

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

## GC400SF HEAT CIRCULATING SERIES GAS APPLIANCE **OWNERS MANUAL** AND INSTALLATION INSTRUCTIONS

MODELS: GC400SF, GC400SFE, GC400SFL, GC400SFLE

This manual must be used for installation of the GC400SF Series Gas Appliance and retained by the homeowner for operating and maintenance instructions.

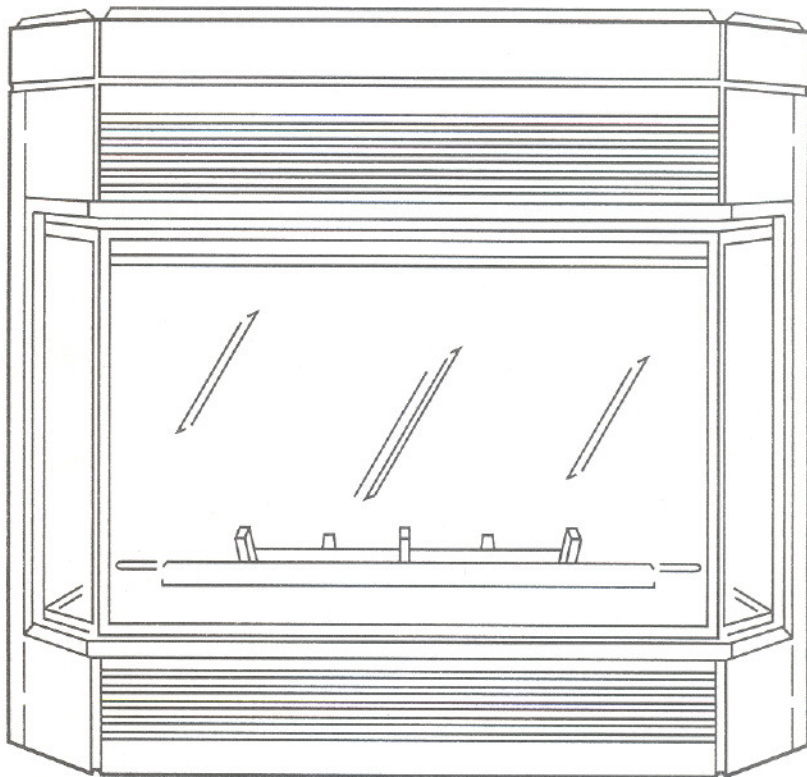
### FOR YOUR SAFETY

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 15 for wiring instructions.



**Plumber:** Please refer to page 6 and 13 for gas connection information.



**Framer:** Please refer to page 7 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 GC400SF fireplace is a vented decorative gas appliance. 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 separate 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. The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5 kPa). The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (kPa).
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.
12. Provisions shall be made to provide for adequate combustion and ventilation air.
13. The appliance area must be kept clear and free from combustible materials, gasoline and other flammable vapors and liquids.
14. The flow of combustion and ventilation air shall not be obstructed.





## I. LISTINGS AND CODE APPROVALS

### U.S. Certification

The GC400SF Series Gas Appliance has been tested in accordance with the ANSI standard Z21.50b-1990 and has been listed by Warnock Hersey for installation and operation as described in these Installation and Operating Instructions. All components are A.G.A. or UL safety certified.

### Canada Certification

The GC400SF Series Gas Appliance has been tested in accordance with the CAN/CGA-2.22-M86 and IR41 and has been listed by Warnock Hersey for installation and operation as described in these Installation and Operating Instructions. All components are C.G.A. or C.S.A. 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 CAN/CGA B149 installation codes 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. It can be converted to use propane, but only if done by a qualified Heatilator distributor 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.

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## II. DESCRIPTION OF THE FIREPLACE SYSTEM

The GC400SF is a direct vent decorative gas appliance. Combustion air is supplied from outside, not from inside the house as with other types of fireplaces. While a significant amount of heat is created by the GC400SF, it is not intended to be and, therefore, should not be used as a heater.

This HEATILATOR fireplace system consists of the following:

1. Fireplace
2. Chimney System
3. Termination

Optional components include:

1. Fan kit
2. Remote control
3. Trim

**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/Sealant
Tape measure	Various Nails
Plumb line	
Level	
Electrical drills/bits	
Square	

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





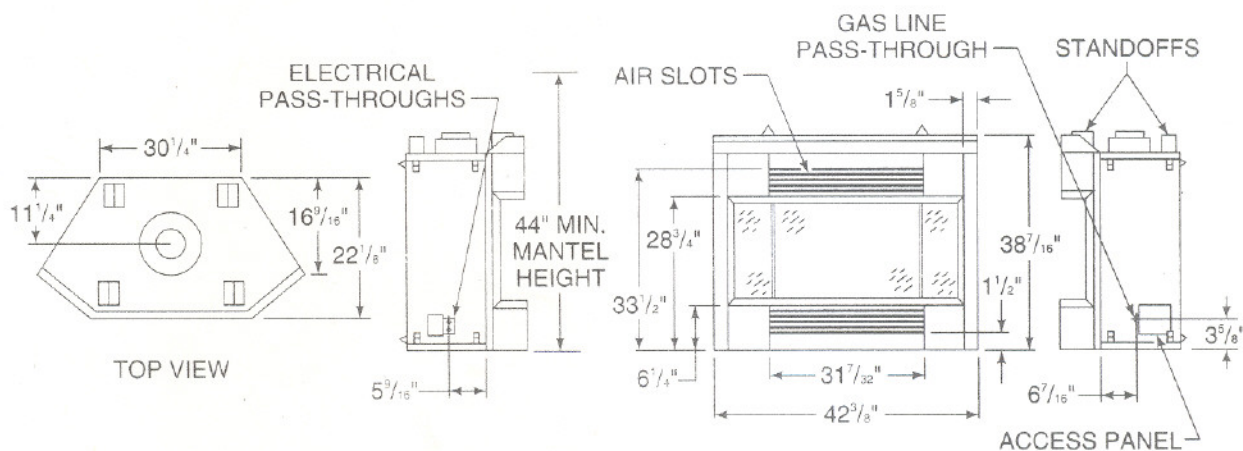
### III. FIREPLACE SYSTEM COMPONENTS

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

illustration of major components can be found on page five.

