

This appliance may be constructed with a vertical or horizontal direct vent termination system.



heatilator
The first name in fireplaces

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



DIRECT VENT HEAT CIRCULATING SERIES GAS APPLIANCE OWNERS MANUAL AND INSTALLATION INSTRUCTIONS

MODELS:GC300, GC400 SERIES

This manual must be used for installation of the GC300/GC400 Series Gas Appliance and retained by the homeowner for operating and maintenance instructions.

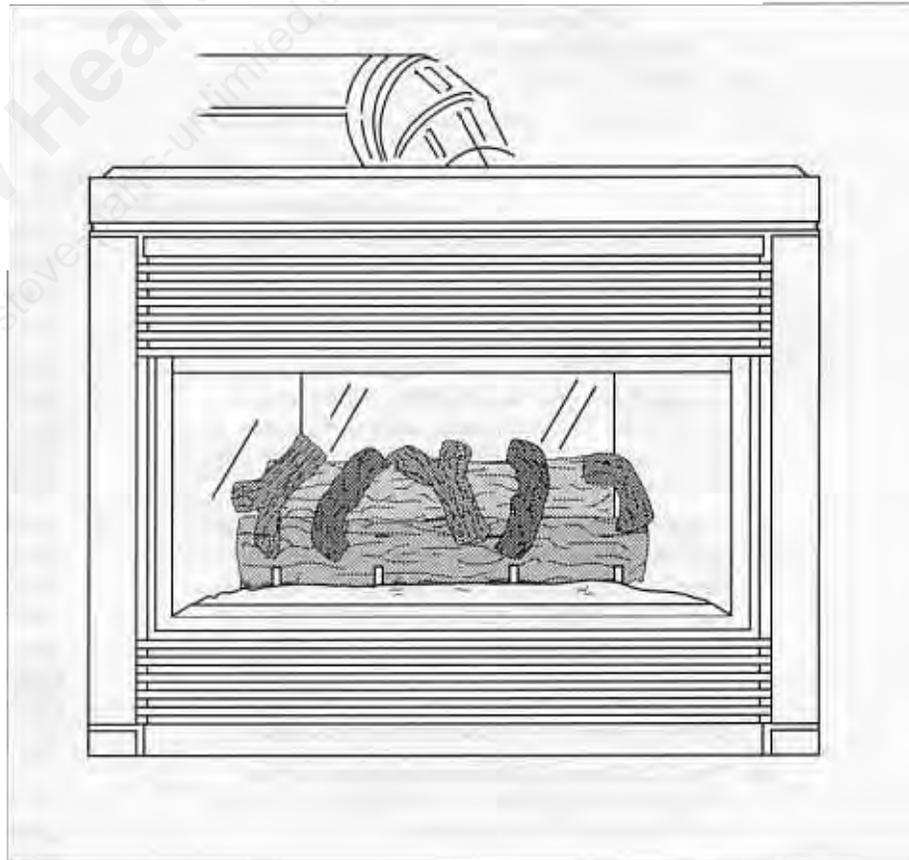
FOR YOUR SAFETY

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 16 for wiring instructions.

Plumber: Please refer to page 7 and 15 for gas connection information.

Framer: Please refer to page 8 for framing specifications.

PLEASE RETAIN THIS MANUAL FOR FUTURE REFERENCE.

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Safety Precautions

1. Please read these installation instructions completely before beginning installation procedures. Failure to follow them could cause a fireplace 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. The GC300 and GC400 fireplaces are vented decorative gas appliances. Do not burn wood or other material in this appliance.
5. NEVER leave children unattended when there is a fire burning in the fireplace.
6. This fireplace may be vented horizontally through an outside wall or vertically above the roof line and must not be connected to a chimney flue servicing a solid fuel burning appliance.
7. NEVER use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids in this fireplace. Keep any flammable liquids a safe distance from the fireplace.
8. While servicing this fireplace, 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 GC300, GC400 Series Gas Appliance has been tested in accordance with the ANSI standard Z21.50b-1990 or, in Canada, the current CAN/CGA M2.22-M86, IR41, and IR55 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 or CSA 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 on page 4. 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, electrical power should be connected to the unit at the time of

the initial fireplace installation 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 must be made by a Heatilator distributor 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, 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.

HEATILATOR® is a registered trademark of Heatilator Inc., a HON INDUSTRIES company.

II. DESCRIPTION OF THE FIREPLACE SYSTEM

The GC300, GC400 series are direct vent decorative gas appliances. Combustion air is supplied from outside, not from inside the house as with other types of appliances. While a significant amount of heat is created by the GC300/GC400, it is not intended to be and, therefore, should not be used as a heater.

This HEATILATOR system consists of the following:

1. Fireplace
2. Venting System
3. Termination

Optional components include:

1. Trim kits
2. Fan kit
3. Remote control

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.

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	
Leveler	
Electrical drills/bits	
Square	

Note: Operation of a direct vent appliance may be sporadic in high wind situations.



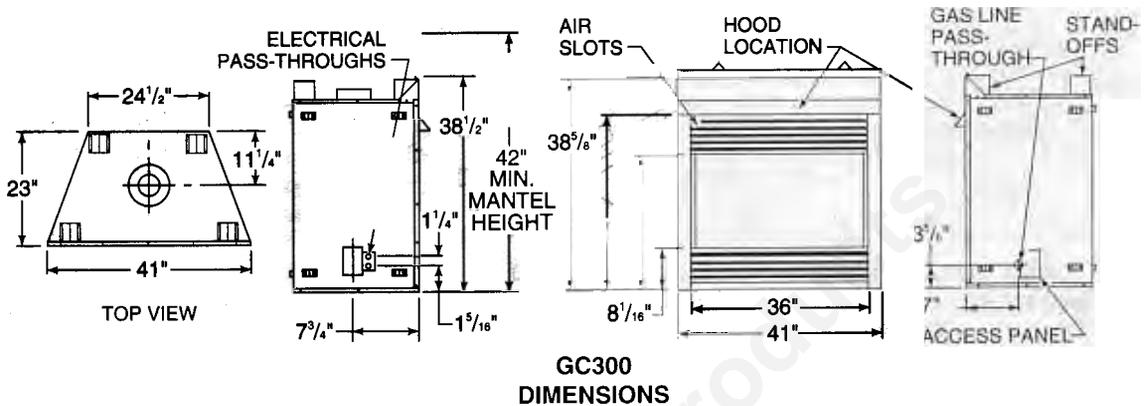
III. FIREPLACE SYSTEM COMPONENTS

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

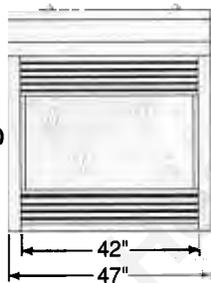
Catalog Number	Description
GC300	36" natural gas, standing pilot, heat circulating appliance
GC400	42" natural gas, standing pilot, heat circulating appliance
<p>The following suffixes are defined as follows:</p> <p>no suffix Natural Gas, Standing Pilot L Propane Gas, Standing Pilot E Natural Gas, Electronic Ignition LE Propane Gas, Electronic Ignition</p> <p>Example: GC400LE is a 42", electronic ignition, propane gas, heat circulating appliance GC300L is a 36", standing pilot, propane gas, heat circulating appliance</p>	
CKP	Natural gas to propane gas conversion kit
CKN	Propane gas to natural gas conversion kit
BC10	Fan motor rheostat control
BC11	Automatic Variable Blower Control
CS200	Direct vent cap shield (for horizontal termination)
CV6	Vertical termination cap
EL45	45 degree elbow
FK4	Fan kit, 160 CFM
FS6	Firestop spacer (for vertical termination)
RC4	Remote control (standing pilot)
RC5	Remote control (electronic ignition)
RC6	Battery operated remote control (standing pilot models only)
RF6	Roof Flashing (for vertical termination)
TA1	Horizontal termination kit including one termination cap, one starter elbow (15942B) and one VK24 (chimney section)
15942B	Starter elbow (If elbow used, must be first elbow)
VK5	90 degree elbow
VK12	12" length vent pipe
VK24	24" length vent pipe
VK36	36" length vent pipe
VK48	48" length vent pipe
VS4	Vertical vent support
WS6	Wall shield to ensure horizontal clearances
TK6CA	Brushed brass louvre trim kit (4 bars) - GC300 series
TK6CB	Polished brass louvre trim kit (4 bars) - GC300 series
TK6CC	Polished chrome louvre trim kit (4 bars) - GC300 series
TK7CA	Brushed brass louvre trim kit (4 bars) - GC400 series
TK7CB	Polished brass louvre trim kit (4 bars) - GC400 series
TK7CC	Polished chrome louvre trim kit (4 bars) - GC400 series
TK40A	Antique brass perimeter trim kit - GC300 series
TK40B	Polished brass perimeter trim kit - GC300 series
TK46A	Antique brass perimeter trim kit - GC400 series
TK46B	Polished brass perimeter trim kit - GC400 series
TK301B	Polished brass front trim kit (6 bars, 1 hood) - GC300 series
TK401B	Polished brass front trim kit (6 bars, 1 hood) - GC400 series
DF300A	Fixed Original style bi-fold antique brass glass doors - GC300 series
DF300B	Fixed Original style bi-fold polished brass glass doors - GC300 series
DF400A	Fixed Original style bi-fold antique brass glass doors - GC400 series
DF400B	Fixed Original style bi-fold polished brass glass doors - GC400 series



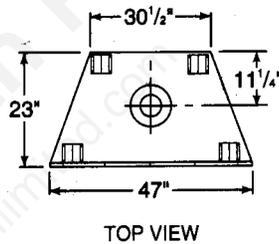
GC300/GC400 SERIES DIRECT VENT GAS APPLIANCE



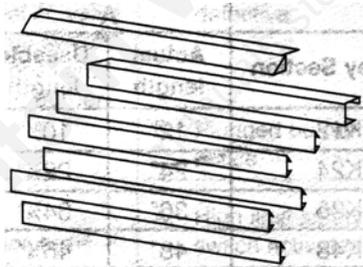
NOTE:
DIMENSIONS NOT SHOWN FOR THE GC400 ARE THE SAME AS THE GC300



GC400 DIMENSIONS



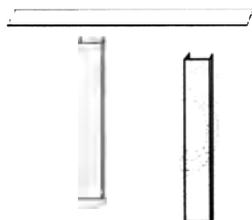
Please refer to page 7 for framing dimensions.



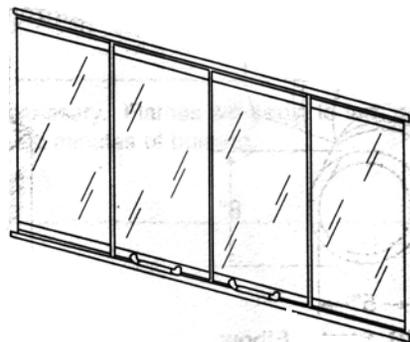
**TK301B
TK401B**



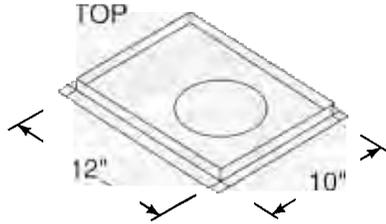
**TK6CA,CB,CC
TK7CA,CB,CC**



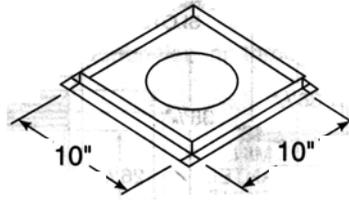
**TK40A,B
TK46A,B**



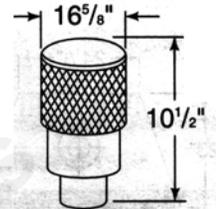
**DF300A,B
DF400A,B**



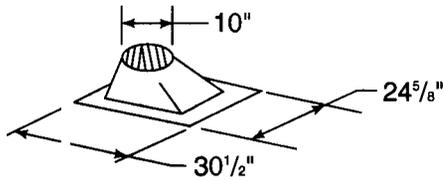
WS6
Wall Shield



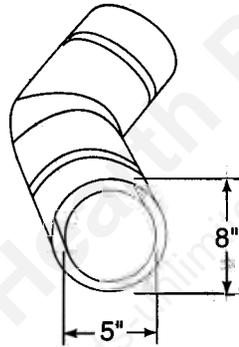
FS6
Firestop Spacer



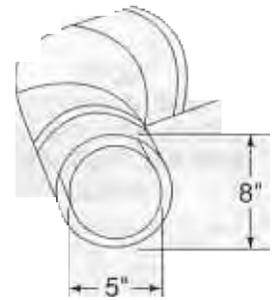
CV6
Vertical Termination Cap



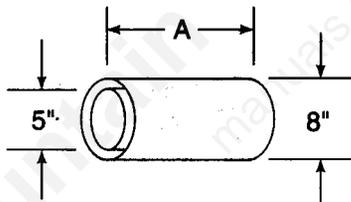
RF6
Roof Flashing



EL45
45° Elbow



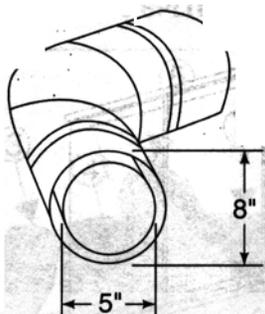
VK5
90° Elbow



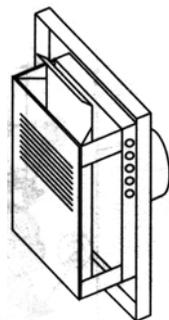
Chimney Section	A	
	Actual length	Useable length
VK12	12"	10 3/4"
VK24	24"	22 3/4"
VK36	36"	34 3/4"
VK48	48"	46 3/4"

Chimney Sections

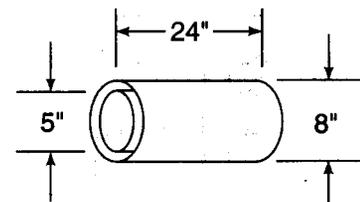
TA1
Horizontal Termination Kit



15942B, Starter Elbow
(Must be the elbow closest to unit when horizontal venting begins.)



Termination Cap



VK24
Chimney Sections

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 MAY ONLY USE THE DIRECT VENT CHIMNEY SYSTEM SUPPLIED WITH THE UNIT AND MUST NOT BE CONNECTED TO A CHIMNEY FLUE SERVICING A SEPARATE SOLID FUEL OR GAS 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. **GC300** input rate is 29,000 Btu/hr. **GC400** 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

For 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 to a smaller size. Input should be reduced 4 percent for each 1000 feet above sea level. Check with the local gas utility for proper orifice size identification. The **GC300** series uses a .110 in./2.80 mm on natural gas versions and a .063 in./1.60 mm on propane versions. The **GC400** series uses a .113 in./2.87 mm. orifice size on natural gas versions and a .067 in./1.70 mm. orifice size on propane gas versions.

