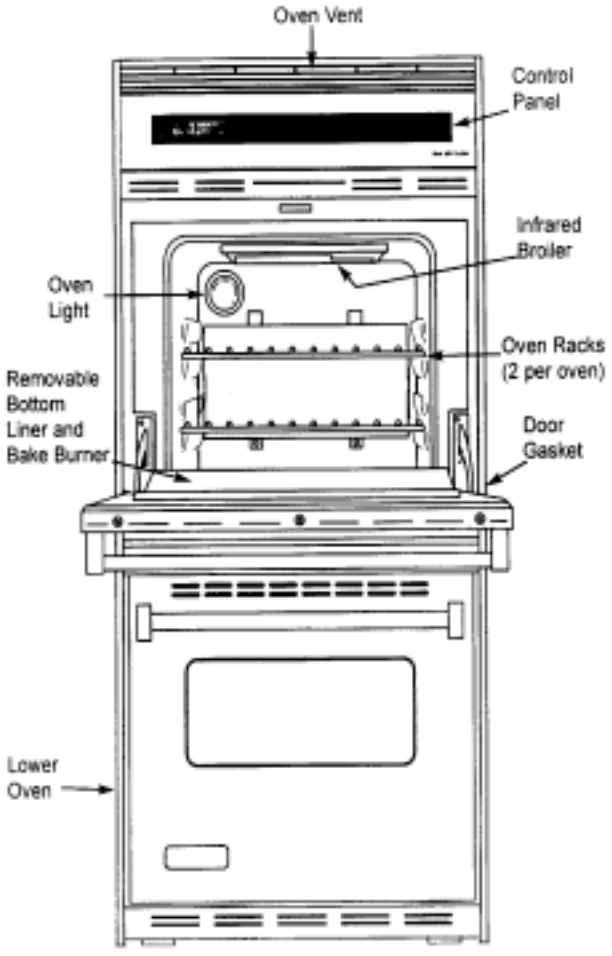
SERVICE NOTEBOOK

GAS WALL OVENS

VGDO271

VIKING RANGE CORPORATION®



VIKING RANGE CORPORATION, P. O. DRAWER 956, GREENWOOD, MS. 38930 - USA

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IMPORTANT INFORMATION

Pride and workmanship go into every product to provide our customers with quality products. It is possible, however, that during its lifetime a **product** may require service. Products should be serviced only by a qualified service technician who is familiar with the safety procedures required in the repair and who is equipped with the proper tools, parts, testing instruments and the appropriate service manual. **REVIEW ALL SERVICE INFORMATION IN THE APPROPRIATE SERVICE MANUAL and TECHNICAL SHEETS BEFORE BEGINNING REPAIRS.**

Important Notice for Consumers and Services

WARNING

To avoid risk of serious injury or death, repairs should not be attempted by unauthorized personnel; dangerous conditions (such as exposure to electrical shock) may result.

CAUTION

VIKING will not be responsible for any injury or property damage from improper service procedures. If performing service on your own product, assume responsibility for any personal injury or property damage which may result.

To locate an authorized servicer, consult the dealer from whom you purchased this product. For further assistance, call:

Viking Preferred Service
Phone # 601-451-4133

Address your written correspondence to:

Viking Preferred Service
111 Front Street
P. O. Drawer 956
Greenwood, MS. 38935-9560

Recognize Safety Symbols, Words, and Labels

DANGER **Danger**-Immediate hazards which WILL result in severe personal injury or death

WARNING **Warning**-Hazards or unsafe practices which COULD result in severe personal injury or death

CAUTION **CAUTION**-Hazards or unsafe practices which COULD result in minor personal injury or product or property damage.

INTRODUCTION

General Information

This manual provides basic instructions and suggestions for handling, installing and servicing your VIKING gas wall oven.

The directions, information, and warnings in this manual are developed from experience with, and careful testing of the product. If the unit is installed according to the manual, it will operate properly and will require minimal servicing. A unit in proper operating order insures the consumer all the benefits provided by clean, modern gas cooking.

This manual contains basic information needed be authorized VIKING service technicians to install and service VIKING gas wall ovens. There may be, however, some parts which need further explanation. Refer to the owners guide or VIKING maintains a toll-free technical support line to answer questions from authorized service technicians. The number is 1-800-467-2665.

Model Identification and Ordering Replacement Parts.

Unit's model and manufacturing numbers are located on its rating label. Rating label is located on the door frame. It can be seen by opening the oven door. Before ordering parts, write down the correct model and manufacturing numbers from the rating label.. This avoids incorrect shipments and delays. Please refer to parts catalog when ordering replacement parts.

SAFETY INFORMATION

As with all appliances, there are certain rules to follow for safe operation. Verify everyone who operates oven is familiar with the operations and with these precautions. Use appliance only for its intended purpose as described. Pay close attention to the safety sections of this manual. Recognize the safety section be looking for the symbol or the word safety.

Recognize this symbol as a safety precaution.

⚠ WARNING

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

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

WHAT TO DO IF YOU SMELL GAS

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

Installation and service must be performed by an authorized installer, service agency or gas supplier.

SAFETY PRACTICES FOR SERVICER

Safe and satisfactory operation of gas wall ovens depends upon its design and proper installation. However, there is one more area of safety to be considered: **SERVICING.**

Listed below are some general precautions and safety practices which should be followed in order to protect the service technician and consumer during service and after service has been completed.

⚠ WARNING

To avoid risk of electrical shock, property damage, personal injury, or death verify wiring is correct, if components were replaced. Verify proper and complete operation of unit after servicing.

This gas appliance contains or produces a chemical or chemicals which are known to the state of California to cause cancer, birth defects, or other reproductive harm. To reduce the risk from substances in the fuel or from fuel combustion make sure this appliance is installed, operated and maintained according to the instructions in this manual.

Due to the nature of cooking, fires can occur as a result of overcooking or excessive grease.

1. Gas smell-Extinguish any and all flames and open windows.
2. Turn gas off-Service wall oven with gas turned off unless testing requires it.
3. Checking for gas leaks-Never check for leaks with any kind of open flame. Soap and water solution should be used for this purpose. Apply solution to suspected area and watch for air bubbles which indicates a leak. Correct leaks by tightening fittings, screws, connections, applying approved compound, or installing new parts.
4. Using lights-Use a hand flashlight when servicing wall ovens or checking for gas leaks. Electric switches should not be operated where leaks are suspected. This will avoid creating arcing or sparks which could ignite the gas. If electric lights are already turned on, they should not be turned off.
5. Do not smoke-Never smoke while servicing gas wall ovens, especially when working on piping that contains or has contained gas.
6. Check wall oven when service is completed-After servicing, make visual checks on electrical connection, and check for gas leaks. Inform consumer of the condition of the wall oven before leaving.
7. Adhere to all local regulations and codes when performing service.

SAFETY INFORMATION

RECEIVING WALL OVEN

- Installer needs to show consumer location of the wall oven gas shut-off valve and how to shut it off, if necessary.
- Authorized servicer must install the wall oven in accordance with the installation instructions. Adjustments and service should be performed only by authorized servicer.
- Plug wall oven into a 120-volt grounded outlet only. Do not remove round grounding prong from the plug. If in doubt about grounding of the home electrical system, it is consumers responsibility and obligation to have an ungrounded outlet replaced with a properly grounded three-prong outlet in accordance with the National Electrical Code. Do not use an extension cord with this appliance.
- Insure all packing materials are removed from the wall oven before operating it, to prevent fire or smoke damage should the packing material ignite.
- Ensure wall oven is correctly adjusted by a qualified service technician or installer for the type gas (NAT or LP). Some wall ovens can be converted for use with NAT or LP gas.
- With prolonged use of a wall oven, high floor temperatures could result. Many floor coverings will not be able to withstand this kind of use. Never install wall oven over vinyl tile or linoleum that cannot withstand high temperatures. Never install wall oven directly over carpeting.

ALL APPLIANCES

1. Proper Installation--Be sure your appliance is properly installed and grounded by a qualified technician.
2. Never Use Appliance for Warming or Heating the Room.
3. Do Not Leave Children Alone-- Children should not be left alone or unattended in the area where the appliance is in use. They should never be allowed to sit or stand on any part of the appliance.
4. Wear Proper Apparel--Loose fitting or hanging garments should never be worn while using appliance.
5. User Servicing--Do not repair or replace any part of the appliance unless specifically recommended in the manual. All other servicing should be referred to a qualified technician.
6. Storage in or on Appliance--Flammable materials should not be stored in oven.

7. Do Not Use Water on Grease Fires-- Smother fire or flame, or use dry chemical or foam-type extinguisher.
8. Use Only Dry Potholders--Moist or damp potholders on hot surfaces may result in burns from steam. Do not let potholder touch burners. Do not use a towel or other bulky cloth.

SELF-CLEANING OVENS

1. Do Not Clean Door Gasket--The door gasket is essential for a good seal. Care should be taken not to rub, damage, or move the gasket.
2. Do Not Use Oven Cleaners--No commercial oven cleaner or oven liner protective coating of any kind should be used in or around any part of the liner.
3. Clean Only Parts Listed in Manual. *See Cleaning* section.
4. Before Self-Cleaning the Oven--Remove broiler pan, oven racks, and other utensils.
5. Remove all items from oven top and backguard.

OVEN

1. Use Care When Opening Door--Let hot air or steam escape before removing or replacing food.
2. Do Not Heat Unopened Food Containers--Build-up of pressure may cause container to burst and result in injury.
3. Keep Oven Vent Ducts Unobstructed.
4. Placement of Oven Racks--Always place oven racks in desired location while oven is cool. If rack is removed while oven is hot, do not let potholder contact hot heating element in oven.

DELAYED IGNITION

Bake Burner Flame

Allow no more than 40-60 seconds before burner ignites and heat is felt. To check for heat, open oven door to first stop and place hand over oven door. If heat is not felt, cancel bake function. If burner repeatedly fails to ignite, contact an authorized servicer.

Broiler Flame

Allow no more than 40-60 seconds before burner ignites and flame is seen. If burner does not ignite cancel broil function. If burner repeatedly fails to ignite within 40-60 seconds contact an authorized servicer.

Radiant screen style broiler flame should appear hazy or fuzzy. Haze should be no more than 3/8 inch thick. The radiant screen should begin to glow red within 1-2 minutes.

SAFETY INFORMATION

IN CASE OF FIRE

Fires can occur as a result of over cooking or excessive grease. Though a fire is unlikely, if one occurs, proceed as follows:

OVEN FIRES

1. If you see smoke from oven, do not open oven door.
2. Turn oven control to **OFF.**
3. As an added precaution, turn off gas supply and power at main circuit breaker, or fuse box.
4. Turn on vent to remove smoke.
5. Allow food or grease to burn itself out in oven.
6. If smoke and fire persist, call fire department.
7. If there is any damage to components, call repair service before using oven.

If smoke or fire persists call the local fire department.

To avoid the risk of property damage or personal injury do not obstruct the flow of combustion or ventilation air to the oven.

To avoid the risk of electrical shock, serious personal injury or death: Make sure your oven has been properly grounded and always disconnect the electrical supply before servicing this unit.

NOTE: The maximum gas supply pressure for these models must not exceed 14 inches W.C.P.

PRECAUTIONS

- Do not mix household cleaning products. Chemical mixtures may interact with objectionable or even hazardous results.
- Do not put plastic items on warm cooking areas. They may stick and melt.
- Do not use damp sponge or dishcloth to clean oven when oven is hot. Steam from sponge or dishcloth can burn.
- Do not leave fat heating unless you remain nearby. Fat can ignite if overheated by spilling onto hot surfaces.

USING THE OVEN

- Do not leave children alone or unattended where a wall oven is hot or in operation. They could be seriously burned.
- Do not allow anyone to climb, stand or hang on the door. They could damage the wall oven and cause severe personal injury.
- Wear proper apparel. Loose fitting or hanging garments should never be worn when using oven. Flammable material could ignite if brought in contact with flame or hot oven surfaces which may cause severe burns.
- Never use wall oven for warming or heating a room. This may cause burns, injuries or a fire.
- Do not use water on grease fires
- Do not let grease or other flammable material collect in or around wall oven.
- Do not repair or replace any part of wall oven yourself unless it is recommended in this manual.
- Use only dry potholders. Moist or damp potholders used on hot surfaces may result in a burn from steam. Do not let a potholder touch the flame. Do not use a towel or a bulky cloth as a potholder.
- Never leave wall oven unattended while cooking. Boilovers can cause smoking and may ignite.
- Only certain types of glass/ceramic, earthenware, or other glazed utensils are suitable for oven use. Unsuitable utensils may break due to sudden temperature change.
- Use care when opening oven door. Let hot air or steam escape before removing or replacing food.
- Do not heat unopened food containers in oven. Build-
  up of pressure may cause a container to burst and result in injury.
- Keep wall oven vent ducts unobstructed.
- Place oven racks in desired location while oven is cool. If a rack must be moved while oven is hot, use a dry potholder.
- Do not use aluminum foil to line oven bottom or racks. Aluminum foil can cause a fire and will seriously affect baking results.
- Do not touch interior surfaces of oven during or immediately after use. Do not let clothing or other flammable materials come in contact with bake or broil burners.
- Other areas of the oven can become hot enough to cause burns, such as vent openings, window, oven door and oven racks.
- To avoid steam burns, do not use a wet sponge or cloth to wipe up spills on hot cooking area.
- Do not store combustible or flammable materials such as gasoline or other flammable vapors and liquids near or in oven.
- Do not clean oven gasket located on back of the door. Gasket is necessary to seal the oven and can be damaged as a result of rubbing or being moved.
- Do not drape towels or any material on oven door

⚠ CAUTION

handles. These items may ignite causing a fire.

Do not store items of interest to children in cabinets

SAFETY INFORMATION

SELF-CLEANING OVEN

- Do not clean door gasket. Door gasket is essential for a good seal. Be careful not to rub, damage or move it.
- Do not use oven cleaners. No commercial oven cleaner or oven liner protective coating of any kind should be used in or around any part of the oven.
- Remove the broiler pan and other cookware before self-cleaning oven.

BAKING, BROILING, AND ROASTING

- Do not use oven area for storage.
- Stand back from wall oven when opening door of a hot oven. Hot air or steam can cause burns to hands, face, and eyes.
- Do not use aluminum foil anywhere in the oven. This could result in a fire hazard and damage the wall oven.
- Use only glass cookware appropriate for use in gas ovens.
- Always remove broiler pan from oven when finished broiling. Grease left in pan can catch fire if oven is used without removing grease from the broiler pan.
- When broiling, meat that is close to the flame, may ignite. Trim any excess fat to help prevent excessive flare-ups.
- Make sure broiler pan is placed correctly to reduce any possibility of grease fires.
- Should a grease fire occur in the broiler pan, turn off oven, and keep oven door closed until fire burns out.

CONNECTING WALL OVEN TO GAS

Install manual shut-off valve in gas line for easy accessibility outside wall oven. Be sure of the location of the shut-off valve.

ELECTRICAL REQUIREMENTS

120-volt, 60 Hertz, individual circuit which is properly grounded and protected by a circuit breaker or fuse.

EXTENSION CORD

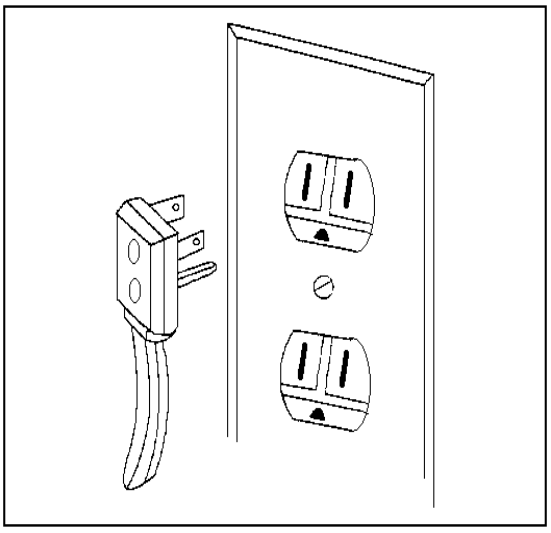
Due to possible pinching during installation, extension cords should not be used on built-in products.

GROUNDING

NOTE: This appliance must be properly grounded, for personal safety.

Power cord on this appliance is equipped with a three prong grounding plug. This matches standard three prong grounding wall receptacle to prevent possibility of electric shock from the appliance.

Consumer should have wall receptacle and circuit checked by qualified electrician to verify receptacle is properly grounded.



Where standard two prong wall receptacle is encountered, it is consumers responsibility and obligation to have it replaced with a properly grounded three prong wall receptacle.

DO NOT, UNDER ANY CIRCUMSTANCES, CUT OR REMOVE THE THIRD (GROUND) PRONG FROM POWER CORD.

SAFETY INFORMATION

PRODUCT SAFETY DEVICES

Safety devices and features have been engineered into the product to protect consumer and servicer. Safety devices must never be removed, bypassed, or altered in such a manner as to defeat the purpose for which they were intended.

Listed below are various safety devices together with reason each device is incorporated in the gas wall oven.

Pressure Regulator
Regulator

Maintains proper and steady gas pressure for operation of wall oven controls. must be set for the type of gas being used whether Natural or LP. After servicing regulator, make certain it is set properly before completing service.

Gas Burner Orifice

Universal orifices are used on some oven valves. They must be adjusted or set for

type of gas being used, Natural or LP. If not universal orifice, the orifice spud or hood must be of proper size for gas used.

After servicing a valve or orifice verify it is adjusted properly before completing service.

Oven Safety Valve

Oven valve is designed to be a safety valve. Two basic designs are used in gas wall ovens.

Hydraulic type valve
Electric type valve

Both types are safety valves because they are indirectly operated by the oven thermostat, which controls a pilot flame or electric ignitor, to open the oven valve. Incoming gas pressure closes the valve.

Latch Assembly

Locks the door during self-cleaning cycle. Prevents possible injury to consumer by preventing door opening at high temperatures where ignition of soil could take place with the in-rush of air.

Grounded Wall Oven Frame

Ground prong on power cord is connected to the frame, usually a green lead fastened by a screw. In addition, any part or component capable of conducting an electrical current is grounded by its mounting.

If any ground wire, screw, strap, nut, etc. is removed for service, or any reason, it must be reconnected to its original position with original fastener before the appliance is put into operation again.

Failure to do so can create a possible shock hazard.

GENERAL INFORMATION

Baking Guide

Refer to owners manual for following recommendations only as a guide for times and temperature. Times, rack position, and temperatures may vary depending on conditions and food type. For best results, always check food at minimum time. When roasting, choose rack position based on size of food item.

Prepare to Bake

To reduce risk of food poisoning due to bacterial

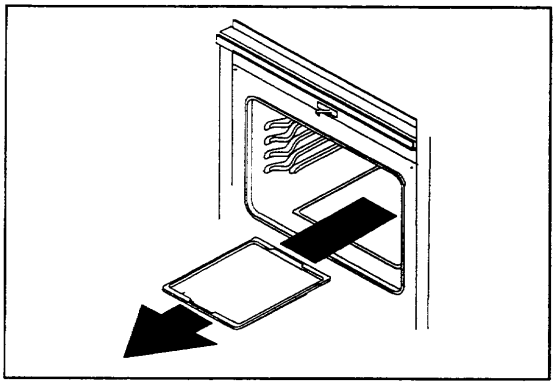
⚠ CAUTION

growth and production of toxins, keep meat, milk, fish, and eggs
refrigerated until needed.

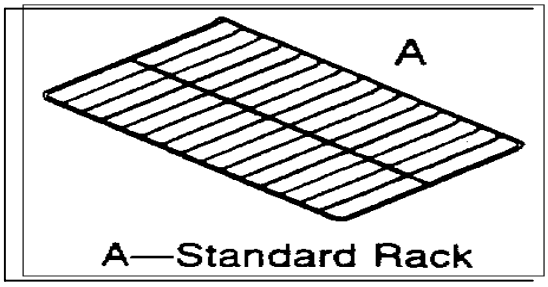
Remove Items Stored in Oven

Remove any pans and other cooking utensils stored in oven.

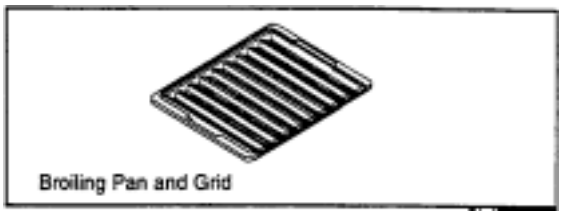
Oven Racks



Use Standard rack for normal baking and broiling.



Oven Rack Placement



Position oven rack before turning oven on.

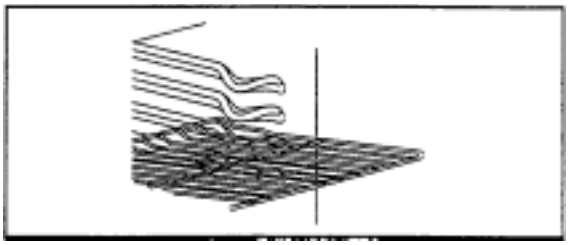
To avoid damaging oven liner or creating fire, do not

⚠ WARNING

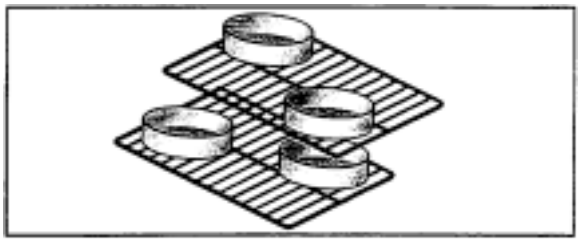
line oven bottom or racks with foil.

1. Pull rack forward to stop position.
2. Raise front edge of rack and pull until rack is out of oven.
3. Place rack in new rack position.
   - Curved edge of rack must be toward rear of oven.

Bake Pan Placement



- Keep pans and baking sheets 2 " from oven walls.
- Stagger pans placed on different racks so one is not directly over the other.



GENERAL INFORMATION

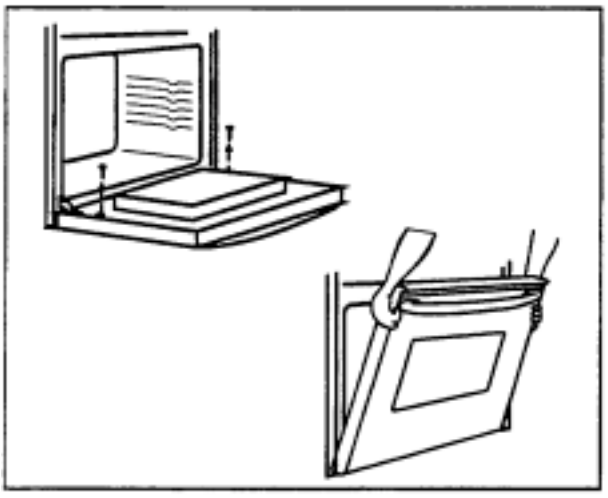
Removing Oven Door

⚠ CAUTION

To avoid personal injury or property damage, handle oven door with care.

- Door is heavy and can be damaged if dropped.
- Avoid placing hands in hinge area when door is removed. Hinge can snap closed and pinch hands.
- Do not scratch or chip glass, or twist door. Glass may break suddenly.
- Replace door glass if damaged.
- Do not lift door by handle.

1. Open door fully.
2. Remove screws.
   - Oven doors are attached with a screw on each side of oven door.
3. Close door to first stop, grasp door firmly on each side, and lift upward until door is off hinges.
   - Do not lift door by handle. Glass or handle can break.
   - Only push hinges closed once oven door is removed if necessary. Use both hands when



closing hinge. Hinge snaps closed.

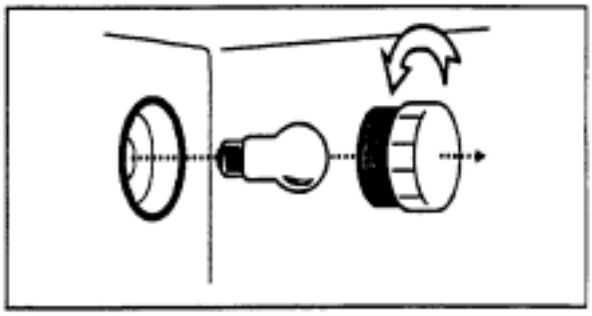
⚠ WARNING

Replacing Oven Light

To avoid risk of burns or electrical shock, disconnect electrical supply to oven before changing light bulb.

- Before replacing light bulb make sure bulb and lens are cool.
- Wear protective gloves.
- Do not operate oven without bulb and lens cover in place.

1. Disconnect electrical supply.
2. Remove oven door if desired.
3. Unscrew light bulb cover (counterclockwise) located in rear of cavity. Then turn light bulb counter-clock-wise to remove.
4. Replace light bulb with 120-volt, 40 watt appliance bulb.
   - Do not over-tighten bulb or cover. They may be difficult to remove later.
5. Replace light bulb cover and oven door before use.



6. Reconnect power supply.

CARE AND CLEANING

Cleaning

Part	Material to Use	General Directions
Clean burner area	Soap and a non-abrasive plastic scouring pad, cloth or toothbrush.	1. Pull oven bottom forward and lift out. 2. Unscrew nut on burner and remove burner baffle. 3. Wipe out burner area around burner with cloth and warm soapy water. 4. Dry area thoroughly. Replace burner baffle and oven bottom.
Broiler pan and grid	Soap and a non-abrasive plastic scouring pad, cloth or toothbrush.	Drain fat, cool pan and grid slightly.(Do not let soiled pan and grid stand in oven to cool.) Sprinkle with soap. Fill the pan with warm water. Let pan and grid stand for a few minutes. Wash or scour if necessary. Rinse and dry. The broiler pan and grid may also be cleaned in the dishwasher.
Inside oven door	Soap and water	Clean the outside of the door and the window area with warm soapy water. <u>Oven Door Gasket</u> Do not clean the braided oven door gasket. Gasket should not be moved while cleaning. Avoid getting any cleaning materials on gasket.
Outside finish	Soap and water	Wash all glass with cloth dampened in soapy water. Rinse and polish with a dry cloth.
Oven interior surfaces	Soap and water	Cool before cleaning. Frequent wiping with mild soap and water prolongs time between self-cleaning. Be sure to rinse thoroughly.
Control panel	Soap and water	Wash with cloth dampened in soapy water. Rinse and polish with a dry cloth.
Oven racks	Soap and water	For heavy soil, clean by hand and rinse thoroughly.

TEST PROCEDURES

⚠ WARNING To avoid the risk of electrical shock, personal injury or death, disconnect power before servicing, unless testing requires it.

Control compartment tests generally requires removal of oven from cabinet cutout. See disassembly instructions to access control compartment.

Sail Switch

Sail switches are located in the rear of control compartment and mounted to control compartment back, in front of the fan motors. During self-clean operations thermal switch contacts close, supplying power to fan motors. Air from the fan motor pushes against the sail switch paddle, closing the sail switch contacts, supplying power to the self-clean circuit. The sail switch contacts must close for proper self-clean operation.

Use the following procedure to check sail switch contacts
for continuity.

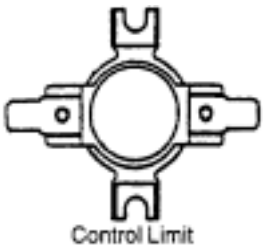
1. Disconnect power from oven. Disconnect switch wires.
2. Access sail switches by removing control panel assembly.
3. Set ohmmeter in the low ohm range. Attach meter leads to switch terminals on sail switch.
4. Meter should indicate no continuity or infinite ohms when switch is in normal position.
5. Push switch paddle to close switch contacts. Meter should indicate continuity or a low ohm reading.
6. Replace sail switch that failed the test.

NOTE: Both sail switches must be tested.

Vent Hi-Limit Control

OPEN CLOSED

145°F 185°F



1. Turn off power to oven and disconnect gas supply.
2. Remove oven from wall cutout.
3. Remove screws securing outer cabinet top shield to outer cabinet wrapper shield.
4. Disconnect wires from switch connections.
5. Attach ohmmeter leads to switch terminals. At ambient room temperature 70°F, continuity should be indicated.

Thermal Fan Switch

Thermal fan switches are mounted behind the control panel. Fan switches monitor the temperature at the rear of the oven cabinet and supply power to the fan motor if the rear cabinet temperatures exceed 150°F.

Thermal fan switch contains three terminals. Terminal 1 is the common terminal connected to the power source. Terminal 2 is the NO terminal connected to the fan motors and terminal 3 is the NC terminal connected to the oven elements.

During most cooking operations, the C-NC contacts remain closed. When the oven rear cabinet temperatures reach approximately 150°F, contacts C-NC open and C-NO closes supplying power to the fan motors. Use the following procedure to check contacts C-NC for continuity.

1. Disconnect power to oven. Remove switch wiring.
2. Access thermal fan switches by removing the oven from the cabinet and rear cabinet back panels
3. Set ohmmeter to low range.
4. Attach meter leads to switch terminal 1 or Com and 3 to NC.
5. Meter should indicate low ohms or continuity. It is difficult to check fan switch contacts COM-NO since they are closed when the rear cabinet temperature reaches 150°F and above.

Terminals 1-2 (NO) closed @150°F open @ 120°F
Terminals 1-3 (NC) opened @150°F closed @ 120°F

TEST PROCEDURES

⚠ WARNING To avoid the risk of electrical shock, personal injury or death, disconnect power before servicing, unless testing requires it.

Fan Motors

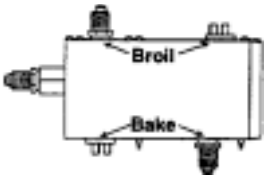
The fan motors are mounted to the control compartment back. They cool the exterior oven cabinets, electrical components and close the sail switch contacts during self-clean operation. Use the following procedure to check for continuity.

1. Remove oven from cabinet. Remove cabinet top.
2. Disconnect power from oven. Remove motor wiring.
3. Set ohmmeter to low range.
4. Attach meter leads to wiring terminals. Meter should indicate a low resistance reading of approximately 20 - 30 ohms for continuity.
5. If an open circuit is indicated, the motor coil has failed. Replace motor.
6. Test each terminal to ground. If motor cavity is shorted, replace motor.

Gas Valve

The bake and broil dual gas valves supply gas to the bake and broil burners. The valves contain bimetal arms attached to the valve seats held closed by incoming gas pressure. These arms are wrapped with a small electric heater coil. When a current range of approximately 3.2-3.6 amps flows through the bake or broil circuit, the bimetal arm is heated. Heating causes the arm to bend, allowing gas to flow and be ignited be the burner ignitor.

The broil gas valve is located on the right side of the control panel flueway and the bake gas valve is located on the left side of the control panel flueway.
The bimetal arms can be checked for continuity using the



following procedure.

1. Access valves by removing control panel glass and control panel mounting bracket.
2. Disconnect power to oven. Remove gas valve wiring.
3. Set ohmmeter to low ohms range. Attach meter leads to the two gas valve terminals facing rear of oven.
4. Meter should indicate low ohms or continuity.
5. Repeat on two gas valve terminals facing front of oven.
6. If meter indicates infinite ohms, an open heater coil, the complete gas valve must be replaced.

NOTE: Do not apply 120 VAC to valve. Apply 120 VAC to valve will render valve inoperative.

Bake and Broil Ignitors

The bake and broil ignitors are mounted to the bake and broil burners. They ignite the gas flowing into the burner.
During bake and broil operations, current flows through the ignitor, gas valve and thermostat at neutral. As the ignitor heats up and starts glowing, its internal resistance decreased. This allows more current to flow through the bake or broil circuit.

When the circuit current reaches approximately 3.2-3.6 amps, the bimetal arm in the gas valve flexes, opening the valve and allows gas to flow to the burner where it is ignited by the glowing ignitor. The ignitors glow anytime the bake or broil burners are operating and cycles on and off with the temperature setting.

Use the following procedure to check the ignitors for continuity.

1. Disconnect power to oven.
2. Remove ignitor from burner.Disconnect ignitor wiring.
3. Set ohmmeter R X 10 range. Attach one meter lead to each ignitor lead.
4. A resistance of several hundred ohms may be indicated. Amount of resistance may vary with each ignitor. This test determines if ignitor is opened internally.
5. Ignitor may still have to be replaced even though continuity is indicated and it glows when the oven is set for a bake, broil or clean function.
   Ignitor current may be measured more exactly by testing with the oven operating. Use the following procedure to test the ignitor current with the oven operating.
1. Insert an ammeter in series with one lead of ignitor or any amprobe attached to the lead to check amount of current flowing through the ignitor circuit.
2. Turn on oven and wait for ignitor to glow red. Meter should indicate approximately 3.2-3.6 amps.

The same procedure may be use to bench test the ignitor. Connect an AC jumper or test cord to the ignitor leads and follow the preceding procedure.

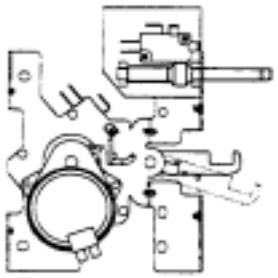
TEST PROCEDURES

⚠ WARNING To avoid the risk of electrical shock, personal injury or death, disconnect power before servicing, unless testing requires it.

Auto Latch Motor

Do not remove latch motor or switches from latch assembly. If latch motor or switches have failed, replace latch assembly.

1. Disconnect power.
2. Slide oven out from wall cutout approximately 6 inches to gain access to control panel screws.
3. Remove screws securing control panel to unit, and pull control panel out of unit to gain access to latch assembly.
4. Disconnect lead wires from latch motor.
5. Connect jumper cord leads to latch motor.
6. Connect jumper cord to 120 AC power source.
7. Replace if latch motor fails to operate.



Door Latch Assembly

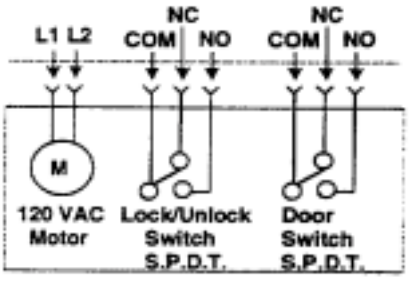
8. Reverse procedure to reconnect.

Auto Latch Switches

Unlock and lock door latch switches cannot be replaced.

Replace latch as an assembly.

1. Perform steps 1 through 3, from "Auto Latch Motor".
2. Disconnect lead wires from door latch switch (unlock)
3. Set ohmmeter to the R X 1 scale.
4. Attach meter leads to door latch switch (unlock).
5. Depress actuator arm. The meter should read continuity.
6. Reverse procedure to reconnect.