Catalog Number	Description
GC400SF	42" natural gas, standing pilot, heat circulating fireplace
GC400SFE	42" natural gas, electronic ignition, heat circulating fireplace (Natural gas models may be converted to propane gas using the CKP conversion kit)
CKP	Natural gas to propane gas conversion kit
BC10	Fan motor rheostat control
BC11	Automatic variable Blower Control
CS	Direct vent cap shield (for horizontal termination)
CV6	Vertical termination cap
FK4	Fan kit, 160 CFM
FS6	Firestop spacer (for vertical termination)
RC4	Remote control (standing pilot)
RC5	Remote control (electronic ignition)
RCP	Remote Control Plus
RF6	Roof Flashing (for vertical termination)
TA2	Horizontal termination kit including one termination cap, one starter elbow(15942), one VK24 (chimney section) and one wall shield
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
VE12	Starter elbow
VE16	16" extended elbow
VE20	20" extended elbow
WS6	Wall shield to ensure horizontal clearances
1243S.	Steep Pitch Roof Flashing

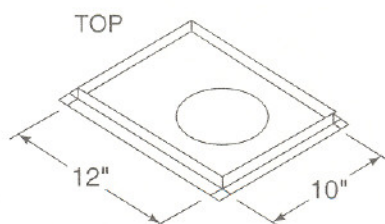
If elbow used, first elbow must be one of these



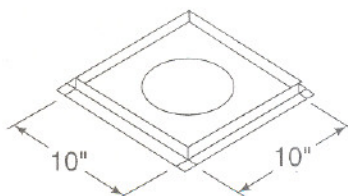
Fireplace Dimensions

Please refer to page 7 for framing dimensions.

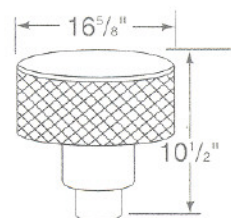




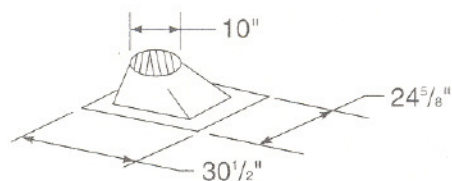
**WS6**  
Wall Shield



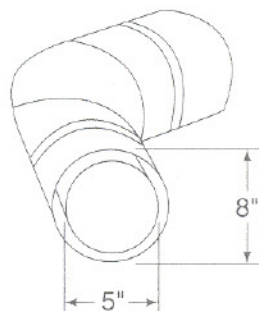
**FS6**  
Firestop Spacer



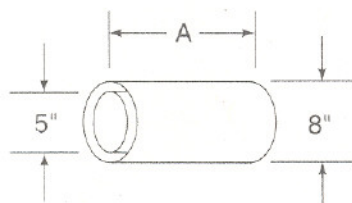
**CV6**  
Vertical Termination Cap



**RF6**  
Roof Flashing

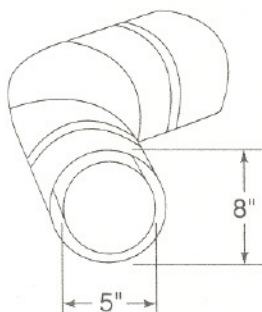


**VK5**  
90° Elbow

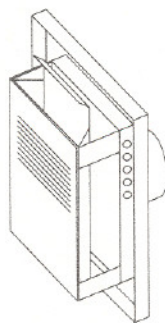


Chimney Section	A	
	Actual length	Useable length
VK12	12"	10 3/4"
VK24	24"	22 3/4"
VK36	36"	34 3/4"
VK48	48"	46 3/4"

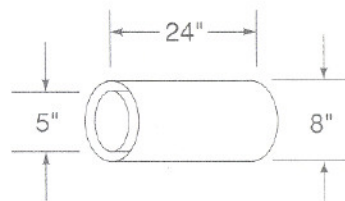
**Chimney Sections**



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



**Termination Cap**



**VK24**  
Chimney Sections

**TA2**  
Horizontal Termination Kit





## 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 DESIGNED FOR USE 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. 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. (See CKP Natural Gas to Propane Gas Conversion Kit installation instructions.)

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 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. This unit 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 converted versions.

Due to out orifice coefficient of .8 (compared to the industry standard of .9), units below 7000 feet do not need to be derated.

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.

ing 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 GC400SF 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.

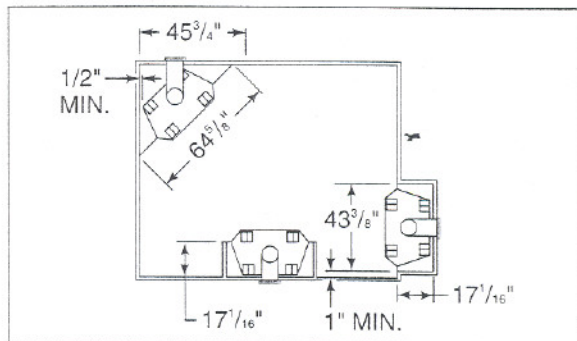


Figure 1  
Fireplace Locations and Clearances

### D. CLEARANCES

The following clearances to combustibles must be maintained: Minimum clearances to the top standoffs of the unit - 0", floor - 0", back - 1/2", sides - 1/2", face of the unit to ceiling - 30". 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.