For 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. FIREPLACE LOCATIONS AND SPACE REQUIREMENTS

This appliance may be installed along a wall, across a corner or use an exterior chase. The GC300 or GC400 Series may be installed at a height level with the floor, or it can be raised up from the floor to enhance its visual impact. Figure 1 illustrates a variety of ways the appliance may be located in a room. These appliances are also certified for installation in a bedroom or bed/sitting room in the U.S. and Canada.

D. CLEARANCES

The following clearances to combustibles must be maintained: Minimum clearances to the top stand-offs of the unit - 0", floor - 0", back - 1/2", sides - 1/2", face of the unit to ceiling - 30". Minimum clearances to venting are as follows: Horizontal runs require a 3" minimum air space on the top and a 1" minimum air space on the sides and bottom of the chimney section. Vertical rise sections require a 1" minimum air space completely around the chimney section.

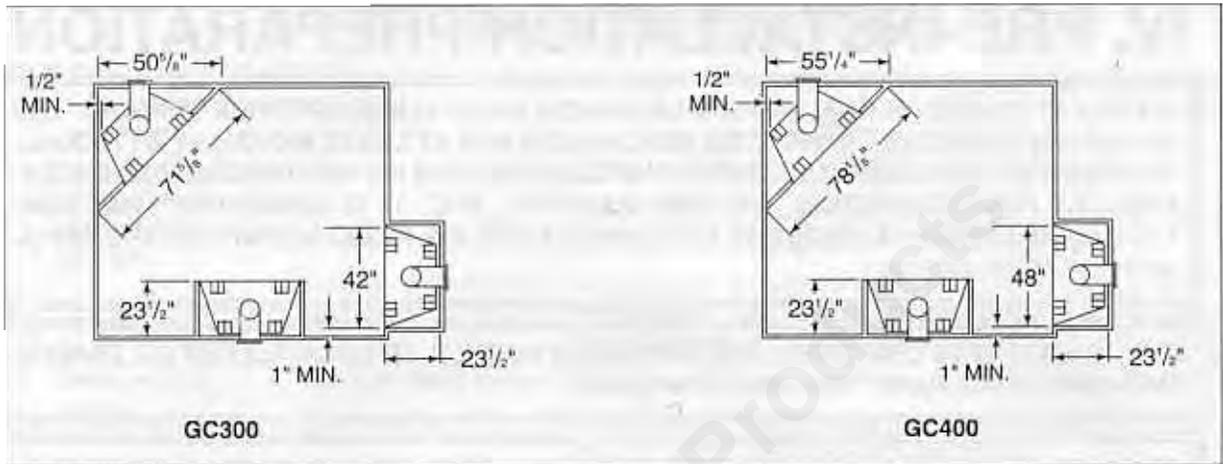


Figure 1

Fireplace Locations and Clearances



E. FRAMING THE FIREPLACE

Note: If an optional fan (FK4) or hand held remote control (RC4 or RC5) are 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 in order to avoid reconstruction.

The **GC300** Series Gas Appliance will fit a framed opening of 42" w X 23 1/2" d X 38 5/8" h.

The **GC400** Series Gas Appliance will fit a framed opening of 48" w X 23 1/2" d X 38 5/8" h.

Figure 2 & 2A shows a typical framing of this fireplace assuming combustible materials are used. All required clearances to combustibles around the fireplace must be adhered to. A 1/2" air clearance must be maintained at the back and sides of the firebox assembly. Any framing on top of the fireplace must be above the top standoffs. Chimney sections for a horizontal run require a 3" minimum air space on top and a 1" minimum air space on the sides and bottom. Vertical rise sections require a 1" minimum air space completely around the chimney section.

Flue outside diameter: 8"

Minimum firestop framing: 10" X10"

Face of header to the center of the firestop framing: 11 1/8"

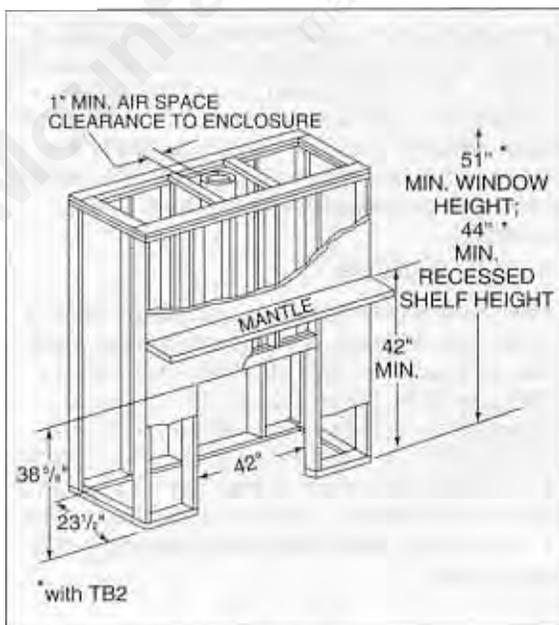


Figure 2
GC300 Framing

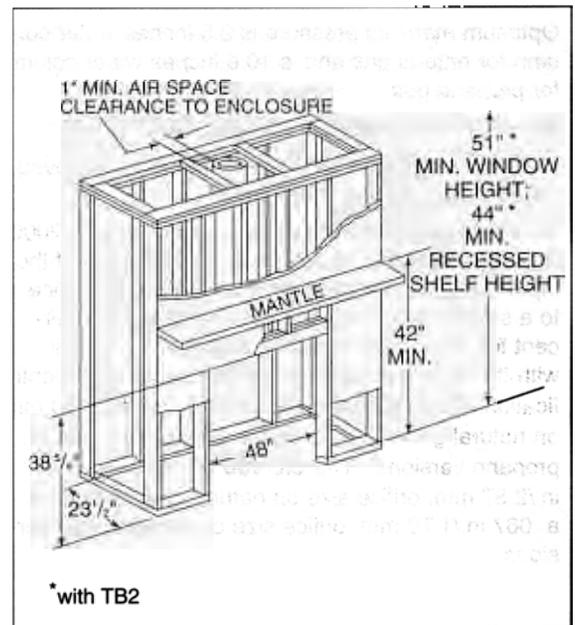


Figure 2A
GC400 Framing



F. FINISHING MATERIALS

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

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 thereof, or have UL Fire 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 (dry wall) over the framing, 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 facing to prevent cold air leaks. See Figure 3.

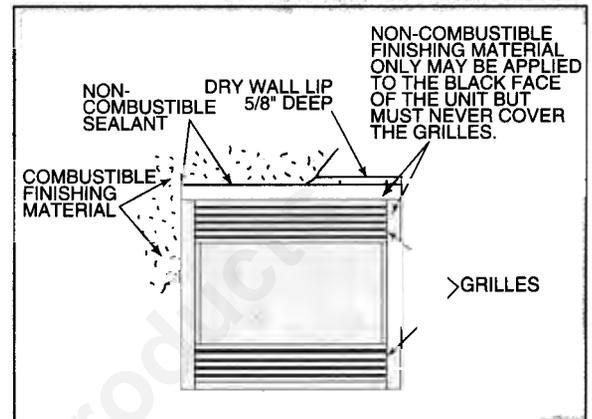


Figure 3
Finishing Materials

WARNING
GRILLES ON THIS APPLIANCE CANNOT, IN ANY WAY, BE COVERED AS IT MAY CREATE A FIRE HAZARD.

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

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

STEP 2 - Termination

Two types of termination are available for this appliance, horizontal and vertical. For vertical termination, skip section A and advance to section B on page 11.

A. Horizontal Termination

Minimum combustible clearances to the vent on a horizontal run is 3" on top and 1" on the bottom and

sides. These clearances must be maintained at all times. The maximum horizontal run allowed for venting is 26 feet. The maximum vertical rise allowed for horizontal termination is 25 feet. See Figure 5.

1. Assembling chimney sections. Attach either a 15942B (starter elbow) or straight pipe section (depending upon your specific installation) to the top of the appliance. Secure with the three screws supplied. Use only pipe supplied and listed for use with this appliance and the appropriate number of direct vent sections. **MAINTAIN MINIMUM CLEARANCES OR GREATER AROUND THE CHIMNEY SYSTEM.** Do not pack air spaces with insulation or other material.



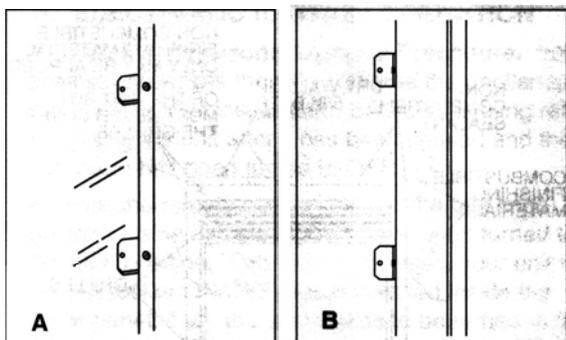


Figure 4
Nailing Flanges

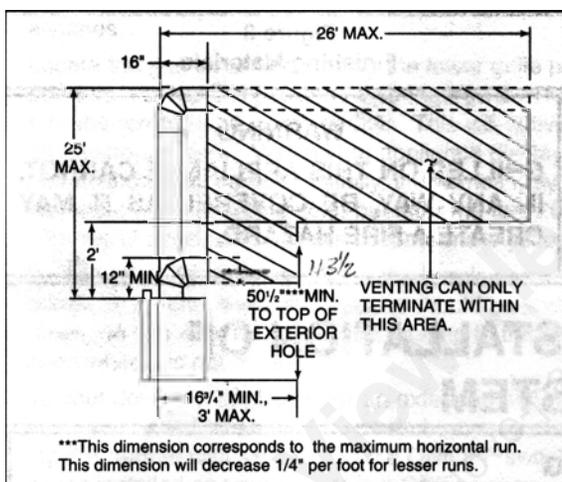


Figure 5
Horizontal Length

Note: The horizontal run of vent must have a 1/4" rise for every 2 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.

a. Using elbows. The first elbow used with horizontal termination must be starter elbow 15942. The maximum horizontal distance this chimney may reach is 26 feet. A single vertical-to-horizontal elbow is already calculated into the allowable 26 foot run. Each additional elbow reduces the maximum horizontal distance by three feet. Example, by using three total elbows, the maximum horizontal distance has been reduced to 20 feet (3 - 1 = 2 elbows x 3' = 6'; 26' max. - 6' of elbows = 20' of horizontal run).

Even with only these three elbows (the equivalent of 6' of horizontal feet) you now need a minimum of 1' of vertical rise. See Chart A.

b. Amount of venting required. Due to the many different combinations that can be used when constructing venting, the number of chimney sections required can only be determined by the installer.

Note: Horizontal runs will require the use of one Vent Support (VS4) for every 3' of vent.

2. Preparing the wall for interior wall shield. A hole measuring 10" wide x 12" high must be cut and framed in the exterior wall where venting will be terminated. If the wall being penetrated is constructed of non-combustible material, i.e. masonry block or concrete, a 9" diameter port is acceptable.

The hole must be positioned so the chimney system will have a 1/4" rise AND be perpendicular to the wall. See Figure 6. The height of the hole must be located to meet all local and national codes and not be easily blocked or obstructed. The minimum height to the top of the exterior wall hole is 50 1/4" from the base of the unit. This figure will increase by the length of each vertically positioned chimney section added to the venting system.

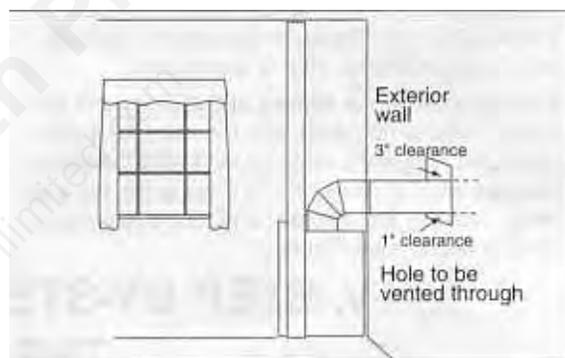


Figure 6
Exterior Wall Hole

3. Interior Wall Shield. An interior wall shield must be installed each time the venting system penetrates a wall. This shield has been designed to maintain the minimum clearances needed for the venting system and prevent cold air infiltration.

After the venting hole has been cut and framed, secure an interior wall shield into position with four 1" fasteners, one in each corner. Bend out the tabs located on the inner portion of the wall shield and use a 1/2" screw to secure each tab to the penetrating pipe. See Figure 7. (1/2" screws are used to avoid penetrating the inner pipe.)

Note: Exterior wall thickness must be a minimum of 4" to a maximum of 23 1/2".

4. Venting through the wall. Horizontal venting must terminate within the shaded area shown in Figure 5. For example, if your vertical rise is the minimum one foot, venting can terminate anywhere between 16 inches and 3 feet.

The last section of vent may require cutting, depending upon wall thickness and appliance location. The end of the vent must penetrate the exterior wall. Cut the pipe so the outer vent section extends past the exterior wall by 1" and the inner vent section extends past the exterior wall by 2 1/2". See Figure 8.

5. Termination Cap. Vent termination must not be recessed into the wall or siding. Figure 9 illustrates termination cap locations and minimum

dimensions for each termination application. Or, follow ANSI Z223.1, latest edition.

