

MAYTAG

Maytag Appliances

Gas Cooktop Service Manual

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General Safety Precautions

Information contained in **this manual is intended for use by a qualified service technician**. The technician is required to be familiar with proper and safe procedures to be followed when repairing electric, gas, and microwave appliances. All tests and repairs are to be performed using proper tools and measuring devices designed for appliance diagnosis and repair. All component replacements should be made **using only factory approved replacement parts**.

Electrical shock and injury can result if service or repairs are attempted by an unqualified individual. **Improper disassembly, assembly or adjustments can create hazardous conditions.**

Even for a skilled technician, a risk of injury or electrical shock exists while performing service or repairs. **Electrical injury can be serious or fatal. Extreme caution must taken when performing voltage checks on individual components of an appliance.**

NOTE: Except as necessary to perform a particular step in servicing a product, the electrical power supply should always be disconnected when servicing a product.

To avoid possible injury, the appliance must be properly grounded. Never plug in or direct wire an appliance unless it is **properly grounded in accordance with all local and national codes.** See the installation instructions that originally accompanied the product for proper grounding procedures.

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Introduction

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

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

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

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

Jenn-Air Models covered in this manual:

CCG2420
CCG2421
CCG2422
CCG2423
CCG2520
CCG2521
CCG2522
CCG2523
CCGP2420P
CCGP2720P
CCGP2820P
CCGX2420
CCGX2620

CCG406
CCG456
CCG457
CCG556
CCP457
CCP556
CG100
CG106
CG106-C
CG200
CG205
CG206

CG206-C
CG206-E
CVDX4180
CVG316
CVG4100
CVG4280
CVG4380
CVG4380P
CVGX2423
GO106
GO206
GO206-8

General Safety Precautions

Information contained in **this manual is intended for use by a qualified service technician.** The technician is required to be familiar with proper and safe procedures to be followed when repairing electric, gas, and microwave appliances. All tests and repairs are to be performed using proper tools and measuring devices designed for appliance diagnosis and repair. All component replacements should be made **using only factory approved replacement parts.**

Electrical shock and injury can result if service or repairs are attempted by an unqualified individual. **Improper disassembly, assembly or adjustments can create hazardous conditions.**

Even for a skilled technician, a risk of injury or electrical shock exists while performing service or repairs. **Electrical injury can be serious or fatal.** Extreme caution must be taken when performing voltage checks on individual **components of an appliance.**

NOTE: The electrical power supply should always be disconnected when servicing a product. If power is needed to test a component extreme caution must be taken.

To avoid possible injury, the appliance must be properly grounded. Never plug in or direct wire an appliance unless it is **properly grounded in accordance with all local and national codes.** See the installation instructions that originally accompanied the product for proper grounding procedures.

In our continuing effort to improve the quality and performance of our cooking products, it may be necessary to make changes to the appliance without revising this manual.

The model and serial number can be found on the data plate located on the underside of the cooktop. The model number identifies features, sizes and engineering changes. The model number assist the technician in establishing the proper service procedures for the different variations of cooking products.

Model / Serial Plate

The Model / Serial plate is located on the bottom of the cooktop towards the back. For downdraft models, the model/serial plate is located on the side of the plenum under the cooktop. The model number is very important to the technician for ordering parts both in and out of warranty. Always be sure to use the complete model number when ordering parts.

Wiring Information

A wiring diagram / schematic is supplied with the unit. It is attached to the underside of the cooktop. Please return the diagram to the storage compartment for future use.

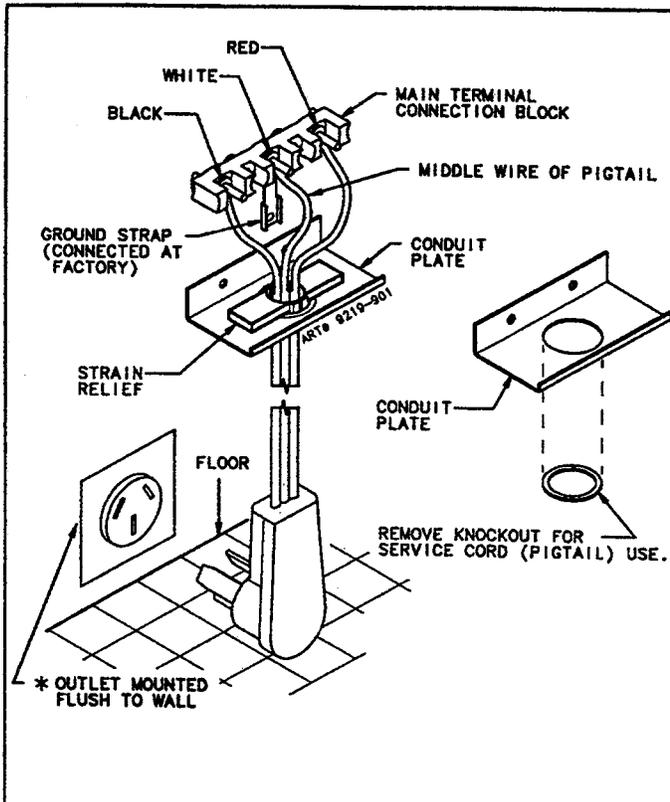
IMPORTANT

Unique product information for specific models is found in the wiring and model specific information section of this manual.

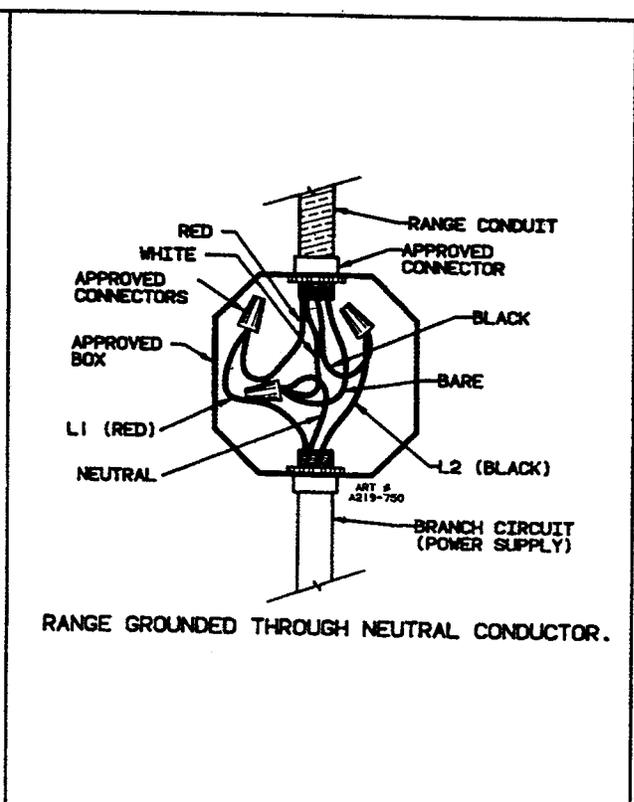
IMPORTANT

Wiring information in this manual was accurate at the time of manual production. Wiring information is subject to change at any time. Please refer to wiring information on the actual product for most current information.

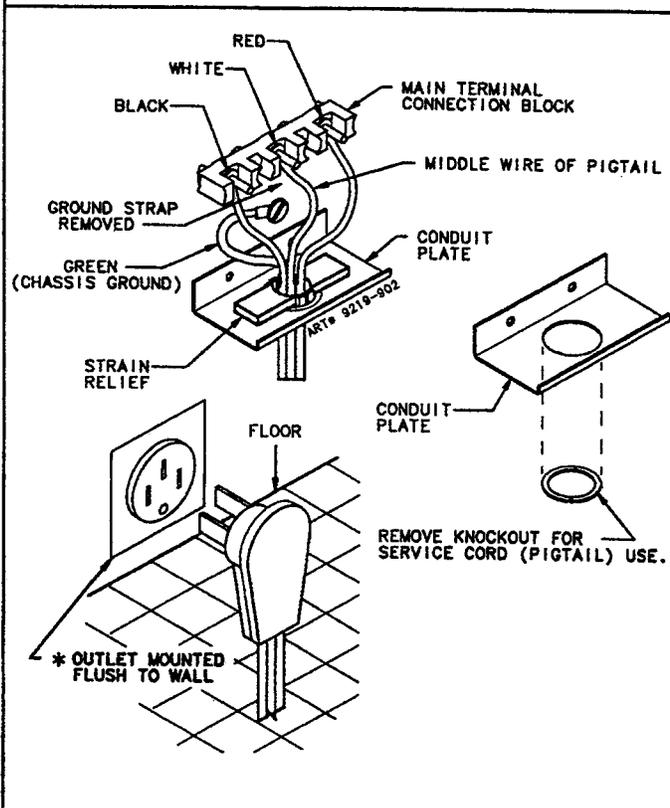
Wiring Installation



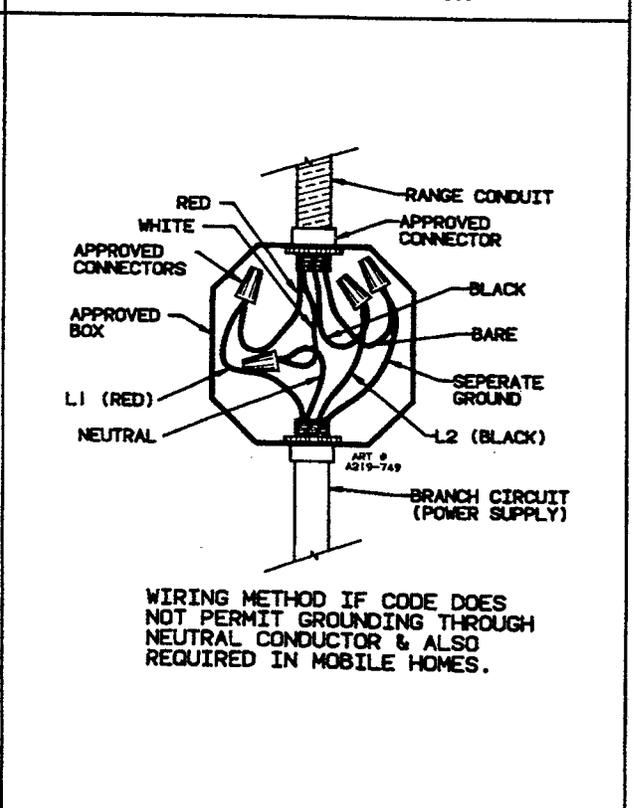
NORMAL - 3 WIRE PLUG



NORMAL - 3 WIRE CONDUIT



MOBILE HOME - 4 WIRE PLUG



MOBILE HOME - 4 WIRE CONDUIT

Electrical Wiring Information

Electrical Wiring Information

The neutral of this unit is grounded to the frame through the solid copper grounding wire. If local codes do not permit grounding of the neutral, untwist or disconnect the solid copper wire and connect the solid copper wire to ground in accordance with local codes. Connect the white neutral to the service neutral.

Proper Electrical Supply

You must provide an adequate electrical supply system as required for your cooktop. All wire connections must be in accordance with local codes and properly insulated. Check with local utility for governing electrical codes and ordinances. In the absence of local electrical codes, the National Electrical Code, NFPA No. 70, governing electric range installations must be followed. A copy of the National Electrical Code, NFPA No. 70, can be obtained by writing to:

National Fire Protection Association
Batterymarch Park
Quincy, Massachusetts 02269

A three-wire, single phase, A.C. 120/240 volt 60 cycle electrical system (properly circuit protected to meet Local Codes of NFPA No. 70) must be provided. Unit must be properly grounded in accordance with local wiring code. The chart below recommends the minimum circuit protector and wire size if the appliance is the only unit on the circuit. If smaller sizes of wire are used, the unit efficiency will be reduced and a fire hazard may be created. It is advisable that the electrical wiring and hookup be accomplished by a competent electrician.

K.W. RATING ON SERIAL PLATE	RECOMMENDED MINIMUM	
	CIRCUIT PROTECTION IN AMPERS	WIRE SIZE (AWG)
0 - 4.9	20	12
5.0 - 6.9	30	10
7.0 - 9.9	40	8
10.0 - 11.9	50	8
12.0 - 14.9	60	6

WARNING

ELECTRICAL GROUNDING INSTRUCTIONS
THIS APPLIANCE IS EQUIPPED WITH A THREE PRONG GROUNDING PLUG FOR PROTECTION AGAINST SHOCK HAZARD AND SHOULD BE PLUGGED DIRECTLY INTO A PROPERLY GROUNDED RECEPTACLE. DO NOT CUT OR REMOVE THE GROUNDING PRONG FROM THIS PLUG.

WARNING

THIS APPLIANCE MUST BE DISCONNECTED FROM ITS ELECTRICAL SUPPLY AT THE WALL RECEPTACLE BEFORE SERVICING THE APPLIANCE.

The non-vented units are provided with 1/2" (1.3 cm) flexible cable, 45" (114.3 cm) long with 6" (15.2 cm) wire leads at end, furnished and installed by manufacturer (connect to 240/120 volt electrical service). Cable is located at the center rear of the cooktop. Refer to owner's installation manual if needed.

Proper Service Procedure

When testing, removing, replacing component or components or performing service:

1. Disconnect the appliance from power source.
2. Note the location of electrical wiring attachments and disassembly order for ease in reassembly.
3. Reassemble in the reverse order of removal unless specified otherwise.
4. Ensure that electrical connections are attached and secure.
5. Ensure that wiring is secured away from sharp edges and moving parts.
6. Do not bypass or disconnect any part or device designed into the appliance.

7. Ensure that ground wiring is connected and secure.
8. Ensure that access panels, covers, tape, and seals are installed.

Ignition/Spark Module

The ignitor wires are color coded to match the input wiring color. If the polarity gets reversed (the power cord is indexed at both ends, reverse polarity can only occur at the outlet). The ignitor will continue to spark after burner lights. If the ignitor module is mis-wired, the same thing will occur.

Wiring, polarity, and grounding are critical to proper operation. Connections at the module and at the ignitor should be snug. A loose connection is added resistance to the circuit.

Spark Module

Provides 14,000 to 16,000 VDC to ignitors. Do not check output.

Check for 120 VAC between L and N. Ensure tight connections at 1, 2, and at ignitors. Ensure sure proper product grounding.

Gas Components

NOTE: Before replacing any component, check the following:

- Be sure 120 VAC power is supplied to unit.
- Be sure correct gas fuel, at correct pressure, is supplied to manifold inlet. The gas supply line is open and air has been bled from gas lines.
- When an electrical component is non-operative, check to be sure the correct electrical leads are securely attached to it. Wire leads are color-coded and identified with stampings.
- When an electrical malfunction cannot be readily located, use a continuity tester to trace circuit. Check wire harness for separated wires, splices, etc.
- If ducting and wall cap are not connected to blower vent, be sure deflected drafts are not causing ignition failure or other burner flame disturbance.

Gas Leaks

CAUTION:

Never check for gas leaks with an open flame. Check for leaks using a soap and water solution.

Flame Rectification

In appliances, there are two main types of re-ignition systems. One, is based on the flame conduction principle (DC current), the other is based on the flame rectification principle (AC current).

The flame conduction principle has DC current arcing from the ignitor to the burner (chassis ground). Since this arcing is placed in the path of the gas/air mixture exiting the burner, the burner is lit. A flame is capable of conducting electricity, thus the arcing stops. If the flame is extinguished, the ignition process starts all over.

Few components are needed to build a conduction type of re-ignition system. However, if the ignitor shorts to ground via moisture or a wiring problem, no arcing takes place and a no light situation occurs. This system is not fail safe.

The flame rectification principle uses very low (one millionth of an amp), AC current arcing from the ignitor to the burner (chassis ground). When one burner is turned on, all burners will spark.

When gas burns in air, there is a release of heat and light. A by-product of the release is a process called "ionization". This means that the edge of the flame is conductive.

By placing the ignitor so it will provide an arc in the path of the flames conductive area, and having its target (chassis ground) be at least four times larger than the ignitors electrode, a rectifier/diode is created.

When alternating current goes into the flame, during one half of the cycle it is flowing from the ignitor to ground, and during the other half cycle it flows from ground to the ignitor. Since the flame is acting like a diode, the current flow will be higher in the ignitor to ground cycle than in the ground to ignitor cycle. When this condition is sensed in the correct polarity, a flame is considered to be present.

If the flame is not present, the current flow in each half cycle is 0, so sparking will continue.

If there is a moisture or grease short, the current flow will be equal during each half cycle. The result is continuous sparking.

Incorrect polarity will cause continuous sparking since the half cycles are reversed. This explains why polarity, grounding, and proper wiring are so critical to proper operation. Also the gap between the ignitor and it's target should be 3mm (the thickness of two dimes).

Burner Ignition and Auto-Reignition

This appliance is equipped for electronic auto-reignition by means of a spark igniter located at the rear of each burner. The burners are designed to light at any valve rotation that admits sufficient gas flow to support a flame and to automatically relight following a loss of flame due to a draft or other adverse condition.

CAUTION: Never cover control knobs or surrounding control surface with utensils, towels, or other objects. Never obstruct free air passage past the control knobs. The knob openings have been sized to properly control air entry to the interior of the appliance during operation.

This appliance has no air shutters. Primary air adjustments are unnecessary. The burners are designed to provide optimum aeration for all gases without air shutters. When operating properly, burners should produce clearly defined, even blue flames.

Specified input rates are as shown below:

**CCGP2420P and CCG2720P
Burner Location**

	Input Rates - Natural Gas (BTU/HR)	
	Hi	Lo
Right Front	15,000	1,500
Right Rear	9,100	1,050
Left Front	6,500	830
Left Rear	15,000	1,500

CCGP2820P

Burner Location	Input Rates - Natural Gas (BTU/HR)	
	Hi	Lo
Right Front	15,000	1,500
Right Rear	9,100	1,050
Center Front	6,500	830
Center Rear	10,500	1,500
Left Front	15,000	1,500
Left Rear	9,100	1,050

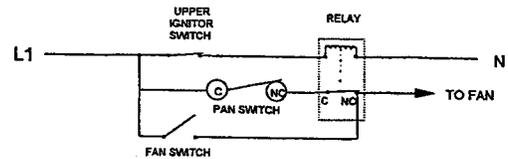
Some models will include 1300 watt Electric Griddle accessory

Fan Motor Circuit - Prostyle

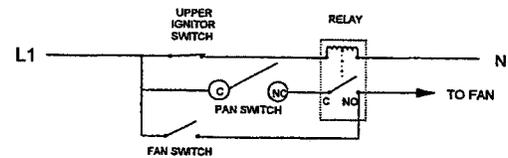
PRO - STYLE

LADDER DIAGRAM - CVG4380P

FAN MOTOR CIRCUIT - "E" BURNER INSTALLED



FAN MOTOR CIRCUIT - AG202 INSTALLED

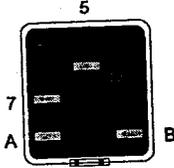


Designer Line Gas

DESIGNER LINE GAS

RELAY

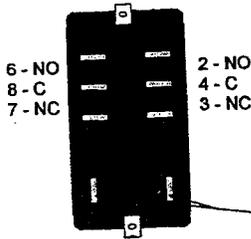
ALLOWS AUTOMATIC STARTING OF BLOWER (WITH FAN RELAY) WHEN "E" BURNER INSTALLED.



A TO B = 2.3K OHMS
7 TO 5 - NORMALLY OPEN

FAN RELAY

OPERATES BLOWER MOTOR DIRECTLY ("E" BURNER INSTALLED), OR FEEDS ROCKER SWITCH

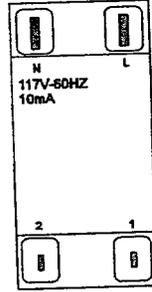


6 - NO
8 - C
7 - NC
2 - NO
4 - C
3 - NC

SOLENOID
950 Ohms

SPARK MODULE

PROVIDES 14,000 TO 16,000VDC TO IGNITORS. DO NOT CHECK OUTPUT.

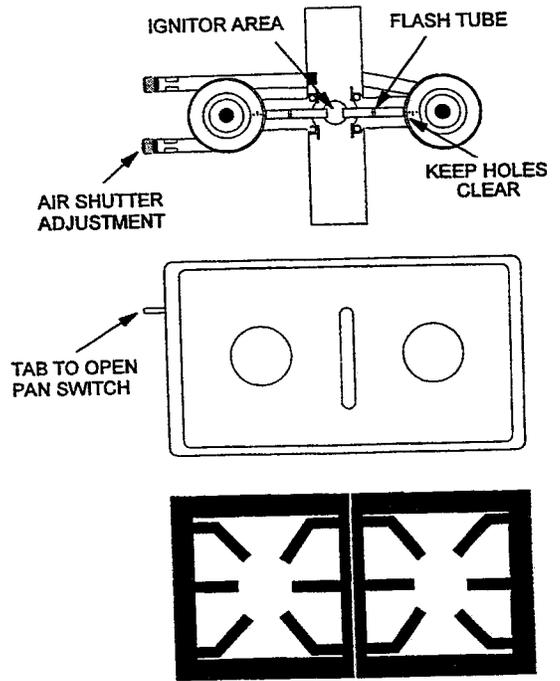


CHECK FOR 120VAC BETWEEN L AND N. ENSURE TIGHT CONNECTIONS AT 1, 2, AND AT IGNITORS. ENSURE PROPER PRODUCT GROUNDING.

DESIGNER LINE GAS

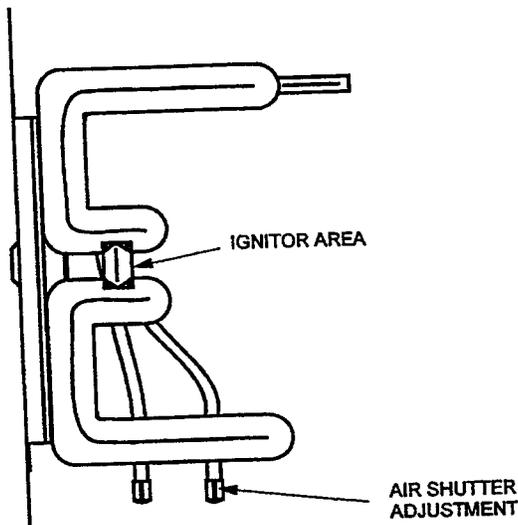
AG202MB(G)

10,000BTU - NAT. OR 8,000BTU - L.P.



DESIGNER LINE GAS

E-VEN HEAT GRILL ASSEMBLY ("E" BURNER)

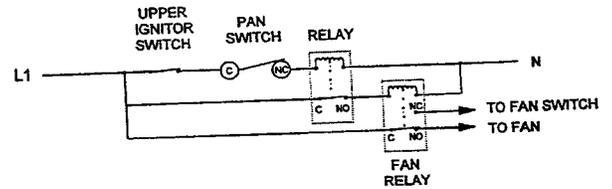


GRILL DESIGNED FOR 8,000BTU (NAT. OR L.P.) OPERATION

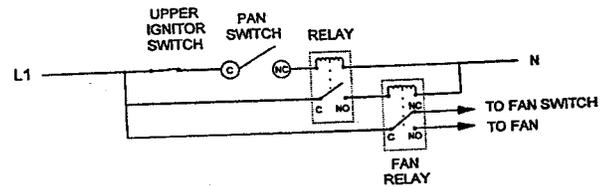
DESIGNER LINE GAS

LADDER DIAGRAM - CVG4280

PAN SWITCH CIRCUIT - "E" BURNER INSTALLED



PAN SWITCH CIRCUIT - AG202 INSTALLED



Gas Supply Connection

A trained serviceman or gas appliance installer must make the gas supply connection. Leak testing of the appliance shall be conducted by the installer according to the instructions below.

Apply a non-corrosive leak detection fluid to all joints and fittings in the gas connection between the supply line shut-off valve and range. Include gas fittings and joints in the range if connections were disturbed during installation. Check for leaks! Bubbles appearing around fittings and connections will indicate a leak. If a leak appears, turn off supply line gas shut-off valve, and retest for leaks.

CAUTION: NEVER CHECK FOR LEAKS WITH A FLAME.

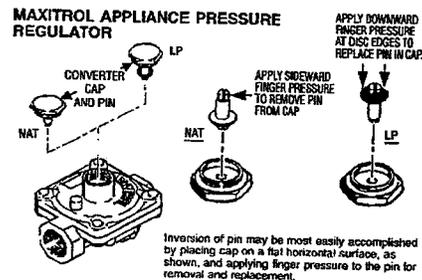
WHEN LEAK CHECK IS COMPLETE, WIPE OFF ALL RESIDUE.

Unless prohibited by local codes or ordinances, an new A.G.A. - Certified, flexible metal appliance connector may be used to connect this appliance to its gas supply. The connector must have an internal diameter not less than nominal 1/2" NPT pipe and be no more than 5 feet in length. A 1/2" NPT x 1/2" flare union adapter is required at each end of the flexible connector if a flexible pressure regulator and manual shut-off valve are joined solidly to other permanent hard piping (either gas supply or the appliance manifold) so as to be physically stationary.

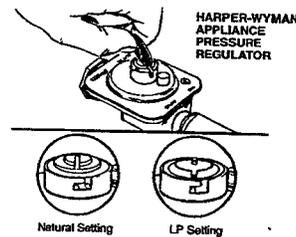
CAUTION: Do not attempt to attach the flexible connector directly to an external pipe thread. Connection requires flare union adapter.

Appliance Pressure Regulator Conversion

If this is a "Style A" regulator, follow instructions in illustration. If it is a "Style B" regulator convert to LP by inserting a coin into the slot in the cap of the appliance pressure regulator and turn counterclockwise to loosen. Reverse (invert) cap, push down and turn clockwise to lock in place. When finished, the marking "LP" should be visible in the center well of the cap.



Style A



Style B

LP Conversion Spuds

The fixed LP orifice spuds supplied with unit must be installed in this appliance if it is converted for use with LP gas. Each part is stamped with a small number, coding its proper location. Refer to installation instructions supplied with this appliance for detailed conversion instructions. Save the fixed natural gas orifice spuds already installed in this appliance, for future use.

To convert cooktop for use on LP Gas, install:

CCGP	Burner/Valve	Orifice Spud Stamping	Spud Color
2420 & 2720	Right front & left rear	65	Brass
	Left front	70	Brass
	Right Rear	69	Brass
2820	Right Front	65	Brass
	Right Rear	69	Brass
	Left Front	65	Brass
	Left Rear	69	Brass
	Center Front	70	Brass
	Center Rear	65	Brass

To convert from use on LP Gas to Natural Gas, install:

CCGP	Burner/Valve	Orifice Spud Stamping	Spud Color
2420 & 2720	Left Rear	None	Red
	Right Front	None	Gold
	Left Front	None	Silver
	Right Rear	None	Green
2820	Right Front	None	Gold
	Right Rear	None	Green
	Left Front	None	Gold
	Left Rear	None	Green
	Center Front	None	Silver
	Center Rear	None	Red

Expressions Models

Converting Appliance for use with LP Gas

WARNING

Propane conversion is to be performed by a Maytag Authorized servicer (or other qualified agency) in accordance with the manufacturer's instructions and all codes and requirements. Failure to follow instructions could result in serious injury or property damage. The qualified agency performing this work assumes responsibility for this conversion.

