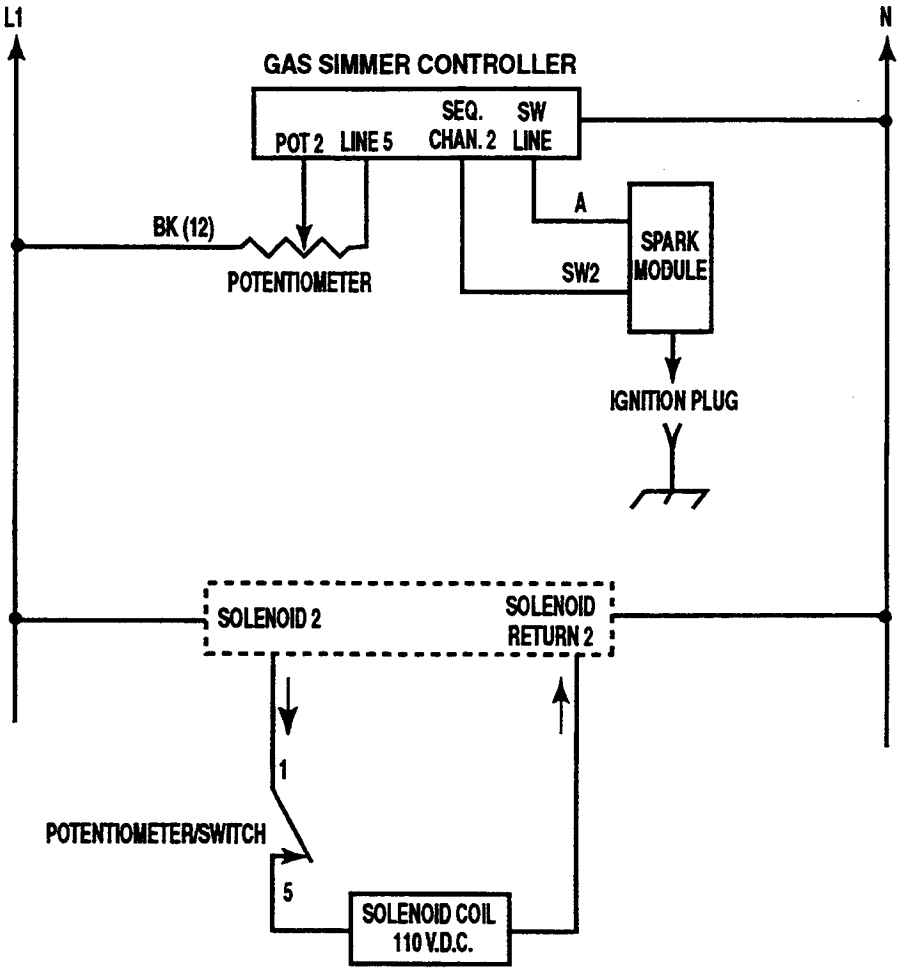
STRIP CIRCUITS
Combustion Diagram



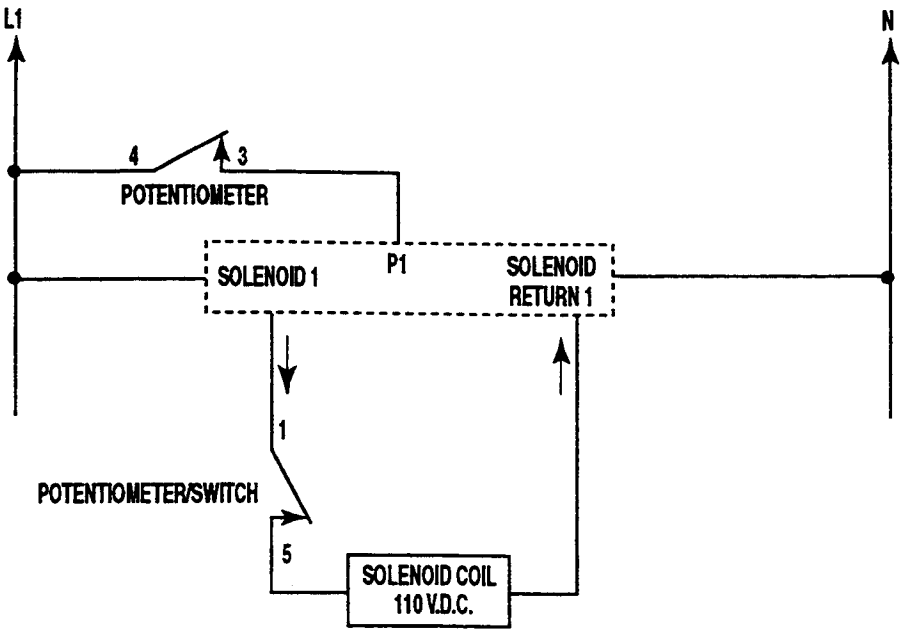
Sequenced Cooktop—LF Burner Current Flow (Sequenced)



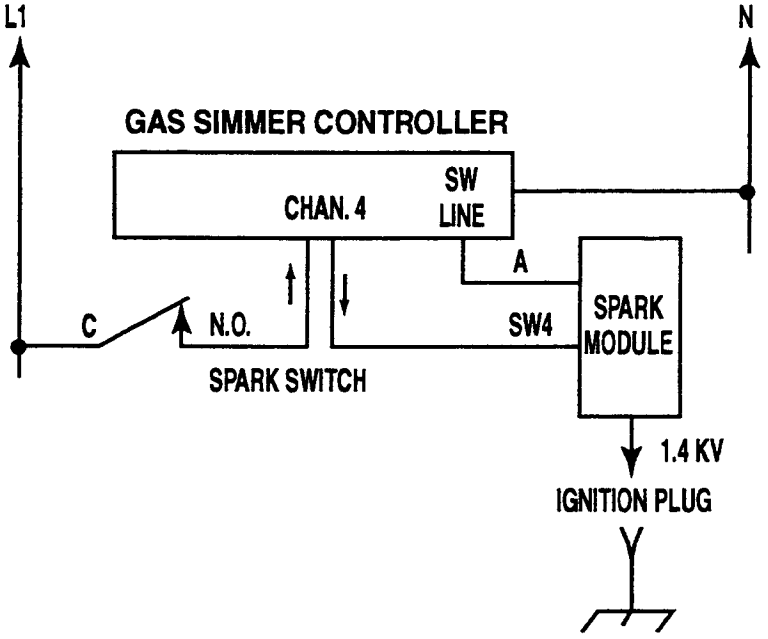
Sequenced Cooktop—LR Burner Current Flow (Sequenced)



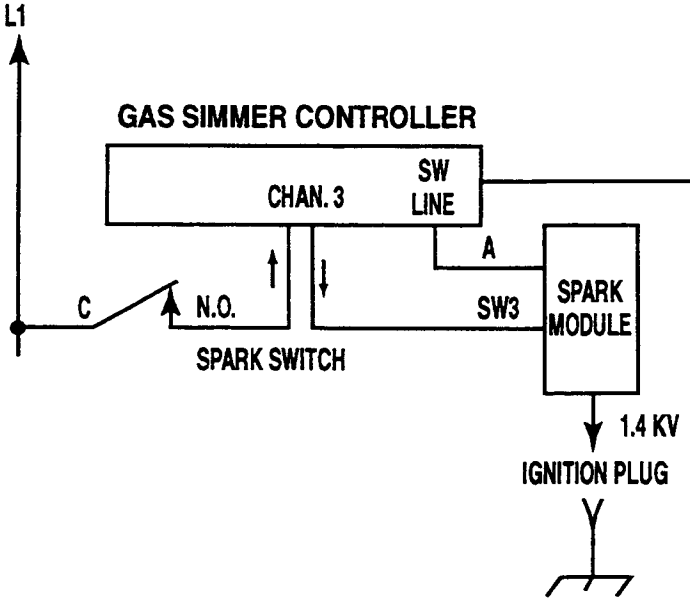
Sequenced Cooktop—Gas Valve (Sequenced)



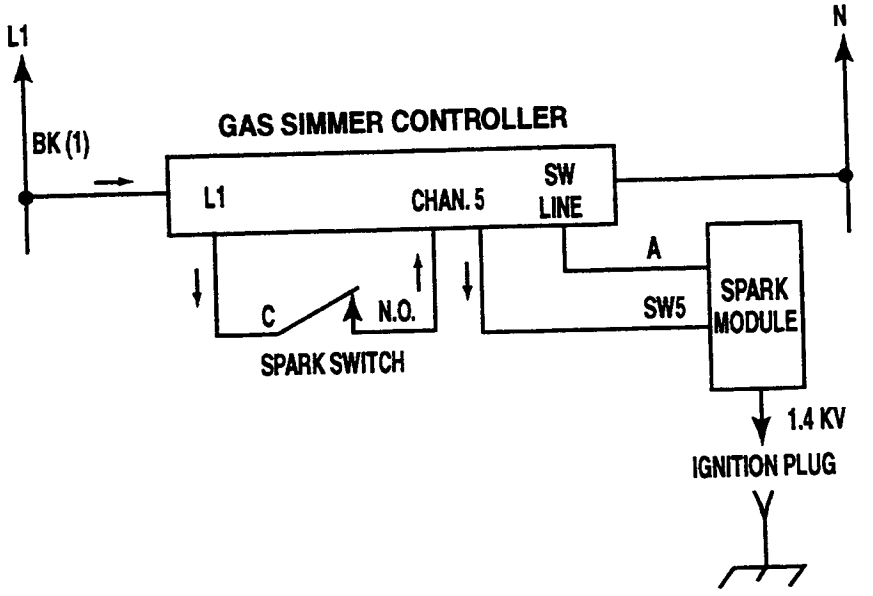
Sequenced Cooktop—
RF Burner Current Flow (Non-Sequenced)