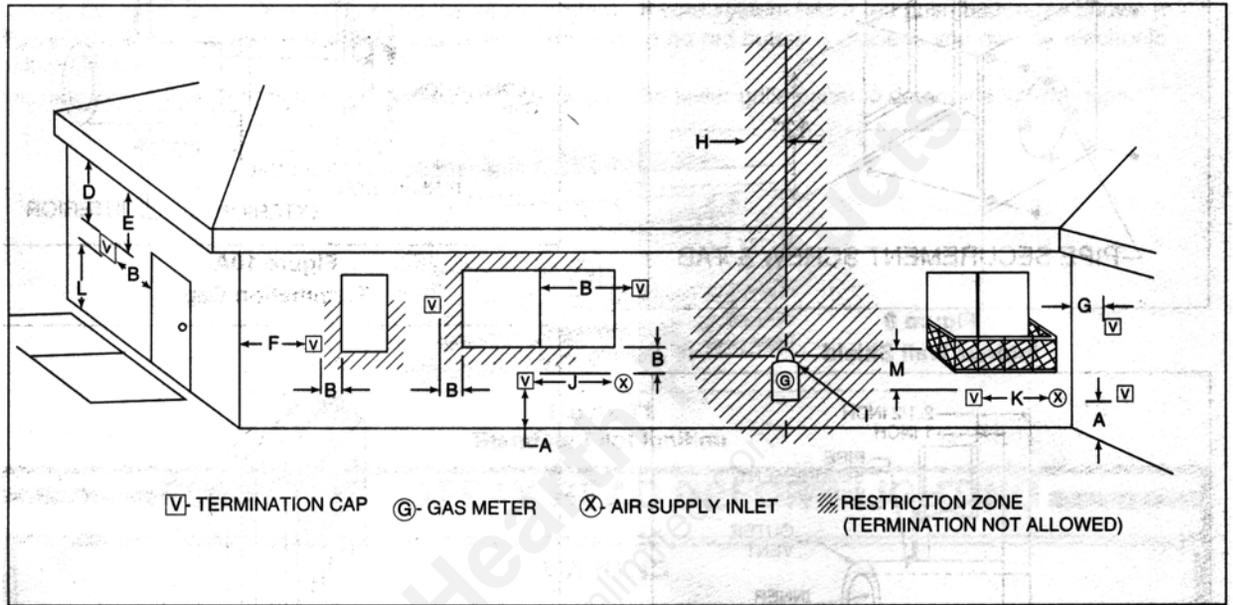


Figure 7

Termination Cap Locations

Dimension Descriptions

- A = Clearance above the ground, a veranda, porch, deck, or balcony - **12 inches (30 cm) minimum.**
- B = Clearance to window or door that may be opened - **9 inches (30 cm) minimum.**
- D* = Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2 feet (60 cm) from the center-line of the terminal - **18 inches (46 cm) minimum.**
- E* = Clearance to unventilated soffit - **12 inches (30 cm) minimum.**
- F = Clearance to outside corner - **6 inches as tested.**
- G = Clearance to inside corner - **6 inches as tested.**
- H• = Not to be installed above a meter/regulator assembly **within 3 feet (90 cm) horizontally** from the center-line of the regulator.
- I• = Clearance to service regulator vent outlet - **3 feet (90cm) min. - United States; 6 feet (1.8 m) min. - Canada.**
- J = Clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other appliance - **12 inches (30 cm) minimum.**
- K• = Clearance to mechanical air supply inlet - **6 feet (1.8 m) minimum.**

- L+ = Clearance above a paved sidewalk or paved driveway located on public property - **7 feet (2.1 m) minimum. Use of a CS200 will reduce this dimension to as low as 12 inches (30 cm).**
- M# = Clearance under veranda, porch deck, or balcony - **12 inches (30 cm) minimum.**
- + = A vent must not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings.
- # = Only permitted if veranda, porch deck, or balcony is fully open on a minimum of 2 sides beneath the floor.
- = As specified in Installation Codes. Note: Local codes or regulations may require different clearances.
- * = Distance required for vinyl soffit materials - **30 inches (76 cm) minimum.**
Distance required for vinyl soffit materials with the use of a vinyl siding shield - **18 inches (46 cm) minimum.**
- ⊗ = As specified in CGA B149 Installation Codes (1991). Note: Local Codes or Regulations may require different clearances.



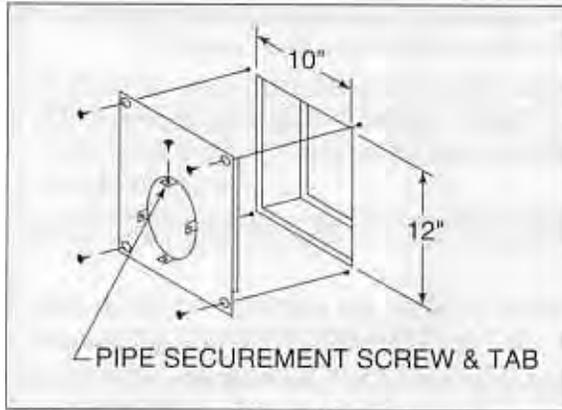


Figure 8
Interior Wall Shield

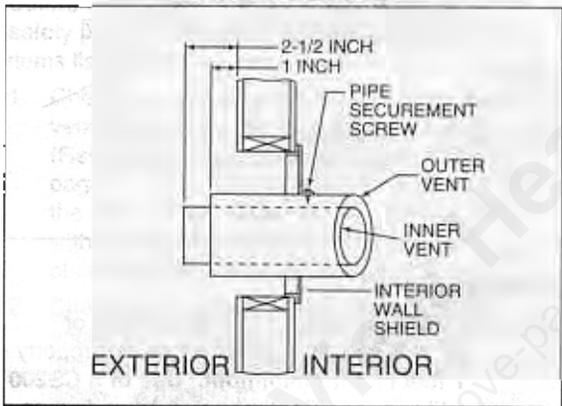


Figure 9
Venting Through the Wall

To install the termination cap, slide the cap pipe sections into the vent pipe as shown in Figures 10A and 10B. Secure the cap flush to the wall using the eight 1" fasteners provided. Seal the cap to the wall with a mastic such as silicone caulking. Fasten the inner vent with three 1/2" screws to secure the vent. (An optional CS200 cap shield may be required. Check local codes. See Figure 11.) Vent termination must not be recessed into the wall or siding.

Be sure to follow all termination cap location minimum dimensions that have been discussed on the previous page.

Skip section B and continue with Step 4 on page 14.

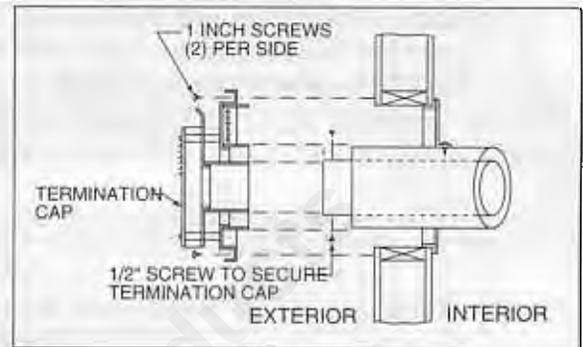


Figure 10A
Termination Cap

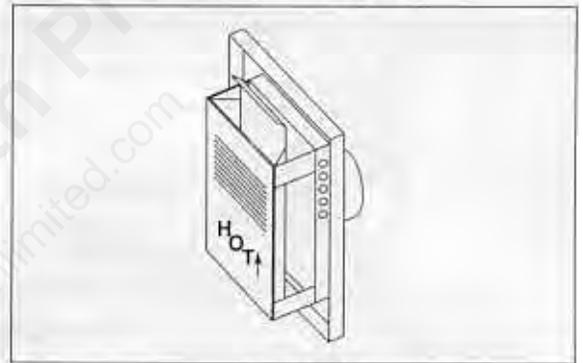


Figure 10B
Proper Positioning of Termination Cap & Shield

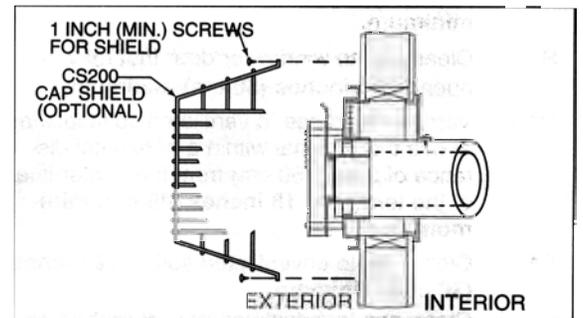


Figure 11
Cap Shield

NOTE

If the termination cap is surrounded by vinyl siding or is located below a vinyl soffit, a vinyl siding shield **MUST** be used to prevent damage to the vinyl.



B. Vertical Termination

When planning your fireplace location, the chimney construction and necessary clearances must be considered. The following figures are the maximum distances from the base of the unit, as well as the minimum air space clearances that must be maintained: Maximum straight unsupported rise - 25 feet; maximum horizontal unsupported run - 3 feet; air space clearances around vertical venting - 1" on all sides; air space clearances around horizontal venting - 3" on top and 1" on sides and bottom; maximum height - 40' from the base of the unit. Every 1' of horizontal run requires at least 2' of vertical rise. (Example: a 12' overall installation height may be offset as much as 6' horizontally.) The maximum is 20 feet.

1. Assembling chimney sections. Attach either a 15942B (starter elbow) or straight pipe section (depending upon your specific installation) to the top of the appliance. Secure with the three screws supplied. Use only pipe supplied with this appliance and the appropriate number of direct vent sections. **MAINTAIN MINIMUM CLEARANCES OR GREATER AROUND THE CHIMNEY SYSTEM.** Do not pack air spaces with insulation or other material.

a. Using elbows. To bypass any overhead obstructions, the chimney may be offset using a 90° elbow (VK5). Vent stabilizers (VS4) have straps for securing these parts to joists or rafters. Plumbers tape may be purchased locally and used in conjunction with vent stabilizers. See Figure 12.

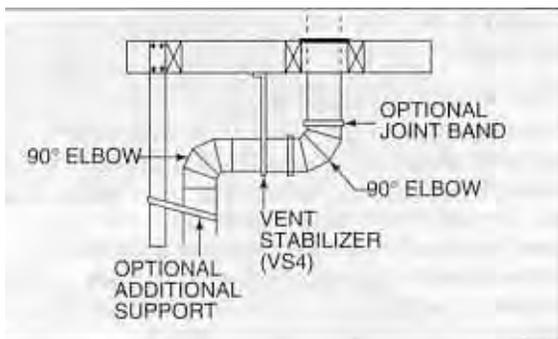
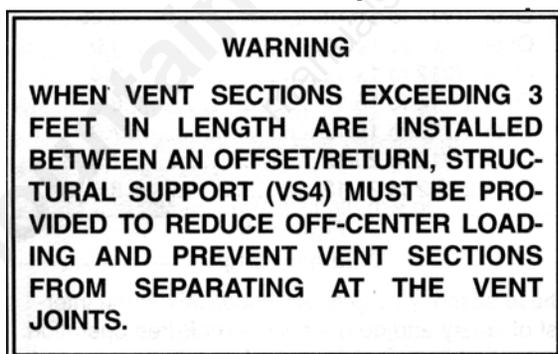


Figure 12
Elbows with stabilizer

2. Preparing the ceiling for firestop spacers.

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. Unless the flue is offset, frame the 10" x 10" opening directly over the firebox.

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

In all situations, firestop spacers are to be nailed to the ceiling joists from the bottom or fireplace side, EXCEPT when the space above is an insulated ceiling or attic space. In this situation, the firestop spacer must be nailed from the top side to prevent loose insulation from falling into the required one inch air space around the chimney. See Figure 13.

Install the firestop spacer (FS6) by positioning and nailing the four sides of the firestop spacer to the joists using a minimum of three nails per side.

4. Securing chimney system. Continue assembling the chimney sections up through the firestop spacers as needed. Pipe sections must be locked into position with the screws provided, using the predrilled holes. The 15942B starter elbow and the chimney stabilizers have straps for securing these parts to joists or rafters.

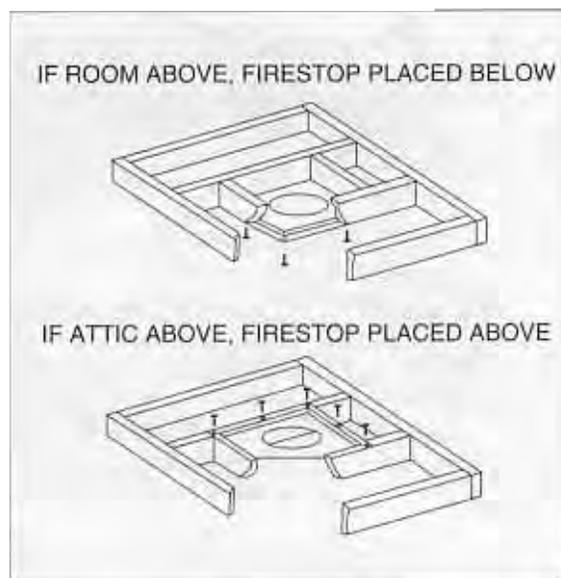


Figure 13
Installing the firestop spacer

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.

6. Marking the exit point in the roof. Locate the point where the chimney will exit the roof by plumbing down to the center of the chimney. Drive a nail up through the roof to mark the center. See Figure 15.

7. Cutting out the hole in the roof. Measure to either side of the nail and mark the 10" x 10" opening required. 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 minimum air space clearance must be maintained between the chimney 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 in place with nails.

9. Assembling chimney sections. Continue to add chimney sections through the roof opening, maintaining at least a one inch air space clearance. If a specific height is desired, the chimney sections may have to be cut (using shears) to a certain length.

10. Termination cap. Major building codes specify a minimum chimney height above the roof top depending on roof pitch. See Figures 15 and 16.

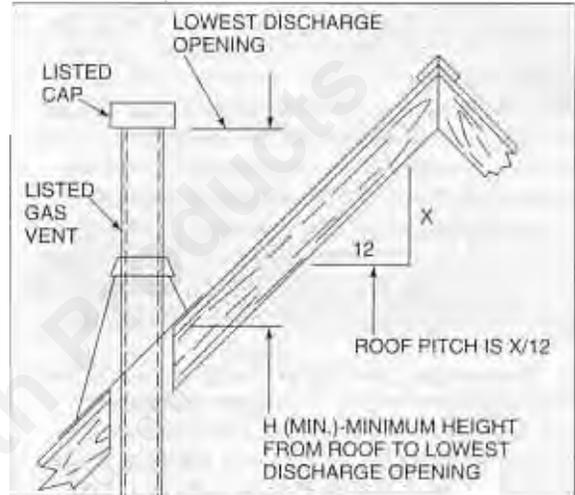


Figure 15
Chimney Height if Termination Location is at Least 8' From a Vertical Wall

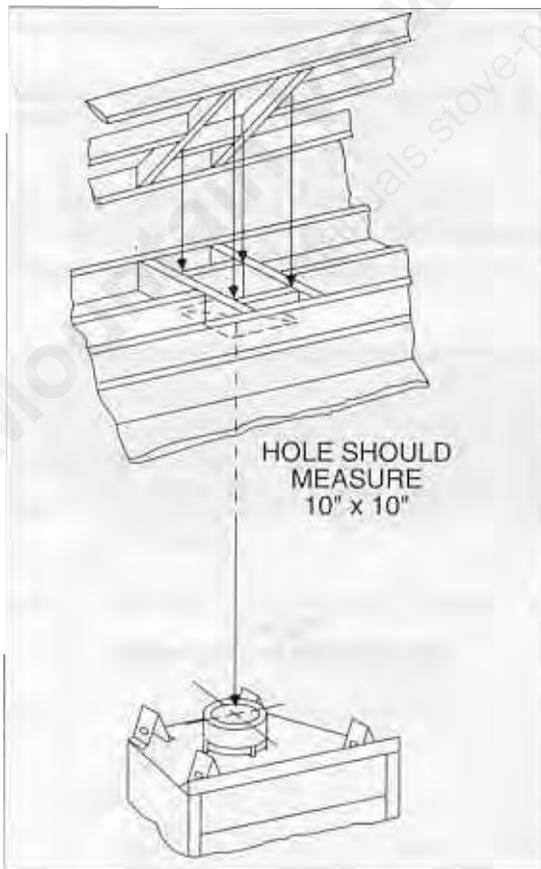


Figure 14
Ceiling and attic construction

Roof Pitch	H (Min.) Ft.
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 16
Chimney Height

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

STEP 4 - Double Checking

When construction of the entire chimney system has been completed, double check to make sure all venting pipes and termination caps are unobstructed. Exhaust gases are extremely hot. When you have chosen a horizontal termination, be sure there are no possible future obstructions from trees, bushes, snow drifts, etc. A cap shield can be purchased to help prevent possible contact.



