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Heatilator Inc.
1915 W. Saunders Street
Mt. Pleasant, IA 52641
a HON INDUSTRIES company

c UL

B-VENT GAS APPLIANCE
OWNERS MANUAL
AND INSTALLATION INSTRUCTIONS

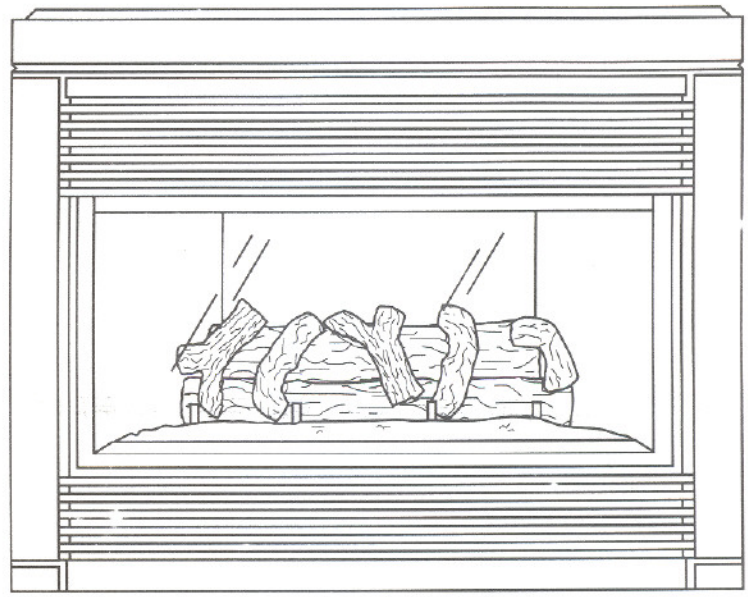
SERIES: GC361 AND GC421

This manual must be used for installation of a B - Vent Gas Appliance and retained by the homeowner for operation and maintenance instructions.

FOR YOUR SAFETY

What to do if you smell gas:

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



WARNING

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information, consult a qualified installer, service agency or the gas supplier.

FOR YOUR SAFETY

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

Electrician: Please refer to page 13 for wiring instructions.

Plumber: Please refer to page 6 and 12 for gas connection information.

Framer: Please refer to page 7 for framing specifications.

PLEASE RETAIN THIS MANUAL FOR FUTURE REFERENCE.

Table of Contents

Safety Precautions

1. Please read these installation instructions completely before beginning installation procedures. Failure to follow them could cause a malfunction resulting in serious injury and/or property damage.
2. Always check your local building codes prior to installation. This installation must comply with all local, regional, state and national codes and regulations.
3. Installation and repair should be done by a qualified service person. This appliance should also be inspected annually by a qualified service person. More frequent inspections/cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that the control compartment, burners and circulating air passage ways of the appliance be kept clean.
4. GC361, GC421 series units are vented decorative gas appliances. Do not burn wood or other material in these appliances.
5. NEVER leave children unattended when there is a fire burning in the unit.
6. This appliance must be vented with a minimum 5" B vent system and must terminate above the roof line. Venting **must not be connected** to a chimney flue servicing a solid fuel burning appliance.
7. Use only the fuel gas specified on the rating label of this gas appliance. Keep any flammable liquids a safe distance from the unit.
8. While servicing this appliance, always shut off all electricity and gas to the fireplace. This will prevent possible electrical shock or burns. Also, make sure the unit is completely cooled before servicing.
9. During any pressure testing of the gas supply piping system that exceeds test pressures of 1/2 psig, this appliance and its individual shut-off valve must be disconnected from the piping system. If test pressures equal to or less than 1/2 psig are used in pressure testing the gas supply piping system, this appliance must be isolated from the piping system by closing its individual manual shut-off valve during testing.
10. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.
11. Be sure to provide adequate clearances around the air openings into the combustion chamber and adequate accessibility clearances for servicing and proper operation.

I. LISTINGS AND CODE APPROVALS

U.S. and Canada Certification

The GC361, GC421 Series Gas Appliance has been tested in accordance with the ANSI standard Z21.50b-1990 or, in Canada, the current CAN/CGA M2.22-M92, CAN/CGA 2.17-M91 and have been LISTED by Underwriters Laboratories Inc. for installation and operation as described in these Installation and Operating Instructions. All components are UL, AGA, CGA orCSA safety certified.

Local codes

Check with your local building code agency prior to installing this appliance to ensure compliance with local codes, including the need for permits and follow-up inspections. This installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1-latest edition, in the U.S.A. and the CANI-B149-latest edition, in Canada.

Optional components

This gas appliance has been tested and listed for use with the optional components listed below. Many optional components may be purchased separately and installed at a later date. However, installation of a remote control or fan kit will require electrical power. To avoid costly reconstruction, a separate source of electrical power should be supplied to the unit at the time of initial installation of the system for possible addition of these accessories at a later date.

Fuel

Any additions, changes or conversions required in order for the appliance to satisfactorily meet the application needs, they must be made by a qualified service technician using factory specified and approved parts.

This product is manufactured to use natural gas or propane gas, depending on model purchased. A natural gas unit can be converted to use propane gas later, but **only** if done by a qualified service technician and **only** if the CKP Natural Gas to Propane Gas Conversion Kit is used. In the event your appliance must be converted back to natural gas from propane, you must use a CKN Propane Gas to Natural Gas Conversion Kit.

If any assistance is required during installation, please contact your local dealer or contact Heatilator Customer Relations Department, 1915 W. Saunders Street, Mt. Pleasant, Iowa 52641.

II. DESCRIPTION OF THE SYSTEM

The GC361/GC421 Series are B-vent decorative gas appliances. While a significant amount of heat is created by these appliances, it is not intended to be and, therefore, should not be used as a heater.

This HEATILATOR system must consist of the following:

1. Fireplace
2. B-Vent System
3. Termination

Tools and building supplies normally required for installation.

Tools	Building Supplies
Saw	Wall-finishing materials
Pliers	Framing material
Hammer	Fireplace surround
Phillips screwdriver	Caulking material
Tape measure	
Plumb line	
Level	
Electrical drills/bits	
Square	

We strongly recommend that you DO NOT install B-Vent Gas Appliances in strong negative air locations, such as a basement or a public facility. Living rooms with cathedral ceilings could be susceptable to a negative air situation, but such installations can be overcome through raising the termination, depending on specific installations. This fireplace uses room air for normal operation and could have problems establishing a positive draft in negative air locations. In lieu, we recommend a direct vent appliance.

Note: Illustrations throughout these instructions reflect typical installations and are for design purposes only. Actual installation may vary slightly due to individual design preferences. However, minimum and maximum clearances must be maintained at all times.

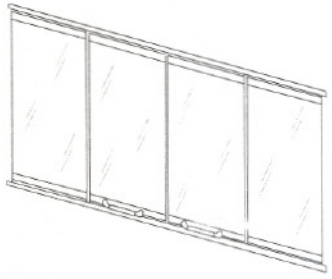
The illustrations and diagrams used throughout these installation instructions are not drawn to scale.

III. SYSTEM COMPONENTS

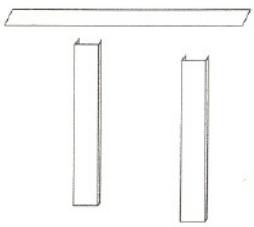
The table below is a list of only those components which may be safely used with this decorative gas appliance.

Catalog Number	Description
GC361	36", Standing pilot, natural gas, heat circulating appliance
GC421	42", Standing pilot, natural gas, heat circulating appliance
The following suffixes are defined as follows:	
no suffix	Natural Gas, Standing Pilot
L	Propane Gas, Standing Pilot
E	Natural Gas, Electronic Ignition
LE	Propane Gas, Electronic Ignition
Example:	GC421LE is a 42", electronic ignition, propane gas, heat circulating appliance GC361L is a 36", standing pilot, propane gas, heat circulating appliance
	Optional Components
CKP	Natural gas to propane gas conversion kit
CKN	Propane gas to natural gas conversion kit
RC4	Remote control (standing pilot)
RC5	Remote control (electronic ignition)
RC6	Battery operated remote control (standing pilot only)
AK14	Outside Air Kit (strongly recommended)
BC10	Fan motor rheostat control, wall mounted
BC11	Automatic Variable Blower Control
FK4	Single fan, includes wiring harness
RE36	Refractory, back and two sides for GC361 Series
RE42	Refractory, back and two sides for GC421 Series
TK40A	Antique brass fireplace perimeter trim kit for GC361 Series
TK40B	Polished brass fireplace perimeter trim kit for GC361 Series
TK46A	Antique brass fireplace perimeter trim kit for GC421 Series
TK46B	Polished brass fireplace perimeter trim kit for GC421 Series
TK301B	Polished brass front trim kit (6 bars, 1 hood) for GC361 Series
TK401B	Polished brass front trim kit (6 bars, 1 hood) for GC421 Series
DF361A	Fixed Original style bi-fold antique brass glass doors for GC361 Series
DF361B	Fixed Original style bi-fold polished brass glass doors for GC361 Series
DF421A	Fixed Original style bi-fold antique brass glass doors for GC421 Series
DF421B	Fixed Original style bi-fold polished brass glass doors for GC421 Series

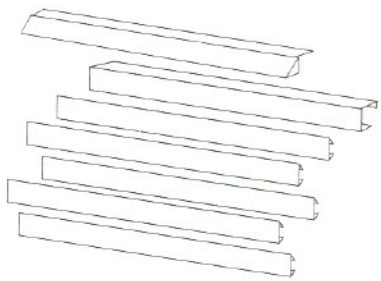
NOTE: An optional thermally-actuated vent damper may be purchased from your B-vent supplier to help reduce heat loss through the flue area while the appliance is not in operation.



DF361A,B
DF421A,B

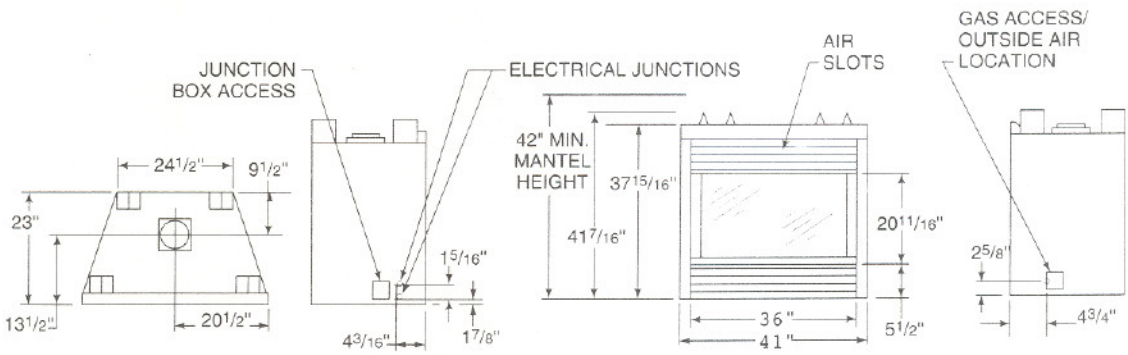


TK40A,B
TK46A,B

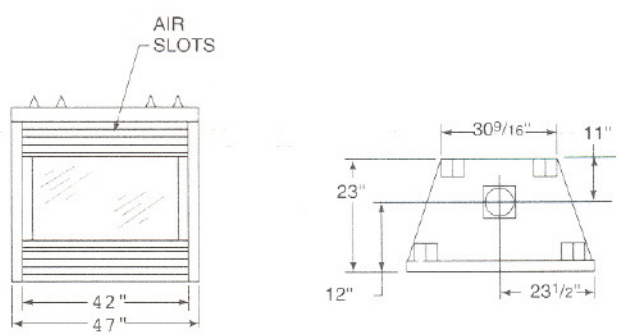


TK301B
TK401B

Trim Kits



GC361 DIMENSIONS



NOTE: DIMENSIONS NOT SHOWN FOR THE GC421 ARE THE SAME AS THE GC361

GC421 DIMENSIONS

Framing dimensions can be found on pages 6 & 7.

IV. PRE-INSTALLATION PREPARATION

INSTALLATION AND REPAIR SHOULD BE DONE BY A QUALIFIED SERVICE PERSON. THE APPLIANCE SHOULD BE INSPECTED BEFORE USE AND AT LEAST ANNUALLY BY A QUALIFIED SERVICE PERSON. MORE FREQUENT CLEANING MAY BE REQUIRED DUE TO EXCESSIVE LINT FROM CARPETING, BEDDING MATERIAL, ETC. IT IS IMPERATIVE THAT CONTROL COMPARTMENTS, BURNERS AND CIRCULATING AIR PASSAGEWAYS OF THE APPLIANCE BE KEPT CLEAN.

DUE TO HIGH TEMPERATURES, THE APPLIANCE SHOULD BE LOCATED OUT OF TRAFFIC AND AWAY FROM FURNITURE AND DRAPERIES.

WARNING: THIS APPLIANCE MUST NOT BE CONNECTED TO A CHIMNEY FLUE SERVICING A SEPARATE SOLID FUEL BURNING APPLIANCE.

A. GAS PRESSURE

For natural gas, the minimum inlet gas supply pressure is 4.5 inches water column, and the maximum inlet gas pressure is 7.0 inches water column, for the purpose of input adjustment. **GC361** input rate is 28,000 Btu/hr. **GC421** input rate is 33,000 Btu/hr. For propane gas, the inlet gas supply pressure must be at least 11.0 inches water column and a maximum 14.0 inches water column.

A 1/8" NPT plugged tapping is provided on the gas control valve, near the outlet to the main burner immediately upstream of the gas supply connection to the appliance, accessible for a test gage connection.

Optimum manifold pressure is 3.5 inches water column for natural gas and is 10.5 inches water column for propane gas.

B. HIGH ALTITUDE INSTALLATION

U.S. installation: Units are tested and approved for elevations from 0-2000 feet.

When installing this unit at an elevation above 2000 feet, United States codes require a decrease of the input rating by changing the existing burner orifice. Input should be reduced 4% for each 1000 feet above sea level. Check with the local gas utility for proper orifice size identification. The orifice size for **GC361** natural gas versions is .101 in./2.5mm and a .063 in./1.6 mm. orifice size on propane gas versions. The orifice size for **GC421** natural gas versions is .110 in./2.75mm and a .067 in./1.7mm orifice size on propane gas versions.

Consult your local gas company for assistance in determining the proper orifice for your location or refer to ANSI Z223.1-latest edition, Appendix F.

Canadian installation: Units are certified for elevations from 0-4500 feet. When installing this unit at an elevation between 0-4500 feet in Canada, the input rating does not need to be reduced.

When installing this unit at an elevation above 4500 feet in Canada, check with local authorities. Consult your local gas company for assistance in determining the proper orifice for your location or refer to ANSI Z223.1-latest edition, Appendix F.

C. LOCATION AND SPACE REQUIREMENTS

This appliance may be installed along a wall, across a corner or in an exterior chase. Clearance to a side wall is 1" from the side column of the appliance. See Figure 1.

D. CLEARANCES

The following clearances to combustibles must be maintained: Minimum clearances to the top standoffs of the unit - 0", floor - 0", back - 1/2", sides - 1/2", face of the unit to ceiling - 30". The minimum height of vent installation must be 9' from the top of the appliance. The maximum horizontal offset must not exceed 50% of the vent height of the appliance. Minimum clearances to venting are as per the vent manufacturer's specifications.