Sequenced Cooktop—
RR Burner Current Flow (Non-Sequenced)

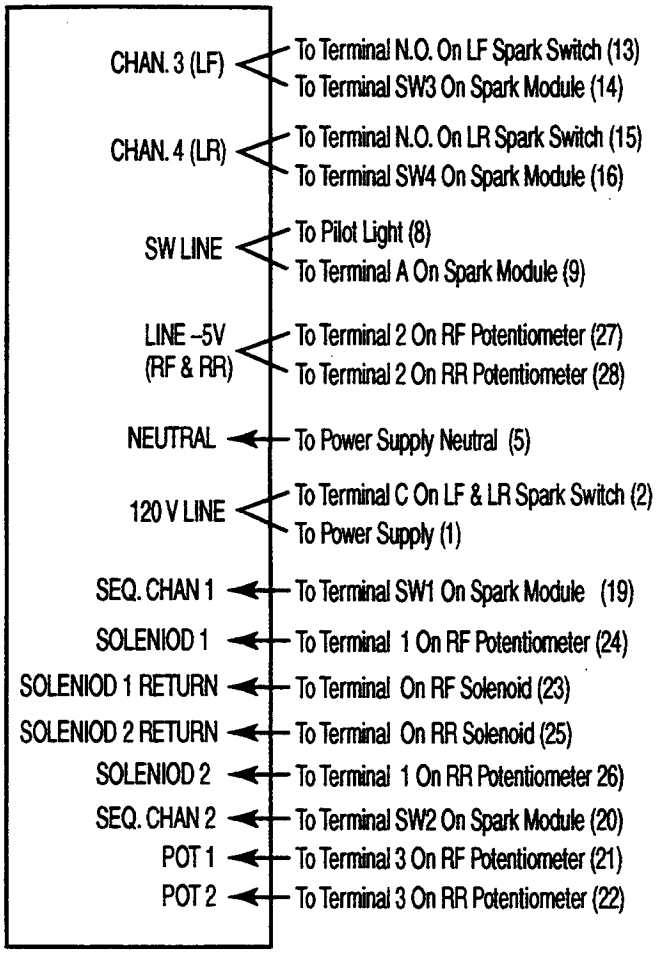


Sequenced Cooktop—
Center Burner Current Flow (Non-Sequenced)

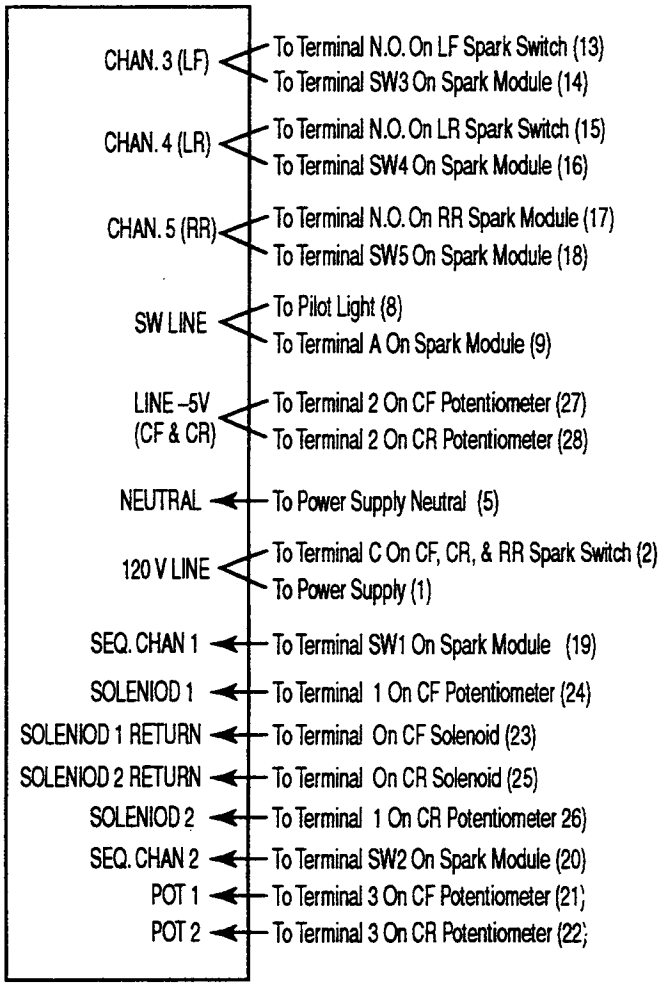


SIMMER CONTROLLER WIRING

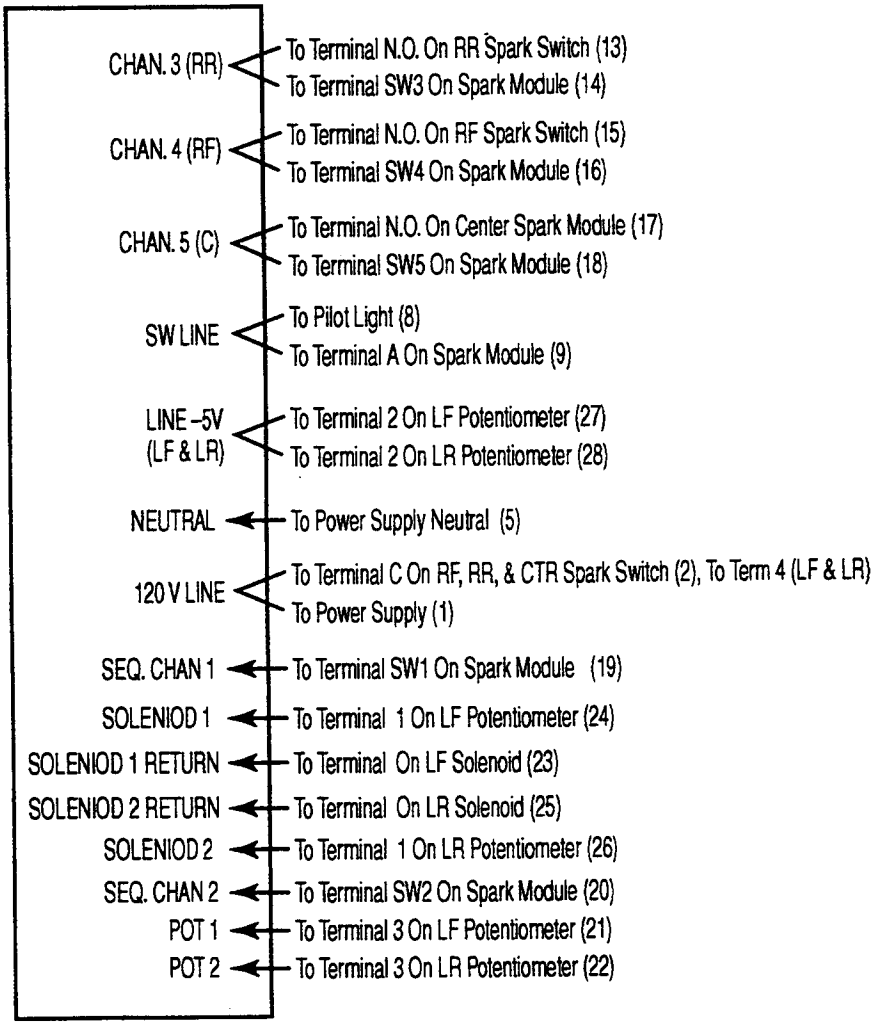
30" Models



36" Models



45" Models


CHAN. 3 (RR)
To Terminal N.O. On RR Spark Switch (13)
To Terminal SW3 On Spark Module (14)
CHAN. 4 (RF)
To Terminal N.O. On RF Spark Switch (15)
To Terminal SW4 On Spark Module (16)
CHAN. 5 (C)
To Terminal N.O. On Center Spark Module (17)
To Terminal SW5 On Spark Module (18)
SW LINE
To Pilot Light (8)
To Terminal A On Spark Module (9)
LINE -5V (LF & LR)
To Terminal 2 On LF Potentiometer (27)
To Terminal 2 On LR Potentiometer (28)
NEUTRAL
To Power Supply Neutral (5)
120 V LINE
To Terminal C On RF, RR, & CTR Spark Switch (2), To Term 4 (LF & LR)
To Power Supply (1)
SEQ. CHAN 1
To Terminal SW1 On Spark Module (19)
SOLENIOD 1
To Terminal 1 On LF Potentiometer (24)
SOLENIOD 1 RETURN
To Terminal On LF Solenoid (23)
SOLENIOD 2 RETURN
To Terminal On LR Solenoid (25)
SOLENIOD 2
To Terminal 1 On LR Potentiometer (26)
SEQ. CHAN 2
To Terminal SW2 On Spark Module (20)
POT 1
To Terminal 3 On LF Potentiometer (21)
POT 2
To Terminal 3 On LR Potentiometer (22)

SIMMER CONTROLLER FUNCTIONS

Channel 3 ..... Receives 120-volts AC from the corresponding spark switches to enable the switch line when none of the sequenced channels is active

Channel 4 ..... Receives 120-volts AC from the corresponding spark switches to enable the switch line when none of the sequenced channels is active

Channel 5 ..... Receives 120-volts AC from the corresponding spark switches to enable the switch line when none of the sequenced channels is active

SW Line ..... Sends 120-volts to the spark module to activate the internal controls.

Line - 5V ..... Sends 120-volts AC with a –5 volts DC bias to one end of the potentiometer.

Neutral ..... Receives neutral side of 120-volts AC to power internal electronics.

Line 120V ..... Receives 120-volts AC to power internal electronics.

Seq. Chan 1 ..... Sends 120-volts AC to SW1 on the spark module to fire the LF burner.