STEP 5 - Gas line installation

Install the gas line piping up to the right side of the appliance. A separate shut-off gas valve (supplied) should always be used. See Figure 17.

STEP 6 - 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. Gas connections can be made from outside the appliance by removing the lower grille panel. All connections must be checked for leaks with a soap and water solution.

Bleed the gas line to extract any air that may have been trapped inside the pipe.

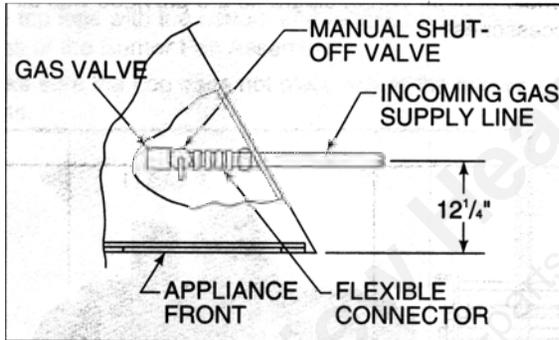


Figure 17
Gas Line

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.

Lower Grille Panel Removal

To remove the lower grille panel, gently lift and pull on the outside edges of the grille as shown in Figure 18, step A. The top part of the grille will rotate downward.

Two spring hinges secure the lower portion of the grille into place. See Figure 18, step B. Simply pull the hinges toward the center of the grille and then pull out the entire grille (Figure 18, step C). To replace the grille, reverse this action.

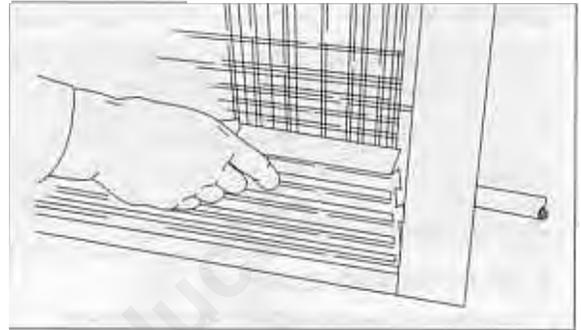


Figure 18, Step A
Lower Grille Panel Removal

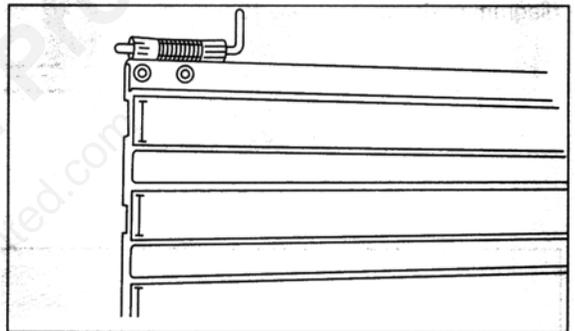


Figure 18, Step B
Lower Grille Panel Removal

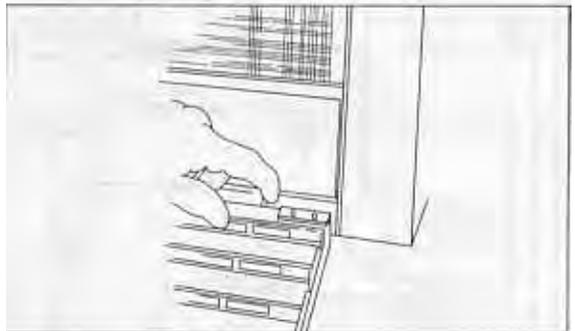


Figure 18, Step C
Lower Grille Panel Removal

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 JOING, INCLUDING THE VALVE, PILOT, FITTINGS, ETC., MUST BE CHECKED.



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. 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 19.

2. Remote Wall Switch. Position the junction box (not provided) in the desired place on the wall. Run the wire to the junction box, connect it to a wall switch and mount 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. The optional fan kit (FK4) requires a separate 110VAC supply to the appliance junction box for operation, as shown in Figure 19, #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 fan motor speed control (BC10) or the remote control (RC5). One black wire and the one white wire are for supplying 110 volt for ignition and for the optional 110 volt switched remote control. Wiring diagrams are provided with all accessories.

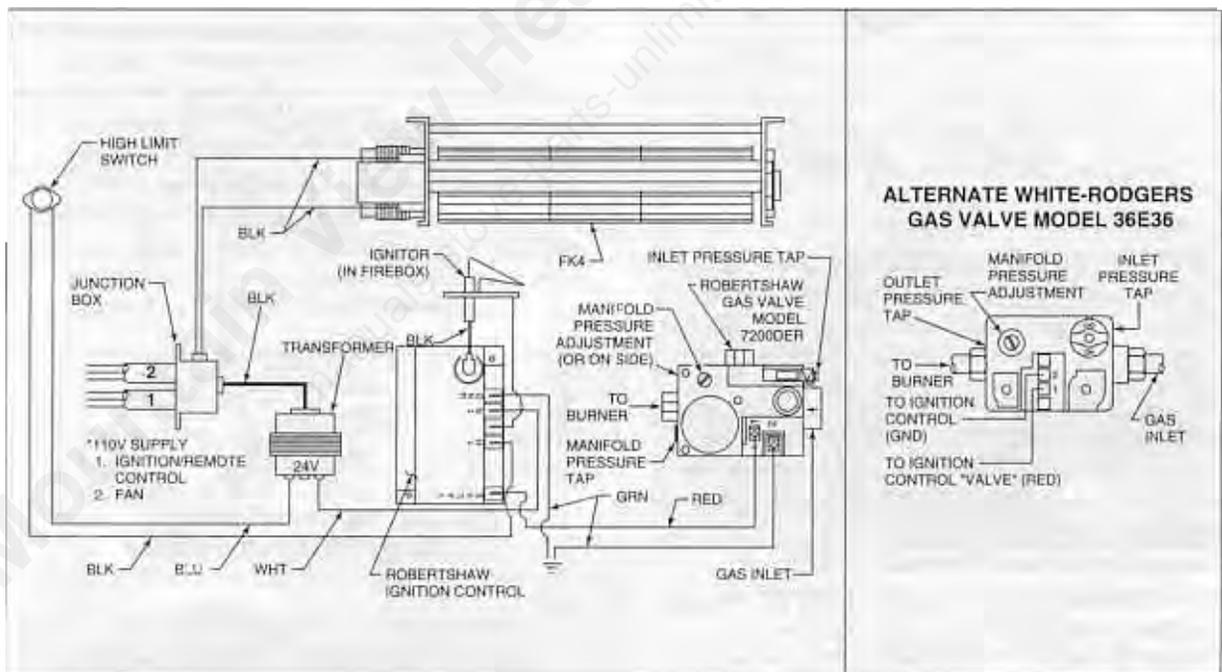


Figure 19
Electronic Ignition Wiring Diagram

*FIELD INSTALLED WIRES MUST BE GROUNDED. (2) SUPPLIES ARE REQUIRED IF AN OPTIONAL FK4 FAN KIT IS TO BE USED.



B. STANDING PILOT IGNITION

Note: This appliance DOES NOT require a 110VAC supply for operation. Connecting the appliance/wall switch to a 110V AC 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 a wall switch and mount inside the junction box. A wiring diagram is shown in Figure 20.

If you extend beyond the wall switch wires provided, you must not wire on nut extensions, but replace the existing wires with the desired length. **NOTE:** extended lengths of wire will reduce millivolt reading and may cause unit shutdowns.

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. The optional fan kit (FK4) 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 BC10. No additional 110VAC supply is required for the fan motor speed control (BC10). One black wire and the one white wire are for the optional 110 volt switched remote control. The remote control (RC4) requires a separate 110VAC supply directly to the appliance junction box, as shown in Figure 20, #2. Wiring diagrams are provided with all accessories.

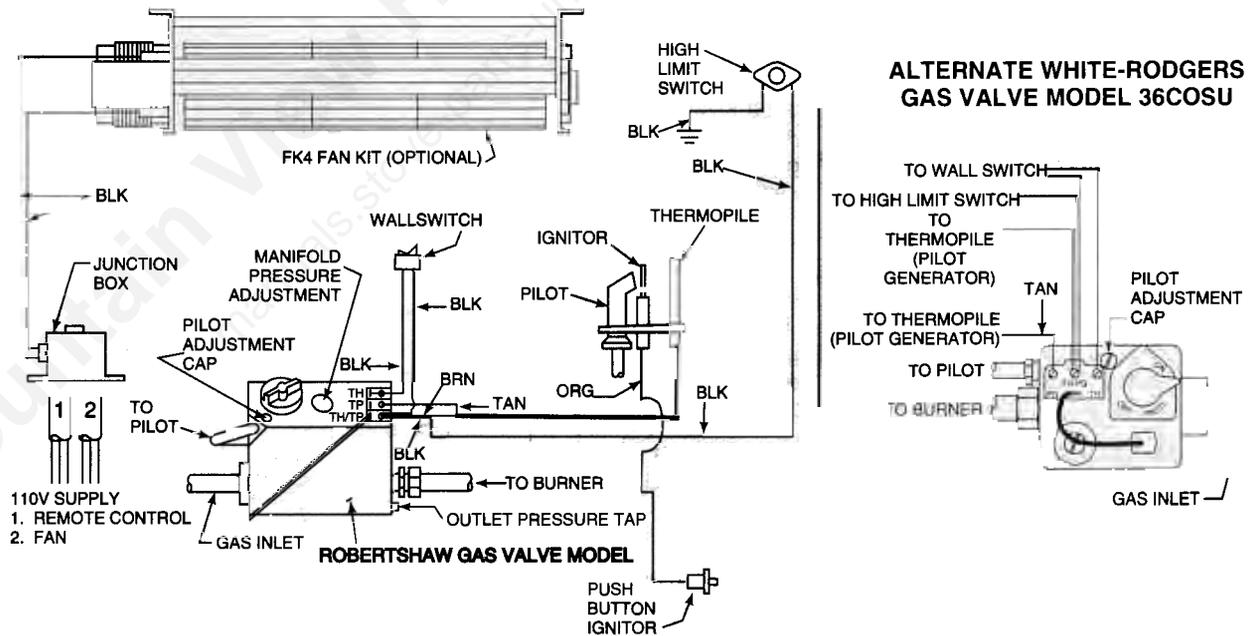


Figure 20
Standing Pilot Ignition Wiring Diagram



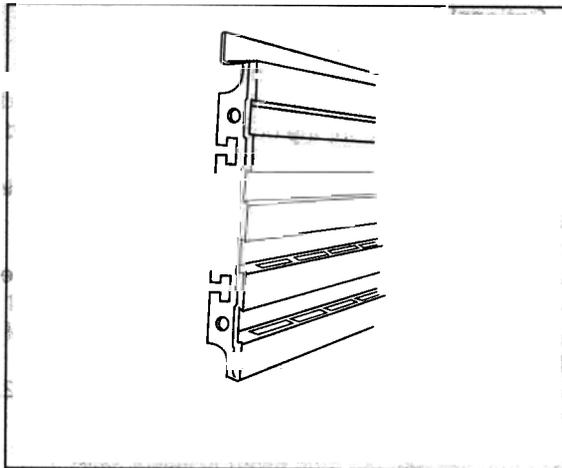


Figure 21
Upper Grille Panel

STEP 8 - Upper Grill Panel Removal

The upper grille panel is constructed with notches as shown in Figure 21. To remove the upper grille, grasp each end, gently lift upward and pull away from the appliance. The grille panel should disengage easily.

STEP 9 - Attaching Hood

The hood is to be located just above the upper grille panel. After the grille panel has been removed (Step 7), four screws are visible just inside the upper section of the fireplace. Remove these screws, position the hood and screw into place. See Figure 22.

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.

NOTE: You cannot cover any of the grilles on this appliance, as this may create a fire hazard. See Figure 23.

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 23.

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

STEP 11 - Screen Removal

After removing the upper and lower grille panels, you are able to remove the protective fire screen. Simply remove the screws located in each corner of the screen, lift it out and set aside. See Figure 24. (The screen must be replaced prior to operating this appliance.)

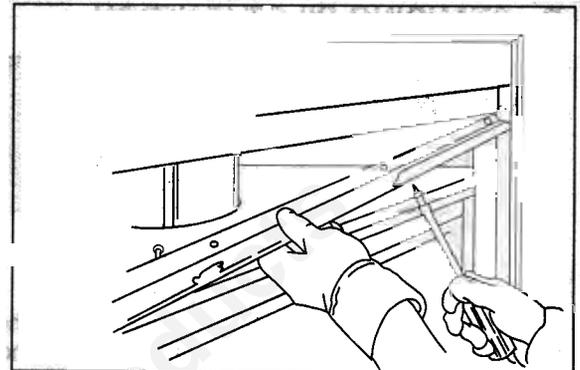


Figure 22
Hood Placement

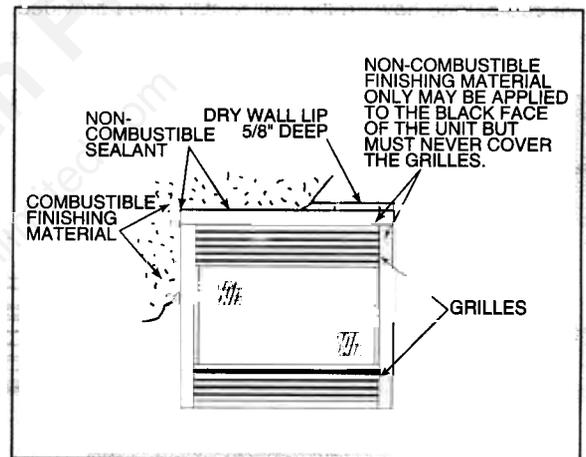


Figure 23
Location of Grilles

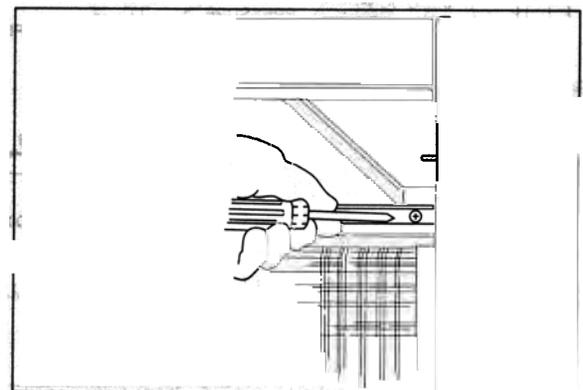


Figure 24
Screen Removal



STEP 12 - Glass Removal

To remove the glass, first loosen the five screws on the bar located at the bottom portion of the glass, then unscrew and remove the five screws located on the top portion of the glass as shown in Figure 25. Be sure to hold the glass to prevent it from falling out once the screws have been loosened and removed. Remove the metal retaining strip which is positioned along the upper edge of the glass. See Figure 26A. Gently tilt the glass towards yourself and lift it out of the bottom track. See Figure 26B.