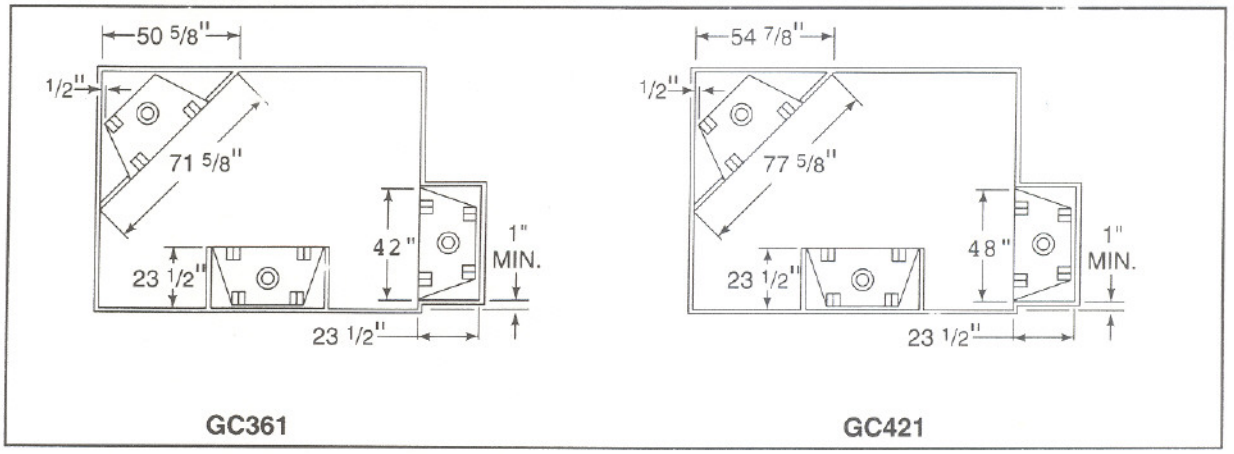


Figure 1
Fireplace Locations and Clearances

E. FRAMING

Note: If an optional hand held remote control (RC4 or RC5) is to be used, wiring must be done prior to finishing to avoid reconstruction.

Note: The remote wall switch must be wired prior to applying the finishing material to the wall in order to avoid reconstruction.

Figures 2 and 2a show a typical framing of this appliance assuming combustible materials are used. All required clearances to combustibles around the firebox must be adhered to. A 1/2" **air space** clearance must be maintained at the back and sides of the firebox assembly. Any framing on top of the unit must be above the top standoffs. Follow manufacturer's instructions for proper clearances to venting.

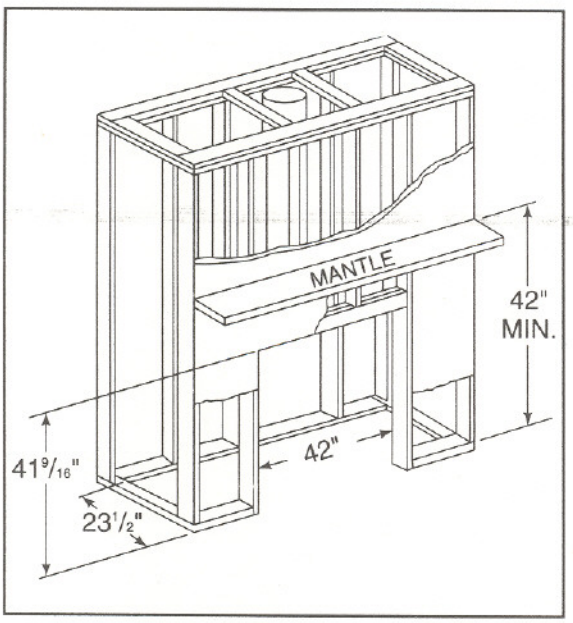


Figure 2
GC361 Framing Dimensions

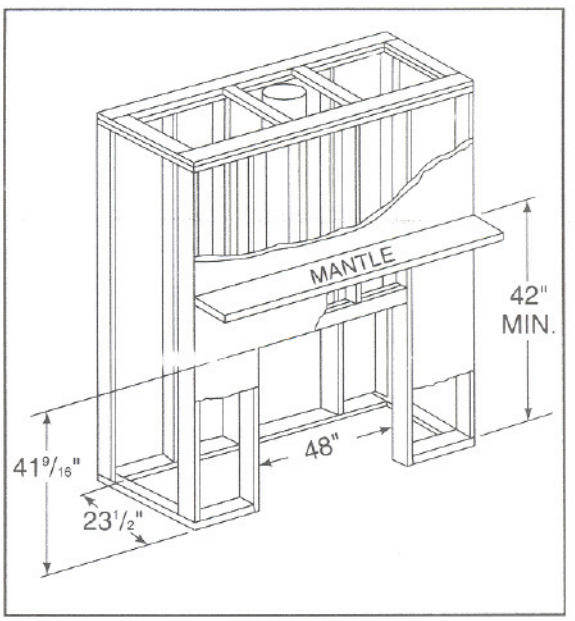


Figure 2a
GC421 Framing Dimensions

F. FINISHING MATERIALS

Only non-combustible materials may be used to cover the black firebox front.

NOTE
NON-COMBUSTIBLE FINISHING MATERIAL ONLY MAY BE APPLIED TO THE BLACK FACE OF THE UNIT BUT MUST NEVER COVER THE GRILLES

Combustible Finishing Material. Material made of or surfaced with wood, compressed paper, plant fibers, plastics, or any material capable of igniting and burning, whether flame proofed or not, plastered or unplastered.

Non-combustible Finishing Material. Material which will not ignite and burn. Such materials are those consisting entirely of steel, iron, brick, tile, concrete, slate, glass or plasters, or combination of the materials, or have a UL Flame rating of Zero (0).

High Temperature Sealant Material. Sealants that will withstand high temperatures; General Electric RTV103 (Black), or equivalent. Rutland, Inc. Fireplace Mortar #63, or equivalent.

After completing the framing and applying the finishing material over the framing, a non-combustible sealant, must be used to close off any gaps at the top and sides between the unit and facing to prevent cold air leaks. See Figure 3.

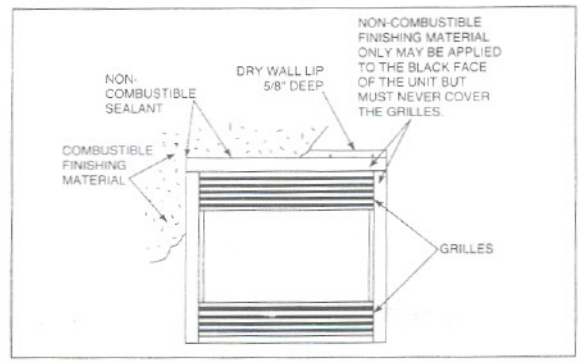


Figure 3
Finishing Materials

V. STEP-BY-STEP INSTALLATION OF THE SYSTEM

WARNING

BEFORE STARTING, DO THE FOLLOWING:

1. **WEAR GLOVES AND SAFETY GLASSES FOR PROTECTION.**
2. **KEEP HAND TOOLS IN GOOD CONDITION. SHARPEN CUTTING EDGES AND MAKE SURE TOOL HANDLES ARE SECURE.**
3. **ALWAYS MAINTAIN THE MINIMUM AIR SPACE REQUIRED TO THE ENCLOSURE TO PREVENT FIRE.**

STEP 1 - Positioning the Firebox

This firebox may be placed on a combustible or non-combustible continuous, flat surface. Slide the unit into position and level the firebox from side-to-side and front-to-back. Shim with non-combustible material, such as sheet metal, as necessary.

Secure the firebox by bending out the nailing flanges located on each side of the fireplace and securing the unit to the framing. See Figure 4.

STEP 2 - Termination

Common venting of this gas appliance with other gas appliances is not allowed in multi-family dwellings.

This appliance requires the use of a 5" B vent for operation and must be terminated above the roof line. Never downsize pipe. Follow all B vent requirements and installation instructions.

The minimum height of vent installation must be 9' from the top or 12' from the base of the appliance. Horizontal run must never exceed 50% of the height of the vent system as shown in Figure 5.

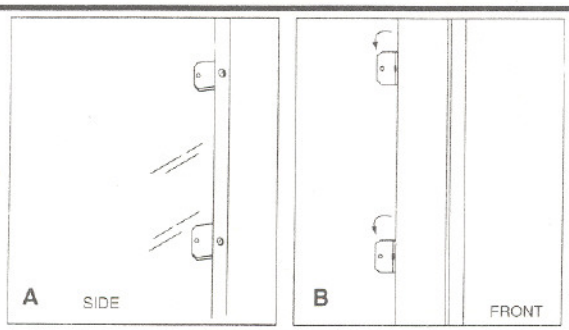


Figure 4
Nailing Flanges

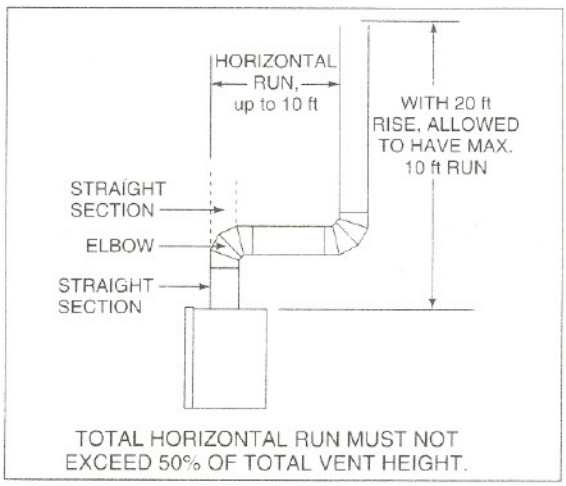


Figure 5
Venting Off The Top of Appliance

Note: The horizontal run of vent must have a 1/4" rise for every 1 ft. of run towards the termination. Never allow the vent to run downward. This could cause high temperatures and may present the possibility of a fire.

NOTE: Vertical rise off the top of the unit before elbowing creates a less restrictive venting environment.

1. Assembling vent sections. Attach a straight vent section to the top of the appliance. Use only B-vent sections.

2. Using Elbows. Elbows exceeding 45 degrees from the vertical shall be considered horizontal and therefore adapt horizontal run limitations. See Figure 6.

3. Penetrating the ceiling. Mark and cut out an opening in the ceiling for the firestop spacer. Frame the opening with the same size lumber used in the ceiling joists.

4. Installing the firestop spacers. Firestop spacers must be used whenever the venting penetrates a ceiling/floor area.

In all situations, firestop spacers are to be nailed to the ceiling joists from the bottom or appliance side, EXCEPT when the space above is an insulated ceiling or attic space. In this situation, the firestop spacer must be secured from the top side to meet fire stopping requirements.

Install the firestop spacer by positioning and securing the four sides of the firestop spacer to the joists using a minimum of three fasteners per side.

5. Securing vent system. Continue assembling the vent sections up through the firestop spacers as needed. Vent sections must be locked into position. Elbows and chimney stabilizers have straps for securing these parts to joists or rafters.

6. Marking the exit point in the roof. Locate the point where the venting will exit the roof by plumbing down to the center of the vent system. Drive a nail up through the roof to mark the center. See Figure 7.

7. Cutting out the hole in the roof. Measure to either side of the nail and mark the opening required to meet minimum clearances per venting requirements. This is measured on the horizontal; actual length may be larger depending on the pitch of the roof. Cut out and frame the opening. See chapter 25 of the Uniform Building Code for Roof Framing details. A one inch or greater minimum air space clearance (see Vent Instructions) must be maintained between the vent section and the roof.

8. Install roof flashing or site-produced chase top. Position a roof flashing or a site-produced chase top and secure into place.

9. Assembling vent sections. Continue to add vent sections through the roof opening, maintaining minimum air space clearance.

Note: Be sure to provide intermediate support for the vent during construction and check to be sure inadvertent loading has not dislodged the vent from the appliance or any vent joint.

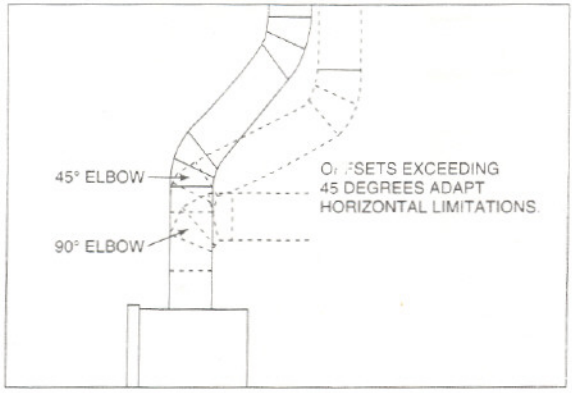


Figure 6
Using Elbows

WARNING

WHEN VENT SECTIONS EXCEEDING 3 FEET IN LENGTH ARE INSTALLED BETWEEN AN OFFSET/RETURN, STRUCTURAL SUPPORT MUST BE PROVIDED TO REDUCE OFF-CENTER LOADING AND PREVENT VENT SECTIONS FROM SEPARATING AT THE VENT JOINTS. FOLLOW ALL B-VENT MANUFACTURER GUIDELINES.

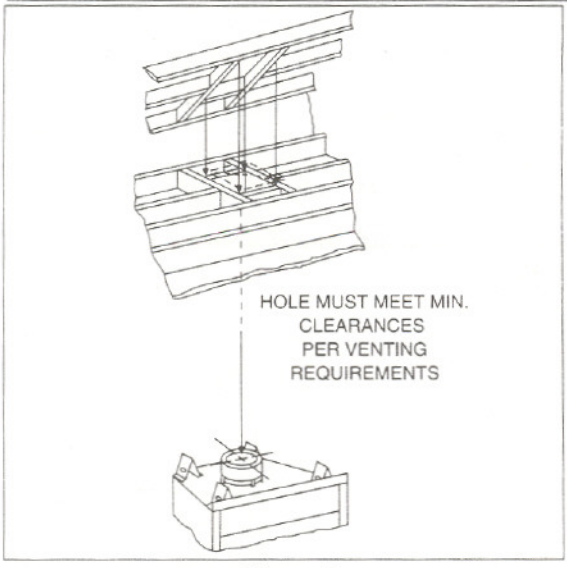


Figure 7
Exiting Through the Roof

10. Termination cap. Major building codes specify a minimum termination height above the roof top depending on the roof pitch.

Unlisted Cap. If you are using an unlisted termination cap and your vent section is at least 8 feet from a vertical wall, follow Figures 8 and 9 to determine the allowable termination height and location.

Measure the roof pitch. (Roof pitch is X/12 as shown in Figure 8.) Find your roof pitch in Figure 9 to determine the minimum height the termination cap must be located from the point where the vent section penetrates the roof (H in Figure 8).

Listed Cap. If you are using a listed termination cap, you must follow the manufacturer's installation instructions for minimum clearances to roof and any obstructions.

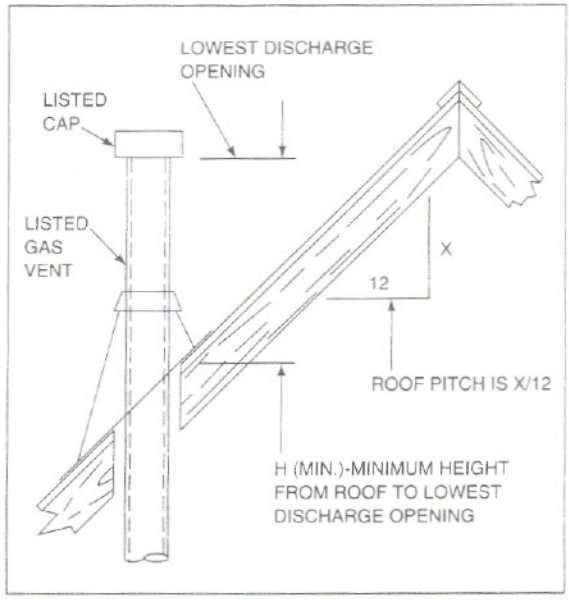


Figure 8
Termination Height if Termination Location is at Least 8' From a Vertical Wall

Roof Pitch	H (Min.) feet
Flat to 6/12	1.0
6/12 to 7/12	1.25
Over 7/12 to 8/12	1.5
Over 8/12 to 9/12	2.0
Over 9/12 to 10/12	2.5
Over 10/12 to 11/12	3.25
Over 11/12 to 12/12	4.0
Over 12/12 to 14/12	5.0
Over 14/12 to 16/12	6.0
Over 16/12 to 18/12	7.0
Over 18/12 to 20/12	7.5
Over 20/12 to 21/12	8.0

Figure 9
Minimum Termination Height

These termination heights are necessary in the interest of safety and do not guarentee proper operation. Trees, buildings, adjoining roof lines, adverse wind conditions, etc., may create a need for a taller roof termination should down drafting occur.