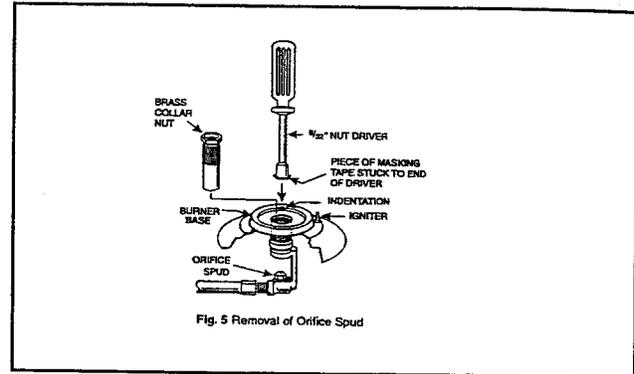
WARNING

Electrical power and gas must be turned off prior to conversion.

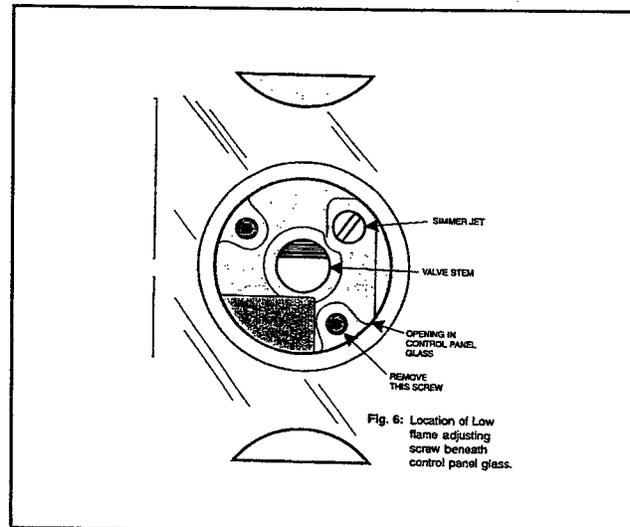
This appliance was adjusted at the factory for use with natural gas. To convert it for use with LP gas (propane or butane), both of the following modifications must be performed:

A. Replace all orifice spuds

1. Remove the grates and burner heads.
2. With an adjustable wrench, unscrew and remove the brass collar nuts.
3. Trim a small piece of masking tape to the size of a dime and affix it over the end of a $3/32$ " nut driver.
4. Firmly press the nut driver over the orifice spud and loosen spud by turning counterclockwise. Carefully lift nut driver out of burner throat. Orifice spud should be captured in the recess. Repeat this step for each burner. Save spuds just removed for future use.



5. Remove control knobs by pulling straight up. With a # 15 Torx driver, remove screw from the right-rear and left-front burner valves. Slide control panel glass to the left by $1/8$ " and lift glass up and out, exposing the gas manifold and valves. Remove the simmer jets by turning counterclockwise and lifting out of recess. Save jets for future use.



6. Locate the LP conversion pack taped to the side of the exhaust plenum. Remove the two small bags containing replacement orifices. Remove the large simmer jets and insert into the large burner valves. Turn clockwise until snug. With masking tape still in place in the recess of the nut-driver, press a zinc-plated spud into the recess so that it is captured snugly. Carefully insert into the throat of the large burner. Tighten to a torque of 15 in-lbs by turning spud clockwise. Repeat for the other large burners. Repeat this same procedure for the small simmer jets and spuds.
7. Reinstall the glass control panel assembly and the two Torx screws removed earlier. Replace the knobs.
8. Replace the brass collar nuts and tighten to a torque of 60 in-lbs. Replace burner heads and grates.
9. Affix the yellow adhesive label from the LP conversion pack to the exhaust plenum adjacent to the rating plate.
10. Place the natural gas simmer jets and brass orifice spuds in the plastic bag for future use and reattach bag to side of plenum.

B. Invert cap in appliance pressure regulator.

With the appliance installed, the regulator is located on the underside of the burner box on the right hand side at the inlet to the gas manifold. Identify the make of appliance regulator on the unit and follow the instructions.

After conversion, steps A and B have been completed. Check the appearance of each burners' flame at Hi and Lo settings. If the flames appear too large or too small, review all steps to make sure they were completed correctly.

Model Number Identification

COOKING-ELECTRIC & GAS COOKTOPS

C	V	G	X	4	3	8	0	B	C
A	B	C	D	E	F	G	H	I	J

A PRODUCT TYPE

- C = Cooktop Electric
- CCE = Conventional Cooktop Electric
- CCG = Conventional Cooktop Gas
- CCR = Conventional Cooktop Solid
- CG = Cooktop Gas
- CU = Cooktop Updraft
- CVE = Conventional Ventilated Electric
- CVG = Conventional Ventilated Gas
- G = Grill Electric

B PRODUCT VENTILATION TYPE

- C = Conventional (Updraft)
- V = Ventilated (Downdraft)

C PRODUCT FUEL/ELEMENT

- E = Electric
- G = Gas
- D = Dual Fuel
- P = LP Gas

D PRODUCT STYLE

- X = Expressions

E SURFACE

- 1 = Coil/Atmospheric Burner
- 2 = Disk/Sealed Burner
- 3 = Ceran/Radiant/Halogen/Induction
- 4 = Modular

E SURFACE

- 5 = Coil/Atmospheric Burner w/Electronics
- 6 = Disk/Sealed Burner w/Electronics
- 7 = Ceran w/Electronics
- 8 = Modular w/Electronics

F CONFIGURATION

- 1 = Single Convertible
- 2 = Double Convertible
- 3 = Triple Convertible
- 4 = Four Fixed Elements/Burners
- 5 = Five Fixed Elements/Burners

G TYPE

- 0 = Coil/Disk/Radiant/Atmospheric Burners
- 1 = Open (No Grill)
- 2 = Sealed Burner
- 3 = Radiant/Halogen
- 5 = Induction/Radiant
- 6 = Induction
- 7 = Grill + Open
- 8 = Grill + Open

H FUTURE UPGRADES, ETC.

I COLOR

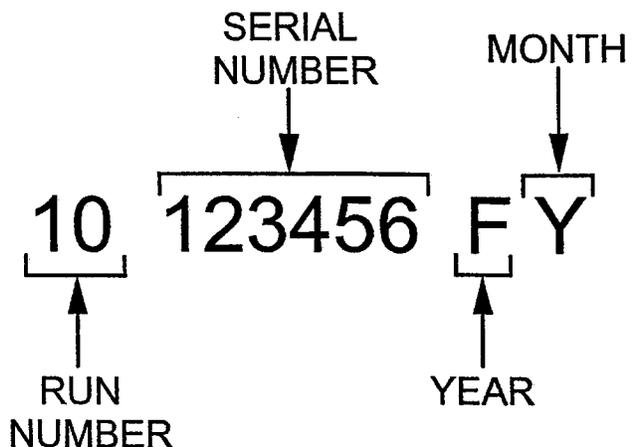
- A = Almond
- B = Black
- P = Pro-Style™
- S = Stainless
- T = Textured
- W = White

J SUFFIX

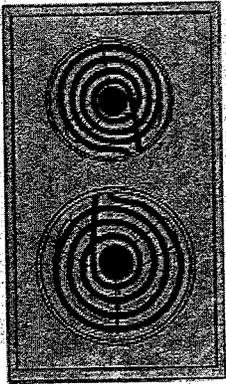
- = U.S. (Blank)
- C = Canada
- E = Export
- J = Jenn-Air
- 8 = 208V

The serial number is necessary when ordering replacement parts. Starting November 1, 1992, Jenn-Air/Maytag began using a 10 digit serial number format. Prior to this an 8 digit serial number format was used. The first two digits denote the run number. The next 6 numbers represent the unit serial number. The seventh and eighth digit represents the year and month the unit was built. This number is also necessary for product information feedback to the manufacture for quality improvements/adjustments.

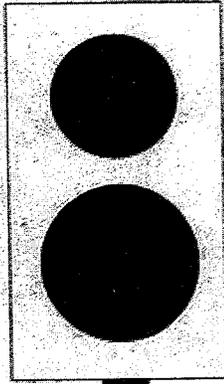
Serial Number Identification



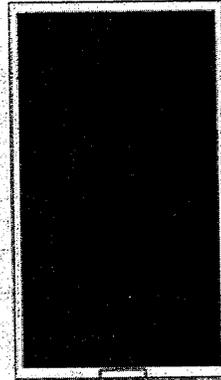
ACCESSORIES



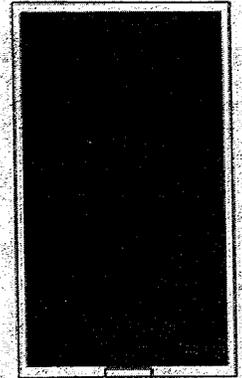
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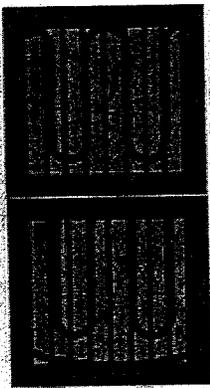
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A122



A126



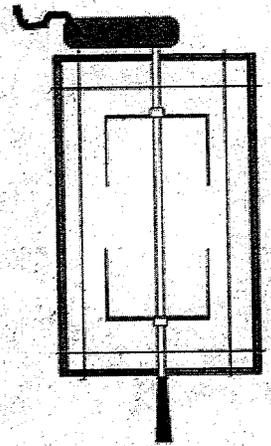
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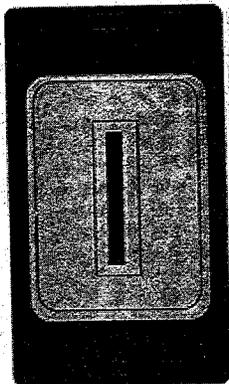
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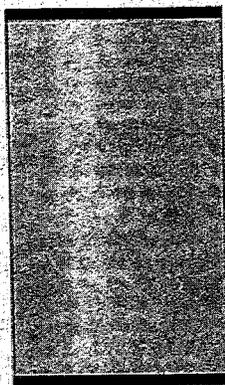
A302



A312



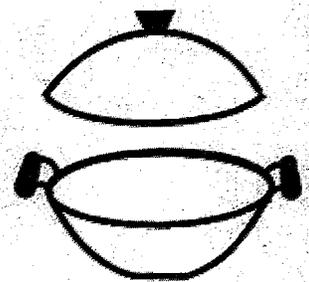
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A341

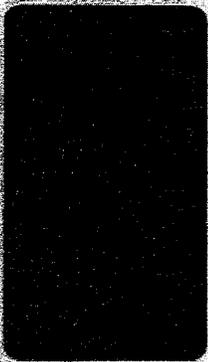


AE915



AO142

ACCESSORIES



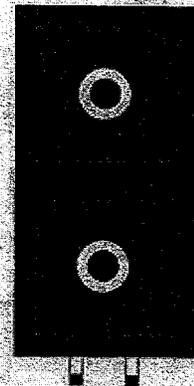
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A911



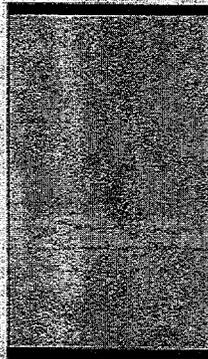
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AG202



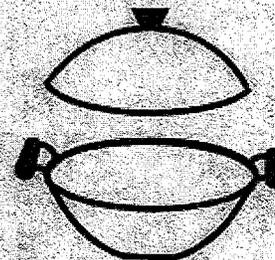
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AG341



AG915



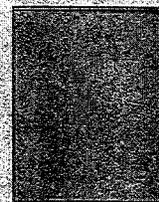
AO142



A905



A912



A913

SECTION 1. GENERAL TROUBLESHOOTING

General Procedures

This section is intended to assist you in diagnosing inoperative conditions which may develop in products manufactured by the Maytag corporation. Electrical testing is, for the most part, made with an appliance test meter and consists of checking for open or closed circuits. Mechanical checks are made through sight and sound, along with the use of a volt-wattmeter and clamp-on ammeter.



This information is intended for the technician who is familiar with the operation and construction of Maytag products.



Electrical Component Testing

One of the easiest means of testing electrical components is "continuity testing" with an appliance test meter.

Continuity is a complete or continuous path from one point in an electrical circuit to another. Continuity testing, as related to an electrical component, is the checking of a part for an "open" or "closed" circuit. A continuity check can be performed once the product being tested has been disconnected from its electrical supply and after appropriate wires have been removed from the terminals of the part being checked. Following manual activation of the part (if required) the probes of the test meter should be placed on the respective terminals. The readout from the test meter will indicate a completed (closed) circuit. Little or no value shown will indicate a broken or (open) circuit and a possible inoperative part.

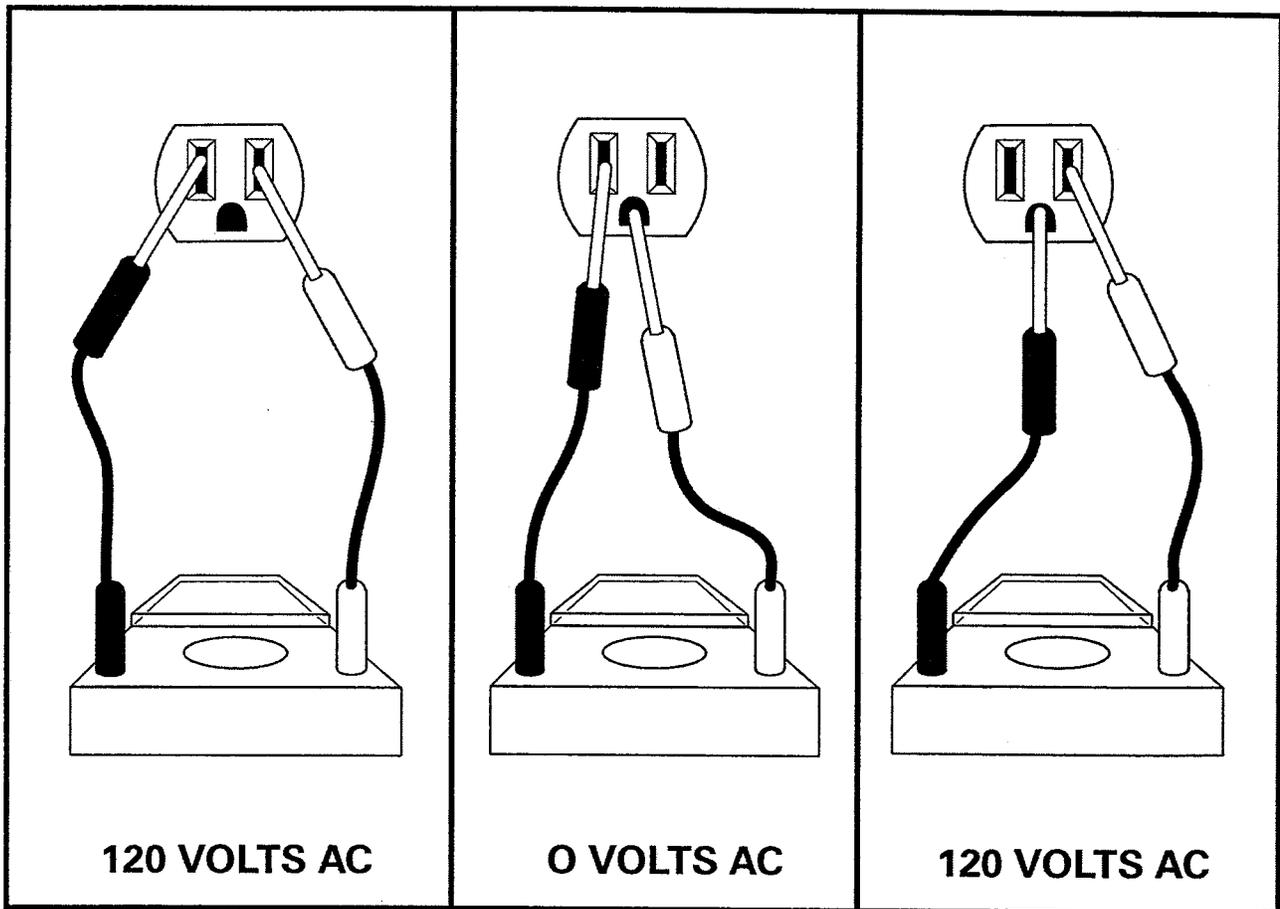
Continuity testing is a process of eliminating those electrical components used in a given function of the product, until the inoperative part is found. By reviewing the list of possible electrical problems, under a given condition, and then performing appropriate continuity checks on the parts involved,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

Electrical components fall into two general categories:

1. **Loads** - Devices that **use** (consume) electricity. Examples would include fan motors, elements, lamps, solenoids, etc.
2. **Switches** - Devices that **control** the supply of electricity to the load or loads in a circuit. Examples include lid switches, timer contacts, selector switch and relay contacts. Continuity tests of "load" devices will show varying levels of resistance from very low for some transformer and motor windings to very high for some timer motors and components on electronic control boards. Usually it is more important to know if there is a path for current flow through a device (continuity) than to the exact resistance (ohms) of the device. Resistance values are included in this manual for your information.

For the most part, "loads" can be powered by using a motor test cord to confirm operation or failure. The motor test cord used in conjunction with a volt-watt meter will also show power required to operate the device. Continuity testing of switches will show virtually no resistance across closed contacts. Resistance even low values indicates burned or dirty contacts in a switch.

Grounding and Polarity



The above illustration shows a simple grounding and polarity check using a common appliance multimeter



IMPORTANT

Never alter or remove the grounding prong from the power cord. Use of grounding adapters is not recommended.

The receptacle used for all Maytag products operating on 120 VAC must be properly grounded and polarized.

The power cord used on the appliances is equipped with a three (3) prong polarized grounding plug for protection against shock hazard and should be plugged directly into a properly grounded and polarized receptacle.

It is the responsibility of the person installing the appliance to ensure it is adequately grounded and polarized at the point of

installation. All local conditions and requirements must be taken into consideration.

In cases where only a two prong receptacle is available, it is the personal responsibility of the customer to have it replaced with a properly grounded and polarized 3 prong receptacle. All grounding and wiring should be done in accordance with national and local codes. **Use of adapters is not recommended by Maytag** unless the receptacle has been grounded through the center plate cover screw.

Test Equipment

Electrical Test Equipment

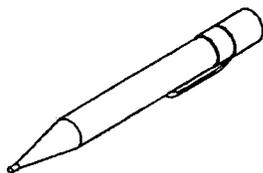
The equipment required to service Maytag products depends largely upon the conditions you encounter. Locating a malfunction will often require the use of electrical testing equipment such as:

<u>Description</u>	<u>Part Number</u>
Analog Test Meter	20000005
Digital Test Meter	20001001
Clamp-On Ammeter	20000002
AC Voltage Sensor	20000081
Digital Multimeter	20001006
Digital Watt/Amp/Volt/ Ohm/Temp. Meter	20000019
Dwyer Air Meter	20000029

Analog Test Meter can be used to check for open or closed circuits, measure resistance, AC and DC volts, and temperature.



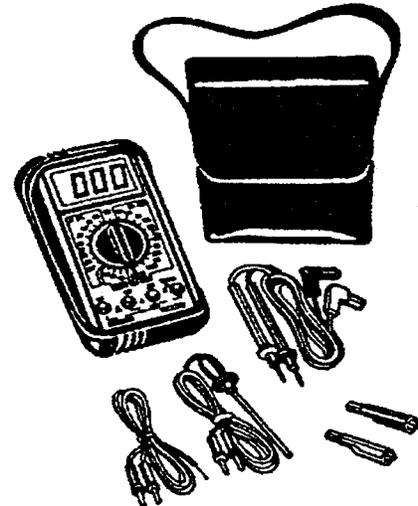
AC Voltage Sensor can be used to alert you if AC voltage is present so proper safety precautions can be observed. The tip of the sensor will glow bright red if voltage is between 110-600 volts AC.



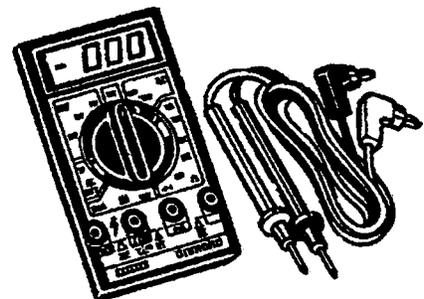
Clamp-On Ammeter can be used to detect shorts. Overloads on the circuit breaker or fuse can be traced to either the appliance or circuit breaker by checking the appliance current draw.



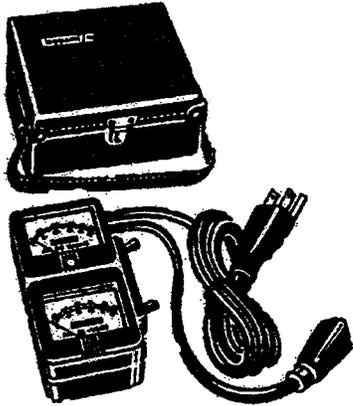
Digital Test Meter can be used to check for open or closed circuits, measure resistance, AC and DC volts, and temperature.



Digital Multimeter features easy-to-read LCD display and tilt stand. Reads AC voltage to 500V and DC voltage to 1000V, battery test, up to 10 amps and 2 meg-ohms of resistance.



Digital Watt/Amp/Volt/Ohm/Temp. Meter measures power (wattage), AC/DC volts, AC/DC amps, temperature (°C & °F) Ohms resistance, continuity and capacitance. Features large LCD display with backlight and analog bar graph to show tendencies.

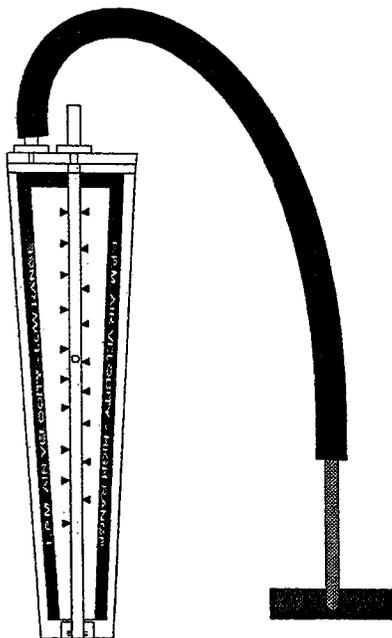


Ventilation Test

All downdraft models being produced today come with a test card insert in the user's material. *(This drawing is not to size, for illustration only!)* This test card is a quick way to test operation of the ventilation system. Although a part number is listed, it is not an individual part. The card is placed over the intake (with all accessories and air grille removed) and the blower started. If it falls in, the air velocity should be OK. This test is not a replacement for using proper instruments. It only provides installers with initial testing for those who do not have proper instruments. **NOTE: Air filter must be in place to prevent card from going into the blower wheel!**

Dwyer Air Meter is used to diagnose restricted vents. A precision air velocity and static pressure indicator based on the principle of the variable area flowmeter.

DWYER



FLOW TESTER

↑
This end of tester to be positioned over air intake.

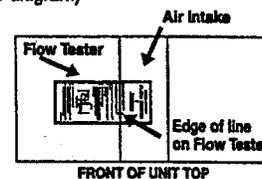
For Cooktop models use this side of line. ↓



For Range models use this side of line. ↑

How to use this tester to check your downdraft system:

- 1) Remove all cartridges, accessories and the air grille from unit.
- 2) Insure the air filter is in place.
- 3) Align the edge of dotted line that corresponds to unit being tested with the edge of the intake on the left side of the unit near the center. (see diagram)



- 4) Turn on the downdraft system.
- 5) If the card is pulled into the air intake your downdraft system is working properly.
- 6) If the card is not pulled into the system see installation instructions for possible causes.

PART NO. 210305A

Ducting

Air movement is measured in two ways. CFM or FPM. CFM (cubic feet per minute) is the measurement of total air VOLUME and is also known as exhaust air. FPM (feet per minute) is the measurement of air VELOCITY. All testing of Jenn-Air downdrafts should be performed using FPM measurements. Use the following formula to determine the FPM: $CFM = FPM \times \text{Free Area in square feet}$.

Example:

*750 FPM X a register measure
12" by 12" (1 sq. Foot) = 750 CFM
(or CFM = Ak X Vk)*

Downdraft ventilation is a high velocity system (750 - 1025 F. P. M.). It is designed to move air quickly and to hold grease, moisture and fumes in suspension as air moves through the ducting. Too little air movement means a smoke filled kitchen. Too much air movement means cooled off food and prolonged cooking times. The type of material used affects the performance. Inferior material can cause up to twice the amount of restriction.

If the system does not capture both cooking fumes and smoke while grilling; these are some ducting installation situations to check:

- 6" diameter round or 3 1/4" X 10" rectangular only, ducting of at least solid gauge or aluminum should be used. Except as follows: For Electric Models, 5" diameter round ducting may be used for venting straight out the back of the range and directly through the wall for 10 feet or less. For Gas Models with Electric Ovens, 5" diameter round must be used if the duct length is 10 feet or less.

- Distance between adjacent fittings should be at least 18". The farther the better. Closer distance promotes turbulence which reduces airflow.
- Recommended Jenn-Air wall cap should be used. Make sure damper moves freely when ventilation system is operating.

If there is not an obvious improper installation, there may be a concealed problem such as a pinched joint, obstruction in the pipe, etc. ***Installation is the responsibility of the installer*** and questions should be addressed first by the installer. The installer should very carefully check the ducting installation instructions.

Restrictions

Restrictions in the ducting are one of the greatest causes for poor performance. Restrictions commonly cause the overload protector of the blower motor to open after 20 minutes of operation. Technicians need to be well versed and need to easily identify the many types of restrictions encountered.

One of the most common restrictions is when two elbows are connected back to back. This configuration causes turbulence in the air stream which carries far down the duct before it recovers. It is recommended that 2 1/2 times the outside diameter of duct be placed in between elbows to prevent this turbulence. Example - 6" duct X 2 1/2 = 15 inches between elbows.

- Handmade crimps are likely to cause restrictions. Improper crimps result in the reduction of inside diameter. Air flow should always come from the male side of connections.

- The reduction of duct size also causes restriction. Never go from a larger size duct to a smaller size.
- All transitions should be tapered. Do not use untapered elbows or transitions.

A service representative can measure the air velocity (FPM - feet per minute) at the grill surface to determine if it meets the requirement for the appliance (the FPM differs from grill-ranges and cooktop models). The grill-range model is rated at 60 feet of straight duct, low ranges is up to 30 feet - high range is 31 to 60 feet.