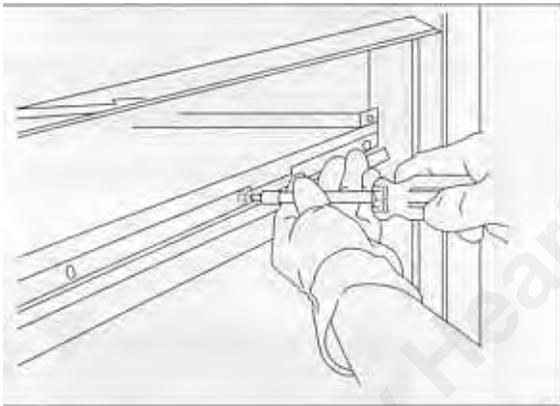


Figure 25
Glass Removal

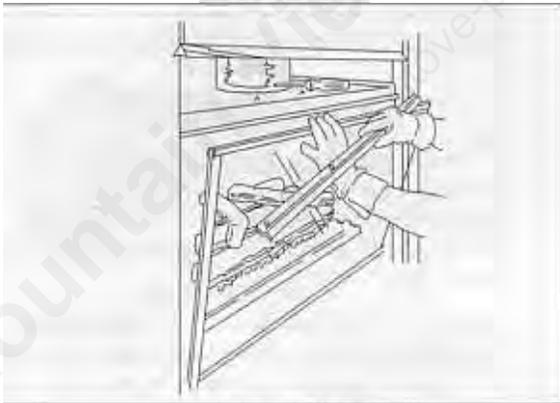


Figure 26A
Glass Removal



Figure 26B
Glass Removal

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 13 - Placing the Lava Rock

Before placing the Lava Rock and Vermiculite in either the GC300 series or GC400 series, install/make sure the four (4) Grate Bars are in their respective positions at the base of the Burner Pan Assembly. The Grate Bars are packaged in with the Log Assembly. (See Figure 28.)

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

STEP 14 - 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 15- 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 27. Save for later use any left over Lava Rock, Vermiculite or Rock Wool.



Figure 27
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.



STEP 16 - Positioning of the Logs

Position the Round Logs - GC300 Series

1. Make sure sheet metal tabs, located on the Back Log Support, are upright, if not, bend to the up position. See Figure 28.

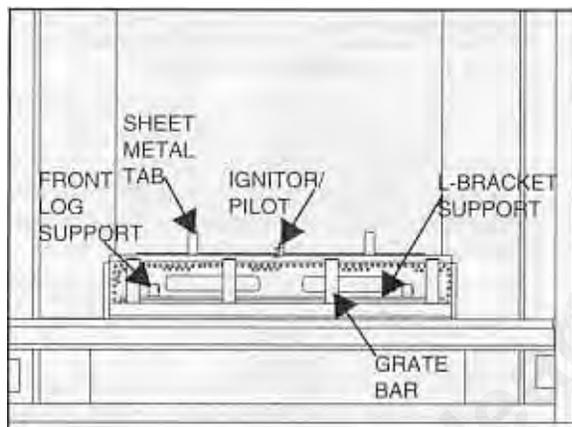


Figure 28
Firebox

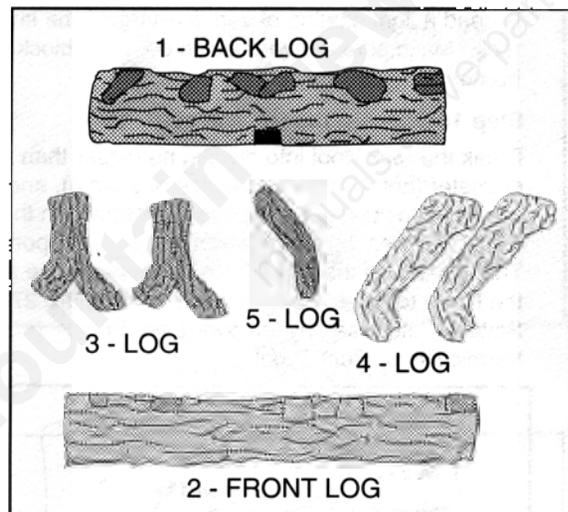


Figure 29
Identify GC300 Logs

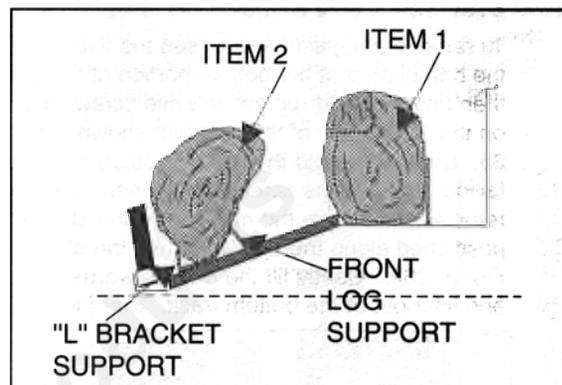


Figure 30
Side View - Front and Back Logs

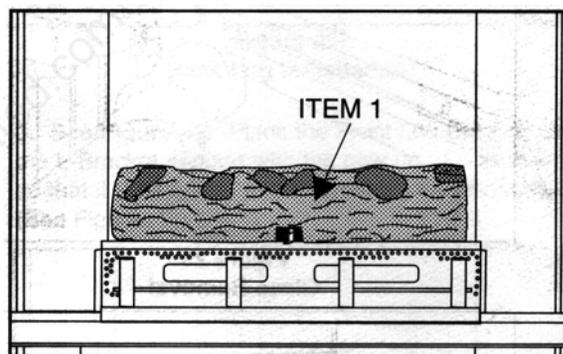


Figure 31
Back Log Installation

2. See Figure 31. 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 30.)



3. See Figure 32. 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 28 & 30.)

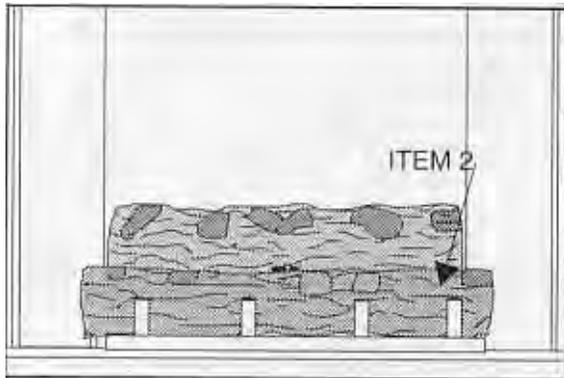


Figure 32
Front Log Installation

4. See Figure 33. 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.

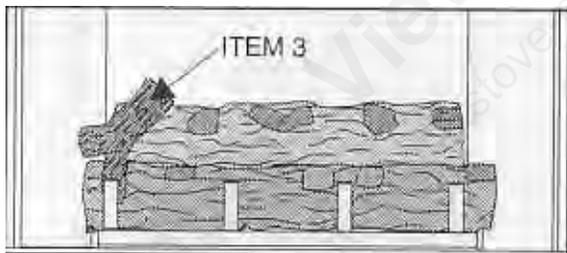


Figure 33
Log Installation

5. See Figure 34. One of the "hooked" Logs (Item 4) is installed next. See Figure 1 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 Assembly.

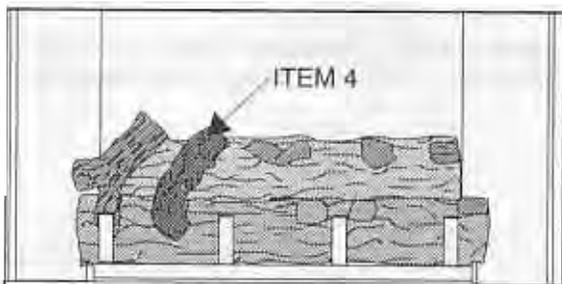


Figure 34
Log Installation

6. See Figure 35. 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.

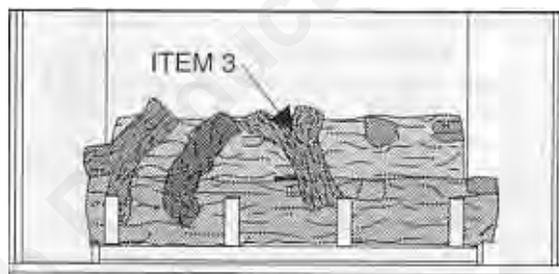


Figure 35
Log Installation

7. See Figure 36. 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.

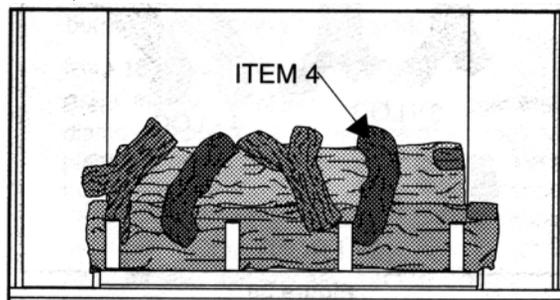


Figure 36
Log Installation

8. See Figure 37. 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 shorter portion of the small "hooked" log is positioned on the right hand indentation of the Front Log.

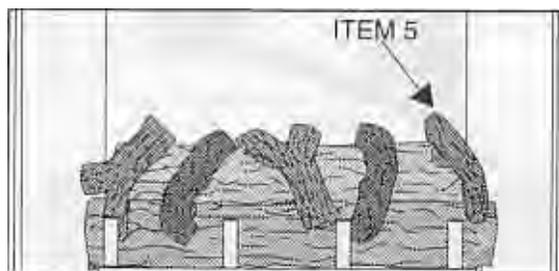


Figure 37
Log Installation

Position the Round Logs - GC400 Series

1. Make sure sheet metal tabs, located on the Back Log Support, are upright, if not, bend to the up position. See Figure 38.

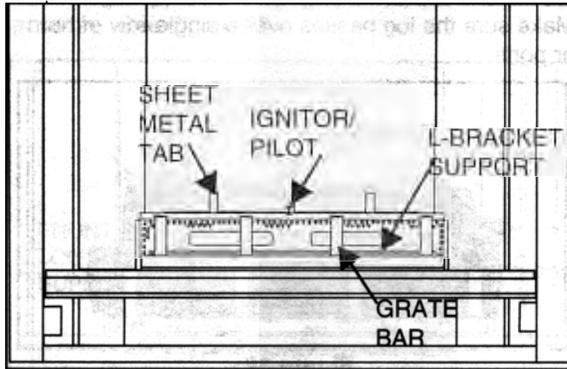


Figure 38
Firebox

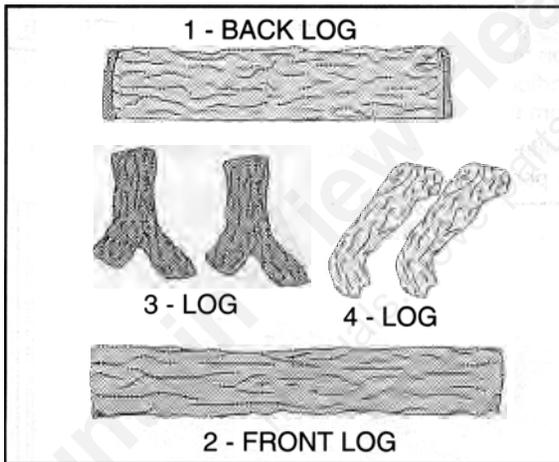


Figure 39
Identify GC400 Logs

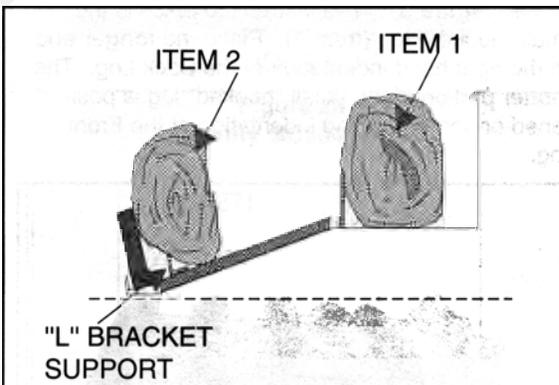


Figure 40
Side View - Front and Back Logs

2. See Figure 41. Place the Back Log (Item 1) on the Back Log Support 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 40.)

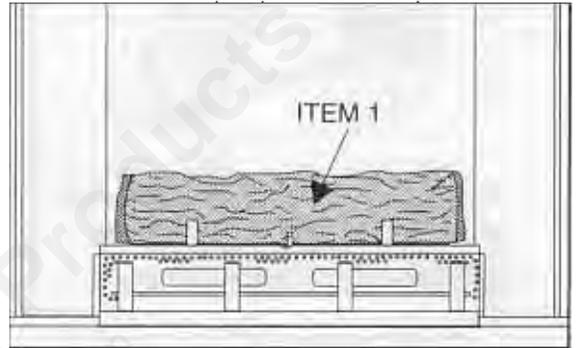


Figure 41
Back Log Installation

3. See Figure 42. 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 38 & 40.)

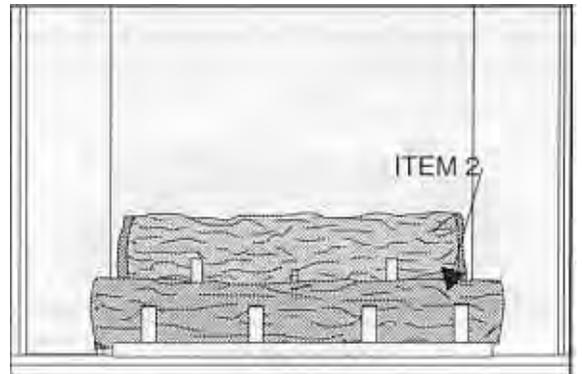


Figure 42
Front Log Installation

4. See Figure 43. 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.



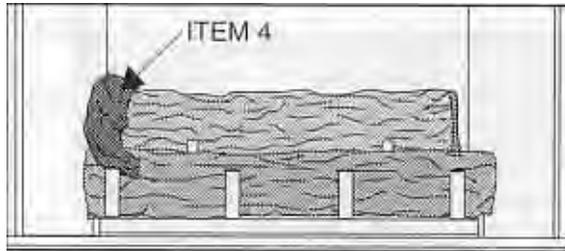


Figure 43
Log Installation

5. See Figure 44. One of the "Y" logs (Item 3) is installed next. See Figure 39 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.