To install the termination cap, slide the cap vent sections into the vent pipe. Secure the cap following manufacturers instructions.

11. Checking the vent system. Periodically the venting system should be tested to assure proper operation. This can be done with a match while the unit is operating.

Hold a lighted match at the top edge of the firebox opening. If the flames and smoke remain upright, ventilation is acceptable. If the flames and smoke are drawn into the firebox, this means ventilation is good. If the flames and smoke are forced away from the firebox, this may indicate a ventilation blockage or down draft resulting in gas spillage into your home. If this occurs, turn off the fireplace and do not burn it until it has been inspected by a qualified service person.

STEP 3 - Double Checking

When construction of the entire vent system has been completed, double check to make sure all venting pipes and termination caps are unobstructed.

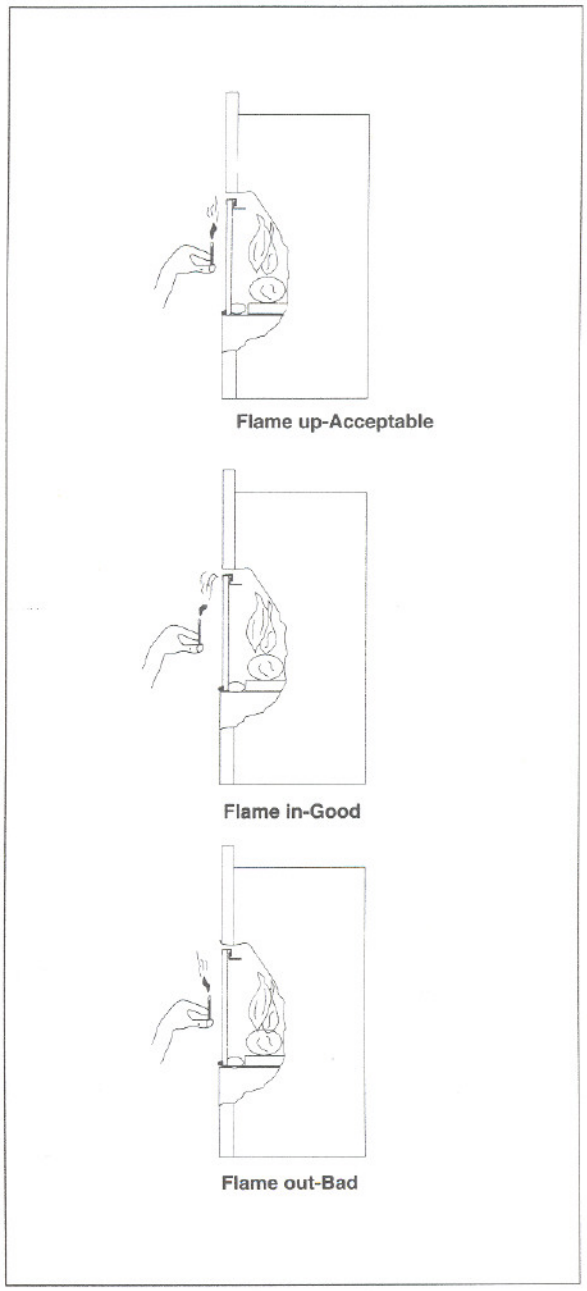


Figure 10
Testing Ventilation

NOTE: During any pressure testing of the gas supply piping system that exceeds test pressures of 1/2 psig, this appliance and its individual shut-off valve must be disconnected from the piping system. If test pressures equal to or less than 1/2 psig are used in pressure testing the gas supply piping system, this appliance must be isolated from the piping system by closing its individual manual shut-off valve during the testing.

NOTE

ALTHOUGH EACH UNIT IS LEAK TESTED IN THE FACTORY, IT IS MANDATORY DURING THE FIRST BURN FOR YOU TO CHECK FOR LEAKS. THESE MAY OCCUR DUE TO HANDLING, SHIPPING, INSTALLATION AND THE LIKE AND ARE BEYOND THE CONTROL OF HEATILATOR. EVERY JOINT, INCLUDING THE VALVE, PILOT, FITTINGS, ETC., MUST BE CHECKED.

STEP 4 - Gas Line Installation

Install the gas line piping into the right side of the gas appliance. A separate shut-off gas valve (supplied) should always be used. See Figure 11.

STEP 5 - Gas Line Connection

Connect the gas line to the appliance manual valve inlet, using 1/2" pipe. To ease installation, a listed flexible connector and manual shut-off valve are supplied. The manual shut-off valve should be connected directly to the hard pipe. The hard pipe should be ran into the gas appliance and then connected to the manual shut-off valve and flexible connector. Gas connections can be made from the control area by removing the lower front face. All connections must be checked for leaks with a soap and water solution.

At this time, bleed the gas line to extract any air that may be trapped inside the pipe.

After finishing the gas line installation, be sure to place insulation or silicone sealant around the incoming gas line to prevent cold air infiltration into this gas appliance. See Figure 11.

STEP 6 - Lower Front Face Removal

To remove the lower front face, gently lift upward and pull on the upper outside edges of the lower front face as shown in Figure 12. The top part of the lower front face will rotate downward.

Two spring hinges secure the lower portion of the lower front face into place. See Figure 13. Simply pull the hinges toward the center of the lower front face and then pull out the entire lower front face (Figure 14). To replace the lower front face, reverse this process.

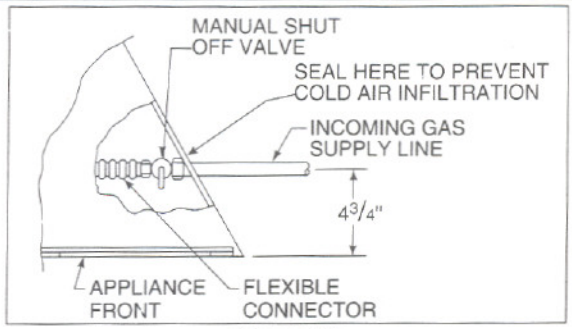


Figure 11
Gas Line

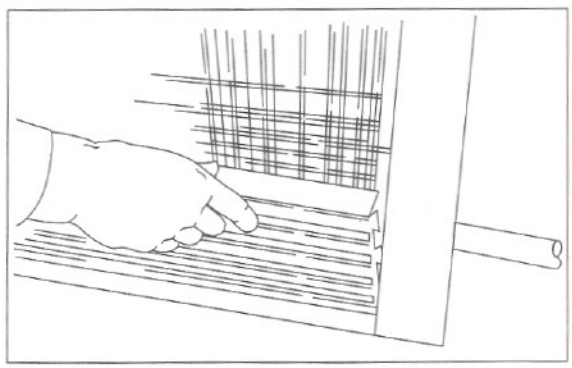


Figure 12
Lower Front Face Removal

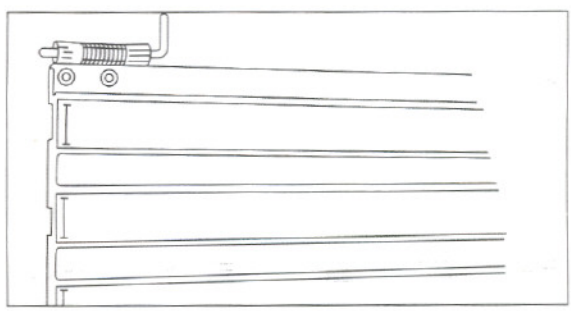


Figure 13
Lower Front Face Removal

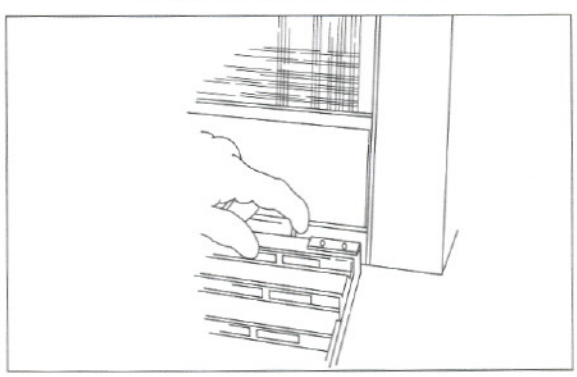


Figure 14
Lower Front Face Removal

STEP 7 - Wiring

Note: This appliance must be electrically wired and grounded in accordance with local codes or, in the absence of local codes, with National Electric Code ANSI/NFPA 70-latest edition, or CSA C22.1 Canadian Electrical Code. This appliance is not intended for use with a thermostat. The addition of a thermostat will void the warranty and may create a fire hazard.

A. ELECTRONIC IGNITION

1. Appliance Requirements. This appliance requires a 110VAC supply from a remote wall switch to the appliance junction box for operation. A wiring diagram is shown in Figure 15.

2. Remote Wall Switch. Position the junction box (not provided) in the desired place on the wall. Run the provided wire from the junction box, connect it to the provided wall switch and mount the wall switch inside the junction box.

3. Optional Accessories Requirements. Optional accessories may be added now or at a later date, however, wiring should be done now to avoid significant wall reconstruction. Two black wires are for the optional 110 volt switched fan. One black wire and the one white wire are for supplying 110 volt for ignition and for the optional 110 volt switched remote control.The optional fan kit (FK4) requires a separate 110VAC supply to the appliance junction box for operation, as shown in Figure 15, #2. In line with this junction box, you must have an on/off switch or a BC10. No additional 110VAC supply is required for the remote control (RC5). Wiring diagrams are provided with all accessories.

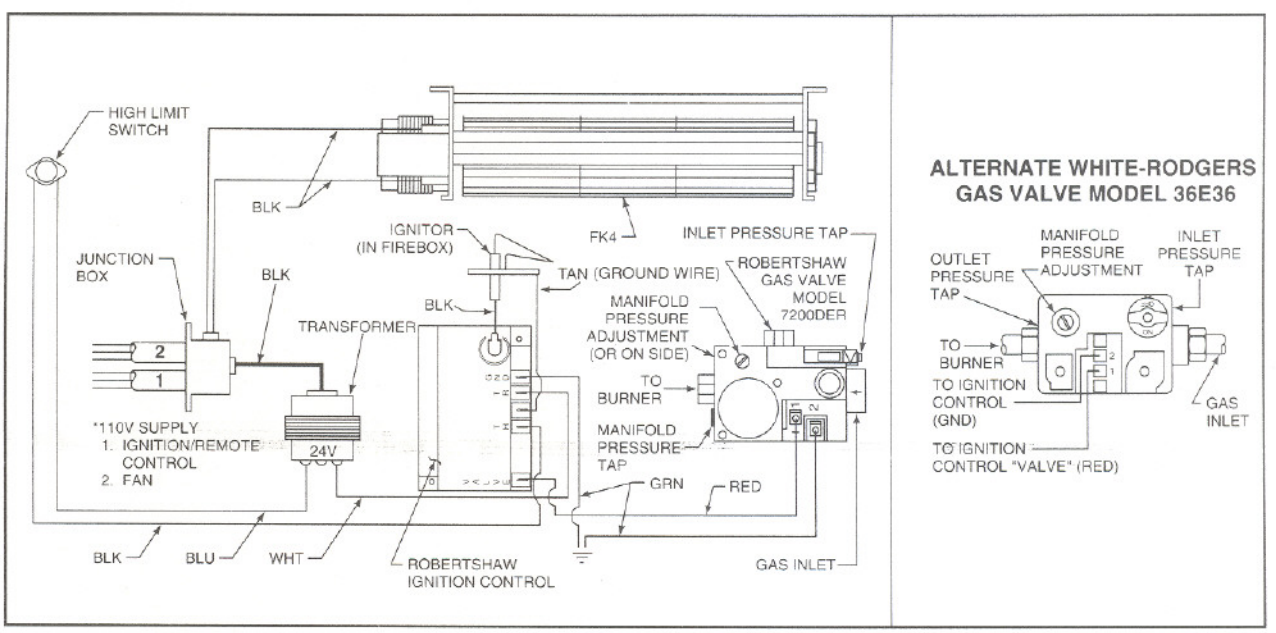


Figure 15
Electronic Ignition Wiring Diagram

B. STANDING PILOT IGNITION

Note: This appliance DOES NOT require a 110VAC supply for operation. Connecting the wall switch to a 110VAC supply will cause the unit to malfunction and destroy the valve and thermopile.

1. Remote Wall Switch. Position the junction box (not provided) in the desired place on the wall. Wiring located for the the wall switch will be found protruding from the left side of the fireplace. Run the wire to the junction box, connect to the provided wall switch and mount the wall switch inside the junction box. If you extend beyond the wall switch wires provided, you must not wire on extension nuts, but replace existing wires with the desired length. NOTE: extended lengths or wire will reduce millivolt readings and may cause unit shutdowns. A wiring diagram is shown in Figure 17.

2. Optional Accessories Requirements. Optional accessories may be added now or at a later date, however, wiring should be done now to avoid significant wall reconstruction later if accessories are added. Two black wires are for the optional 110 volt switched fan. One black wire and the one white wire are for the optional 110 volt switched remote control. The optional fan kit requires a 110VAC supply to the appliance junction box for operation. In line with this junction box, you must have an on/off switch or a RC10. No additional supplies are required for the fan motor speed control. The remote control (RC4) requires a separate 110VAC supply directly to the appliance junction box, as shown in Figure 16, #2. Wiring diagrams are provided with all accessories.

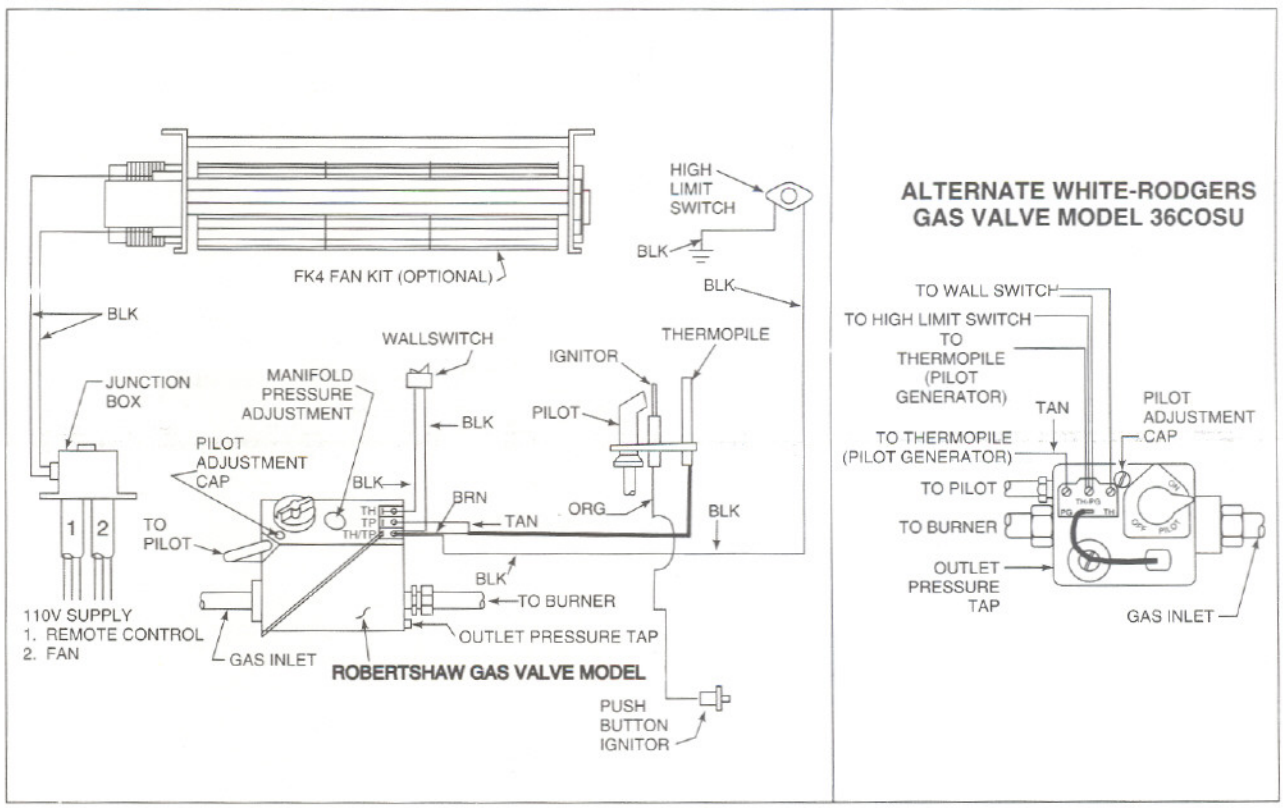


Figure 16
Standing Pilot Ignition Wiring Diagram

STEP 8 - Installing the Outside Air (OA) Kit (Strongly Recommended)

The use of an Outside Air Kit is optional, but should be installed during appliance installation to avoid significant reconstruction later. The use of outside air will improve combustion and preserve interior air quality. Figure 18 shows two of the many possible installations of the outside air.