## 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.

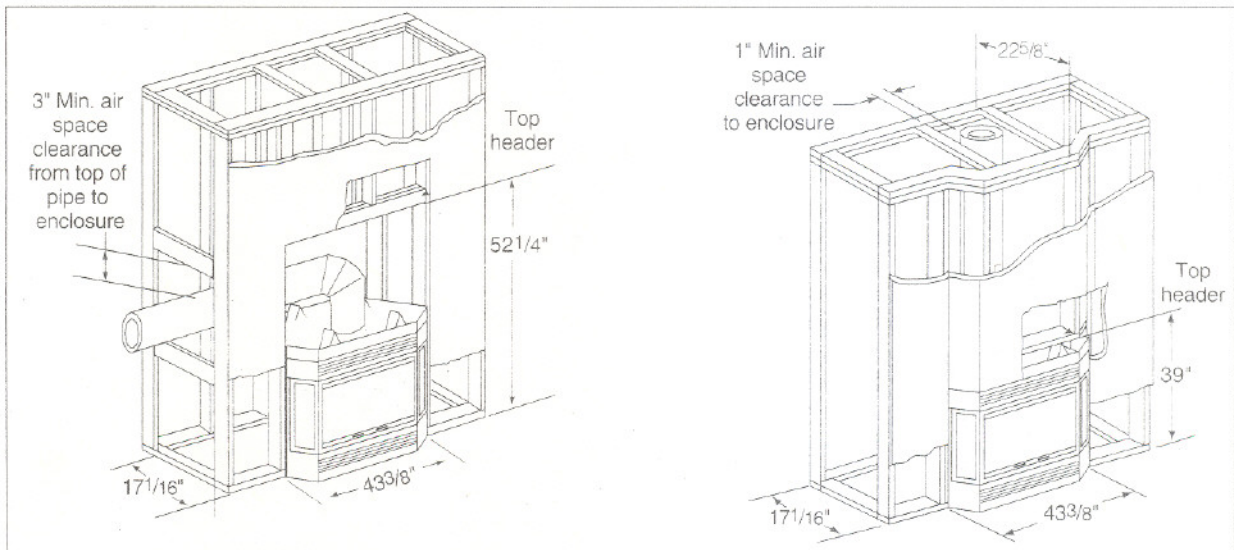
The GC400SF Series Gas Appliance will fit a framed opening of  $43\frac{3}{8}"$  w X  $17\frac{1}{16}"$  d X 39" h.

Figure 2 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  $\frac{1}{2}"$  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" x 10"

Face of header to the center of the firestop framing: 10"



**Figure 2**  
Framing the Fireplace

## F. FINISHING MATERIALS

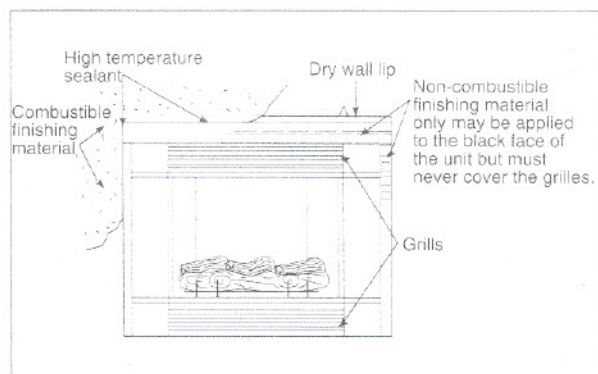
Only non-combustible materials may be used to cover the black surfaces of the fireplace front.

**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.

**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 FIREPLACE 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, smooth flat surface. When the appliance is installed directly on carpeting, tile or other combustible material other than wood flooring, the appliance shall be installed on a metal or wood panel extending the full width and depth of the appliance. 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

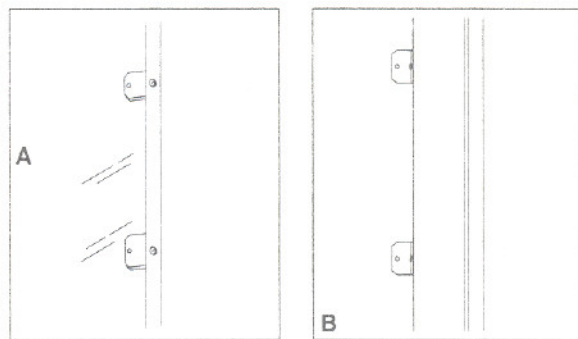
If you have chosen a horizontal termination, be sure there are no possible future obstructions from trees, bushes, snow drifts, etc. A cap shield can be purchased to help prevent possible contact.

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.

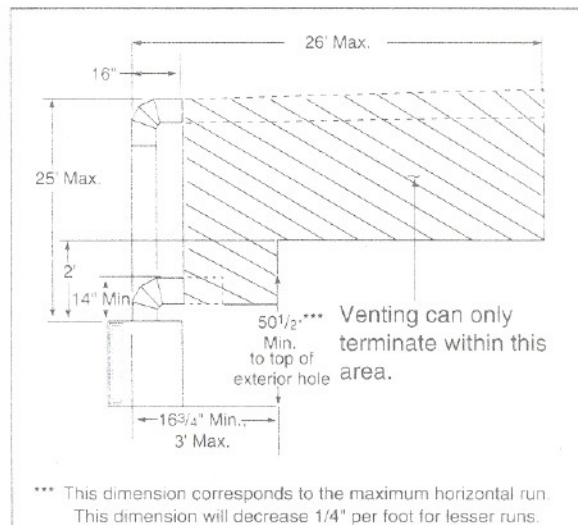
**1. Assembling chimney sections.** Attach either a VE12 (starter elbow), VE16, VE20 or straight pipe section (depending upon your specific installation) to the top of the appliance. Secure the inner and outer pipe with the three screws (supplied) to the unit collars and at each joint. Use only pipe designed 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.

**a. Using elbows.** The first elbow used with the horizontal termination must be starter elbow 15942. **No more than 3 elbows may be used.** 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 twenty feet ( $3 - 1 = 2$  elbows  $\times 3' = 6'$ ;  $26' \text{ max.} - 6' \text{ of elbows} = 20'$  of horizontal run).



**Figure 4**  
Nailing Flanges



**Figure 5**  
Horizontal Length





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

Even with only these three elbows (the equivalent of 6' of horizontal feet) you now need a minimum of 2' of vertical rise.

**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. All vent joints must be secured with a minimum of (3) screws on inner and outer vents.

**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  $\frac{1}{4}$ " 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  $50\frac{1}{2}$ " from the base of the unit. This figure will increase by the length of each vertically positioned chimney section added to the venting system.

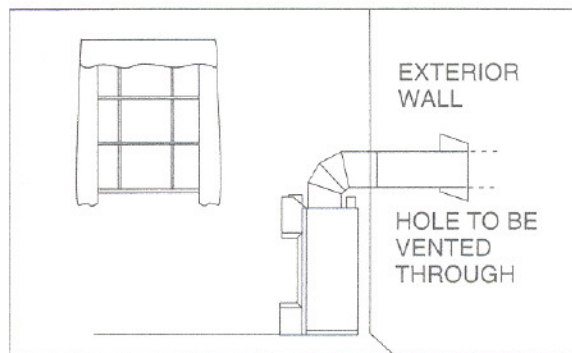
**3. Interior Wall Shield.** An interior wall shield must be installed each time the venting system penetrates a wall. This shield has been designed to maintain the minimum clearances needed for the venting system and prevent cold air infiltration.