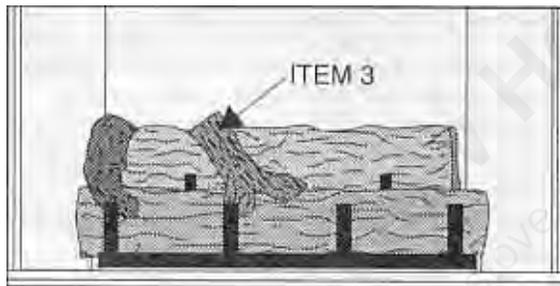


Figure 44
Log Installation

6. See Figure 45. 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.

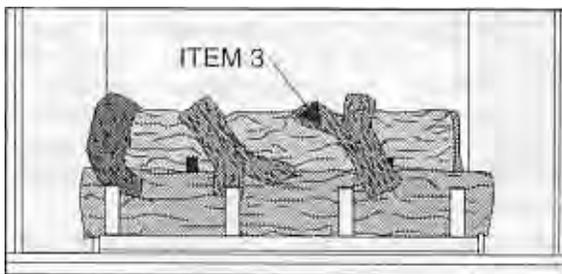


Figure 45
Log Installation

7. See Figure 46. 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.

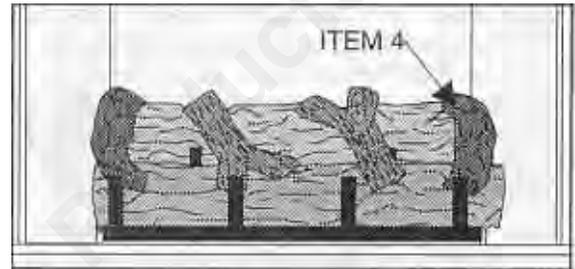


Figure 46
Log Installation

GC300 Series Split Logs

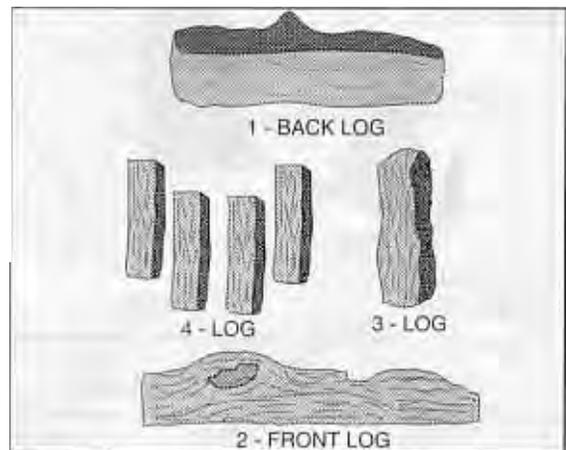


Figure 48
Identify GC300 Split Logs

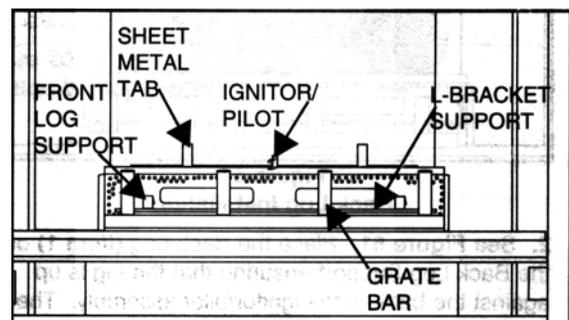


Figure 49
Firebox



Position the Split Logs (Option)

GC300 series

1. If Sheet Metal Tabs are in the upright position, as shown in **Figure 49**, 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 49**.

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 49**.

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.

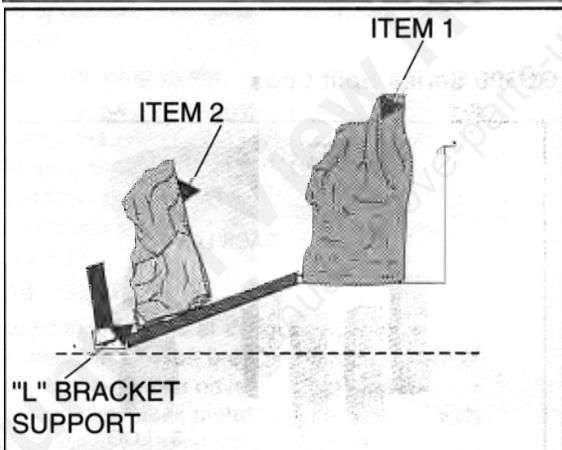


Figure 50
Side View - Front and Back Logs

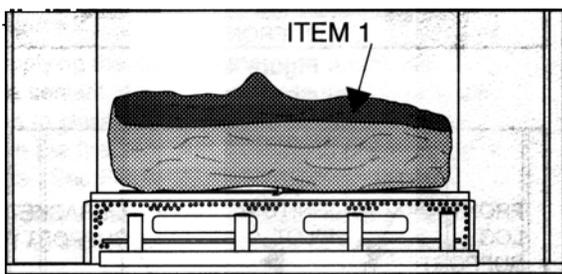


Figure 51
Back Log Installation

2. See **Figure 51**. 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 50**.

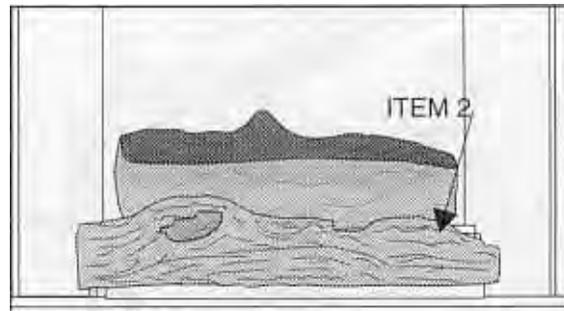


Figure 52
Front Log Installation

3. See **Figure 52**. Place the Front Log (**Item 2**) directly on the "L" Bracket Support. See **Figures 48 & 49**.

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 15.

4. See **Figure 53**. 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.

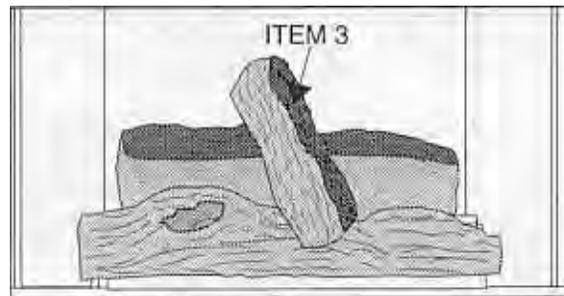


Figure 53
Log Installation

5. See **Figure 54**. One of the small straight logs (**Item 4**) is installed next. See **Figure 1** 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 Assembly.



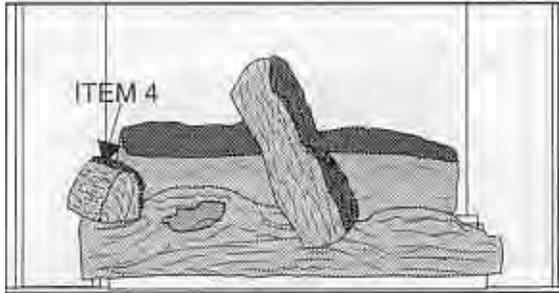


Figure 54
Log Installation

6. See Figure 55. 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.

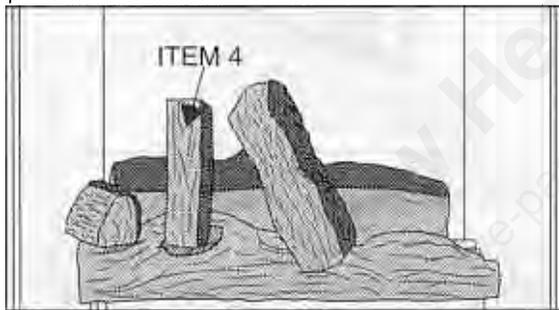


Figure 55
Log Installation

7. See Figure 56 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.

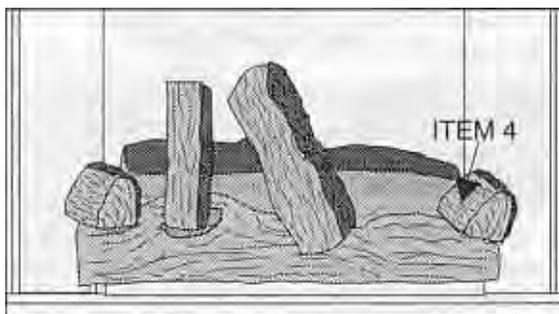


Figure 56
Log Installation

8. See Figure 57 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.

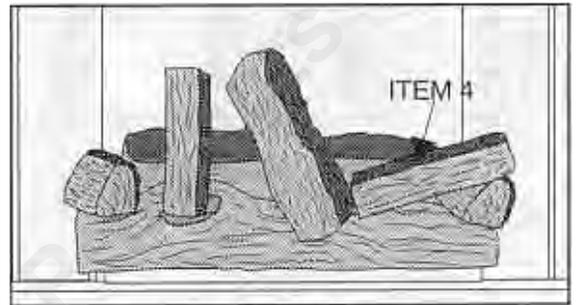


Figure 57
Log Installation



Position the Optional GC400 Split Logs

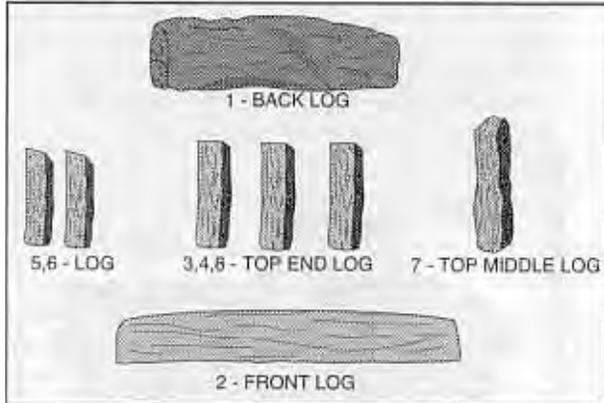


Figure 58
Identify GC400 Split Logs

1. If Sheet Metal Tabs are in the upright position, as shown in **Figure 59**, 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 59**.

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 59**.

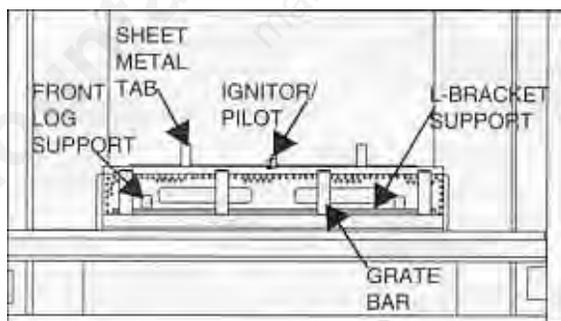


Figure 59
Firebox

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 60**. 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 61**.)

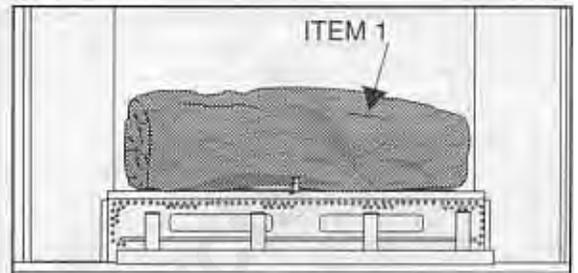


Figure 60
Back Log Installation

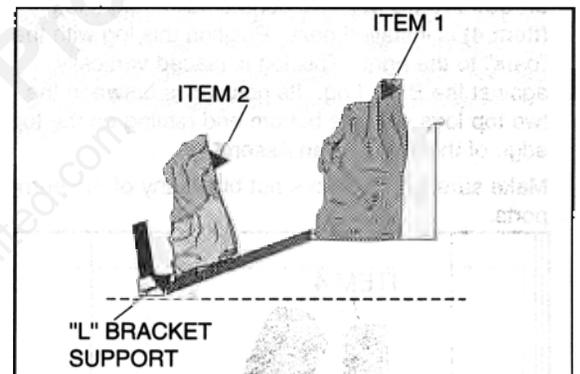


Figure 61
Side View - Front and Back Logs

3. See **Figure 62**. Place the Front Log (**Item 2**) directly on the "L" Bracket Support. (See **Figures 59 & 61**.)

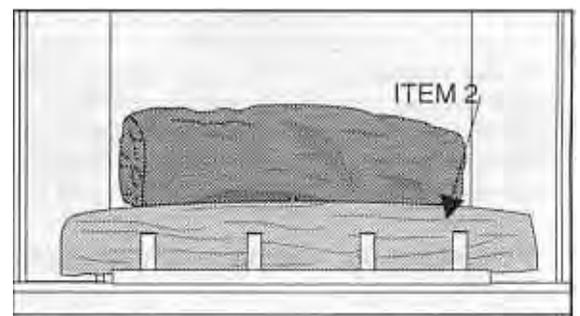


Figure 62
Front Log Installation

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 63**. 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.