Insert the Handle in the bottom slot on the door toward the Door Hinge. See Figure 17.

Pivot the Handle in the slot toward the Hinge.

Remove the cover plate from the side of the appliance and discard.

Open the Lower Grille assembly by pulling the top portion towards you. It will swing down.

Partly open the Air Kit Door and insert the Handle into the appropriate hole in the Side Column of the appliance. The Hinge on the Door Assembly should be located toward the front of the appliance. If the Hinge and the Handle are not positioned in this manner, the Door will not function correctly.

Attach the Door Assembly to the appliance using the screws provided.

Check operation by lifting and pulling the Handle out to open, and lifting and pushing it in to close.

Mark and cut a hole in the building side for air entry. This hole should allow some framing (2 sides) so the tube Assembly may be fastened properly.

Assemble Flexible Duct (not supplied) between the Door Assembly and the Tube Assembly. Secure it in position with the supplied wire ties.

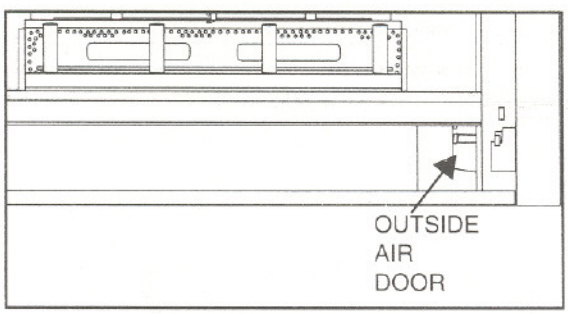


Figure 17
Outside Air Door

WARNING

WHEN LOCATING THE APPLIANCE IN A SPACE PROJECTING INTO A GARAGE, THE OUTSIDE AIR MUST NOT BE TAKEN FROM THE GARAGE SPACE. EXHAUST PRODUCTS OF GASOLINE ENGINES ARE HAZARDOUS. DO NOT INSTALL OUTSIDE AIR DUCTS SUCH THAT THE AIR MAY BE DRAWN FROM ATTIC SPACES, BASEMENTS, OR ABOVE THE ROOFING WHERE OTHER HEATING APPLIANCES, FANS OR CHIMNEYS, EXHAUST OR UTILIZE AIR.

While the use of an outside air kit is optional, it is recommended, due to tighter construction practices in new housing.

NOTE: Significant cold air may infiltrate through the duct. To guard against this, check for light leaks with a flashlight and seal these with duct tape and/or insulation.

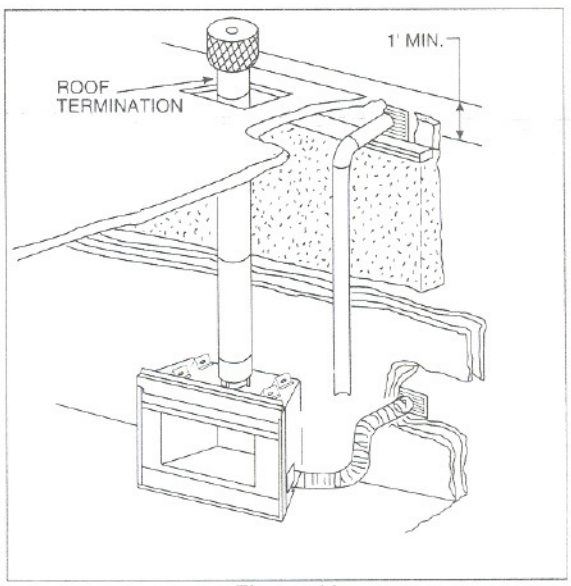


Figure 18
Outside Air Kit Installation

NOTE: Installation of the Fan Kit is optional, however, to avoid significant wall reconstruction later it is recommended to run the necessary wiring at the time of the appliance installation.

WARNING
DISCONNECT/SHUT OFF POWER BEFORE INSTALLING THE FAN KIT

STEP 9 - Installing the Fan Kit (Optional)

1. Open the lower grille assembly by lifting and pulling it away from the unit.
2. Remove Glass Panel from unit by pressing the glass retainer bar up over the glass. Allow the glass to tilt out and then remove. Carefully set aside the glass panel. (See Figures 19A and 19B).
3. Using a phillips screwdriver remove six (6) screws securing the Lower Air Deflector. Move the Lower air deflector out of the way. See Figure 19C.
4. If the appliance is Electronic, disconnect the control panel and move it out of the way.
5. From the Fan Kit, attach the Air Deflector to the Fan output using two (2) screws.
6. Attach to the back of the Fan Assembly, the Hook and Loop material by removing tape to expose the adhesive back on the Loop Tape and pressing it to the back of the Fan assembly .

NOTE: Do not remove tape backing material on the Hook Tape until the Fan Assembly is inside the unit and near its final position.

7. Attach the Foam Tape, in the same manner, to the bottom of the Fan Assembly.
8. Place the Fan Assembly into the lower cavity.

NOTE: The Fan Assembly must be installed as instructed to allow for connection to the Junction Box. The motor on the Fan must be positioned to the left side of the unit. Ensure the Fan Assembly is centrally located so it does not contact any firebox supports that may interfere with operation of the Fan.

9. Attach the Fan Assembly to the back of the fireplace by removing the tape covering the adhesive on the Hook and Loop material. Press the Fan in place, against the back of the appliance.
10. Plug the Fan into the Junction Box.
11. Position the Cord Clips, from the Fan Kit, in locations to ensure there will be no contact between the electrical cord and moving parts of the fan.
12. Re-install the Lower Air Deflector with six (6) screws. Making sure the back tab on the air duct is hooked over the back edge of the Air Passage on the firebox bottom.
13. Re-install the glass panel, hold the glass secure and slide the glass retainer bar in place, over the glass and metal lip behind the glass panel.
14. Close the lower grille assembly.

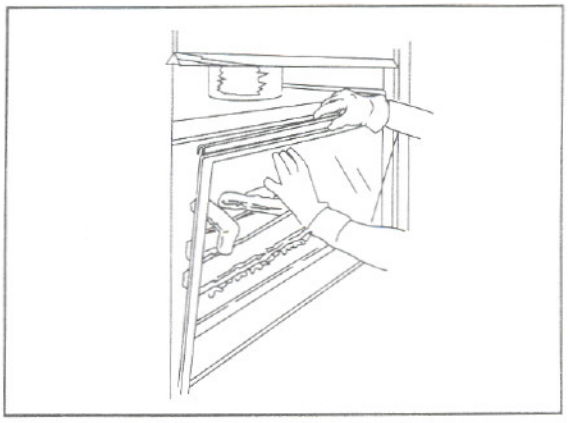


Figure 19A
Glass Panel Removal

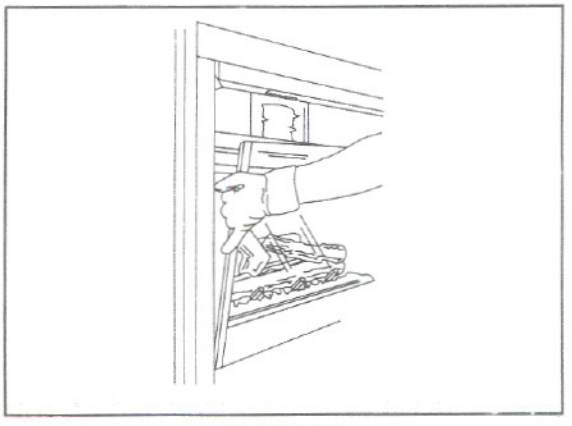


Figure 19B
Glass Panel Removal

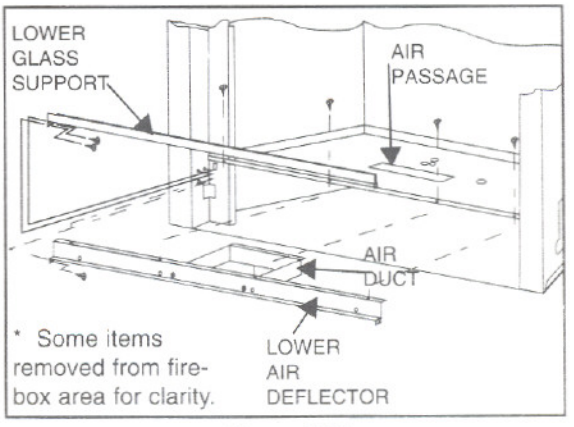


Figure 19C
Lower Air Deflector

NOTE: A Motor Speed Control Kit, BC10, is available for use with the Fan Kit.

STEP 10 - Finishing

When finishing the face of the appliance, combustible material may be brought up to the sides of the appliance, but must never overlap onto the black metal. The black metal may be covered with non-combustible material only. After applying the finishing material, a non-combustible sealant, one-half inch wide maximum, must be used to close off any gaps at the top and sides between the fireplace and finishing to prevent cold air leaks. See Figure 20.

A combustible mantle may be installed at a minimum of 42 inches above the base of the appliance.

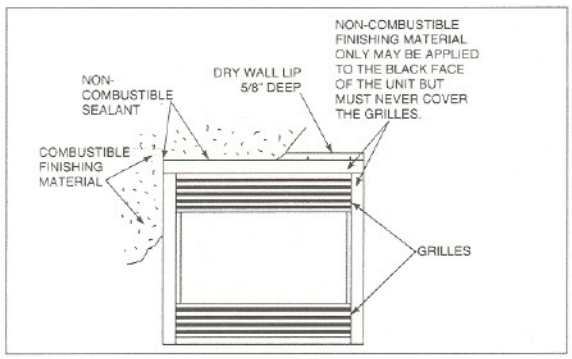


Figure 20
Finishing Materials

STEP 11 - Remove Glass to Install Logs

Remove the glass panel from the unit. See Figures 19A and 19B on page 16.

Note: The placement of the logs, lava rock and rock wool is very critical to the appearance of the fireplace looks during its operation. Please take time during this portion of the setup to achieve the best appearance.

Note: The shading of the logs in the installation instruction does not represent the color of the actual logs. The shading in this document is for definition only.

STEP 12 - Placing the Lava Rock

Before placing the Lava Rock and Vermiculite in either the GC361 series or GC421 series, install/make sure the four (4) Grate Bars are in their respective positions at the base of the Burner Pan Assembly. **See Figure 21.** The Grate Bars are packaged in with the Log Assembly.

Spread the lava rock evenly on the firebox bottom around the base of the burner pan assembly. Lava Rock can be brought up to the top of the front edge of the Burner Pan Assembly.

Spread the lava rock in the trough area of the burner pan assembly keeping the level of the lava rock approximately 1/8" below the bottom burner ports.

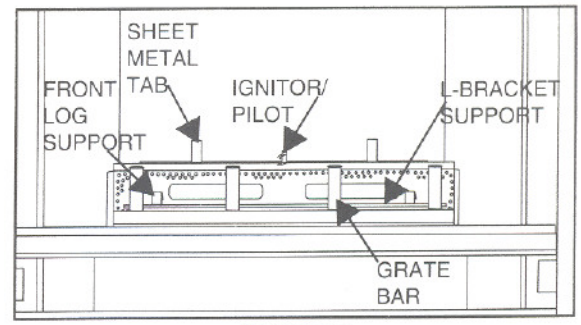


Figure 21
Firebox

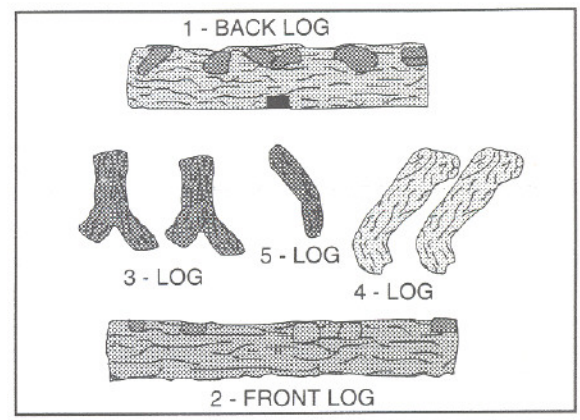


Figure 22A
Identify Logs

Step 13 - Placing the Vermiculite

Spread a light coating of vermiculite over the lava rock. Make sure the vermiculite does not block any burner pan assembly burner ports.

Step 14 - Placing the Rock Wool

Break the rock wool into pieces, no bigger than 1/2" diameter (approximately the size of a dime), and place the rock wool on the lava rock that is in the trough and rest the wool towards the burner ports. This will create the glowing ember appearance as the flame touches the rock wool. **See Figure 22B.**

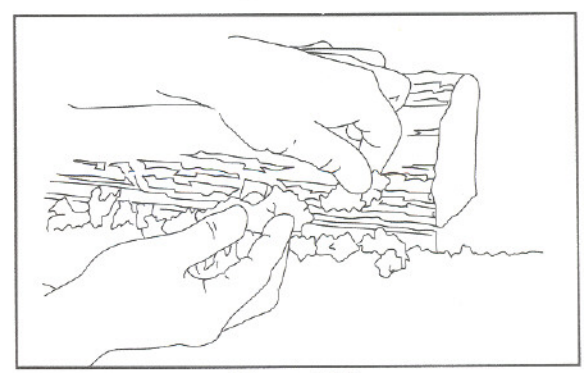


Figure 22B
Placing the Rock Wool

Helpful Hint: Take a small portion of the Rock Wool and rub it on the face of the front log and on the face of the back log. As the flame licks the log face it will add to the glowing look of the log.

NOTE: There may be left over Lava Rock and Vermiculite. Save for later use.

NOTE
IT IS VERY CRITICAL THAT ALL LOGS ARE POSITIONED CORRECTLY. CHECK FOR LOG IMPINGEMENT AFTER ALL LOGS AND GLASS HAVE BEEN PLACED.

STEP 15 - Positioning of the Logs

Position the Round Logs - GC361 Series

1. Make sure sheet metal tabs, located on the Back Log Support, are upright, if not, bend to the up position. (See Figure 21.)

2. See Figure 24. Place the Back Log **(Item 1)** on the Back Log Support ensuring that the log is in front of the sheet metal tabs. The flat surface of the log will be against the sheet metal tabs. (See Figure 23.)

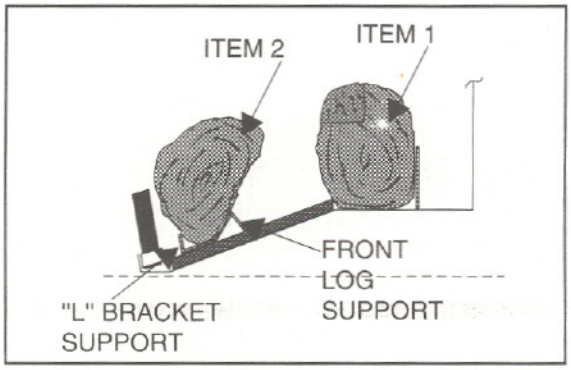


Figure 23
Side View - Front and Back Logs

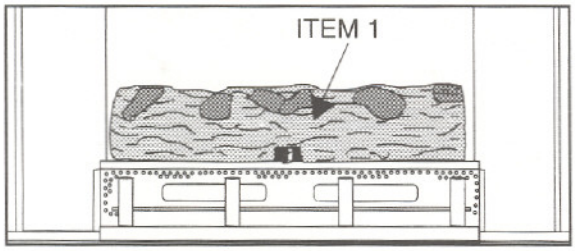


Figure 24
Back Log Installation

3. See Figure 25. Place the Front Log **(Item 2)** on the L-Bracket support and rest the flat portion of the log on the Front Log Supports. (See Figures 21 & 23.)