Double Switch

7. Use same procedure to test door latch switch (lock).

If upper latch fails in the closed position.

1. Shut off electricity at the fuse box or circuit breaker.
2. Remove control panel to gain access to latch assembly.
3. Force door latch rod past "fishhook" detent.
4. Replace latch assembly.

Oven Temperature Sensor

Detail testing can be accomplished as follows.

Oven temperature sensor is mounted in the oven cavity and electrically connected to the ERC.

Following is approximate resistance.

75°F--1082 ohms
350°F--1656 ohms
550°F--2056 ohms
880°F--2686 ohms

Sensor resistance can be checked by removing the sensor interconnect harness plug from the ERC and inserting ohmmeter leads into the harness connector plug. A resistance reading of approximately 1100 ohms should be indicated at ambient room temperature, 75°F. If a higher resistance is indicated, then remove sensor from oven. Disconnect sensor from harness at plug and recheck sensor resistance to assure that the problem is in the sensor and not in the interconnect harness or due to a bad connection.

NOTE: Sensor resistance will increase if held in your hand.

1. Disconnect power to oven.
2. Disconnect sensor harness plug from ERC.
3. Connect meter leads into harness connector plug, resistance should be approximately 1100 ohms at room temperature 75°F.

- If a higher resistance is indicated remove sensor from oven. Disconnect sensor from harness at the plug and recheck sensor resistance to assure the problem is in the sensor and not in the

TEST PROCEDURES

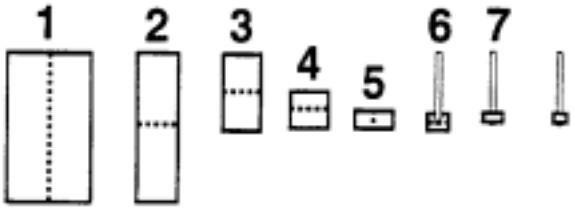
⚠ WARNING To avoid the risk of electrical shock, personal injury or death, disconnect power before servicing, unless testing requires it.

Oven Temperature Test

The following procedure should be used to verify oven temperature calibration.

- Verify oven door is adjusted and sealing properly.
- Do not cover the oven racks or oven bottom with foil.

1. Acquire an 8-1/2 X 11 inch piece of aluminum foil.
2. Fold the aluminum foil five times, doubling the thickness with each fold.
3. After the fifth fold, place the thermocouple tip into the center of the foil and fold foil over the thermocouple. Fold ends of the foil sides to attach foil to thermocouple.



4. Place the oven rack in the center of the oven cavity. Position thermocouple on the center of the rack.
5. Turn oven to 350°F and allow oven to cycle for 25 to 30 minutes. Oven should cycle between 330°F to 370°F.

TEST PROCEDURES

⚠ WARNING To avoid the risk of electrical shock, personal injury or death, disconnect power before servicing, unless testing requires it.

Problem	Probable Cause	Correction
1. No oven operation in bake or broil.	A. No voltage to ERC	A. Check for 120 VAC at ERC. If no voltage is present, check for broken or loose wiring.
2. No gas flows to burner, Ignitor glows red.	A. Failed ignitor	A. Check ignitor current draw. Replace ignitor if it fails test.
	B. Gas pressure too high	B. Check for correct gas pressure. Natural gas pressure should be 5" WCP and LP gas pressure should be 10" WPC.
	C. Failed gas valve	C. Check gas valve for continuity.
3. Gas flows to bake/broil burner, but does not light.	A. Ignitor positioned too far from burner.	A. Reposition ignitor closer to Bake/broil burner.
	B. Dirt or grease in orifice or burner.	B. Clean orifice or burner.
	C. Insufficient gas pressure.	C. Check for correct gas pressure. Natural gas pressure should be 5" WCP and LP gas pressure should be 10" WCP.
4. Broil burner shuts off shortly after the start of self-clean operation. Bake and broil functions operate normally.	A. Sail switch contacts not closing.	A. Check both sail switch contacts for continuity.
5. Fan motor does not operate.	A. No power to fan motor.	A. Check for 120 VAC supplied at fan motor. If no voltage is present, check for broken or loose wiring between fan motor and relay board. If voltage is present at fan motor, go to next step.
	B. Failed fan motor or winding or frozen shaft.	B. Check motor winding for continuity. Check for a frozen motor shaft. Check for broken wiring between motor and neutral terminal block.

TEST PROCEDURES

⚠ WARNING To avoid the risk of electrical shock, personal injury or death, disconnect power before servicing, unless testing requires it.

Problem	Probable Cause	Correction
6. Oven light does not operate	A. Failed light bulb. B. Failed light switch C. Failed light socket.	A. Replace bulb. B. Check light switch contacts for continuity. Replace light switch if necessary.. C. Check for 120 VAC at the light socket terminals. If voltage is present, replace socket. If no voltage is present, check for broken wiring between hot terminal block and light switch and between light switch and socket.
7. Oven light stays on.	A. Burned out bulb. B. Failed light switch contacts C. Failed light socket.	A. Check light switch contacts for continuity.

DISASSEMBLY PROCEDURES

⚠ WARNING To avoid the risk of electrical shock, personal injury or death, disconnect power before servicing, unless testing requires it.

⚠ CAUTION

To avoid risk of personal injury or property damage this unit requires a two man lift when lifting unit in or out of cutout

Removing and Replacing Oven

1. Turn off power to the oven at the circuit breaker.
2. Open oven door and remove screws securing unit to the wall.
3. Pull oven forward out of the cabinet opening.
4. Disconnect or unplug the power cord leading from unit to fuse box or junction box depending on unit.
5. Disconnect gas supply from unit.
6. Replace the oven using the installation instructions.

After final gas connection is made, turn on manual gas valve and test all connections in gas supply piping and oven for gas leaks.

To avoid property damage or serious personal injury,

⚠ WARNING

never use a lighted match to test for gas leaks.

Control Panel Assembly

1. Turn off power to unit.
2. Remove screws securing top piece to the unit.
3. Mylar control panel is loose, but the ribbon cable does not allow complete removal.

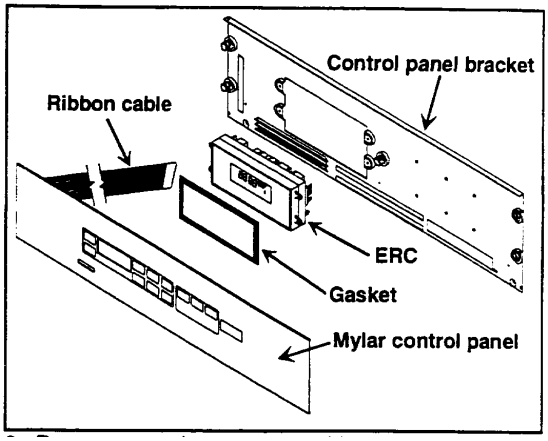
NOTE: Mylar control panel needs to be supported while removing rest of assembly.

4. Remove screws securing bottom trim under Mylar panel.
5. Remove screws securing control panel bracket.
6. Lean control panel bracket forward to disconnect wire terminals and ribbon cable.

⚠ CAUTION

While unplugging electrical connections, pins may be damaged, use extreme care when disconnecting.

7. Gently pull control panel up and forward to remove complete assembly.



8. Reverse procedure to reassemble control panel.

ERC

1. Turn off power to unit.
2. Remove screws securing top trim piece to the unit.
3. Mylar control panel is loose, but the ribbon cable does not allow complete removal.

NOTE: Mylar control panel needs to be supported while removing rest of assembly.

4. Remove screws securing ECR to control panel bracket.
5. Gently pull ECR forward to gain access to wire terminals.

⚠ CAUTION

While unplugging electrical connections, pins may be damaged, use extreme care when disconnecting.

6. Disconnect all electrical connections from ECR and remove.
7. Reverse procedure to reassemble.

DISASSEMBLY PROCEDURES

WARNING To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

Mylar Control Panel

1. Turn off power to unit.
2. Remove screws securing top trim piece to the unit.
3. Mylar control panel is loose, but the ribbon cable does not allow complete removal.

NOTE: Mylar control panel needs to be supported while removing rest of assembly.

4. Remove screws securing ERC to control panel bracket.
5. Gently pull ERC forward to gain access to ribbon

CAUTION While unplugging electrical connections, pins may be damaged, use extreme care when disconnecting.

cable.

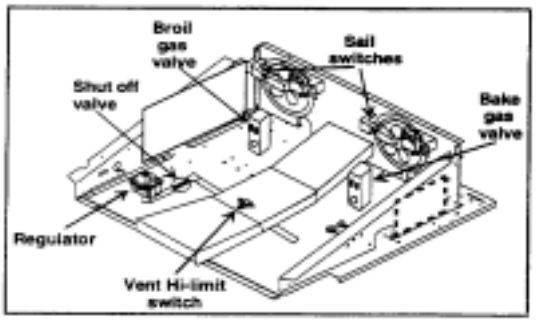
6. Disconnect ribbon cable from ERC and remove Mylar control panel.
7. Reverse procedure to reassemble.

Transformer / Relay Board(s)

1. Turn power off to unit.
2. Remove control panel, see "Control Panel Assembly" for removal.
3. PC board is mounted to the chassis side walls behind the control panel assembly.
4. Disconnect and label wire terminals.
5. Release plastic tabs securing circuit board.
6. Reverse procedure to reassemble.

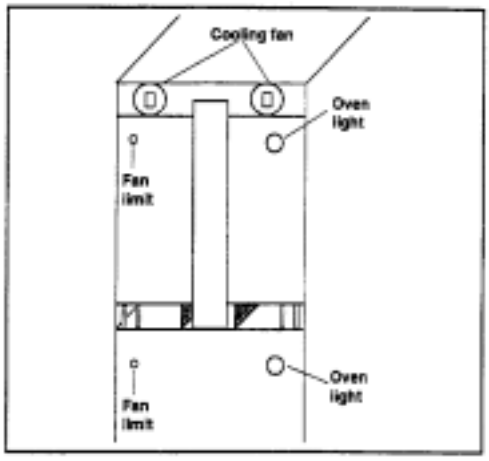
Vent Hi-Limit Switch

1. Turn power and gas off to unit.
2. Remove control panel, see "Control Panel Assembly" for removal.
3. Disconnect wire terminals from control limit switch.
4. Remove screws securing control limit switch.
5. Reverse procedure to reassemble.



Thermal Fan Limit Switch

1. Turn off and disconnect both electrical and gas supplies to the unit.
2. Open oven door and remove screws securing unit to the wall.
3. Remove unit from cutout opening.
4. Remove screws securing top or bottom back rear outer wrapper from the unit, depending on which limit switch need replaced.
5. Disconnect wiring terminal leads from limit switch.



6. Remove screws securing limit switch.
7. Reverse procedure to reassemble.

Oven Sensor

1. Turn off power to unit.
2. Open oven door or remove oven door, see "Door Removal".
3. Remove screws securing sensor to top right rear corner of oven cavity.
4. Pull sensor forward, maneuver wires through insulation to disconnect wire plug connector.
5. Reverse procedure to reassemble.

Upper Oven Door Latch / Door Plunger
Light Switch Assembly

1. Turn off power to unit.
2. See "Control Panel Assembly " for removal.
3. Remove screws securing latch assembly to chassis.
4. Disconnect and label wire terminals.
5. Remove latch assembly from chassis.

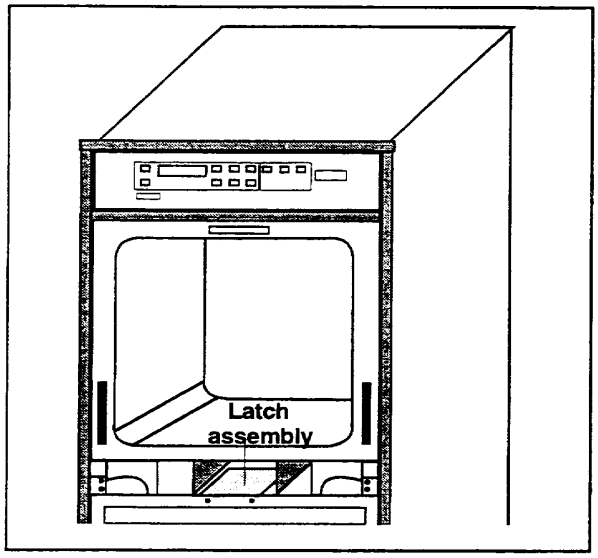
DISASSEMBLY PROCEDURES

WARNING To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

Lower Oven Door Latch / Door Plunger
Light Switch Assembly

1. Turn off power to unit.
2. Remove top oven door, see "Oven Door" procedure.
3. Remove screws securing center trim between oven doors.
4. Remove screws securing latch assembly to chassis.
5. Remove latch assembly from chassis.
6. Disconnect and label wire terminals.
7. Reverse procedure to reinstall door latch assembly.

Oven Light Bulb / Oven Light Socket

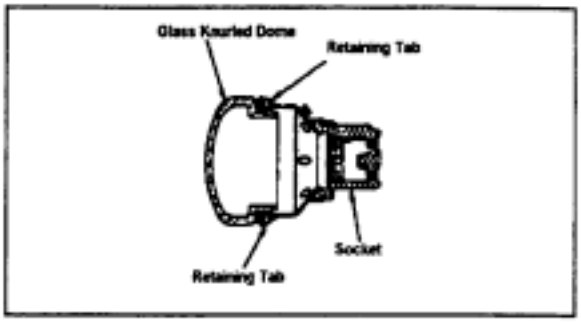


1. Turn off power to unit.
2. Open oven door to gain access to oven light.
3. Unscrew (counterclockwise) glass knurled dome.
4. Using a glove, unscrew (counterclockwise) oven light bulb.

NOTE: Proceed with the following steps for oven light socket removal.

5. Remove screws securing unit to the wall.
6. Remove oven from cutout opening and disconnect gas supply.
7. Disconnect or unplug the power cord leading from unit to fuse box or junction box depending on unit.
8. Remove screws securing outer wrapper cover and remove.
9. Carefully displace fiberglass insulation away from rear of light socket.
10. Push inner assembly of light socket toward rear of range, or twist out, depending on style of base.
11. Disconnect wires from light socket.
12. Reverse procedure to reinstall light socket. Reposition insulation around lamp socket. Do not over tighten.

NOTE: Reposition fiberglass insulation around oven light socket to eliminate possibility of heat related problems.



Oven Liner Removal

NOTE: Unit should be run through at least one clean cycle to set insulation.

1. Turn off and disconnect both electric and gas supplies to oven.
2. Remove oven door and oven racks.
3. Remove oven bottom and temperature sensor. Pull capillary tube through side of oven.
4. Remove oven light cover and bulb.
5. Remove bake burner, ignitor, broil burner, and broil ignitor.
6. Remove chip cover.
7. Remove cabinet back.
8. Remove screws securing oven liner at the rear. Maneuver oven liner from frame by pulling outward.
9. Reverse procedure to reassemble.

When reinstalling new liner, use flat sheet metal strips 4 X 28 inches to prevent insulation from "bunching up" as new liner is installed.

NOTE: When removing oven liner be certain not to dislodge the broil air duct on the right side of cabinet. If air duct is dislodged, broiler burner will not function as it will disrupt the flow of air to the broiler, resulting in poor air-gas mixture.

DISASSEMBLY PROCEDURES

WARNING To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

Oven Door Removal

1. Open oven door and remove screws securing door to hinge assembly.
2. Place oven door in first stop position, then grasp both sides and lift up off the hinge.

NOTE: Door hinges are spring loaded and will snap closed if bumped. Avoid pinching fingers by closing hinges completely until ready to mount door back on the unit.

3. Reverse procedure to reassemble.

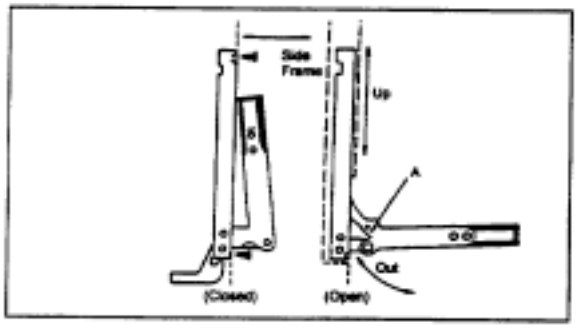
Door Disassembly

1. Remove oven door, see "Door Removal".
2. Remove screws on right, left, top, and bottom of oven door.
3. Remove door liner from door assembly.
4. Remove screws securing inner glass support securing glass and door handle.
5. Remove glass mounting bracket and glass window.
6. Remove screws securing heat door liner shield and remove.
7. Reverse procedure to reassemble.

NOTE: When reassembling door, verify HB ll marking on the glass is facing toward the heat (inside of the oven).

Oven Door Hinge

1. Turn off power to unit.
2. Remove oven door, see "Door Removal".
3. Carefully open the hinge fully, and insert a wooden dowel or screwdriver bit into opening marked A on the following diagram.
4. Remove the top and bottom screws securing hinge assembly to the front frame.
5. Slide the hinge assembly up and move top of hinge towards rear of the range. Withdraw hinge assembly through the frame opening.
6. Reverse procedure to reinstall oven door hinge assembly.



Blower Motor

1. Turn off and disconnect electrical and gas supplies to the oven.
2. Open oven door and remove screws securing unit to the wall.
3. Remove unit from cutout opening.
4. Remove screws securing top outer wrapper from the unit.
5. Disconnect and label wire terminals connected to blower motor.
6. Remove screws securing blower motor assembly to bracket.
7. Reverse procedure to reassemble.

Vent Assembly

1. Turn off and disconnect electrical and gas supplies to the oven.
2. Open oven door and remove screws securing unit to the wall.
3. Remove unit from cutout opening.
4. Remove screws securing top and back outer wrapper from the unit.
5. Remove screws securing vent assembly to unit.
6. Turn off and disconnect electrical and gas supplies to the oven. Vent assembly and slowly maneuver vent assembly away from unit.
7. Reverse procedure to reassemble.

Broil Ignitor

1. Shut off power and gas supply to oven.
2. Remove oven door and oven racks.
3. Unscrew broil ignitor wire cover mounting screw. Remove cover.
4. Remove broil ignitor mounting screws. Pull ignitor leads and connectors into oven cavity through hole in broil chamber.
5. Disconnect ignitor wiring.
6. Reverse procedure to reassemble.

Broil Burner

1. Shut off power and gas supply to oven.
2. Remove oven door and oven racks.
3. Remove broil ignitor mounting screws. Remove ignitor from broiler burner.
4. Remove broil burner mounting screws securing burner to burner bracket.
5. Move burner up against burner bracket, push burner towards rear of oven. Slide broiler burner out of broil chamber.

DISASSEMBLY PROCEDURES

WARNING To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

Oven Burner Ignitor

1. Shut off power and gas supply to oven.
2. Remove oven door and oven racks.
3. Remove oven bottom by lifting from front and sliding it out of oven.
4. Remove screws securing ignitor bracket to back burner box. Remove screw securing ignitor to bake burner.
5. Pull ignitor leads and connectors through opening. Disconnect ignitor wiring.
6. Reverse procedures to reassemble.

Oven Burner

1. Shut off power and gas supply to oven.
2. Remove oven door and oven racks.
3. Remove oven bottom by lifting from front and sliding it out of oven.
4. Remove screws securing ignitor bracket to back burner box. Remove screw securing ignitor to bake burner.
5. Disconnect and remove bake burner.
6. Reverse procedures to reassemble.

Pressure Regulator

1. Turn off and disconnect electrical and gas supplies to the oven.
2. Remove control panel assembly, see "Control Panel Assembly" procedures.
3. Unscrew and remove regulator from 90° elbow fitting.
4. Reverse procedures to reassemble.

NOTE: Use a soap solution to check for leaks after installing replacement regulator.

Shut - Off Valve

1. Turn off and disconnect electrical and gas supplies to the oven.
2. Remove control panel assembly, see "Control Panel Assembly" procedures.
3. Unscrew pressure regulator from 90° fitting.
4. Unscrew shut-off valve and fitting assembly from gas manifold.
5. Unscrew 90° fitting from shut-off valve.
6. Reverse procedures to reassemble.

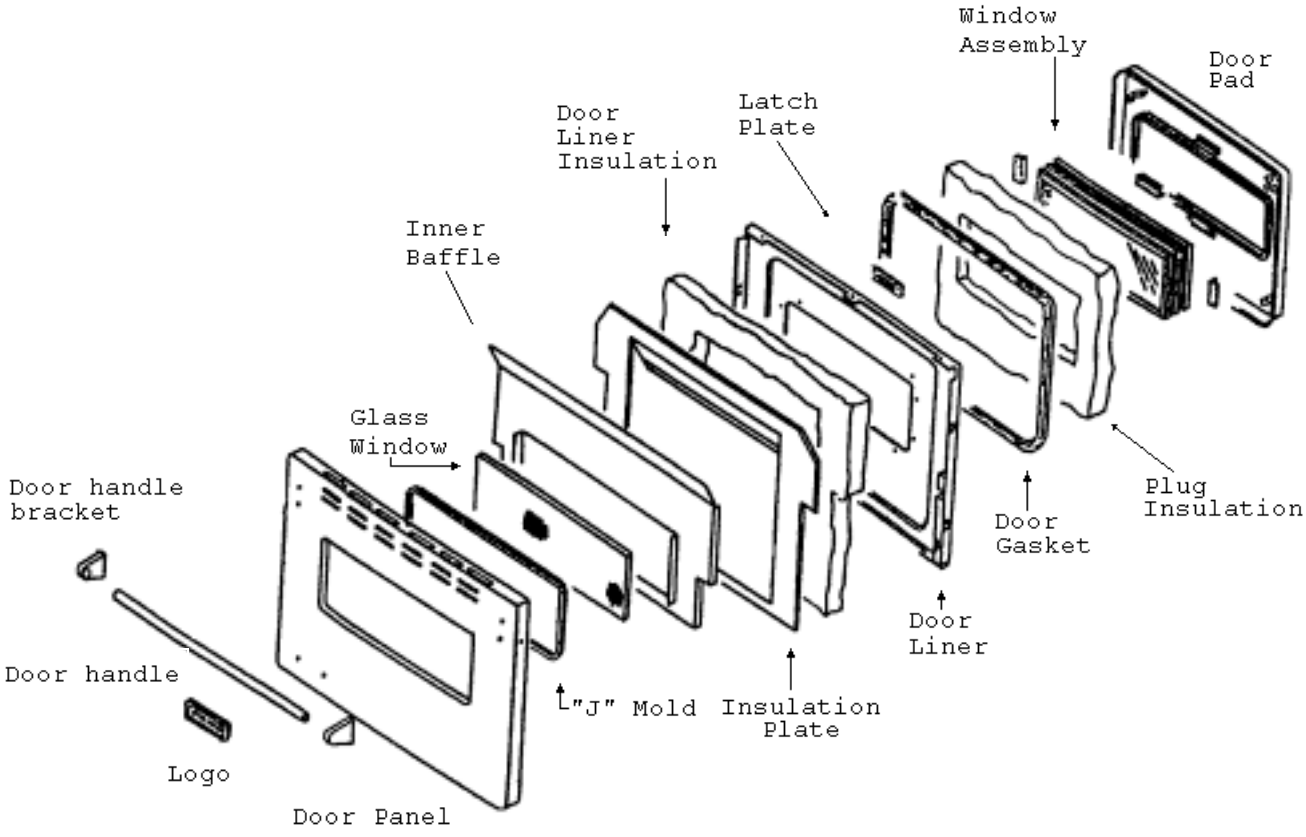
NOTE: Use soap solution to check for leaks after installing replacement valve.

Sail Switch

1. Shut off electrical and gas supplies to the oven.
2. Remove control panel assembly, see "Control Panel Assembly" procedures.
3. Remove screws securing sail switch mounting bracket to control compartment back. Disconnect switch wiring.
4. Remove sail switch and bracket assembly.
5. Reverse procedures to reassemble.

DISASSEMBLY PROCEDURES

WARNING To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.



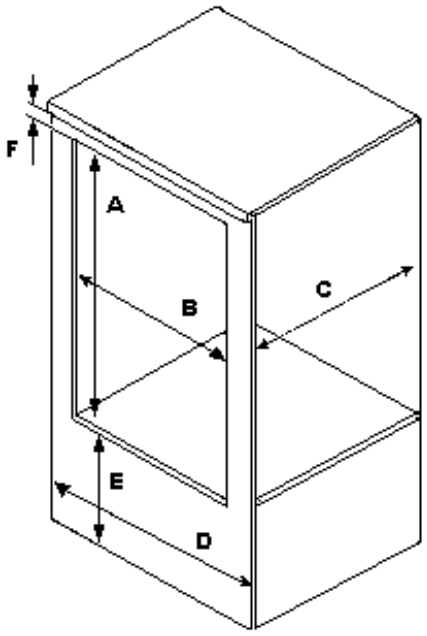
Door Assembly

INSTALLATION INSTRUCTIONS

Packing Material
Remove protective packing material from oven. Tape residue can be cleaned with a soft cloth and alcohol.

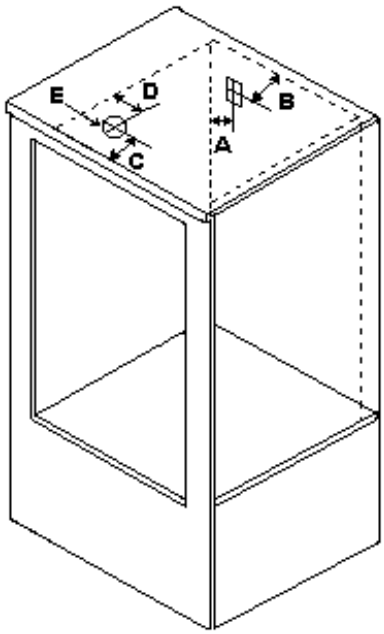
Oven Location
Choose a location based on following factors.

- Make sure there is adequate space for proper installation.
- Carefully read all instructions before beginning installation.



A --- 54 inches
B --- 25 inches
C ---23 3/4 inches
D ---27 inches
E ---12 ½ inches
F --- 3 inches

Gas and Electric Supply Location
Gas supply must be located in the area shown. Gas connection must not interfere with the electrical connection.



Electrical
A --- 8 inches
B --- 5 inches

Gas
C --- 5 ½ inches
D --- 5 inches
E --- 4 inch round hole

WARNING

Electrical Connection Requirements

To avoid the risk of serious electrical shock or property damage, do not cut or remove the third (ground) prong from the power plug. A 3-wire grounded conductor system must be used. Relying on the flexible connector, hard piping or any other part of the part of the gas supply line as a ground may cause fire, electrical shock and/or erratic control operation.

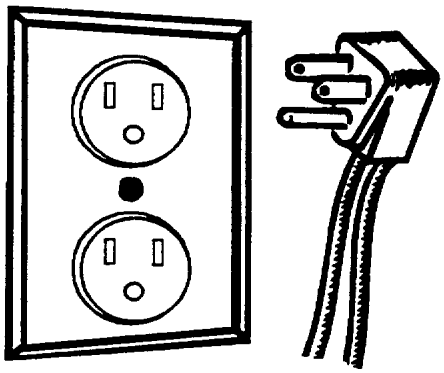
Oven must be electrically grounded in accordance with local codes or in the absence of local codes, with the National Electrical Code, ANSI/NFPA #70-latest edition.

INSTALLATION INSTRUCTION

In Canada, electrical connections are to be made in accordance with CSA C22.1 Canada Electrical Code. All electrical connections are to be made in accordance with CSA standards Z240.6.1 electrical requirements for mobile homes.

Use a 120 volt, 60 hertz, 3-prong receptacle protected by a 15 amp circuit breaker or time delay fuse. A qualified electrician should confirm the outlet is properly grounded and polarized.

If a 2-prong outlet is encountered, home owner must replace outlet before using oven. Do not cut off cord, use plug adapter or extension cord, or remove grounding plug.



Gas Connection Requirements

Before connecting this appliance to the gas supply piping system, confirm installation meets the requirements of local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1-Latest Edition.

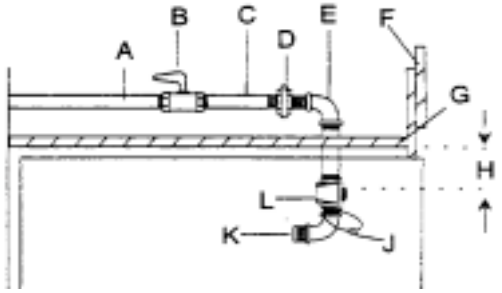
When installed in mobile housing, installation is to be in accordance with CSA standard A241.1 gas equipped mobile housing.

The installation of appliances designed for manufactured (mobile) home installation must conform with Manufactured Home Constriction and Safety Standard, Title 24 CFR, Pare 3280, or when such standard is not applicable, the Standard for Manufactured Home Installation, ANS1225.1/NPA 501 A-Latest Edition, or with local codes or the standard CAN/CSA-Z240MH, "Mobile Homes", and with local codes where applicable.

The installation of appliances is to be in accordance with CAN1-B149.1 or B149.2 installation code for gas burning appliances and equipment and/or local codes. Part1 and/or local codes.

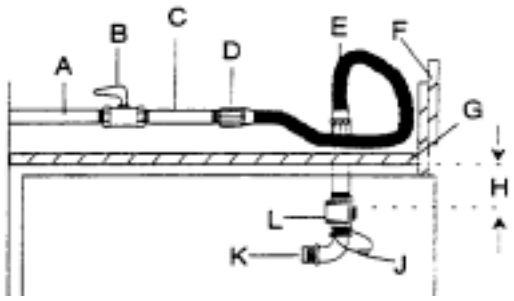
Assemble gas supply line to oven. All gas supply piping tubing, fittings, and shutoff valves are not supplied with this oven. See examples.

NOTE: Refer to National Fuel Gas Code to determine gas pipe sizing requirements, if oven



performance is in question.

A --- ½-inch rigid pipe supply line.
B --- Manual shutoff valve
C --- Nipple
D --- Union
E --- Elbow
F --- Upper cabinet door or removable panel
G --- Upper cabinet shelf.
H --- 2 1/4 inches
J --- L.P. orifice spuds.
K --- Inlet to oven.



L --- Pressure regulator.

A --- ½-inch rigid pipe supply line.
B --- Manual shutoff valve.
C --- Nipple
D --- Adapter.
E --- Flexible gas connector.
F.--- Upper cabinet door or removable panel.
G--- Upper cabinet shelf
H --- 2 1/4 inches.
J --- L.P. orifice spuds

INSTALLATION INSTRUCTIONS

Gas Supply Pressure

⚠CAUTION

To avoid property damage, maximum gas supply pressure must not exceed 14" WCP.

- Appliance and 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 ½ psig (3.5 kPa) (14" WCP).
- Appliance must be isolated from gas supply piping system by closing manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than ½ psig (3.5 kPa) (14"WCP).
- Gas supply pressure for checking regulator setting must be at least 1" WCP above manifold pressure shown on rating label.

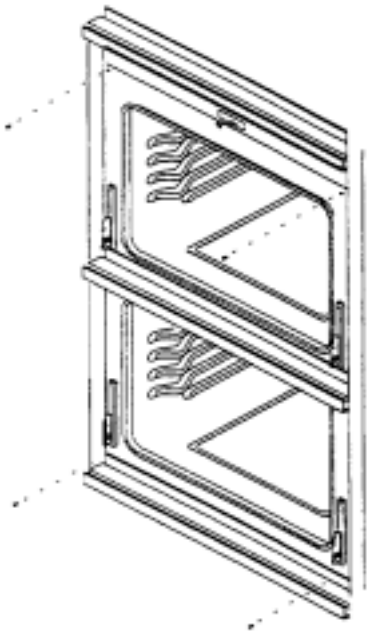
Seal Openings

Openings in wall behind the oven or on the floor under oven must be sealed before sliding oven into position.

Place Oven in Wall

This procedure should be performed by 2 people.

1. Lean oven to each side and remove shipping base.
2. Move wall oven close to wall opening and plug in oven cord.
3. Place in wall opening.
4. Secure wall oven to cabinet with 4 screws.



Converting Pressure Regulator for Use with Natural Gas or Propane Gas

This oven arrives from factory adjusted for use with natural gas. If using LP/propane gas is desired, oven must be converted. See “Type 1" or Type 2" regulator.

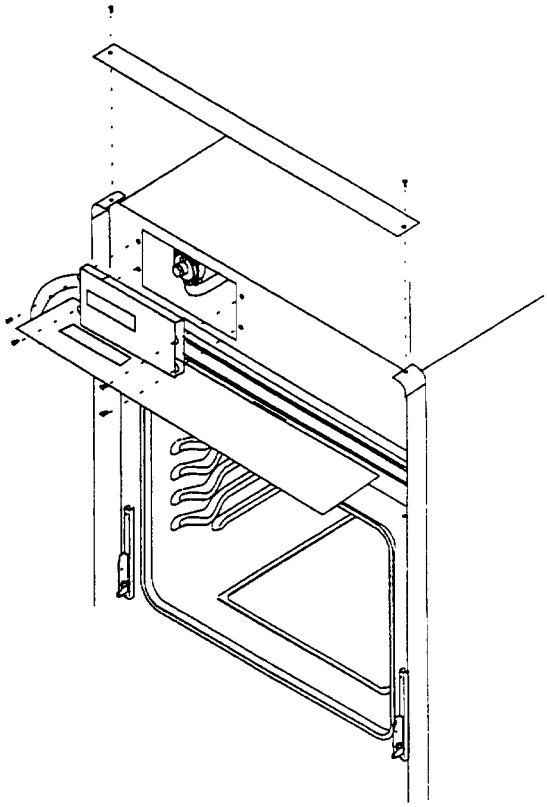
⚠WARNING

To avoid electrical shock that can cause personal Injury or death, disconnect main electrical supply To oven before servicing.

Remove Control Panel

To convert pressure regulator remove oven control panel.