Solenoid 1 ..... Sends 110-volts DC through potentiometer LF to activate the LF solenoid.

Solenoid Ret 1 ..... Sends current to the other side of the LF solenoid to complete the circuit.

Solenoid 2 ..... Sends 110-volts DC through potentiometer RF to activate the RF solenoid.

Solenoid Ret 2 ..... Sends current to the other side of the RF solenoid to complete the circuit.

Seq. Chan 2 ..... Sends 120-volts AC to SW2 on the spark module to fire the RR burner.

Pot 1 ..... Receives 0- to 5-volts DC from the LF potentiometer to control the flame operation.

Pot 2 ..... Receives 0- to 5-volts DC from the RF potentiometer to control the flame operation.

CHECKING THE OPERATING VOLTAGES FROM THE SIMMER CONTROLLER

To check the operating voltages coming from the simmer controller, perform the following tests.

1. Set the voltmeter to read negative voltage on the 10-volts DC scale.
2. Attach the red meter lead to the L1 lug (120-volts AC) on the terminal block.
3. Touch the black meter lead to the orange wire at terminal 3 of the LF potentiometer. You should obtain the following readings with the control set as indicated:

   a) Off = 5-volts.
   b) On = 4-volts .
   c) Low = 1-volt.
   d) XLO = 0-volts.

4. Touch the black meter lead to the yellow wire at terminal 3 of the LR potentiometer. You should obtain the following readings with the control set as indicated:

   a) Off = 5-volts.
   b) On = 4-volts .
   c) Low = 1-volt.
   d) XLO = 0-volts.

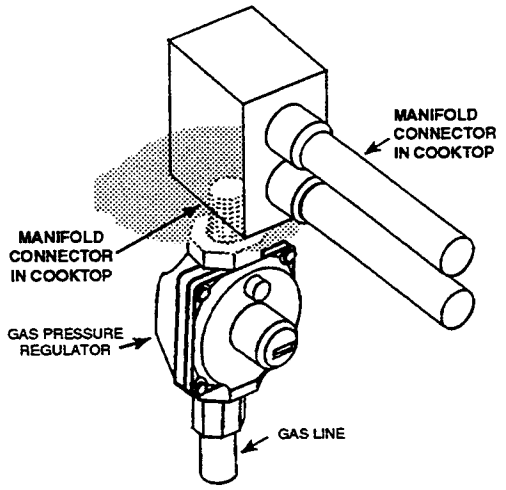
TESTING THE COMPONENTS

⚠ 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 GAS PRESSURE REGULATOR



To test the regulator, perform the following steps:

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

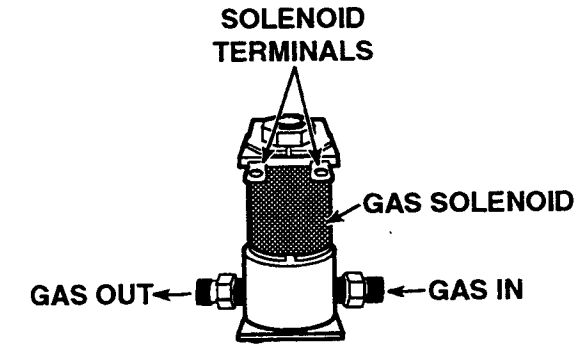
   Minimum pressure = 5 inches WCP

   L.P. Gas

   Minimum pressure = 10 inches WCP
5. If the reading is not correct, the pressure regulator is defective and should be replaced.
6. Turn on all burners and re-read the pressure. The readings should be:

   Natural Gas = minimum 4.5" W.C.
   L.P. Gas = minimum 9" W.C.

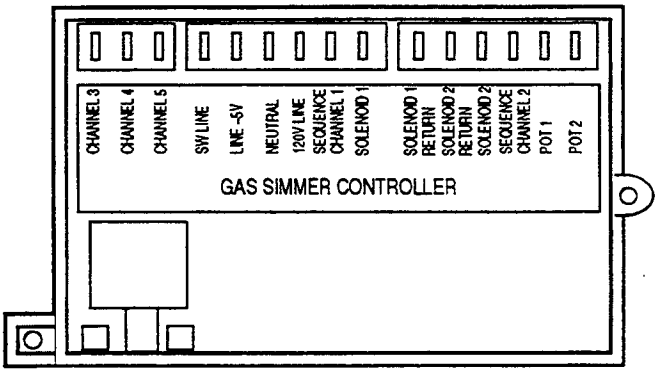
GAS SOLENOID



To test the solenoid valve, (see page 2-16 to access the valve), perform the following steps:

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 Ω.
5. If the meter is not within 20% of the reading, the solenoid is defective.

GAS SIMMER CONTROLLER

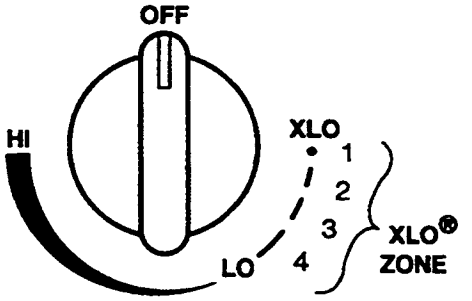


To test the gas simmer controller, refer to page 3-25.

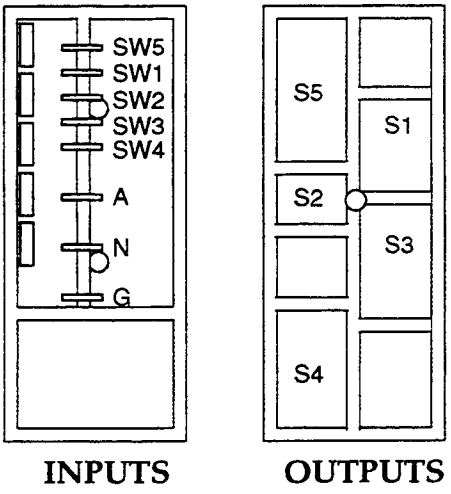
XLO® BURNERS

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 then back ON again after power has been restored.



SPARK MODULE



To test the spark module, refer to page 3-26.

The troubleshooting charts on pages 3-25 through 3-27 are intended to help correct the following conditions on gas cooktops equipped with the Sequential Burner System:

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

Chart A—Extra Low (XLO) Gas Simmer

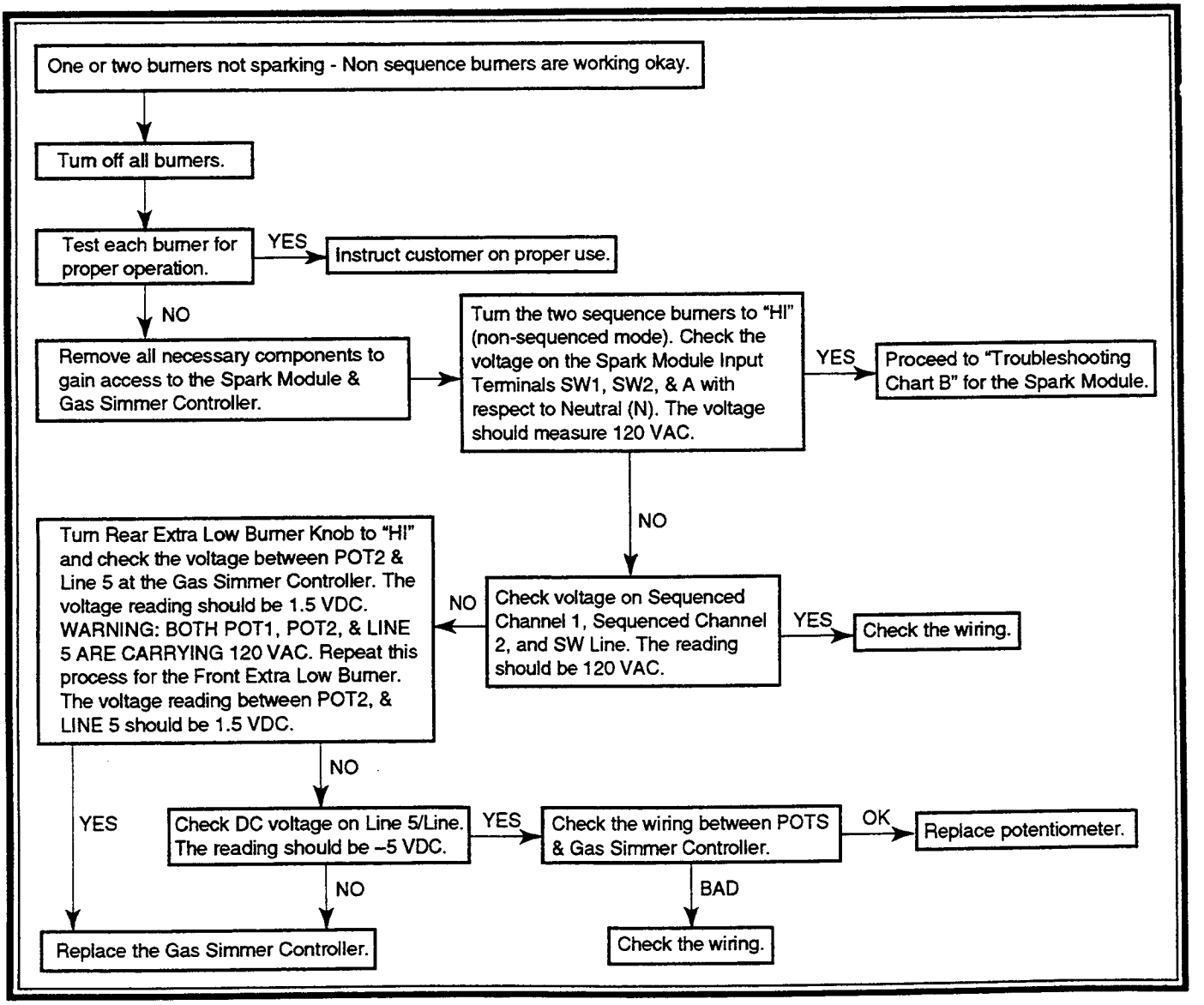


Chart B—Spark Module

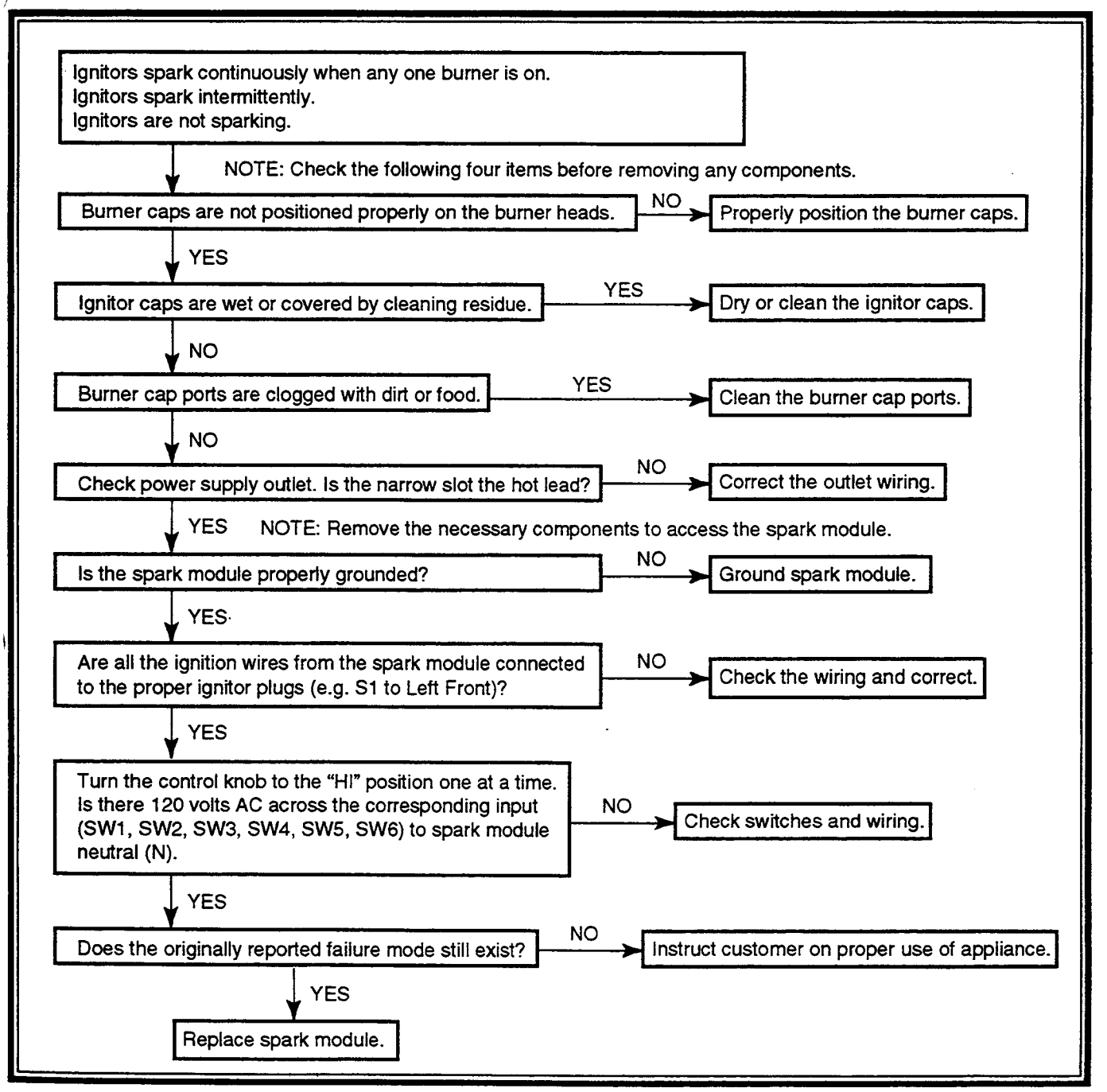
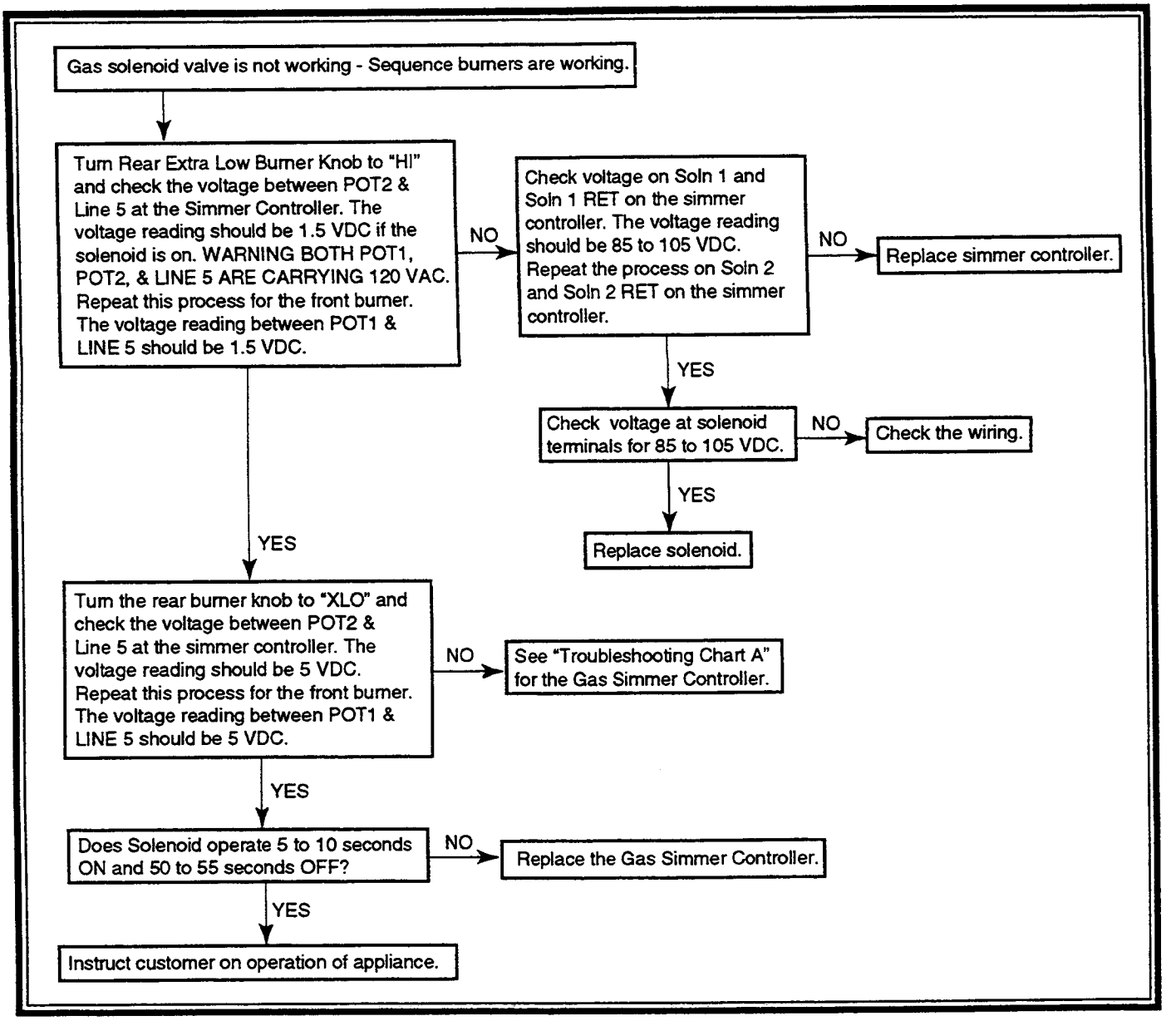
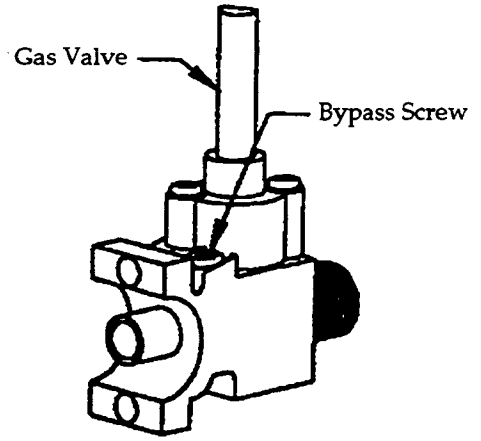


Chart C—Low Simmer Gas Solenoid

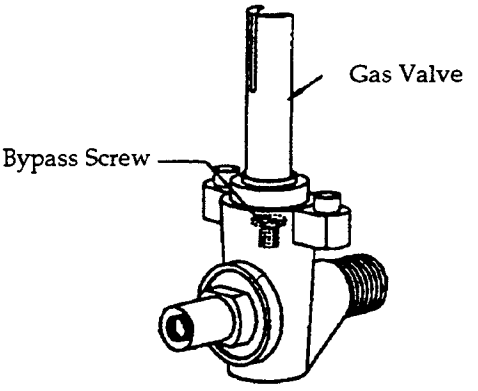


Gas Valve Color I.D.
Models SGCS304R/SGC304R



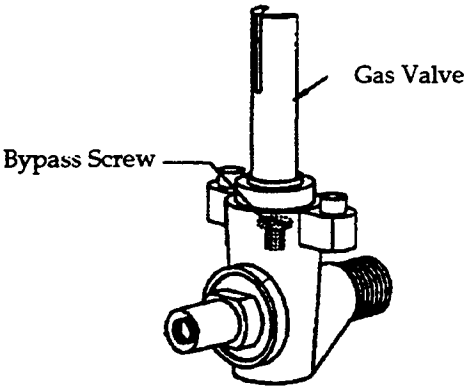
30" Models (Sequenced): SGCS304R		
L.F. Valve	Orange	20-02-532-02
L.R. Valve	Blue	20-02-532-01
R.F. Valve	Violet	20-02-532-02
R.R. Valve	Red	20-02-532-01
30 " Models (Non-Sequenced): SGC304R		
L.F. Valve	Orange	20-02-532-02
L.R. Valve	Blue	20-02-532-01
R.F Valve	Blue	20-02-532-02
R.R. Valve	Orange	20-02-532-01