Ventilation System

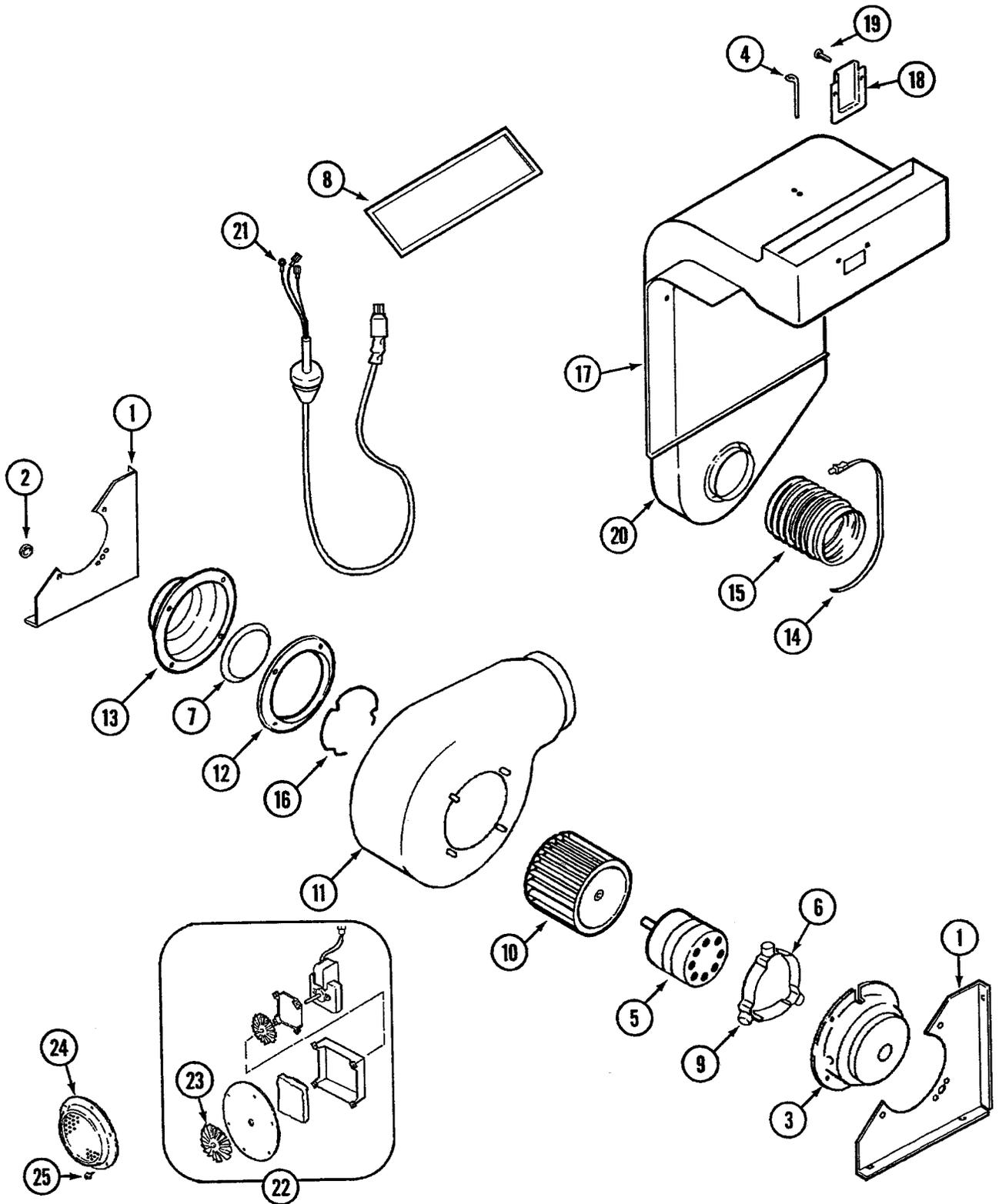
The ventilation system is either two speed or one speed depending on the model. When grilling, the motor always defaults to high speed. On two speed models, one push on the fan button starts the ventilation motor on high, the second push switches the motor to low. There is a five second delay in switching from high to low. This protects the motor by allowing it to obtain momentum before using the slow speed winding.

Blower & Convect Assembly Parts List

1. Bracket, Mount
2. Locknut, Bracket
3. Cover, Motor
Screw, Motor Cover
4. Stop, Filter
5. Motor
Foam, Urethane
6. Band, Motor
7. Ring, Restrictor
8. Filter, Grease
9. Isolator (nut & screw)
10. Wheel, Blower
11. Scroll, Blower Assy.
12. Ring, Inlet
13. Adapter. Restrictor Ring
14. Clamp, Hose
15. Duct, Flexible
16. Retainer
17. Plenum (upper), & clip
18. Cover, Vent
19. Screw, Vent Cover
20. Plenum (lower)
21. Cord, Motor
22. Convect Motor Assy.
23. Wheel, Convect Assy.
24. Plate, Convection (front)
25. Screw, Plate (& washer, plate)

NOTE: Select models to have certain features.

Blower & Convector Assembly Illustration



NOTE: Select models to have certain features.

Cause & Effect

<u>Condition</u>	<u>Possible Cause</u>	<u>Correction</u>
No spark at ignitor(s)	1. Loose wire connection to spark ignitor. Turning on any valve will cause both ignitors to spark simultaneously. Both ignitor lead wires must be connected to spark module for either to work correctly.	Reconnect loose wires.
	2. Ignitor not grounded..	Tighten mounting nut to assure solid ground.
	3. Ignitor.	Replace ignitor(s).
	4. Spark Module.	Replace module.
Ignitor sparks- gas supply OK, won't light	1. Ignitor port in cap not in line with burner flash tube.	Align ignitor cap so port is in-line.
	2. Strong external drafts.	Locate cause; i.e. HVAC vent, etc. Advise customer on adjustment.
	3. Aeration pan, air grille, grates not in position.	Install parts for proper operation.
	4. Burner not seated into unit properly or flash tubes not aligned with ignitor port.	Seat or replace burner.
	5. Primary air shutter set too far open.	Adjust air shutter.
	6. Blocked burner ports.	Clear with straight pin or replace burner.
Ignitor fails through one valve, but works through another.	1. Stem ignition switch not securely seated.	Seat switch securely.
	2. Stem ignition switch (On left side switch assemblies, the lower switch is the ignition switch).	Replace switch (on left side, replace entire switch assembly).
	3. Valve, no click heard (valve fails to rotate through full 175°, thereby failing to activate stem switch).	Replace valve.
	4. Switch wiring.	Check connections: Yellow wire - Stem switch to spark module. Check splices and connections for proper continuity.

<u>Condition</u>	<u>Possible Cause</u>	<u>Correction</u>
Ignitor keeps sparking on setting other than "LITE"	1. Stem switch, internal contacts won't open.	Replace switch.
	2. Stem switch.	Check wiring against diagram.
	3. Valve.	Replace valve.
	4. Spark module.	Replace module.
Binding valve stems	1. Valve.	Replace valve.
	2. Stem switch or assembly.	Replace switch.
No "manual" fan operation	1. Rocker switch, contacts open.	Replace switch.
	2. Fan motor (windings open/shorted).	Replace motor.
No "auto" fan operation (fan should run when left side valve(s) turned on and aeration pan removed)	1. Upper stem - switch on either L.H. assembly.	Replace switch assembly or seat switch securely.
	2. Reversed stem switch wires.	Check wiring. Brown wires should be on upper switches, yellow wires on lower.
	3. Relay.	Replace relay.
	4. N.C. pan switch or lever arm.	Bend lever arm so that projection pin on aeration pan makes contact or replace switch.
	5. Fan motor.	Check wiring. Replace motor.
Fan operates automatically when it shouldn't	1. Projection pin on aeration. Pan not depressing pan switch fully when installed on L.H. side.	Carefully bend lever arm so that projection pin on aeration pan makes contact.
	2. N.C. fan switch.	Replace switch.
	3. Stem switch or relay.	Check wiring against diagram. Replace switch or relay.
Fan won't shut off	1. Rocker switch.	Replace switch.
	2. Relay or motor.	Check wiring against relay.
No flame - gas not reaching any burner	1. Line gas valve turned off, or air in manifold or supply line.	Turn supply valve on. Bleed gas line at regulator.
	2. Gas supply pressure to unit exceeding 14.0" W.C.	Reduce gas supply pressure (may require additional customer installed pressure regulator).
	3. Pressure regulator on unit or supply line.	Replace regulator.

Condition	Possible Cause	Correction
Flame blows away from burner ports - gas flows too high	4. Pressure regulator on unit or supply line mounted backward (arrow on regulator body indicates direction of flow).	Reverse regulator.
	5. Conversion cap in pressure regulator missing or unseated.	Check cap. Re-seat.
	6. Gas valve.	Replace entire assembly.
	7. Orifice fitting: Hood blocked or screwed tight against internal pin. Blockage within gas way.	Clear with straight pin. Back hood off internal pin at least 1 1/4 turns. Replace orifice fittings.
Flame too soft or lazy - gas flow too low	1. Pressure regulator, pressure regulator cap is inverted (set for LP at 10" W.C. instead of natural at 5" W.C.).	Replace regulator, invert conversion cap.
	2. Oversize outlet hole in orifice hood.	Replace entire orifice fitting.
	3. Wrong orifice hood installed.	Check color code on orifice hood (L.H. fittings are black, R.H. fittings are brass).
	4. Primary air shutter set too far open.	Adjust air shutter.
Flame too soft or lazy - gas flow too low	1. Gas supply pressure to unit below 6.0" W.C.	Supply pressure must be increased. Advise customer on correction required.
	2. Wrong orifice hood installed.	Check color code on orifice hood (L.H. side fittings are black, R.H. side fittings are brass).
	3. Orifice hood.	Clear with straight pin.
	4. Primary air shutter set too far closed.	Adjust air shutter.
No gas or incorrect flow at "MED" or "LO" setting.		

Note:

SECTION 2. GENERAL COMPONENT ACCESS

Getting Started

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

Cartridges

Cooktop cartridges, either conventional coil, halogen, radiant or solid element, can be installed on either side of the range.

To remove cartridges:

1. Controls must be OFF and the cartridge should be cool.
2. Lift up on the "tab" located on the cartridge until top of cartridge clears the opening on the range by about 2 inches. Lifting the cartridge too high while still engaged in the receptacle could damage the terminal plug.
3. To disengage terminal, hold cartridge by the sides and slide away from the terminal receptacle. Lift out when fully unplugged.

Surface Burner Module

Before installing or removing grill/burner components, be certain control knobs are in the **OFF** position.

To Remove Burner Module:

1. Remove the aeration tray by lifting up the front end on the right side (back end on the left side) until the top clears the opening of the rangetop by about 5 inches.

2. Hold aeration tray by the sides and slide away to remove the prong from the opening and clear the surface burners.
3. Lift up on the sides of the surface burner assembly bracket about 2 inches. Slide away from the orifices.

To Install Burner Module:

1. Be sure the control knobs are turned off.
2. If the grill burner and grill grates are in place, remove before installing a surface burner module.
3. Position the burner assembly with the mixer tube openings toward the orifices. Slide the burner assembly toward the orifices until opening for ignitor is over the ignitor. Lower into place until side openings are resting on the burner supports and ignitor is centered between the two flash tubes.
4. Install the aeration tray by inserting the prong at the end of the pan into opening in the end of the burner basin. Lower the opposite end into the range top.

To Install Grill Module:

Position the grillburner with the mixer tube openings toward the orifices. Slide the burner toward the orifices until the ignitor is in between front and rear grill sections. Lower into place until side openings are resting on the burner support pins.

Left Side or Single Grill

The LO controls are set for the grill burner. Thus, when using a surface burner, the control knobs may be turned to a position lower than the LO setting.

Right Side

Only surface burners may be used on the right side. Use the right surface burners on HI for large quantity cooking and canning because the BTU rate is higher. Also use the right surface burners on LO for sauces and delicate items because the LO setting has a lower BTU rate. Note CVG4380 Models: The center bay is also designated for surface burners only.

Drain Jar

A drain jar is located below the grill basin pan under the countertop. Unscrew and remove. If jar is broken, replace with any heat tempered jar, such as a canning jar, which has a standard screw neck.

Filter

Turn off ventilation system before removing. The filter is a permanent type.

Important: DO NOT OPERATE SYSTEM WITHOUT FILTER. Filter should always be placed at an angle. As you face the front of the cooktop, the top of the filter should rest against the left side of the vent opening and the bottom of the filter should rest against the right side of the ventilation chamber at the bottom. If filter is flat against the fan wall, ventilation effectiveness is reduced.

Surface Burner Heads (Sealed Burner)

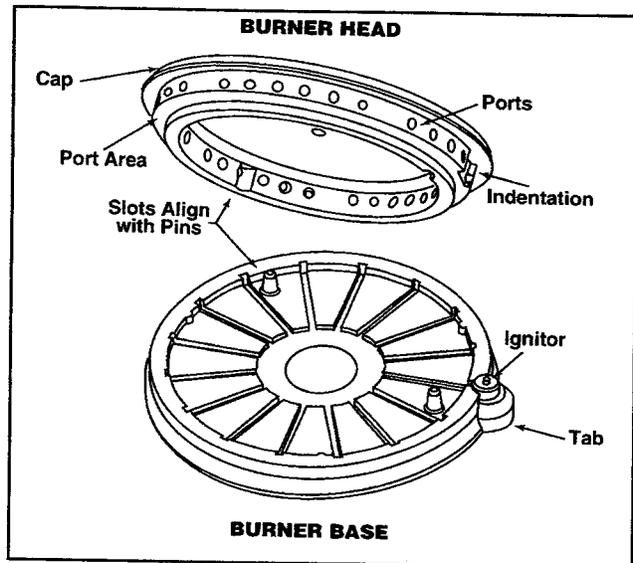
The surface burner heads are removable. The cap portion of the head is porcelain and the port area is aluminum. Wash the burner heads in the sink with mild detergent and a plastic scrubber.

Check to be sure all ports are open. To open clogged ports, insert a straight pin directly into each port. Do not enlarge or distort the port.

When replacing the burner heads, carefully align the tab on the burner base with the indentation in the head. The two pins will fit

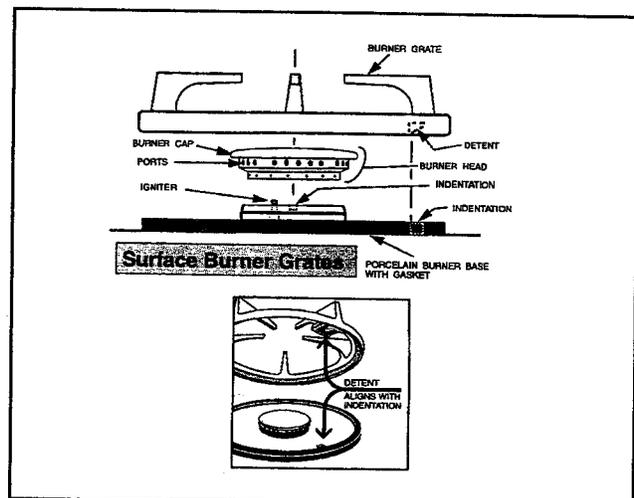
in the slots when the tab is aligned with the indentation.

Note: When burner heads are removed for cleaning, do not spill liquids through the holes in the burner base.



Surface Burner Grates

When replacing the grates, carefully align the tab on the grate with the indentation in the porcelain burner base. If the grates are not properly aligned, they may rock.



Pressure Testing

The maximum gas supply pressure for the appliance pressure regulator supplied on this appliance is 14" W.C. The test pressure for checking this appliance pressure regulator must be at least 6" W.C. for Natural Gas, and at least 11" W.C. for LP. It is shipped from the factory set for Natural Gas at 5" W.C.

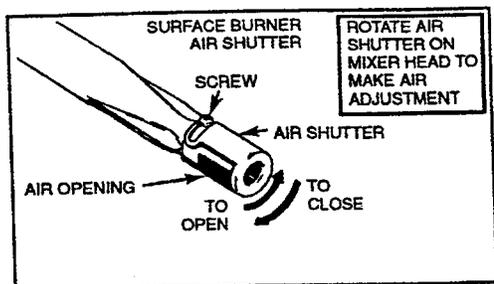
This appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2" PSIG (3.5k Pa).

This appliance 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 (3.5k Pa).

Gas Components - (Designer)

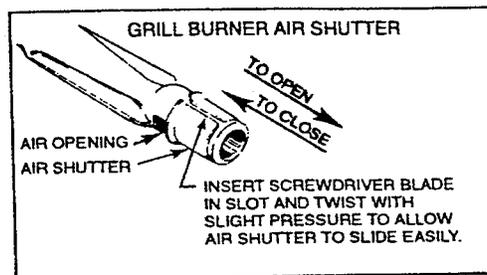
Air Shutter Adjustment

To adjust surface burner air shutters (select models):



Loosen fastening screw and rotate air shutter to increase or decrease the size of the air opening. As the shutter is turned observe change in flame appearance. Adjustment is satisfactory when a clearly defined, even blue flame results at the HI flame setting. After adjustment, tighten screw.

To adjust grill burner air shutters and surface burner air shutters (some models):

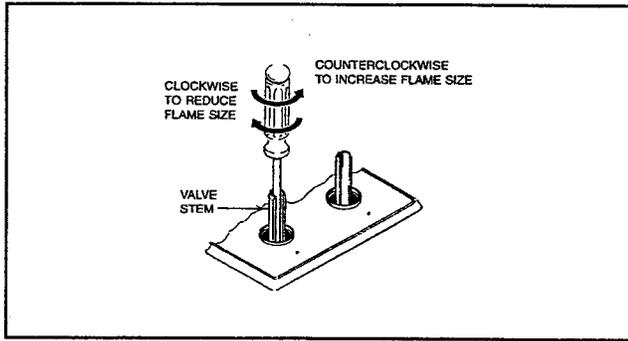


The left hand air shutter controls the rear half of the grill burner or the rear surface burner. The right hand shutter controls the front half of the grill burner or the front surface burner. Air shutters fit snugly on the burner, so a screwdriver blade may be required to make this adjustment.

On any burner, closing the air shutter too far will cause the flame to become soft and yellow tipped. Opening the air shutter too wide will cause the flame to blow away from the burner ports. Proper adjustment will produce a sharp, clearly defined, even blue flame.

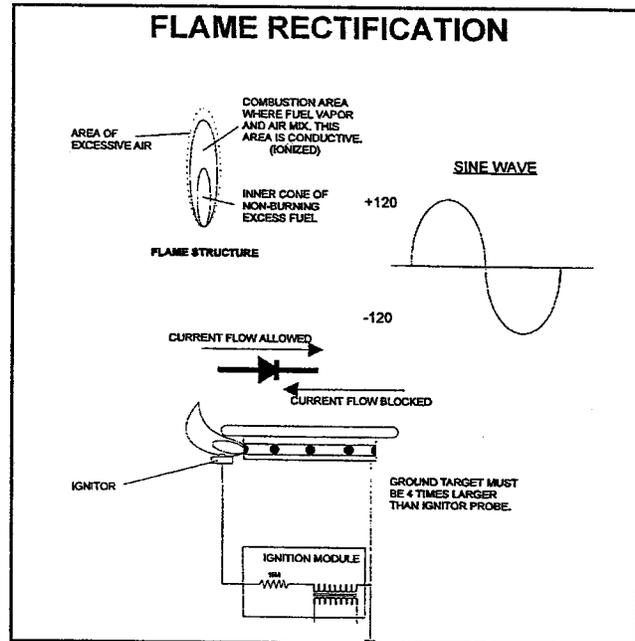
To adjust the Lo setting:

1. Light burner and set control knob for low flame.
2. Remove control knob from valve stem.
Caution: Never use a metal blade to pry knob off.
3. Insert a slender, thin-blade screwdriver into the recess at center of valve stem and engage blade with slot in adjusting screw.
4. Turn center stem adjusting screw slightly to set flame size. **NOTE: Turn clockwise to reduce or counterclockwise to increase flame size.**
5. Replace control knob when adjustment is completed.



Proper adjustment will produce a stable, steady blue flame of minimum size. The final adjustment should be checked by turning knob from **Hi** to **Lo** several times without extinguishing the flame.

This adjustment, at the **Lo** setting, will automatically provide the proper flame size at the **Med.** setting.



Conventional Gas Models

To remove orifices:

Remove the grates and burner caps, pull the venturi tube up and out. Access to orifices can now be made.

To remove the Burner Assembly:

Remove the grates and burner caps, remove the 15/16" nut. The burner can now be lifted up and off.

To remove Ignitor:

The ignitor is sandwiched between the burner base and pan. It is accessed by removing the burner as outlined above.

The burner cap and the burner base are indexed for easy reassembly.

To remove Glass Top:

The glass can be removed by removing all the knobs and burner pans. This will allow access to the manifold, valves, and the burner tube routing. The ignition module is located in the burner box at the back center under a support bracket. The orifices and valves are color coded. These cooktops use the flame rectification principle.

Pro Style Cooktops

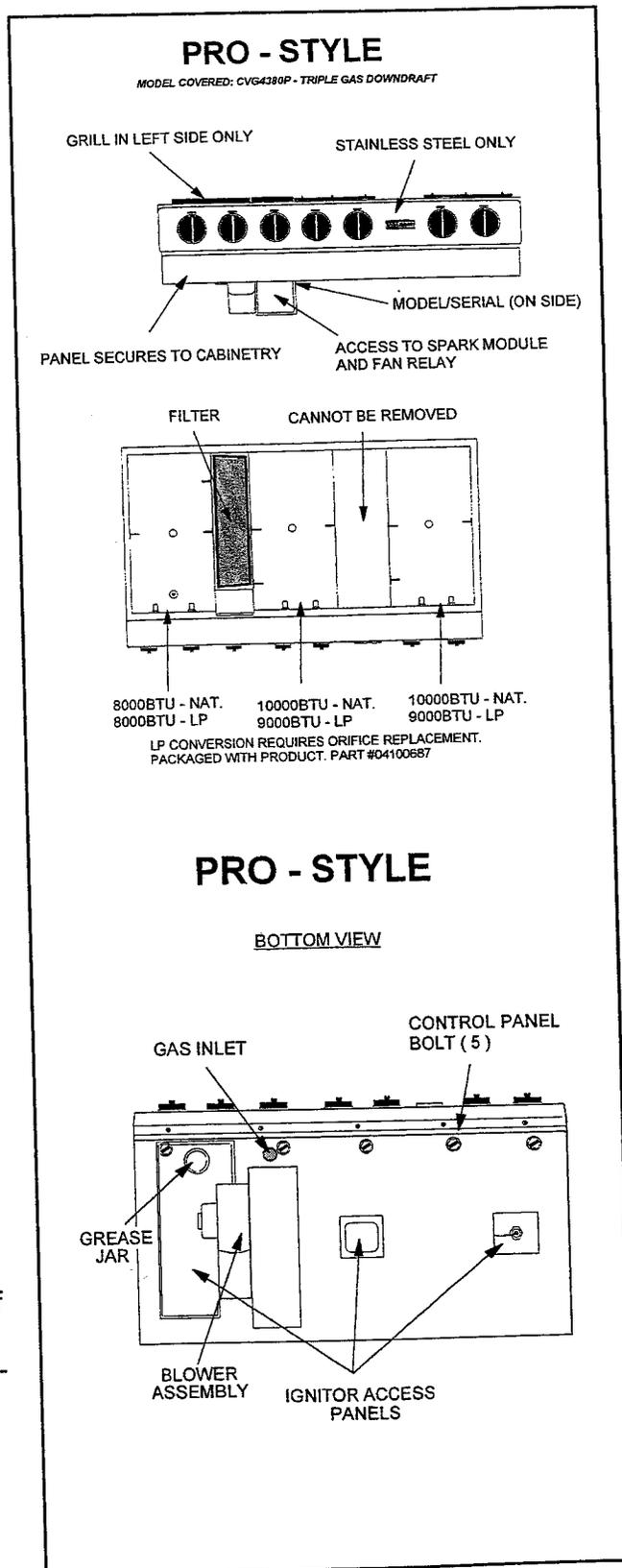
The Pro Style design uses a couple of different chassis. This unit only comes in stainless steel.

- The fan switch uses a large knob design that matches the surface unit knobs. It is located in between the left and right surface unit switches.
- The panel between the right and middle bay is not removable.
- The panel below the control knobs does not attach to the product. It is secured to the cabinetry.
- The blower and ventilation chamber are the same style as the Designer Line Series.
- The grill burner may be used in the left bay only.
- Although the orifices look like universal ones, they need to be replaced if unit is to be converted for L.P. usage.
- Igniters have panels to access them, and the gas inlet is in front of the ventilation chamber (downdraft models).

The illustration shows the product with the control panel removed. The two left hand valves use stacked ignitor switches to facilitate automatic blower operation when the grill burner is installed (downdraft models only). All the others are single. These switches push onto valve stems. The pan switch is normally closed and opens when the AG202 is used. The burner pan of the AG202 has a tab which depresses the lever of the pan switch, thus opening it. This will prevent the blower from coming on automatically when a left side burner is turned on.

The bezel does not need to be removed to take the control panel off. However, the fan switch wiring will have to be disconnected.

To remove the fan switch, tabs at the top and bottom of the switch have to be depressed and then twist the switch. No screws are used.