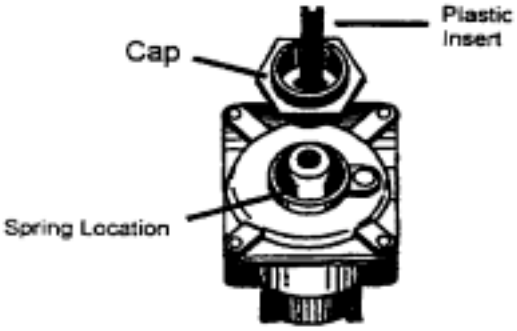
1. Remove 2 screws and lift off top trim.
2. Tilt control panel out to expose electronic range control.
3. Remove 4 screws and pull out range control to expose pressure regulator.
   - Broiler burner orifice spuds are wired to manifold behind pressure regulator.
4. After converting broiler burners and wiring orifice



INSTALLATION INSTRUCTIONS

Converting Type 1 Pressure Regulator for Use with LP/ Propane

1. Remove pressure regulator cap with a wrench.
2. Remove plastic insert from pressure regulator cap.
   - Plastic insert fits tightly in cap.
3. Reverse plastic insert and carefully push plastic insert firmly into hole in pressure regulator cap.
   - Cap must show “LPG10" or “LP10".



4. Place pressure regulator cap on pressure regulator and tighten.
   - Insert should not disturb spring in body of regulator.

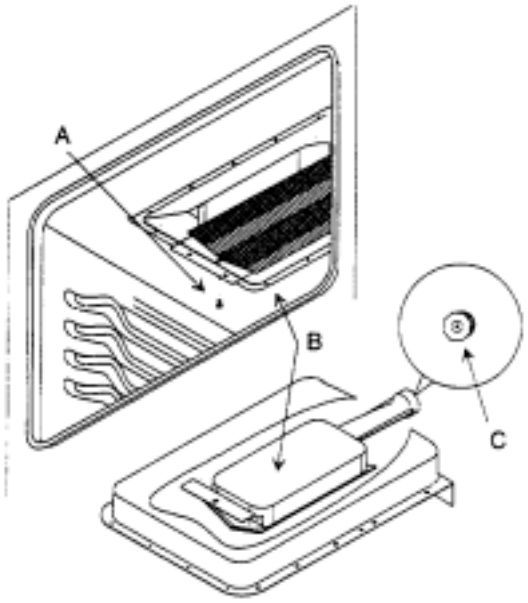
Converting Type 2 Pressure Regulator for Use with LP/Propane

1. Remove pressure regulator cap with a wrench.
2. Reverse pressure regulator cap.
   - Cap must show “LP”.

3. Place pressure regulator cap on pressure regulator and tighten.

Converting Broiler Burner for Use with LP/Propane

1. Locate orifice spud attached adjacent to pressure regulator and remove for later use.
2. Open oven door and locate broiler burner on oven ceiling.
   - Remove oven door to make conversion easier. See “Removing Oven Door” section.
3. Remove screw securing front of burner to oven ceiling and remove broiler.
   - Be careful not to damage ignitor while removing broiler.



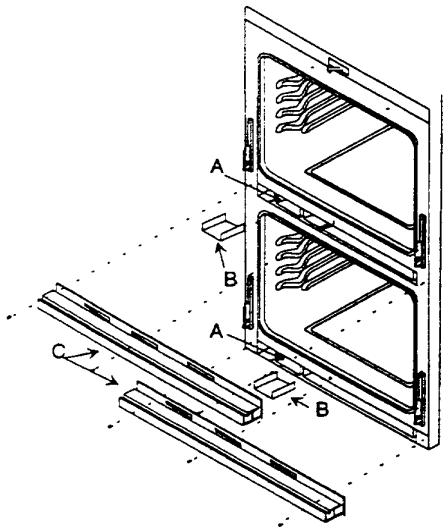
A--- Remove Screw B --- Broiler C --- Orifice

4. Unscrew natural gas burner spud stamped “52" with 5/16-inch socket wrench and replace with LP/propane burner spud stamped “58".
   - Attach unused burner spud near regulator for future use.
5. Reinstall broiler.

INSTALLATION INSTRUCTIONS

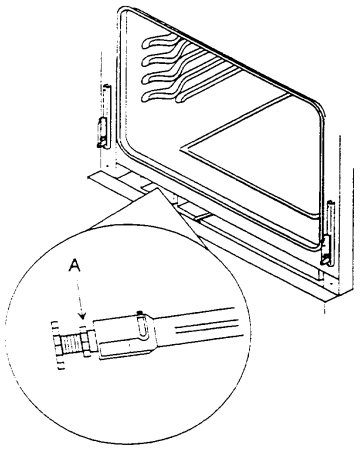
Converting Oven Burners for Use with LP/Propane
Lower burner orifices and air shutters are located behind front trim. Remove oven trim to convert oven burners.

1. Remove oven doors.
   - See "Removing Oven Doors" section.
2. Remove screws (3) from each trim piece.
3. Pull trim away from oven.
   - Each orifice box has an air channel. Air channel must be in place before reinstalling trim.
   - Reverse procedure to reinstall trim.



A --- Air Channel B --- Orifice Box C --- Trim

4. Turn (tighten) orifice hood clockwise until snug.
   - Do not over tighten orifice hoods. Orifice hoods can strip.



A – Orifice Hood

5. Replace trim after burner is tested and air shutter is properly adjusted.
   - See "Test and Adjust Oven Burner " section.

Converting Type 1 Pressure Regulator for Use with Natural Gas

1. Remove pressure regulator cap with a wrench.
2. Remove plastic insert from pressure regulator cap.
   - Plastic insert fits tightly in cap.
3. Reverse plastic insert and carefully push plastic insert firmly into hole in pressure regulator cap.
   - Insert must show "NAT" or be blank.
4. Place pressure regulator cap on pressure regulator and tighten.
   - Insert should not disturb spring in body of regulator.

Converting Type 2 Regulator for Use with Natural Gas

1. Remove pressure regulator cap with a wrench.
2. Reverse pressure regulator cap.
   - Insert shows "NAT" or is blank.
3. Place pressure regulator cap on pressure regulator and tighten.

Converting Oven Burner for Use with Natural Gas
Lower burner orifices and air shutters are located behind front trim. Remove oven trim to convert oven burners.

1. Remove oven doors.
   - See "Removing Oven Door" section.
2. Remove screws (3) from each trim piece.
3. Pull trim away from oven.
   - Each orifice box has an air channel. Air channel must be in place before reinstalling trim.
   - Reverse procedure to reinstall trim.
4. Turn (loosen) orifice hood counterclockwise 2 full turns.
5. Replace cover plate and storage drawer.

INSTALLATION INSTRUCTIONS

Converting Broiler Burner for Use with Natural Gas

1. Locate orifice spud attached adjacent to pressure regulator and remove for later use.
   - Orifice spud used for natural gas is silver and is stamped “52".
2. Open oven door and locate broiler burner on oven ceiling.
   - Remove oven door to make conversion easier. See “Removing Oven Door” section.
3. Remove screw securing front of burner to oven ceiling and remove broiler.
   - Be careful not to damage ignitor as you remove broiler.
4. Unscrew LP/propane burner spud stamped “58" with 5/16 inch socket wrench and replace with natural gas spud stamped “52". Replace LP spuds on inlet piping.
5. Reinstall broiler and, if necessary, oven door.

Gas Connection

Connect gas supply to regulator using hard pipe or flexible connector (check local codes). Pressure regulator supplied with this appliance has a ½ inch NPT female connector.

- A manual shutoff , not supplied with oven, must be installed in an accessible location outside of oven.
- Use joint compound that is resistant to action of propane gas on all male pipe threads.
- Do not over tighten gas fitting when attaching to pressure regulator. Over tightening may crack regulator.
- Support pressure regulator with wrench when installing gas fitting.

⚠WARNING

To avoid property damage or personal injury, only use a new flexible connector that is AGA/CGA design certified.

- Do not use an old connector.
- Do not reuse a connector after moving appliance.

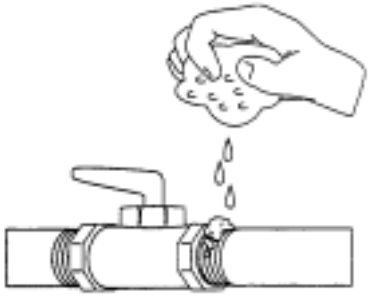
Testing for Gas Leaks

After final gas connections are made, turn on manual gas valve and test all connections in gas supply piping and oven for gas leaks.

⚠WARNING

To avoid property damage or serious personal injury, never use a lighted match to test for gas leaks.

1. Place soap suds on connection.
   - Bubbles appear if leak is present.
2. If bubbles appear, shut off gas supply valve.
3. Tighten joint if leak is at factory fitting.
   - If leak is not at factory fitting, unscrew, apply more joint compound, and tighten to correct leak.



4. Retest connection for leak after tightening.
   - Retest any connections that were disturbed.

Test Oven Burner Flame

Properly adjusted oven burner flames are blue with a distinct deep blue inner cone approximately ½ inch long. When using natural gas, flame should not have any yellow flame when burning. Some yellow flame when burning LP/propane gas is normal.

Flame should not be visible in the oven cavity when burning and should not extend into the oven cavity beyond the removable oven bottom.

- If burner flame is blowing or noisy, reduce airflow to burner.
- If burner flame is yellow and does not hold its shape, increase airflow to burner.

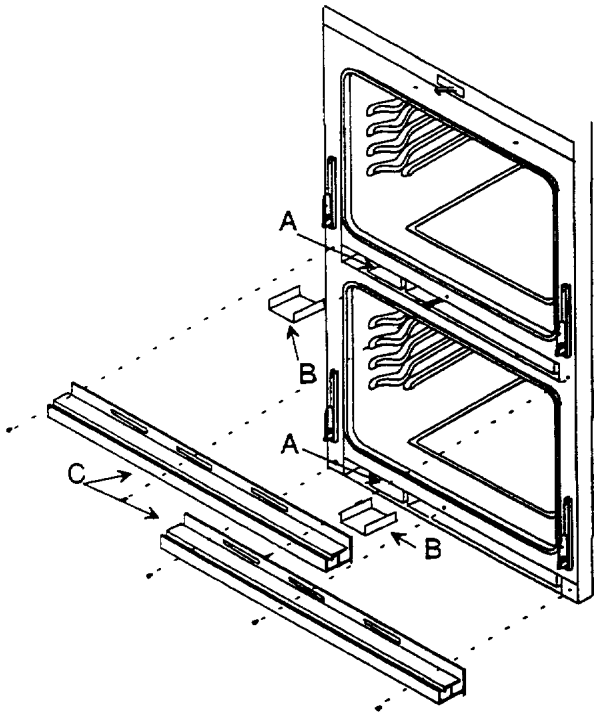
INSTALLATION INSTRUCTIONS
Adjust Oven Burner Flame

⚠WARNING

To avoid electric shock that can cause personal injury or death, disconnect main electrical supply to oven before servicing.

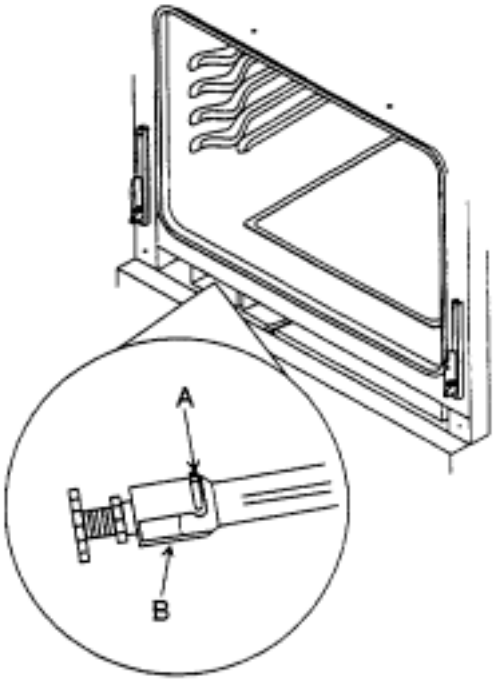
Lower burner orifices and air shutters are located behind front trim. Remove oven trim to adjust oven burners.

1. Remove oven doors.
   - See "Removing Oven Door" section.
2. Remove screws (3) from each trim piece.
3. Pull trim away from oven.
   - Each orifice box has an air channel. Air channel must be in place before reinstalling trim.
   - Reverse procedure to reinstall trim.



A --- Air Channel B --- Orifice Box C --- Trim

4. Loosen air shutter screw and open or close air shutter.



A --- Air Shutter screw B --- Air Shutter

5. Replace trim after burner is tested and air shutter is properly adjusted.

Test Broiler Flame

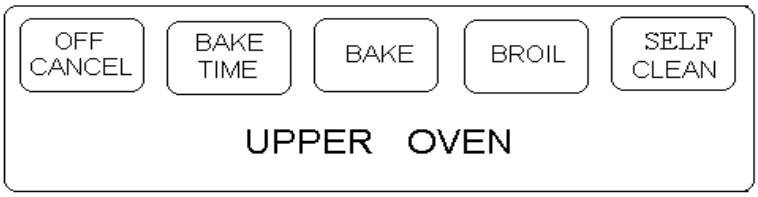
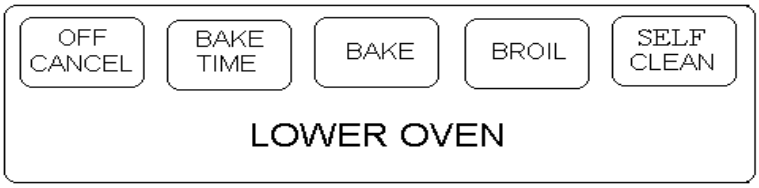
Broiler flame should appear hazy or fuzzy. Haze should be no more than 3/8 inch thick. The radiant screen should begin to glow red within 1--2 minutes.

Removal and Replacement of Oven

1. Disconnect power to oven at circuit breaker or fuse panel.
2. Turn off manual shutoff valve, and disconnect gas supply.
3. Remove oven, unplug power cord, and place oven aside.
4. To reinstall oven, follow instructions in Installation section of this manual.
   - Do not reuse a flexible connector after moving appliance.

PROGRAMMING INSTRUCTIONS

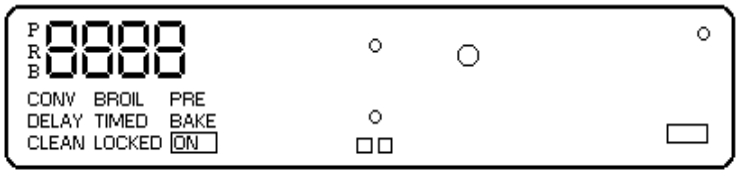
Controls clock, timer, and interior oven light for both ovens. **STOP TIME** pad is used to program delayed bake and delayed clean features for both upper and lower ovens.

Oven Control	**Description**
	Controls upper oven settings. Any time or temperature settings entered only effect upper oven.
	Controls lower oven settings. Any time or temperature settings entered only effect lower oven.

Pad	**Description**
OVEN LIGHTS	Turn light on and off in both upper and lower ovens.
TIMER ON/OFF	Use to time any kitchen function or cancel timer. Does not control bake, broil, or clean functions.
CLOCK	Use to set time of day.
STOP TIME	Use to set delayed bake and delayed self-clean.
OFF / CANCEL	Cancels any baking or cleaning function except timer.
COOK TIME	Use to set timed baking.
CLEAN	Use to set self-clean cycle.
BROIL	Use to select broil.
BAKE	Use to select bake.
+ *or* -	Use to set temperature or time.

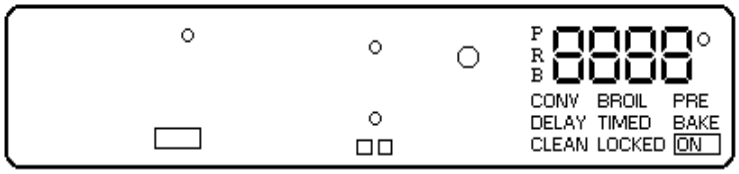
PROGRAMMING INSTRUCTIONS

Display
Some items in display can be seen but will not glow.



Displays temperature and baking method or function for upper oven.

Displays time-of-day, timer and Timed of delayed settings.



Displays temperature and cooling method or function for lower oven.

DESCRIPTION of DISPLAY

TIME AM, PM or HR	TIME AM or PM Flashes in display while time-of -day is entered. TIME HR flashes when time is entered for timed or delayed baking or delayed self-cleaning.
TIMER counts down.	Flashes in display while timer is set. TIMER stops flashing and displays while time
PRE-BAKE, BAKE	BAKE flashes while bake oven temperature is entered. While oven preheats PRE-BAKE displays. After oven has reached temperature, BAKE displays.
ON	Displays when oven is heating.
OVEN 1 or 2	Flashes while time is entered for timed or delayed baking. 1 displays when upper oven is set. 2 displays when lower oven is set.
TIMED BAKE	Flashes, then displays when a time baking cycle is set.
DELAYED TIME BAKE or CLEAN	Displays when delayed bake or self-clean cycle is set.
STOP	Displays when setting stop time for a delayed baking or self-clean cycle.
BROIL	Flashes, then displays when a broil is set.
CLEAN	Displays when self-clean cycle is entered and set.
LOCK	LOCK flashes while oven door is locked and remains in display while door is locked. After cycle is complete and oven has cooled to a safe temperature, LOCK no longer displays and door can be opened.
HLD	Displays when oven is holding oven temperature at 170°F for 1 hour.
SLO	Displays when oven is set to slow-bake temperature. Oven cooks like crockpot for up to 12 hours. Approximately 225°F.

PROGRAMMING INSTRUCTIONS

Oven Signals

Preheat signal	After setting oven to bake and selecting a temperature, oven preheats. When oven reaches set temperature, 1-second signal sounds.
Timer and end-of-cycle Signal	When a timed baking cycle is complete or time elapses on timer, three long signals sound, then once approximately every 6-8 seconds. End of cycle signal continues to sound until OFF/ CANCEL pad is pushed . If minute timer end of cycle signal is sounding, push TIMER ON/OFF pad. No signal will sound at the end of a clean cycle.

Other Features

12-hour automatic cancel	This safety feature prevents oven from continuing to operate if it has been left on for over 12 hours. If a cooking function continues longer than 12 hours without any options on oven control being touched, this feature turns oven off. Any time an option is touched, 12-hour automatic cancel is reset.
Child lockout	This safety feature is used to prevent children from accidentally programming oven by disabling electronic oven control. On the upper oven control press and hold BAKE and BAKE TIME for 5 seconds. "OFF" displays where the temperature normally appears. To reactivate control, press and hold BAKE and BAKE TIME pads for 5 seconds on the upper oven control. Child lockout must be reset after a power failure.
Service codes and tones	Electronic range control is equipped with a self diagnostic system. Self diagnostic system alerts you if there is an error or problem in the control. If electronic range control sounds a series of short, rapid beeps for over 16 seconds and display shows a F-code, record the F-code shown. Some F-codes can be cleared by touching OFF/ CANCEL or disconnecting power to the range. If the code continues to reoccur call an authorized servicer. Disconnect electrical supply to range and contact an authorized servicer. F1--Control malfunction F2--High oven temperature F3--Temperature sensor malfunction F4--Temperature sensor malfunction F7--Touch pad malfunction F9--Door lock malfunction (door unlocked) FF--Door lock malfunction (door locked)

Sounds

Oven Fan	Oven cooling fan can turn on while oven is heating to cool range control

PROGRAMMING INSTRUCTIONS

Quick Reference Instructions
Read "Important Safety Instructions" before using "Quick Reference Instructions". If there are unanswered questions, see detailed sections of this manual.

Flashing Display
When power is connected to oven display flashes. Press OFF/ CANCEL to clear display.

Setting Electronic Clock
1. Press CLOCK pad.
2. Press ***+ or -*** *pad* until correct time-of-day displays.
   - Clock saves time-of-day approximately 5-10 seconds after time is entered.

Setting Electronic Timer
1. Press TIMER pad.
2. Press ***+ or - pad*** until correct time displays.
3. Press TIMER pad again to cancel

Resetting and Canceling Timer
To reset the time when remaining time is displayed, press ***+ or - pad*** until new time displays. To cancel timer, press and hold TIMER pad for approximately 5 seconds.

Baking
1. Press BAKE pad.
2. Press + *or* - *pad* until desired temperature is displayed.
3. Press OFF/ CANCEL pad when finished.

Time Baking
1. Place food in oven.
2. Press BAKE TIME pad.
3. Press + *or* - *pad* until desired baking time is displayed.
4. Press BAKE pad.
5. Press + *or* - *pad* until desired temperature displays.
6. Press OFF/ CANCEL pad when finished.

Delayed Baking
1. Place food in oven.
2. Press BAKE pad.
3. Press + *or* - *pad* until desired temperature is displayed.
4. Press STOP TIME pad.
5. Press + *or* - *pad* until desired stop time displays.
6. Press BAKE TIME pad.
7. Press + *or* - *pad* until desired baking time displays.

To Cancel Remaining Baking Time
1. Press OFF/ CANCEL pad.

Instant Broil
1. Center food on broiling grid and pan, and place on rack in oven.
2. Push BROIL pad.
3. Press + *pad* to set HI, *-pad* to set lower broil temperature.
4. Press OFF/ CANCEL pad when finished.

Self-cleaning
1. Prepare oven for self-cleaning.
2. Press CLEAN pad.
3. Press + *or* - *pad* to adjust desired amount of cleaning time.
4. Press OFF/ CANCEL pad when finished.

Delayed Self-clean Cycle
1. Prepare oven for self-cleaning.
2. Press CLEAN pad.
3. Press + *or* - *pad* to adjust desired amount of cleaning time.
4. Press STOP TIME pad.
5. Press + *or* - *pad* until desired stopping time appears in display.
6. Press OFF/ CANCEL pad when finished.

Interrupt Self-clean Cycle
1. Press OFF/ CANCEL pad.
2. After oven has cooled to a safe temperature, door can be opened.

Hold
1. Press BAKE pad.
2. Press - *pad* until 170° , then HLD is displayed.
3. Press OFF/ CANCEL pad when finished.

Slow Bake
1. Press BAKE pad.
2. Press *-pad* until 170°, then HLD, and then SLO is displayed.
3. Pres OFF/ CANCEL pad when finished.

Timed Slow Bake
1. Place food in oven.
2. Press BAKE TIME pad.
3. Press + *or* - *pad* until desired baking time is displayed.
4. Press BAKE pad.]

6. Press OFF/CANCEL pad when finished.

Delayed Slow Bake
1. Place food in oven.
2. Press STOP TIME pad.
3. Press + *or* - *pad* until desired baking time displays.
4. Press BAKE TIME pad.
5. Press + *or* - *pad* until desired baking time displays.
6. Press BAKE pad.
7. Press - *pad* until 170°, HLD, and then SLO is displayed.

To Cancel Remaining Baking Time
Press BAKE CANCEL pad.

Flashing Display
When power is connected to oven display flashes. Press OFF/CANCEL to clear display.

Setting Electronic Clock
When power is connected or restored, display flashes until pad is pressed.
1. Press CLOCK pad.
2. Press + *or* - *pad* until correct time-of-day displays.
   - Time increases in larger increments the longer + *or* - *pad* is held.
   - Clock saves time-of-day approximately 5-10 seconds after time is entered.

Setting Electronic Timer
The timer is a timer only. Electronic timer does not control bake, broil, or self-clean function. Timer can be set up to 11 hours and 50 minutes. Up to 1 hour, timer displays minutes and seconds. After 1 hour, timer displays hours and minutes.
1. Press TIMER ON/OFF pad.
2. Press +*or* - *pad* until correct time displays.
   - Timer increased in larger increments the longer + *or* - *pad* is held.
   - Timer begins counting down automatically after time is entered.
3. Press TIMER ON/OFF pad to cancel timer signal.
   - After time elapses, timer beeps approximately once a second until TIMER ON/OFF pad is pressed.

Resetting and Canceling Timer
To reset the time when remaining time is displayed, press TIMER ON/OFF pad, then + *or* - *pad* until new time displays.

To cancel timer, press and hold TIMER ON/OFF pad for approximately 5 seconds.
Also, to cancel timer, press TIMER ON/OFF pad, then press + *or* - *pad* until timer displays “00".

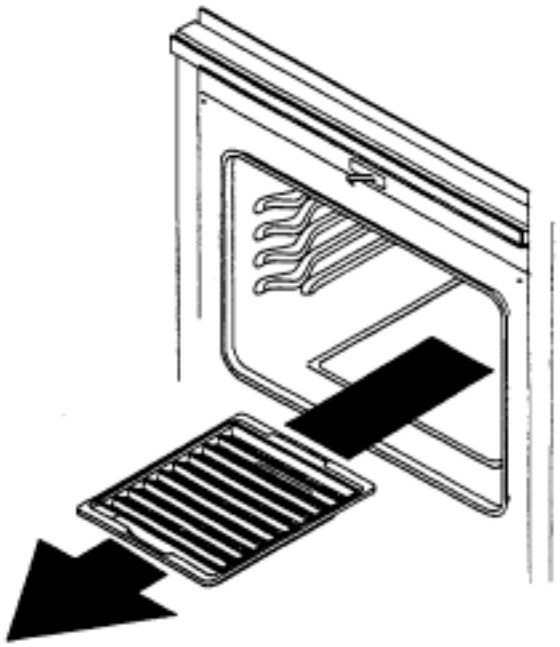
Prepare to Bake, Broil, Timed Bake, and Delayed Bake

CAUTION

To reduce risk of food poisoning due to bacterial growth and production of toxins, never hold meat, milk, fish or eggs for more than 2 hours before cooking.

Remove Items Stored in Oven
Remove any pans and other cooking utensils stored in oven. Items left in oven can cause damage to the oven or item in oven.

Never store the broiler pan or place utensils directly on the oven bottom. If the broiler pan or utensils are left on the oven bottom while heating, the oven bottom can chip or be damaged.



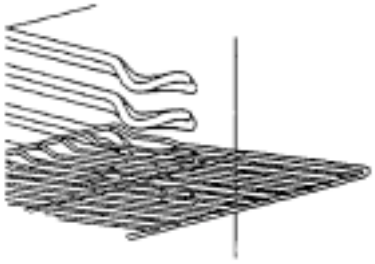
PROGRAMMING INSTRUCTIONS

Oven Rack Placement
Position oven rack before turning oven on.

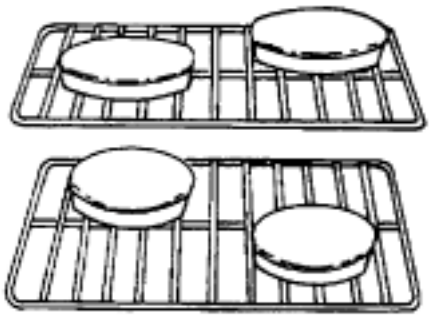
⚠WARNING

To avoid damaging oven liner or creating fire, do not line oven bottom or oven racks with foil.

1. Pull rack forward to stop position.
2. Raise front edge of rack and pull until rack is out of oven.
3. Place rack in new rack position.
   - Curved edge of rack must be toward rear of oven.



Pan Placement
- Keep pans and baking sheets 2 inches from oven walls.
- Stagger pans placed on different racks so one is not



directly over the other.

Check for Bake Burner Flame
Allow no more than 40 - 60 seconds before burner ignites and heat is felt. To check for heat, open oven door to first stop and place hand over oven door. If heat is not felt, press OFF/CANCEL. If burner repeatedly fails to ignite, contact an authorized servicer.

Baking
Open oven door to confirm nothing is stored in oven cavity and set racks to proper height before baking. Preheat approximately 10 -15 minutes before placing food inside oven.
1. Press BAKE pad.
2. Press + *or* - *pad* until desired temperature is displayed.
   - Temperature can be set from 170°F to 550°F in 5 degree increments.
   - Temperature starts at 170°F and increases in 5° increments until reaching set temperature. Some minor smoking is normal when using oven for first time.
   - When bake temperature is reached oven signal sounds for approximately 1 second.
3. Press OFF/CANCEL pad when finished.
   - Remove food from oven when baking time has elapsed. Food left in oven can overcook.

Time Baking
Set oven to cook for desired amount of time. Oven automatically stops heating after time elapses.
1. Place food in oven.
2. Press BAKE TIME pad.
3. Press + *or* - *pad* until cooking time is displayed.
   - Cook time can be set up to 11 hours and 50 minutes.
   - 10 minutes minimum baking time.
4. Press BAKE pad.
5. Press + *or* - *pad* until desired temperature is displayed.
   - Temperature can be set from 170°F to 550°F in 5° increments.
   - Temperature display increases in 5°F increments starting 100°F until reaching set temperature. Some minor smoking is normal when using oven for first time. When bake temperature is reached oven signals.
   - To view bake time, press and hold BAKE TIME pad.
   - When baking time has elapsed, an end of cycle signal sounds, oven automatically turns off and display returns to time of day. Oven signal sounds 3 times, then once every 3 seconds for 5 minutes or until OFF/ CANCEL pad is pressed.
6. Press OFF/CANCEL pad when finished.
   - Remove food from oven when baking time has elapsed. Food left in oven can overcook.

To Cancel Remaining Baking Time

PROGRAMMING INSTRUCTIONS

Delayed Baking

Set oven to begin and end baking at later time. Range control automatically calculates starting time.

1. Place food in oven.
2. Press STOP TIME pad.
   - Current time of day appears in display.
3. Press + *or* - *pad* until desired stop time displays.
   - Stop time can be set 11 hours 50 minutes ahead of current time of day.
4. Press BAKE TIME pad.
5. Press + *or* - *pad* until desired baking time displays.
   - 10 minimum baking time.
6. Press BAKE pad.
7. Press + *or* - *pad* until desired temperature is displayed.
   - Temperature can be set from 170°F to 550°F in 5° increments.
   - Electronic range control calculates start time.
   - When start time is reached "DELAY" no longer displays and "ON" displays.
   - To view stop time, press and hold STOP TIME pad.
   - When baking time has elapsed, end of cycle signal sounds, oven automatically turns off and display returns to time of day. Oven signal sounds 3 times, then once every 3 seconds for 5 minutes or until OFF/CANCEL pad is pressed.

To Cancel Remaining Baking Time

press OFF/CANCEL pad.

Prepare for Broiling

WARNING To avoid risk of fire, do not line the broiler grid with foil.

- Foil may trap grease on top of grid close to burner causing a fire.
- Never leave oven unattended while broiling. Overcooking may result in a fire.

Broiling Tips

- Remove excess fat from meat before broiling. Cut edges of meat to prevent curling.
- Place food on a cold ungreased broiling pan. If pan is hot, food sticks.
- All food except fish should be turned at least one time. Begin broiling with skin side down,
- Season meat after it has browned
- Broiling does not require preheating.
- Begin broiling using suggested rack levels in *Broil Guide* .section to test broiler results. If food is not brown enough, broil on a higher rack position. If food is too brown, broil on a lower rack position.

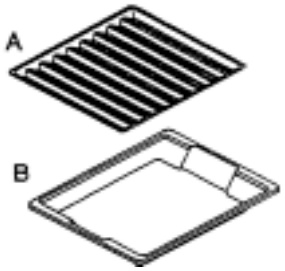
Infrared Broiling System

Infrared Broiling System generates immediate, intense heat using a special screen. This screen focuses heat directly on the food; searing in natural juices and providing restaurant quality, charbroiled flavor.

1. Center food on broiler grid and pan, and place on rack in oven.
   - Oven door should be closed.

A --- Broiler Grid

B --- Broiler Pan



2. Push BROIL pad.
3. Press + to set HI broil or - pad to set lower broil temperature
   - Temperature sets to HI or from 170°F to 550°F.

Broiler Setting Flame

HI	Broiling red meats
545	Broiling pork
525	Broiling poultry
475	Broiling seafood
425	Broiling fruits and vegetables
400 and below	Toasting and warming breads

4. Press OFF/CANCEL pad when finished.

Check Broiler Flame

Allow no more than 40--60 seconds before burner ignites and flame is seen. If burner does not ignite, press OFF/CANCEL pad. If burner repeatedly fails to ignite within 40--60 seconds contact an authorized servicer.

Hold

The hold feature holds the oven temperature at a low temperature for 1 hour to keep food warm.

1. Press BAKE pad.
2. Press - pad until 170°, then HLD is displayed.
3. Press OFF/CANCEL pad when finished.
   - Remove food from oven when broiling time has

PROGRAMMING INSTRUCTIONS

Prepare for Self-Clean and Delayed Self-Clean Cycle

⚠WARNING

To avoid risk of personal injury, do not touch oven vents or area around vents during self-cleaning. These areas can become hot enough to cause burns.

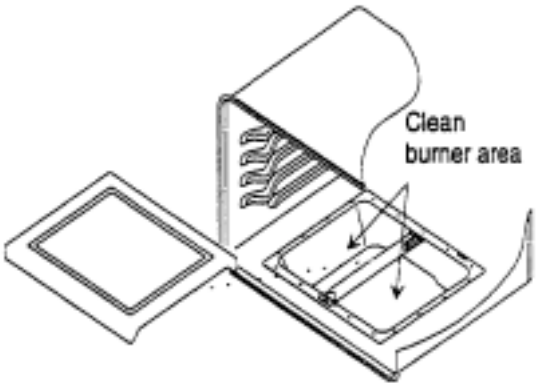
To avoid risk of smoke damage or fire, clean excess spills from oven interior.

- A small amount of smoke is normal when cleaning. Excess smoke may indicate a faulty gasket or too much food residue has been left in oven. Move birds and small animals susceptible to fumes or smoke to another room.
- Do not use cleaning cycle if oven light cover is not properly in place.
- Remove oven racks and all baking utensils from oven.

Clean Burner Area

Wear hand protection to avoid injury from sharp edges.

1. Pull oven bottom forward and lift out.
2. Wipe out burner area around burner with cloth and warm soapy water.
3. Dry area thoroughly. Replace oven bottom.



Self-Cleaning

Self-clean feature uses high oven temperature to clean oven interior. Only one oven can be cleaned at a time.

1. Prepare oven for self-cleaning.
2. Press CLEAN pad.
3. Press + *or* - *pad* to adjust desired amount of cleaning time.
   - Increase or decrease cleaning time by 5 minute increments.
   - Clean can be set from 2 to 4 hours. Minimum recommended cleaning time is 3 hours.
   - "LOCK" flashes while oven door is locking and remains in display while door is locked.
   - Oven begins to clean automatically.
4. Press OFF/CANCEL pad when finished.
   - After oven has cooled to a safe temperature, "LOCK" no longer displays and door is unlocked.

Delayed Self-Clean Cycle

Self-clean feature uses high oven temperature to clean oven interior. Set oven to begin and end cleaning at later time. Control calculates back from end time to determine starting time. Only one oven can be cleaned at a time.