Gas Valve Color I.D.
Models SGCS365R/SGC365R



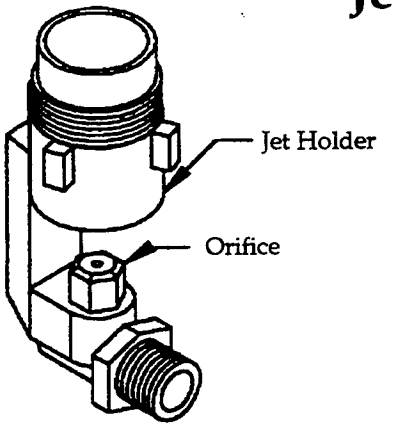
36" Models (Sequenced): SGCS365R		
L.F. Valve	Orange	20-02-422-01
L.R. Valve	Blue	20-02-421-01
C.F. Valve	Violet	20-02-421-02
C.R. Valve	Red	20-02-422-02
R.R. Valve	Blue	20-02-421-01
36" Models (Non-Sequenced): SGC365R		
L.F. Valve	Orange	20-02-422-01
L.R. Valve	Blue	20-02-421-01
C.R. Valve	Blue	20-02-421-01
C.F. Valve	Orange	20-02-422-01
R.R. Valve	Blue	20-02-421-01

Gas Valve Color I.D.
Models SGCS456R/SGC456R



45° Models (Sequenced): SGCS456R		
L.F. Valve	Orange	20-02-422-01
L.R. Valve	Blue	20-02-421-01
C.F. Valve	Violet	20-02-421-02
C.R. Valve	Red	20-02-422-02
R.F. Valve	Orange	20-02-422-01
R.R. Valve	Blue	20-02-421-01
45° Models (Non-Sequenced): SGC456R		
L.F. Valve	Orange	20-02-422-01
L.R. Valve	Blue	20-02-421-01
C.R. Valve	Blue	20-02-421-01
C.F. Valve	Orange	20-02-422-01
R.F. Valve	Orange	20-02-422-01
R.R. Valve	Blue	20-02-421-01

Jet Holder Color I.D. Chart



COLOR	B.T.U. RATING	JET HOLDER PART NUMBER	ORIFICE NUMBER	ORIFICE PART NUMBER
Green	9,100	20-02-309-02	140	20-02-311-02
Blue	12,500	20-02-309-05	170	20-02-311-10

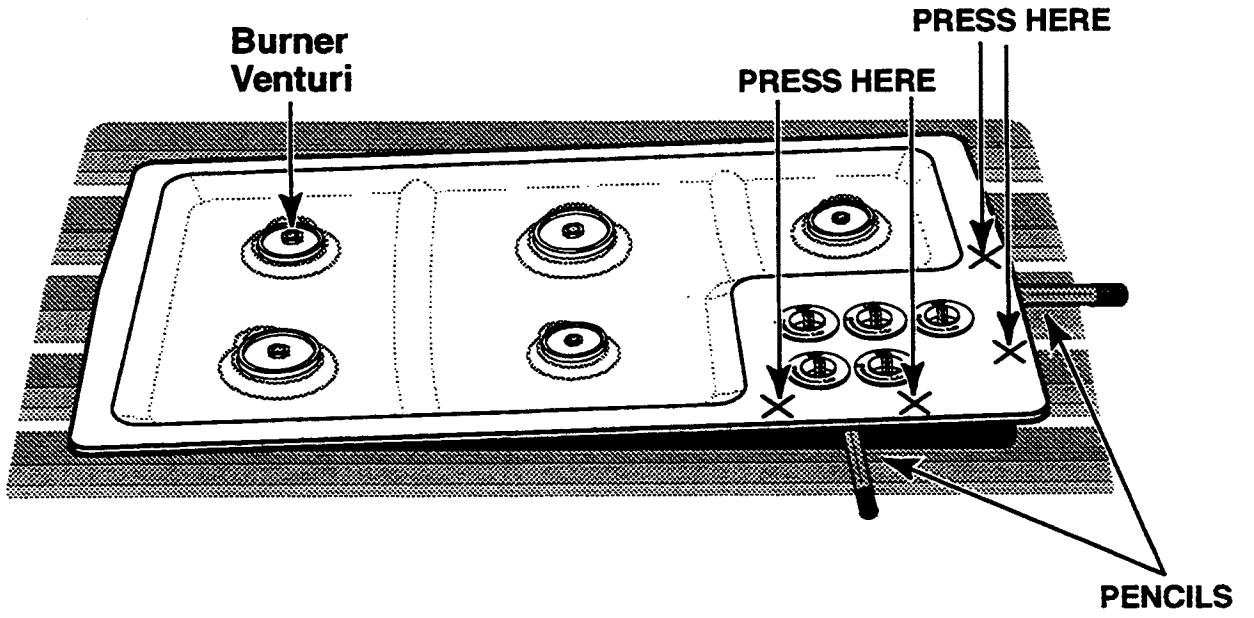
STRAIGHTENING THE COOKTOP
Models: SGC/SGCS 365R

If the right front corner of the cooktop's maintop does not lay flat against the countertop, because the stamped maintop is warped, refer to the illustration below and the steps to straighten the maintop. **CAUTION:** Do not overbend the maintop or you will kink the edges. Bend it a little at a time. If you cannot straighten the maintop sufficiently using the method shown below, use the "Bracket Attachment Kit **(#35-00-608)**" to secure the bracket to the rough-in box to help straighten it.

NOTE: Beginning with Serial #9701, the bracket is part of the maintop. If service is still necessary to straighten the maintop, the entire cooktop will have to be removed from the cabinet instead of just loosening the maintop.

1. Completely loosen the venturi at each cooktop burner.
2. Remove the knobs from the controls.
3. Lift the right front corner of the cooktop's maintop and install a pencil between the countertop and the maintop at each of the two indicated locations.
4. Place your hands against the maintop on both sides of the pencils, and carefully press down and bend the maintop so it is flat.

If the cooktop cannot be straightened sufficiently using the previous procedure, proceed to "Installing The Bracket Attachment Kit" on the following page.

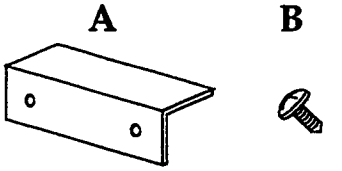


INSTALLING THE BRACKET ATTACHMENT KIT — #35-00-608

The Bracket Attachment Kit allows you to anchor the maintop to the rough-in box with a bracket to correct a warped maintop condition that cannot be corrected using the procedure shown on the previous page. The Kit consists of the following components:

KEY	QTY.	DESCRIPTION	PART NO.
A	1	Bracket	20-02-601
B	2	#8 x 3/8" Sheet Metal Screws	14-91-024
	1	1" x 3" Adhesive Tape	20-02-600-01
	1	Surface Primer	20-02-609
	1	Instruction Sheet	96-93-550

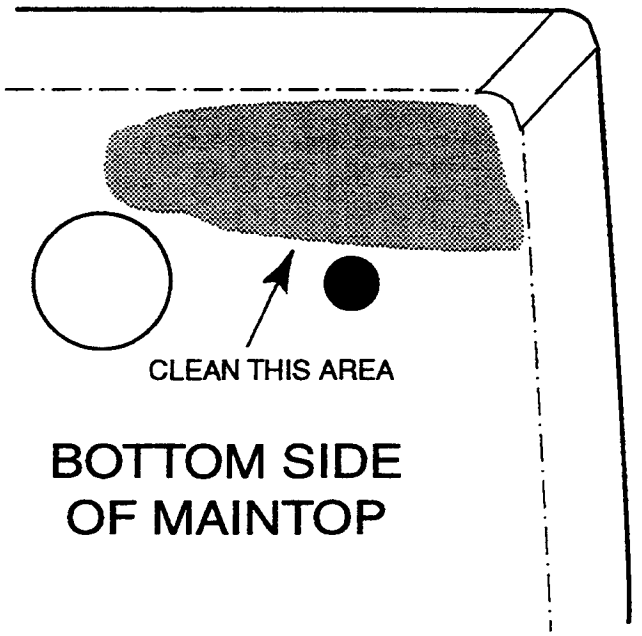
ILLUSTRATIONS



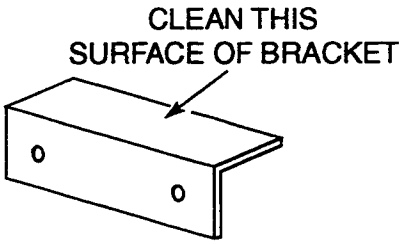
⚠ WARNING

Turn off the power circuit and the gas supply to the cooktop before installing the repair kit.