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  $\frac{1}{2}$ " screw to secure each tab to the penetrating pipe. See Figure 7. ( $\frac{1}{2}$ " screws are used to avoid penetrating the inner pipe.)

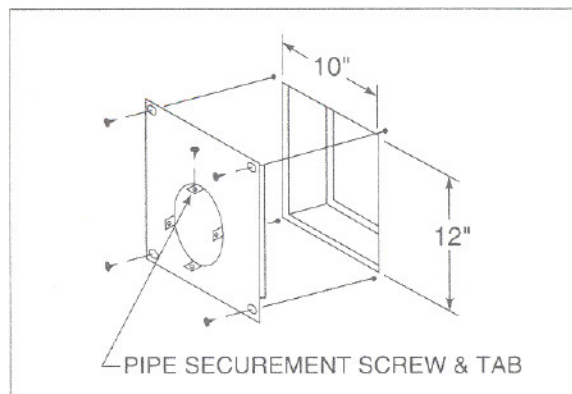
**Note:** Exterior wall thickness must be a minimum of 4" to a maximum of  $23\frac{1}{2}$ ".

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

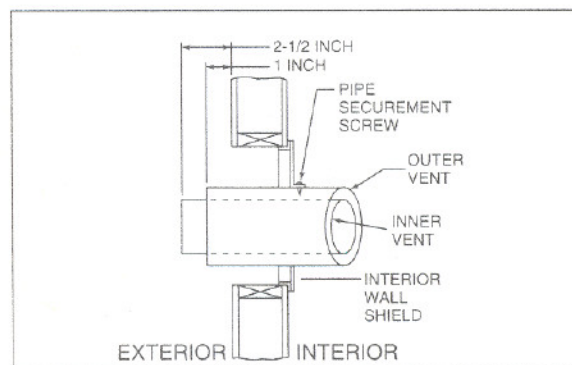
The last section of vent may require cutting, depending upon wall thickness and appliance location. The end of the vent must penetrate the exterior wall. Cut the pipe so the outer vent section extends past the exterior wall by 1" and the inner vent section extends past the exterior wall by  $2\frac{1}{2}$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



**Figure 6**  
Exterior Wall Hole



**Figure 7**  
Interior Wall Shield

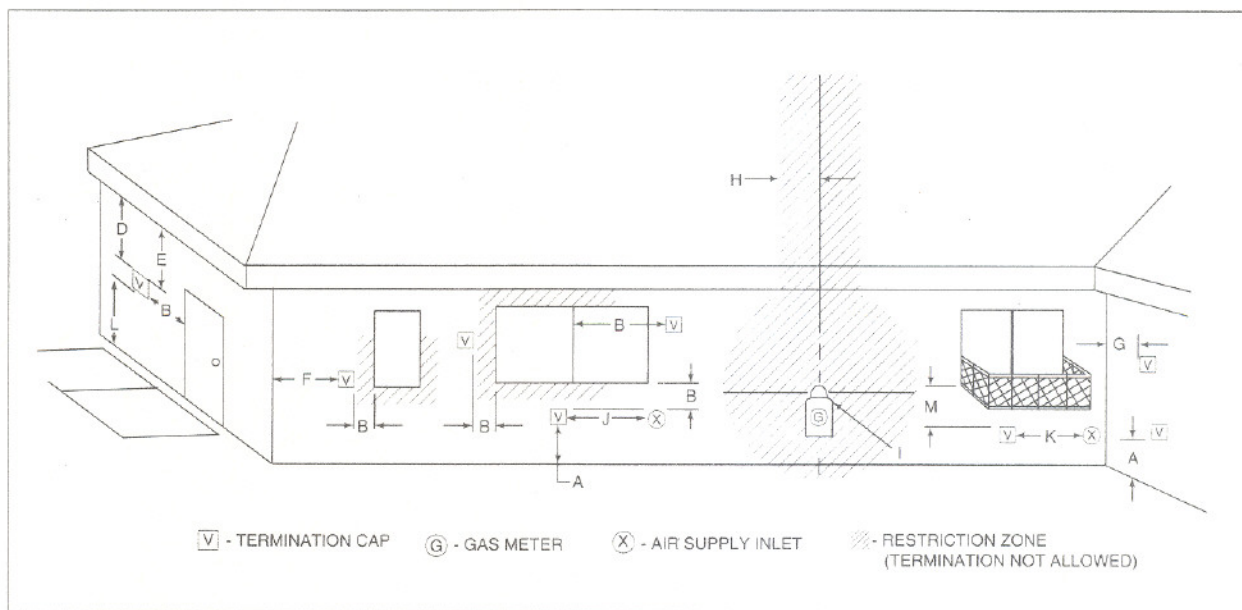


**Figure 8**  
Venting Through the Wall



**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 9**  
**Termination Cap Locations**

**Dimension Descriptions**

- |  |   |
|--|---|
| <p><b>A</b> = Clearance above the ground, a veranda, porch, deck, or balcony - <b>12 inches (30 cm) minimum.</b></p> <p><b>B</b> = Clearance to window or door that may be opened - <b>9 inches (30 cm) minimum.</b></p> <p><b>D*</b> = 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 - <b>18 inches (46 cm) minimum.</b></p> <p><b>E*</b> = Clearance to unventilated soffit - <b>12 inches (30 cm) minimum.</b></p> <p><b>F</b> = Clearance to outside corner - <b>9 inches as tested.</b></p> <p><b>G</b> = Clearance to inside corner - <b>9 inches as tested.</b></p> <p><b>H*</b> = Not to be installed above a meter/regulator assembly <b>within 3 feet (90 cm) horizontally</b> from the center-line of the regulator.</p> <p><b>I</b> = Clearance to service regulator vent outlet - <b>6 feet (1.8 m) minimum.</b></p> <p><b>J</b> = Clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other appliance - <b>12 inches (30 cm) minimum.</b></p> | <p><b>K*</b> = Clearance to mechanical air supply inlet - <b>6 feet (1.8 m) minimum.</b></p> <p><b>L+</b> = Clearance above a paved sidewalk or paved driveway located on public property - <b>7 feet (2.1 m) minimum. Use of a CS200 will reduce this dimension to as low as 12 inches (30 cm).</b></p> <p><b>M#</b> = Clearance under veranda, porch deck, or balcony - <b>12 inches (30 cm) minimum.</b></p> <p><b>+</b> A vent must not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings.</p> <p><b>#</b> Only permitted if veranda, porch deck, or balcony is fully open on a minimum of 2 sides beneath the floor.</p> <p><b>•</b> As specified in Installation Codes. Note: Local codes or regulations may require different clearances.</p> <p><b>*</b> Increased distance required for vinyl soffit materials.</p> |
|--|---|





To install the termination cap, slide the cap pipe sections into the vent pipe as shown in Figure 10. 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 is required if the cap is located in an area of easy accessibility. 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 below and continue with Step 4 on page 13.