1. Prepare oven for self-cleaning.
2. Press CLEAN pad.
3. Press + *or* - *pad* to adjust desired amount of cleaning time.
   - Increase or decrease cleaning time by 5 minute increments.
   - Clean can be set from 2 to 4 hours. Minimum recommended cleaning time is 3 hours.
4. Press STOP TIME pad.
5. Press + *or* - *pad* until desired stopping time appears in display.
   - Starting time is automatically calculated back based on amount of cleaning time and stop time. Oven begins to clean automatically.
   - "LOCK" flashes while oven door is locking and remains in display while door is locked.
   - To view remaining cleaning time, press and hold CLEAN pad.
   - To view calculated stop time, press and hold STOP TIME pad.
6. Press OFF/CANCEL pad when finished.
   - After oven has cooled to a safe temperature, "LOCK" no longer displays and door is unlocked.

Interrupt Self-Clean Cycle

1. Press OFF/CANCEL pad.
2. After oven has cooled to a safe temperature, door can be opened.

Adjusting Oven Temperature

Oven temperature has been factory calibrated and tested. In the unlikely event that oven consistently overcooks or undercooks food, oven temperature can be adjusted.

1. Press BAKE pad.
2. Press + until an oven temperature greater than 500°F shows in display.
3. Immediately press and hold BAKE pad until "00" appears in display, approximately 5 seconds.
4. To decrease oven temperature (for cooler oven), press - until negative numbers appear. Oven can be adjusted from -05° to - 35° lower. To avoid over-adjusting oven move temperature -5° each time.
5. To increase oven temperature (for a warmer oven) press + until positive numbers appear. Oven can be set from 05° to 35° higher. To avoid over adjusting oven, move temperature 5° each time.
6. Press 0FF/CANCEL pad. Temperature adjustment will be retained even through a power failure.

Service Tones and Codes

Electronic range control has a self-diagnostic system.

Self-diagnostic system sounds a series of short, rapid beeps and shows an "F-code" in display when there is a problem. When electronic range control signals a problem, follow steps listed below.

1. Record "F-code" shown.
   - See, **DIGIT FAILURE DISPLAY** in "Warnings and Failure Codes" section.
2. Disconnect electrical supply.
   - Pressing OFF/CANCEL pad or disconnecting electrical supply may eliminate "F-code". If failure continues, contact an authorized servicer.
3. Contact an authorized servicer to check range.

NOTES:

WARNING To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

TESTING PROCEDURES

Service Information

Electronic Range Control (ERC) operates in conjunction with a transformer/relay board 1, relay board 2, and oven temperature sensor(s) to control all bake, broil, and self-clean functions.

The ERC is connected to a mylar control panel incorporating minute timer, clock, stop time, oven light, cancel, bake, bake time, broil, and clean. Slew pads are used to set times and temperatures.

The mylar control panel provides direct input to the ERC to control all functions.

The ERC display consists of two digital readouts which displays all timing functions, and all temperature functions.

The transformer/relay board for upper oven consists of oven light, bake, broil, door lock, and double line break relays controlled by the ERC, and a step down transformer with two secondary windings which convert 120 VAC input to filament voltage (3.2--4.2 VAC) to power the ERC display.

The relay board for lower oven consists of bake, broil, door lock, and double line break relays controlled by the ERC.

Oven temperature sensor 1 is mounted in the upper oven cavity and connected to the J4 connector on the rear of the ERC. Oven temperature sensor 2 is mounted in the lower oven cavity and connected to the J6 connector on the rear of the ERC. As the oven temperature increased, the sensor resistance also increases. The ERC converts this resistance to a corresponding temperature readout and cycles the relay(s) to maintain the desired temperature setting.

The ERC is also capable of sensing certain failure conditions which can occur in the oven temperature sensor(s), the self clean latch switch(es) the adaptor board or the ERC itself. If the ERC senses a failure, power will be removed from the relays, an alarm will sound and a failure code will be displayed.

Each major component of the ERC system is serviced as a separate part. However, each component and related wire harness must be tested prior to replacing an individual component.

Quick Test Procedure

"Quick Test" Mode for Electronic Range Control

Follow procedure to use the quick test mode. Entries must be made within 32 seconds of each other or the control will exit the quick test mode. The quick test mode cannot be reactivated until power is disconnected from oven, and must be accessed with in 5 minutes of powering up.

NOTE: To enter Quick Test mode, this **must** be the first key pad entered after power is applied.

1. Apply power to oven **press and hold** BAKE TIME (upper oven) pad for 5 seconds.
2. Display will read the following:

Pad	Response
CLEAN	Double Line Break (DLB) on
BAKE	DLB and Bake on
BROIL	DLB and Broil on
STOP TIME	Panel light and beeper on
BAKE TIME	Displays manufacturer code and sensor readings "000" = open sensor
TIMER	Displays dashes
CLOCK	All display segments illuminated
OVEN LIGHT	Oven light on
CANCEL	Exit Quick test
SLEW	Sequences through display segments

ERC Warnings and Failure Codes

The ERC is capable of detecting certain failures within the ERC, along with oven temperature sensor and self clean door latch switch.

The warning and failure codes which may appear on the display:

ERC will flash "door", if one full door lock cycle has not been completed within 60 seconds of energizing the door lock relay.

DIGIT FAILURE DISPLAY

F1	control malfunction - **Replace ERC**
F2	oven over temperature - **Check sensor wiring, sensor, and temperature limiter**
F3	open sensor or sensor circuit - **Check sensor resistance and wiring**
F4	shorted sensor or sensor circuit - **Check sensor resistance and wiring**
F7	shorted input key - **verify control panel to p.c. board connection, test control panel continuity, replace control panel**
F9	failure of door lock switch sensing with door unlocked - **Check latch switch, door motor, check plunger switch, and wiring.**
FF -	failure of door lock switch sensing with door locked **Check latch switch, door motor, check plunger switch, and wiring**

WARNING To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

TESTING PROCEDURES

Temperature Calibration Offset

The ERC incorporates ± 35°F calibration offset capabilities for the oven. This adjustment will not effect the cleaning cycle temperature and will remain in memory if power is interrupted. Follow the procedures as listed to calibrate oven.

1. Press BAKE pad.
2. Press + until an oven temperature greater than 500°F shows in display.
3. Immediately press and hold BAKE pad until "00" appears in display, approximately 5 seconds.
4. To decrease oven temperature (for cooler oven), press - until negative numbers appear. Oven can be adjusted from -05° to -35° lower. To avoid over-adjusting oven move temperature -5° each time.
5. To increase oven temperature (for a warmer oven) press + until positive numbers appear. Oven can be set from 05° to 35° higher. To avoid over adjusting oven, move temperature 05° each time.
6. Press OFF/CANCEL pad. Temperature adjustment will be retained even through a power failure.

Function Switch Connection Check Procedure

The Quick-Test mode can be used to verify relay operation on the transformer/relay board. If the relay engages (clicks) during Quick-Test mode it is generally operative.

Transformer/Relay Board 1

The relays for door lock, oven light, bake, and broil, are controlled by approximately a 24 VDC signal from the ERC. Input voltage is 102 - 132 VAC.

Testing of the relays is with voltage applied to oven **after** attaching voltmeter leads to appropriate terminals.

Double Line Break --K6

Drive voltage (24 VDC) indicated at J1 connector Pin 1 and 3.

1. Turn off power to oven.
2. Attach voltmeter lead to E1 connector on relay board.
3. Attach voltmeter lead to E18 connector on relay module.
4. Turn on power and touch bake, broil or convection.
5. If 24 VAC is indicated, the double line break relay is closing. Otherwise, replace the transformer/ relay board.

Bake Relay --K4

Double line break relay okay. Drive voltage at J1 connector pins 3 and 5.

1. Turn off power to oven.
2. Attach voltmeter lead to E18 connector on relay board.
3. Attach voltmeter lead to E11 (BK) connector on relay module.
4. Turn on power and touch the bake pad.
5. If 24 VAC is indicated, bake relay is operating.

Broil Relay --K5

Double line break relay okay. Drive voltage at J1 connector pins 3 and 6.

1. Turn off power to oven.
2. Attach voltmeter lead to E18 connector on relay module.
3. Attach voltmeter lead to E12 (BR) connector on relay module.
4. Turn on power and touch broil pad.
5. If 24 VAC is indicated broil relay is operating.

Oven Light Relay --K10

Drive voltage at J1 connector pins 1 and 4.

1. Turn off power to oven.
2. Attach voltmeter lead to E3 (neutral) connector on relay module.
3. Attach voltmeter lead to E17 connector on relay module.
4. Turn on power and touch oven light pad.
5. If 120 VAC is indicated, oven light relay is operating.

Door Lock Relay --K3

Double line break relay okay. Drive voltage at J1 connector pins 1 and 9.

1. Turn off power to oven.
2. Attach voltmeter lead to E3 (neutral) connector on relay module.
3. Attach voltmeter lead to E8 connector on relay module.
4. Turn on power and program cleaning cycle operation.
5. Two indications will be present during this test.
   - 120 VAC will be present when the lock assembly is being engaged.
   - 0 VAC is indicated when the door is locked and cleaning cycle is operational.

Display (Filament) Voltage

1. Turn power on, turn meter to VAC scale.
2. Touch meter lead to J1-1 terminal.

⚠WARNING To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

TESTING PROCEDURES

Relay Board 2
The relays for oven light, bake, broil, convection element, convection fan and double line break are controlled by approximately 24 VAC signal from ERC. Input voltage is 102 -- 132 VAC.

Testing of the relays is with voltage applied to oven **after** attaching voltmeter leads to appropriate terminals

NOTE: If bake, broil, or convection do not work, the first test would be the relay for double line break.

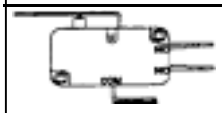
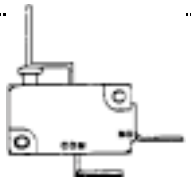
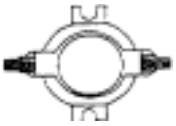
Bake Relay --K2
Double line break relay okay. Drive voltage at J1 connector pins 4 and 5.
1. Turn off power to oven.
2. Attach voltmeter lead to gray wire connection on double line break relay.
3. Attach voltmeter lead to E3 (BA) connector on relay.
4. Turn on power and touch the bake pad.
5. If 24 VAC is indicated bake relay is operating.

Broil Relay --K3
Double line break relay okay. Drive voltage at J1 connector pins 3 and 5.
1. Turn off power to oven.
2. Attach voltmeter lead to gray wire connection on double line break relay.
3. Attach voltmeter lead to E6 (BR) connector on relay module.
4. Turn on power and touch broil pad.
5. If 24 VAC is indicated broil relay is operating.

Door Lock Relay --K4
Double line break relay okay. Drive voltage at J1 connector pins 1 and 7.
1. Turn off power to oven.
2. Attach voltmeter lead to E3 (neutral) connector on transformer/relay board 1.
3. Attach voltmeter lead to E2 connector on relay module.
4. Turn on power and program cleaning cycle operation.
5. Two indications will be present during this test.
   - 120 VAC will be present during the lock assembly is being engaged.
   - 0 VAC is indicated when the door is locked and cleaning cycle is operational.

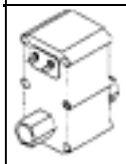
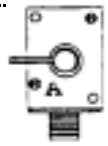
WARNING To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

COMPONENT TESTING INFORMATION

Illustration	Component	Test procedure	Results
	Oven light socket	Test continuity of receptacle terminals. Measure voltage at oven light check wiring.	Indicates continuity with bulb screwed in. 120 VAC, see wiring diagram for terminal identification If no voltage is present at oven light
	Hinge	Carefully open the hinge fully, & insert a wooden dowel or screw-driver bit into opening. Remove top and bottom screws securing hinge. Slide hinge top toward rear of unit and guide hinge out through frame opening or storage drawer	w **CAUTION** Do not place hands in hinge area when oven door is removed. Hinge can snap and pinch hands or fingers.
	Blower motor	Verify supply voltage. Disconnect and check continuity of motor at the terminals, and verify terminals, and are not shorted to chassis.	120VAC Continuity
	Heraeus sensor	Measure resistance	Approximately 1100Ω at room temperature.
	Door lock switch or light switch	Switch connections in following positions: Unlocked Locked	Normally open Com-NO=Open, Com-NC=Closed Com-NO=Closed, Com-NC-Open
	Sail switch	Switch connections in following positions: Not engaged Engaged	Normally open Com-NO=Open, ComNC=Closed Com-NO=Closed, ComNC=Open
	Controls	Verify proper operation. 31833001 Control limi 042056 Fan switch 1-2 (NO) 1-3 (NC)	Normally open Opens at 145°F, Closes at 185°F Opens at 120°F, Closes at 150°F Opens at 150°F, Closes at 120°F
		Bake Burner Verify gas is supplied. Orifice adjusted for Natural or LP. Check for obstructions or contamination in ports.	

WARNING To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

COMPONENT TESTING INFORMATION

Illustration	Component	Teat Procedure	Result
	Broil Burner	Verify gas is supplied. Proper orifice installed for Natural or LP. Check for damage to screen.	Replace if punctured or torn.
	Pressure regulator	Verify gas pressure (WPC). If on LP service verify gas supply conversion.	5" Natural 10" LP/Propane
	Norton Ignitor	Test for voltage at terminals. Test for the amount of amperage in the circuit (Ignitor may glow but not have sufficient amperage to open valve).	120 VAC 3.2 --3.6 Amps
	Gas valve	Disconnect wiring to valve Measure resistance on bake circuit. Measure resistance on broil circuit	**WARNING** Do not attempt to open valve with 120 VAC Continuity Continuity
	Shut off valve	Check to verify gas supply is turned on.	

WARNING To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

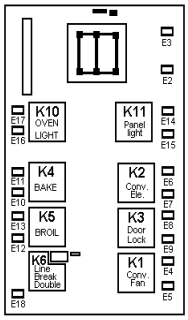
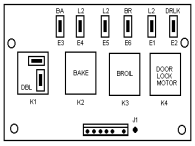
COMPONENT TESTING INFORMATION

ECR mylar touch system

Illustration	Component	Test Procedure	Results
See Illustrations above	Mylar touch system	F1 - Control malfunction. F2 - Oven over temperature. F3 - Open sensor or sensor circuit F4 - Shorted sensor or sensor circuit F7 - Shorted input key. F9 - Door lock or door lock circuitry malfunction (door unlocked) FF - Door lock or door lock circuitry malfunction (door locked) Door - Lock status is not sensed within 90 seconds of energizing door lock relay.	Test mylar touch pad. Check sensor wiring, sensor, and temperature limiter. Check sensor resistance and wiring. Check sensor resistance and wiring. Verify mylar switch connections, replace mylar touch switch. Check latch switch. Check latch switch Verify operation of door latch switches.
ERC control	Oven temperature adjustment	Press *Bake* Press + slew pad until an oven temperature greater than 500° shows on display. Immediately press and hold *BAKE* until “00" appears in display, approximately 5 seconds. To decrease oven temperature (for a cooler oven), press - slew pad until negative numbers appear. Oven can be adjusted from -5° to -35° lower. To avoid over adjusting oven move temperature -5° each time. To increase oven temperature (for warmer oven), press + slew pad until positive numbers appear. Oven can be adjusted 5° to 35° higher. To avoid overadjusting oven move temperature 5° each time. Press *OFF / CANCEL*. Temperature adjustment will be retained even though power failure.	While increasing or decreasing oven temperature, this does not affect self-cleaning temperature.
ERC control	Twelve hour off	Control will automatically cancel any baking operation and remove all relay drives 12 hours after the last pad touch.	
ERC control	Child lock out	This is a safety feature that can be used to prevent children from accidentally programming the oven. If disables the electronic oven control. Press and hold *BAKE* and *BAKE TIME* for approx-Imately 5 seconds. “Off” will display where the temperature normally appears. To reactivate the control, press and hold *BAKE* and *BAKE TIME* for 5 seconds. Child lockout features must be reset after a power failure.	

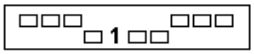
⚠WARNING To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

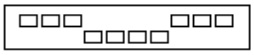
COMPONENT TESTING INFORMATION

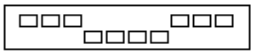
Illustration	Component	Teat Procedure	Results
ERC Controlled	Quick test mode	Press and hold *Bake Time* pad for 5 seconds within the first 5 minutes of power up. (This must be the first pad touhed.) Pressing each pad will force a response from control, releasing the pad ends the response. Entries on control pad must be within 32 seconds of each other or control will exit mode. Mode can exited by pressing *Off/Cancel.* See Quick Test Mode Display below.	Clean: Double line break (DLB) on Bake: DLB and Bake on Broil: DLB and Broil on Stop Time: Panel light and beeper on Bake Time: Displays checks and sensor readings Timer: Displays dashes Clock: Display on full Oven Light: Oven light on Slew pads: Sequences thru display segments Cancel: Exits quick test mode
	Relay Board to	Listen for relay to actuate. Verify input and output power.	If relay does not actuate, verify power relay board (120 VAC)
	Relay Board to	Listen for relay to actuate. Verify input and output power	If relay does not actuate, verify power relay board (120 VAC).

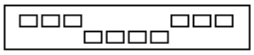
Quick Test Mode Display;

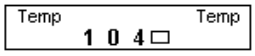
Upper oven
Lower oven

Clean Pad 

Bake Pad 

Broil Pad 

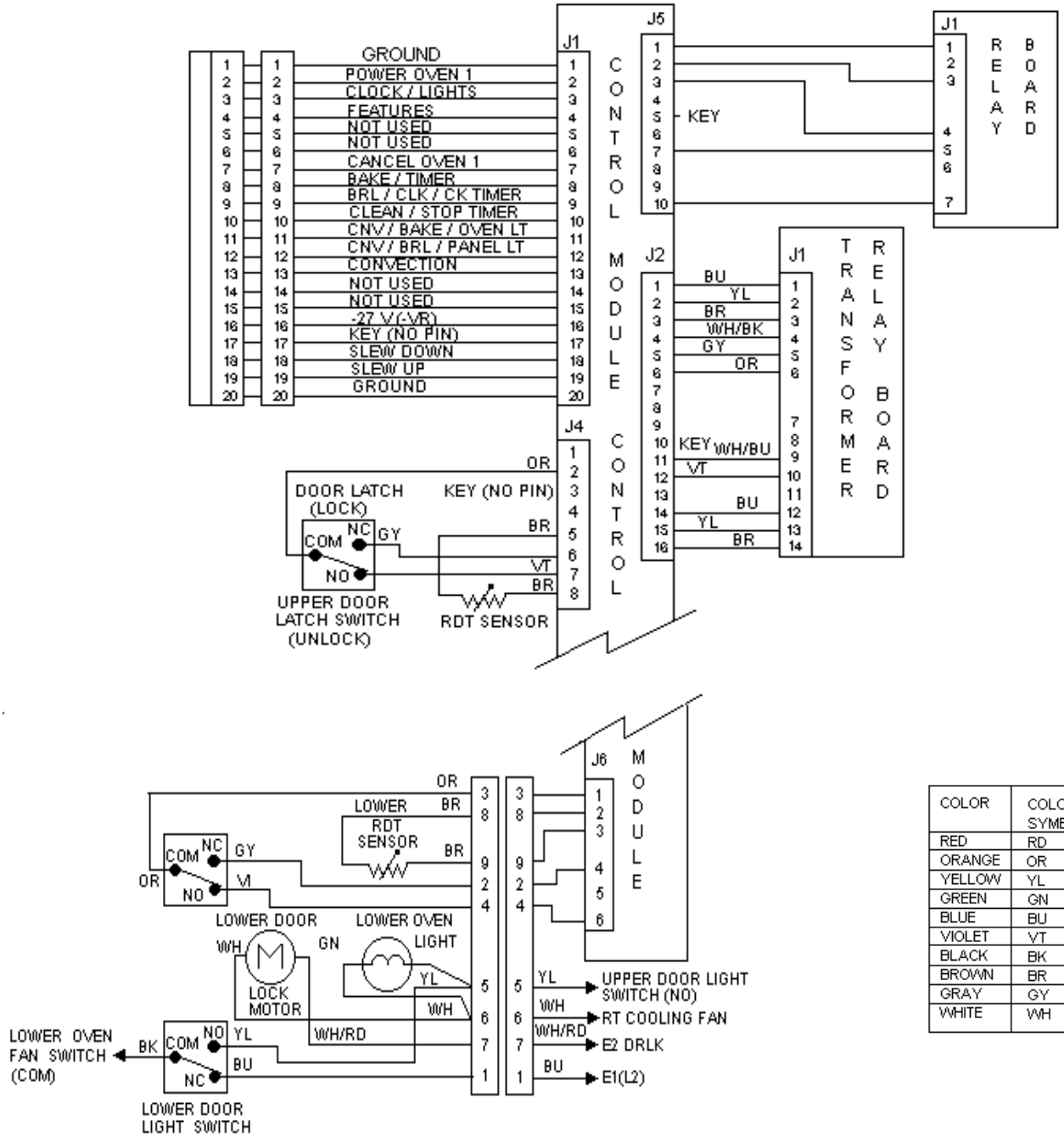
Timer Pad 

Stop Time Pad 

Oven Light Pad: Turn ON both oven Lights

WARNING To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

COMPONENT TESTING INFORMATION

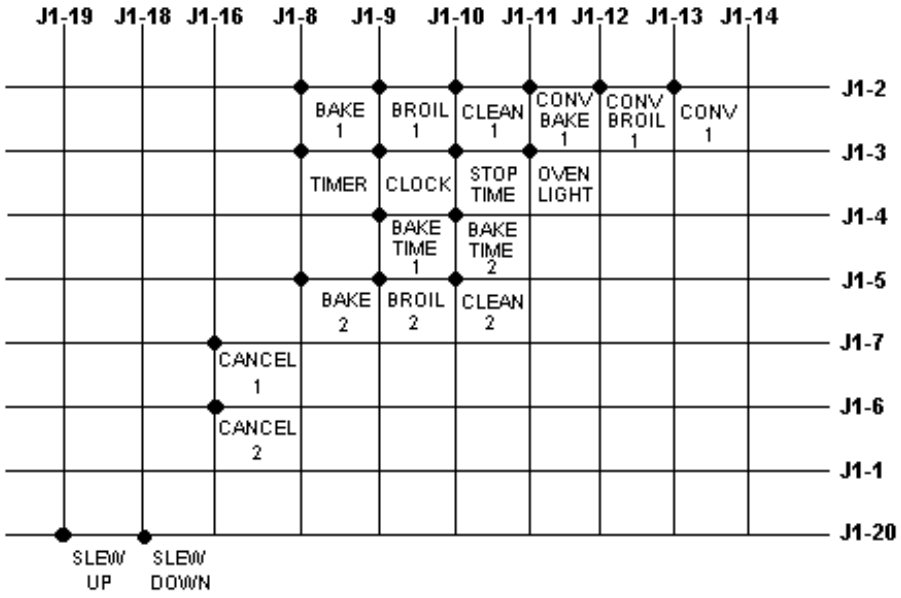


COLOR	COLOR SYMBOL
RED	RD
ORANGE	OR
YELLOW	YL
GREEN	GN
BLUE	BU
VIOLET	VT
BLACK	BK
BROWN	BR
GRAY	GY
WHITE	WH

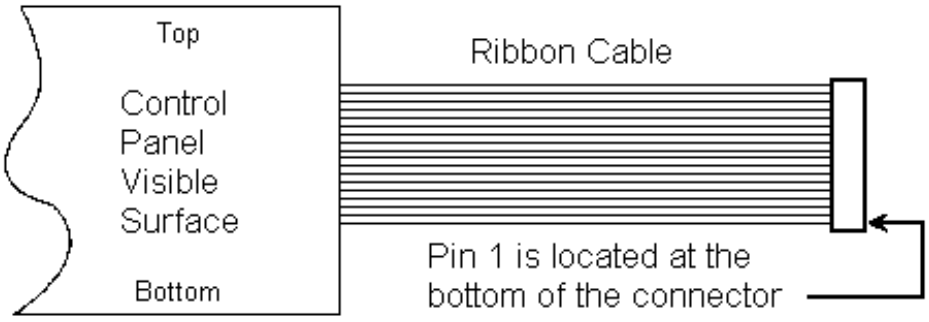
WARNING To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

COMPONENT TESTING INFORMATION

Continuity is indicated as 100Ω and below. Each pad must be pressed to perform the following test.



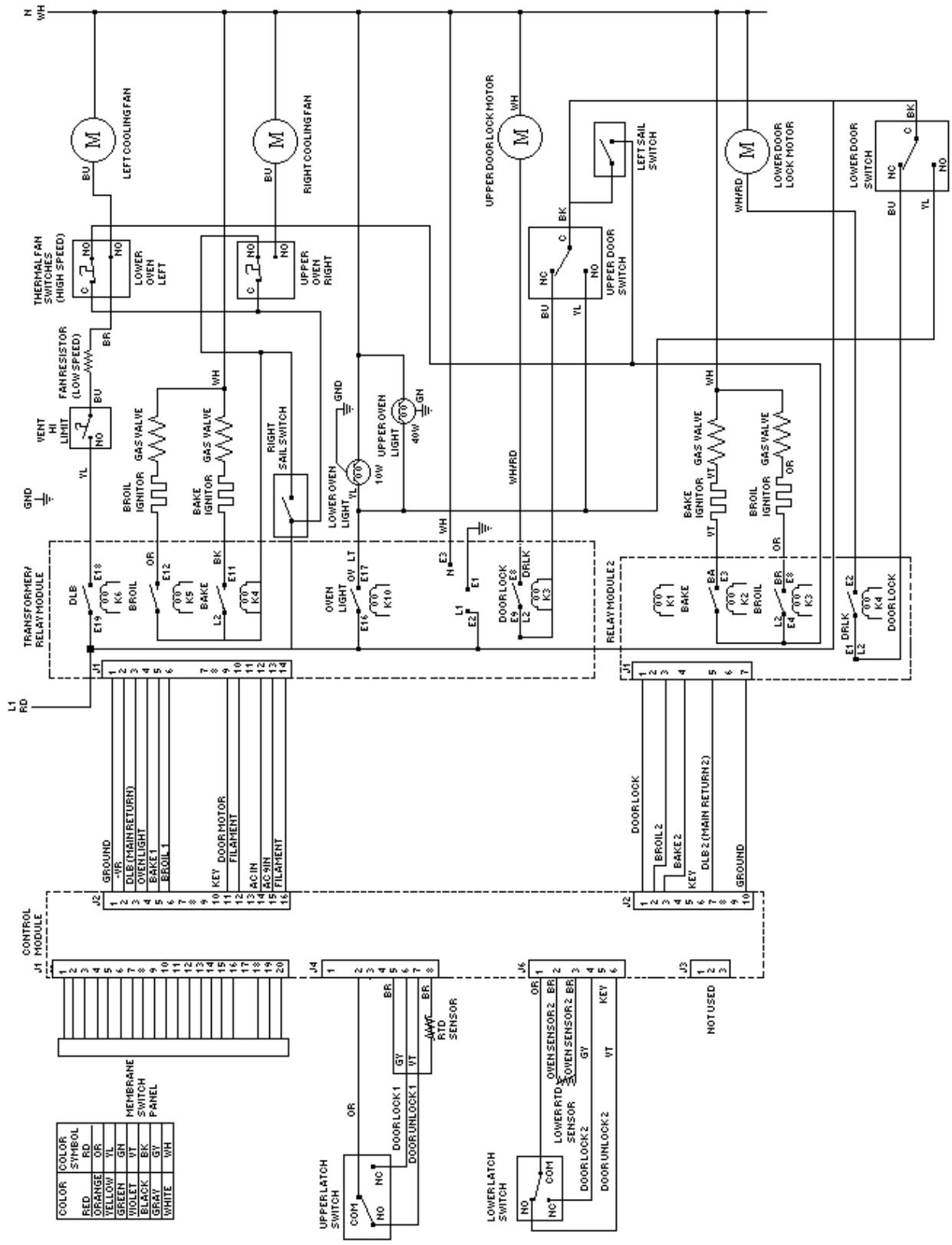
Switch Matrix



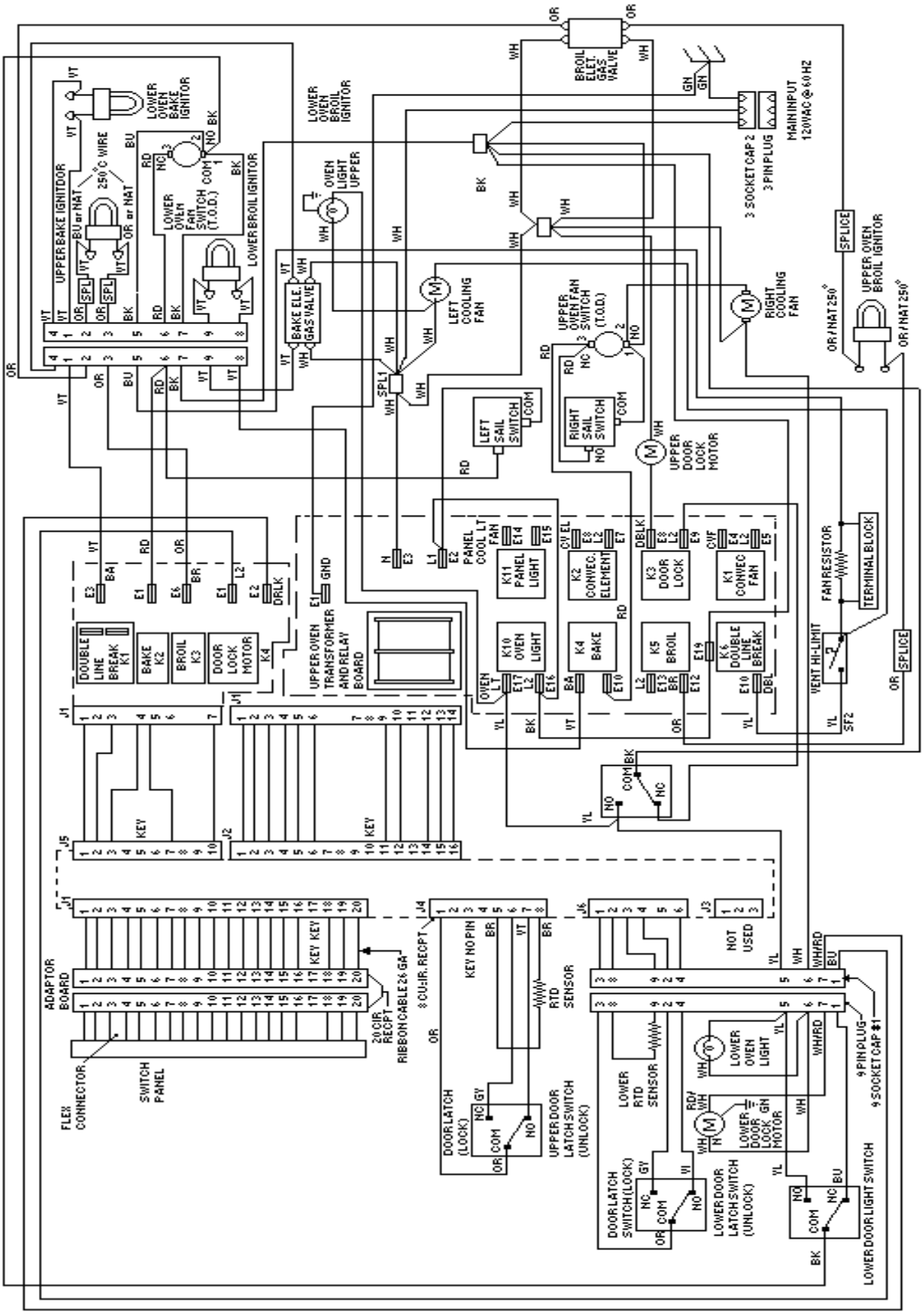
Relay Drive Requirements
Relay drive requirements are defined as a percentage of on time based on a 60 second cycle.