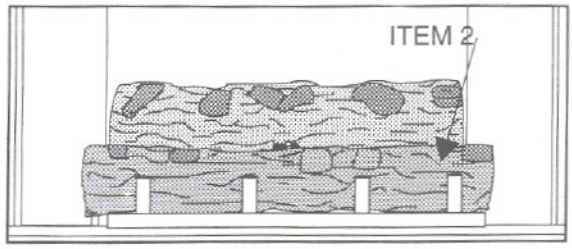


Figure 25
Front Log Installation

4. See Figure 26. Position one of the "Y" Logs **(Item 3)**, on the indentations to the left of the Front and Back Logs. The "Y" portion of the log will be to the front, with the "straight" portion angled slightly to the right and laying on the Back Log.

Make sure the log passes over a single row of burner ports at the left end of the Burner Pan Assembly.

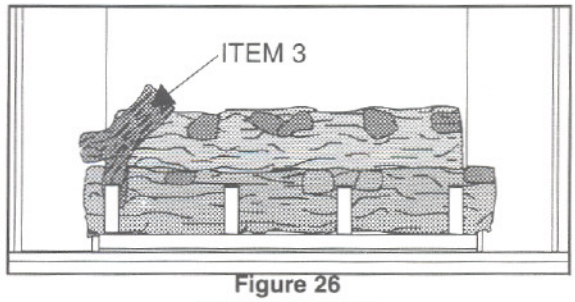


Figure 26
Log Installation

5. See Figure 27. One of the "hooked" Logs **(Item 4)** is installed next. See Figure 22A for identification. The "hooked" portion of the log will rest on the Front Log on the indentation next to the "Y" log. The "straight" portion of the log will rest on the Back Log's second indentation.

Make sure the log passes over a single row of burner ports on the Burner Pan Assemlby.

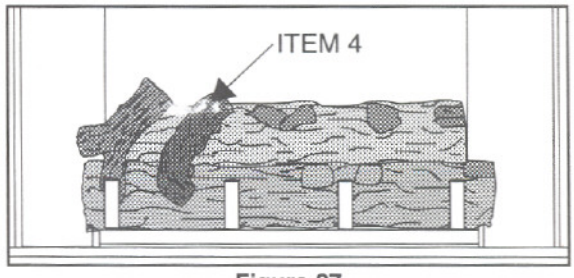


Figure 27
Log Installation

6. See Figure 28. The remaining "Y" Log **(Item 3)** is installed next. This time the straight portion of the log lies on the front log on the indentation near the center. Angle this log slightly to the left and rest the "Y" portion on the indentations located near the center of the Back Log.

Make sure the log passes over a single row of burner ports.

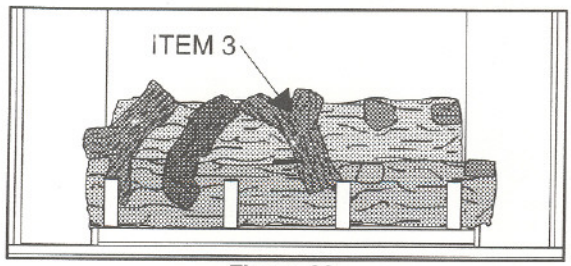


Figure 28
Log Installation

7. See Figure 29. Position the remaining "hooked" log **(Item 4)** with the "hook" on the second indentation from the right on the Back Log. The "straight" portion of the log will lay on the second indentation from the right on the Front Log.

Make sure the log passes over a single row of burner ports.

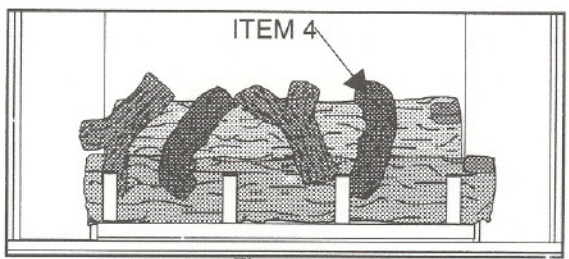


Figure 29
Log Installation

8. See Figure 30. The last log to place is the small "hooked" Log **(Item 5)**. Place the longer end on the right hand indentation of the Back Log. The short portion of the small "hooked" log is positioned on the right hand indentation of the Front Log.

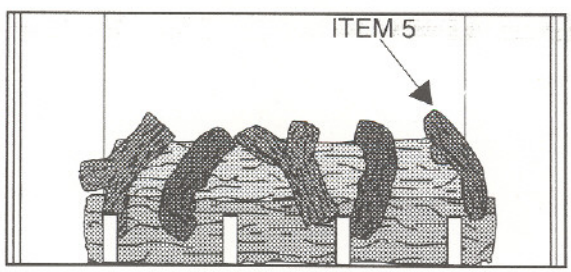


Figure 30
Log Installation

Position the Round Logs - GC421 Series

1. Make sure sheet metal tabs, located on the Back Log Support, are upright, if not, bend to the up position. **See Figure 31.**

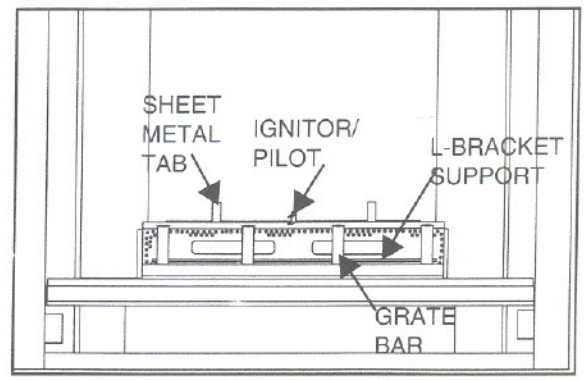


Figure 31
Firebox

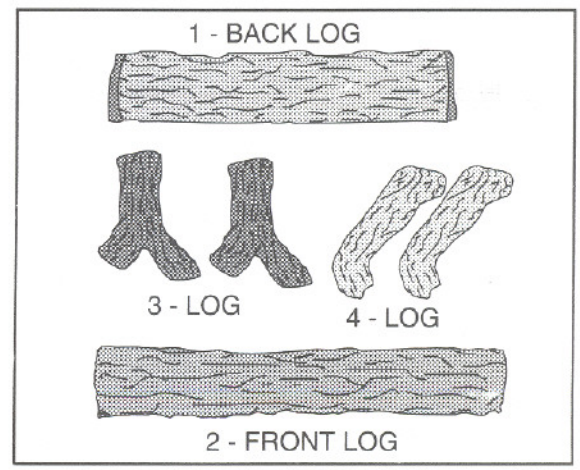


Figure 32
Identify GC400 Logs

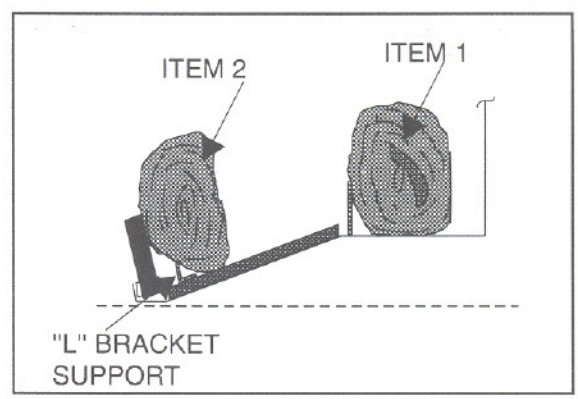


Figure 33
Side View - Front and Back Logs

2. See Figure 34. Place the Back Log **(Item 1)** on the Back Log Support with the bow up, ensuring that the log is directly behind the sheet metal tabs. The flat surface of the log will be approximately 1/2" to 1" from the back of the firebox. (See Figure 33.)

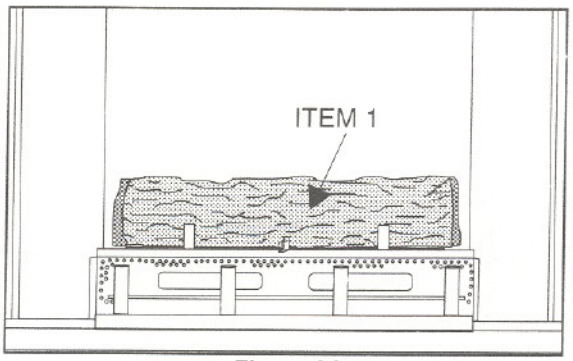


Figure 34
Back Log Installation

3. See Figure 35. Place the Front Log **(Item 2)** on the L-Bracket support with the bow up. Position it so that it is balanced and is leaning forward slightly. (See Figures 31 & 33.)

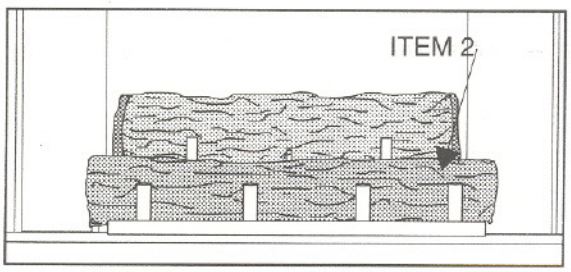


Figure 35
Front Log Installation

4. See Figure 36. Position one of the "hooked" Logs **(Item 4)**, with the "hook" toward the front. Place the log to the left end of both the Front and Back Logs. The "hook" will lay on the left end of the Front Log and the "straight" end will lay on the left end of the Back Log.

Make sure the log passes over a single row of burner ports at the left end of the Burner Pan Assembly.

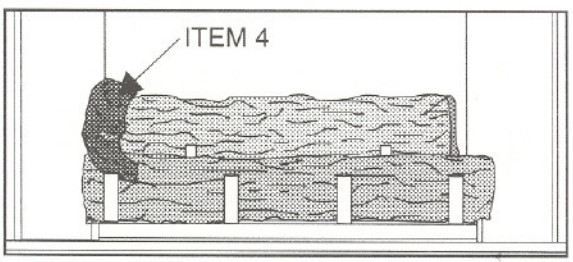


Figure 36
Log Installation

5. See Figure 37. One of the "Y" Logs **(Item 3)** is installed next. See Figure 1 for identification. The "Y" portion of the log will rest on the Front Log. The "straight" portion of the log will rest on the Back Log. This log is positioned at an angle with the "Y" slightly to the right.

Make sure the log passes over a single row of burner ports on the Burner Pan Assembly.

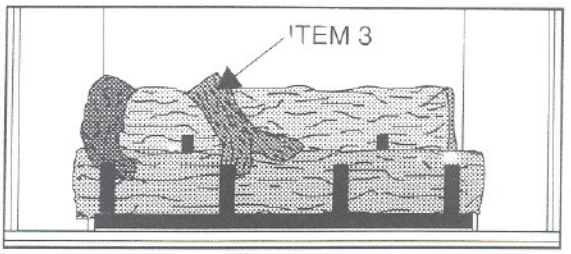


Figure 37
Log Installation

6. See Figure 38. The remaining "Y" Log **(Item 3)** is installed next. This time the straight portion of the log lies on the front log 1" to 2" to the right of center. Angle this log slightly to the left and rest the "Y" portion on the indentations located near the center of the Back Log.

Make sure the log passes over a single row of burner ports.

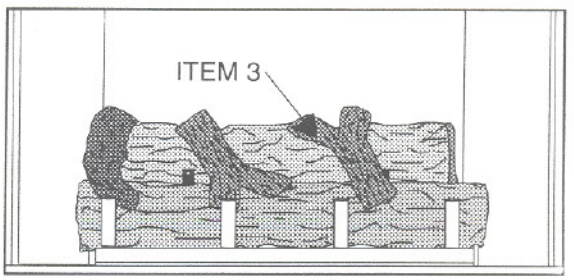


Figure 38
Log Installation

7. See Figure 39. Position the remaining "hooked" Log **(Item 4)** with the "hook" on the right end of the Back Log. The "straight" portion of the log will lay on the right end of the Front Log.

Make sure the log passes over a single row of burner ports.

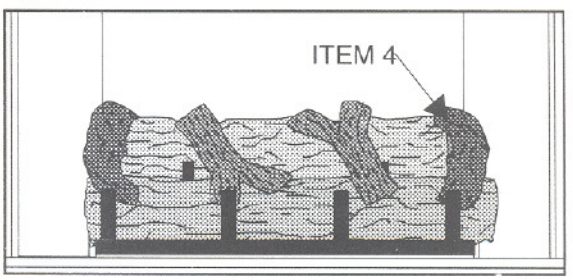


Figure 39
Log Installation

Position the Optional GC361 Split Logs

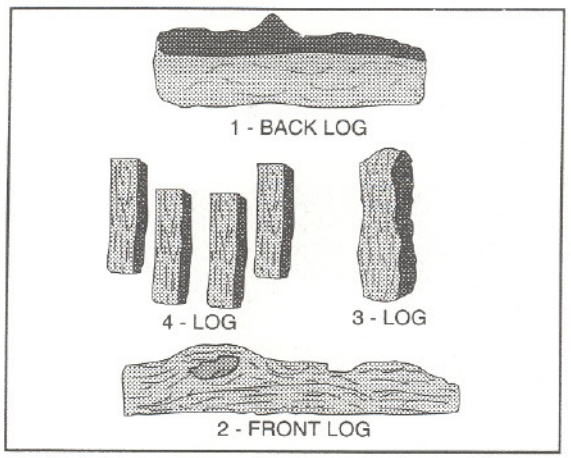


Figure 40
Identify GC361 Split Logs

1. If Sheet Metal Tabs are in the upright position, as shown in **Figure 41**, bend them down. They should be flush with the Back Log Support.

Using a phillips screwdriver loosen and remove the left and right outermost screws on the "L" Bracket Support. Remove the (2) Front Log Supports, shown in **Figure 41.**

Re-install the two screws removed from the "L" Bracket Support and tighten them down using a phillips screwdriver. Be sure not to strip out hole in the Burner Pan Assembly.

Also, install or make sure the four (4) Grate Bars are in their respective positions at the base of the Burner Pan Assembly. **See Figure 41.**

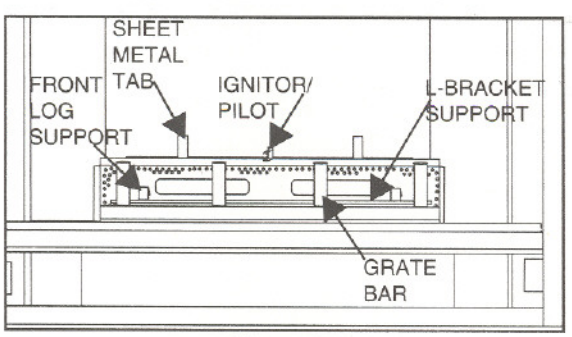


Figure 41
Firebox

Note: When removing the Front Log Supports use only a hand held Phillips Screwdriver to avoid stripping out the screw holes in the Burner Pan Assembly.

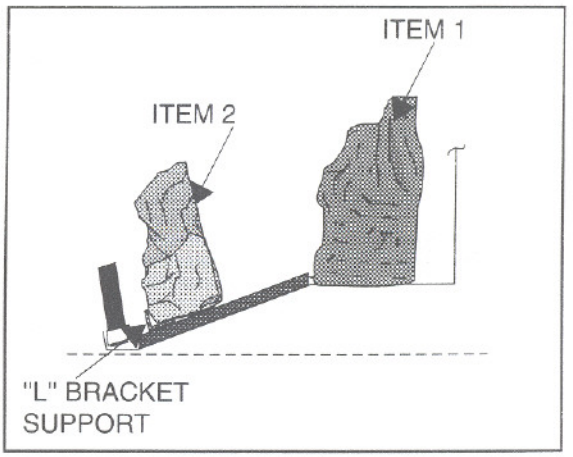


Figure 42
Side View - Front and Back Logs

2. See Figure 43. Place the Back Log **(Item 1)** on the Back Log Support ensuring that the log is up against the back of the ignitor/pilot assembly. The flat surface of the log will sit on the Back Log Support with the Split Side of the log facing front. (See Figure 42.)