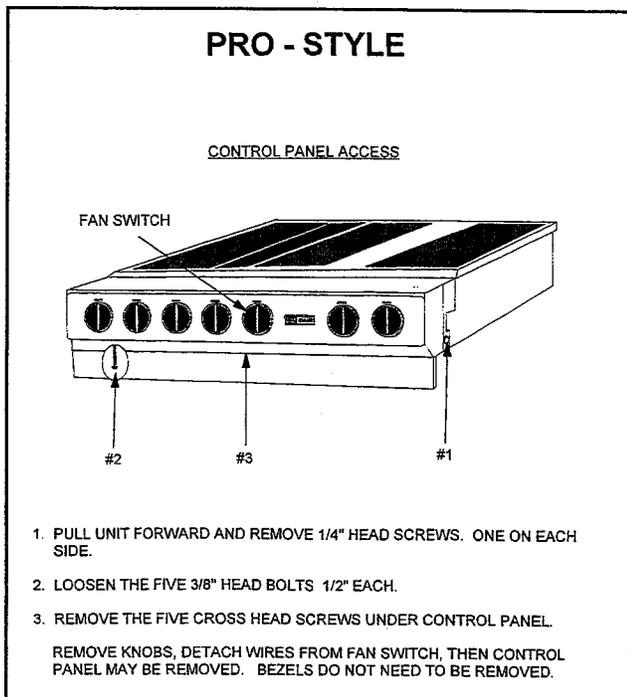


Top Assembly Removal

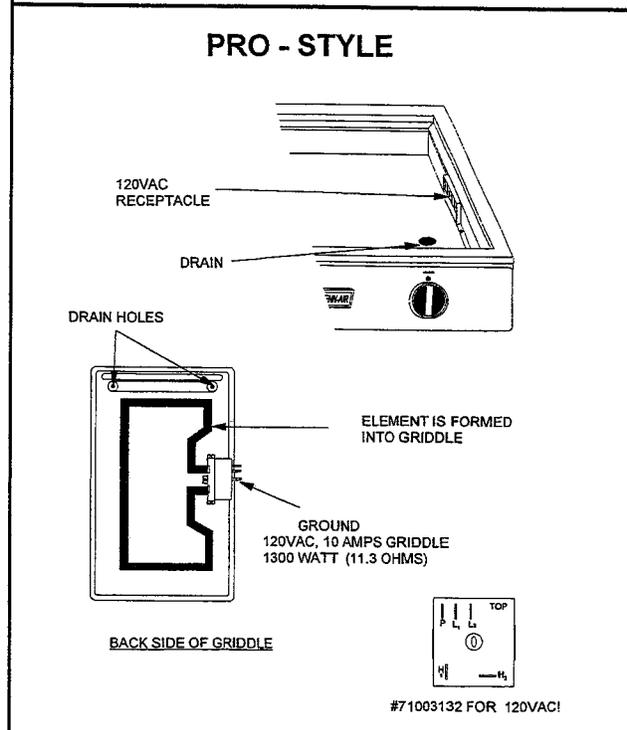
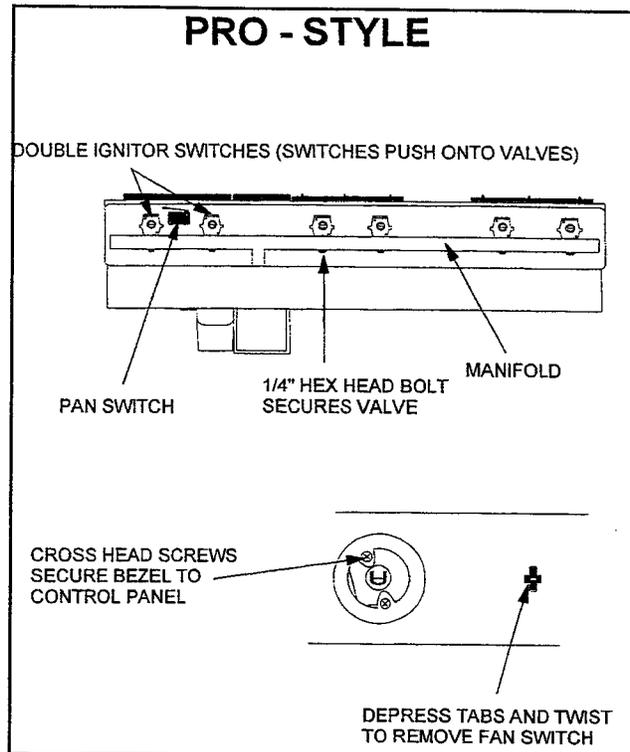
1. Turn the gas supply off and disconnect the supply line from the regulator.
2. Disconnect the electrical cord and ducting, if applicable, from below the unit.
3. Loosen the 3/8" hex head tie down screws located under the control panel area.
4. Remove the unit from the countertop and place it on a protected surface.
5. Remove the screws from around the top of the grill pan and the plenum.
6. The top assembly will now lift off.
7. Reverse the procedure to reinstall.

Control Panel Access

1. Pull unit forward and remove 1/4" head screws. One on each end of the control panel.
2. Loosen the five 3/8" head bolts 1/2" each.
3. Remove the five cross head screws located on the bottom of the control panel.



4. To remove the griddle infinite switch, if applicable, remove two # 15 torx screws.
5. Remove knobs, detach wires from fan switch, then control panel may be removed. Bezels do not need to be removed.



Valves and Switches

1. Follow steps 1-5 under Control Panel Access to gain access to the valves, valve switches, manifold and burner tubes.
2. Remove the valve switch by pulling the switch off the burner valve. Disconnect the electrical wires. Be sure that when replacing the switch, it is oriented the same as the original with the connectors facing up and to the left. The valve switch snaps into place on the valve.
3. Using a 1/2" or adjustable wrench, loosen the burner tube nut. Use care not to "strip" the threads on the valve when reassembling.
4. Using a 1/4" nut driver, remove the screw that secures the valve to the manifold.

Valve Seals

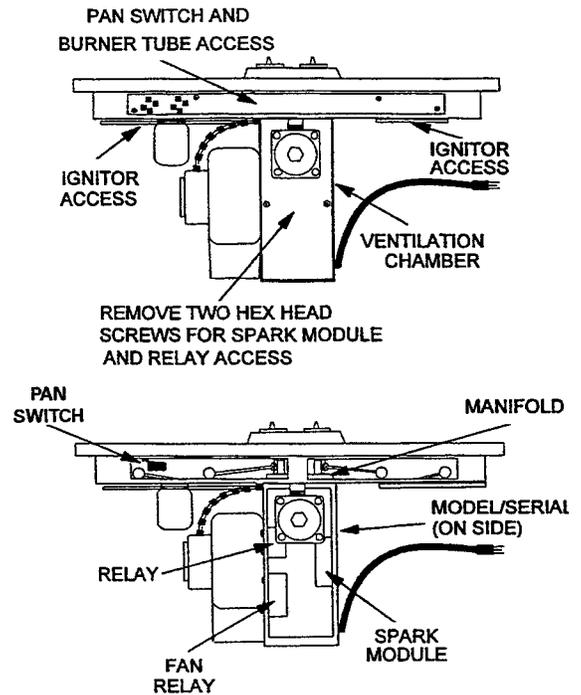
Once the valve has been removed, thoroughly inspect the valve seals. If the seals appear broken or brittle, replace them before reassembly.

Spark Module Access

1. The spark module is located under the burner box and inside the module cover.
2. Remove two 1/4" hex head screws and the cover may be removed.
3. The module is attached with one 1/4" hex head screw. Lift up and slide it out from under the locator tabs.
4. Disconnect the wires from the terminals.
5. Reverse the procedure to reinstall.

Designer Line Gas

DESIGNER LINE GAS

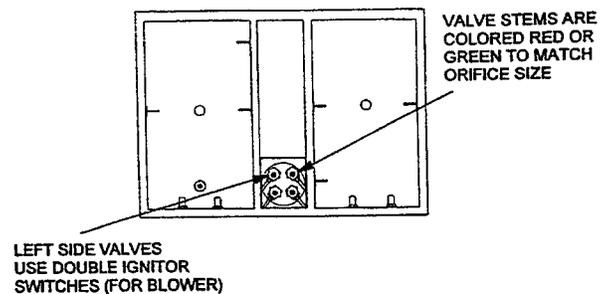
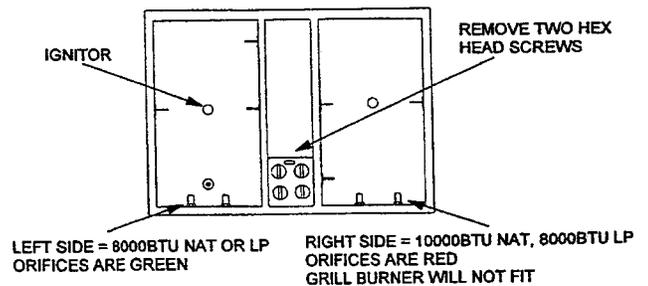


NOTE: RELAY AND MODULE SCREWS ACCESSED FROM OUTSIDE OF VENTILATION CHAMBER

DESIGNER LINE GAS

MODELS COVERED: CVG4100 - 18" SINGLE BAY
CVG4280 - 30" DOUBLE BAY
CVG4380 - 48" TRIPLE BAY

CVG4280 USED FOR EXAMPLE



Component Access/Removal

Relay, Spark Module

Disconnect power supply and/or gas supply to unit before attempting service.

1. Remove electrical box cover.
2. Relay is mounted on L.H. side of box. Remove screws from outside of electrical box to release relay. Disconnect wires from relay terminals.
3. Spark module is mounted on R.H. side of box. Remove nut from outside of electrical box and lift module up and out from locator tab. Disconnect wires from module terminals.
4. Reverse procedure to reinstall.

Fan Motor

1. Remove electrical box cover and cut the blue, white, and green motor wires approximately 2" from crimp connectors. This will allow enough wire to rewire new fan motor wires with wire nuts and tape.
2. Loosen cable clamp on BX cable and remove fan wire harness.
3. Remove mounting nuts on fan motor cover and lift assembly off.
4. Blower wheel, motor, isolators and motor band are now accessible.
5. Reverse procedure to reinstall. Make sure fan wires are secure in wire nuts and taped.

Pressure Regulator

1. Turn gas supply to unit off and disconnect supply line from bottom of pressure regulator.
2. Regulator is mounted directly in front of electrical box and may be removed with pipe wrench.

3. Reverse procedure to reinstall.

Make sure that a high quality pipe joint compound, acceptable for L.P. and natural gas or approved Teflon tape is applied to all thread connections. Once gas supply is turned on to unit, check connections for leaks with a soapy solution. If leak is detected, turn gas supply off immediately and correct leak. Test system again.

Power Supply Receptacle

1. Unplug power supply cord.
2. Remove electrical box cover.
3. Disconnect wires from receptacle and squeeze retainer bracket together while pushing receptacle out. If bracket is too tight, an alternative method would be to remove screw from inside retainer bracket.
4. Reverse procedure to reinstall.

Pan Switch

1. Remove screws from access panel located at front of burner box.
2. Disconnect wires from micro switch.
3. Remove mounting screws and washers from switch body and lift out from front.
4. Reverse procedure to reinstall. Make sure projection pin on aretation pan will engage switch. Adjust if necessary.

Ignitor

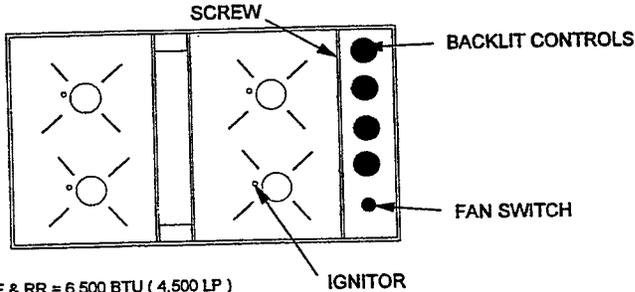
1. Remove electrical box cover and disconnect ignitor lead wire from spark ignitor.
2. Attach a small guide wire approximately 15" long to terminal end of ignitor lead. (This will be used to pull new ignitor lead wire back to electrical box.)

Expressions Gas

EXPRESSIONS GAS

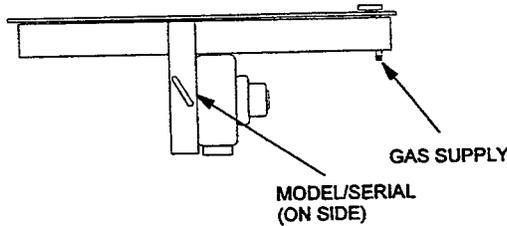
MODELS COVERED: CVGX2423 - DOUBLE DOWNDRAFT
CCGX2420 - DOUBLE NON - DOWNDRAFT
CCGX2620 - TRIPLE NON - DOWNDRAFT

CVGX2423 WITH GRATES AND BURNER CAPS REMOVED

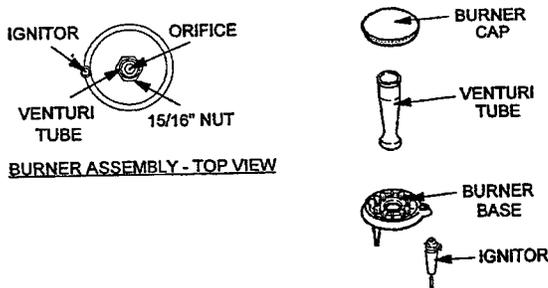


LF & RR = 6,500 BTU (4,500 LP)
LR = 10,500 BTU (8,000 LP)
RF = 12,000 BTU (8,000 LP)

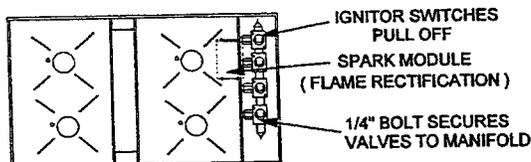
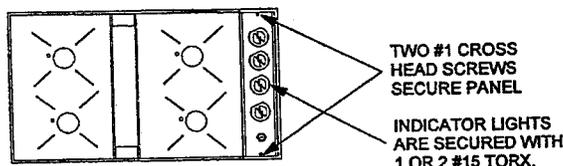
TRIPLE BAYS USE:
RF & LF = 12,000 BTU (8,000 LP)
RR & LR = 6,500 BTU (4,000 LP)
CF = 9,100 BTU (6,000 LP)
CR = 10,500 BTU (6,000 LP)



EXPRESSIONS GAS



BURNER ASSEMBLY - TOP VIEW



Spark Ignitor/Wires

Spark ignitor/wires replacement:

1. Turn gas supply off and disconnect power.
 2. Remove top.
 3. Disconnect the wires at the switch escutcheon and from the pan switch mounted on the left grill pan.
 4. Disconnect the two wires from the spark module located on the back of the unit.
 5. If replacing the ignitors, disconnect ignitor wires from spark module and remove nut and washer. Disengage ignitor from the grill pan and pull wires through hole in the grill pan.
 6. Reverse disassembly procedure, making sure the ignitor wires are pulled tight through the holes in the unit back and held down by clips.
- NOTE:** The holes at the top of the ignitor must face the front and back of the unit to provide proper ignition.

7. Check for gas leaks at all connections.

Burner Tubes/Orifices

To replace burner tube(s):

1. Turn off gas supply and disconnect power.
2. Lower control panel.
3. Disconnect burner tube from valve.
4. Disconnect burner tube from grill pan.
5. When installing the new tube, first position hood through hole in grill pan. Finger tighten nut to valve making sure not to cross thread.
6. Tighten tube to valve* and grill pan.
7. Check for gas leaks at all connections.

8. Reassemble control panel to the unit.

NOTE: *Burner tube nut to valve torque 45 to 55 in./lbs. min.

Supply Tube

To replace the supply tube:

1. Turn off gas supply and disconnect power.

2. Lower control panel.

3. Remove the top assembly.

4. The supply tube is now accessible and can be disconnected from the manifold.

5. Disconnect the supply tube from the regulator. The regulator is located behind the base door at the right side of the unit.

6. The supply tube may now be removed through the top of the unit.

7. Reverse procedure for reassembly.

Be sure to torque the nut at the manifold to 60 in./lbs. min. Torque the nut at the regulator to 70 in./lbs. min.

8. Check for gas leaks at all connections.

Manifold/Valves/Stem Switches

To replace these components:

1. Turn off gas supply and disconnect power.

2. Lower control panel.

3. Loosen the burner tubes at the valves. Do not remove burner tube nuts from the valves unless tubes or valves are to be replaced.

4. Remove nuts and washers attaching burner tubes to the grill pans.

5. Remove stem switches from valve stems. Leave wires connected to switches unless the switches are to be replaced.

6. Disconnect the supply tube from the regulator* (lower right side, behind base door).

7. Remove the hex head screws from the side panels that hold the manifold in place.

8. Remove the wire ties holding wire harness to the manifold. Disconnect the supply tube* and remove the manifold.

9. Remove the valve(s) from the manifold and replace or install them on the replacement manifold. Make sure the blue tip valves are installed at the right side nearest the supply tube connection, and the black tip valves are installed at the left side.

NOTE: When replacing valves, be sure to use double gaskets at the bottom connection. This will ensure a good seal with the old manifold.

10. Reinstall the screws securing the manifold to the side panels. Make sure that the screws are in the high side of both slots on each side when fastening. This will help align the valve stems in relation to the control panel.

11. Check for gas leaks at all connections.

12. Reverse procedure for reassembly.

NOTE: *Supply tube nut to manifold torque: 60 in./lbs. min. Burner tubes nut to valve torque: 45-55 in./lbs. min. Supply tube nut to regulator torque: 70 in./lbs. min.

Pan Switch

To remove the pan switch:

1. Turn off gas supply and disconnect power.

2. Lower control panel.

3. The switch is located on the front of the left grill pan. Remove wires.

4. Remove the nuts that mount the switch to the grill pan and replace.

5. Be sure the strike plate on the switch arm is aligned properly. The projection pin on the aeration pan should fully depress the switch as it sits flat on the unit top. If adjustment is needed, do so by carefully bending the switch arm with needle nose pliers.

6. Reverse procedure for reassembly.

Cycle Switch

To remove the cycle switch:

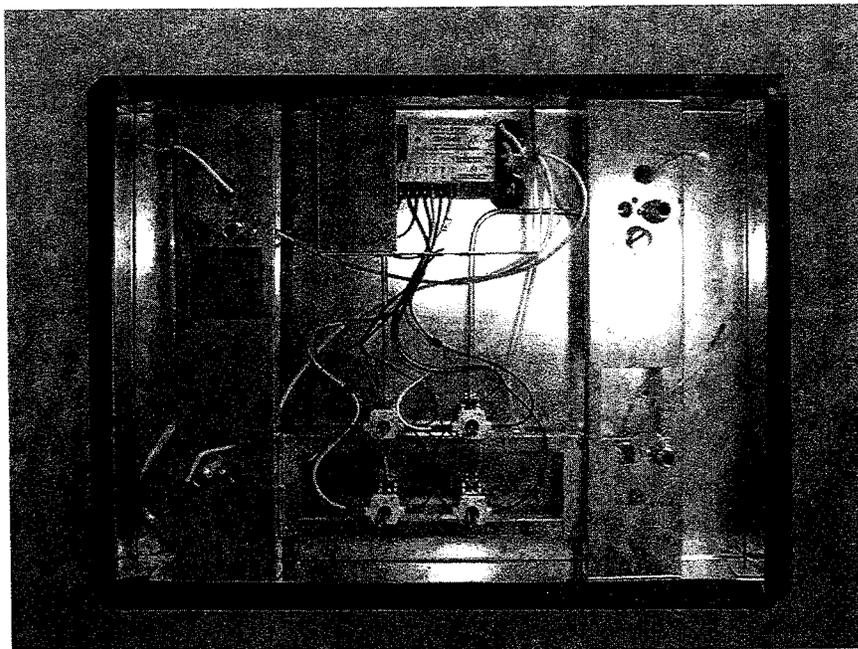
1. Turn off gas supply and disconnect power.
2. Remove top assembly.
3. Cycle switch is located on the upper right side panel.
4. Replace by removing mounting screws and wires.
5. Reassemble in reverse order.
6. Check for gas leaks at all connections.

Ceramic Radiant Elements

Select models are equipped with ceramic radiant elements. Cooking areas are identified by patterns in the ceramic surface. The elements consist of element coil(s) contained in the element housing. Power to the element (240 volts) is provided and controlled by the infinite switch. There are three Ultra Quick-Start™ radiant elements and one Ultra Quick-Twin™ dual radiant element. The large elements are rated 2200 watts and the small elements are rated 1200 watts @ 240 volts. The dual element is rated 2400/1000 watts at 240 volts.

To replace elements:

1. Disconnect the appliance from power source before servicing.
2. Remove glass top assembly by removing eight (1/4") hex screws that secure the top. There are two hex screws on each side and four on the back.
3. Remove tinnerman clips securing element on element supports.
4. Disconnect wiring and replace.
5. Reverse procedure to reinstall.



SECTION 3. GENERAL COMPONENT TESTING

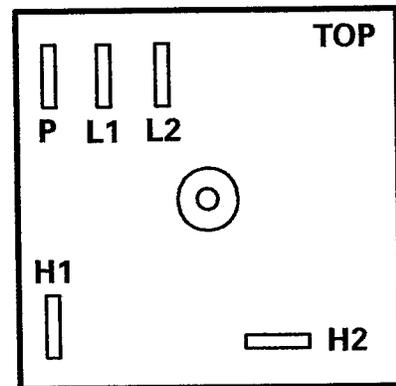
Electrical Components

Infinite Switch

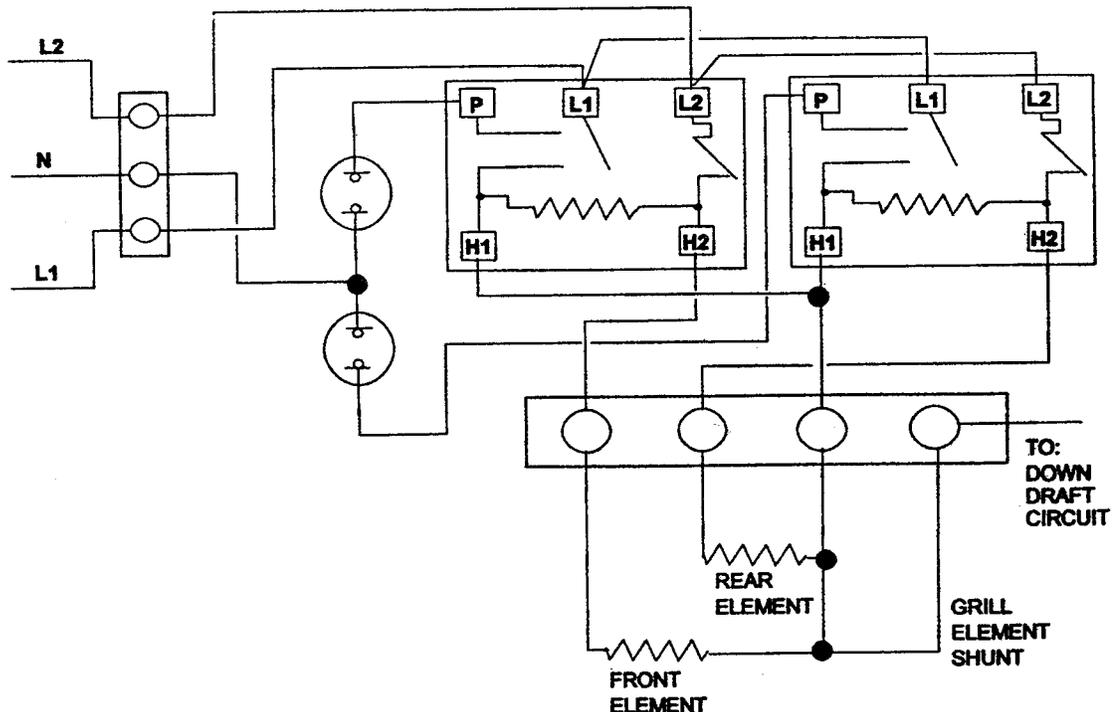
The mechanical device used to supply voltage to a heating element. When set to the "Hi" position, the contacts from L1 and L2 are mechanically fixed to allow for 100% operation. In any position other than "Hi," the cycle rate is determined by the amount of spring tension exerted on the cycling contact. Wrapped around the contact arm is a heater that will create a bi-metal effect on the arm,

causing the material to bend, thus opening the contact. The closer the switch is set to the "Low" position, the less spring tension is exerted on the contact. The infinite switch used in these products is a voltage-sensing type. This means the heater wire that is wrapped around the cycling contact will be activated in any position other than "Off." This will cycle the contacts in the switch regardless of the presence of a heating load such as a surface element. See detail of switch on chart below.

Setting	% On	Range
Hi	100	100
10	65	62-70
9	50	48-53
8	45	44-47
7	42	39-43
6	35	33-37
5	31	28-32
4	22	21-24
3	19	16-20
2	11	9-13
Lo	6	4-8
Off	0	0



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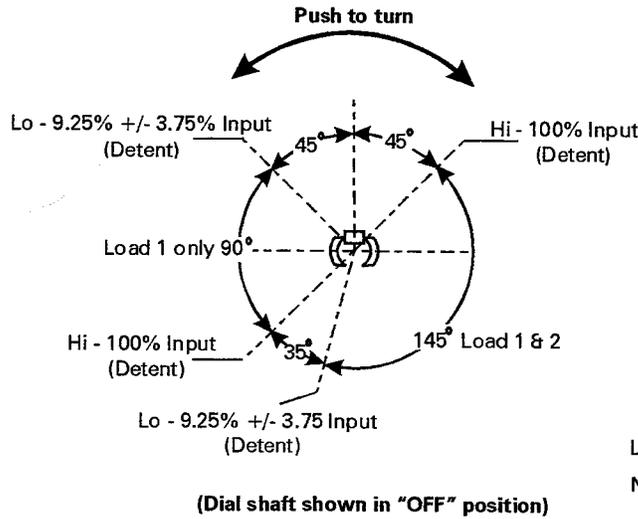
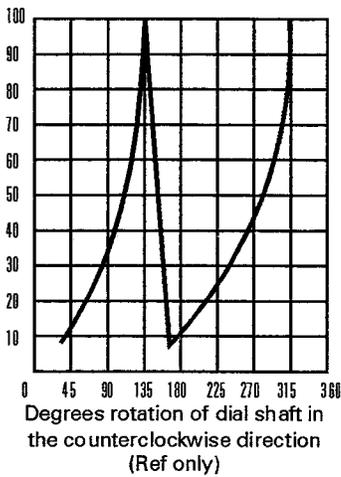
NOTE: Resistance reading from H1 to H2 is 15.5 K +/- 10%

Dual Element Infinite Switch

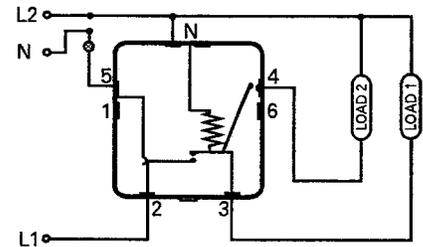
Dual Element: Consists of an inner coil and outer coil. The inner coil can be activated independently; however, when the outer coil is selected, the entire coil is supplied with voltage from the switch.