#### NOTE

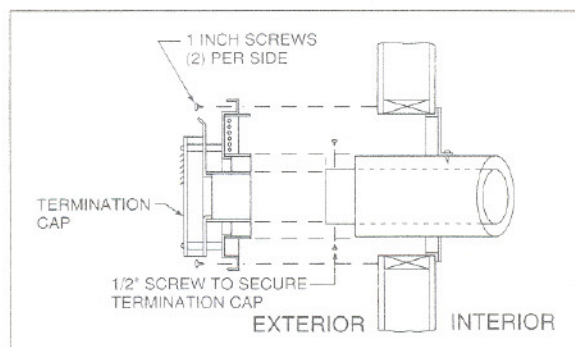
**IF THE TERMINATION IS SURROUNDED BY VINYL SIDING OR IS LOCATED BELOW A VINYL SOFFIT, A VINYL SIDING OR SOFFIT SHIELD MUST BE USED TO PREVENT DAMAGE TO THE VINYL.**

### B. Vertical Termination

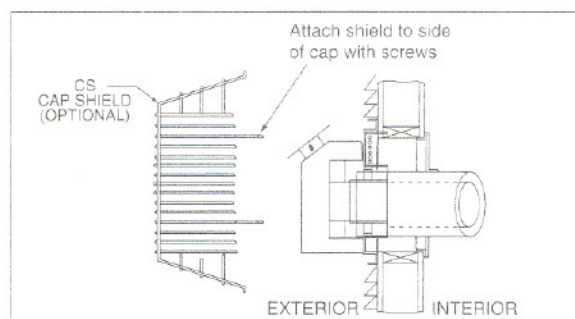
When planning your fireplace location, the chimney construction and necessary clearances must be considered. The following figures are the maximum distances from the base of the unit, as well as the minimum air space clearances that must be maintained: Maximum straight unsupported rise - 25 feet; maximum 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 feet from base of unit; minimum height - 9 feet from base of unit. The maximum horizontal run is 20 feet, including elbows.

1. **Assembling chimney sections.** Attach either a VE12 (starter elbow) or straight pipe section (depending upon your specific installation) to the top of the appliance. Secure inner and outer pipe with the three screws supplied. Use only pipe designed for use with this appliance and the appropriate number of direct vent sections. **ALWAYS MAINTAIN MINIMUM CLEARANCES OR GREATER AROUND THE CHIMNEY SYSTEM.** Do not pack air spaces with insulation or other material.

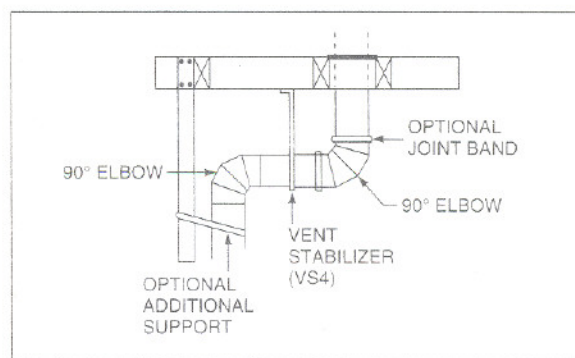
**a. Using elbows.** To bypass any overhead obstructions, the chimney may be offset using a 90° elbow (VK5). Vent stabilizers (VS4) have straps for securing these parts to joists or rafters. Plumbers tape may be purchased locally and used in conjunction with vent stabilizers. See Figure 12.



**Figure 10**  
**Termination Cap**



**Figure 11**  
**Cap Shield**



**Figure 12**  
**Elbows with stabilizer**

#### WARNING

**WHEN VENT SECTIONS EXCEEDING 3 FEET IN LENGTH ARE INSTALLED BETWEEN AN OFFSET/RETURN, STRUCTURAL SUPPORT (VS4) MUST BE PROVIDED TO REDUCE OFF-CENTER LOADING AND PREVENT VENT SECTIONS FROM SEPARATING AT THE VENT JOINTS.**





**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.

**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.

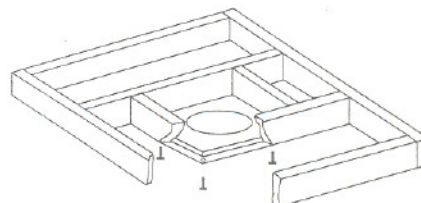
**5. Marking the exit point in the roof.** Locate the point where the chimney will exit the roof by plumbing down to the center of the chimney. Drive a nail up through the roof to mark the center. See Figure 15.

**6. 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.

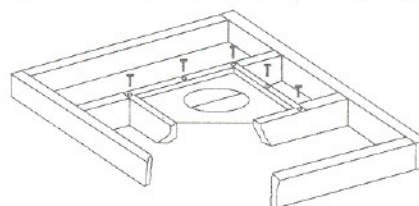
**7. Install roof flashing or site-produced chase top.** Position a roof flashing or a site-produced chase top and secure in place with nails.