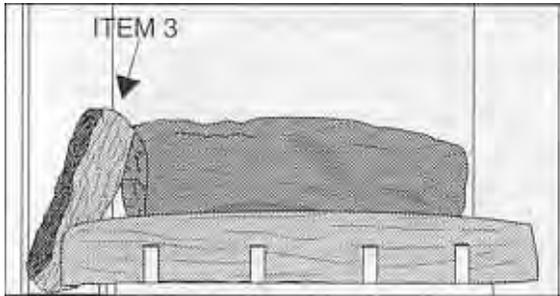


Figure 63
Log Installation

5. See Figure 64. 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.

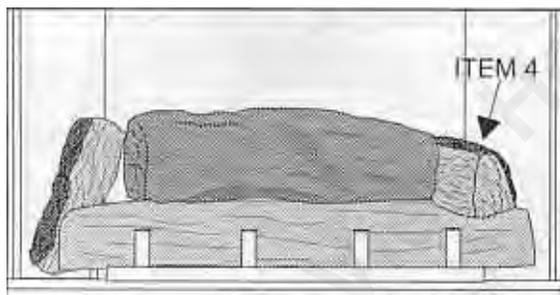


Figure 64
Log Installation

6. See Figure 65. 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.

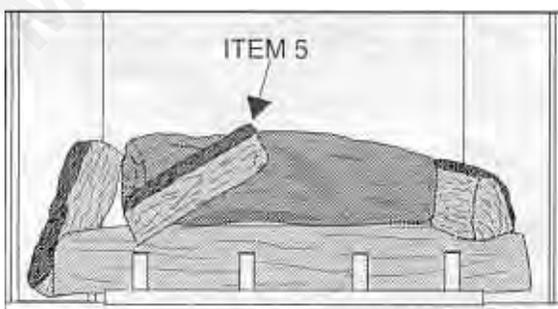


Figure 65
Log Installation

7. See Figure 66. 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).

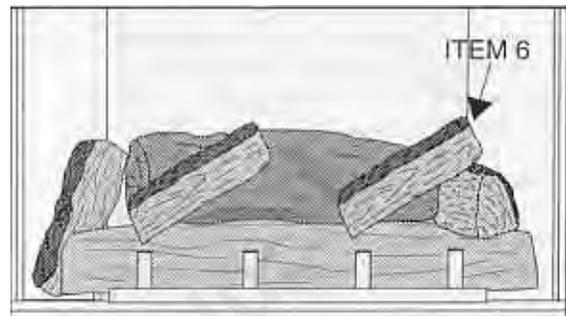


Figure 66
Log Installation

8. See Figure 67. 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.

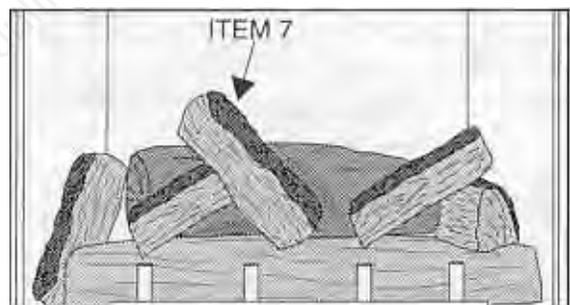


Figure 67
Log Installation

8. See Figure 68. 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.

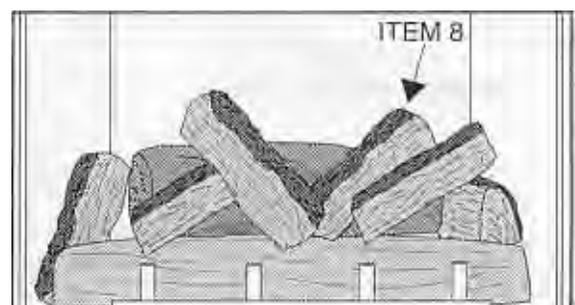


Figure 68
Log Installation



STEP 17 - Glass Replacement

After arranging the log set in the unit, replace the fixed pane of glass. Be sure the rubber gasket material is on the top and bottom edges of the glass. Carefully lower the glass into the lower track of the unit (black trim facing outward) and center it in the track. Next, place the metal retaining strip along the upper edge of the glass and align the screw holes with holes in the fireplace. Secure the glass into place with the provided screws. See Figure 69.

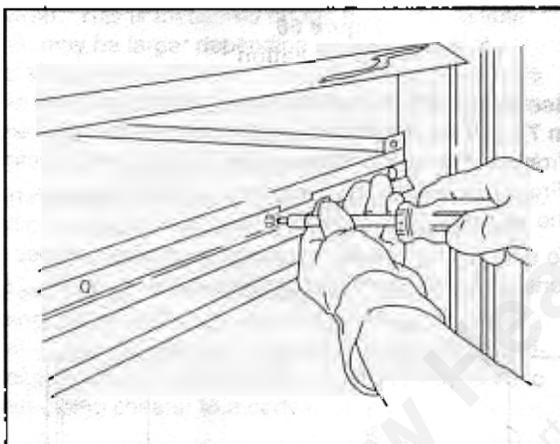


Figure 69
Glass Replacement

WARNING
NEVER OPERATE THIS APPLIANCE WITH THE GLASS REMOVED OR NOT SEALED.

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

STEP 18 - Screen Replacement

Position the screen over the glass, align the screw holes located in each upper corner of the grille with the holes in the fireplace and screw into place.

STEP 19 - Replacing the Lower Grille Panel

Align the lower hinges on the grille with the holes provided in the fireplace. Place them in those holes and pivot the grille upward and snap into place. See Figure 70.

STEP 20 - Replacing the Upper Grille Panel

Simply replace the upper grille panel by positioning the notches, located on each end of the panel, in place over the pins on either side of the grille opening and press downward. The grille panel should snap into place easily.

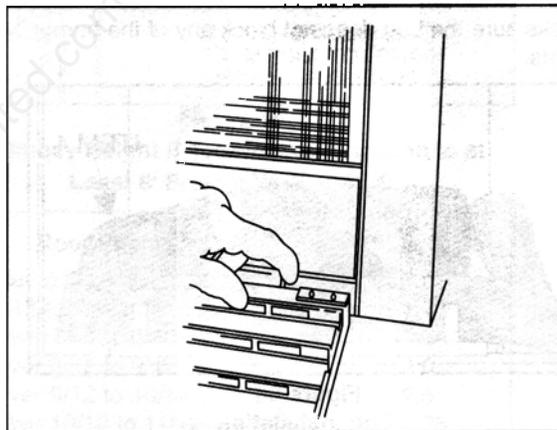


Figure 70
Lower Grille Replacement



VI. OPERATING INSTRUCTIONS

TO THE CONSUMER: To determine whether your appliance is an electronic ignition or a standing pilot ignition, remove the lower grille panel to examine the wiring system. If your system has a red push button (as shown in Figure 71 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 of the lower grille panel to determine ignition type.

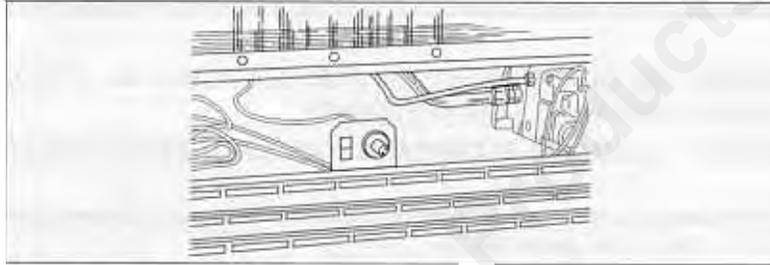


Figure 71
Standing Pilot Ignition

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

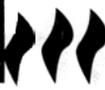
- Do not try to light any appliance.
 - Do not touch any electric switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand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

ANY SAFETY SCREEN OR GUARD REMOVED FOR SERVICING AN APPLIANCE MUST BE REPLACED PRIOR TO OPERATING THIS APPLIANCE. 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 vermiculite have all been placed correctly. (Refer to Steps 13 through 16 beginning on page 19. The top of the burner and the holes in the sides of the burner should not be covered with vermiculite. If these items are not visible, please adjust before continuing.
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. Make sure the front glass is sealed and in its proper position. Never operate this appliance with the glass removed or not sealed.
5. Verify that all venting and caps are unobstructed. Exhaust gases are extremely hot. Be sure there are no possible future obstructions from trees, bushes, snow drifts, etc. A CS200 cap shield can be purchased to help prevent possible contact.
6. Read and understand these Instructions thoroughly before attempting to operate this appliance.

STEP 1- Lower Grille Panel Removal

To remove the lower grille, gently lift and tug on the outside top edges of the grille as shown in Figure 72. The top of the grille will rotate downward.

Two spring hinges secure the lower portion of the grille into place. See Figure 73. Simply pull the hinges toward the center of the grille and then pull out the entire grille (Figure 74). To replace the grille, reverse this action.

If you own an electronic ignition, at this point skip section A on the following page and continue with section B on page 23.



Figure 72
Lower Grille Panel Removal

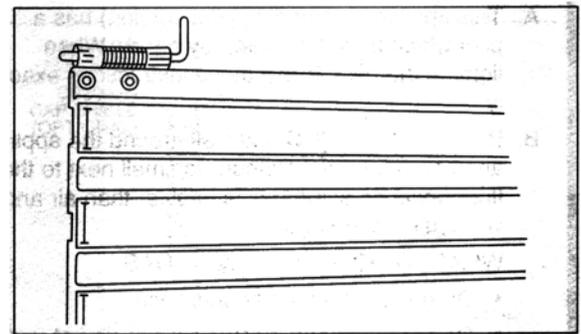


Figure 73
Lower Grille Panel Removal

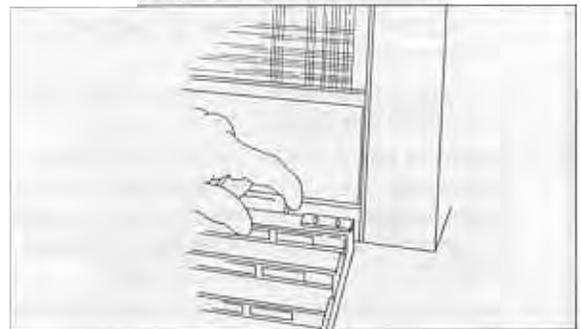


Figure 74
Lower Grille Panel Removal



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 inside the lower grille) have been turned to the OFF position. See Figure 75. 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 gas knob to PILOT, as shown in Figure 76, and press in. While holding it in, light the pilot by pressing the red ignitor button several times until the gas 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 77. You may now turn the remote wall switch to the ON position which will turn on the main burner. Watch your appliance display beautiful, dancing flames. Initially, the flames may resemble more of a blue color but after the first 20 minutes of operation, they will become more yellow.

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 if it was installed on your unit) to the OFF position.

The next step is to remove the lower grille panel to expose the wiring system. (Follow Step 1 on page 30.) Locate the gas knob and turn it to the PILOT position. Press in slightly and continue turning to the OFF position. 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.

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. Glass will also require cleaning after the initial burn. (Instructions for cleaning the glass are given on page 33.)

Each time this appliance is lit, it will cause condensation and fog on the glass. This condensation and fog will disappear in a few minutes.

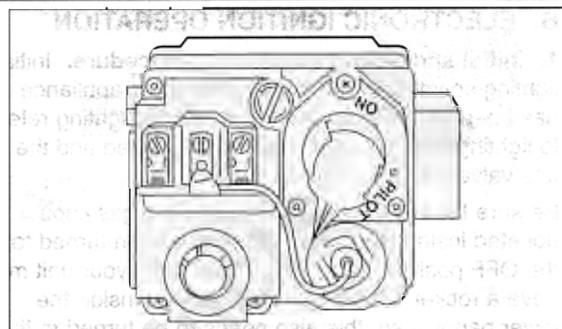


Figure 75
Standing Pilot Ignition valve "OFF"

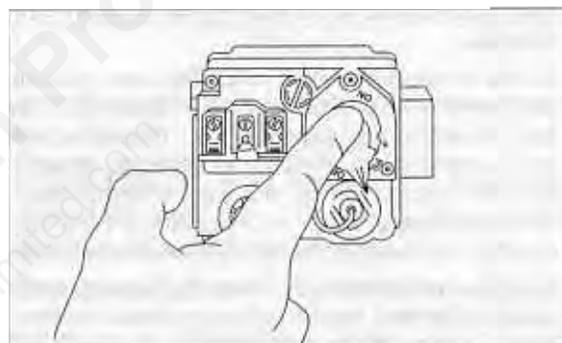


Figure 76
Standing Pilot Ignition valve to "PILOT"

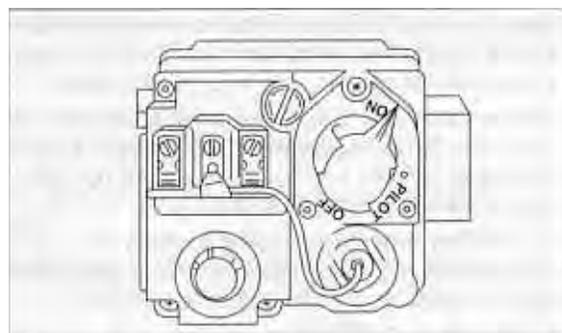


Figure 77
Standing Pilot Ignition to "ON"

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

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 knob (located inside the lower grille) have been turned to the OFF position. See Figure 78. 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.

Locate the gas valve knob inside the lower grille panel and turn it to the ON position. See Figure 79. Then, turn the remote wall switch to ON. This will activate an electronic spark. Watch your appliance display beautiful dancing flames. Initially, the flames may resemble more of a blue color but after the first 20 minutes of operation, they will become more yellow.

2. Seasonal Shutdown. When the burning season comes to an end, the entire system should be shut down. 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 period of time, you must first shut off the main burner by moving the remote wall switch (and the ON/OFF switch if it was installed on your unit) to the OFF position.

The next step is to remove the lower grille panel (Step 1 on page 20) to expose the wiring system. Locate the gas valve knob and turn it to the OFF position. 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.

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. Glass will also require cleaning after the initial burn. (Instructions for cleaning the glass are given on page 33.)

Each time this appliance is lit, it will cause condensation and fog on the glass. This condensation and fog will disappear in a few minutes.

STEP 2 - Replacing the Lower Grille Panel

To replace the lower grille panel, align the lower hinges on the grille with the holes provided in the fireplace. Place them in those holes and pivot the grille upward as shown in Figure 80. The grille should connect smoothly back into place.

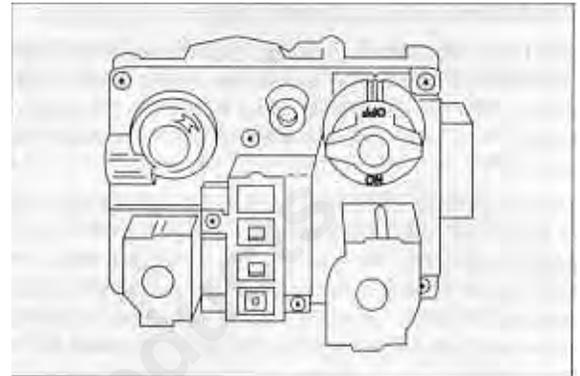


Figure 78
Electronic Ignition valve to "OFF"

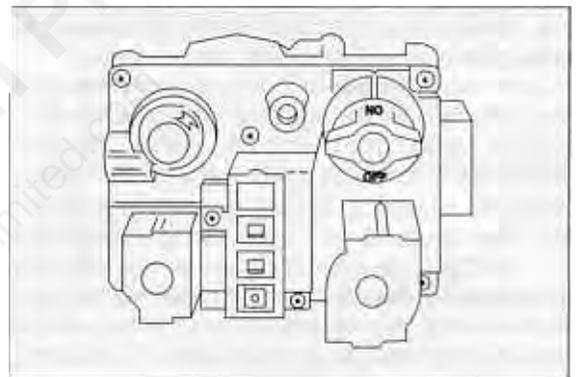


Figure 79
Electronic Ignition valve to "ON"

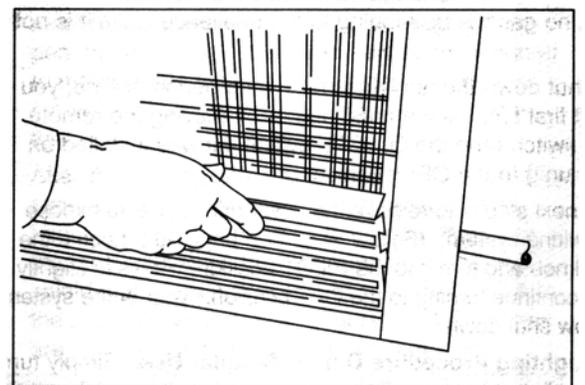


Figure 80
Lower Grille Panel Replacement

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 81 through 83.