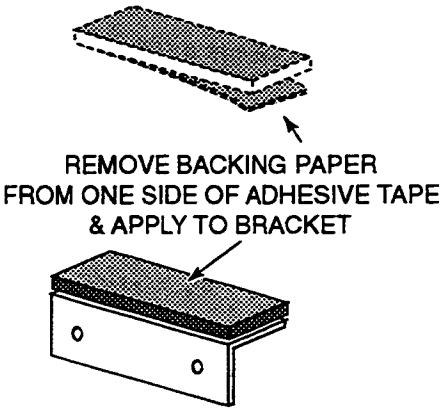
1. Remove the cooktop assembly from the cabinet and set it on the countertop.
2. Remove the cooktop's maintop from the rough-in box and turn it over so that you can access the bottom surface.
3. Use a clean cloth and the surface primer that is supplied with the kit, and clean the area at the right front corner of the maintop where the bracket will be mounted.



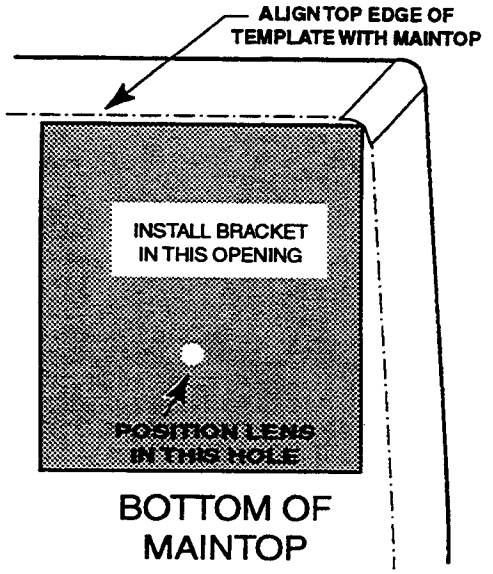
4. Carefully cut the two templates from the template sheet that was supplied with the kit. If you need templates, they are also provided on page 3-33.
5. Use the surface primer and clean the application surface of the bracket (see below). The maintop and bracket surfaces must be clean, dry, and grease-free.



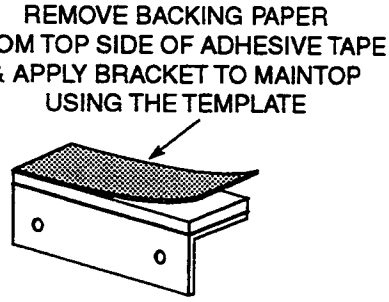
6. Remove the backing paper from one side of the adhesive tape and apply the adhesive side to the prepared surface of the bracket.



7. Place the bracket template against the bottom of the maintop so the round hole is over the pilot light lens and align the top edges as shown.



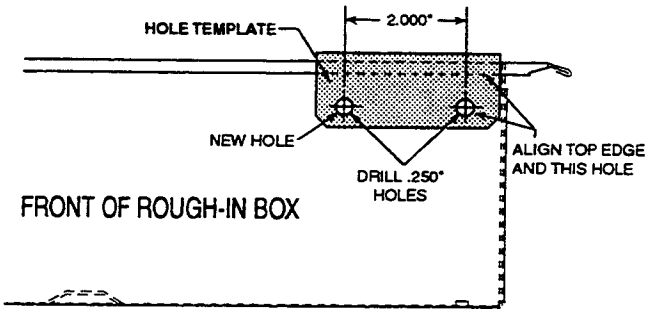
8. Remove the top strip of paper backing from the adhesive tape on the bracket.



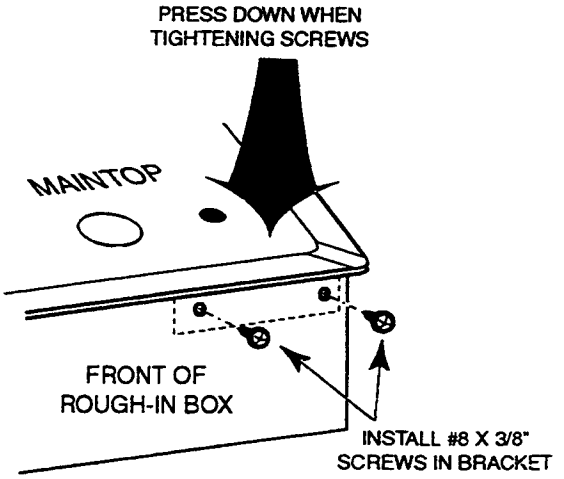
CAUTION: Once the adhesive tape is applied to a surface, it is very difficult to remove, therefore, make sure to install it correctly the first time.

9. While you hold the template firmly in place, very carefully position the bracket inside the cutout area of the template with the hole side facing the front of the rough-in box, and then press it against the surface of the maintop for approximately 1-minute to allow the adhesive to set.

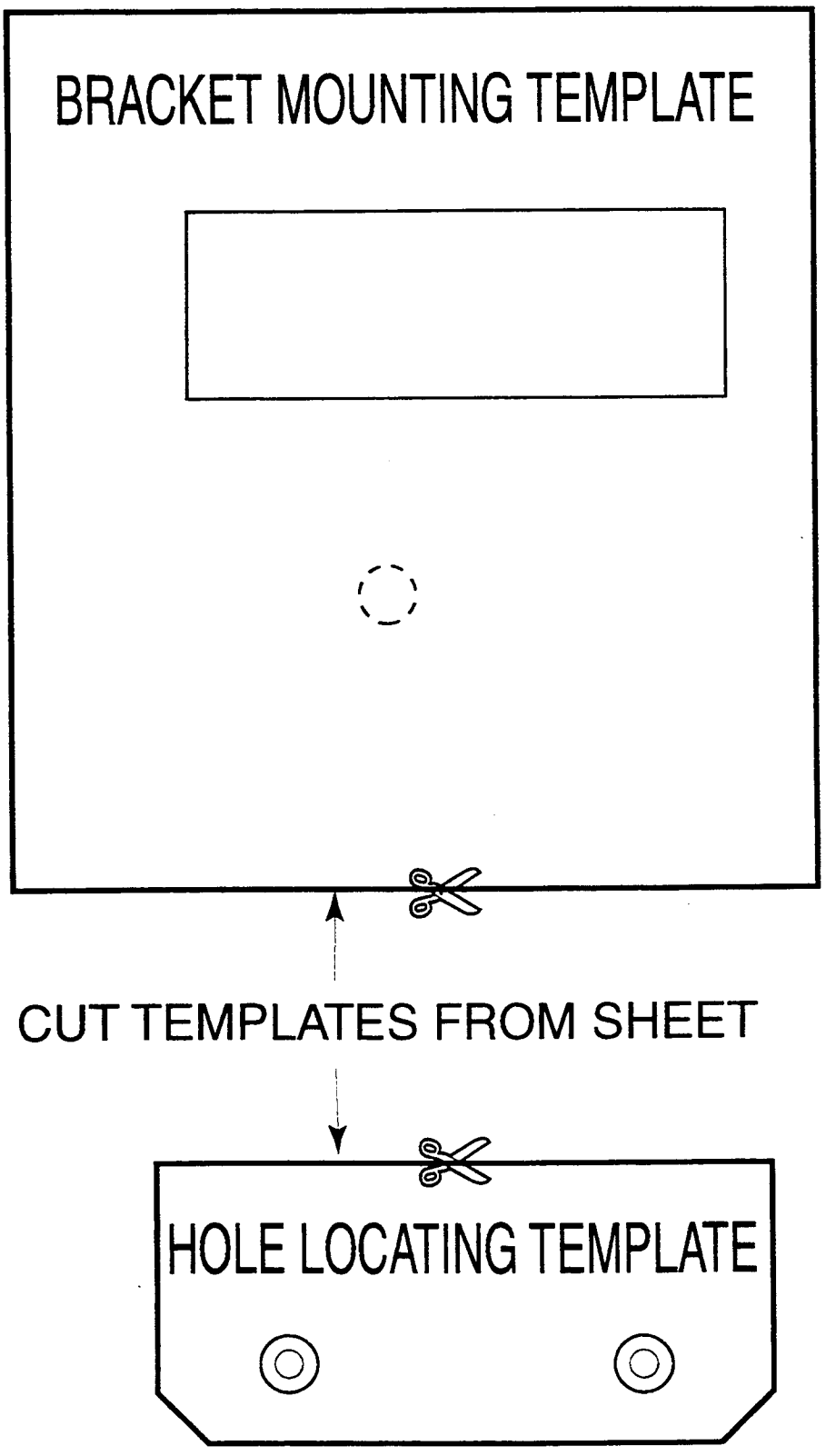
10. Position the hole template against the right front side of the rough-in box so that the mounting holes are aligned, and the top edge is against the flange of the box.



11. While you hold the template firmly in place, press a centerpunch against the new hole location, and mark the location in the rough-in box using a hammer.
12. Use a 1/4" bit and drill the new hole in the rough-in box at the marked location.
13. Use the 1/4" bit and enlarge the hole next to it.
14. Reinstall the maintop on the rough-in box, (be careful not to pinch any wires between the box and the maintop).
15. Position the maintop so that the two bracket holes align with the holes in the rough-in box, and **loosely** install the two #8 x 3/8" sheet metal screws. When both screws are mounted, press down on the corner of the maintop so that it is firmly against the top of the rough-in box flange, and tighten the screws securely.