**8. 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.

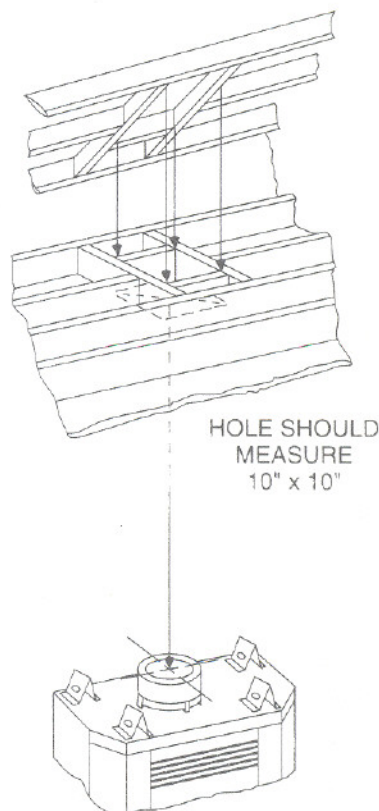
IF ROOM ABOVE, FIRESTOP PLACED BELOW



IF ATTIC ABOVE, FIRESTOP PLACED ABOVE



**Figure 13**  
Installing the firestop spacer

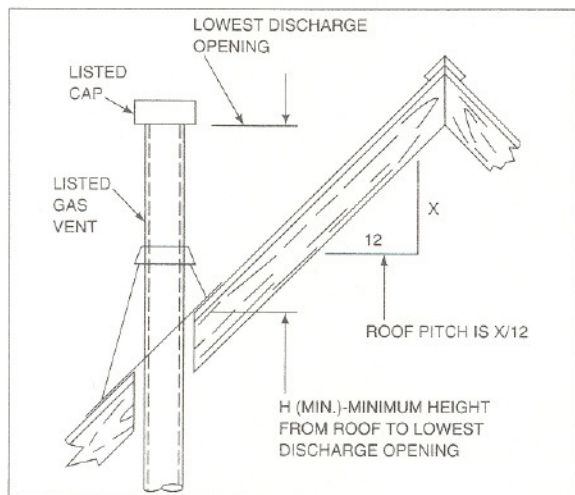


**Figure 14**  
Ceiling and attic construction





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



**Figure 15**

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

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**

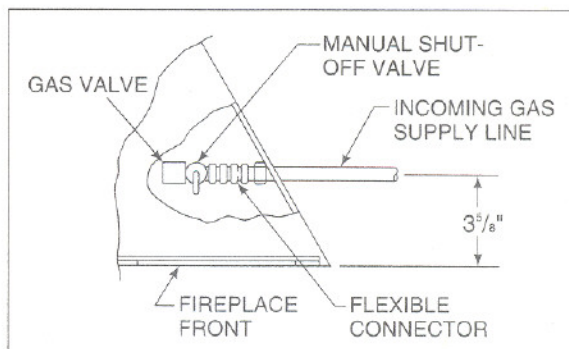
These chimney heights are necessary in the interest of safety and do not ensure draft-free operation. Trees, buildings, adjoining roof lines, adverse wind conditions, etc., may create a need for a taller chimney should down drafting occur.

### STEP 3 - 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 4 - 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.



**Figure 17**  
**Gas Line**

### STEP 5 - Gas Line Connection

Connect the gas line to the appliance manual valve inlet, using 1/2" pipe. To ease installation, a listed flexible connector and manual shut-off valve are supplied. The manual shut-off valve should be connected directly to the 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 or a leak detector.

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

**NOTE: The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5 kPa). The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa).**

#### NOTE

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



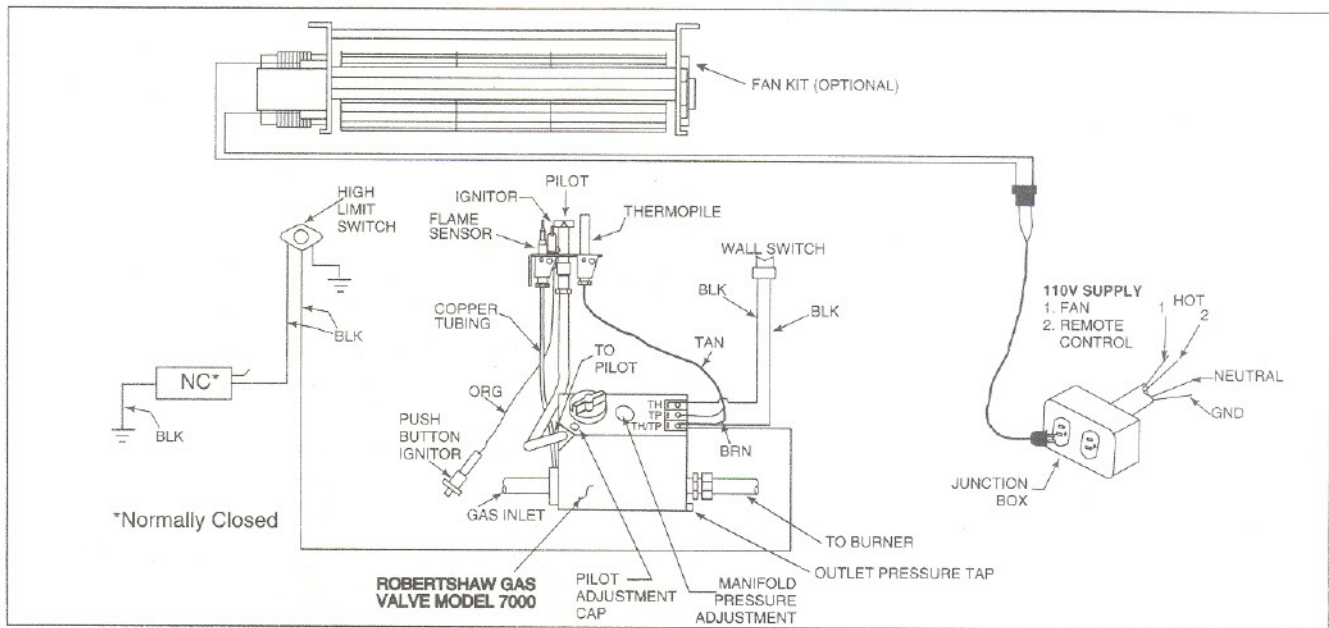






If you extend beyond the wall switch wires provided, you must not wire on nut extensions, but replace existing wires with desired length. NOTE: extended lengths of wire will reduce millivolt reading and may cause unit shutdowns.

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 110V power 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 power supplies are 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 110V power supply directly to the appliance junction box, as shown in Figure 19, #2. Wiring diagrams are provided with all accessories.
3. **Manual Timers.** Manual timers (i.e. the Sky-Tech 60 Mechanical Timer Model 310) are permitted to control on/off operation of the appliance. Timers should be designed for millivolt or 24 volt operation, depending on the type of ignition system used.