Bake	100% bake
Broil	100% broil
Clean	Stage 1 - 100% broil, 0% bake, for 30 minutes
	Stage 2 - 0% broil, 100% bake

SCHEMATIC WIRING DIAGRAM
VGDO 271 BUILT-IN GAS 27” W. DOUBLE WALL OVEN



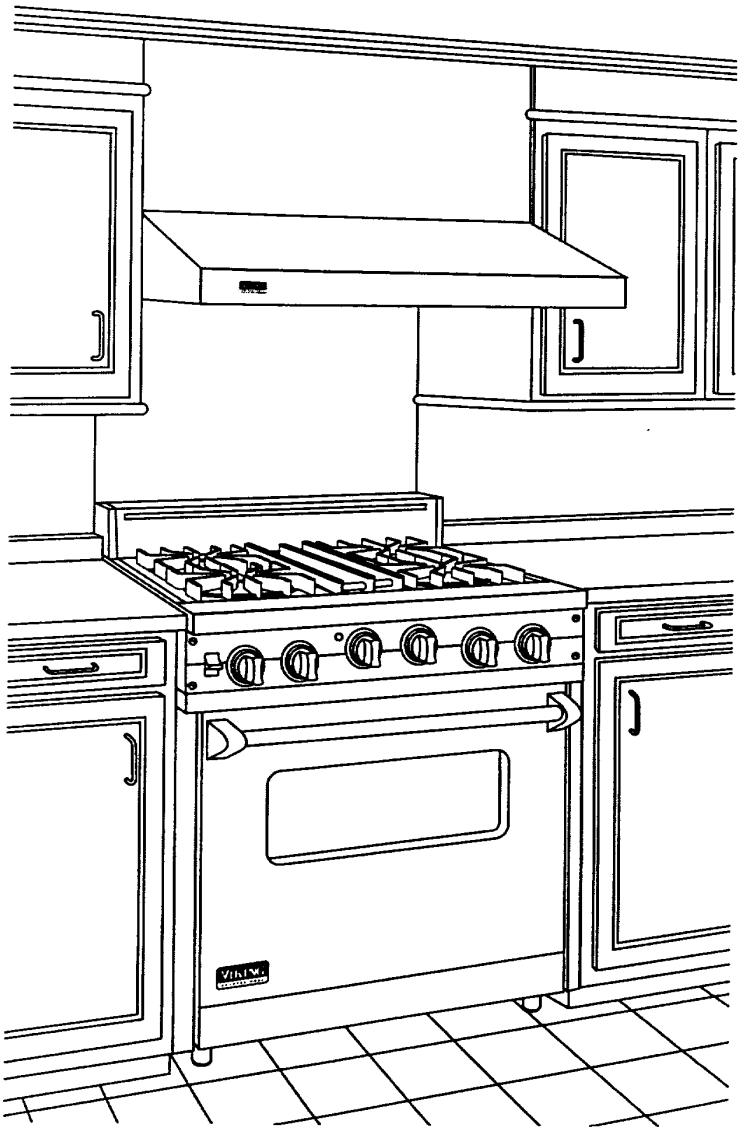
VGDO271 WIRING DIAGRAM BUILT-IN GAS 27” W. DOUBLE OVEN



SERVICE NOTE BOOK

FREESTANDING GAS SELF-CLEAN RANGE

VIKING RANGE CORPORATION ®

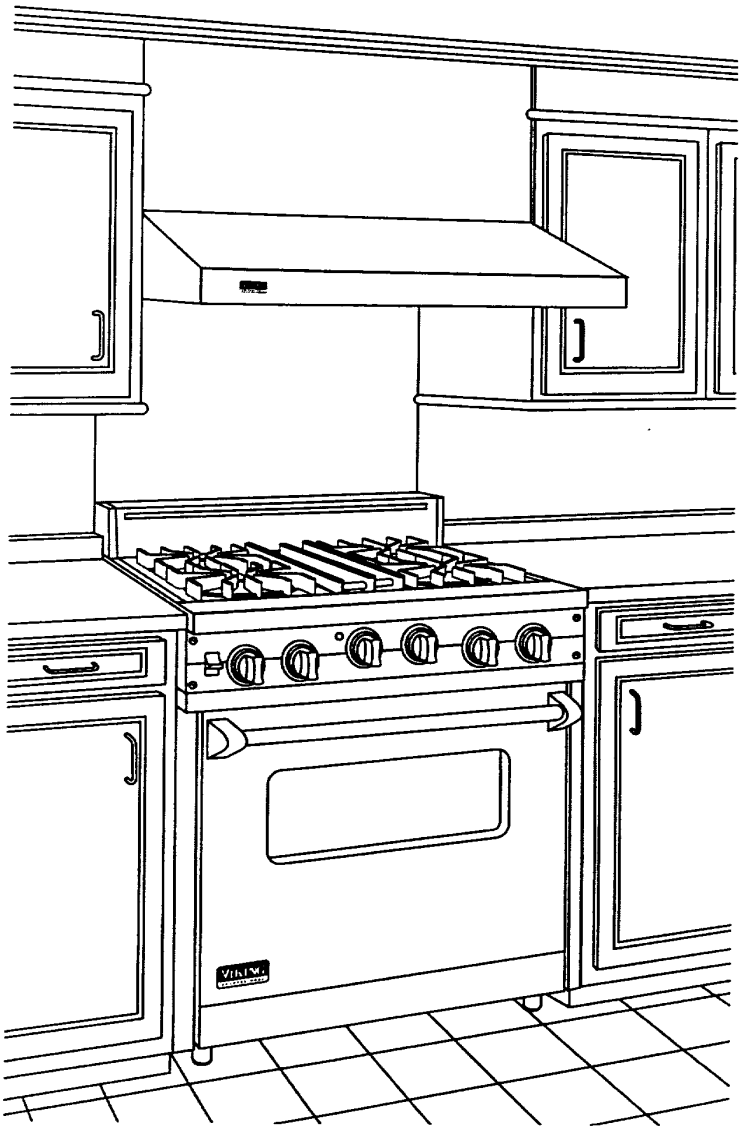


VIKING RANGE CORPORATION, P. O. BOX 956, GREENWOOD, MS. 38930

SERVICE NOTE BOOK

FREESTANDING GAS SELF-CLEAN RANGE

VIKING RANGE CORPORATION ®



VIKING RANGE CORPORATION, P. O. BOX 956, GREENWOOD, MS. 38930

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IMPORTANT Information (Note to Customer)

The information contained in this manual is intended for use by a qualified service technician who is familiar with the application of all safety procedures required in the repair of any gas or electric appliance, and who is equipped with the proper tools and testing instruments.

Repairs covered in this manual and made by unqualified persons can result in hazards developing due to improper assembly or adjustment.

Inexperienced persons making such repairs subject themselves to the risk of injury or electrical shock which can be serious or even fatal.

If you perform service on your own Viking product, you must assume responsibility of personal injury or property damage which may result.

Viking will not be responsible for injury or property damage arising from service performed by other than Viking Factory Authorized Service Agencies.

In order to locate a Viking Factory Authorized Service Agency, please consult the dealer from whom you purchased this product. You may also write to:

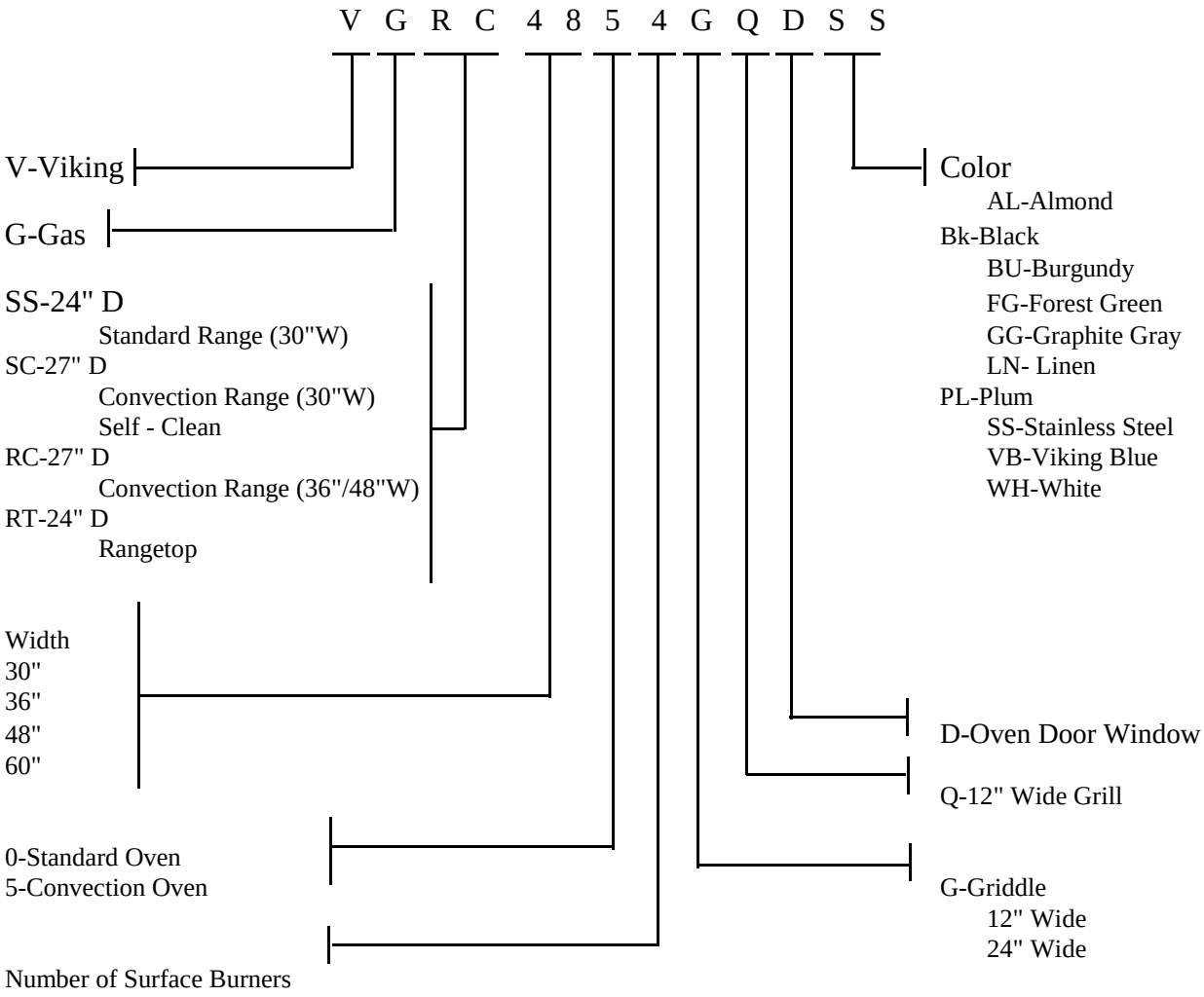
Viking Preferred Service
P.O. Drawer 956
Greenwood, Ms. 38930

BAKING PROBLEM REMEDIES

Problem	Cause	Remedy
Food browns unevenly	Improper heating	Preheat until oven indicator light goes out.
	Aluminum foil on rack or oven bottom.	Remove foil
	Baking utensils too large for the recipe or oven.	Use correct size utensil.
	Several utensils crowded together	Leave at least 1 1/2" (3.8 cm) or more space between all utensils and oven walls.
Food too brown on bottom	Baking utensil too large	Use correct utensil
	Baking utensil dark or glass	Lower oven temperature 25°F (-3.8°C) for this type of utensil.
Food dries before browning	Oven temperature too high	Lower oven temperature
	Oven door open too frequently	Check food at minimum time
Cookies too brown on bottom	Pans too deep pan.	Use a cookie sheet (not a baking
	Dark cookie sheet	Use light, shiny cookie sheet
	Oven temperature too high	Lower oven temperature
Cookies too flat	Hot cookie sheet	Allow cookie sheet to cool between batches
Cake too brown on bottom or crust forms on bottom	Oven temperature too high	Lower temperature; if using glass pan, lower 25°F (-3.8°C)
Cakes burns on sides or not done in center	Oven too Hot	Reduce temperature;
	Wrong pan size	Use recommended pan size; fill pan no more than 2/3 full.

NEW VIKING MODEL NUMBERS

RANGES AND RANGETOPS



VIKING RANGE CORPORATION
PRODUCT WARRANTY
COOKING PRODUCTS

FREE STANDING GAS RANGES

* 90 DAYS-GLASS, PAINTED, PORCELAIN AND DECORATIVE ITEMS
* 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
* 5 YEAR LIMITED WARRANTY-SURFACE BURNER, GRIDDLE TUBULAR BURNER, GRILL TUBULAR BURNER (PART ONLY)
* 10 YEAR LIMITED WARRANTY-ANY PORCELAIN OVEN OR PORCELAIN INNER DOOR WHICH **RUSTS THROUGH**

DUAL FUEL RANGES

* 90 DAYS-GLASS, PAINTED, PORCELAIN AND DECORATIVE ITEMS
* 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
* 5 YEAR LIMITED WARRANTY-SURFACE BURNER, GRIDDLE TUBULAR BURNER, GRILL TUBULAR BURNER, BAKE ELEMENT, BROIL ELEMENT, OR CONVECTION COOK ELEMENT (PART ONLY)
* 10 YEAR LIMITED WARRANTY-ANY PORCELAIN OVEN OR PORCELAIN INNER DOOR PANEL WHICH **RUSTS THROUGH**

ELECTRIC RANGES

* 90 DAYS-GLASS, PAINTED, PORCELAIN AND DECORATIVE ITEMS
* 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
* 5 YEAR-ANY HALOGEN ELEMENT, BAKE ELEMENT, BROIL ELEMENT, OR CONVECTION COOK ELEMENT (PART ONLY)
* 10 YEAR LIMITED WARRANTY-ANY PORCELAIN OVEN OR PORCELAIN INNER DOOR PANEL WHICH **RUSTS THROUGH**

GAS RANGETOPS

* 90 DAYS -GLASS, PAINTED, PORCELAIN AND DECORATIVE ITEMS
* 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
* 5 YEAR LIMITED WARRANTY-SURFACE BURNERS, GRIDDLE TUBULAR BURNER, GRILL TUBULAR BURNER (PART ONLY)

ELECTRIC RANGE TOP

* 90 DAYS-GLASS, PAINTED, PORCELAIN AND DECORATIVE ITEMS
* 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
* 5 YEAR-ANY HALOGEN ELEMENT, BAKE ELEMENT, BROIL ELEMENT, OR CONVECTION COOK ELEMENT (PART ONLY)

GAS WALL OVENS

* 90 DAYS-GLASS, PAINTED, PORCELAIN AND DECORATIVE ITEMS
* 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
* 5 YEARS-OVEN TUBULAR BURNER (PART ONLY)
* 10 YEAR LIMITED WARRANTY-ANY PORCELAIN OVEN OR PORCELAIN INNER DOOR PANEL WHICH **RUSTS THROUGH**

ELECTRIC WALL OVENS

* 90 DAYS-GLASS, POINTED, PORCELAIN AND DECORATIVE ITEMS
* 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
* 5 YEARS LIMITED WARRANTY-OVEN BAKE, BROIL, OR CONVECTION HEATING ELEMENTS
* 10 YEAR LIMITED WARRANTY-ANY PORCELAIN OR PORCELAIN INNER DOOR PANEL WHICH **RUSTS THROUGH**

WARMING DRAWERS

* 90 DAYS-PAINTED AND DECORATIVE ITEMS
* 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
* 5 YEAR LIMITED WARRANTY-HEATING ELEMENT

VENTILATION PRODUCTS

* 90 DAYS-PAINTED AND DECORATIVE ITEMS
* 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
* 2 YEAR LIMITED WARRANTY-BLOWER MOTOR OR EXTERIOR VENTILATOR MOTOR

KITCHEN CLEAN-UP

DISHWASHER

* 90 DAYS-PAINTED OR DECORATIVE ITEMS
* 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
* 5 YEAR LIMITED WARRANTY-MOTOR/PUMP AND WATER DISTRIBUTION SYSTEM COMPONENTS
    * CIRCULATION PUMP
    * DRAIN MOTOR/PUMP
    * FILL VALVE
    * LOWER WASH ARM
    * TUBE TO UPPER WASH ARM
    * UPPER WASH ARM
* 25 YEAR LIMITED WARRANTY-STAINLESS STEEL TANK OR INNER DOOR LINER WHICH DEVELOPS A WATER LEAK

TRASH COMPACTORS

* 90 DAYS-PAINTED OR DECORATIVE ITEMS
* 1 YEAR FULL WARRANTY-COMPONENTS AND ACCESSORIES
* 5 YEAR LIMITED WARRANTY-DRIVE SYSTEM MOTOR

DISPOSERS

* VCFW 1020 AND VBFW
    - 7 YEAR FULL WARRANTY

PRODUCT WARRANTY (CONTINUED)

REFRIGERATION PRODUCTS

REFRIGERATION
- * 90 DAYS-PAINTED OR DECORATIVE ITEMS
- * 2 YEARS FULL WARRANTY
- * 6 YEARS FULL WARRANTY ON SEALED SYSTEM COMPONENTS
  - * COMPRESSOR
  - * CONDENSER
  - * DRYER/STRAINER
  - * EVAPORATOR
  - * CONNECTING TUBING
- * 12 YEAR LIMITED WARRANTY-SEALED SYSTEM COMPONENT (PARTS ONLY)
  - * COMPRESSOR
  - * CONDENSER
  - * DRYER/STRAINER
  - * EVAPORATOR
  - * CONNECTING TUBING

ICE MAKER
- * 90 DAYS-PAINTED OF DECORATIVE ITEMS\
- * 2 YEAR FULL WARRANTY
- * 6 YEAR FULL WARRANTY ON SEALED SYSTEM COMPONENT
  - * COMPRESSOR
  - * CONDENSER
  - * DRYER/STRAINER
  - * EVAPORATOR
  - * CONNECTING TUBING
- * 12 YEAR LIMITED WARRANTY-SEALED SYSTEM COMPONENT (PART ONLY)
  - * COMPRESSOR
  - * CONDENSER
  - * DRYER/STRAINER
  - * EVAPORATOR
  - * CONNECTING TUBING

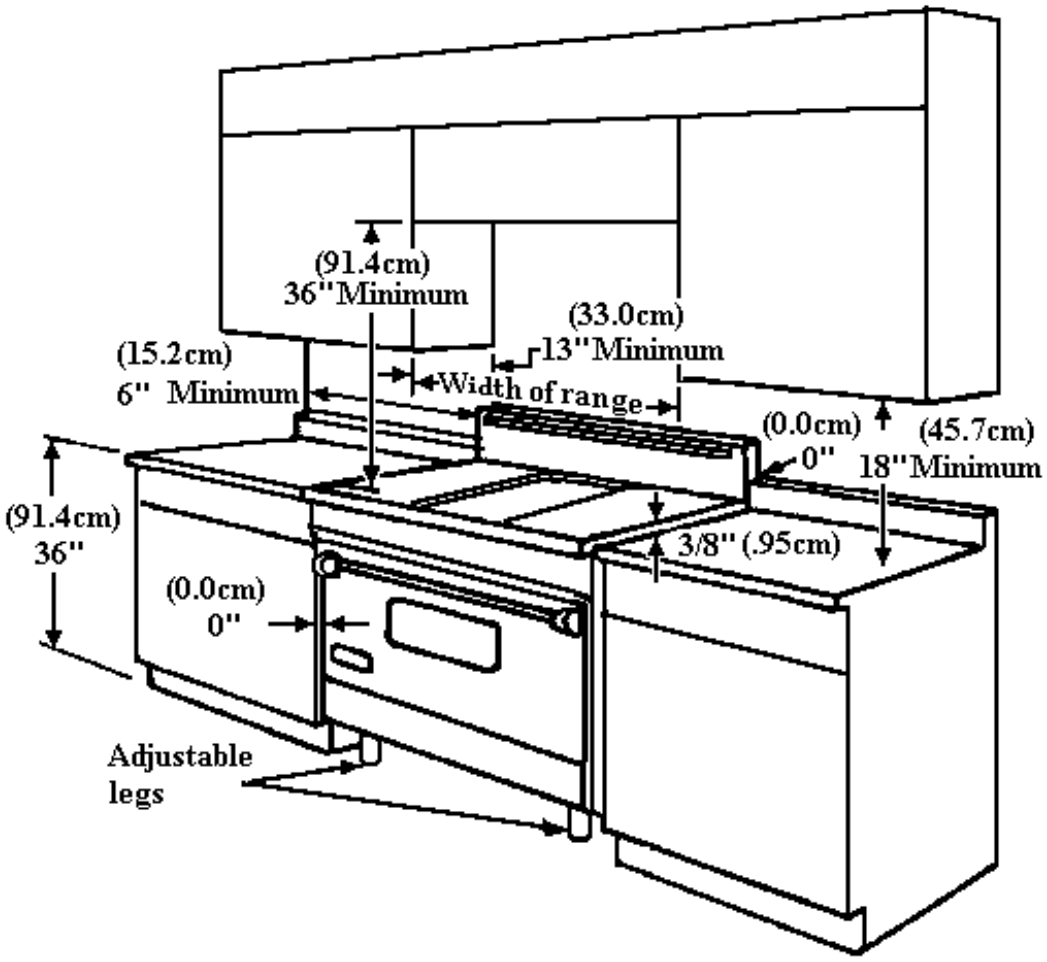
WINE COOLER
- * 90 DAYS-PAINTED OR DECORATIVE ITEMS
- * 2 YEAR FULL WARRANTY
- * 6 YEAR FULL WARRANTY ON SEALED SYSTEM COMPONENT
  - * COMPRESSOR
  - * CONDENSER
  - * DRYER/STRAINER
  - * EVAPORATOR
  - * CONNECTING TUBING
- * 12 YEAR LIMITED WARRANTY-SEALED SYSTEM COMPONENT (PART ONLY)
  - * COMPRESSOR
  - * CONDENSER
  - * DRYER/STRAINER
  - * EVAPORATOR
  - * CONNECTING TUBING

OUTDOOR PRODUCTS

GAS GRILLS
- * 90 DAY-PAINTED, PORCELAIN, AND DECORATIVE ITEMS
- * 1 YEAR FULL WARRANTY
- * 5 YEAR LIMITED WARRANTY-CAST IRON OR STAINLESS STEEL BURNER ASSEMBLIES, INFRARED ROTISSERIE BURNERS, AND PORCELAIN GRILL GRATES
- * LIFETIME WARRANTY-STAINLESS STEEL PART WHICH **RUST THROUGH**

PROXIMITY TO SIDE CABINET INSTALLATION

1. Range / Rangetops may be installed directly adjacent to existing 36" high base cabinets. **IMPORTANT**-the top grate support **MUST** be 3/8" above the adjacent base cabinet counter top. This may be accomplished by raising the unit, (using the adjustment spindles on the range legs) or (using shims for the range top).
2. The range / range top **CANNOT** be installed directly adjacent to sidewalls, tall cabinets, tall appliances, or other side vertical surfaces above 36" high. There must be a minimum of 6" side clearance from the range to such combustible surfaces above the 36" counter height.
3. Within the 6"side clearance to combustible vertical surfaces above 36", the maximum wall cabinet depth must be 13" and wall cabinets within this 6"side clearance must be 18" above the 36" high counter top.
4. Wall cabinets above the range / range top must be a minimum of 36" above the cooking surface for the full width of the range / range top.



RANGE LEVELING

Careful leveling of the range is critical not only to performance, but also to allow the alignment of oven doors and drip tray. Closely follow the procedures below to ensure proper performance and appearance of the range. The range being even slightly out of level will significantly contribute to misalignment of oven doors.

1. If the floor is smooth and level, level the unit with the screw thread of the legs. Set the high corner of the range so that the top of the grate support is 3/8" above the counter top, and level the range to the high corner.

2. If the floor is uneven or has a decided slope, level the unit with metal shims, as the adjustment required may exceed the thread available in the leg.

3. Proper and careful leveling of the range is necessary for proper alignment of the oven doors.

- The body of the range does not have a rigid frame to hold it into one position. This nonrigid framework allows the range to shift with unlevel floors or slanted cabinets.
- Moving any one of the adjustable leveling legs up or down will shift the range body. Use the vertical line between the edge of the door and the left side trim or center trim on the 2 door models to adjust the leveling legs.

When adjusted properly this space will be uniform from the top to the bottom of the door. The bottom corner of the end panel will move in or out. Adjust this lower corner to have an equal space from the top to the bottom of the door.

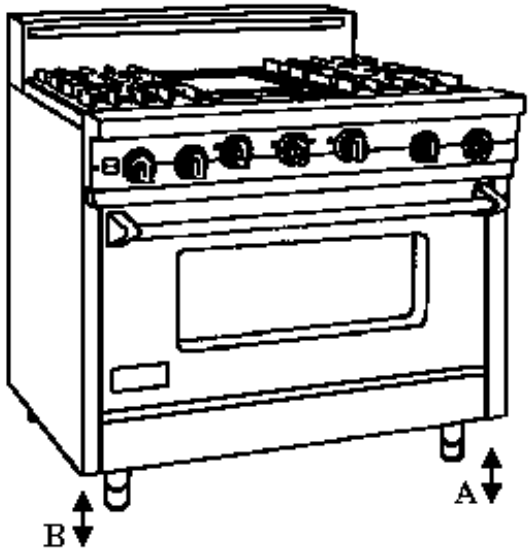
- Increasing the length of the right front leveling leg will raise the right front corner of the range, moving the top of the door to the left. Lowering the right front leveling leg will cause the top of the door to move to the right.
- Using the left front leveling leg will give you the opposite effect. Raising the left front corner will move the top of the door to the right. Lowering the corner will move the top of the door to the left. The rear leveling legs will also have an effect on the door alignment.

4. After the range is properly leveled , the drip tray handle may be aligned by loosening the screws and adjusting the handle horizontally within the limits provided by the slotted screw holes.

5. A carpenters' spirit level should be placed across the top of the range and the unit leveled front-to back, side-to side and vertically. If it is not level, burner combustion may be erratic, liquid or semi-liquid batters will cook at an angle, and the unit may not function efficiently.

A. Right Side Front / Back Adjustable Legs

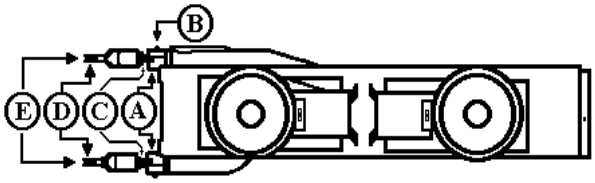
B. Left Side Front / Back Adjustable Legs



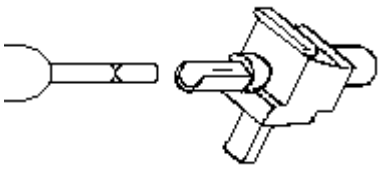
SURFACE BURNER ADJUSTMENTS

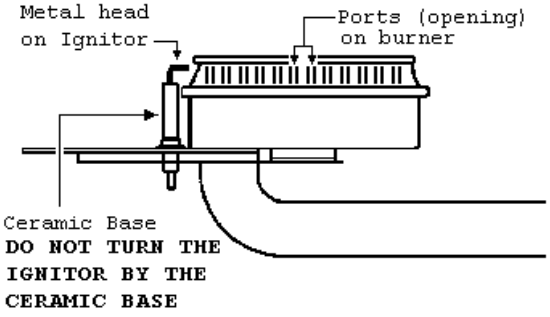
To gain access to the surface burner adjustments:

1. Remove the grates, burner caps, burner bowls, and grate supports.
2. Locate the air shutter "A" and loosen screw "B" that holds the air shutter in place.
3. Remove the drip tray, allowing you work space to adjust the orifice hood "C".
4. Replace the grate support and burner bowls (this allows for correct air flow, as in normal use).
5. Light each burner by rotating the burner valve shaft "D" to high position.
6. Use a ½" deep socket to adjust the orifice hood on Nat. gas only (LP tighten to fixed orifice); turn clockwise to decrease the flame and counter clockwise to increase the flame.
7. With the proper flame height, adjust the air shutter "A" to obtain a blue flame (with no yellow tipping) that sits on the burner at the burner ports.
    a) Open the air shutter gap to eliminate yellow tipping.
    b) Close the air gap to prevent a noisy flame that lifts off the burner ports.
8. Turn the surface burner off.
9. Replace the drip tray.
10. Remove the grate support and burner bowls.
11. Tighten the air shutter screws "B".
12. Replace the grates, burner caps (if applicable), burner bowls and grate supports.
13. Relight each burner and turn to the low flame setting.
14. Remove knob.
15. Insert a narrow, flat blade screwdriver into the hollow shaft of the surface burner valve, and engage the slotted low flame adjustment screw. The low flame should be a small flame the comes just to the edge of the burner rim. Rotate the adjusting screw "E" clockwise to lower the flame or clockwise to increase the flame. Turn the burner off and relight several times, turning to the low position. The flame should light at every port each time. Readjust as needed.

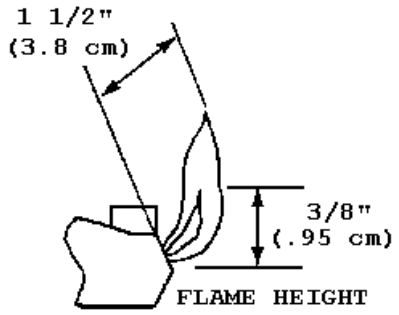


A. Air Shutter
B. Air Shutter Set Screw
C. Orifice Hood
D. Burner Valve Shaft
E. Adjusting Screw





LOW FLAME ADJUSTMENT



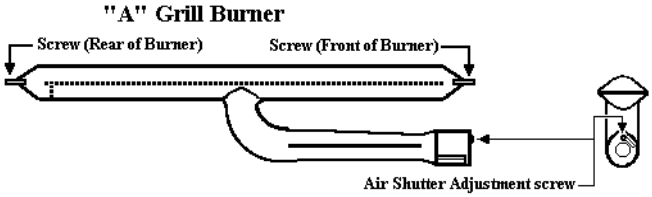
SPARK IGNITOR ADJUSTMENT

Occasionally a burner may not ignite with in a few seconds after turning the appropriate control knob counterclockwise. If a "clicking sound" continues with out the burner igniting, the spark ignitor needs to be adjusted. To adjust the spark ignitor, use a small needle nose plier to turn the metal head of the ignitor toward the port (opening) on the burner. **DO NOT TURN THE IGNITOR BY THE CERAMIC BASE.** This could cause damage to the spark ignitor.

GRILL / GRIDDLE BURNER ADJUSTMENT

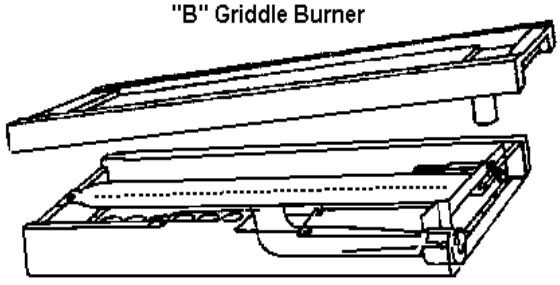
GRILL (Item “A”)

1. The grill burner orifice and air shutter are located beneath the front end of the grill assembly. To gain access to the adjustments, remove the grill grate, grate support, flame spreader and the burner shield.
2. Remove the screw at the front and rear of the burner.
3. Lift the burner off the orifice and locate the air shutter adjustment screw at the end of the burner.
4. Loosen the screw and adjust the air shutter to the desired setting (for natural gas open shutter approximately ½"; for LP/Propane gas open the air shutter approximately 9/16").
5. Tighten the screw, then replace burner on the orifice.
6. Check flame for desired height before replacement of the above parts.
7. The flame adjustments are the same as the surface burners. Use a ½" deep socket to adjust the orifice hood on natural gas only (LP tightened to the fixed orifice); turn clockwise to decrease the flame and counter clockwise to increase the flame.



GRIDDLE (Item “B”)

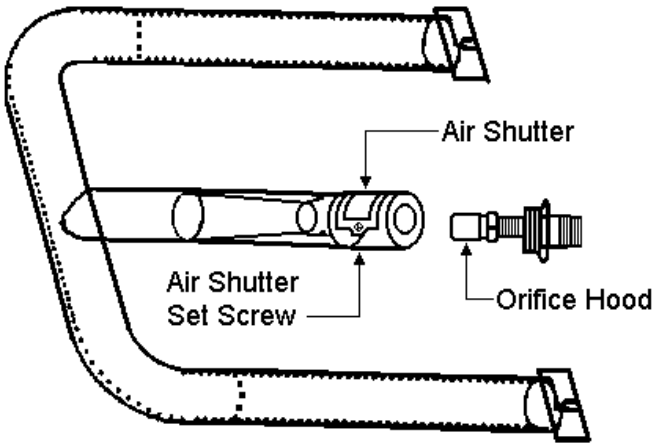
1. To gain access to the burner orifice and air shutter, remove grates and grate supports located on either side of the griddle. Lift and remove griddle plate.
2. Carefully remove ignitor and put to the side.
3. Remove the metal plate located below the burner.
4. Remove the screws at the front and rear of the burner remove the burner tube and locate the air shutter adjustment screw at the end of the burner tube.
5. Flame adjustments are the same as the grill - see #4 and #7 under grill.
6. Replace the griddle plate.

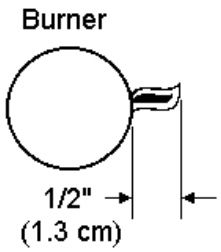


OVEN TUBULAR GAS BURNER ADJUSTMENT

To gain access to the oven burner adjustments:

1. Remove oven bottom panel.
2. Remove U-shaped burner venturi cover.
3. Locate the air shutter and loosen the set screw that holds the air shutter in place.
4. Light the burners by rotating the thermostat to a bake temperature.
5. Using a ½" (1.3cm) open-end wrench, adjust orifice hood to obtain a sharp, well defined blue inner cone approximately ½" (1.3cm) long. The flame should be contacting the burner at each port opening. THE FLAME SHOULD NOT EXTEND INTO THE OVEN BOTTOM VENT SLOTS.
6. With a proper flame height, adjust the air shutter to obtain a blue flame with no yellow tipping that contacts the burner at each port opening.
   a) Open the air shutter gap to eliminate yellow tipping.
   b) Close the air shutter gap to prevent a noisy flame that lifts off the burner.
7. Recheck the orifice hood adjustment for proper gas flow.
8. Turn the thermostat off.
9. Tighten the air shutter set screw being careful to not change the adjusted shutter gap.





DIRECT SPARK IGNITION (DSI) MODULE SPECIFICATIONS

Power Requirements:

Input Voltage Range (L1 - N)	102 to 132 VAC, 60/50 Hz 135 mA current typical

Control Outputs:

Bake or Broil Burner	
Coil Pull-pulse	54 V.C. _ 10% @ 250 mA
Coil Hold-in	36 mA minimum
Life Requirements	2,000,000 cycles
Bake and Broil Spark	16.5 KV @ 50 PFD load @ nominal conditions
Design Life	2,000,000 sparks
Spark Rate	3 sparks then 1 second delay (repeated cadence)

Control Inputs:

Flame Sense Type:	Flame Rectification
Minimum Flame Sense:	1μA. min.
Flame Sense Model:	A 25 MΩ resistor in series with a 1N4004 diode

Control Timing:

All timings are 60 Hz; timing will be 20% longer at 50 Hz. Times are +/- 0.2 seconds except for flame failure response time.

Trial for ignition period	10.0 sec	Flame failure response time:	30.0 sec. max.
Lock out time:	15.0 sec.	Flame establishing period:	0.5 sec. max.
Conditional prepurge time:	30.0 sec.	Recycle time:	30.0 sec. max.\
Interpurge time:	30.0 sec.	Ignition attempts:	3
		Ignition recycles:	1

Description of Operation

Overview:

The GDS/DSI control interfaces with a thermostat, a valve, and spark electrodes to provide a complete direct spark ignition system for gas ranges. The DSI (Direct Spark Ignition) is a 0+2 DSI system: 2 oven burner spark outputs with flame sense and valve enable safety supervision. Contact closure inputs from the thermostat initiates micro controlled logic, which supervises gas distribution to an oven burner and the ignition/flame sense safety circuits.