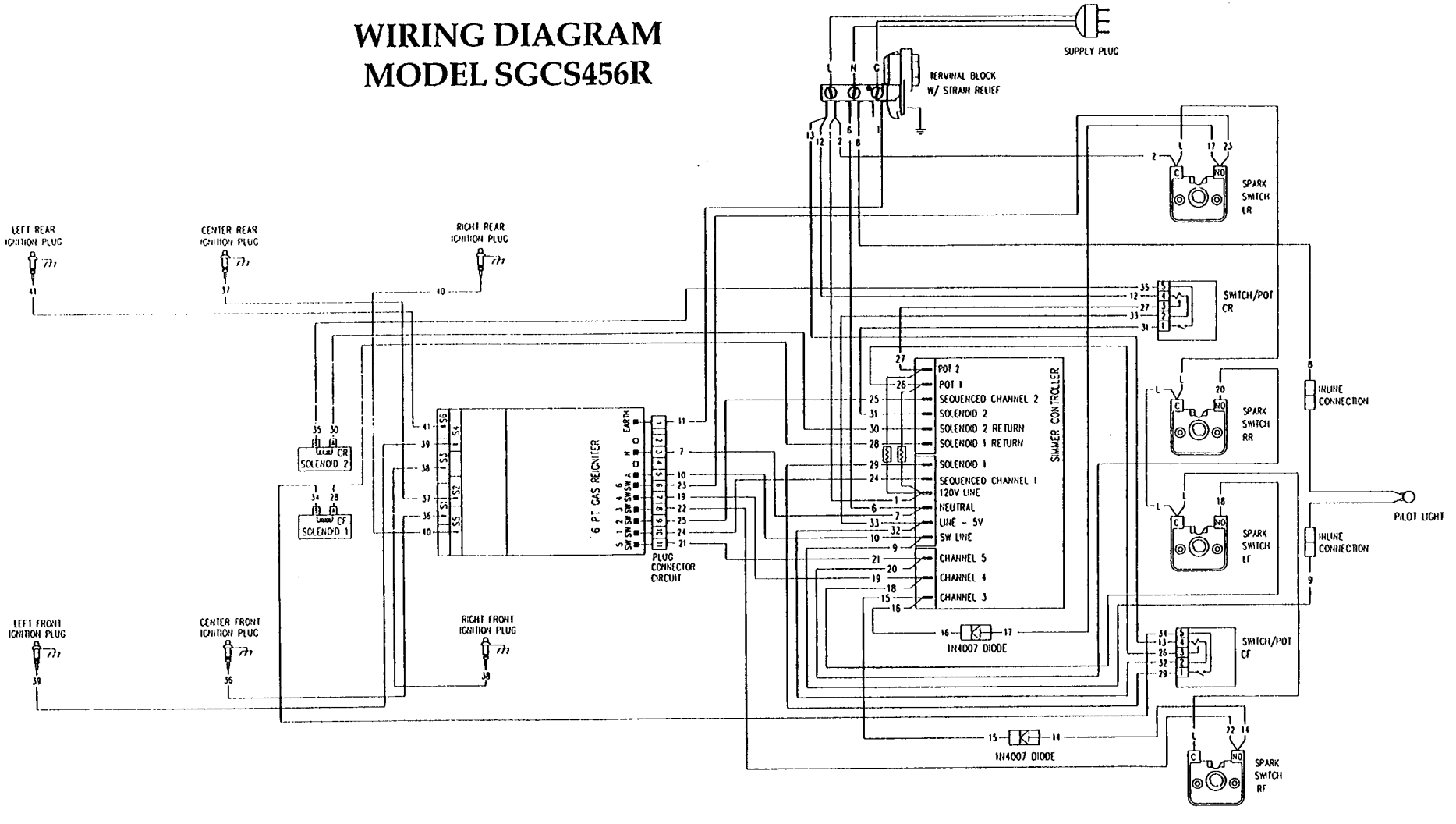


16. Install the cooktop assembly in the cabinet, then check to make sure that the edges of the maintop fit flat against the countertop. If there are any gaps, they should not exceed the thickness of a standard paper clip.