**Figure 19**  
**Standing Pilot Ignition Wiring Diagram**

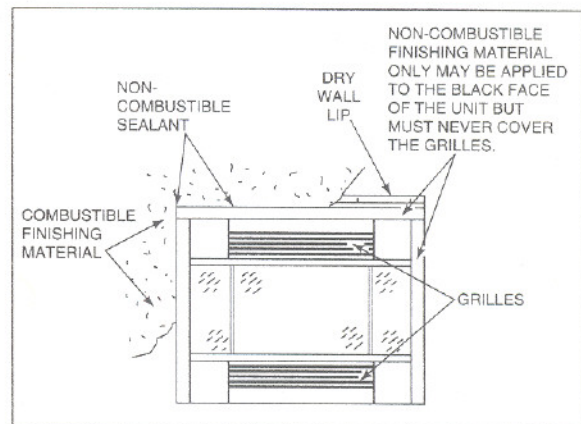
#### STEP 7 - Finishing

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 20.**

After applying the finishing material, a non-combustible sealant, one-half inch wide maximum, must be used to close off any gaps at the top and sides between the fireplace and finishing to prevent cold air leaks. See Figure 20.

A combustible mantel may be installed at a minimum of 44 inches above the base of the appliance.



**Figure 20**  
**Location of Grilles**





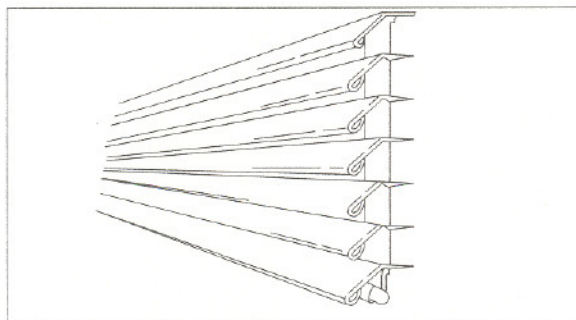
### STEP 8 - Upper Grille Panel Removal

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.

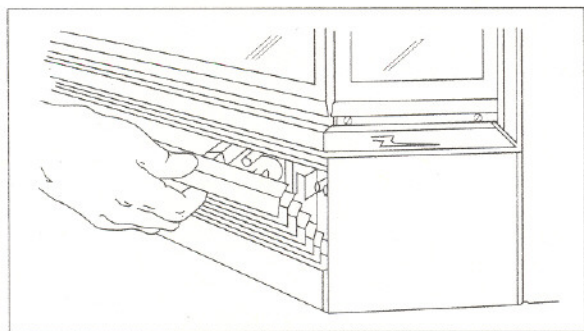
### STEP 9 - Lower Grille Panel Removal

To remove the lower grille panel, gently lift and pull on the outside edges of the grille as shown in Figure 22, step A. The top part of the grille will rotate downward.

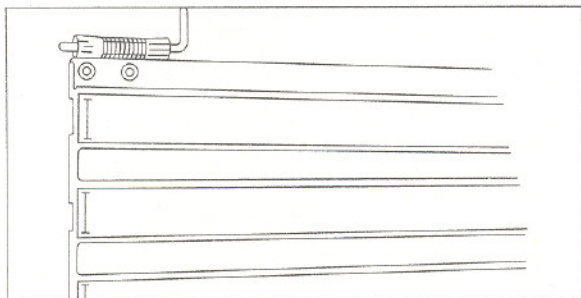
Two spring hinges secure the lower portion of the grille into place. See Figure 22, step B. Simply pull the hinges toward the center of the grille and then pull out the entire grille (Figure 22, step C). To replace the grille, reverse this action.



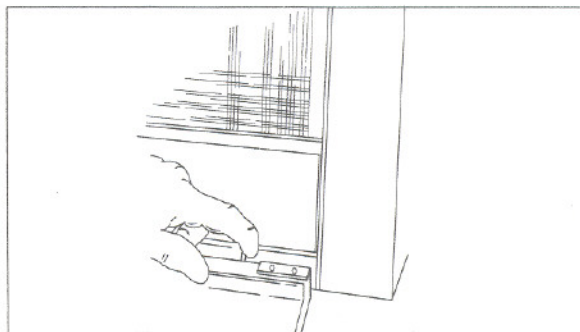
**Figure 21**  
Upper Grille Panel



**Figure 22, Step A**  
Lower Grille Panel Removal



**Figure 22, Step B**  
Lower Grille Panel Removal

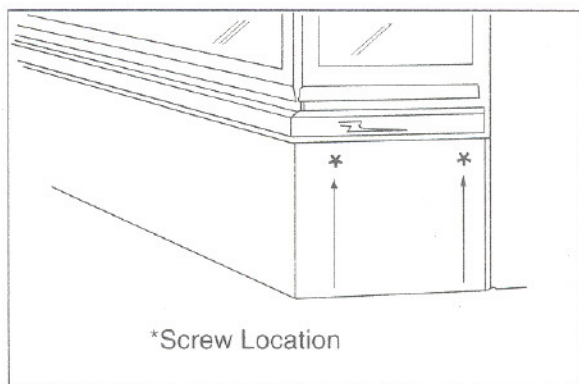


**Figure 22, Step C**  
Lower Grille Panel Removal

### STEP 10 - Trim Removal

#### Lower Trim

The lower trim is constructed with notches. To remove the trim, use a phillips screwdriver to loosen the screws, as shown in Figure 23. Two screws are located at each end of trim, and both ends need to be loosened to remove the trim. The trim should disengage easily.



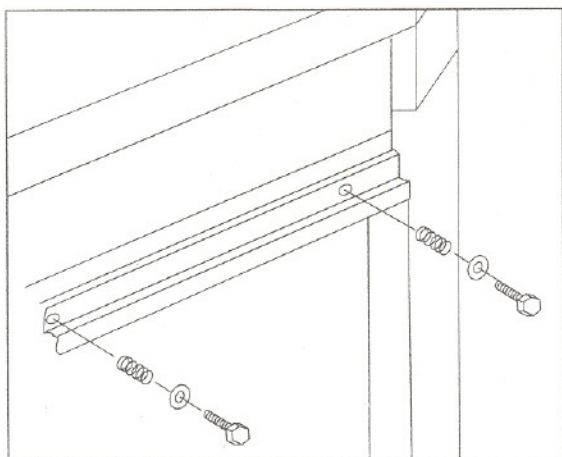
**Figure 23**  
Upper Trim

### STEP 11 - Glass Removal

**DO NOT ATTEMPT TO REMOVE THE GLASS WHILE IT IS HOT!** Before removing glass, you must first remove the microswitch which is on the left side, above the glass. Do this by removing the screws on each side of the switch with a phillips screwdriver. Do not remove wiring from the switch; place switch out of the way on top of firebox. The glass assembly can be removed with the use of a 7/16" wrench. Loosen the bottom screws with a phillips screwdriver, but **DO NOT REMOVE THEM**. Remove the bolt and spring assembly as shown in Figure 24. (There are 3 bolts that need removed.) After removal, tilt the glass assembly back toward you and lift it from position, as shown in Figure 25.