Dual Element Switch: Controls either an inner coil (high through low) or both the inner and outer coils of the element (high through low). *See chart for cycle rates and contact circuitry.*

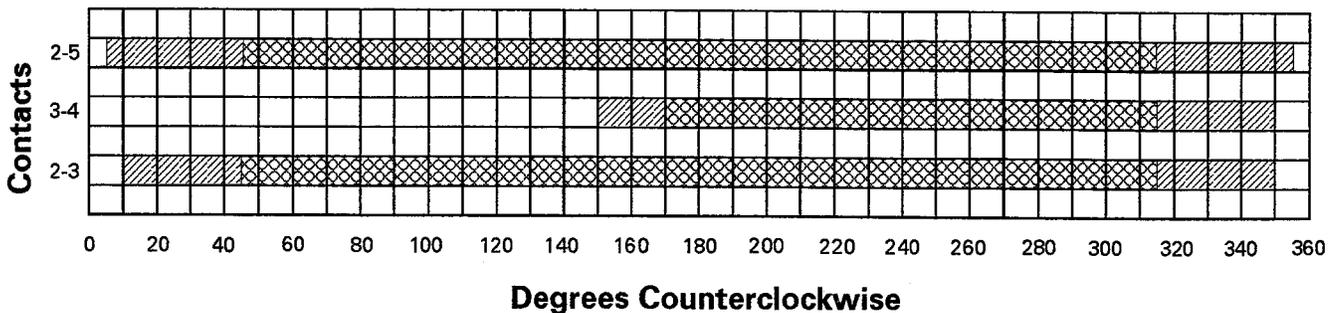
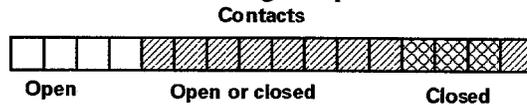
Typical Output Graph



Wiring Diagram



Switching Sequence



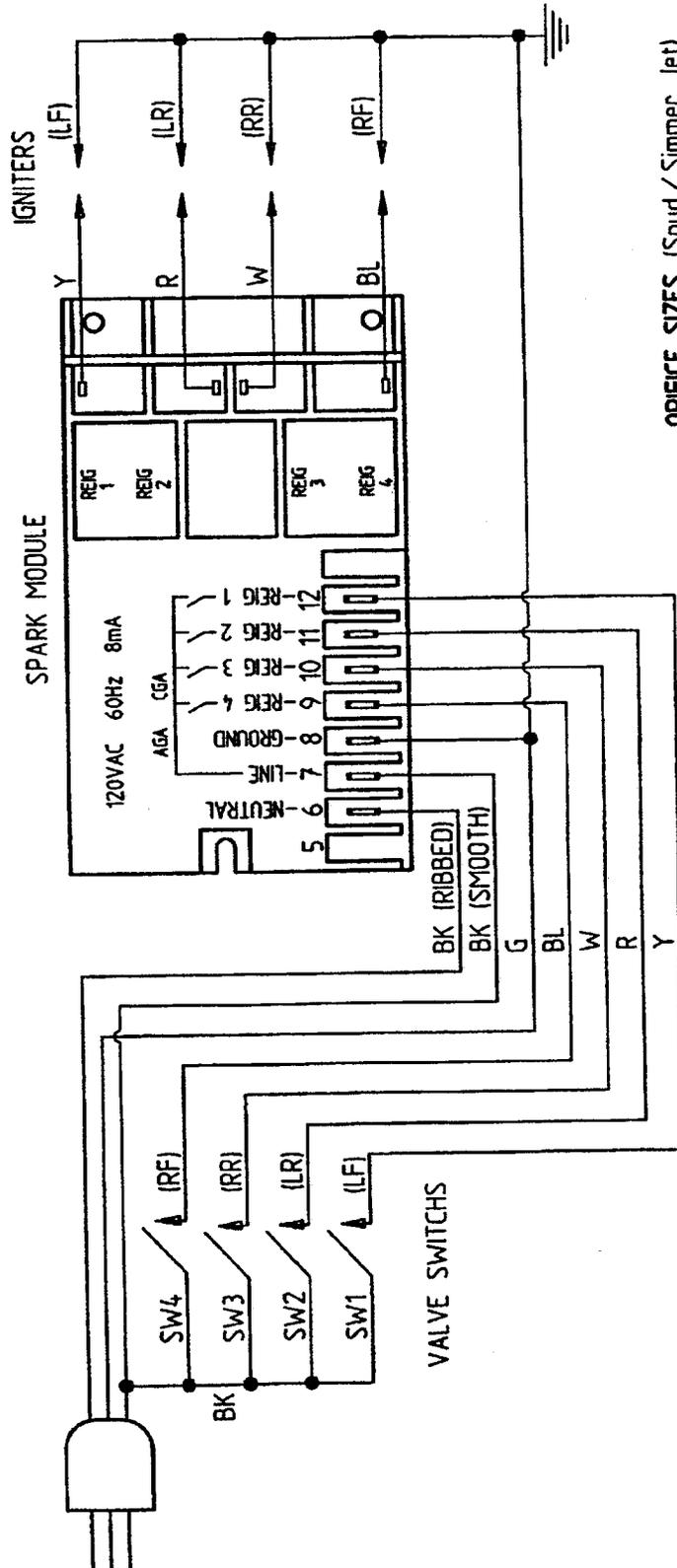
Contacts 2-5 must close before contacts 2-3 in the counterclockwise direction.

Contacts 2-5 must close before contacts 3-4 & contacts 2-3 in the clockwise direction.

SC008TIF

SECTION 4. WIRING & SPECIFIC MODEL INFORMATION

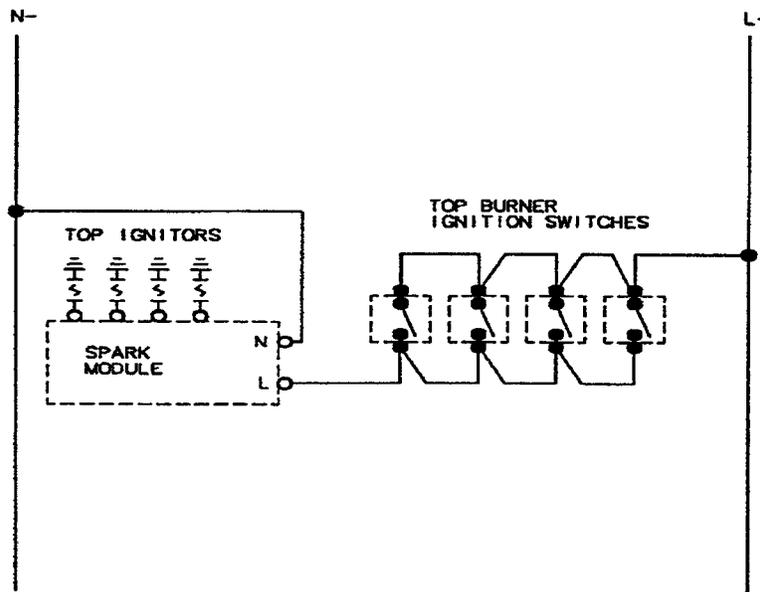
CCG2420 Diagram/Schematic



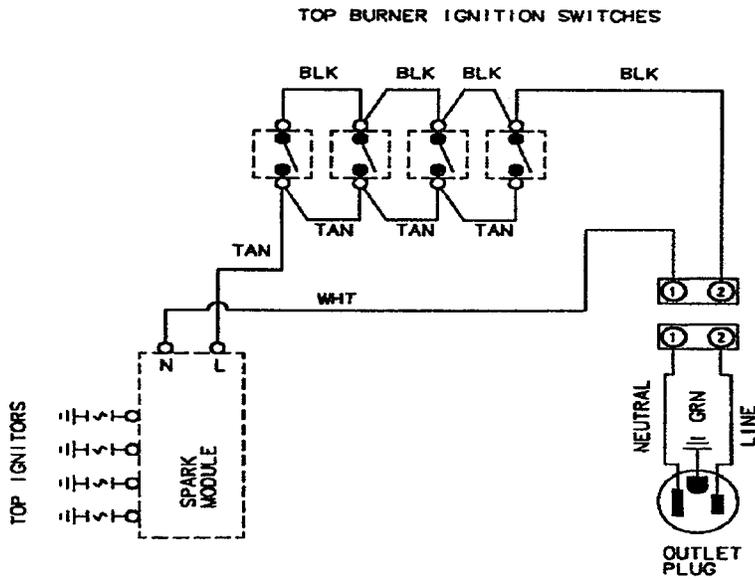
ORIFICE SIZES (Spud / Simmer Jet)

Burner	Nat. Gas	LP Gas
RF	166 / 58	105 / 38
RR	140 / 49	89 / 32
LF	118 / 42	74 / 28
LR	156 / 58	99 / 38

CCG2421 Diagram/Schematic



SCHEMATIC

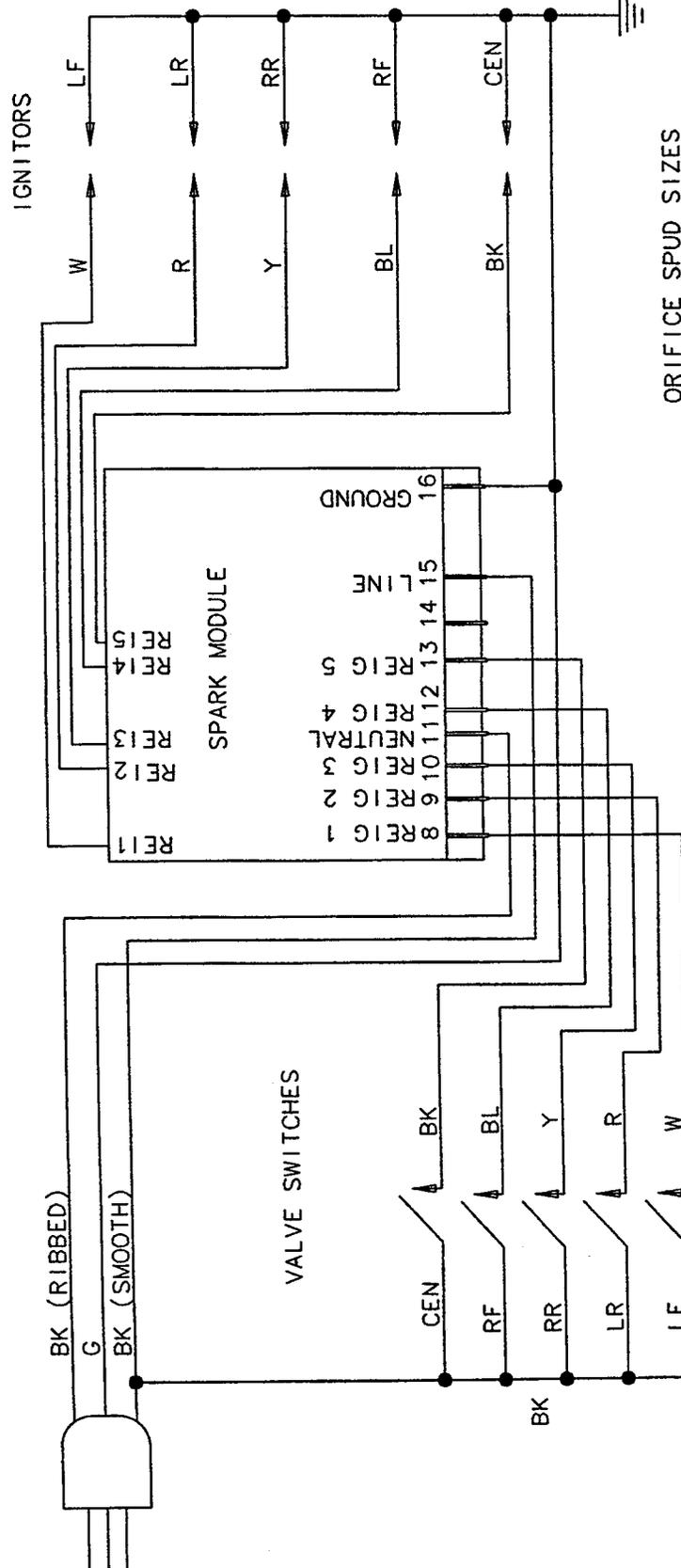


NOTICE:

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

DIAGRAM NO. 8104P559-60

CCG2422 Diagram/Schematic



ORIFICE SPUD SIZES

Burner	Nat. Gas	LP Gas
RF	166	105
RR and LF	140	89
CEN	118	74
LR	156	99

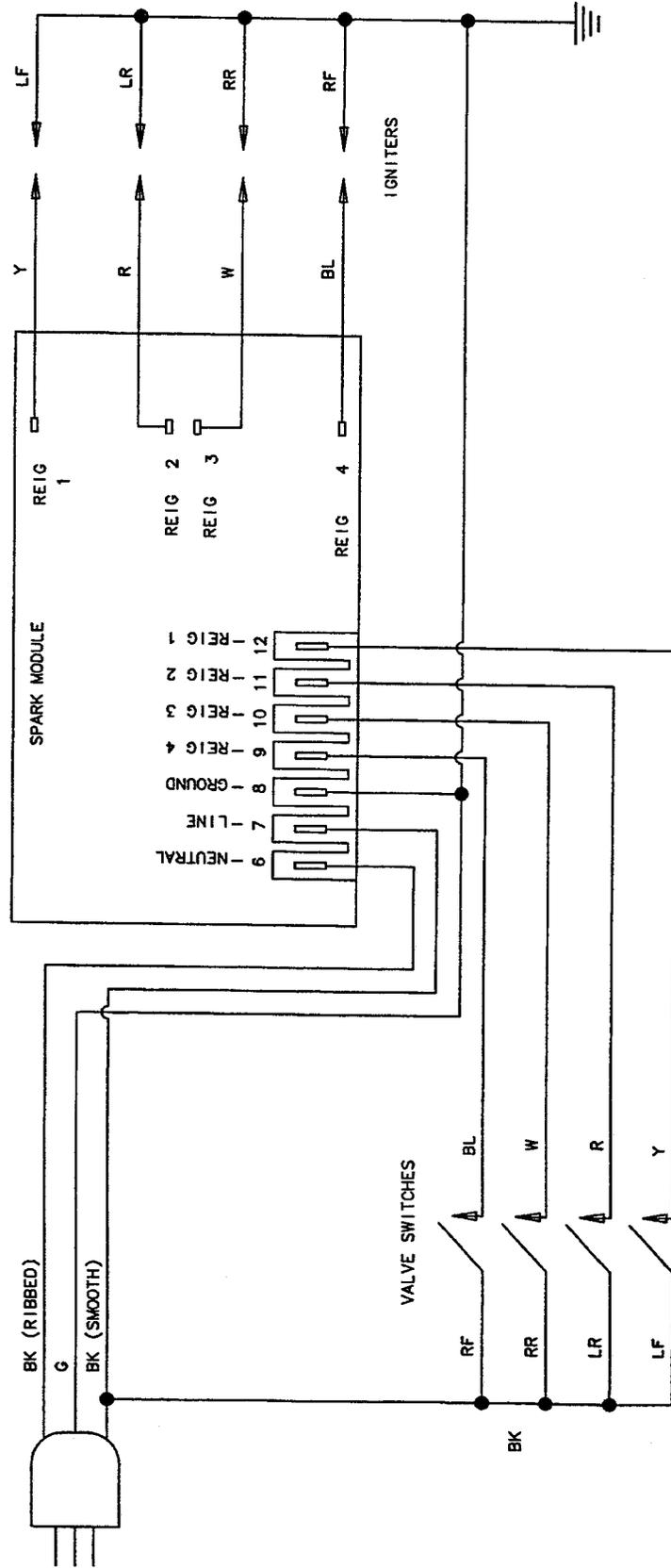
WIRING LABEL
8114P606-60

CCG2423 Diagram/Schematic

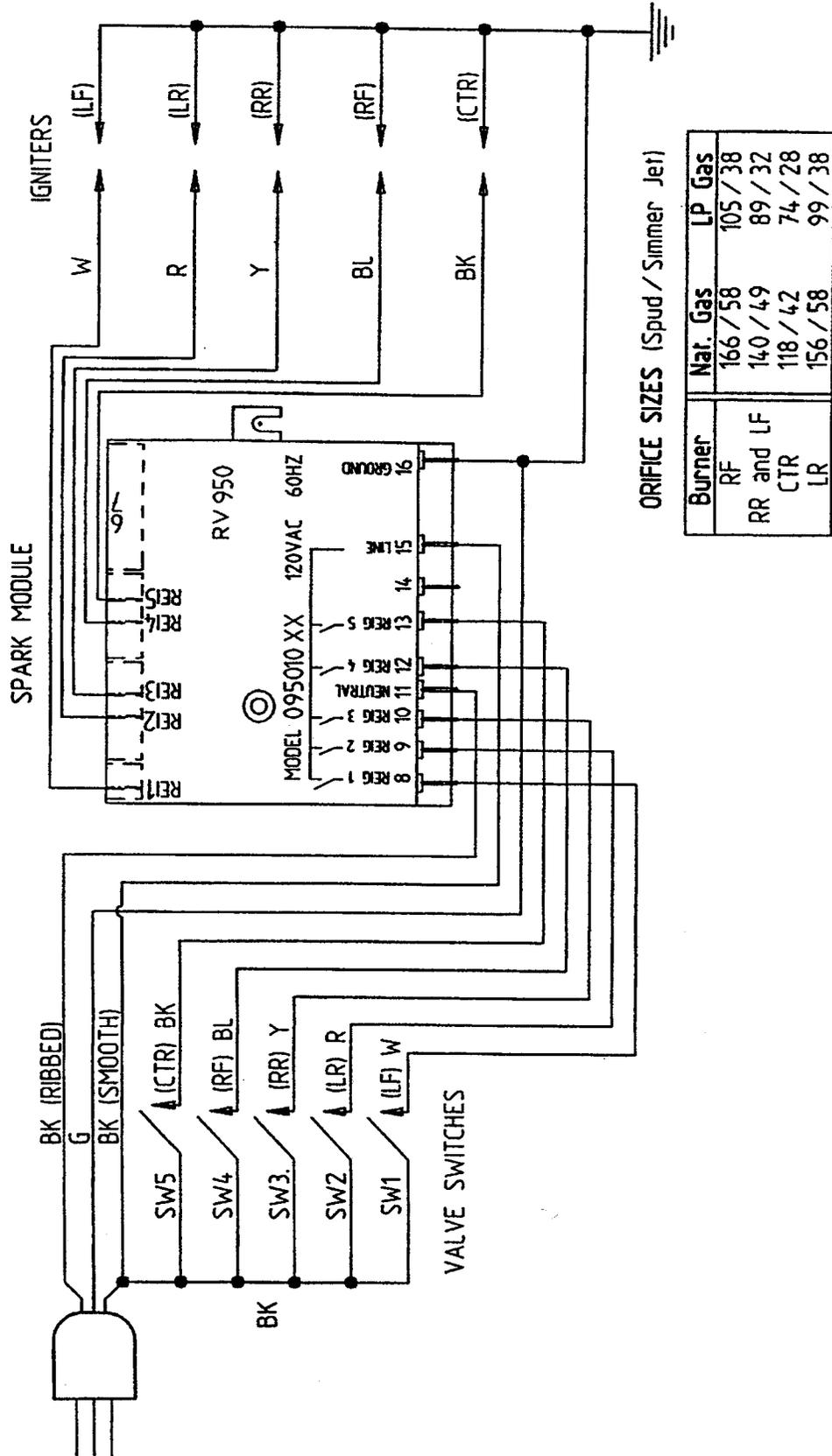
8104P526-60

NOTICE:

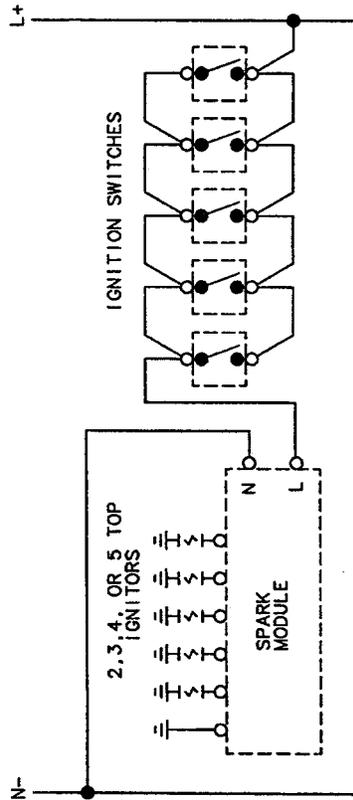
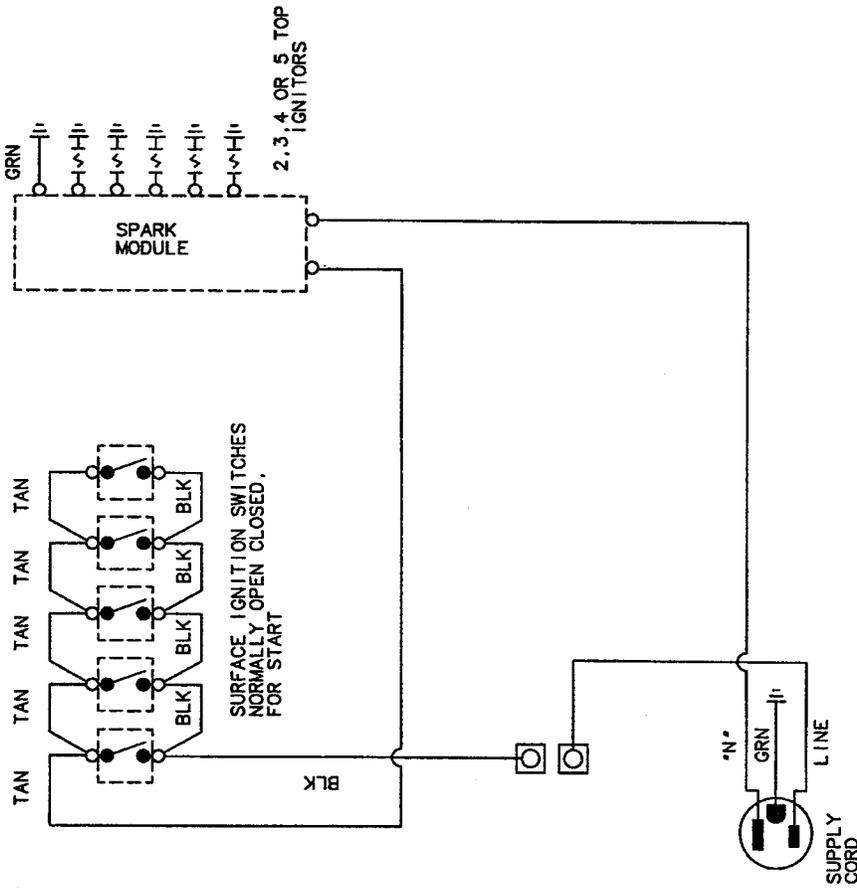
- 1- DISCONNECT RANGE FROM POWER BEFORE REMOVING WIRE COVER.
- 2- REFER ONLY TO FEATURES EQUIPPED.
- 3- SERVICER PLEASE RETURN DIAGRAM TO RANGE.
- 4- CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING PROBLEMS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.