Oven Burner Ignition:

Closure of the thermostat output contacts (BR and / or BA) applies L1 to the Broil (J1-7) and / or Bake (J1-6) inputs. The Bake and / or Broil input is detected by the micro, which operates the gas valve and spark ignition sequence. The logic Flow Diagram and Timing Diagram illustrates the typical valve/ignition supervision sequence provided by the micro as follows:

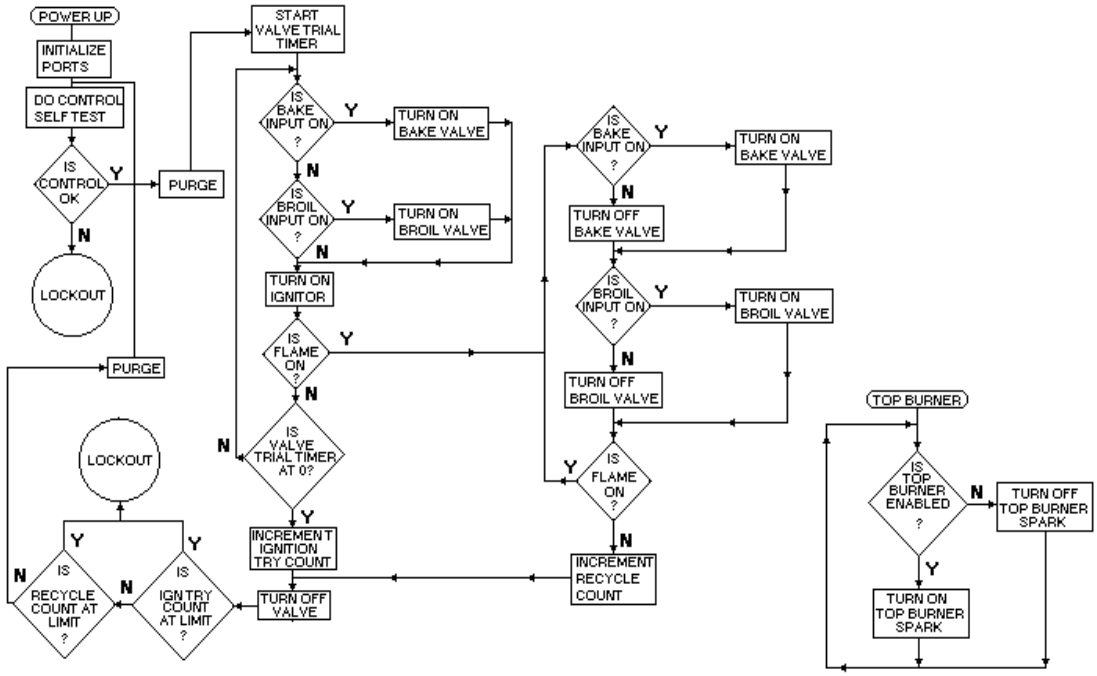
Power up initializes the micro ports and performs an internal self-test and a flame safety check. Failure of this test sequence aborts operation in the lockout mode, which safety inhibits gas flow and sparking to prevent ignition of any residual gas.

Verification of the safety checks initiates the Valve Trial Timer, which energizes the bake or broil solenoid. The spark output rate is coordinated to the flame sense sequence, confirmation of flame sense typically occurs after 2 sparks. If flame is detected, the spark is inhibited, and the valve will be opened as long as flame sense is normal and a call for heat is detected. If flame is not detected, the spark rate will continue for the full duration of Valve Trial Time. Combustion failure during the ignition trial period or after the flame has been established, will de-energize the solenoid for a 30 second interpurge time before initiating another trial for

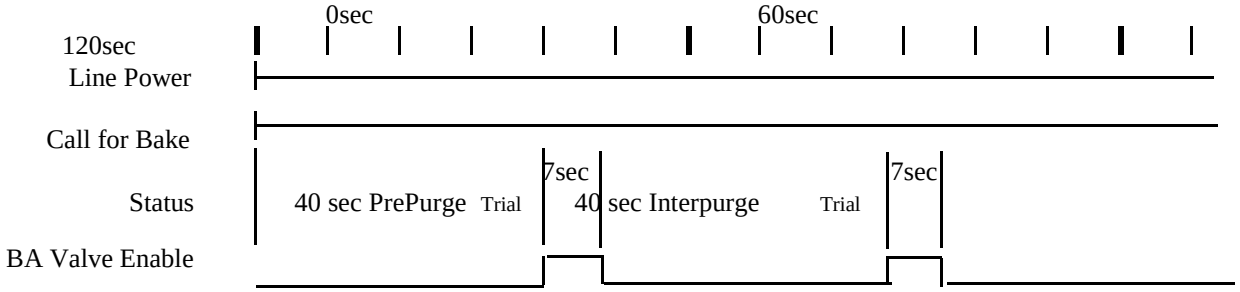
Description of Operation (con't)

Lockout:
The control will lockout if any self-checks fail during normal operation. Also, the control will lockout if it failed to ignite gas after the selected number of ignition attempts or ignition recycles. In lockout the valve and ignition means are turned off. The control must be manually reset be cycling bake or broil off and back on.

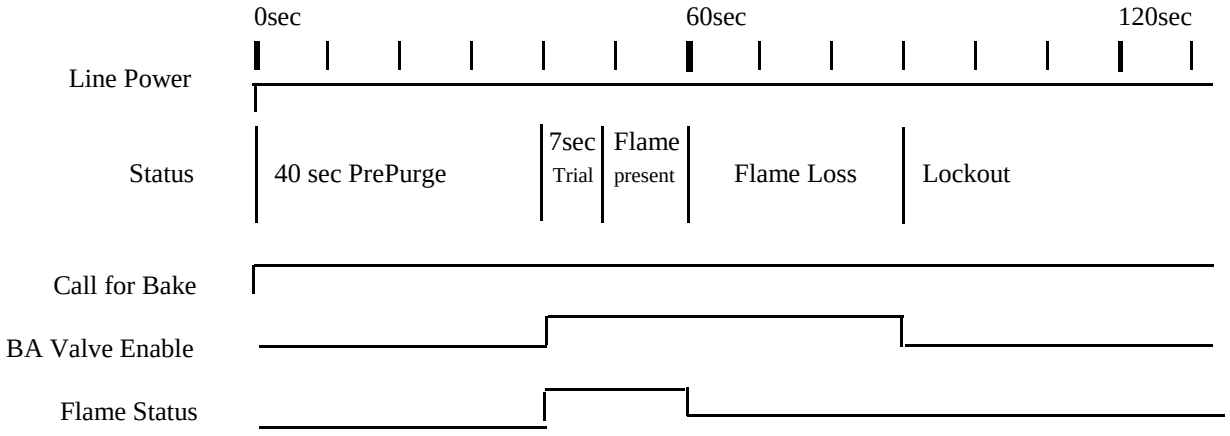
Flame with Gas Valve Off:
If there is proof of flame for ten seconds with the gas valve off, the control will go to lockout. If there is flame for less than ten seconds, the control will reset.



TIMING DIAGRAM: NORMAL IGNITION CYCLE (On initial power up, there will be a 30-60 second for the electronics to reset before ignition.)



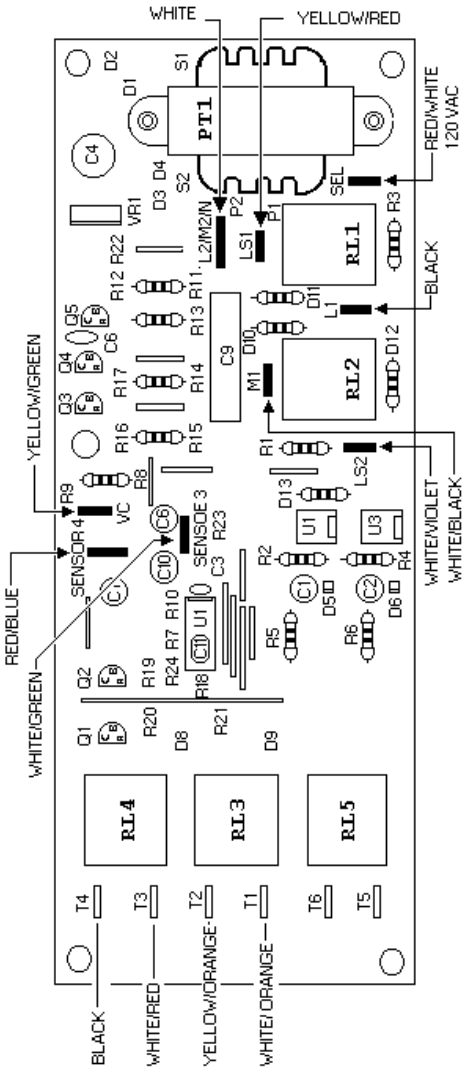
TIMING DIAGRAM: POWER UP CYCLE - IGNITION, FLAME LOSS



COMPONENTS
(With color coded wires)

DOOR LOCK CONTROL / TIMER
VGSC306

Function: The **Door Lock Control / Timer** is activated by the line voltage at the **"SEL"** contact (red/white-120vac). Relay **"RL1"** and **"RL2**"close, providing voltage to the **Door Lock Motor.** The relays stay closed until 10 seconds after **Sensor #3** (white/green) receives a signal that the **Door Lock** is fully closed. Once this happens relay **"RL2"** opens to stop the **Door Lock Motor**. Relay **"RL1"** stays closed providing voltage to the **Auto Reset Thermostat.** Relays **"RL3"** and **"RL4"** close powering the **Cooling Fan Motor** and **Cycle Relay. "RL3"** and **"RL4"** will stay closed for approximately 3 ½ hours unless power is interrupted to **Sensor #3** or **SEL.** In which case **"RL3"** and **"RL4"** will open, interrupting the clean cycle and **Cooling Fan,** and **"RL2"** will close, opening the **Door Lock. "RL2"** will stay closed until 2 seconds after **Sensor #4** is powered.

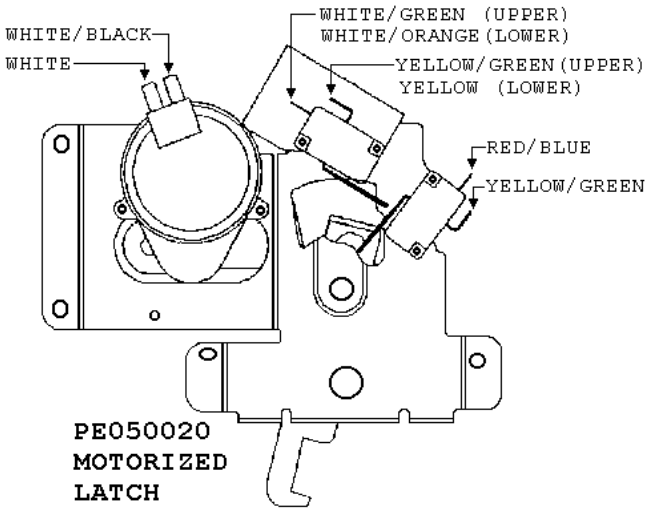


SELF CLEAN BOARD/TIMER
PE070148

DOOR LOCK

VGSC306

Function: When the **Door Lock Motor** is powered it turns a cam which pulls back a lever. As the lever moves back it allows a micro switch **SW1** to open. When the lever reaches the fully closed position it closes a double stacked micro switch **SW2** and **SW3. Door Lock Switch SW2** completes the circuit to sensor **#3** on the **Door Lock Control/Timer** board. After 10 seconds **LS1-M1** opens, stopping the **Door Lock** motion. **Door Lock Switch #3** closes **T1-T2** and **T3-T4** energizing the **DSI Module pin #7 (broil)** through the **Selector Switch** contacts **4** and **8** to the **NC** contacts on the **Thermostat,** to **SW3** on the **Door Lock** assembly, to **T1/T2** switch on the **Clean Timer** to the cycle contacts of the **Thermostat 1 & 2 to L2.**



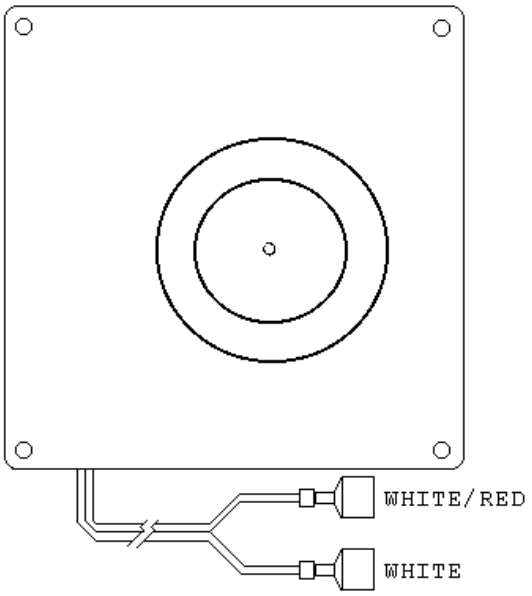
PE050020
MOTORIZED LATCH

COMPONENTS (con't)

COOLING FAN MOTOR

VGSC Gas Self-clean Ranges

Function: Provides a continuous supply of cool air during self-clean cycles to keep the DOOR LOCK MOTOR and associated circuits cool.

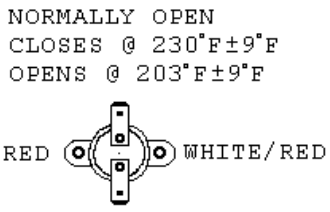


PE050026
COOLING FAN

COOLING FAN LIMIT SWITCH

VDSC Gas Self-clean Ranges

Function: The switch has a 1/2" bi-metal disc. The two metals have a different thermal coefficient**.** The expansion of the two metals cause the discs to bow as it heats up. When it reaches the calibration temperature the disc snaps closed, which closes the electrical contacts. The switch closes when the temperature reaches 230°F _ 9°F and will open when temperatures are below 203°F _ 9°F.

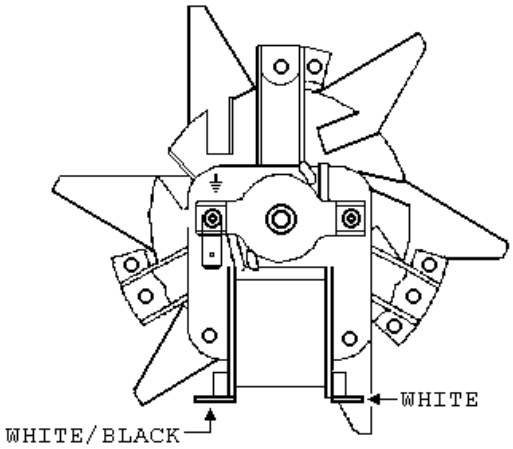


PJ030015
FAN LIMIT
SWITCH

CONVECTION FAN MOTOR

VGSC Gas Self-clean Ranges

Function: Provides an even flow of air in the oven cavity for more even baking.



PE050057
CONVECTION FAN

COMPONENTS (con't)

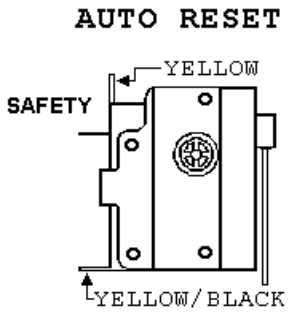
AUTO RESET SWITCH

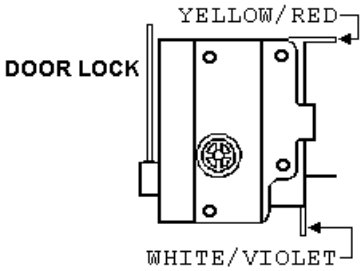
VGSC306 Self-clean Ranges

AUTO RESET (Top) Safety Auto Reset Switch
AUTO RESET (Bottom) Door Lock Auto Reset Switch.

Function: The **Auto Reset Switch** is a single pole / double throw switch (thermostat) which is activated by a thermobulb and lever which is calibrated to 550°F _ 25°F. The **Safety Auto Reset Switch** (Thermostat) will open at approximately 575 / 600°F and interrupt the voltage to the DSI Module turning off the gas valve to the oven burner.

Function: The **Door Lock Auto Reset Switch** below 575°F closes contacts 2 to 1 and energizes the Door Lock Motor. The **Door Lock Auto Reset Switch** above 575°F switches to contacts 1 to 3 to disable the **Door Lock Motor** circuit. Final below 575°F the Auto Reset Switch closes contact 1 to 2 turning off the Door Lock Motor circuit through door Lock **Motor / Timer Relay LS2 - M1.** The **Door Lock Motor** operates until 2 seconds after **sensor 4** is signaled be **VC** that the **Door Lock Switch SW1** has been closed mechanically by the door lock bolt. The Door **Lock / Timer** switches **LS2 - M1** and **LS1 - L1** opens and the timer resets.



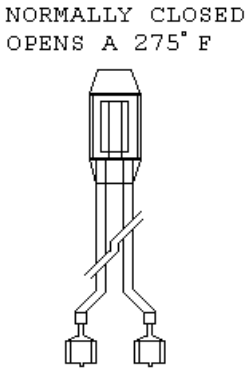


PJ030002
AUTO RESET
SWITCHES
@ 550° F ± 25°F

HIGH LIMIT SWITCH

VGSC306 Gas Self-clean Ranges

Function: The **High Limit Switch** (located on the clean lock bracket) is designed to keep the temperature from reaching a run away condition. The switch is a normally closed switch that will open when the temperature, at the clean lock bracket, reaches 275°F _ 9°F. The **Switch** contains a heater that will keep it from cycling at the high temperature. The **Switch** will only reset when the supply voltage to the range is interrupted. (Unplug the range cord or interrupt the voltage at the fuse / breaker box.)



PE050059
HIGH LIMIT
SWITCH

COMPONENTS (con't)

DIRECT SPARK IGNITION (DSI)

The DSI module provides supervised operation of the gas valve, oven burner spark ignition with flame sense.

The DSI control interfaces with a Thermostat, a Gas Valve and Spark Electrode to provide a complete DSI and Gas Distribution system for gas ranges. Closing contacts on the Thermostat and Selector switch initiate micro controlled logic, which supervises gas distribution to an oven burner and the ignition / flame sense safety circuits. Closing Thermostat and Selector switches apply L1 to the Bake (J1-6) or Broil (J1-7) inputs. This signal is detected by the micro, which operates the gas valve and spark ignition sequence. The Logic Flow Diagram (pg 12 & 13) and Timing Diagrams (pg 14) illustrates the typical valve / ignition supervision sequence provided be the micro as follows:

(1) Power up initializes the micro ports and performs an internal Self-Test and a Flame Safety Check. Failure of this test sequence aborts operation in the lockout mode. Which safety inhibits gas flow and sparking to prevent ignition of any residual gas.

(2) Verification of the safety checks initiates the Valve Trail Timer, which energizes the bake or broil solenoid. The spark output rate is coordinated to the flame sense sequence, confirmation of flame sense typically occurs after 2 sparks. If flame is detected, the spark is inhibited, and the valve will be open as long as flame sense is normal and a call for heat is detected. If flame is not detected, the spark rate will continue for the full duration of Valve Trail Time. Combustion failure during the ignition trail period or after the flame has been established, will de-energize the solenoid for a 40 second interpurge time before initiating another trail for ignition. If the control fails to establish proof of flame after a specified number of ignition attempts, the external lockout is executed.

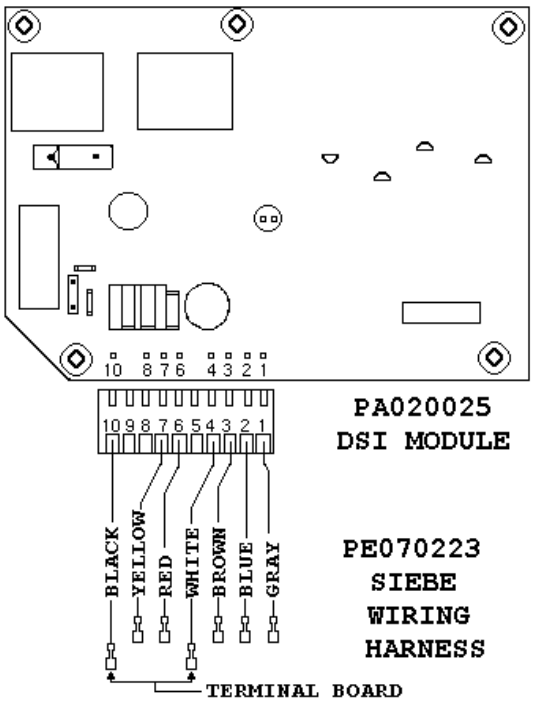
(3) LOCKOUT: The control will lockout if any self-checks fail during normal operation. Also the control will lockout if it failed to ignite gas after the selected number of ignition attempts or ignition recycles. In lockout the valve and ignition means are turned off. The control must be manually reset be cycling bake or broil off and back on.

OVEN THERMOSTAT

Function: As the shaft is rotated from the OFF position clockwise, an internal cam pushes a lever which increases the temperature at which the thermostat cycles.. Rotating the shaft 212° (angular degrees) switches an external (clean) Micro Switch to the closed position, providing 120VAC to Bake Pin #6 on the DSI Module during self-clean after Door Locks above 600°F.

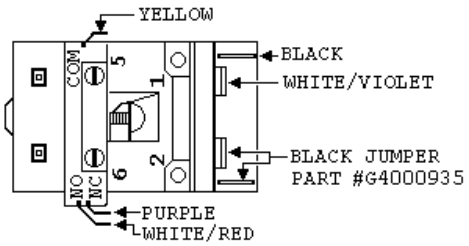
RELAY

Function: The relay works with the safety auto reset to disable the BAKE signal to the DSI module after 600°F.

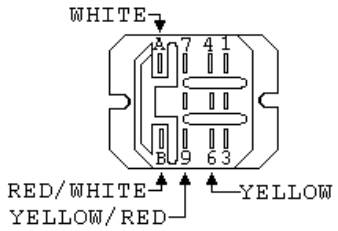


PA020025
DSI MODULE

PE070223
SIEBE
WIRING
HARNESS



SELF-CLEAN THERMOSTAT
PB010186

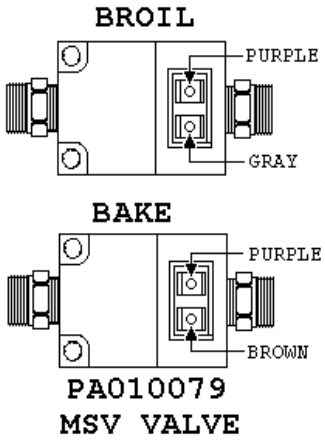


PM10029
RELAY (DPDT)

COMPONENTS (con't)

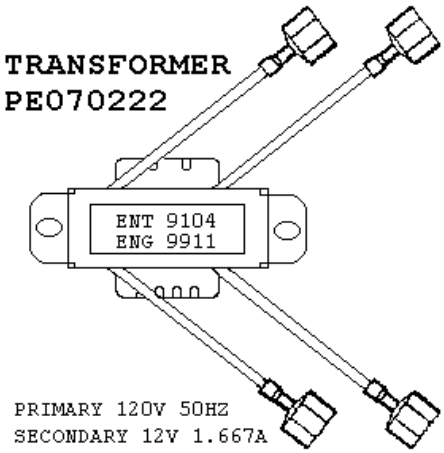
GAS VALVES - BAKE OR BROIL

Function: The **Bake** or **Broil** gas valve receives a voltage (approximately 22 volts DC) from the **Direct Spark Ignition Module** to open the valve and supply gas to the oven burner. (Operating voltage is from 10 / 12 volts DC.).



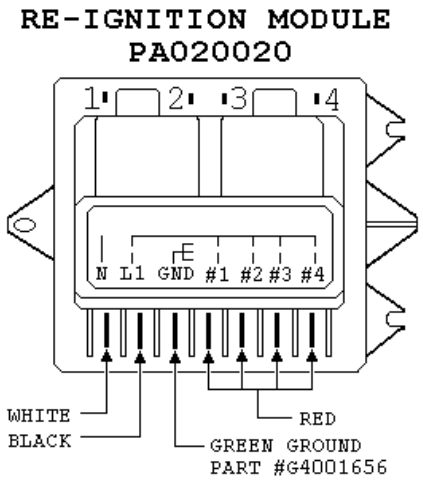
HALOGEN LIGHT TRANSFORMER

Function: Provides power for the oven **Halogen Lights.**



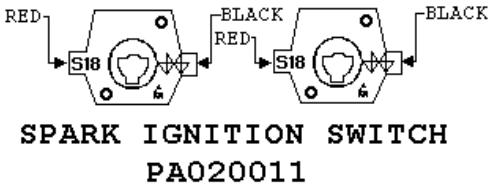
RE-IGNITION MODULE

Function: Used in series with a spark ignition switch and an electrode to provide a high voltage spark at the surface burners for gas combustion. The **Re-ignition Module** will send a spark to the surface burner electrodes when there is no flame sensed at the electrode.



SPARK IGNITION SWITCH

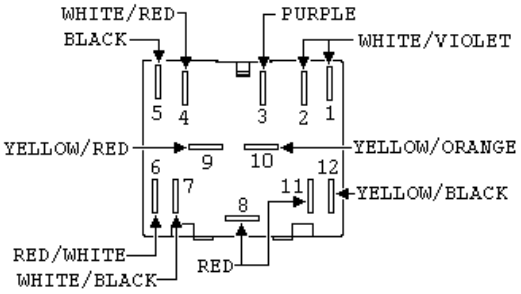
Function: Completes the circuit to the spark module for ignition of the surface burners. Rotating the surface burner control to any on position will cause a spark at the surface burner electrode.



COMPONENTS (con't)

SELECTOR SWITCH

Function: Rotating the shaft twists a cam which moves one or more spring loaded levers, which make contact with a terminal closing the circuit. (See page 21 for closed contacts.)



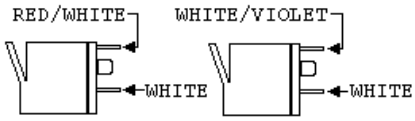
6 POSITION SELECTOR SWITCH
PJ030006

OVEN INDICATOR LIGHT (Cycle)

Function: Provides visual indication that the oven temperature control is on and cycles on and off with the thermostat cycles.

OVEN INDICATOR LIGHT (Clean)

Function: Provides visual indication that the oven has been placed in Self-clean and will remain on until the temperature drops below 575°F.

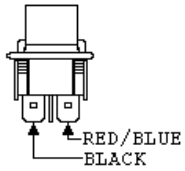


OVEN INDICATOR LIGHT
PE050024

OVEN LIGHT SWITCH

Function: A manual switch to turn the interior oven lights on and off.

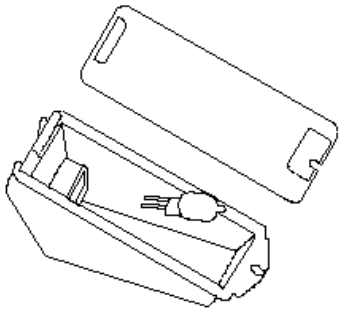
OVEN
LIGHT
SWITCH
PE050016



OVEN LIGHT ASSEMBLY

Function: Provides interior oven light for viewing baking products. (Halogen light assemblies four in number.)

OVEN LIGHT ASSEMBLY
PE050056



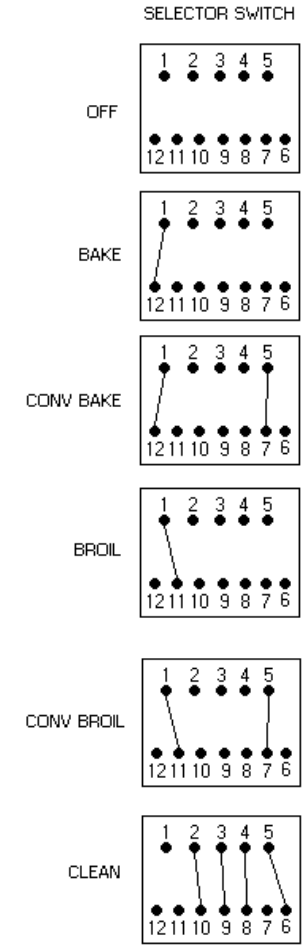
COMPONENT CONTACTS AND WIRING

SELECTOR SWITCH

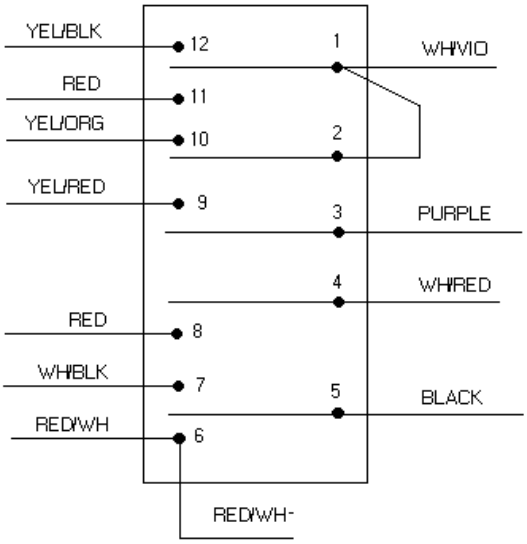
POSITION	1-11	1-12	2-10	3-9	4-8	5-6	5-7
OFF 1	0	0	0	0	0	0	0
BAKE 2	0	X	0	0	0	0	0
CONV BAKE 3	0	X	0	0	0	0	X
BROIL 4	X	0	0	0	0	0	0
CONV BROIL 5	X	0	0	0	0	0	X
CLEAN 6	0	0	X	X	X	X	0

O OPEN X CLOSED

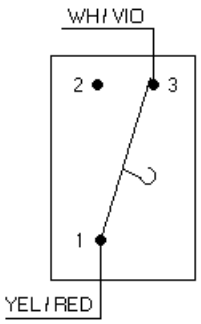
SELECTOR SWITCH



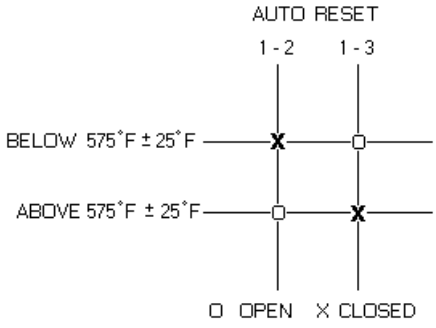
SELECTOR SWITCH



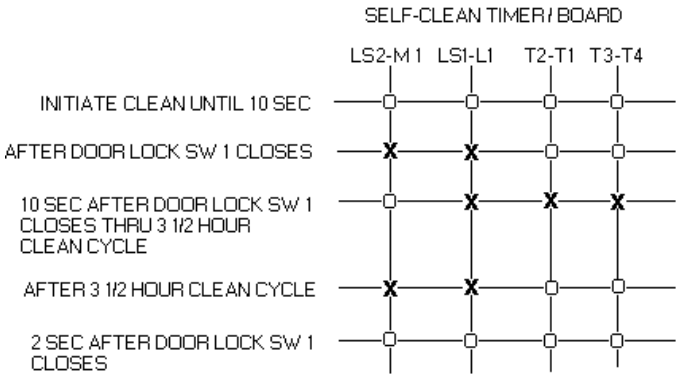
AUTO RESET

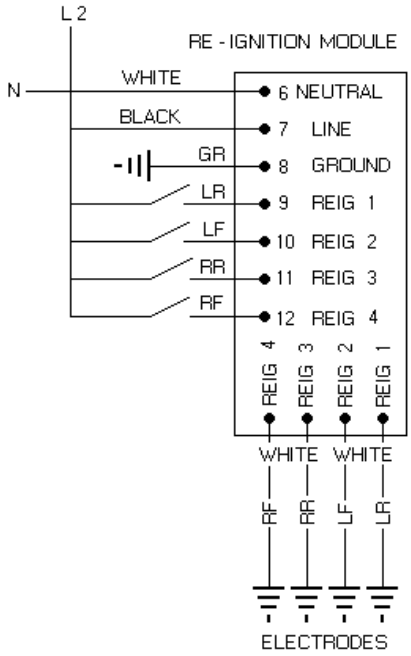


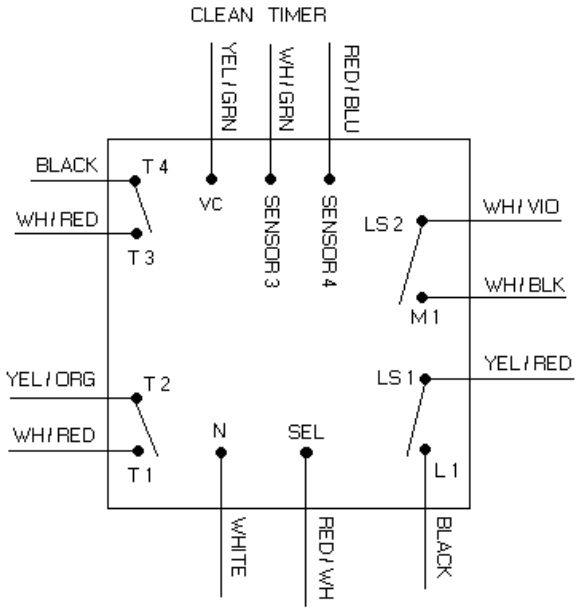
AUTO RESET

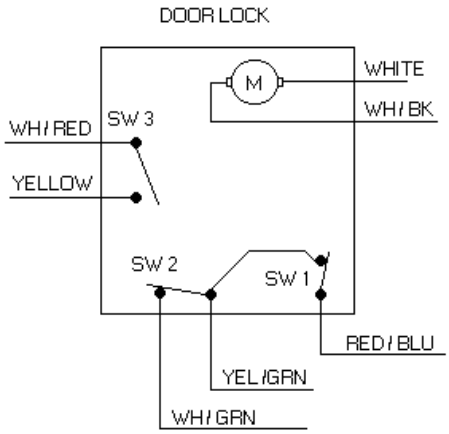


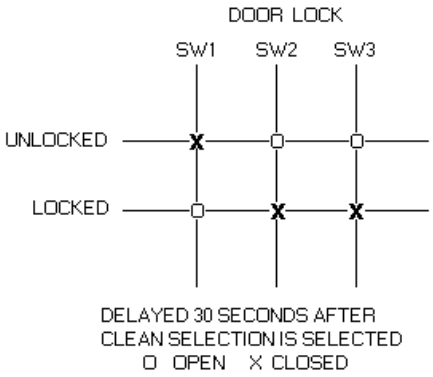
COMPONENT CONTACTS AND WIRING (con't)



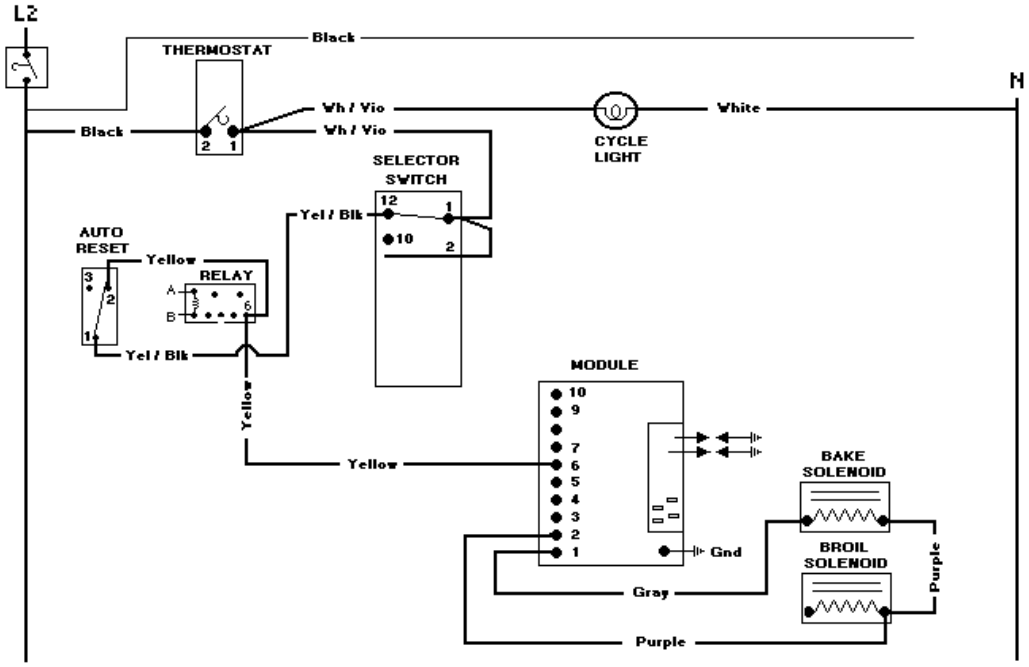






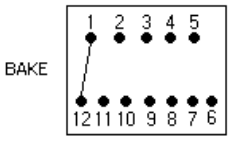


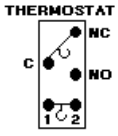
WIRING DIAGRAM
GAS SELF-CLEAN
BAKE



SELECTOR SWITCH

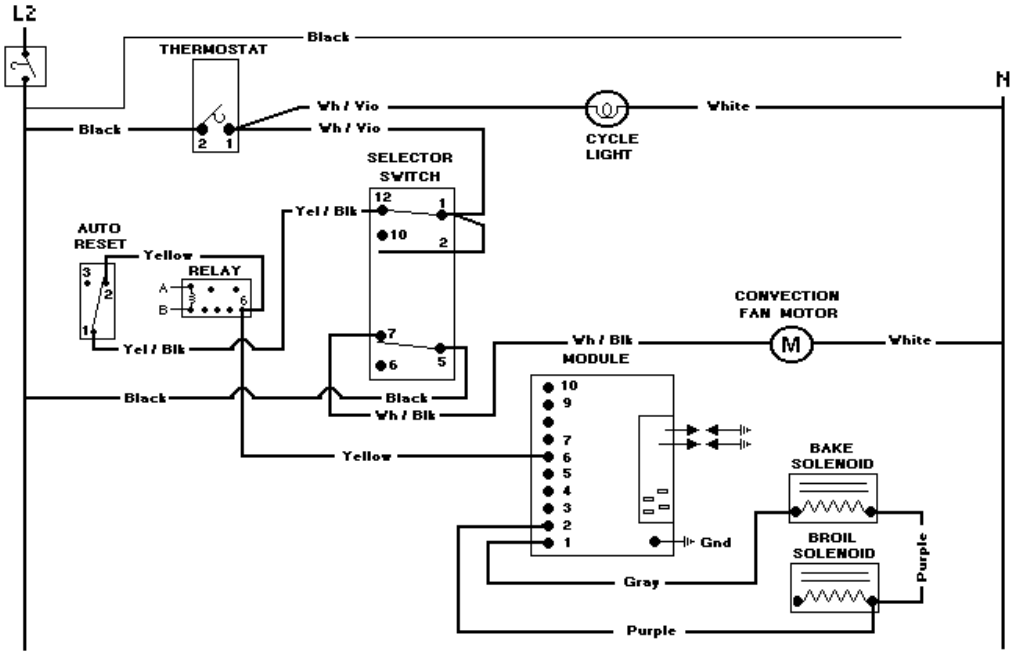
POSITION	1-11	1-12	2-10	3-9	4-8	5-6	5-7
BAKE 2	0	X	0	0	0	0	0





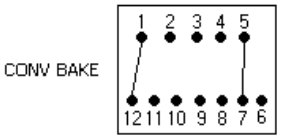
BAKE MODE: Turn the selector switch to the BAKE POSITION, closing SELECTOR SWITCH contacts 1 & 12. Turning the temperature control to the desired temperature will close THERMOSTAT contacts 1 & 2. The CYCLE LIGHT will come on and cycle with the THERMOSTAT when the desired temperature is reached and will go off and on with the cycle of the thermostat to maintain the desired temperature. The contacts 1 & 2 will remain closed on the AUTO RESET until the temperature raises beyond 600°F. L1 voltage is applied to BAKE input (pin 6) on the module. The BAKE input is detected by the micro, which operates the BAKE VALVE and SPARK IGNITION sequence. (See pages 12 and 13 for a full description of operation and page 14 for the timing sequence.)