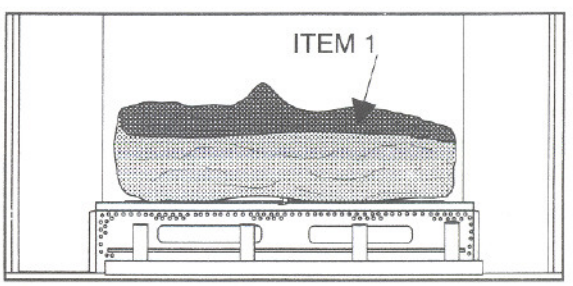


Figure 43
Back Log Installation

3. See Figure 44. Place the Front Log **(Item 2)** directly on the " L" Bracket Support. (See Figures 41 & 42.)

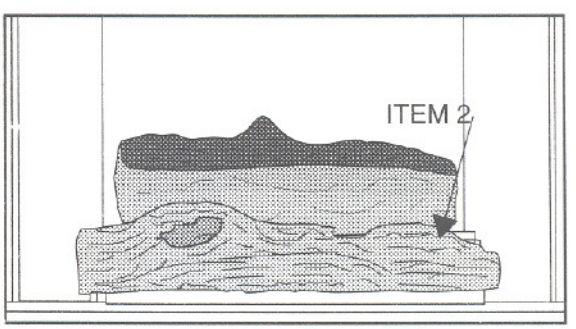


Figure 44
Front Log Installation

Note: There may be a space between the bottom of the Front Log and the Burner Pan Assembly. This space may be filled in using a portion of Rock Wool during Step 14.

4. See Figure 45. Position the large straight log **(Item 3)** with the "bark" of the log to the right. Place one end of the log in the center indentation of the Front Log. Place the opposite end at a slight angle (to the left) near the center of the Back Log.

Make sure the log passes over a single row of burner ports on the Burner Pan Assembly.

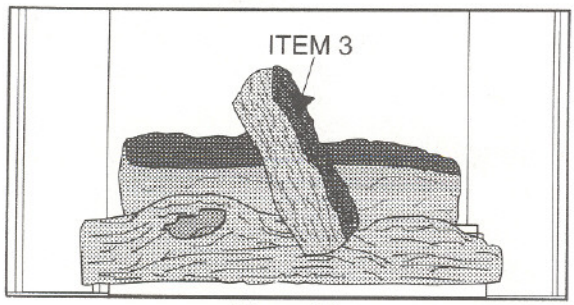


Figure 45
Log Installation

5. See Figure 46. One of the small straight logs **(Item 4)** is installed next. See Figure 40 for identification. Position this log with the "bark" of the log to the right. Place one end of the log in the indentation on the left side of the front log. Rest the opposite end of the log on the Back Log Support, left of the Back Log.

Make sure the log passes over a single row of burner ports on the Burner Pan Assemlby.

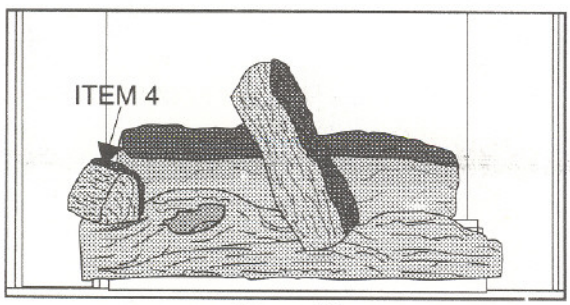


Figure 46
Log Installation

6. See Figure 47. A second small straight log **(Item 4)** is installed next. Position this log with the "bark" to the right. This log is placed vertically against the Back Log. Its position is between the two top logs with the bottom end resting on the top edge of the Burner Pan Assembly.

Make sure the log does not block any of the burner ports.

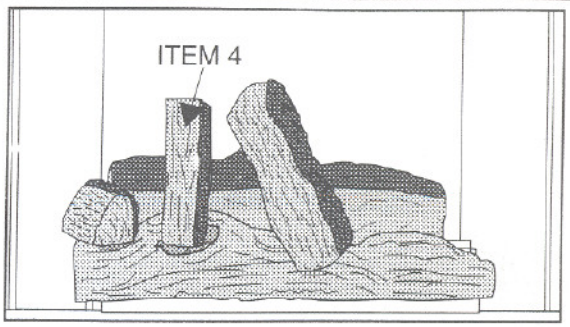


Figure 47
Log Installation

7. See Figure 48. The third small straight log **(Item 4)** is installed next. Position this log with the "bark" to the right. Place one end of the log in the indentation on the far right of the Front Log. The opposite end will lay on the back log support, right of the Back Log.

Make sure the Log passes over a single row of burner ports.

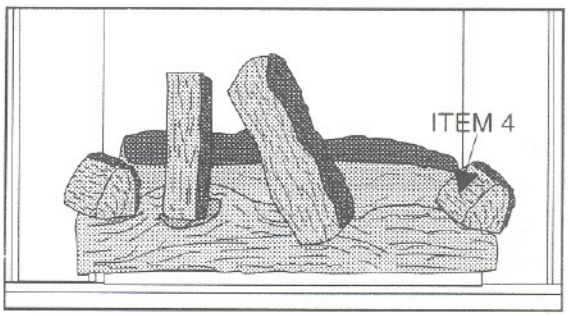


Figure 48
Log Installation

8. See Figure 49. The last small straight log **(Item 4)** is installed next. Position this log with the "bark" towards the back of the firebox. The left end of the log is placed in the remaining indentation of the Front Log and the right end of the log rests on top of the small straight log place previously.

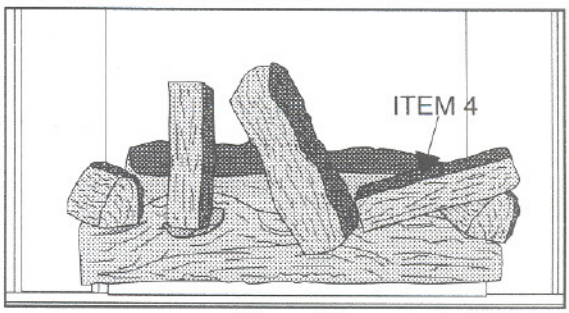


Figure 49
Log Installation

Position the Optional GC421 Split Logs

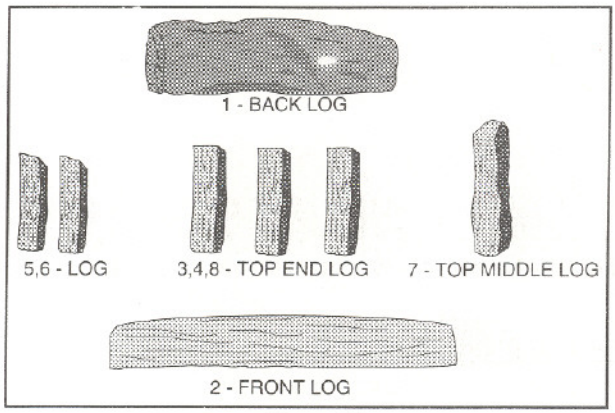


Figure 50
Identify GC421 Split Logs

1. If Sheet Metal Tabs are in the upright position, as shown in **Figure 51,** bend them down. They should be flush with the Back Log Support.

Using a phillips screwdriver loosen and remove the left and right outermost screws on the "L" Bracket Support. Remove the (2) Front Log Supports, shown in **Figure 51.**

Re-install the two screws removed from the "L" Bracket Support and tighten them down using a phillips screwdriver. Be sure not to strip out hole in the Burner Pan Assembly.

Also, install or make sure the four (4) Grate Bars are in their respective positions at the base of the Burner Pan Assembly. **See Figure 51.**

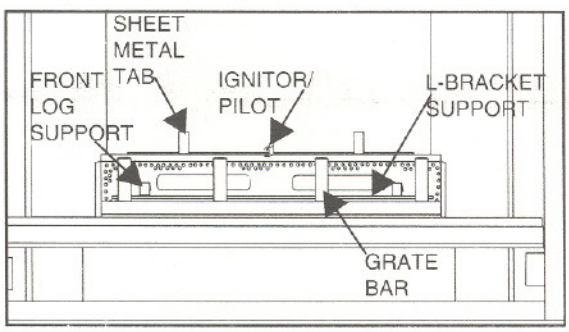


Figure 51
Firebox

Note: When removing the Front Log Supports use only a hand held Phillips Screwdriver to avoid stripping out the screw holes in the Burner Pan Assembly.

2. See Figure 52. Place the Back Log **(Item 1)** on the Back Log Support ensuring that the log is up against the back of the ignitor/pilot assembly. The flat surface of the log will sit on the Back Log Support with the split side of the log facing front. (See Figure 53.)

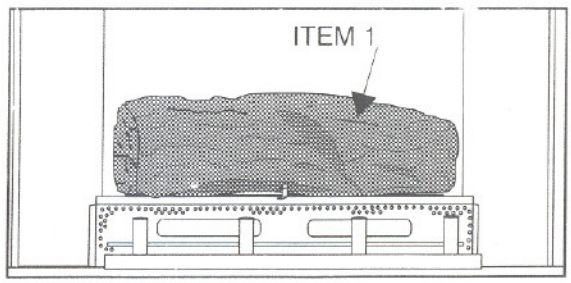


Figure 52
Back Log Installation

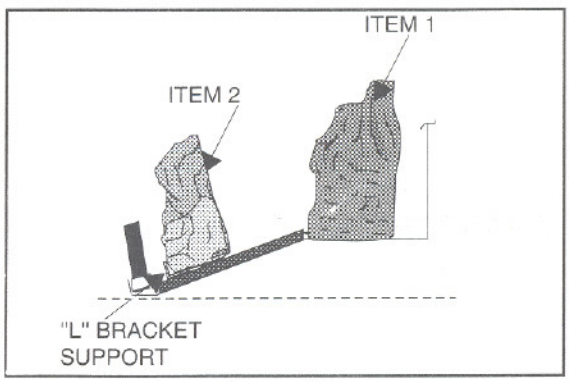


Figure 53
Side View - Front and Back Logs

3. See Figure 54. Place the Front Log **(Item 2)** directly on the " L" Bracket Support. (See Figures 51 & 52.)

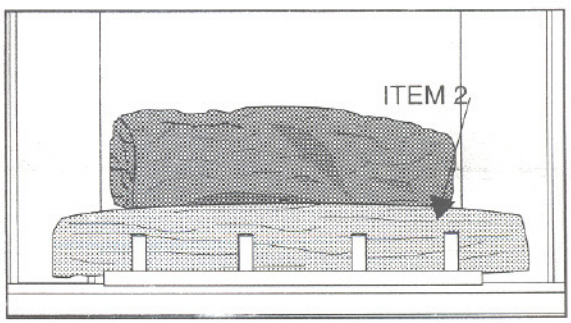


Figure 54
Front Log Installation

Note: There may be a space between the bottom of the Front Log and the Burner Pan Assembly. This space may be filled in using a portion of Rock Wool during Step 14.

4. See Figure 55. One of the thin logs **(Item 3)** is installed next. Position this log with the "bark" of the log to the left. Place one end of the log behind the left side of the front log. Rest the opposite end of the log on the left edge of the Back Log.

Make sure the log passes over a single row or burner ports on the Burner Pan Assembly.

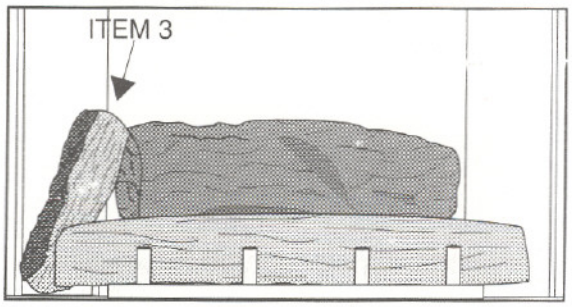


Figure 55
Log Installation

5. See Figure 56. A second small, thin log **(Item 4)** is installed next. Position this log with the "bark" to the right. This log is placed with the front edge resting on the front log and the back edge resting on the Burner Pan Assembly.

Make sure the Log does not block any of the burner ports.

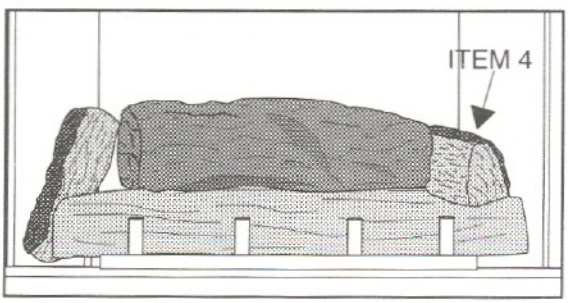


Figure 56
Log Installation

6. See Figure 57. Position **(Item 5)** next, with the "bark" to the left. Place one end of the log in the indentation on the far left of the Front Log. The opposite end will lay on the Back Log, almost near the middle of the Back Log.

Make sure the Log passes over a single row of burner ports.

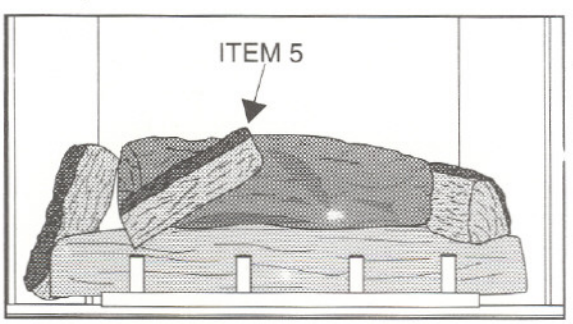


Figure 57
Log Installation

7. See Figure 58. Item 6 is installed next. Position this log with the "bark" toward the rear of the firebox. The left end of the log is placed in the notch on the right of the Front Log and on the right edge of Item 4 (already placed).

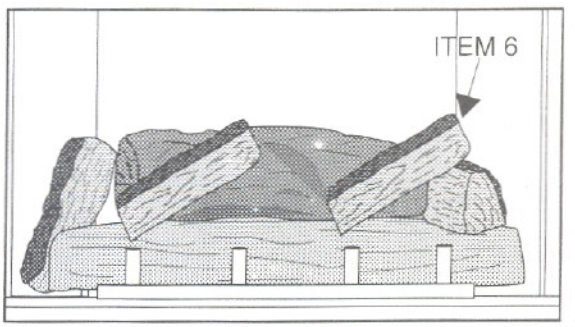


Figure 58
Log Installation

8. See Figure 59. Position the large straight Log **(Item 7)** with the "bark" of the log to the right. Place the front end of the log in the center indentation of the Front Log. Place the opposite end at an angle (to the left) near the left edge of the Back Log.

Make sure the log passes over a single row of burner ports on the Burner Pan Assembly.

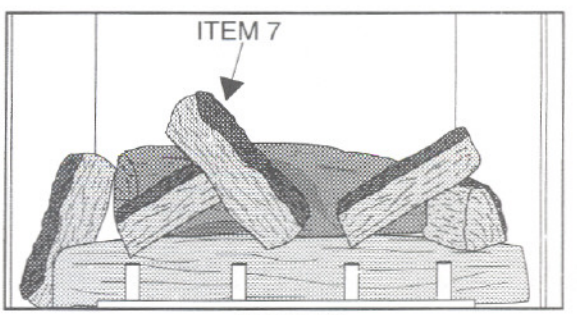


Figure 59
Log Installation

8. See Figure 60. The final log to be placed is **Item 8.** Position this log with the bark to the left. The front end of the log lays on the Front Log, behind the right edge of Item 7. The right end of Item 8 is then placed on the right edge of the back log.

Make sure the log passes over a single row of burner ports on the Burner Pan Assembly.