CCG2520 Diagram/Schematic



CCG2521 Diagram/Schematic

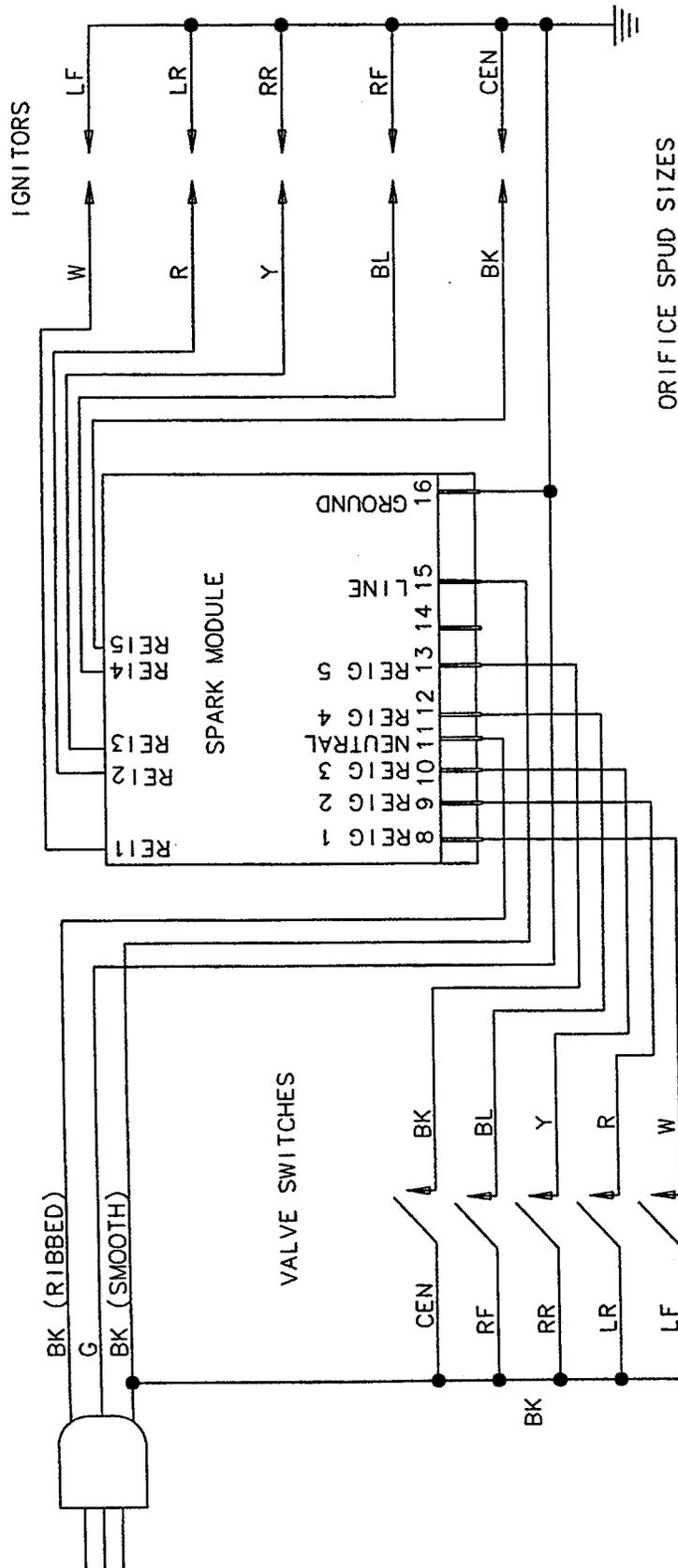


SCHEMATIC

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

DIAGRAM NO.
8104P563-60

CCG2522 Diagram/Schematic

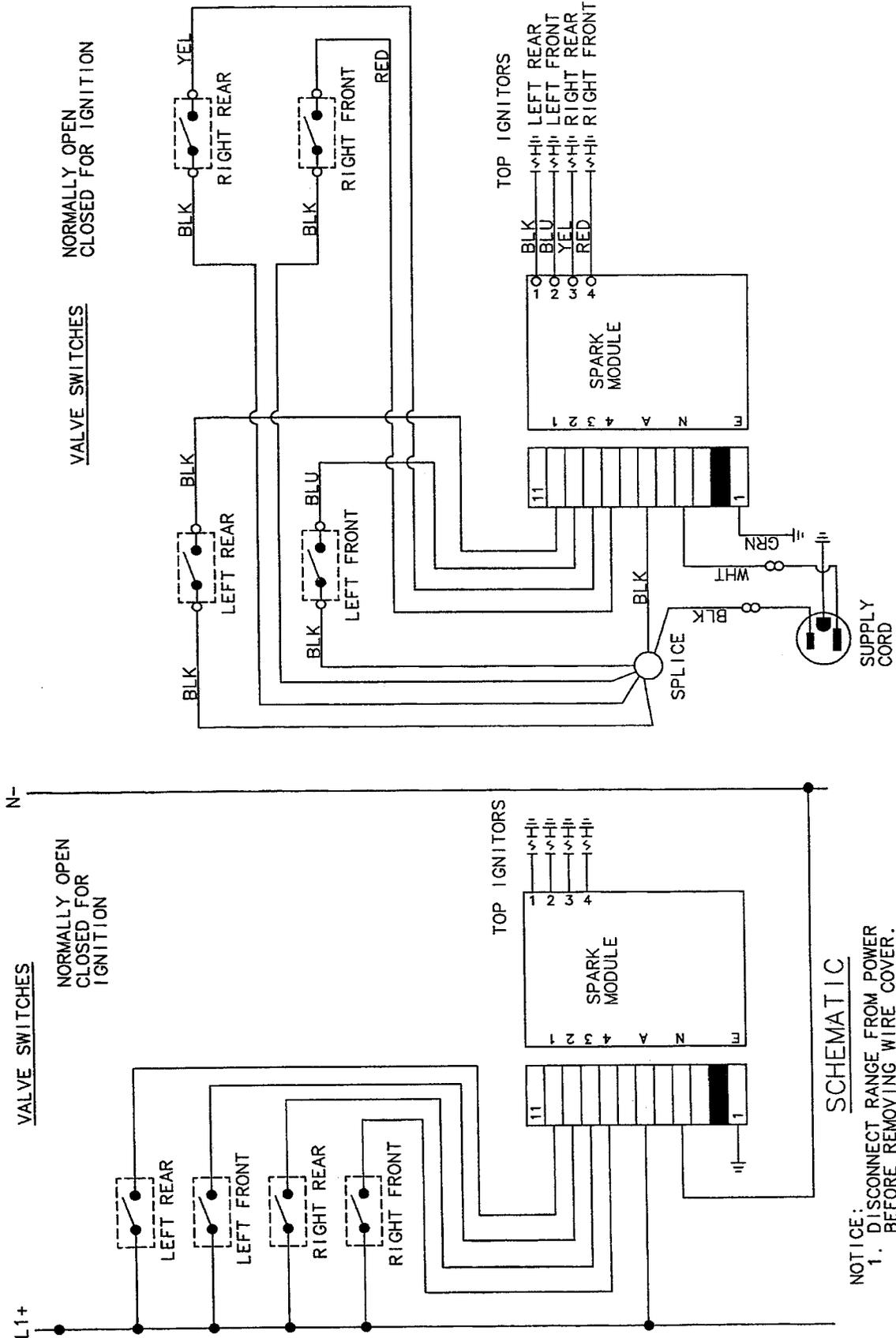


ORIFICE SPUD SIZES

Burner	Nat. Gas	LP Gas
RF	166	105
RR and LF	140	89
CEN	118	74
LR	156	99

WIRING LABEL
8114P606-60

CCGP2420 Diagram/Schematic

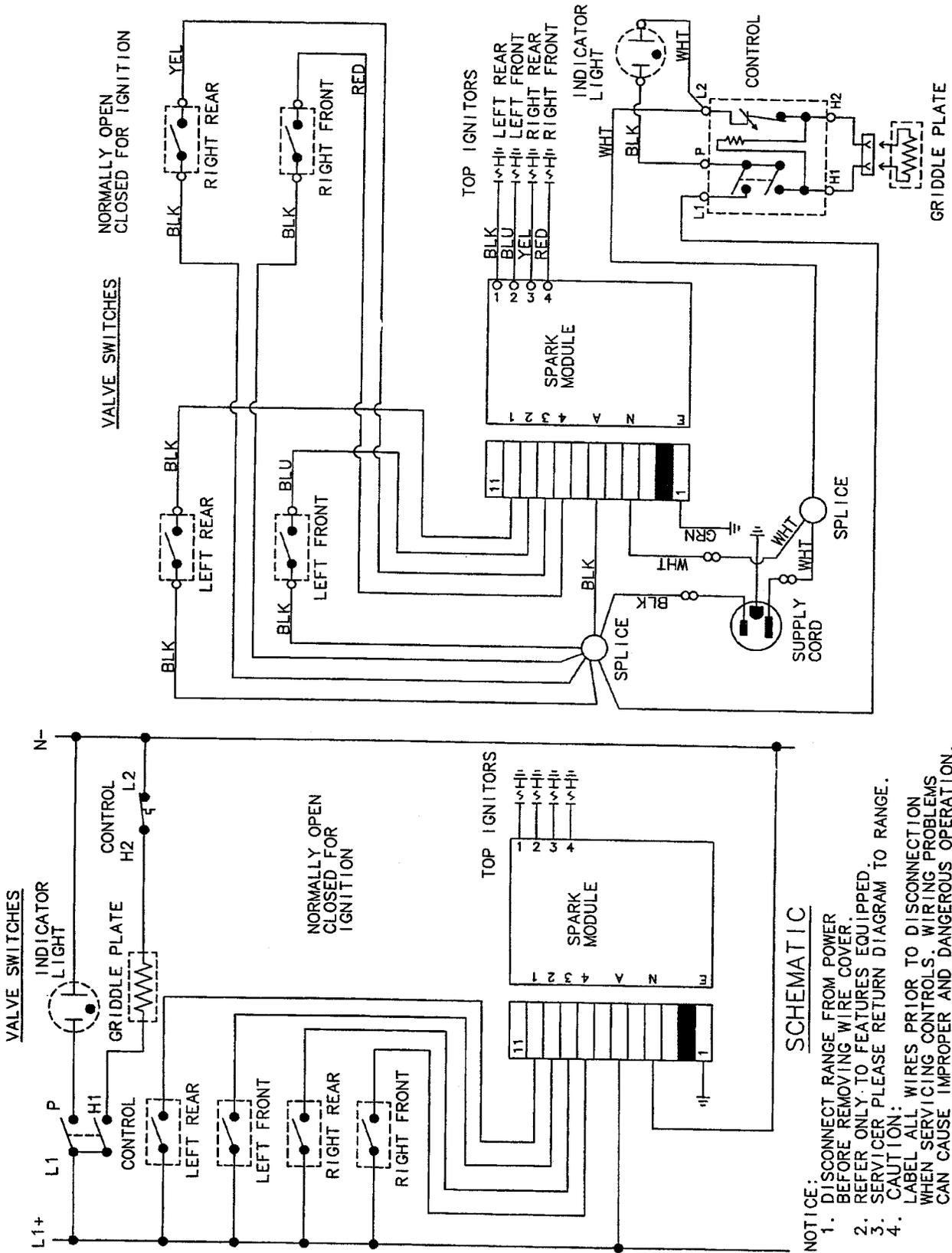


SCHEMATIC

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

PART NO. 8104P590-60

CCGP2720 Diagram/Schematic

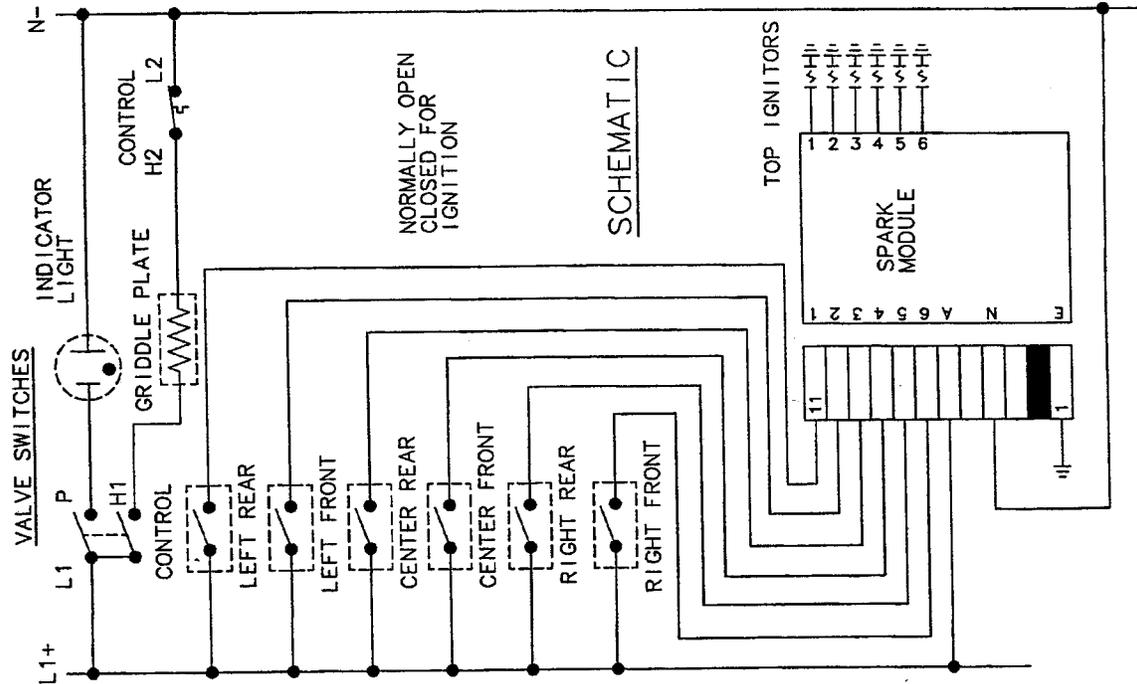
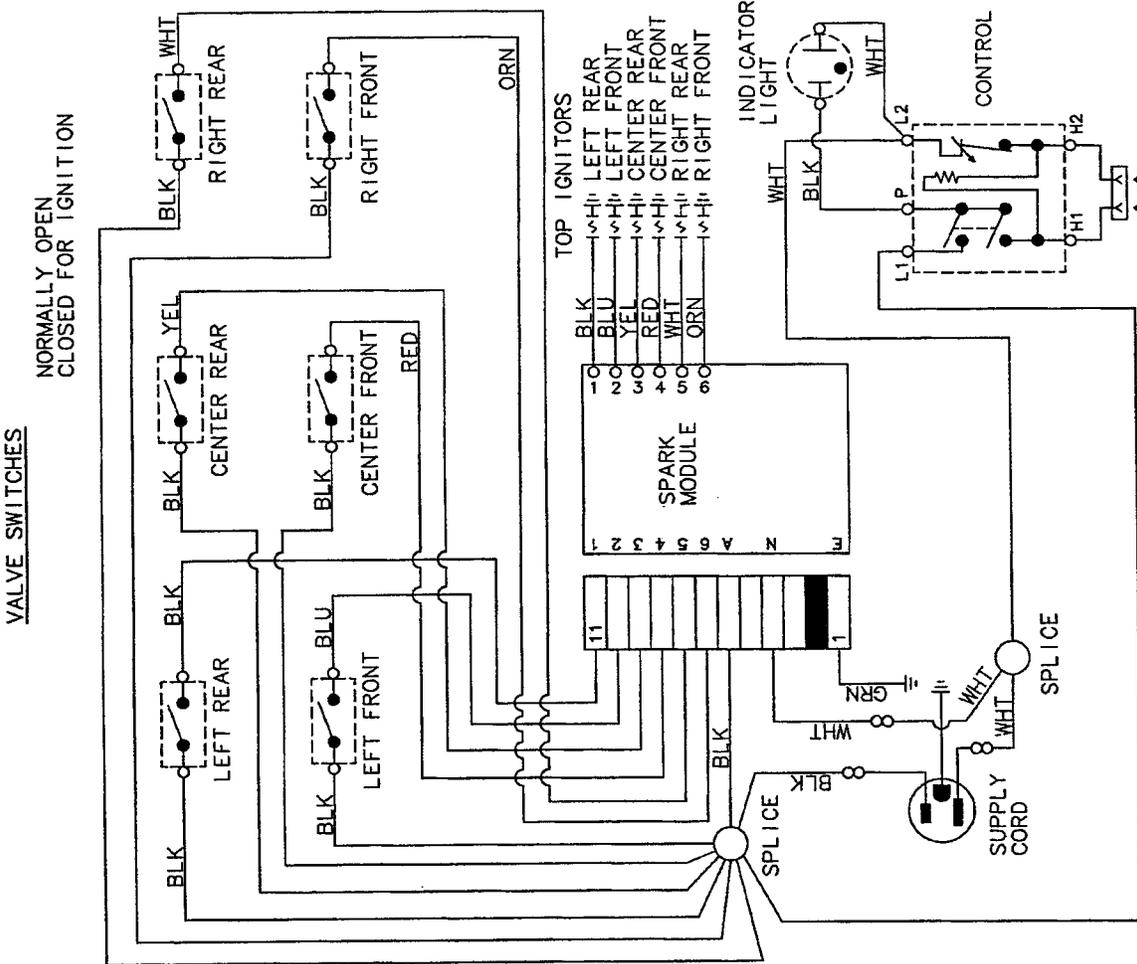


PART NO. 8104P591-60

SCHEMATIC

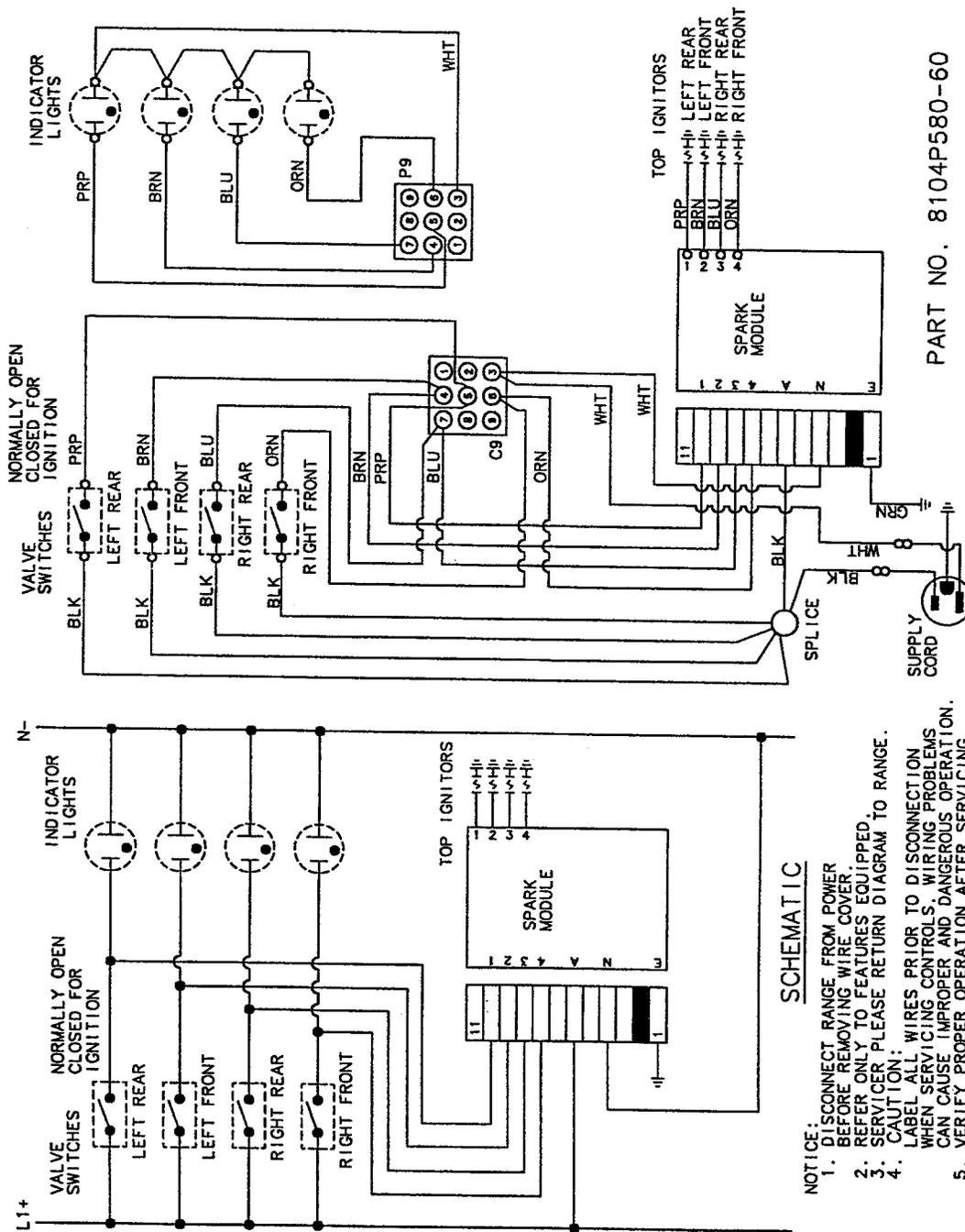
- NOTICE:
1. DISCONNECT RANGE FROM POWER BEFORE REMOVING WIRE COVER.
 2. REFER ONLY TO FEATURES EQUIPPED.
 3. SERVICER PLEASE RETURN DIAGRAM TO RANGE.
 4. CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING PROBLEMS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.
 5. VERIFY PROPER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

CCGP2820 Diagram/Schematic



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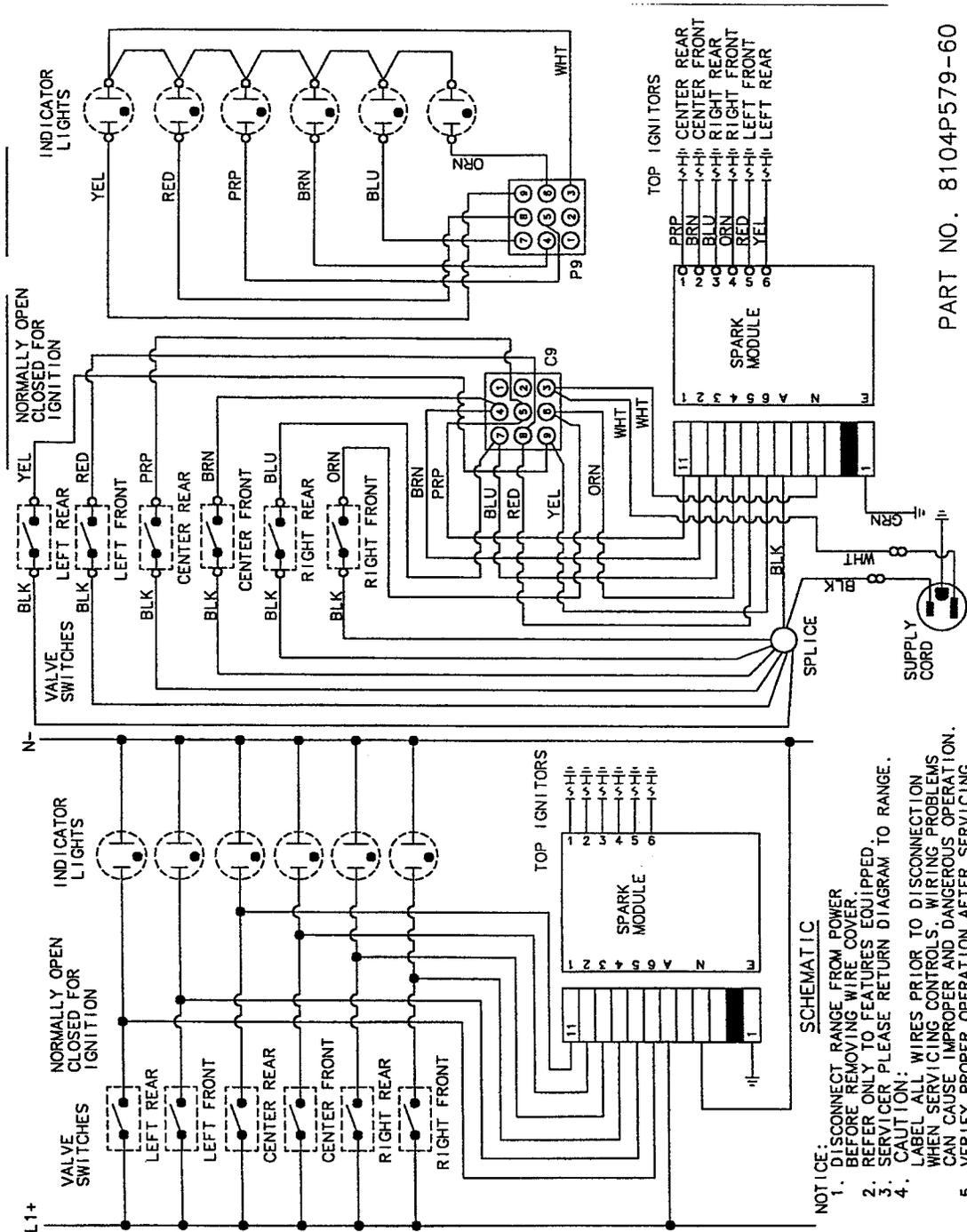
CCGX2420 Diagram/Schematic



PART NO. 8104P580-60

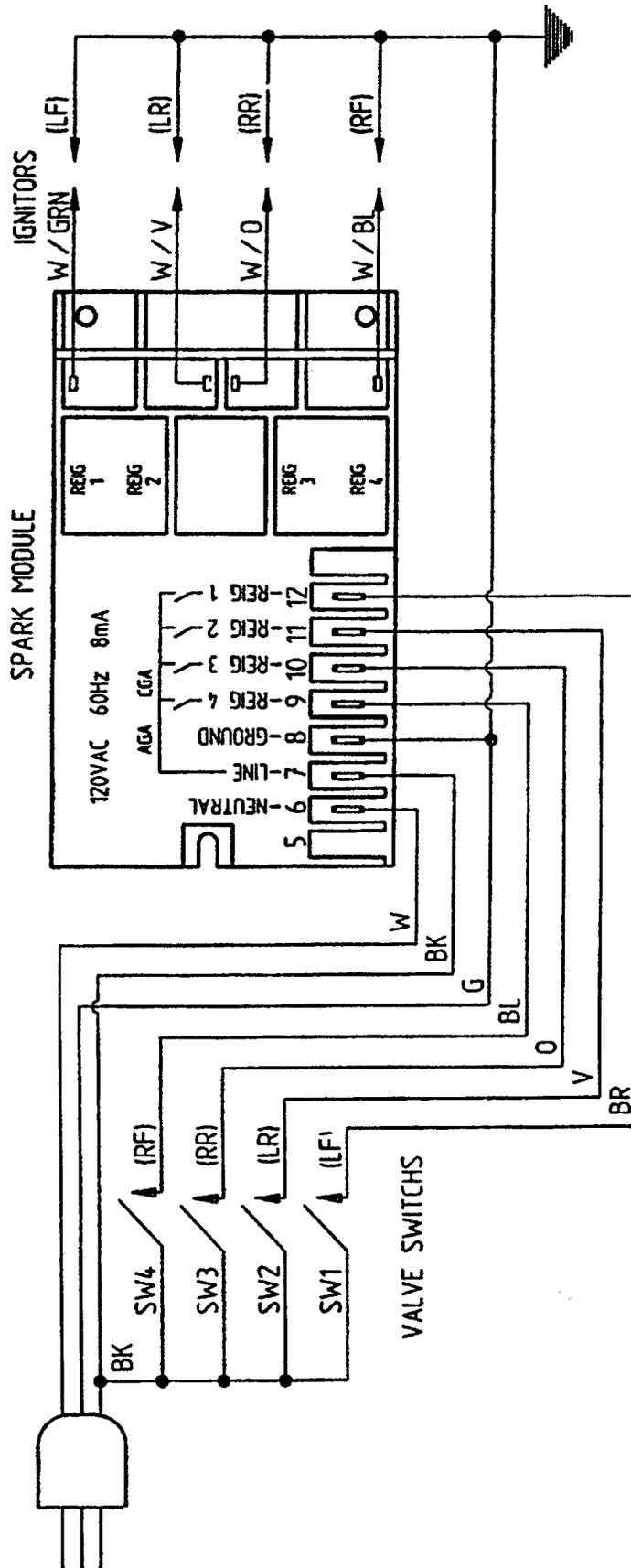
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CCGX2620 Diagram/Schematic



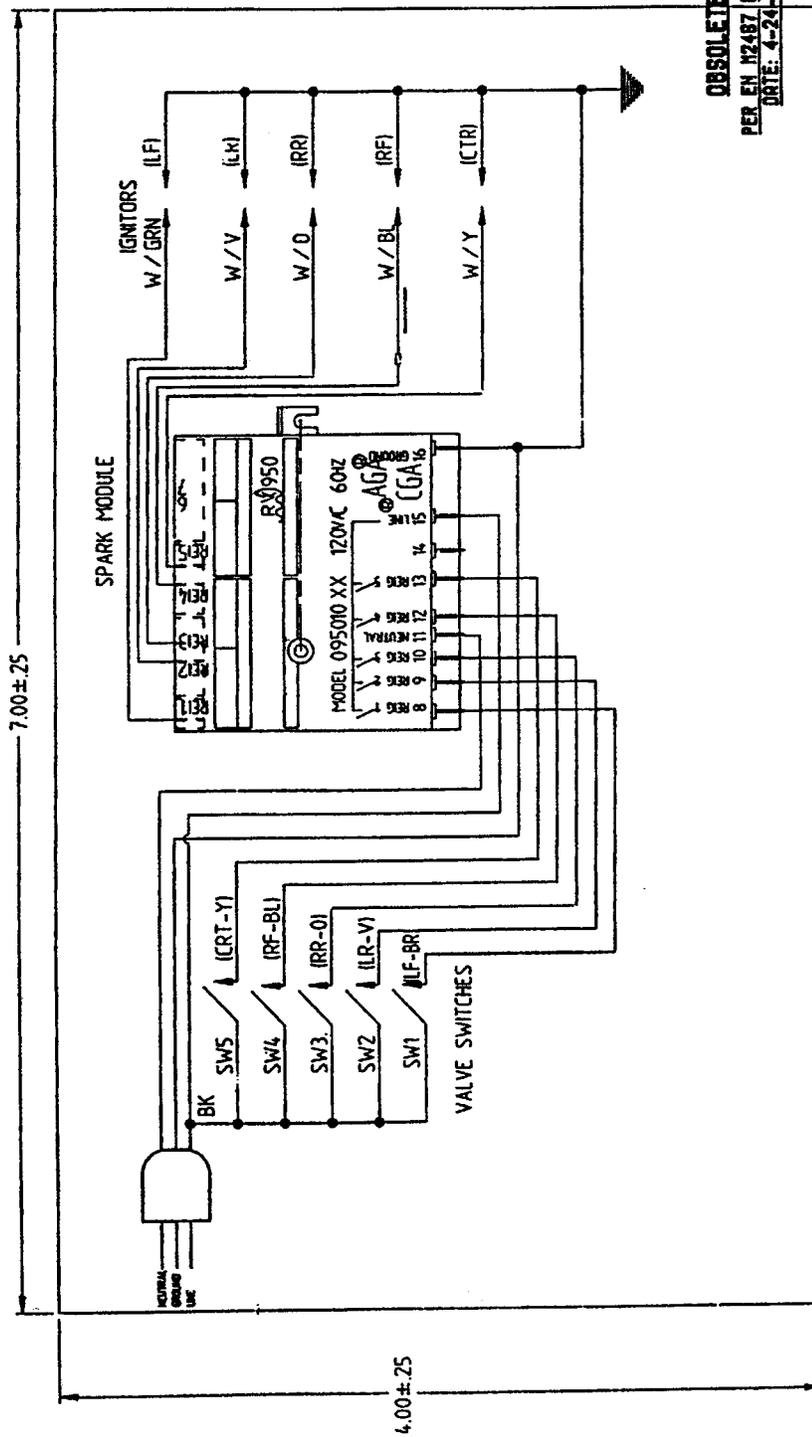
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CCG456, CCG457, CCP457, CCP556 Diagram/Schematic