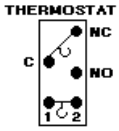
WIRING DIAGRAM
GAS SELF-CLEAN
CONVECTION BAKE



SELECTOR SWITCH

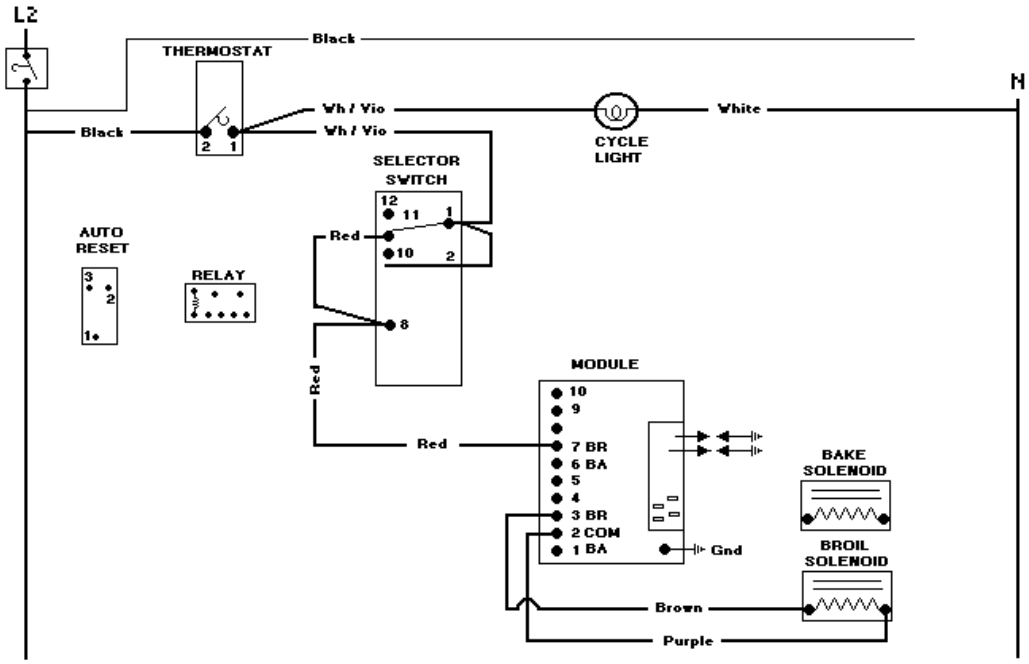
POSITION		1-11	1-12	2-10	3-9	4-8	5-6	5-7
CONV BAKE	3	0	X	0	0	0	0	X





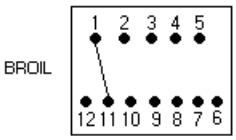
CONVECTION BAKE MODE: Turn the selector switch to the CONV. BAKE POSITION, closing SELECTOR SWITCH contacts 1 & 12 and 5 &7. Contacts 1 & 12 supplies L1 voltage to the MODULE. Contacts 5 & 7 supplies L1 voltage to the CONVECTION FAN MOTOR. Turning the temperature control to the desired temperature will close THERMOSTAT contacts 1 & 2. The CYCLE LIGHT will come on and cycle with the THERMOSTAT when the desired temperature is reached and will go off and on with the cycle of the thermostat to maintain the desired temperature. Contact 1 & 2 will remain closed on the AUTO RESET until the temperature raises beyond 600°F. L1 voltage is applied to BAKE input (pin 6) on the module. The BAKE input is detected by the micro, which operates the BAKE VALVE and SPARK IGNITION sequence. (See pages 12 and 13 for a full description of operation and page 14 for the timing sequence.)

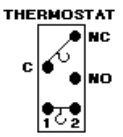
WIRING DIAGRAM
GAS SELF-CLEAN
BROIL



SELECTOR SWITCH

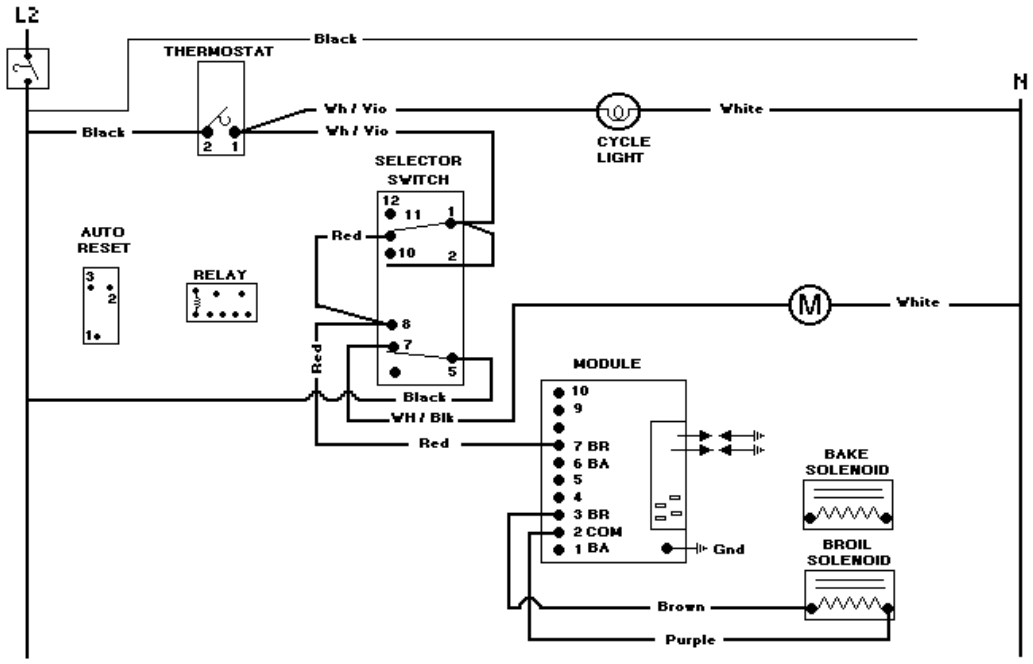
POSITION	1-11	1-12	2-10	3-9	4-8	5-6	5-7
BROIL 4	X	0	0	0	0	0	0





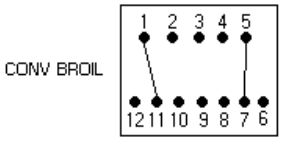
BROIL MODE: Turn the selector switch to the BROIL POSITION, closing SELECTOR SWITCH contacts 1 & 11. Turning the temperature control to BROIL will close THERMOSTAT contacts 1 & 2. The CYCLE LIGHT will come on and will cycle off and on with the cycling of the THERMOSTAT. L1 voltage is applied to BROIL input (pin 7) on the module. The BROIL input is detected by the micro, which operates the BROIL VALVE and SPARK IGNITION sequence. (See pages 12 and 13 for a full description of operation and page 14 for the timing sequence.)

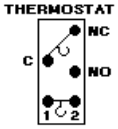
WIRING DIAGRAM
GAS SELF-CLEAN
CONVECTION BROIL



SELECTOR SWITCH

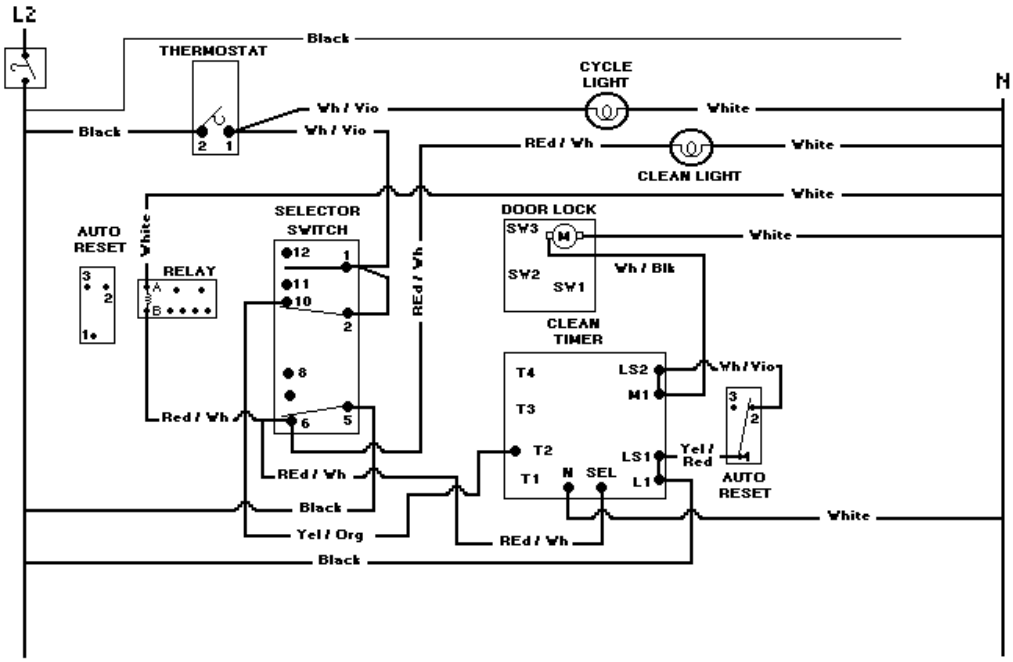
POSITION	1-11	1-12	2-10	3-9	4-8	5-6	5-7
CONV BROIL 5	X	0	0	0	0	0	X





CONVECTION BROIL MODE: Turn the selector switch to the CONV. BROIL POSITION, closing SELECTOR SWITCH contacts 1 & 11 and 5 & 7. Contacts 1 & 11 supplies L1 voltage to the MODULE. Contacts 5 & 7 supplies L1 voltage to the CONVECTION FAN MOTOR. Turning the temperature control to CONV. BROIL will close THERMOSTAT contacts 1 & 2. The CYCLE LIGHT will come on and will cycle off and on with the cycling of the THERMOSTAT . L1 voltage is applied to BROIL input (pin 7) on the module. The BROIL input is detected by the micro, which operates the BROIL VALVE and SPARK IGNITION sequence. (See pages 12 and 13 for a full description of operation and page 14 for the timing sequence.)

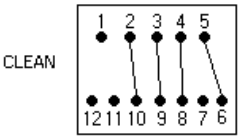
WIRING DIAGRAM
VGSC306 GAS SELF-CLEAN
CLEAN BEFORE DOOR LOCK

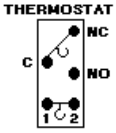


SELECTOR SWITCH
CLEAN (BEFORE DOOR LOCK)

POSITION	1-11	1-12	2-10	3-9	4-8	5-6	5-7
CLEAN 6	0	0	X	X	X	X	0

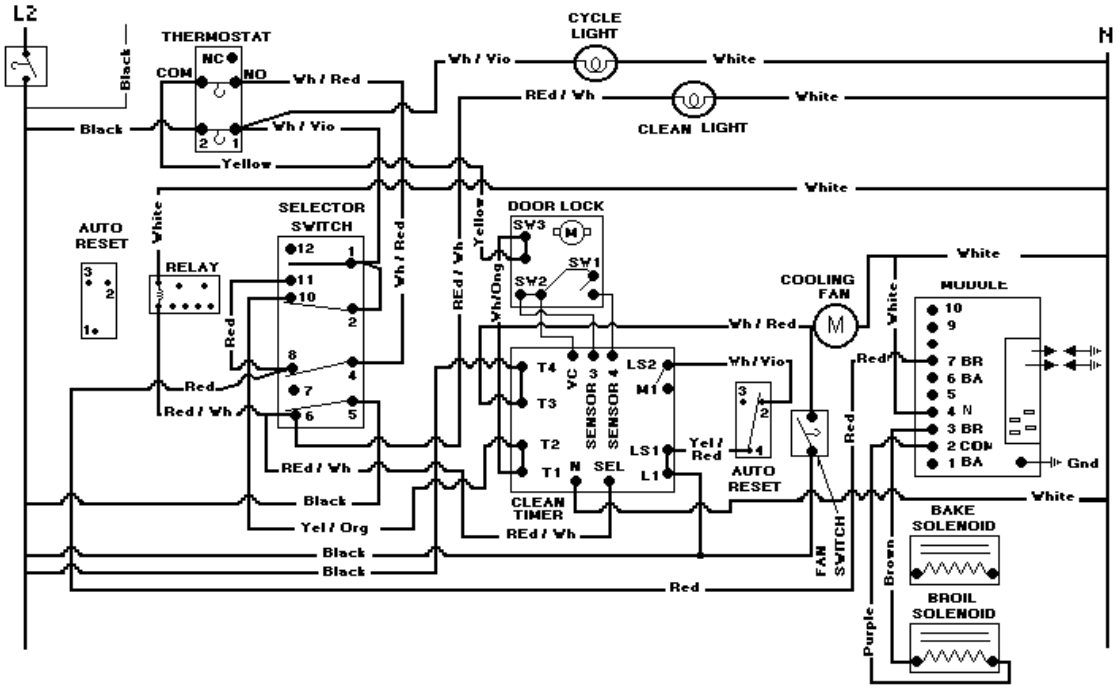
O OPEN X CLOSED





SELF-CLEAN MODE (Before the door locks): Turn the SELECTOR SWITCH to the SELF-CLEAN MODE. Turn the TEMPERATURE control past the clean setting until the knob stops. THERMOSTAT contacts 1 & 2 will close suppling L1 voltage to the SELECTOR SWITCH contacts 1 & 2. SELECTOR SWITCH contacts 2 & 10 will close suppling voltage to CLEAN/TIMER contact T2. SELECTOR SWITCH contacts 5 & 6 will close suppling voltage to CLEAN/TIMER contact SEL. and will power the relay coil. Power to SEL on the CLEAN/TIMER board will close contacts L1 & LS1 completing the circuit for the DOOR LOCK MOTOR through the AUTO RESET contacts 1 & 2 and LS2 & M1 on the CLEAN/TIMER board. This powers the DOOR LOCK MOTOR until 10 seconds after SENSOR 3 is signaled by VC that the DOOR LOCK SWITCH SW2 has been closed mechanically (along with SW3) by the DOOR LOCK BOLT.

WIRING DIAGRAM
VGSC306 GAS SELF-CLEAN
CLEAN BEFORE 600°F AFTER DOOR LOCK

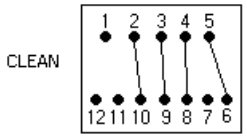


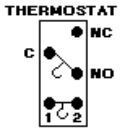
SELECTOR SWITCH

CLEAN (BEFORE 600°F AFTER DOOR LOCK)

POSITION	1-11	1-12	2-10	3-9	4-8	5-6	5-7
CLEAN 6	0	0	X	X	X	X	0

O OPEN X CLOSED

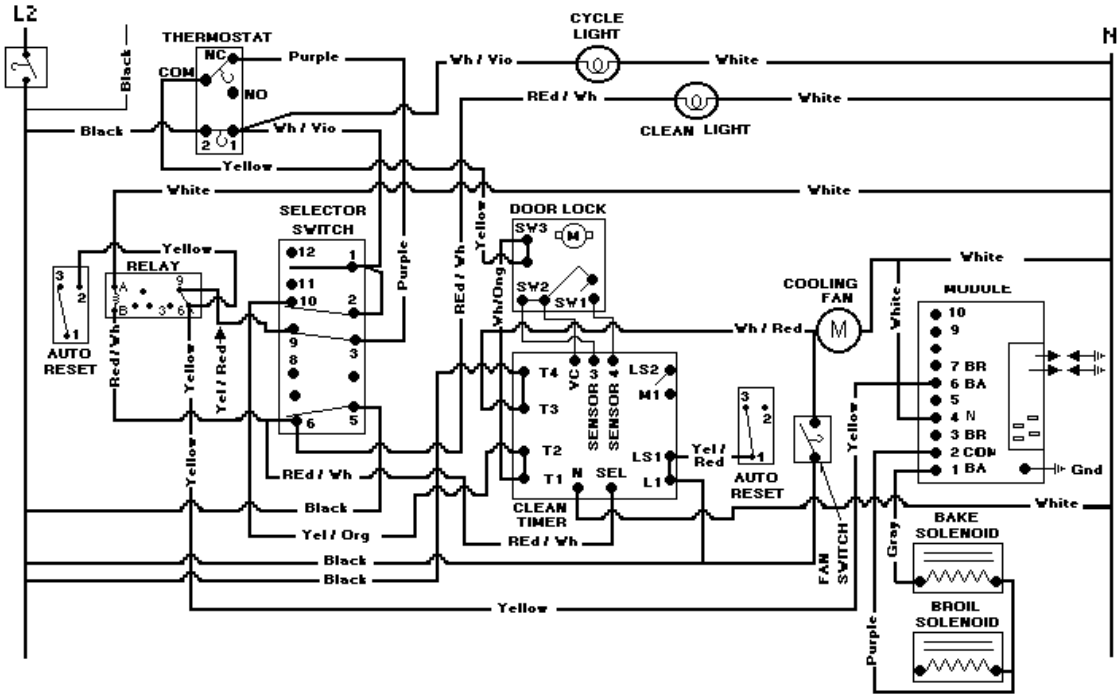




SELF-CLEAN MODE (Before 600°F after door lock): **10** seconds after the signal to SENSOR 4, SWITCH LS2 & M1 is opened, stopping the DOOR LOCK motion. T1 &T2 closes applying voltage to BROIL input Pin 7 on the MODULE. (L2 - T-STAT contacts 1 & 2 - SEL. SW. Contacts 2 & 10 - CLEAN TIMER contacts T2 & T1 - DOOR LOCK SW3 - T-stat COM & NO - SEL. SW. 4 & 8 - MODULE PIN 7 BROIL). The BROIL input is detected by the micro, which operates the BROIL VALVE and SPARK IGNITION sequence.

T3 & T4 close powering the COOLING FAN MOTOR (L2 - CLEAN TIMER T4-T3 to COOLING FAN MOTOR - Neutral.)

WIRING DIAGRAM
VGSC306 GAS SELF-CLEAN
CLEAN AFTER 600°F AFTER DOOR LOCKS

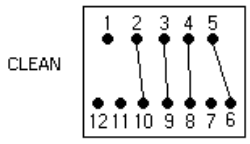


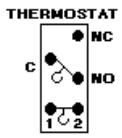
SELECTOR SWITCH

CLEAN (AFTER 600°F AFTER DOOR LOCK)

POSITION	1-11	1-12	2-10	3-9	4-8	5-6	5-7
CLEAN 6	0	0	X	X	X	X	0

O OPEN X CLOSED





SELF-CLEAN MODE (After 600°F after door lock): L2 to THERMOSTAT, contacts 2&1, - SEL. SW. contacts 2 &10 to CLEAN TIMER contacts T2-T1 and to DOOR LOCK switch SW3 to THERMOSTAT contacts COM & NC to SEL. SW. contacts 3 & 9 to BAKE RELAY to MODULE pin 6 (Bake). The BAKE input is detected by the micro which operates the BAKE VALVE and SPARK IGNITION sequence.

After approximately 3 ½ hours the CLEAN TIMER board will time out and will terminate the cycle. The temperature and the selector switch is to be turned OFF. 30 minutes will be required for the oven to cool enough for the door latch to disengage.

VOLTAGE READINGS

MEASURED WITH DOOR OPEN

T4	107VAC	70VAC
T3	4VAC	16VAC
T2	4VAC	16VAC
T1	5VAC	1VAC

MEASURED WITH DOOR LOCKED

T4	80VAC	56VAC
T3	85VAC	56VAC
T2	90VAC	56VAC
T1	93VAC	56VAC

VC--4VDC

SENSOR 3--3VDC SW2 closed in self clean (Locked).

SENSOR 4--4VDC SW1 closed with clean lock open.

M1--120VAC lock motor supply voltage. (31VAC in locked position)

LS2--70VAC (unlocked)--**55VAC** (locked)

L1-- 70VAC (unlocked)--**56VAC** (locked)

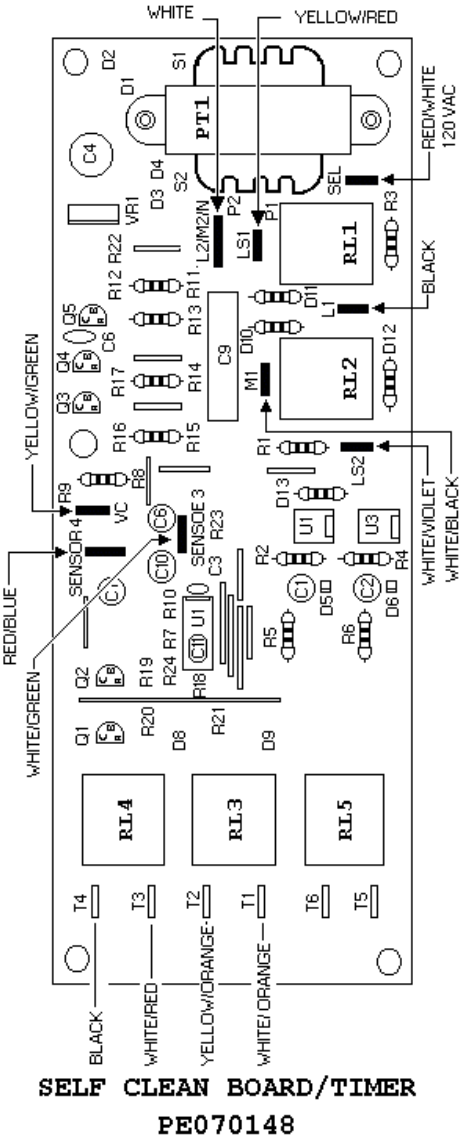
L2/M2--16VAC(unlocked)--**32VAC** (locked)

LS1--107VAC (locked or unlocked)

SEL--120VAC SUPPLY

CHASSIS GROUND

P.C. BOARD GROUND



SELF CLEAN BOARD/TIMER

PE070148

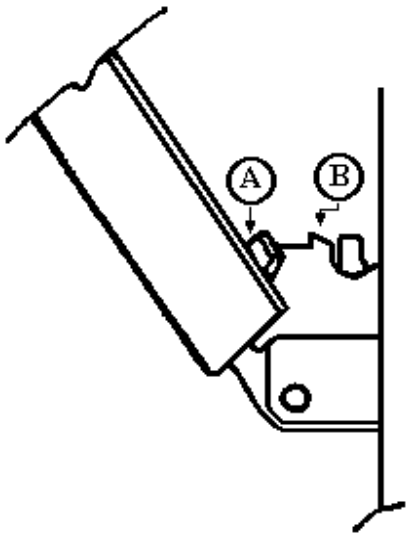
DOOR REMOVAL

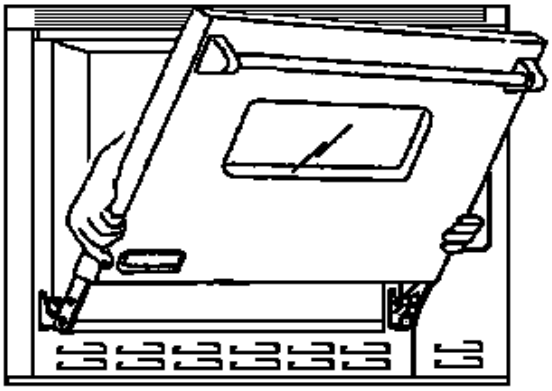
1. Open the door approximately 15° to 20° then slowly pull upward until the door stop (A) pops out of the door socket. Gently close the door until the door stops rest against one of the stop notches (C). Slide the door up until completely free of the hinge arms.

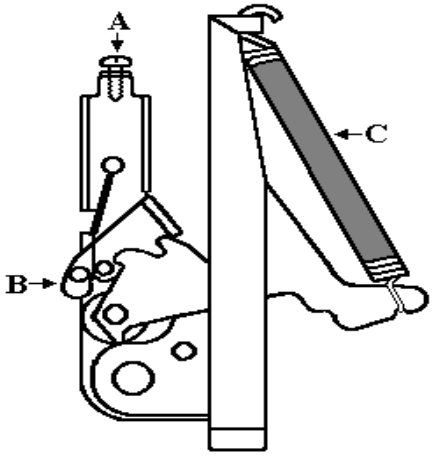
   When the door stops pop out of the door too soon the door will not slide off. When this happens:

   a) Lower the door until the door stops disappear into the door;
   b) Grasp the door near the lower end;
   c) Place your thumbs over the door socket openings to prevent the door stops from popping out;
   d) Hold the door stops in the door while sliding the door up approximately 3 inches;
   e) Release the door stops and gently close the door until the door stops rest against one of the stop notches.

2. To replace the door, place the hinge arms into the door sockets. Slide the door down close to the door stops and release the pressure from the stop notches. Slowly lower the door down completely allowing the door stops to







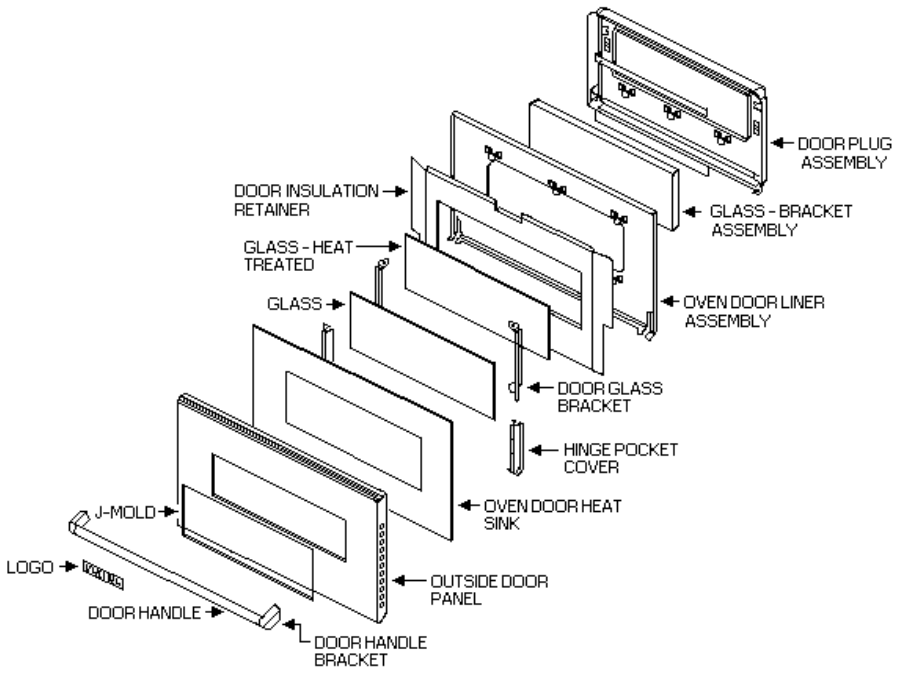
A. DOOR (Vertical adjustment screw)

B. DOOR STOP (Holds hinge in place while removing or replacing the door)

C. DOOR HINGE SPRING (Color denotes part number)

OVEN DOOR ASSEMBLY

1. Remove oven door and put on a protected table or counter top. (See oven door removal.)
2. Remove screws securing the door panel to the door liner and remove the panel from the liner.
3. Remove the inner baffle, the window trim and the glass window from the door panel.
4. The door handle is mounted to the door panel and can be removed by removing the four (4) screws.
5. Remove the insulation plate and insulation from the liner.
6. Remove the screws securing the window brackets to the door liner and remove the brackets.
7. Remove the door window retainer and remove window assembly.



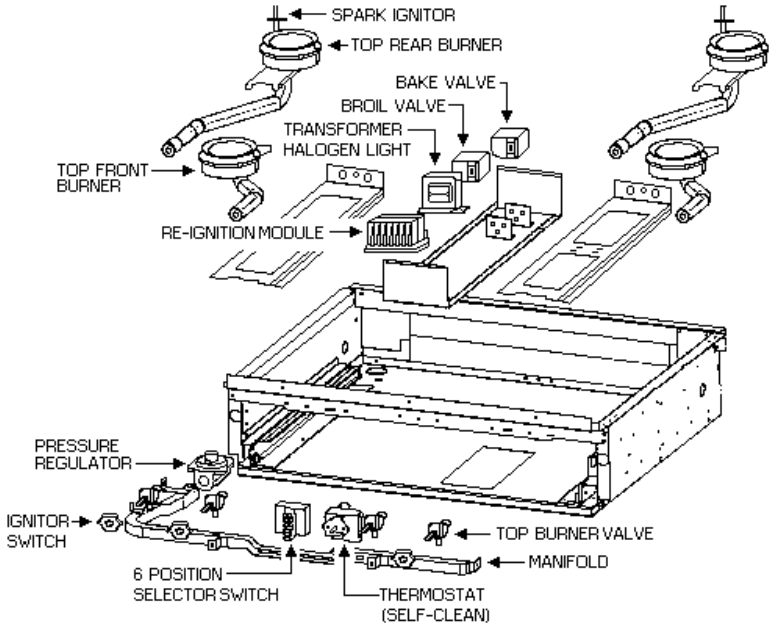
HANDLE and LOGO REMOVAL

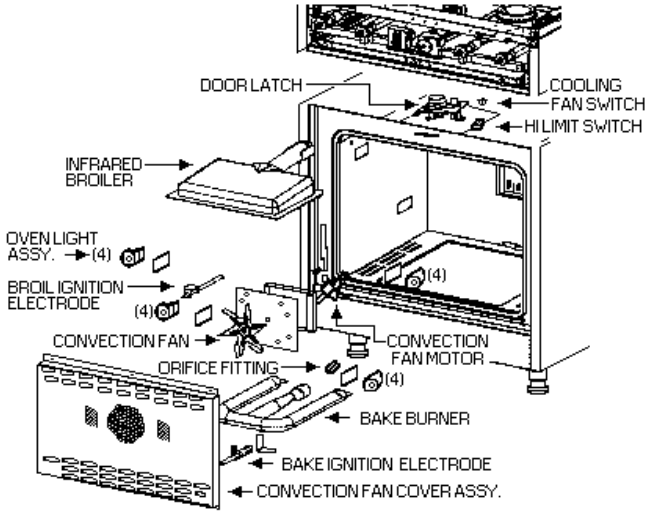
1. Remove door. (See door removal.)
2. Remove screws securing the door panel to the door liner and remove panel form the liner.
3. Door handle is mounted to the door panel and can be removed by removing four (4) screws.
4. Remove the two (2) cap nuts securing the logo to the outer door panel.