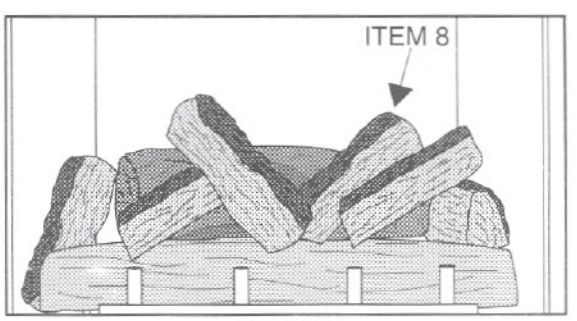


Figure 60
Log Installation

VI. OPERATING INSTRUCTIONS

TO THE CONSUMER: To determine whether your appliance is an electronic ignition or a standing pilot ignition, remove the lower front face (Step 6 on page 12) to examine the wiring system. If your system has a red push button (as shown in Figure 61 below), you own a standing pilot ignition fireplace. If no red button is present, you own an electronic ignition appliance.
You may also check the rating label located on the inside (behind the lower front face) to determine ignition type.

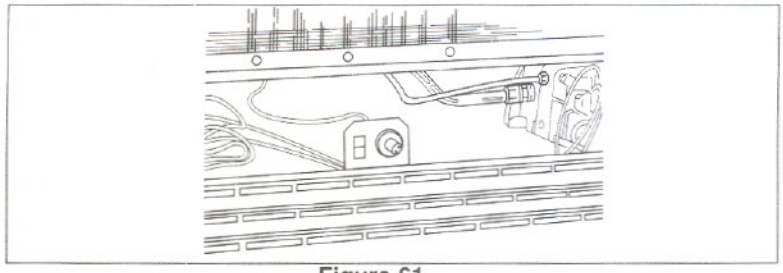


Figure 61
Standing Pilot Ignition

FOR YOUR SAFETY READ BEFORE LIGHTING

WARNING

IF YOU DO NOT FOLLOW THESE INSTRUCTIONS EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.

STANDING PILOT

A. This appliance (standing pilot version) has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.

B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS

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

C. Use only your hand to push in or turn knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it; call a qualified service technician. Forced or attempted repair may result in a fire or explosion.

D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

ELECTRONIC IGNITION

A. This appliance (electronic ignition version) does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.

B. BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS

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

C. Use only your hand to push in and move the gas control lever. Never use tools. If the lever will not push in or move by hand, do not try to repair it; call a qualified service technician. Force or attempted repair may result in a fire or explosion.

D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

WARNING

CHILDREN AND ADULTS SHOULD BE ALERTED TO THE HAZARDS OF HIGH SURFACE TEMPERATURES AND SHOULD STAY AWAY TO AVOID BURNS OR CLOTHING IGNITION. YOUNG CHILDREN SHOULD BE CAREFULLY SUPERVISED WHEN THEY ARE IN THE SAME ROOM AS THE APPLIANCE.

CAUTION

CLOTHING OR OTHER FLAMMABLE MATERIAL SHOULD NOT BE PLACED ON OR NEAR THE APPLIANCE.

Before operating this appliance, please review the safety precautions given on page 2 as well as the items listed below:

1. Check to make sure the logs, rock wool and lava rock have all been placed correctly. (Refer to Steps 12 through 15 on pages 17 through24).
2. Check to see that all wiring is correct and enclosed to prevent possible shock. This is done by removing the lower grille (follow Step 1 below) to access the control area.
3. Check to ensure there are no gas leaks. This may be done with a soap and water solution.
4. Verify that all venting and caps are unobstructed.
5. Read and understand these instructions thoroughly before attempting to operate this appliance.

STEP 1- Lower Grille Panel Removal

To remove the lower Grille panel, gently lift upward and tug on the outside top edges of the lower panel as shown in Figure 62. The top of the panel will rotate downward.

Two spring hinges secure the lower portion of the lower access into place. See Figure 63. Simply pull the hinges toward the center of the panel and then pull out the entire assembly(Figure 64). To replace the lower grille panel, reverse this action.

If you own an electronic ignition appliance, at this point skip section A on the following page and continue with section B on page 28.

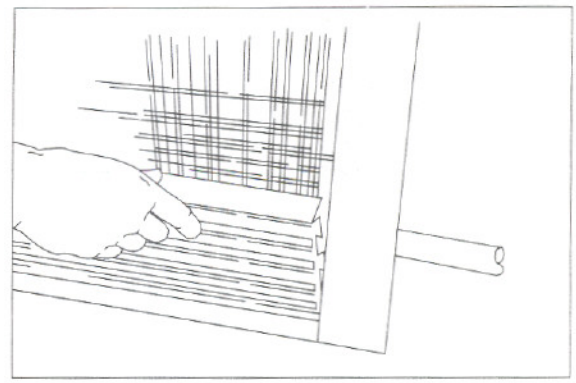


Figure 62
Lower Grille Panel Removal

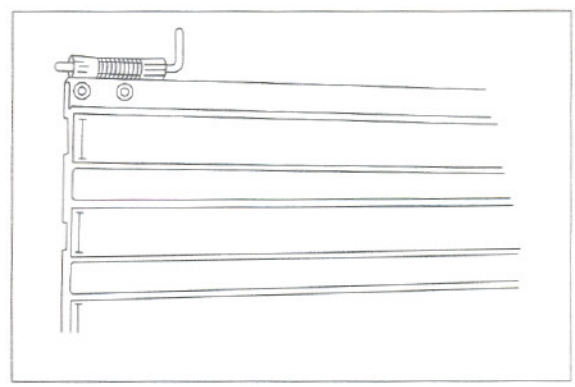


Figure 63
Lower Grille Panel Removal

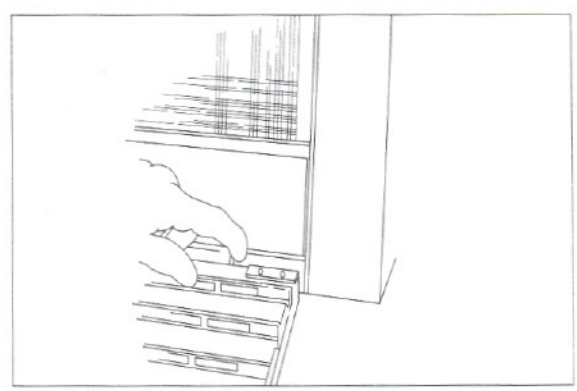


Figure 64
Lower Grille Panel Removal

A. STANDING PILOT OPERATION

1. Initial and Seasonal Lighting Procedure. Initial lighting constitutes the first time the appliance has been lit after installation. Seasonal lighting refers to lighting the appliance after it has been unused and the gas valve has been turned to OFF.

Be sure the remote wall switch and the gas knob (located behind the lower access panel) have been turned to the OFF position. See Figure 65. Also, your unit may have a rocker ON/OFF switch installed inside the lower panel; if it does, this also needs to be turned to the OFF position. If they are not, do so and allow the appliance to sit for five minutes so any gas that may have accumulated in the main burner compartment escapes.

Turn the manual on/off valve to ON. Turn the gas knob to PILOT, as shown in Figure 66, and press in. While holding it in, light the pilot by pressing the red ignitor button, shown in Figure 67, several times until the pilot ignites. Continue to hold in the gas knob for about one minute after the pilot is lit. Release the gas knob. The pilot should remain lit. If it goes out, turn everything to the OFF position, let it sit for five minutes and repeat this step again.

When the pilot remains lit, turn the gas knob to the ON position. See Figure 68. You may now turn the remote wall switch to the ON position which will turn on the main burner. Initially, the flames may resemble more of a blue color but after the first 20 minutes of operation, they will become more yellow.

Note: When first operated, this unit may release an odor for the first several hours. This is caused by the curing of the paint and the burning off of any oils remaining from manufacturing.

2. Seasonal Shutdown. When the burning season comes to an end, the entire system should be shut down. This way, no gas will be running to the appliance while it is not in use.

To shut down the appliance for a long period of time, you must first shut off the main burner by moving the remote wall switch (and the ON/OFF switch underneath the unit, if applicable) to the OFF position.

Next step, remove the lower access panel to expose the valve area. (Follow Step 6 on page 12.) Locate the gas knob and turn it to the PILOT position. Press in and continue turning to the OFF position. Turn the manual ON/OFF valve to OFF. Your entire system is now shut down.

3. Lighting Procedure During Regular Use. Simply turn the wall switch to the ON position. This will ignite the main burner.

4. Shutdown During Regular Use. Simply turn the remote wall switch to OFF. This will disengage the burner and the flames will extinguish. The pilot light will continue to burn.

Note: Keep the area near the appliance clear and free from combustible materials, gasoline and other flammable vapors and liquids.

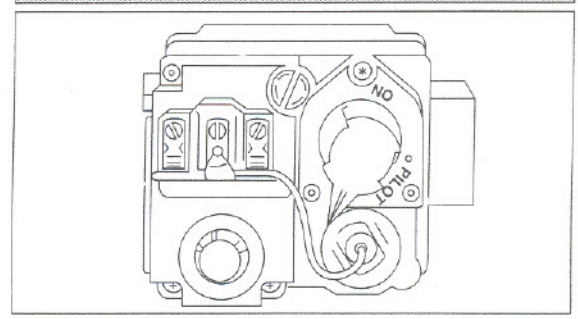


Figure 65
Standing Pilot Ignition Valve "OFF"

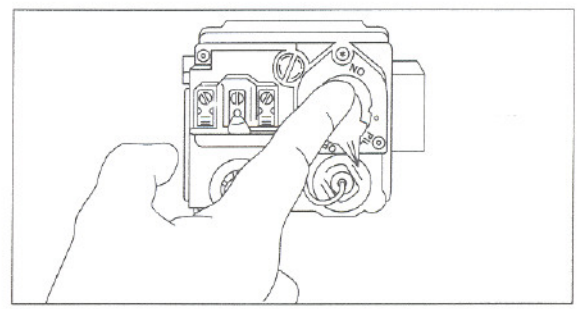


Figure 66
Standing Pilot Ignition Valve to "PILOT"

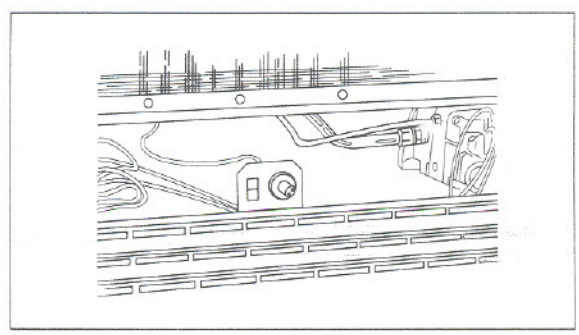


Figure 67
Red Ignitor Button

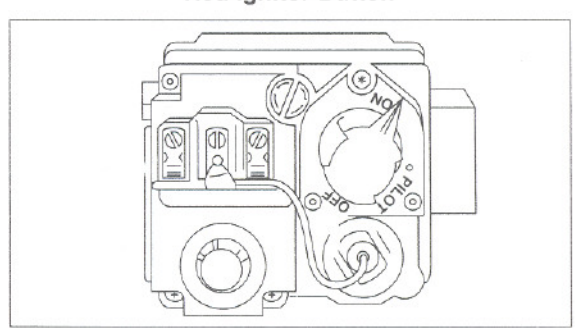


Figure 68
Standing Pilot Ignition to "ON"

If you own a standing pilot ignition, skip section B and continue with Step 2.

B. ELECTRONIC IGNITION OPERATION

1. Initial and Seasonal Lighting Procedure. Initial lighting constitutes the very first time the appliance has been lit after installation. Seasonal lighting refers to lighting the unit after it has been unused and the gas valve has been turned to OFF.

Be sure the remote wall switch and the gas valve knob (both located behind the lower access panel) have been turned to the OFF position. See Figure 69. Also, your unit may have a rocker ON/OFF switch installed inside the lower panel; if so, this also needs to be turned to the OFF position. If they are not, do so and allow the appliance to sit for five minutes so any gas that may have accumulated in the main burner compartment escapes.

Turn the manual on/off knob and the gas valve knob inside the lower access area and turn them to the ON position. See Figure 70. Then, turn the remote wall switch to ON. This will activate an electronic spark. Initially, the flames may have more of a blue color but after the first 20 minutes of operation, they will become more yellow.

Note: When first operated, this unit may release an odor for the first several hours. This is caused by the curing of the paint and the burning off of any oils remaining from manufacturing.

2. Seasonal Shutdown. When the burning season comes to an end, the entire system should be shut down. Note: There may be a rocker switch on a column in the control area, as well as a wall switch. **Both have to be off for the unit to be off.** In this way, no gas will be running to the appliance while it is not in use.

To shut down the appliance for an extended periods of time, you must first shut off the main burner by moving the remote wall switch (and the ON/OFF switch underneath the unit, if applicable) to the OFF position.

The next step is to remove the lower access panel (Step 6 on page 12) to expose the valve area. Locate the gas valve knob and turn it to the OFF position. Turn the manual on/off knob to OFF. Your entire system is now shut down.

3. Lighting Procedure During Regular Use. Simply turn the wall switch to the ON position. This will activate the ignitor and the main burner will light.

4. Shutdown During Regular Use. Simply turn the remote wall switch to the OFF position. This will disengage the ignitor and the main burner will extinguish.

STEP 2 - Replacing the Lower Access Panel

To replace the lower access panel, align the lower hinges on the panel with the holes provided in the fireplace. Place the hinge pins in those holes and pivot the panel upward as shown in Figure 71. The panel should connect smoothly back into place.

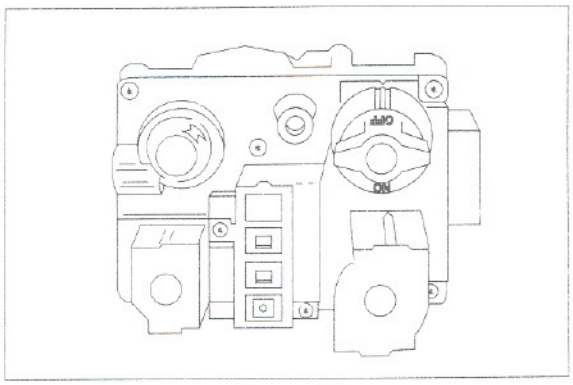


Figure 69
Electronic Ignition Valve to "OFF"

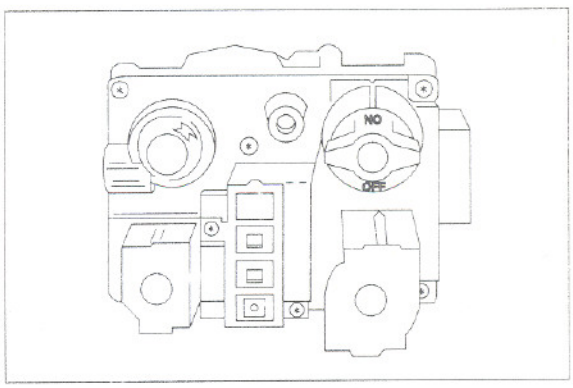


Figure 70
Electronic Ignition Valve to "ON"

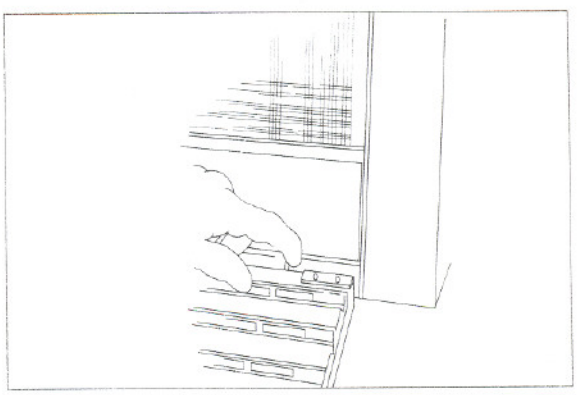


Figure 71
Lower Front Face Replacement

NOTE: Keep the area near the appliance clear and free from combustible materials, gasoline and other flammable vapors and liquids.