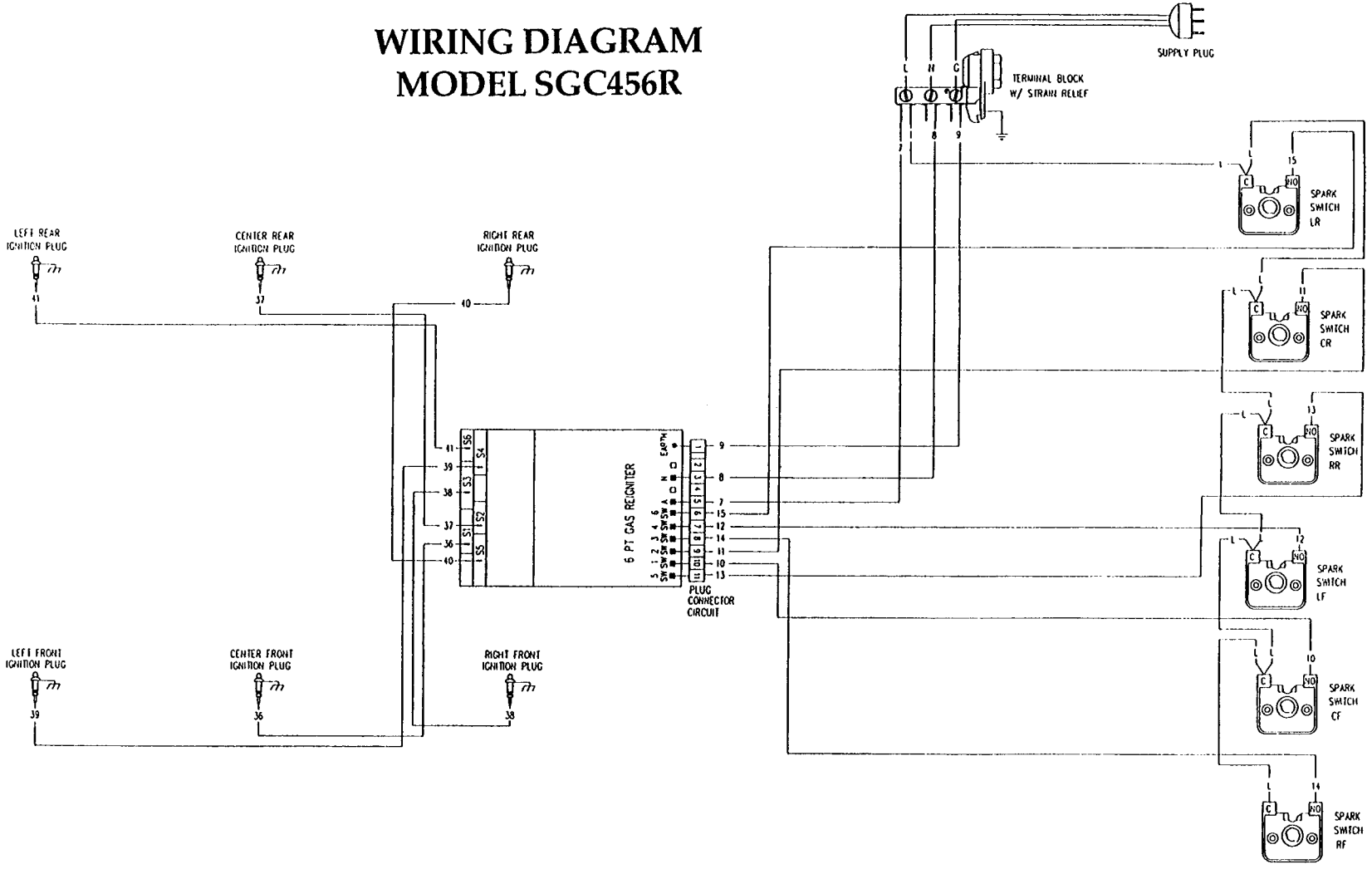

BRACKET MOUNTING TEMPLATE
CUT TEMPLATES FROM SHEET
HOLE LOCATING TEMPLATE

— NOTES —

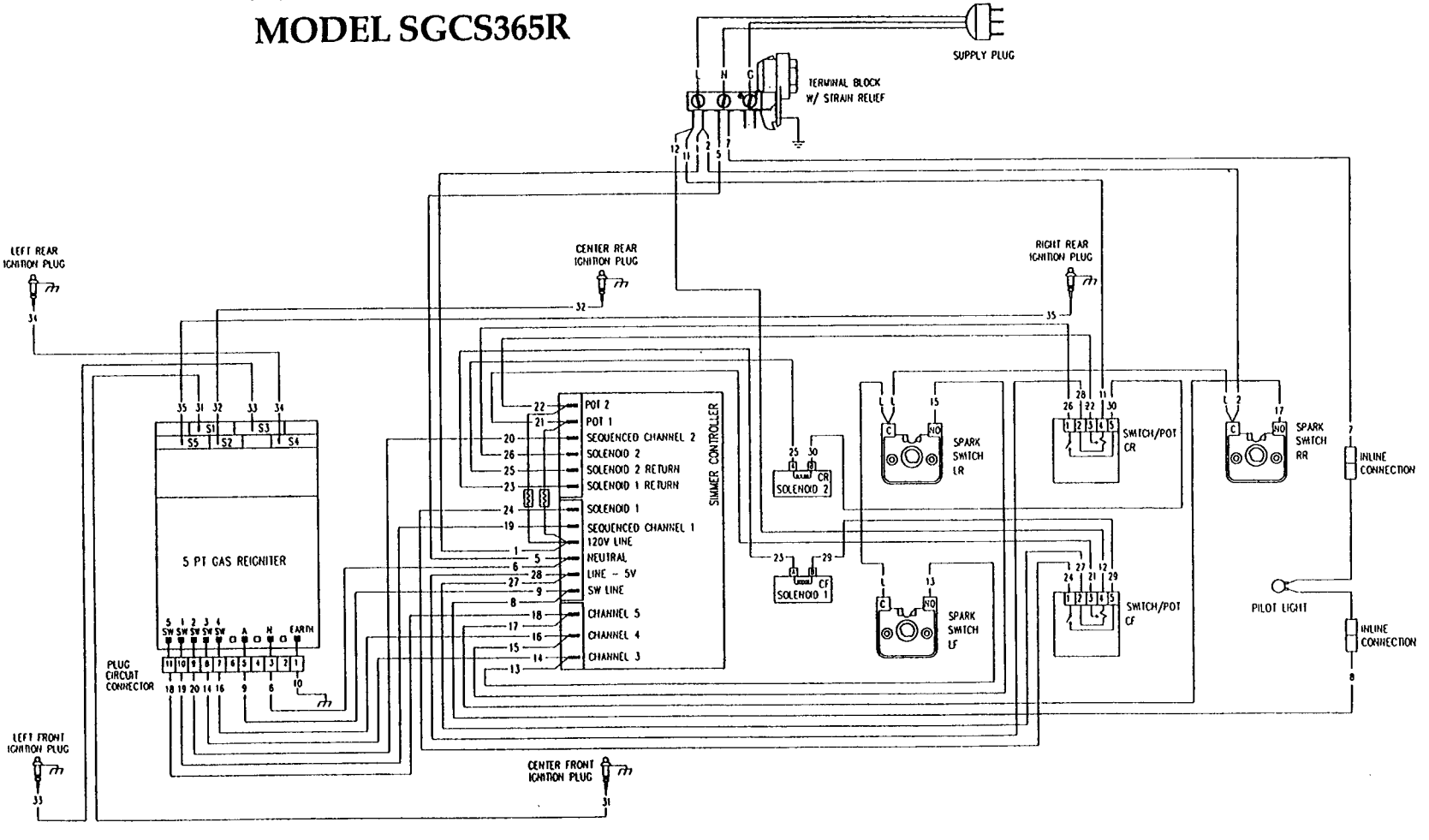
WIRING DIAGRAM
MODEL SGCS456R



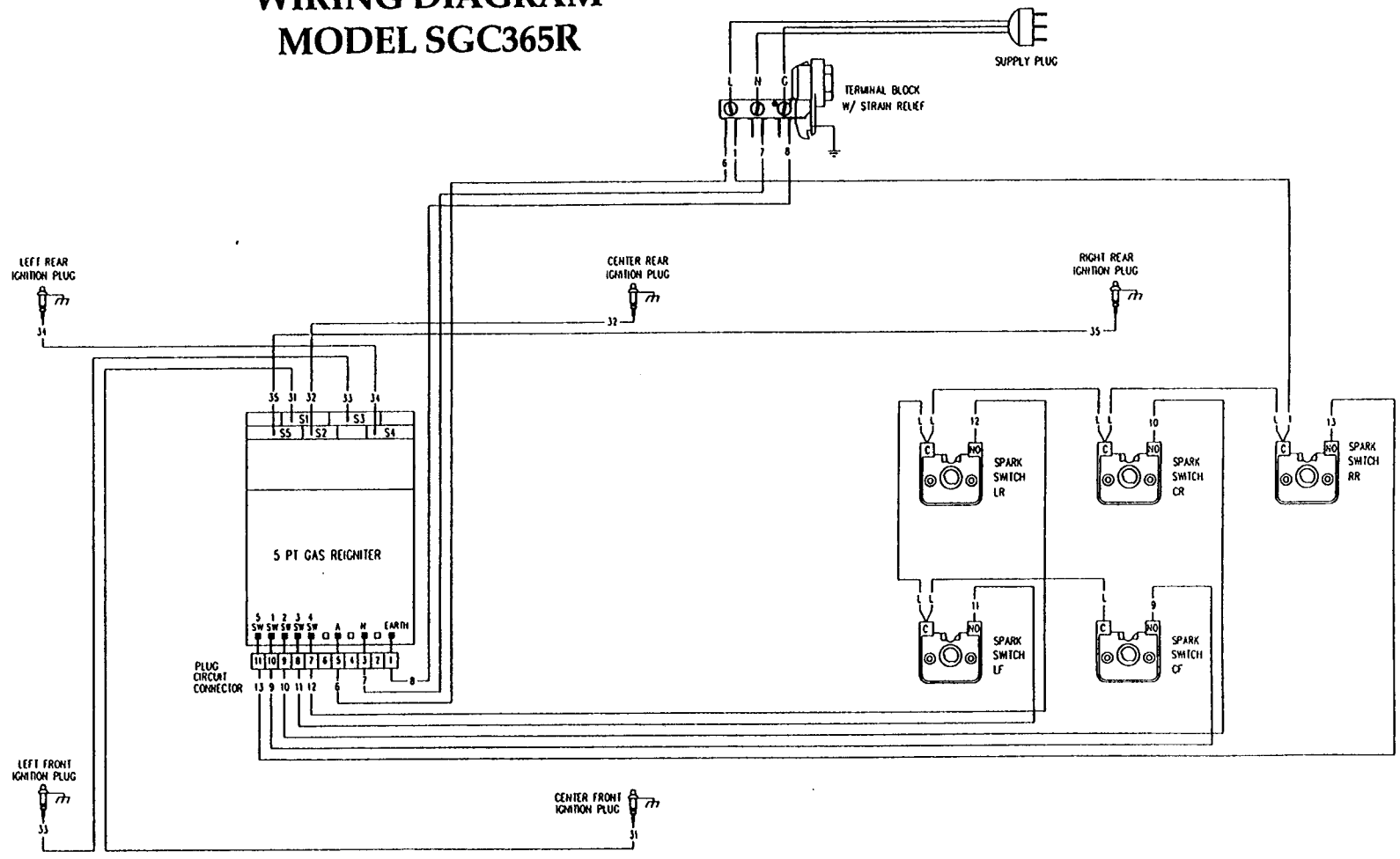
WIRING DIAGRAM
MODEL SGC456R



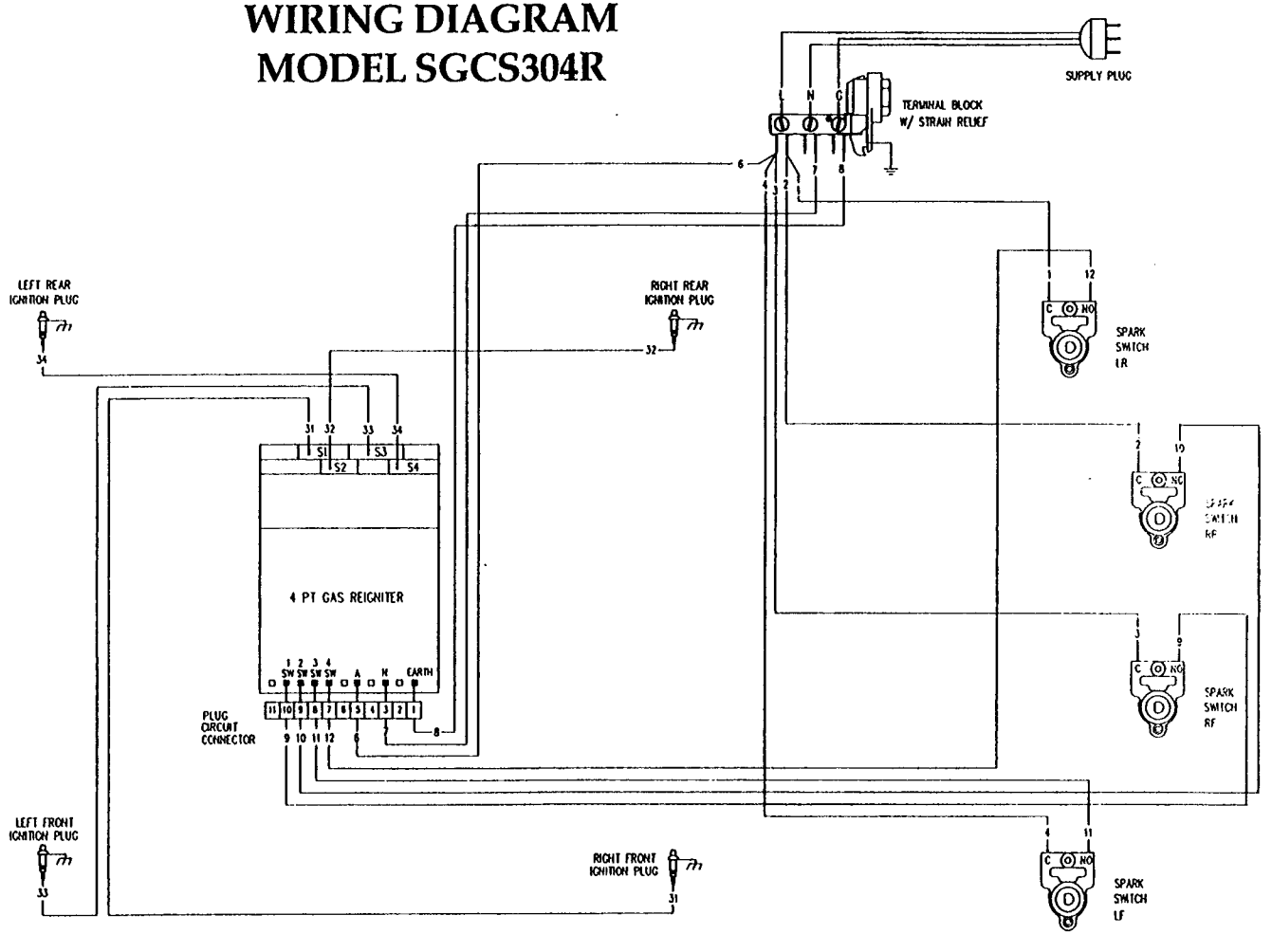
WIRING DIAGRAM
MODEL SGCS365R



WIRING DIAGRAM
MODEL SGC365R



WIRING DIAGRAM
MODEL SGCS304R



WIRING DIAGRAM
MODEL SGC304R