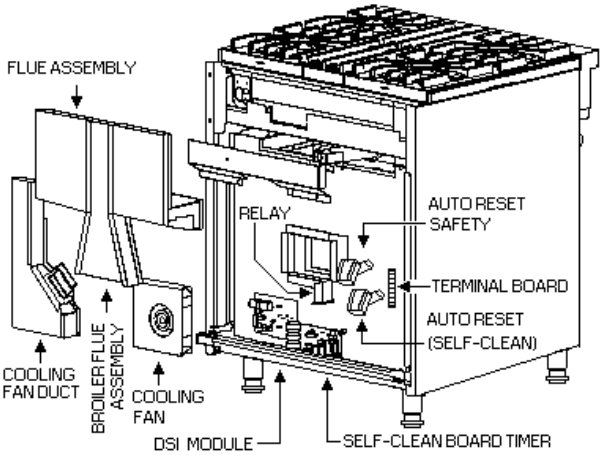
DOOR HINGE REMOVAL

1. Remove door. (See oven door removal.)
2. Remove two (2) screws located behind the door seal for the top screw and beneath the access panel below the door for the bottom screw.
3. Open the hinge and lock in the most open position.
4. Remove the hinge through the opening toward the front of the range.

COMPONENT LOCATION

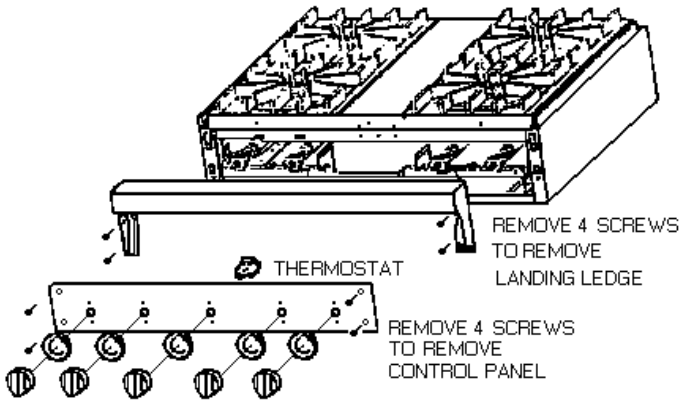






CONTROL PANEL REMOVAL

1. Shut off power to the unit.
2. Remove all top burner knobs.
3. Remove lower bezel screw from the second burner control from each end of the control panel. (Remove lower bezel screw from grill control on grill models.)
4. Remove two decorative screws at both ends of the control panel.
5. It is not necessary to remove bezels.



LANDING LEDGE REMOVAL

1. Shut off power to the unit.
2. Remove the control panel. (See control panel removal.)
3. Remove grates, burner bowls, and grate supports.
4. Remove the screws along the back of the landing ledge.
5. Remove the two (2) screws at each end of the front of the landing ledge.
6. Remove the landing ledge.

OVEN LIGHT SWITCH REMOVAL

1. Shut off power to the unit.
2. Remove the control panel. (See control panel removal.)
3. Disconnect the wires from the switch.
4. Push the switch forward and out of the control panel.

OVEN LIGHT SWITCH

The oven light switches are mounted in the control panel. The light switch can be checked for continuity by using an ohmmeter set to the low ohms range or a continuity tester.

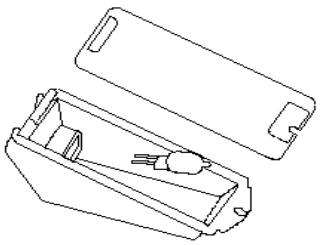
Access to the switch can be made by removing the control panel. Disconnect the wires from the switch. Attach the meter or tester leads to the switch terminals. Continuity or low ohms should be indicated when the switch contacts are closed and no continuity or infinite ohms indicated when the switch contacts are open. If the switch fails this test, it must be replaced.

OVEN LIGHT REMOVAL

1. Turn off power to the unit.
2. Unsnap glass light cover at opposite end from metal hinge.
3. Firmly grasp light bulb and pull out.
4. Replace with a 64405, 12V - 5W bulb.
5. Replace the light cover by first sliding into metal hinge and then snapping close on opposite end.
6. Reconnect power at the main fuse or circuit breaker.

CAUTION: DO NOT TOUCH BULB WITH BARE HANDS. CLEAN ANY SIGNS OF OIL OFF OF THE BULB AND HANDLE WITH A SOFT CLOTH.

OVEN LIGHT ASSEMBLY
PE050056



INDICATOR LIGHTS

A voltage test can be made to check the indicator light operation. Access the indicator lights by removing the control panel. Attach the leads from a voltmeter set to measure 120VAC or a test light to the indicator terminals and turn the oven on to bake operation. If voltage is present at the indicator terminals or the tester lights up, and the indicator does not light, replace the

TOP BURNER REMOVAL

1. Shut off power to the oven.
2. Remove grates, burner bowls and grate supports.
3. Remove the phillip head screw near the burner head securing the burner to the burner support.
4. Lift the burner and venturi assembly and remove the wire from the bottom of the ignitor.
5. Both burner assemblies (front and read) can be removed together by removing one (1) screw at the rear of the burner support, remove both ignitor wires and lift the burner support assembly.

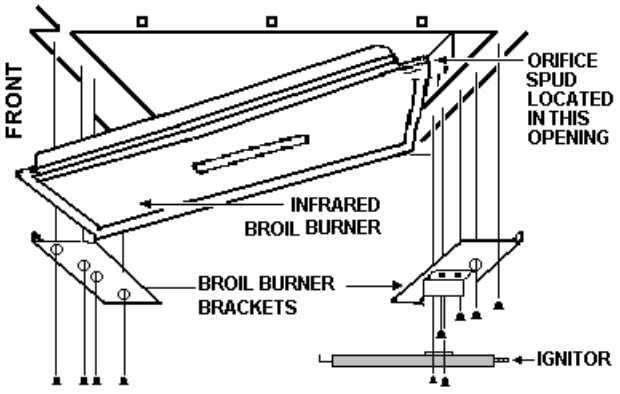
TOP BURNER IGNITOR REMOVAL

1. Shut off power to the oven.
2. Remove grate and burner bowl.
3. Remove two (2) screws securing the ignitor to the burner support.
4. Disconnect the ignitor wire.

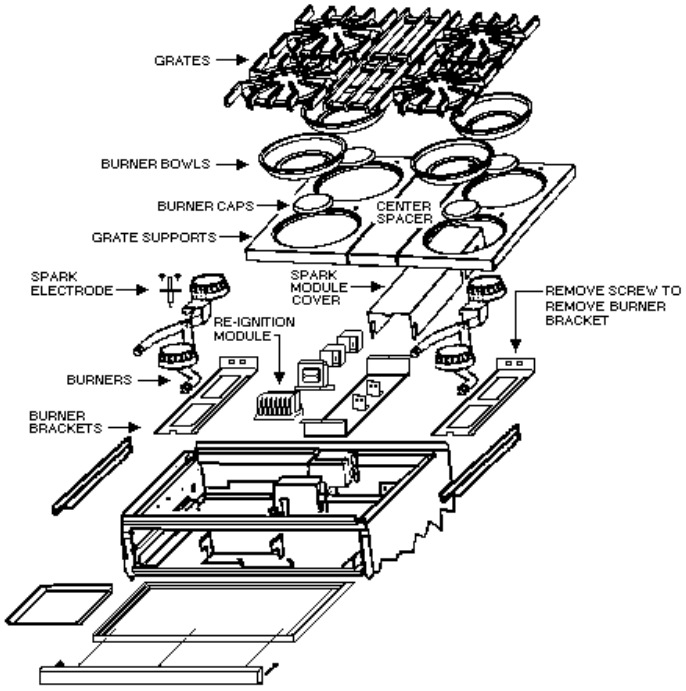
SPARK MODULE REMOVAL

NOTE: FOUR BURNER MODELS WITH OR WITHOUT A GRIDDLE USE ONLY ONE (1) SPARK MODULE; FOUR (4) BURNERS WITH A CHAR- GRILL REQUIRES TWO (2) SPARK MODULES.

1. Remove grates, grate supports and center spacer.
2. Remove spark module cover.
3. Remove two (2) screws securing the spark module using care not to damage wiring.
4. Disconnect the wiring. (When replacing module do not forget to ground green wire to chassis.)
5. For wiring sequence see wiring on page 22..



BURNER BOX SECTION



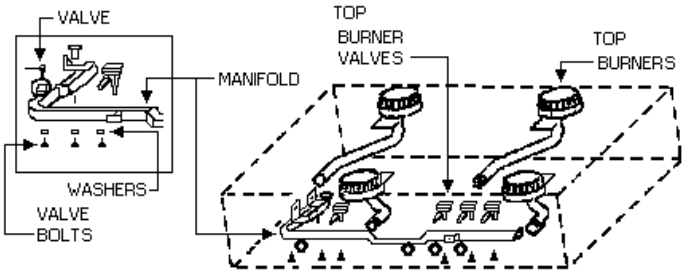
INFRARED BURNER
BROIL BURNER REMOVAL

1. Shut off power to the unit.
2. Shut off the gas supply.
3. Remove the two (2) broil ignitor mounting screws and remove the ignitor from the broil burner
4. Remove the broil burner brackets.
5. Remove the broil burner mounting screws securing the burner to the oven cavity.
6.. Remove the broil burner.

BROIL IGNITOR REMOVAL

1. Shut off power to the oven.
2. Remove the two (2) broil ignitor mounting screws and pull the ignitor leads into the oven cavity.
3. Disconnect the wire leads.

TOP BURNER VALVES



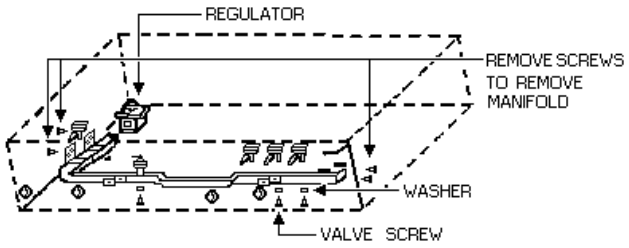
VALVE REPLACEMENT

1. Remove the control panel. (See control panel removal.)
2. Remove the lower valve bolt and gasket.
3. Lift the valve from the manifold.

NOTE: CHECK ALL CONNECTIONS FOR LEAKS USING A SOAP SOLUTION AFTER INSTALLING THE REPLACEMENT VALVE.

PRESSURE REGULATOR REMOVAL

1. Shut off power to the oven.
2. Shut off gas supply to the oven.
3. Remove the left side grates, burner bowls and grate supports.
4. Disconnect the gas supply to the oven.
5. Remove the regulator with a pipe wench turning counter clock wise. (Secure the manifold with another wrench before turning.)



MANIFOLD and REGULATOR

OVEN BURNER REMOVAL

1. Shut off power to the oven.
2. Remove the oven door. (See oven door removal.)
3. Remove oven racks and rack supports.
4. Remove oven bottom assembly.
5. Remove two (2) screws securing the oven burner.
6. Remove the oven burner by pulling up and out of the oven cavity.

NOTE: CHECK ALL CONNECTIONS FOR LEAKS USING A SOAP SOLUTION AFTER INSTALLING REPLACEMENT REGULATOR. USE SEALANT ON ALL PIPE JOINTS. SEALANT MUST BE RESISTIVE TO L.P. GAS. **DO NOT USE THREAD TAPE.**

CONVECTION FAN REMOVAL

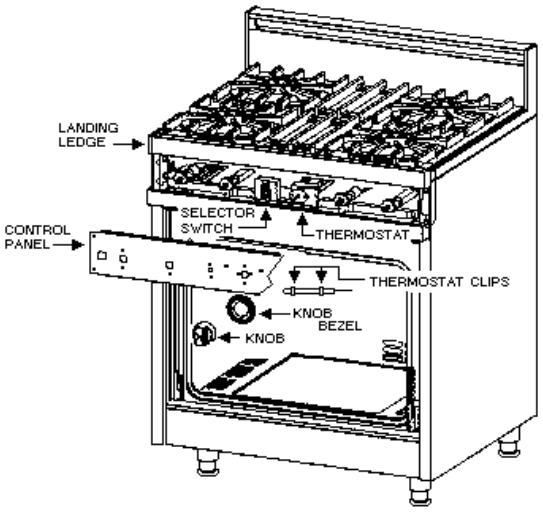
1. Shut off power to the oven.
2. Remove the door. (See oven door removal.)
3. Remove the oven racks.
4. Remove the hex head screws securing the fan cover to the rear wall of the oven
5. Remove the hex head screws securing the fan mounting box to the rear wall of the oven, (being careful not to allow the motor wires to come loose and fall behind the rear wall of the oven) disconnect the wiring one lead at a time and connect to the appropriate terminal on the replacement fan motor.

INDICATOR LIGHT REMOVAL

1. Shut off power to the unit.
2. Remove the control panel. (See control panel removal.)
3. Disconnect the wiring from the indicator light.
4. Push the indicator light out of the control panel.

BAKE / BROIL THERMOSTAT REMOVAL

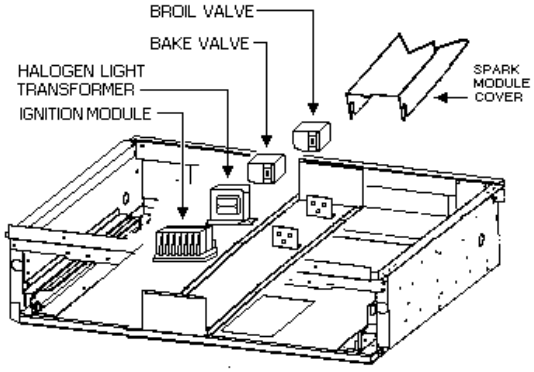
1. Shut off power to the unit.
2. Pull the range out far enough to remove the rear panel.
3. Remove control panel. (See control panel removal.)
4. Remove the two (2) clips securing the thermostat bulb to the inner back wall.
5. Remove grates, burner bowls and grate supports.
6. Carefully pull the capillary tube out of the oven cavity.
7. Disconnect the thermostat wiring one lead at a time and connect to the appropriate terminal on the replacement thermostat.
8. Remove two (2) screws mounting thermostat to the control panel.



OVEN IGNITOR ELECTRODE REMOVAL

1. Shut off power to the unit.
2. Remove oven door for easy access. (See oven door removal.)
3. Remove the lower access panel below the oven door be removing two (2) mounting screws on either side under the oven door hinges.
4. Disconnect the wire leads to the ignitor.
5. Remove two (2) screws holding the ignitor electrode to the bracket.

BROIL GAS VALVE REMOVAL



1. Shut off power to the oven.
2. Shut off gas supply to the oven.
3. Remove grates, grate supports and center spacer.
4. Remove spark module cover.
5. Disconnect the wire leads to the broiler valve connecting the leads to the replacement valve.
6. Disconnect the gas supply tubing from the gas valve.
7. Remove two (2) screws securing the gas valve to the mounting bracket.

NOTE: CHECK ALL CONNECTIONS FOR LEAKS USING A SOAP SOLUTION AFTER INSTALLING THE REPLACEMENT VALVE.

OVEN GAS VALVE REMOVAL

1. Shut off power to the oven.
2. Shut off gas supply to the oven.
3. Remove grates, grate supports and center spacer.
4. Disconnect the wires leads to the gas valve.
5. Disconnect the gas supply tubing to the gas valve.
6. Remove two (2) screws securing the gas valve to the mounting bracket.

NOTE: CHECK ALL CONNECTIONS FOR LEAKS USING A SOAP SOLUTION AFTER INSTALLING THE REPLACEMENT VALVE.

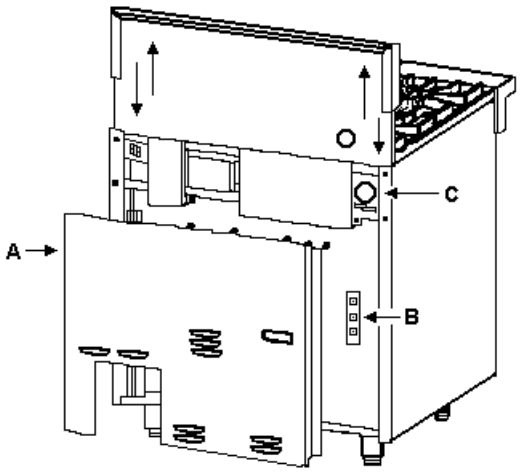
ACCESS TO THE SELF-CLEAN ELECTRONIC CIRCUIT FOR REPAIR

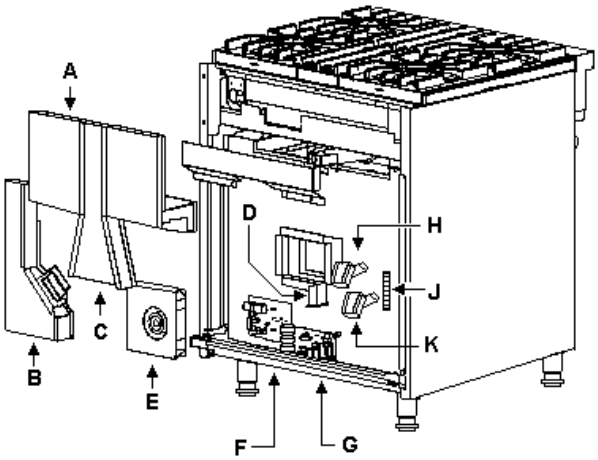
Remove the range from the cabinet and remove the back cover to service the electronic components for self - clean.

A. Remove the rear cover.

B. Disconnect power to the unit.

C. Disconnect the gas supply to the unit.

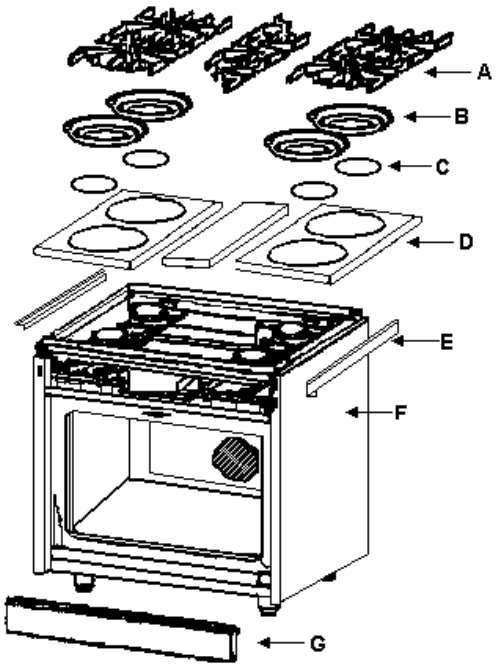




COMPONENT LOCATION

A. Flue assembly.
B. Cooling fan duct.
C. Broiler flue assembly.
D. Relay.
E. Cooling fan
F. Direct Spark Ignition (DSI) module.
G. Self-clean timer PC board.
H. Auto reset (safety).
J. Terminal board.
K. Auto reset (self-clean).

FREESTANDING GAS SELF-CLEAN LOCK
To replace the self-clean lock mechanism you will need to remove the following:



A. Burner gates and center grate.

B. Burner bowls.

C. Burner caps.

D. Grate supports and center spacer.

E. Grate support trim.

F. Side panels.

G. Lower access panel.

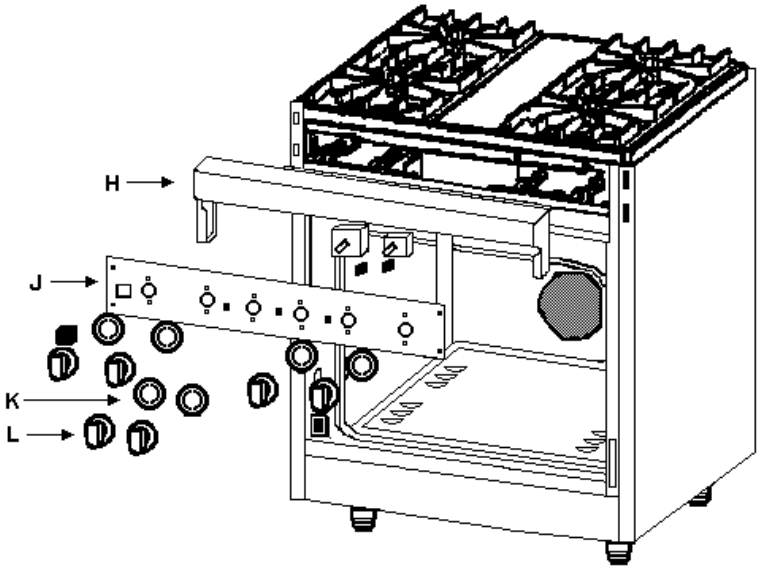
H. Landing ledge.

J. Control panel

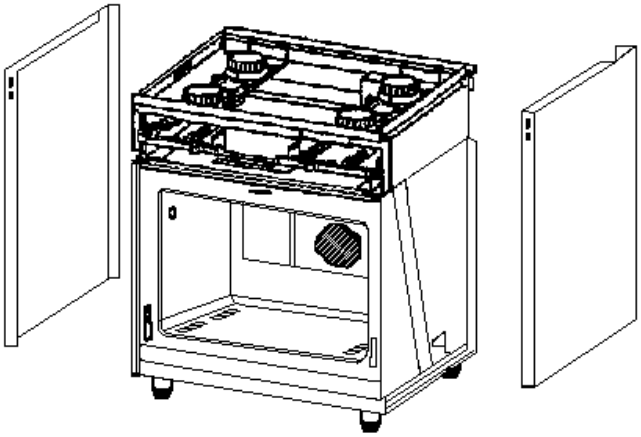
K. Knob bezels.

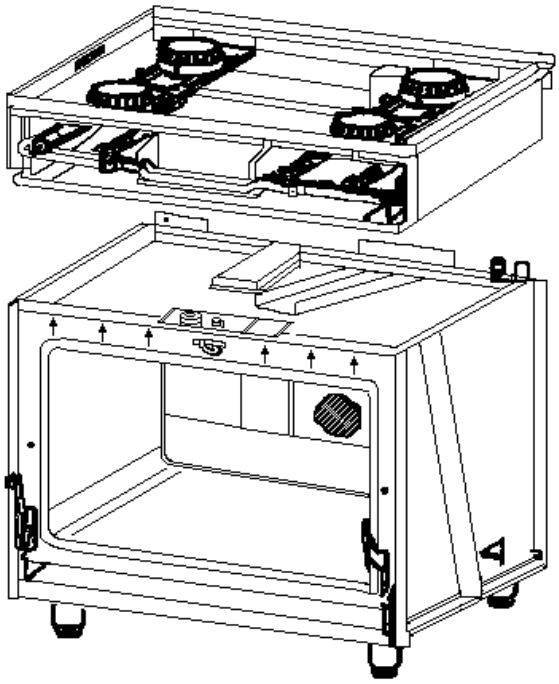
L. Knobs.

(Continued on next page)



FREESTANDING GAS SELF-CLEAN LOCK (Con't)



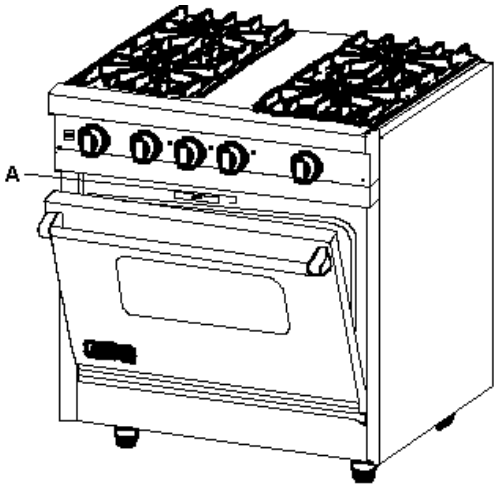


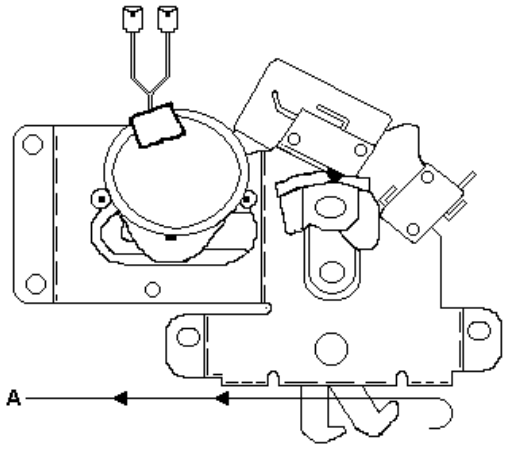
1. Remove both side panels and insulation.
2. Remove the six (6) screws along the upper frame above the door that hold the burner box assembly to the oven body. Lift the front of the burner box high enough to gain access to the **Self-clean lock** and associated components (High Limit Switch and Cooling Fan Switch). Use a block, approximately 6" high, to hold the burner box in place while working on the lock.

VGSC "LOCKED" DOOR

In the unlikely event the door lock motor should fail in the "locked" position you will need to:

1. To fashion a hook on the end of a 12" long stiff wire.
2. Insert the hook between the door and the front frame assembly at the top, see "A" illustration at right. The hook on the wire should be to the right of the latch hook.
3. Engage the door latch hook with the wire hook and pull the latch hook to the left until the door is released, see illustration below.





TROUBLE SHOOTING GUIDE --GSC SELF-CLEAN FREESTANDING RANGE		
PROBLEM	**PROBABLE CAUSE**	**CORRECTION**
✷✷✷**BAKE SHUTS OFF** ✷Selector Switch to Bake ✷Baking Temperature Set ✷Cycle Light is On	**Control Board is Locked Out** (If flame is not detected, the external LOCKOUT is executed).	(1) Turn off selector switch (2)Turn off Temperature Control (3)Position igniter (4) Adjust Air Shutter (5) Turn on Selector Switch (6) Turn on Temperature Control
Range Completely Inoperative Electrically	***No supply voltage to range*** ***No voltage to range circuits***	***Check fuse / breaker box*** ***Check high limit switch***
1. **No Bake:** ✷Selector Switch to Bake ✷Baking Temperature set ✷No Cycle Light Contacts open, Replace T-stat.	1A. No voltage to Thermostat. 1B. Defective T-stat contacts. contacts BA to Neutral.	1A. Check for 120VAC at the Thermostat terminals BA to Neutral. If no voltage is present check for broken or burned wires. 1B. Check continuity across
2. **No Bake:** ✷Selector Switch to Bake ✷Baking Temperature set ✷Cycle Light is on	2A. Selector Switch contacts 1 to 12 open. 2B. Safety Reset Relay contacts 1 to 2 open.	2A. Check continuity at contacts 1 to 12 on Selector Switch. Open contacts, replace Selector Switch. 2B. Check continuity at contacts 1 to 2 on Safety Auto Reset, Open contacts, replace Safety Auto Reset.
3. **No Bake:** ✷Selector Switch to Bake ✷Baking Temperature set ✷Cycle Light is on ✷Bake Ignitor does not click	3A. Direct Spark Ignition Module (DSI) inoperative.	3A Check for 120VAC to pin #6 (BA / Yel). 120VAC present, Replace DSI module.
4. **No Bake:** ✷Selector Switch to Bake ✷Baking Temperature set ✷Cycle Light is on ✷Bake Ignitor clicks ✷Gas supply tubing on wrong Gas Valve	4A. Open coil in the Bake Solenoid valve. 4B. Air in the gas line.	4A. Check continuity across the Solenoid coils, If open replace the Solenoid Gas Valve. When the coil is okay check the wiring. 4B. Purge the Gas Line, turn control off and retry.✷✷
5. **No Convection Bake:** ✷Bake functions normally	5A. Open contacts in the Selector Switch. 5B. Open Motor windings in the Convection Fan Motor.	5A. Check continuity from 5 to 7 on the Selector Switch. If open replace Selector Switch. 5B. Check continuity across the Motor windings. If open replace Motor. Check wiring.
6. **No broil:** ✷Selector Switch set to Broil ✷Temperature set to Broil ✷Bake functions normally ✷Cycle Light is on ✷Broil Ignitor does not click ✷Gas supply tubing on wrong Gas Valve	6A. Open contacts in the Selector Switch. 6B. Direct Spark Ignition Module (DSI) inoperative.	6A. Check continuity from 1 to 11 on the Selector Switch. If open replace Selector Switch. Check wiring. 6B. Check for120VAC at pin 7 (BR / RED) on the Module. If voltage is present, replace Module. No voltage check wiring.

✷✷See Description of Operation, pages 12, 13, and 14.

✷✷✷Electronic Protection Devices make use of a flame electrode as a sensor and an electronic amplifier to boost the small current involved to operate a relay. The advantage of these units over thermal expansion or thermoelectric devices are: (1) they are not activated by heat, only flame; (2) they respond quickly to the presence of flame, or flame failure; (3) they can be positioned to provide pilot proving, at the ignition point of the flame; (4) the electrode has a longer working life. Both systems rely on the ability to conduct and electrical current, during the combustion process. Large numbers of free electrons and ions are present in the flame, so the flame acts as an electrolyte in which the current can flow. The ions and electrons are attached to suitable charged electrodes. Current of

TROUBLE SHOOTING GUIDE----GSC SELF-CLEAN FREESTANDING RANGE		
PROBLEM	**PROBABLE CAUSE**	**CORRECTION**
7. **No Broil:** ✸Selector Switch set to Broil ✸Temperature set to Broil ✸Bake functions normally ✸Cycle Light is on ✸Broil Ignitor clicks	7A. Open coil in Broil Solenoid valve. 7B. Air in the gas line.	7A. Check continuity across Broil Valve. If open, replace valve. 7B. Purge the gas line, turn the control off and retry.✸✸
8. **No Convection Broil:** ✸Selector Switch set to Broil ✸Temperature set to Broil ✸Broil functions normally	8A. Open contacts in the Selector Switch. 8B. Open Windings in the Convection Fan Motor.	8A. Check continuity from 5 to 7 on the Selector Switch. If open replace Selector Switch. 8B. Check continuity across the Motor windings. If open replace Motor. Check wiring.
9. **No Self-clean:** **Before Door Lock** ✸Selector Switch to Clean ✸Thermostat to Clean (Against the upper stop) ✸Bake functions normally ✸Broil functions normally ✸Clean Light does not light ✸Door does not lock	9A. Selector Switch contacts 2 to 10 open. 9B. Selector Switch contacts 5 to 6 open 9C. No power to L1 on the Timer PCB. 9D. No power to pin 1 on the Auto Reset. 9E. No power to Timer PCB contact LS2. 9F. No power to Door Lock Motor.	9A. Check continuity from contact 2 to 10. If open replace Selector Switch. Contacts okay, check for power at **T2** on the Timer PCB. No power, check the wiring from Selector Switch to Timer (PC) Board. 9B. Check continuity from contact 5 to 6. If open replace Selector Switch. Contacts okay, check for power at **SEL** on the Timer PCB. No power check the wiring from Selector Switch to Timer PCB. 9C. Check wiring from Line L2 to L1 on Timer PCB. 9D. Check continuity from Timer PCB pin L1 to LS1. If open replace the Timer PCB. 9E. Auto Reset not closing. Check continuity from Auto Reset pin 1 to pin 2. If open replace Auto Reset. Contacts okay check wiring from Auto Reset pin 2 to Timer PCB pin LS2. 9F. Check for power at M1 on the Timer PCB. If no power replace the Timer PCB. Power at M1, check wiring to Door Lock Motor. Check continuity of the Door Lock Motor. No continuity, replace the Motor.

TROUBLE SHOOTING GUIDE----VGSC SELF-CLEAN FREESTANDING RANGE		
PROBLEM	**PROBABLE CAUSE**	**CORRECTION**
10. **No Self-clean:** **Before 600°F After Door Lock** ✸Selector Switch to Clean ✸Thermostat to Clean (Against the upper stop) ✸Bake functions normally ✸Broil functions normally ✸Clean Light is on ✸Door lock engaged ✸No spark to Broil Igniter ✸No Broil flame	10A. Selector Switch contacts 2 to 10 open 10B. Timer PCB open contacts T1 to T2. 10C. Door Lock Switch SW3 open. 10D. Micro switch on the T-stat open. 10E. Selector Switch contacts 4 to 8 open.	10A. Check continuity from pin 2 to 10. If open replace Selector Switch. Continuity checks okay. 10B Check for power at T2 on the Timer PCB, no power check wiring from Selector Switch to Timer PCB. Check continuity from T1 to T2 on Timer PCB. If open replace Timer PCB. 10C Check for power at the COM connection on the Microswitch on the Thermostat. No power, check the Door Lock Switch SW3 for continuity. If open, replace SW3 on the Door Lock. 10D. Check continuity across pin COM to NO. If open replace Thermostat. 10E. Check continuity across pins 4 to 8. Open contacts, replace Selector Switch. Contacts okay, check the wiring from pin 8 to the DSI module.
11. **Partial Self-clean:** **After 600°F After Door Locks** ✸Broil Burner comes on during the first half of ✸Self-clean. ✸Bake Burner fails to Ignite during the last half of the clean cycle. ✸Bake functions normally	11A. Selector Switch contacts 3 to 9 open. 11B. Bake Relay contacts 9 to 6 open.	11A. Check continuity from pin 3 to 9 on the Selector Switch, open Contacts replace Selector Switch 11B. Check continuity from pin 9 to 6 on the Bake Relay, open contacts replace Relay.
12. **Cooling Fan:** ✸Does not come on when place in self-clean. Self-clean cycle okay during initial startup.	12A. Timer PCB contacts T4 to T3 open.	12A. Check continuity from T3 to T4 on Timer PCB. If open replace the Timer PCB. Contacts good check continuity across the Fan Motor. No continuity, replace the motor.
13. **Cooling Fan:** ✸Does not turn off (The Cooling Fan will normally run for several minutes after a self-clean cycle, until the temperature drops to a safe level.)	13A. Fan Switch defective.	13A. Fan Switch is normally open. Check continuity when cold, if closed, replace the Fan Switch.

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