CCG556 Diagram/Schematic

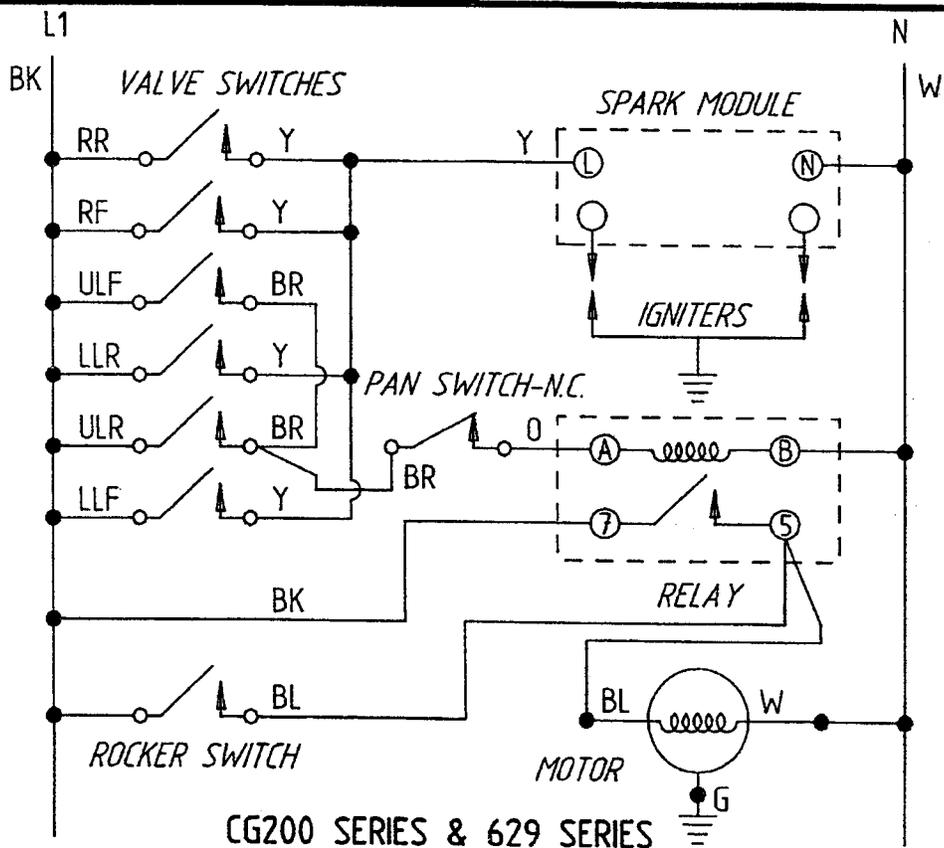
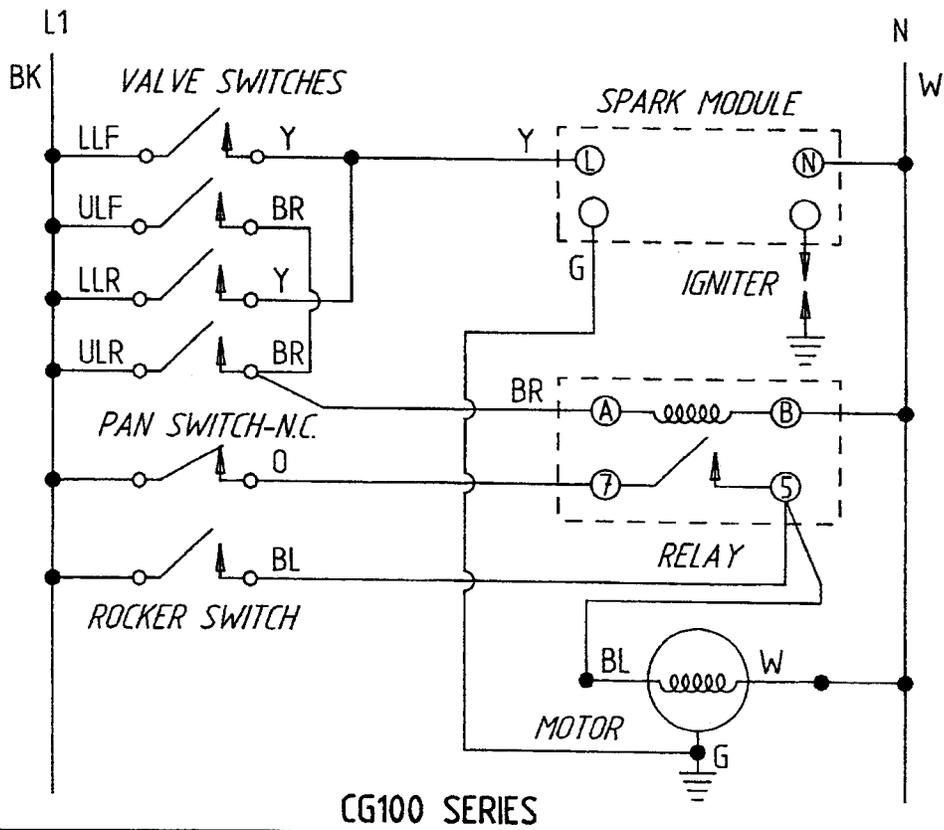
- NOTES:
1. BLACK PRINTING ON WHITE LABEL STOCK WITH PRESSURE SENSITIVE ADHESIVE BACKING LABEL MATERIAL TO BE UARCO #1940 OR AGA APPROVED EQUIVALENT INSTALLATION TO CONFORM TO AGA SPECIFICATIONS.



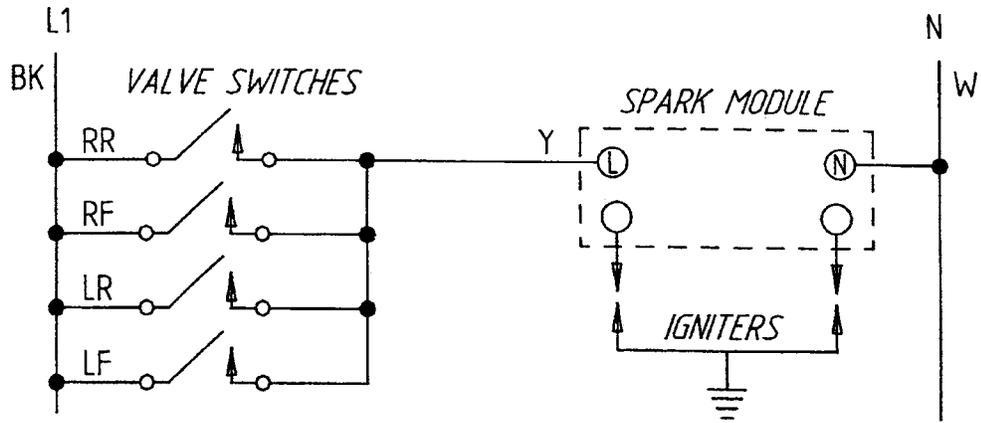
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 PER EN 12487 BY MGA
 DATE: 4-24-95

CG100, CG106, CG106*C, CG200, CG205, CG206, CG206*C, 629.12103, 629.12104 Diagram/Schematic

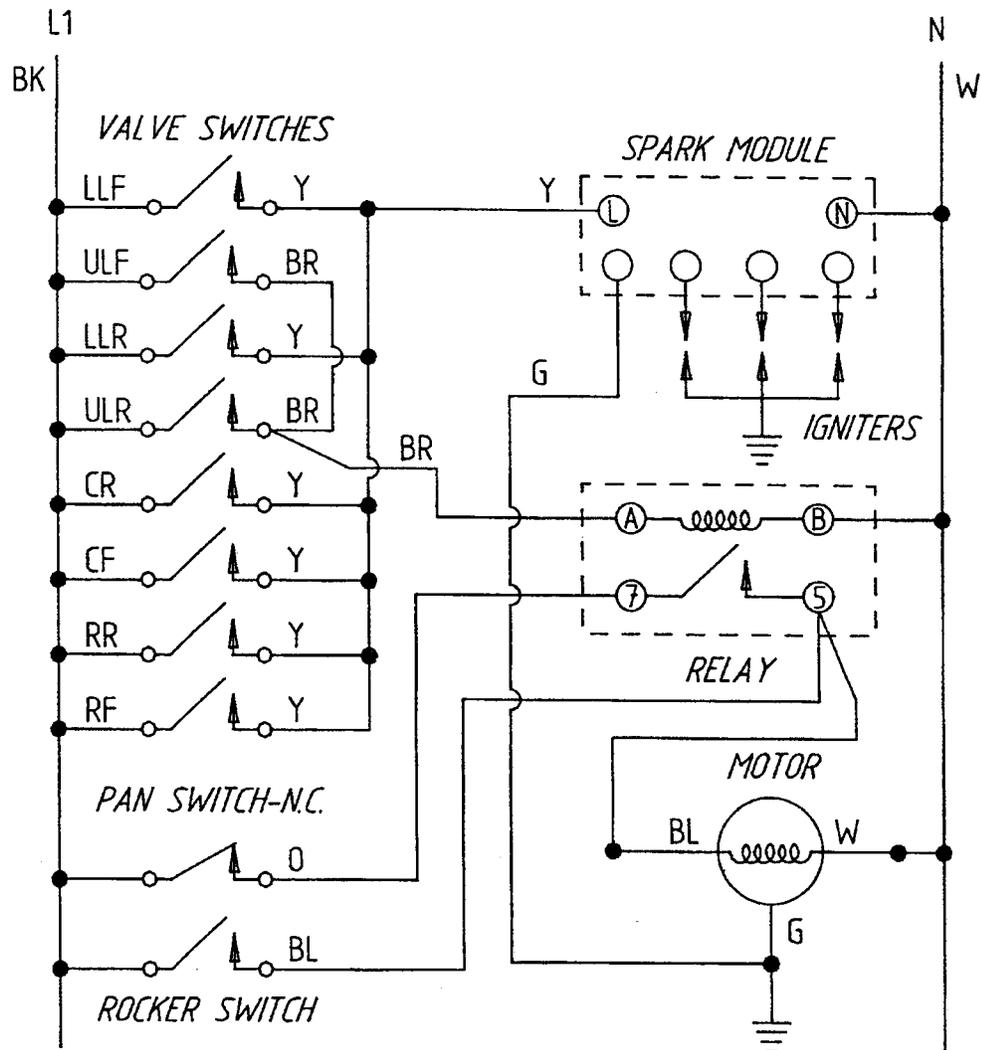
8104P311-60



CCG406, CVG316, CVG4380P Diagram/Schematic



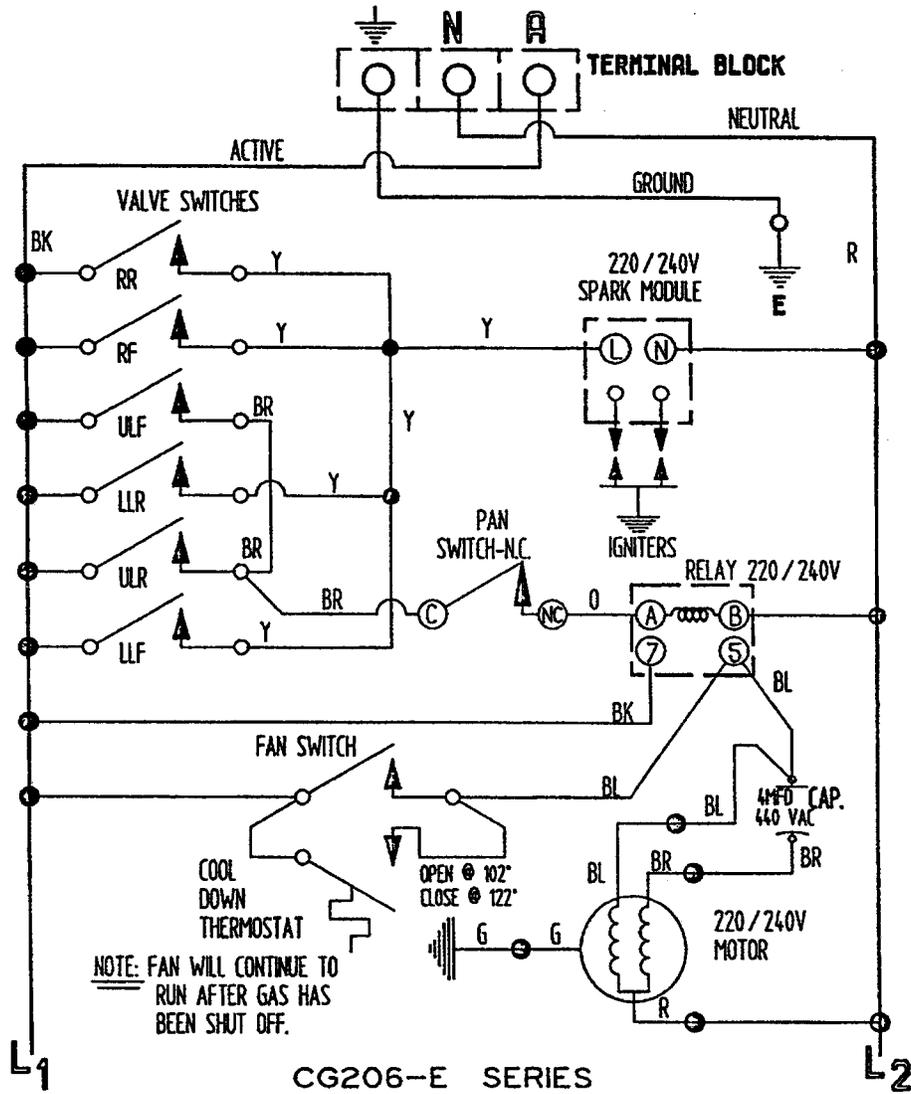
CCG406 SERIES



CVG316 SERIES & CVG4380P SERIES

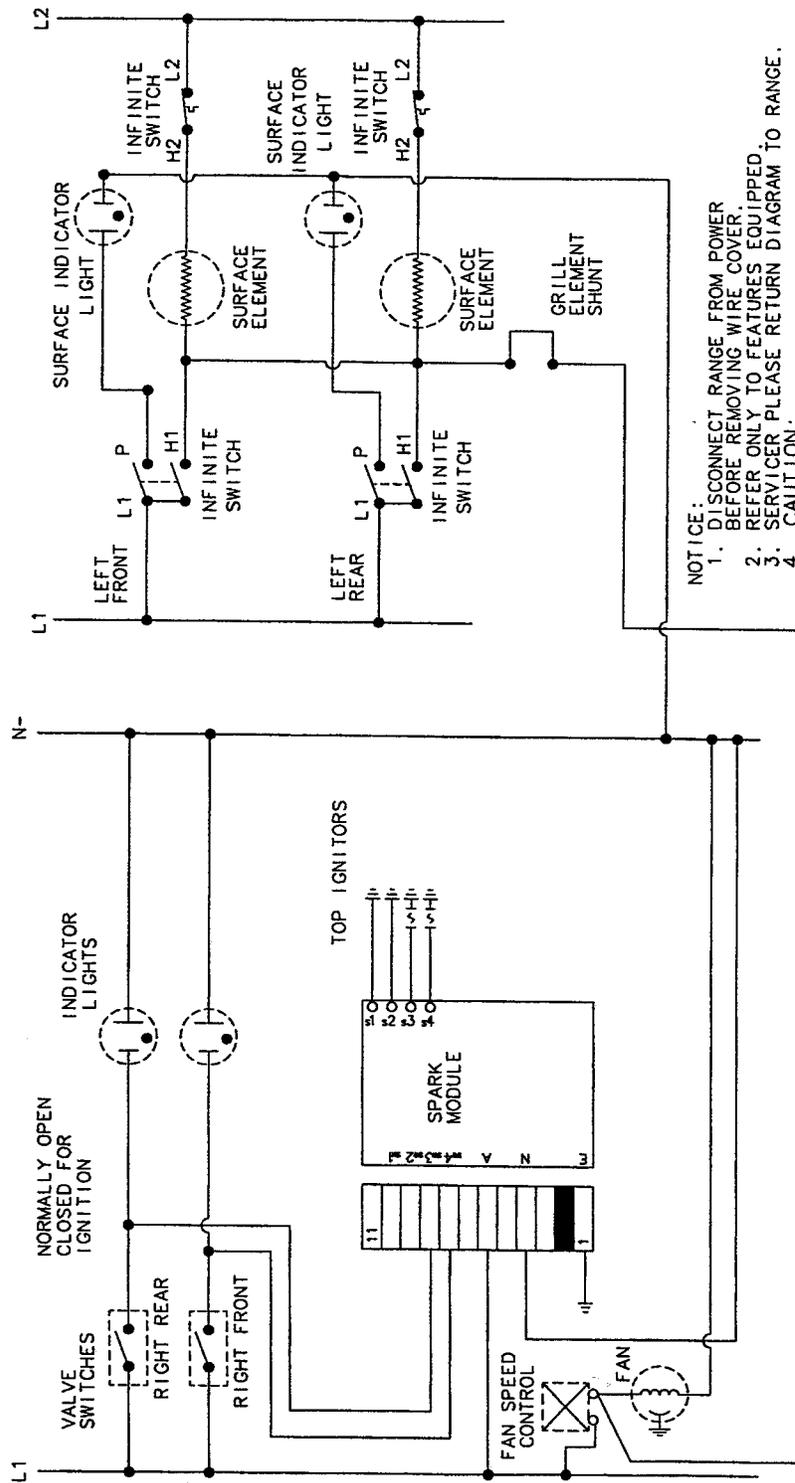
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CG206-E Diagram/Schematic



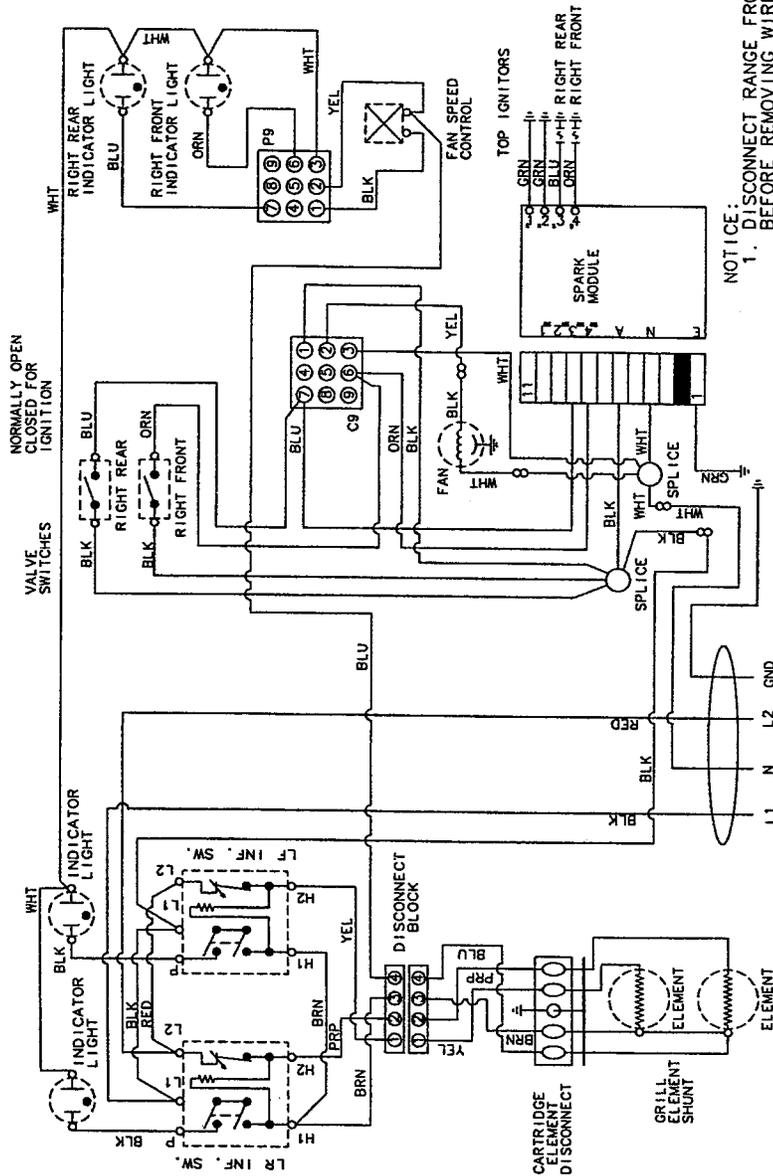
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CVDX4180 Diagram



CVDX4180 Schematic

PART NO. 8104P595-60 REV 2

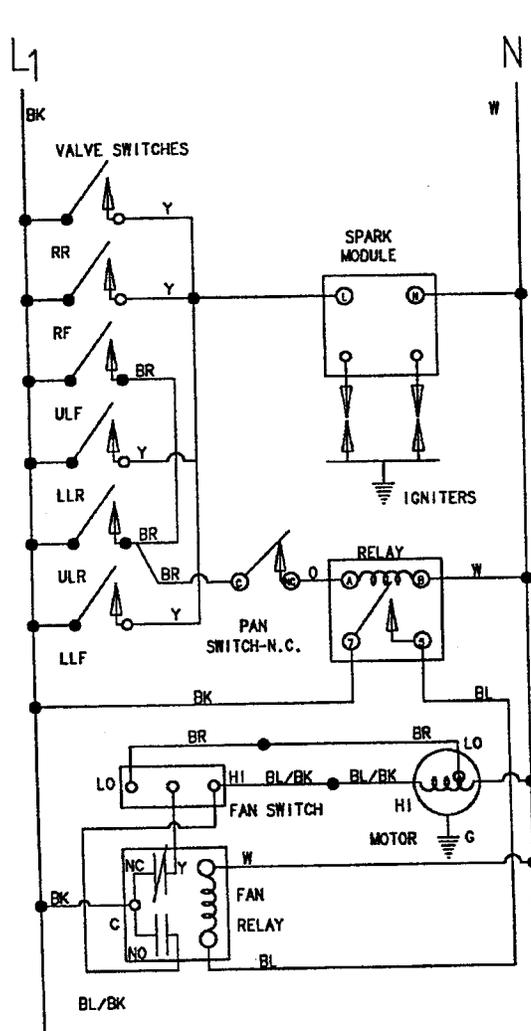


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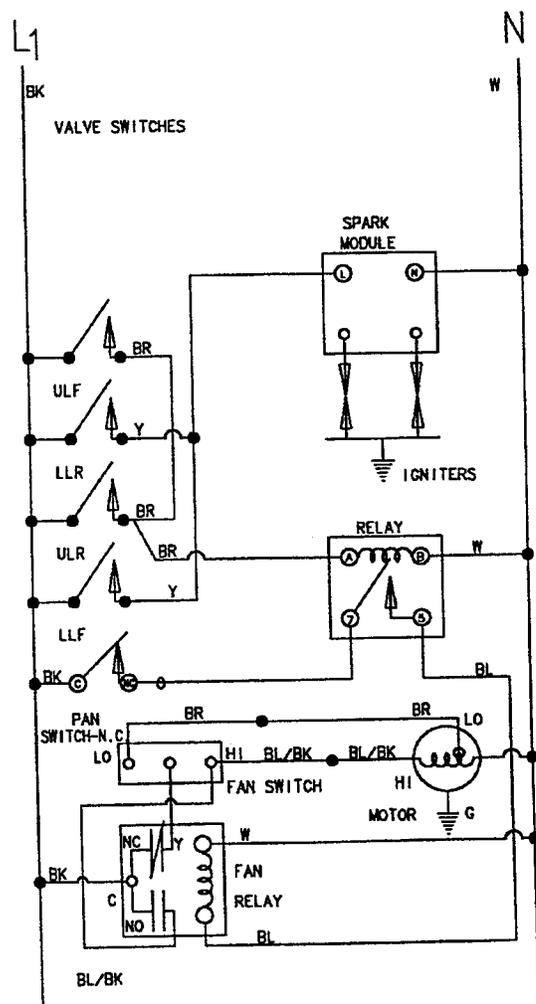
CVG4180, CVG4280, CVG4380 Diagram

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CVG4280 SERIES

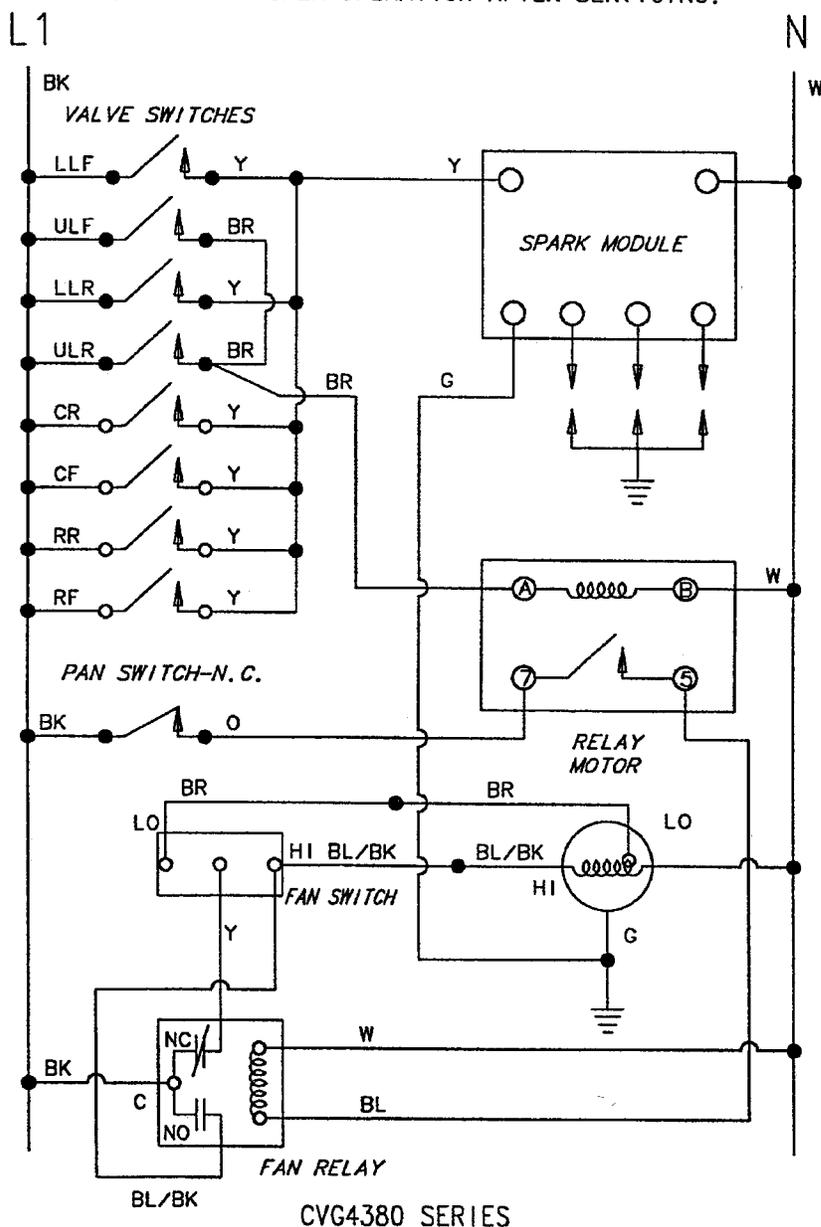


CVG4100 SERIES

CVG4100, CVG4280, CVG4380 Schematic

NOTICE:

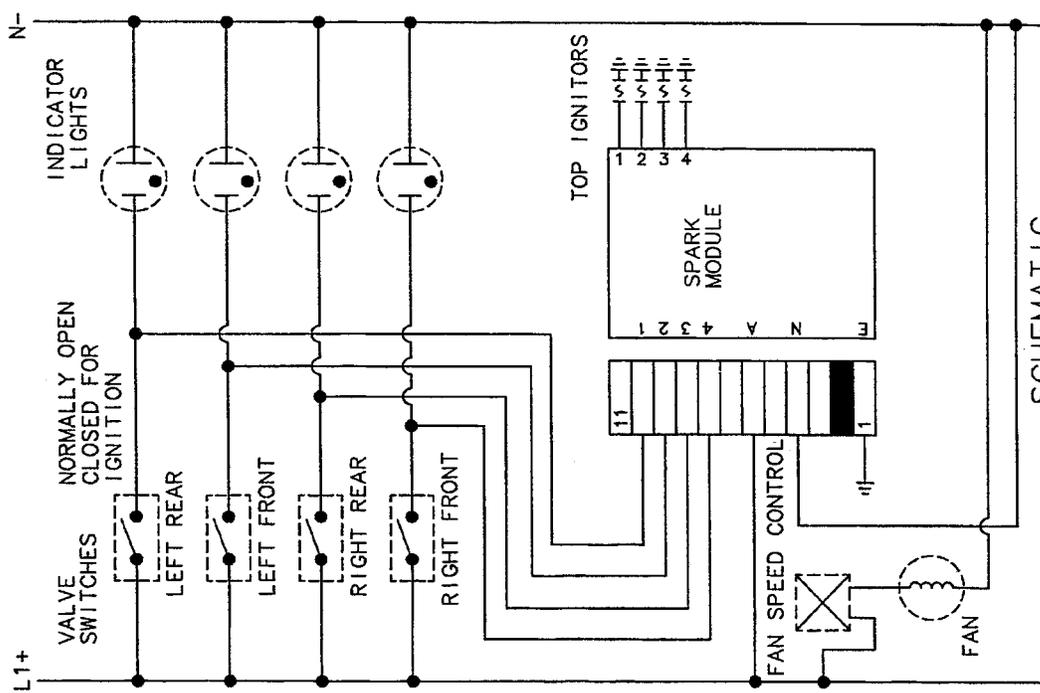
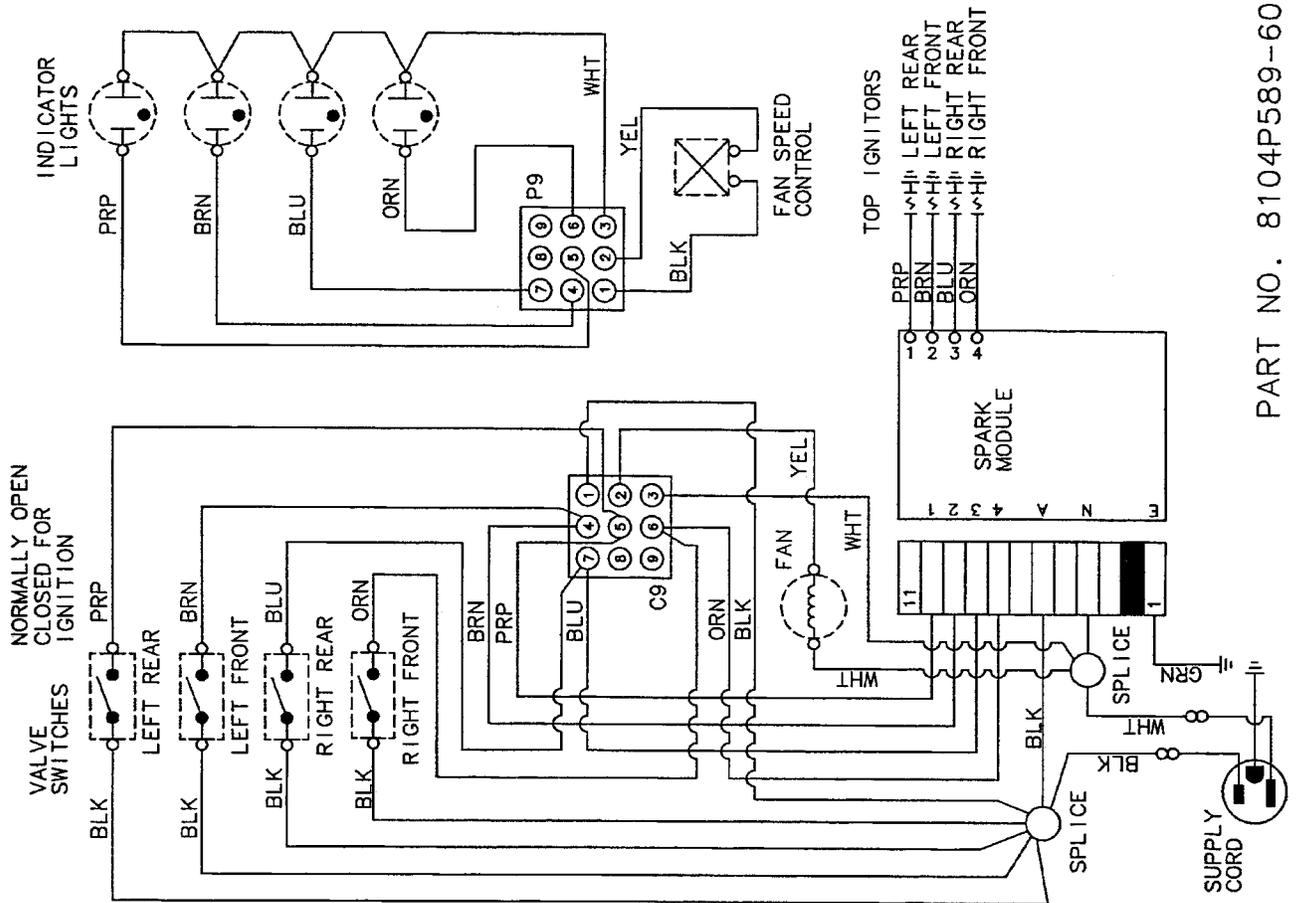
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8104P574-60

CVG4380 SERIES

CVGX2423 Diagram/Schematic



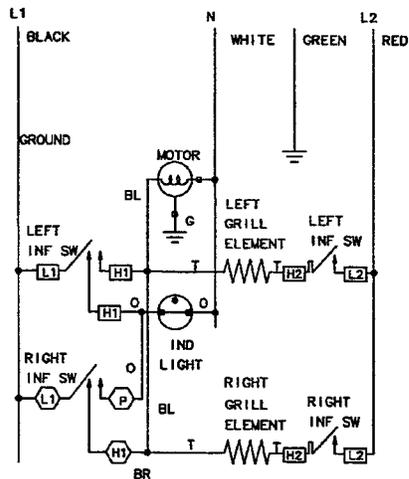
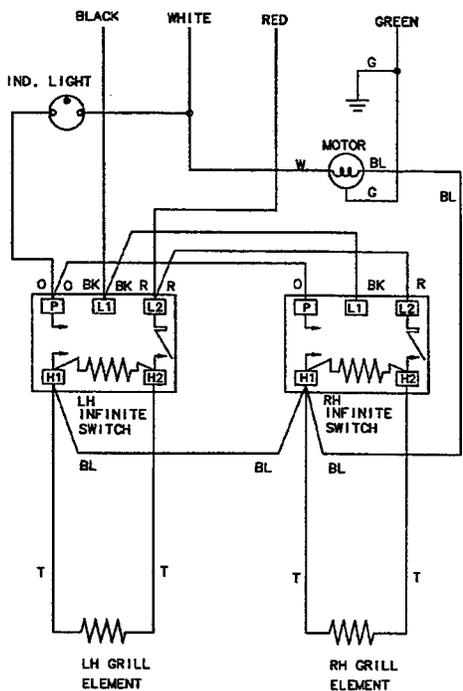
SCHMATIC

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PART NO. 8104P589-60

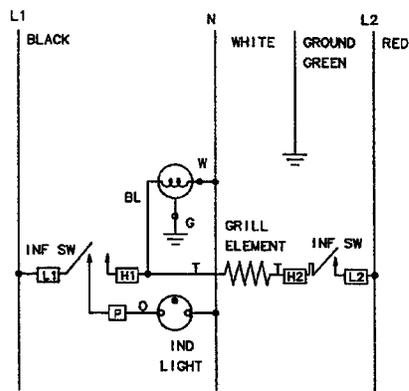
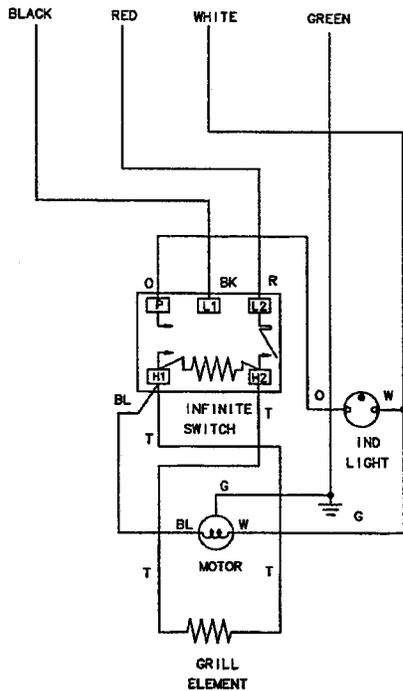
GO106, GO206, GO206-C Diagram/Schematic

DIAGRAM NO. 8104P577-60



COMPONENT SYMBOLS DO NOT REFLECT TRUE CONFIGURATION. ALL FEED LINE COLORS ARE NOTED (BLACK & RED). ALL COMPONENTS SHOWN IN "OFF" OR RELAXED POSITION.
NOTE: THERE IS A RESISTANCE HEATER IN THE INFINITE CONTROL BETWEEN H1 & H2.

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MAYTAG
P/N 16010242-01
SERVICE MANUAL
SUPPLEMENT ONE

The following revised pages are to be supplemented into service manual **P/N 16010242**, due to revisions, changes, and/or additions that have taken place since the original printing.

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Introduction

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

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

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

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

Jenn-Air Models covered in this manual:

CCG2420	CCGX2620	CG205
CCG2421	CCG406	CG206
CCG2422	CCG456	CG206-C
CCG2423	CCG457	CG206-E
CCG2520	CCG556	CVDX4180
CCG2521	CCP457	CVG316
CCG2522	CCP556	CVG4100
CCG2523	CG100	CVG4280
CCGP2420P	CG106	CVG4380
CCGP2720P	CG106-C	CVG4380P
CCGP2820P	CG200	CVGX2423
CCGX2420		

General Safety Precautions

Information contained in **this manual is intended for use by a qualified service technician**. The technician is required to be familiar with proper and safe procedures to be followed when repairing electric, gas, and microwave appliances. All tests and repairs are to be performed using proper tools and measuring devices designed for appliance diagnosis and repair. All component replacements should be made **using only factory approved replacement parts**.

Electrical shock and injury can result if service or repairs are attempted by an unqualified individual. **Improper disassembly, assembly or adjustments can create hazardous conditions.**

Even for a skilled technician, a risk of injury or electrical shock exists while performing service or repairs. **Electrical injury can be serious or fatal.** Extreme caution must be taken when performing voltage checks on individual **components of an appliance.**

NOTE: The electrical power supply should always be disconnected when servicing a product. If power is needed to test a component extreme caution must be taken.

To avoid possible injury, the appliance must be properly grounded. Never plug in or direct wire an appliance unless it is **properly grounded in accordance with all local and national codes.** See the installation instructions that originally accompanied the product for proper grounding procedures.

In our continuing effort to improve the quality and performance of our cooking products, it may be necessary to make changes to the appliance without revising this manual.

The model and serial number can be found on the data plate located on the underside of the cooktop. The model number identifies features, sizes and engineering changes. The model number assist the technician in establishing the proper service procedures for the different variations of cooking products.

SECTION 3. CAUSE & EFFECT

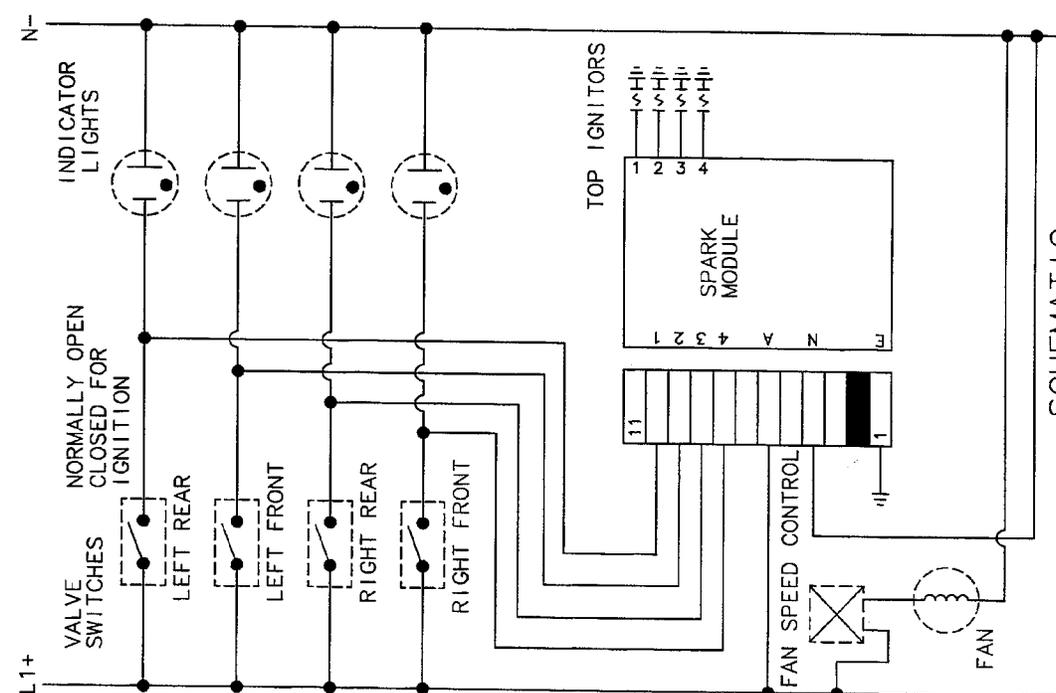
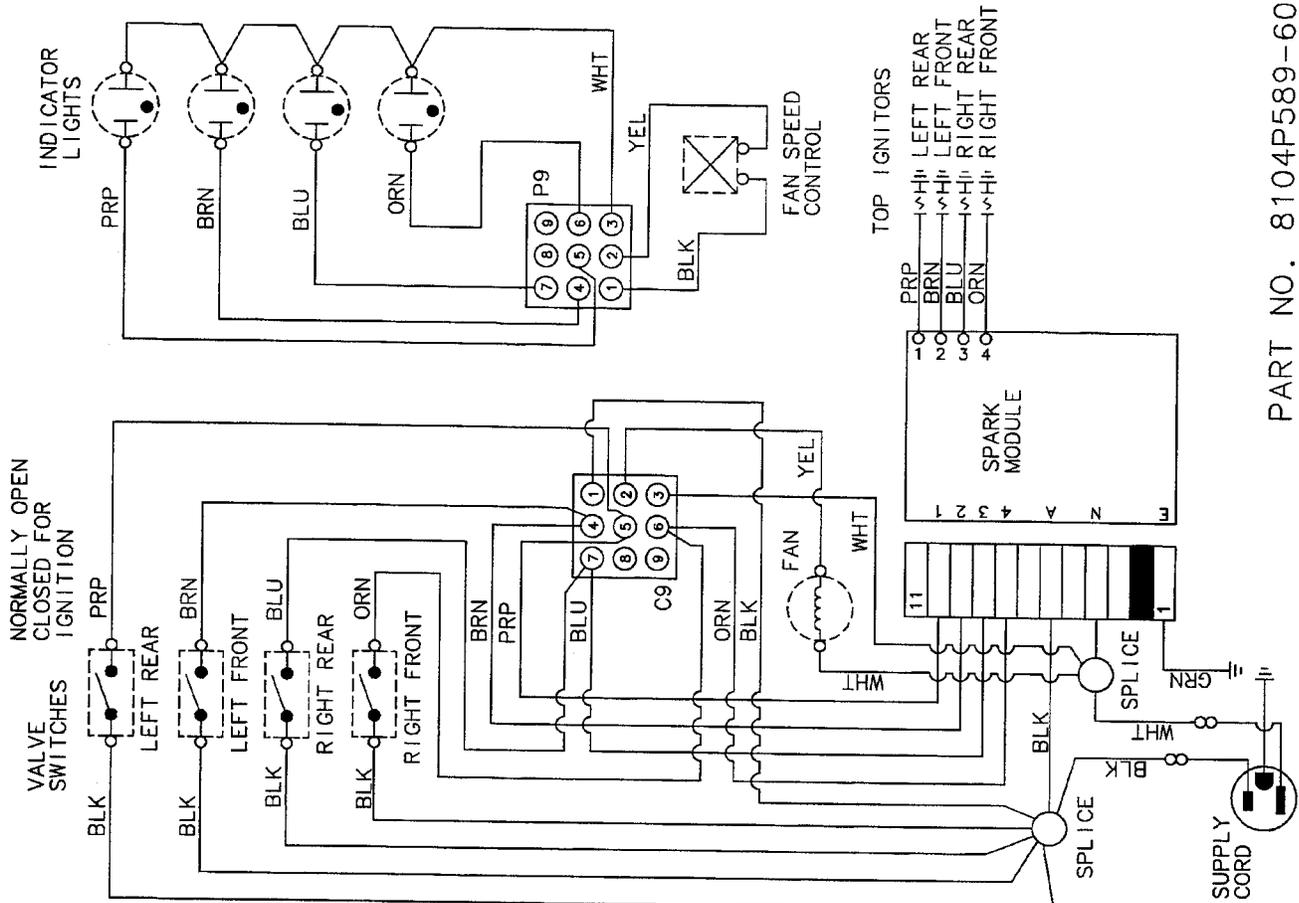
<u>Condition</u>	<u>Possible Cause</u>	<u>Correction</u>
No spark at ignitor(s)	1. Loose wire connection to spark ignitor. Turning on any valve will cause both ignitors to spark simultaneously. Both ignitor lead wires must be connected to spark module for either to work correctly.	Reconnect loose wires.
	2. Ignitor not grounded..	Tighten mounting nut to assure solid ground.
	3. Ignitor.	Replace ignitor(s).
	4. Spark Module.	Replace module.
Ignitor sparks- gas supply OK, won't light	1. Ignitor port in cap not in line with burner flash tube.	Align ignitor cap so port is in-line.
	2. Strong external drafts.	Locate cause; i.e. HVAC vent, etc. Advise customer on adjustment.
	3. Aeration pan, air grille, grates not in position.	Install parts for proper operation.
	4. Burner not seated into unit properly or flash tubes not aligned with ignitor port.	Seat or replace burner.
	5. Primary air shutter set too far open.	Adjust air shutter.
	6. Blocked burner ports.	Clear with straight pin or replace burner.
Ignitor fails through one valve, but works through another.	1. Stem ignition switch not securely seated.	Seat switch securely.
	2. Stem ignition switch (On left side switch assemblies, the lower switch is the ignition switch).	Replace switch (on left side, replace entire switch assembly).
	3. Valve, no click heard (valve fails to rotate through full 175°, thereby failing to activate stem switch).	Replace valve.
	4. Switch wiring.	Check connections: Yellow wire - Stem switch to spark module. Check splices and connections for proper continuity.

<u>Condition</u>	<u>Possible Cause</u>	<u>Correction</u>
Ignitor keeps sparking on setting other than "LITE"	1. Stem switch, internal contacts won't open.	Replace switch.
	2. Stem switch.	Check wiring against diagram.
	3. Valve.	Replace valve.
	4. Spark module.	Replace module.
Binding valve stems	1. Valve.	Replace valve.
	2. Stem switch or assembly.	Replace switch.
No "manual" fan operation	1. Rocker switch, contacts open.	Replace switch.
	2. Fan motor (windings open/shorted).	Replace motor.
No "auto" fan operation (fan should run when left side valve(s) turned on and aeration pan removed)	1. Upper stem - switch on either L.H. assembly.	Replace switch assembly or seat switch securely.
	2. Reversed stem switch wires.	Check wiring. Brown wires should be on upper switches, yellow wires on lower.
	3. Relay.	Replace relay.
	4. N.C. pan switch or lever arm.	Bend lever arm so that projection pin on aeration pan makes contact or replace switch.
	5. Fan motor.	Check wiring. Replace motor.
Fan operates automatically when it shouldn't	1. Projection pin on aeration. Pan not depressing pan switch fully when installed on L.H. side.	Carefulley bend lever arm so that projection pin on aeration pan makes contact.
	2. N.C. fan switch.	Replace switch.
	3. Stem switch or relay.	Check wiring against diagram. Replace switch or relay.
Fan won't shut off	1. Rocker switch.	Replace switch.
	2. Relay or motor.	Check wiring against relay.
No flame - gas not reaching any burner	1. Line gas valve turned off, or air in manifold or supply line.	Turn supply valve on. Bleed gas line at regulator.
	2. Gas supply pressure to unit exceeding 14.0" W.C.	Reduce gas supply pressure (may require additional customer installed pressure regulator).
	3. Pressure regulator on unit or supply line.	Replace regulator.

<u>Condition</u>	<u>Possible Cause</u>	<u>Correction</u>
No flame - (continued)...	4. Pressure regulator on unit or supply line mounted backward (arrow on regulator body indicates direction of flow).	Reverse regulator.
	5. Conversion cap in pressure regulator missing or unseated.	Check cap. Re-seat.
	6. Gas valve.	Replace entire assembly.
	7. Orifice fitting: Hood blocked or screwed tight against internal pin. Blockage within gas way.	Clear with straight pin. Back hood off internal pin at least 1 1/4 turns. Replace orifice fittings.
Flame blows away from burner ports - gas flows too high	1. Pressure regulator, pressure regulator cap is inverted (set for LP at 10" W.C. instead of natural at 5" W.C.).	Replace regulator, invert conversion cap.
	2. Oversize outlet hole in orifice hood.	Replace entire orifice fitting.
	3. Wrong orifice hood installed.	Check color code on orifice hood (L.H. fittings are black, R.H. fittings are brass).
	4. Primary air shutter set too far open.	Adjust air shutter.
Flame too soft or lazy - gas flow too low	1. Gas supply pressure to unit below 6.0" W.C.	Supply pressure must be increased. Advise customer on correction required.
	2. Wrong orifice hood installed.	Check color code on orifice hood (L.H. side fittings are black, R.H. side fittings are brass).
	3. Orifice hood.	Clear with straight pin.
	4. Primary air shutter set too far closed.	Adjust air shutter.
No gas or incorrect flow at "MED" or "LO" setting.	1. Center stem adjustment.	Adjust center stem under knob to correct flame. Clockwise to reduce, counterclockwise to increase.
	2. Gas valve (flow won't adjust through center stem).	Replace gas valve.
Unit not exhausting properly, or fan shuts off approximately 20 min. into operation	1. Ducting diameter too small, length of system too long, obstructions, too many elbows, or installed back to back.	Advise customer to have ducting corrected according to installation instructions.
	2. Fan motor.	Replace motor. Upon completion, if short cycling exists, problem is generally ducting, not motor.

<u>Condition</u>	<u>Possible Cause</u>	<u>Correction</u>
Nothing works	1. Fuse or circuit breaker tripped.	Replace/reset as necessary.
	2. Wiring to unit open.	Check for burnt or open wiring between service panel and unit receptacle.
Blower shuts off during operation or not exhausting properly	1. Filter positioned incorrectly, or dirty.	Position filter so that it slants downward to the R.H. side of plenum chamber. Clean filter.
	2. Duct system not in accordance with recommended specifications. (Warranty not applicable.) Blower scroll reversed, duct length too long or improper size, too many elbows, excessive flex duct, joints not taped, restriction in ducting or wall cap, motor foam seal missing, improper transitions, inadequate make-up air.	Correct as necessary. NOTE: If alteration in the ducting system is required, advise customer of exact changes necessary and refer to installer.
Element does not heat	1. Circuit breaker or fuse blown.	Replace as necessary.
	2. Inoperative infinite switch.	Remove cartridge, turn infinite switch to high, check voltage at range receptacle.
	3. Open element.	Replace as necessary.
	4. Open wiring.	Replace as necessary.
Element shuts off during cooking cycle	1. Thermal limiter opening due to excessive heat buildup. Improper cookware, etc.	Check and replace if necessary. Advise customer to review U & C manual.
Cooling fan does not run during grilling (some updraft models)	1. Grill element shunt clip missing.	Install clip.
	2. Fan motor inoperative.	Replace.
	3. Wiring to fan open.	Check and repair as necessary.
	4. Fan blade binding.	Reposition fan assembly blade.

CVGX2423 Diagram/Schematic



SCHMATIC

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PART NO. 8104P589-60

MAYTAG
P/N 16010242-02
SERVICE MANUAL
SUPPLEMENT TWO

The following revised pages are to be supplemented into service manual **P/N 16010242**, due to revisions, changes, and/or additions that have taken place since the original printing.

DISCARD PAGES

1-7, 1-8

INSERT PAGES

1-7, 1-8