Venting system inspection

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

Cleaning the glass

Note: When cleaning the glass, NEVER use abrasive materials. NEVER clean glass when hot. Always wear hand and eye protection and keep children and pets a safe distance away.

It is recommended to wear gloves while handling or removing glass. **DO NOT REMOVE GLASS WHEN HOT.**

To remove the glass for cleaning, following Steps 11 and 12 beginning on page 18. Handle glass panel with care to avoid striking or scratching it on hard objects.

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.

In the event of glass breakage, follow glass removal instructions to remove the top retaining strip. Remove lower retaining strip in the same manner. This will allow the removal of all glass fragments and sheet metal edge protection strips. Vacuum all remaining glass pieces with a shop vac. (DO NOT VACUUM IF PIECES ARE HOT.) Replace glass only with Heatilator Glass ordered direct or through your local distributor. Never use substitute material. Only fully tempered soda lime safety glass may be used on this appliance.

Log cleaning

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

To prevent the possibilities 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 84. This can be done with a screwdriver or a 1/4" wrench. Also, ensure the logs are positioned correctly to minimize flame contact with the logs.

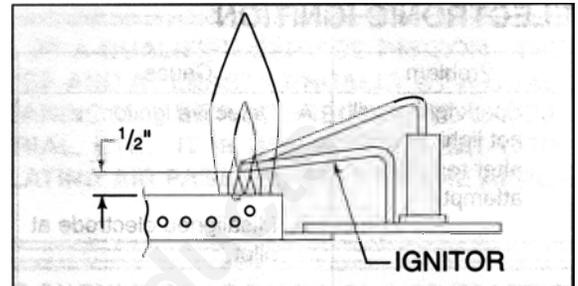


Figure 81
Electronic Ignition

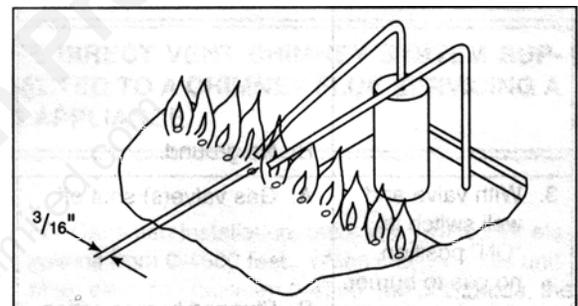


Figure 82
Electronic Ignition

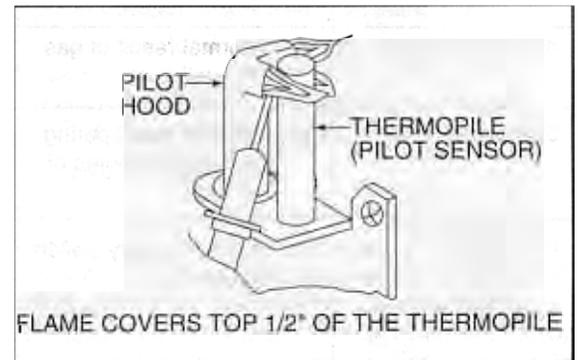


Figure 83
Standing Pilot

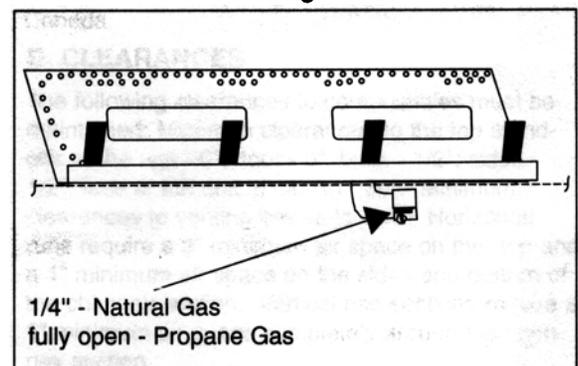


Figure 84
Both Ignitions



VIII. TROUBLE SHOOTING

ELECTRONIC IGNITION

Problem	Cause	Corrective Action
1. Spark ignitor will not light burner after repeated attempts.	A. Defective ignitor. B. Misaligned electrode at pilot.	Check for loose connections on electrode and ignitor. 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 51. 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 Figure 81 & 82. Adjust sensor if necessary. Be sure sensor is secured tight into bracket. Be sure wiring connections are tight throughout system, including high limit switch. Check that wiring is grounded as shown in Figure 19.
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.	Check all gas valves leading to appliance. Turn to the "ON" position. Check wall switch for proper connections. Check for 24 volt power off secondary on the transformer. Check burner orifice; remove blockage. Check power source (fuses).
4. Glass fogs 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.	No action is necessary. Flames will begin to turn more yellowish after about 20 minutes of burning.
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 and reset limit switch located on upper side column. To reset limit switch, make sure power is OFF, remove the upper grille and press in the button on the back of the limit switch.



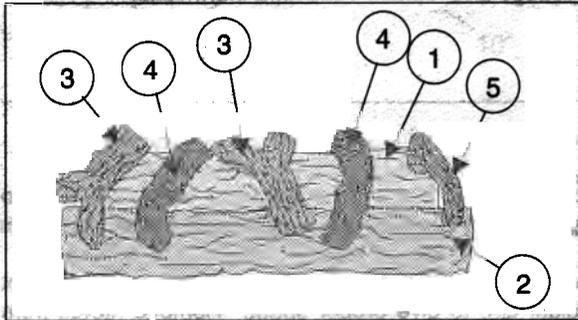

STANDING PILOT

Problem	Cause	Corrective Action
1. Burner will not ignite.	A. 110 volts of electrical current has burned out the wall switch.	Remove voltage and replace valve and thermopile.
2. Spark ignitor will not light the pilot after repeat pressing of Red Button.	A. Defective ignitor.	Check for loose connections on electrode and ignitor. Check for spark. If electrode connection is correct and no spark, replace ignitor.
	B. Misaligned electrode.	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.
3. Pilot light will not stay lit.	A. Defective pilot thermopile.	Check pilot flame. See Fig. 83 Adjust flame if necessary. 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.
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 activated.	Have a qualified service technician check venting system for blockage, e.g., bird nests, damage. Ensure proper venting condition and reset limit switch located on the upper side column. To reset limit switch, remove the upper grille and press in the button on the back of the limit switch.
6. Glass Fogs 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 first 20 minutes of burning.	No action is necessary. Flames will begin to turn more yellowish after about 20 minutes of burning.



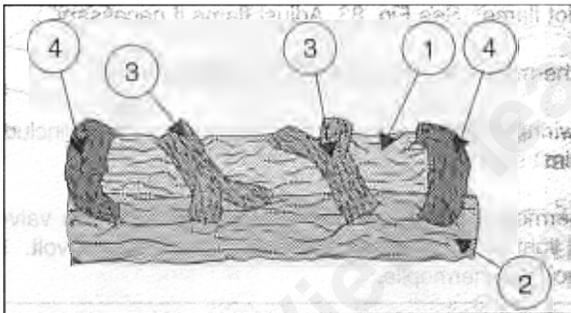
IX. REPLACEMENT PARTS

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



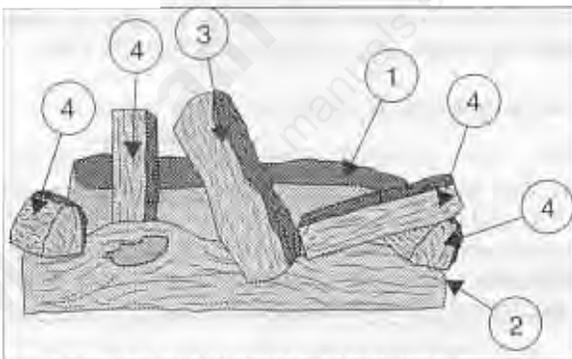
GC300 LOG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	22892	Back Log - GC300	1
2	23506	Front Log - GC300	1
3	21445	Log	2
4	21444	Log	2
5	19743	Log	1



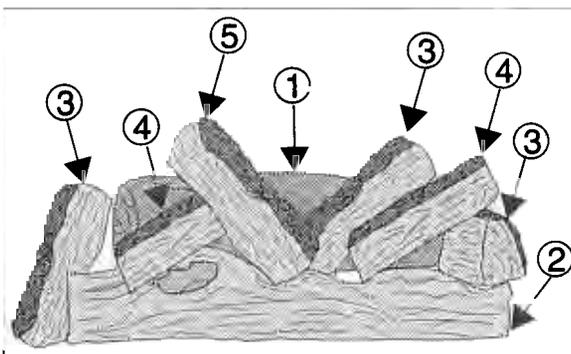
GC400 LOG ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	22186	Back Log - GC400	1
2	22902	Front Log - GC400	1
3	21445	Log	2
4	21444	Log	2



GC300 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

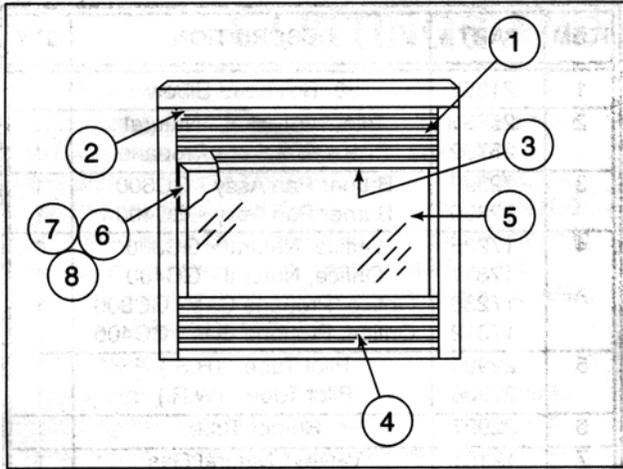


GC400 SPLIT LOG ASSEMBLY

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

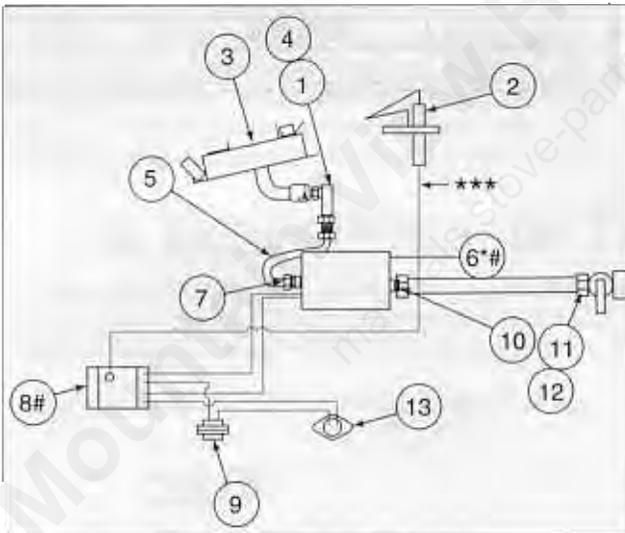


GC300/GC400 SERIES DIRECT VENT GAS APPLIANCE



ITEM	PART NO.	DESCRIPTION	QTY
1	20942	Upper Grille - GC300	1
	20943	Upper Grille - GC400	1
2	13441	Hood - GC300	1
	19160	Hood - GC400	1
3	13376	Glass Frame - GC300	2
	19171	Glass Frame - GC400	2
4	20944	Lower Grille - GC300	1
	20945	Lower Grille - GC400	1
5	13379	Glass Panel - GC300	1
	17522	Glass Panel - GC400	1
6	17197	Glass Seal - GC300	1
	19170	Glass Seal - GC400	1
7	16996	Upper Air Deflector - GC300	1
	19154	Upper Air Deflector - GC400	1
8	22998	Lower Air Deflector - GC300	1
	23082	Lower Air Deflector - GC400	1

ELECTRONIC IGNITION



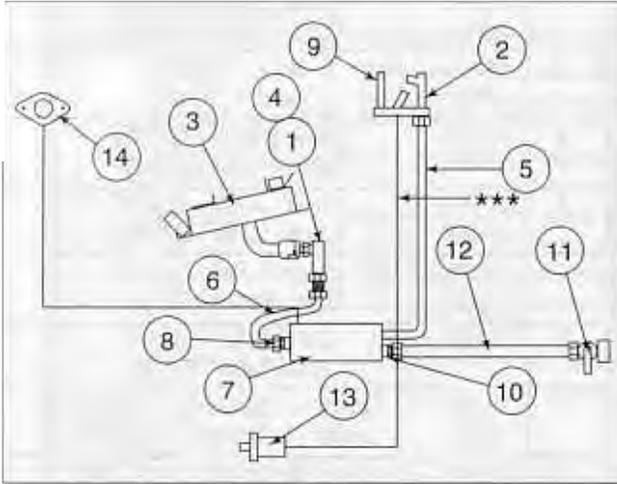
ITEM	PART #	DESCRIPTION	QTY
1	21352	90° Bulkhead Elbow	1
2	17003	Ignitor	1
3	22329	Burner Assembly - GC300	1
	22355	Burner Assembly - GC400	1
4	17235	Orifice, Natural - GC300	1
	17811	Orifice, Natural - GC400	1
	17236	Orifice, Propane Gas - GC300	1
	17812	Orifice, Propane Gas - GC400	1
5	22997	Burner Gas Tubing	1
6#*	16239	Valve#* - Natural	1
	16489	Valve#* - Propane Gas	1
7	13425	Brass Fitting, Male	1
8*	15695	Ignition Control	1
9	17836	Transformer	1
10	17069	Brass Fitting, Male (R.S.)	1
	19641	Brass Fitting, Male (W.R.)	1
11	15697	On/Off Valve	1
12	15696	Flexible Line	1
13	16957	High Limit Switch	1

Ignition control identification must be made. They are marked Channel Products or Fenwal.

#* Valve identification must be made. They are marked "White-Rodgers" or "Robertshaw".

If any of the original wiring as supplied with the appliance must be replaced, it must be replaced with Type 18 ga., 105C wire, or its equivalent.

STANDING PILOT



ITEM	PART #	DESCRIPTION	QTY
1	21352	90° Bulkhead Elbow	1
2	25731	Pilot w/Bracket - Natural	1
	25732	Pilot w/Bracket - Propane	1
3	22329	Burner Pan Assy - GC300	1
	22355	Burner Pan Assy - GC400	1
4	17235	Orifice, Natural - GC300	1
	17811	Orifice, Natural - GC400	1
	17236	Orifice, Propane Gas - GC300	1
	17812	Orifice, Propane Gas - GC400	1
5	22995	Pilot Tube - (R.S.)	1
	22996	Pilot Tube - (W.R.)	1
6	22997	Burner Tube	1
7	12191	Valve#* Natural Gas	1
	14160	Valve#* Propane Gas	1
8	13425	Male Connector	1
9	13411	Thermopile	1
10	17069	3/8 x 3/8 Male Conn. (R.S.)	1
	19641	3/8 x 1/2 Male 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





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Attention

APPLIANCE INSTALLER

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Operating & Installation
Instructions to the
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for Consumer Use***

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