VII. MAINTENANCE INSTRUCTIONS

Cleaning the burner and control compartment

Keep the burner and control compartment clean by brushing and vacuuming at least once a year. Always turn off the gas valve and the remote wall switch before cleaning.

Checking flame patterns

Visually check the flame of the burner periodically, making sure the flames are steady; not lifting or floating. The flame color should be blue with yellow tips. The ignitor (electronic) or thermopile (standing pilot) tips should be covered with flame. See Figures 72 through 75.

Venting system inspection

The appliance and venting system should be inspected before use, at least annually, by a qualified field service person, to ensure that the flow of combustion and ventilation air is not obstructed.

Log cleaning

Logs can be easily lifted out of position. Carbon build-up (soot) can be removed with a vacuum cleaner.

To prevent the possibility of soot, we have provided your fireplace with an adjustable air shutter. Your air shutter is provided in an open position to ensure clean operation under normal situations. In the event that soot is accumulating in your appliance, the air shutter should be opened farther as shown in Figure 75. This can be done with a screwdriver of a 1/4" wrench. Also, ensure logs are positioned correctly to minimize flame contact with the logs.

Glass Removal

Do not attempt while hot. Remove the top glass closure by pressing up over the glass. (See Figure 76.) Tilt the glass out and lift to remove. To install the glass, reverse the procedure. **DO NOT OPERATE THIS APPLIANCE WITHOUT THE GLASS PROPERLY POSITIONED AND SECURED.**

Cleaning the Glass

The Glass should be cleaned after the first hour of use. Thereafter, it should be cleaned as needed.

To clean the glass, use a non-abrasive, mild cleaning solution. (For example, POLISH PLUS by KEL KEM.) Simply apply an adequate amount to the glass and wipe off with a damp cloth.

Never operate this appliance without the glass properly secured in place or if the glass is broken.

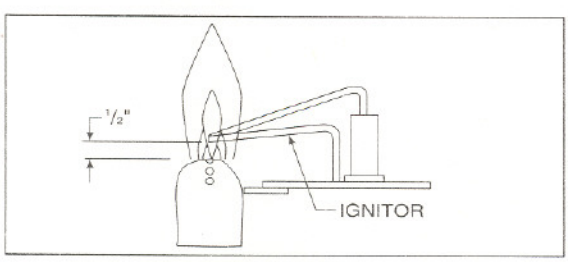


Figure 72
Electronic Ignition

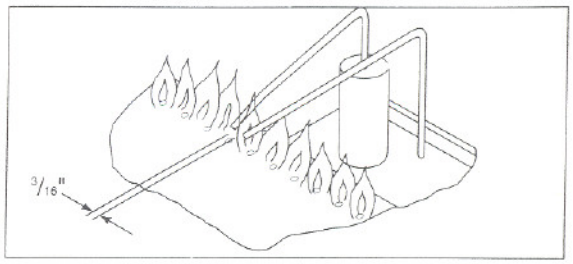


Figure 73
Electronic Ignition

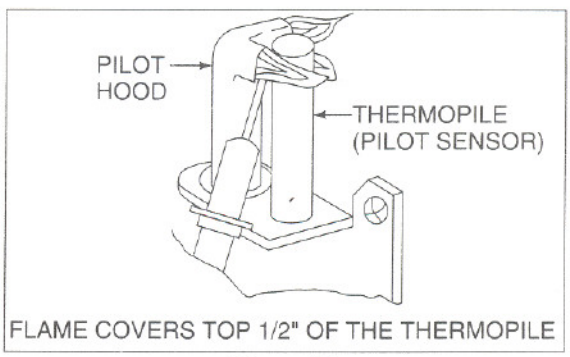


Figure 74
Standing Pilot

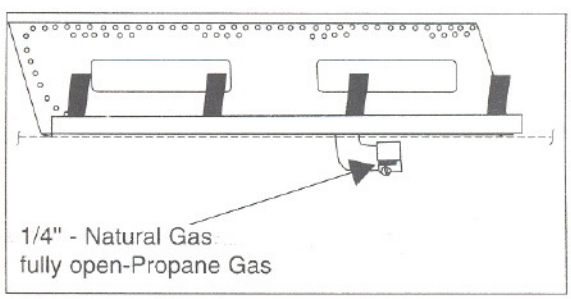


Figure 75
Both Ignitions

Note: When cleaning the glass, NEVER use abrasive materials. NEVER clean glass when hot. Keep children and pets away from the glass.

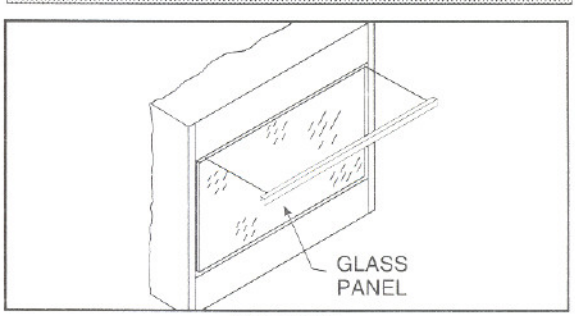


Figure 76
Designer Glass Removal

VIII. TROUBLE SHOOTING

ELECTRONIC IGNITION

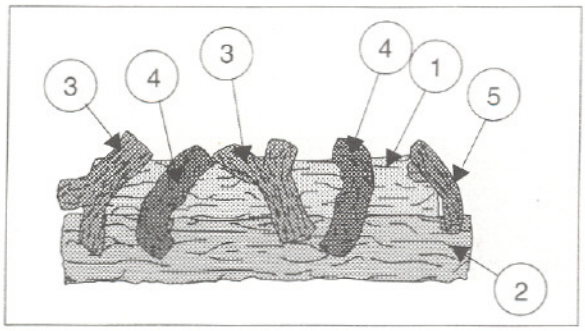
Problem	Cause	Corrective Action
1. Spark ignitor will not light burner after repeated attempts.	A. Defective ignitor; loose wire. B. Misaligned electrode at pilot.	Check for loose connections on electrode and ignitor. Refer to the wiring diagram on page 12 for assistance. Check for spark. If electrode connection is correct and there is no spark, replace ignitor. Spark should be extending approx. 3/16" to ground wire. See Figure 73. Adjust gap to give proper spark. Remove hands from electrode before attempting.
2. Burner will not stay lit.	A. Defective flame sensor. B. No ground.	Check burner flame. See Figures 72 & 73. Adjust sensor if necessary. Be sure sensor is secured tight into bracket and bracket is secured tightly to the unit. Be sure wiring connections are tight throughout system, including high limit switch. Check that wiring is grounded as shown in Figure 15.
3. With valve and wall switch in "ON" position, no gas to burner.	A. Gas valve(s) shut off. B. Plugged burner orifice. C. Wall switch defective. D. No Power	Check all gas valves leading to appliance. Turn to the "ON" position. Check for 24 volt power off secondary on the transformer. Check burner orifice; remove blockage. Check continuity. Check 110VAC supply (Fuses/Breaker)
4. Glass doors fog up.	A. A normal result of gas combustion.	No action is necessary. After the fireplace has warmed up, the glass will clear.
5. Blue flames.	A. A normal result during the first 20 minutes of burning. B. Improper air mixture.	No action is necessary. Flames will begin to turn more yellowish after about 20 minutes of burning. If blue flames persist, check air shutter setting and check log and embers are positioned correctly. Check air shutter setting.
6. Appliance turns itself off after a period of time.	A. High limit safety switch is activated.	Have a qualified service technician check venting system for blockage, e.g., bird nests, damage. Ensure proper venting condition. To reset limit switch, first make sure power to the appliance is OFF. Remove upper grille and press the reset button in.

STANDING PILOT

Problem	Cause	Corrective Action
1. Burner will not ignite.	A. 110 volts of electrical current has burned out the valve.	Remove voltage and replace valve and thermopile.
2. Spark ignitor will not light the pilot after repeated pressing of red button.	A. Defective ignitor.	Check for loose connections on electrode and ignitor.
	B. Misaligned electrode.	Check for spark. If electrode connection is correct and no spark, replace ignitor. Spark should be extending approx. 1/8" to the bottom of the pilot hood. Adjust gap to give proper spark. Remove hands from electrode before pressing red button.
	C. No gas.	Check valve knob position and any shut-off valves — if propane, check for an empty tank. Check pilot flame. See Figure 74. Adjust flame if necessary.
3. Pilot light will not stay lit.	A. Defective pilot thermopile.	Be sure thermopile is secured tight into pilot bracket. Be sure wiring connections are tight throughout system, including high limit switch. Check thermopile voltage with millivolt meter. Depress valve knob and light pilot. Meter should read min. of 325 millivolt. If not, replace the thermopile.
	B. Wiring	Verify wiring. See Figure16.
4. With pilot lit, valve and on/off switch in "On" position, no gas to burner.	A. On/off switch defective.	Check on/off switch for proper connections. Connect wires across terminal at on/off switch. If burner comes on, replace on/off switch. If burner does not come on, connect to on/off switch junctions at valve. If burner comes on, replace wires.
	B. Plugged burner orifice.	Check burner orifice; remove blockage.
5. Appliance turns itself off after a period of time.	A. High limit safety switch is activated.	Have a qualified service technician check venting system for blockage, e.g., bird nests, damage. Ensure proper venting condition. To reset limit switch, remove upper grille and press reset button in.
6. Glass doors fog up.	A. A normal result of gas combustion.	No action is necessary. After the appliance has warmed up, the glass will clear.
7. Blue flames.	A. A normal result during the first 20 minutes of burning.	No action is necessary. Flames will begin to turn more yellowish after about 20 minutes of burning.
	B. Improper air mixture.	Check air shutter setting.

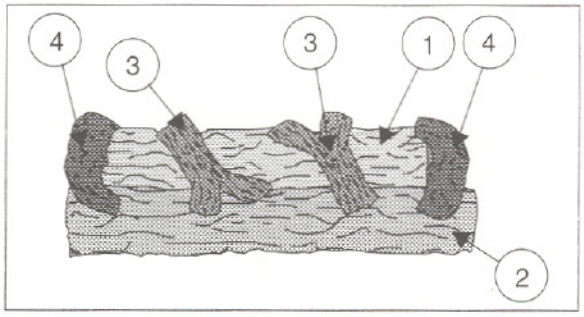
IX. REPLACEMENT PARTS

Replacement parts are available from your distributor/dealer, or through Heatilator Inc., 1915 W. Saunders Street, Mt. Pleasant, Iowa 52641.



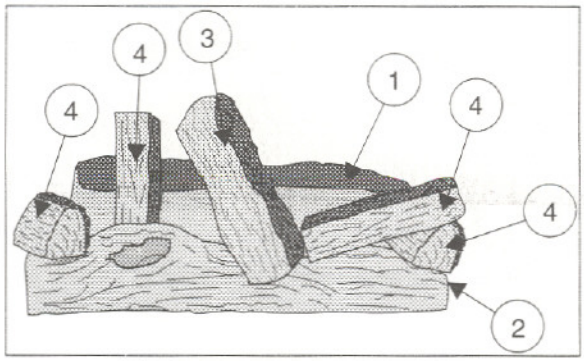
GC361 LOG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	22892	Back Log - GC361	1
2	23506	Front Log - GC361	1
3	21445	Log	2
4	21444	Log	2
5	19743	Log	1



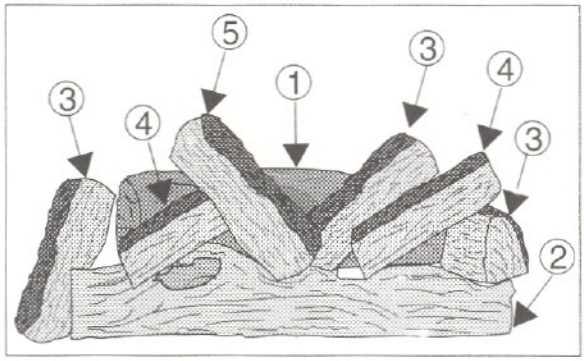
GC421 LOG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	22186	Back Log - GC421	1
2	22902	Front Log - GC421	1
3	21445	Log	2
4	21444	Log	2



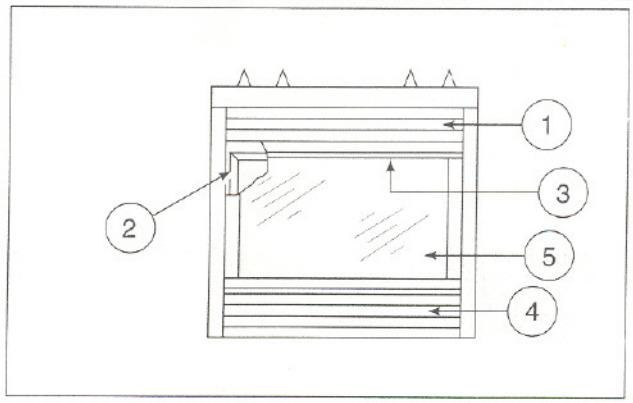
GC361 SPLIT LOG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	23196	Back Log	1
2	23195	Front Log	1
3	22421	Log	1
4	22544	Log	4



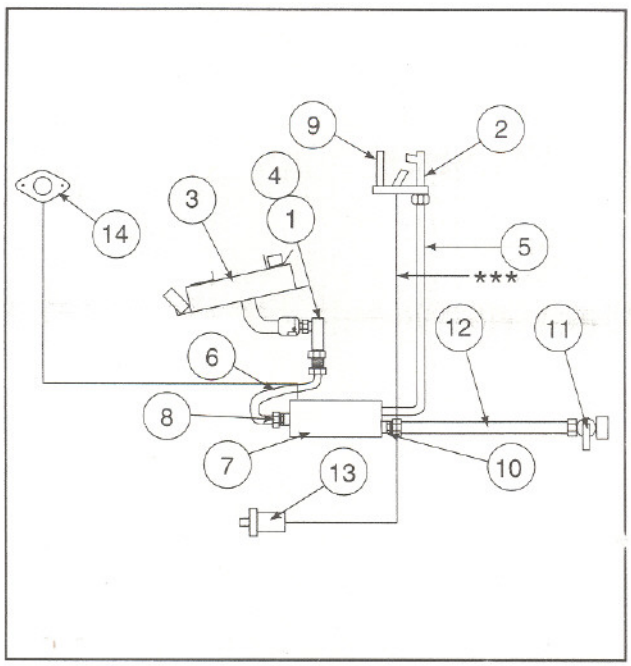
GC421 SPLIT LOG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	23272	Back Log	1
2	23258	Front Log	1
3	22420	Log	3
4	22544	Log	2
5	22421	Log	1



ITEM	PART NO.	DESCRIPTION	QTY
1	26122	Upper Grille GC361	1
	26123	Upper Grille GC421	1
2	17553	Side Glass Seal w/Gasket	2
3	17551	Glass Retainer GC361	1
	17552	Glass Retainer GC421	1
4	26124	Lower Grille GC361	1
	26125	Lower Grille GC421	1
5	13379	Glass Panel GC361	1
	17522	Glass Panel GC421	1

STANDING PILOT



ITEM	PART NO.	DESCRIPTION	QTY
1	17237	90° Bulkhead Elbow	1
2	25731	Pilot w/Bracket - Natural	1
	25732	Pilot w/Bracket - Propane	1
3	22329	Burner Pan Assy GC361	1
	22355	Burner Pan Assy GC421	1
4	13410	Orifice - Natural - GC361	1
	17235	Orifice - Natural - GC421	1
	17236	Orifice - Propane - GC361	1
	17812	Orifice - Propane - GC421	1
5	22516	Pilot Tube - White Rodgers	1
	22515	Pilot Tube - Robertshaw	1
6	22517	Burner Tube	1
7	12191	Valve* (White-Rodgers or Robertshaw)	1
8	13425	Male Connector	1
9	13411	Thermopile	1
10	17069	3/8" x 3/8" Conn. (R.S.)	1
	19641	1/2" x 3/8" Conn. (W.R.)	1
11	15697	Manual On/Off Valve	1
12	15696	Flex Line	1
13	13416	Push Button Ignitor	1
14	24968	Limit Switch	1