**Figure 24**  
Glass Removal



**Figure 25**  
Glass Removal

**WARNING**

**DO NOT HIT OR STRIKE THE GLASS.**

**CAUTION**

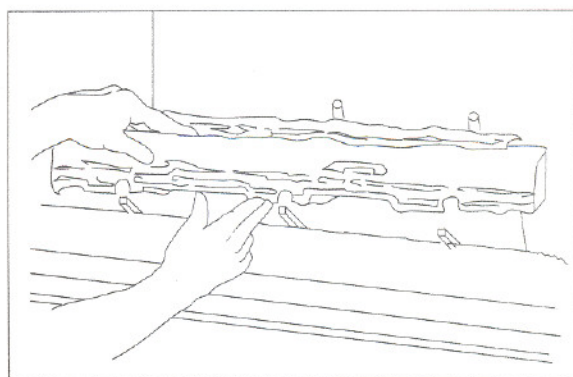
**DO NOT OPERATE THIS APPLIANCE IF THE GLASS IS BROKEN OR CRACKED.**

**STEP 12 - Positioning the Logs**

Place the medium-sized log in the back log brackets. Place the larger log in front. Notches in the log fit onto the grate extensions. See Figure 26.

Grasp the left Top Log in your left hand so the knot is on your left hand side. Grasp the right Top Log in your right hand so the knot is on your right hand side. Place the logs on the pins, over the large logs previously placed.

The last log to be placed is the Top Twig. The knot in the Top Twig faces the far right corner of the firebox back. The left end of the Top Twig sets behind the knot in the left Top Log. The right end of the Top Twig sets behind the knot in the right Top Log. See Figure 27.



**Figure 26**  
Positioning the Logs



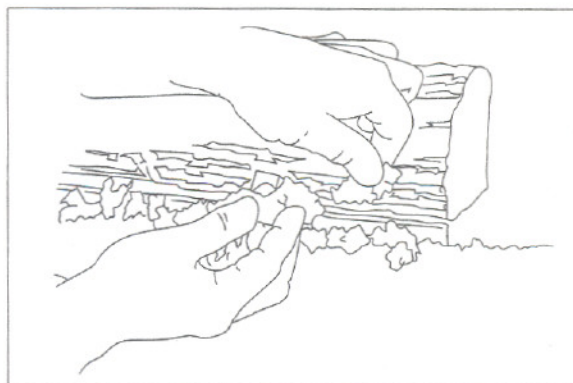
**Figure 27**  
Positioning the Logs







**Figure 28**  
**Placing the Vermiculite**



**Figure 29**  
**Placing the Rock Wool**

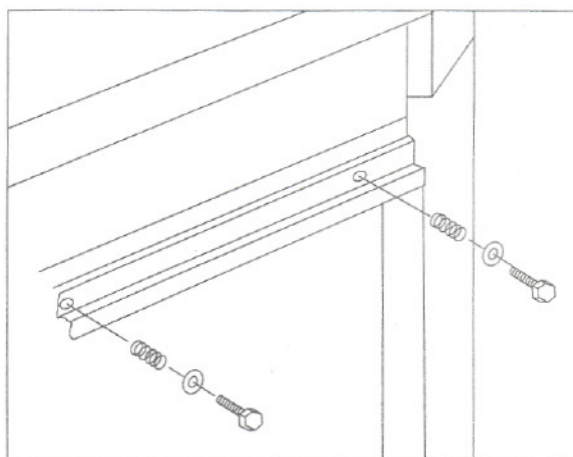
**STEP 13 - Placing the Vermiculite and Rock Wool**

Spread the vermiculite over the area in front of the burner. Do not cover the front gas ports with the vermiculite. See Figure 28.

Break the rock wool into pieces, no bigger than 1/2" diameter, and place them close to the front gas ports so that the flame can touch the rock wool. This creates the glowing ember look. Be sure not to pack the rock wool against the gas ports. See Figure 29.

**STEP 14 - Glass Replacement**

After arranging the log set in the unit, replace the fixed pane of glass. Carefully lower the glass into the lower track of the unit (black paint facing outward) and center it in the track. Next, position the glass over the loosened screws at the bottom of the unit. Position the spring bolt assembly as shown in Figure 30. Bring the bolts in until they hit the last thread. Do not force or overtighten the screws, as this will damage the unit. Replace microswitch in original position by attaching it with the two screws.



**Figure 30**  
**Glass Replacement**

**WARNING**

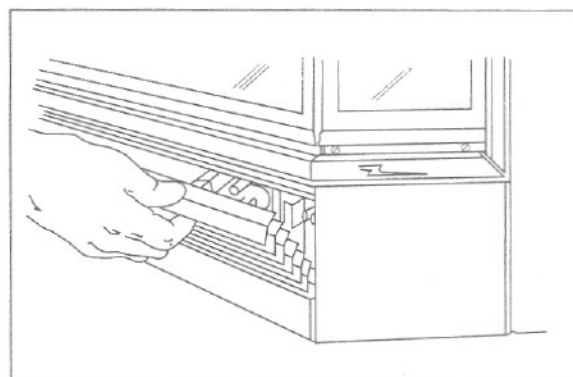
**NEVER OPERATE THIS APPLIANCE  
WITH THE GLASS REMOVED OR NOT  
SEALED.**

**STEP 15 - Trim Replacement**

To replace the trim, simply snap back into place and retighten the screws that were loosened earlier. Top and bottom trim are identical.

**STEP 16 - 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 31.



**Figure 31**  
**Lower Grille Replacement**

**STEP 17 - 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. If it does not snap shut, bend the tabs on the retainer bracket to engage the panel.





## 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 32 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.

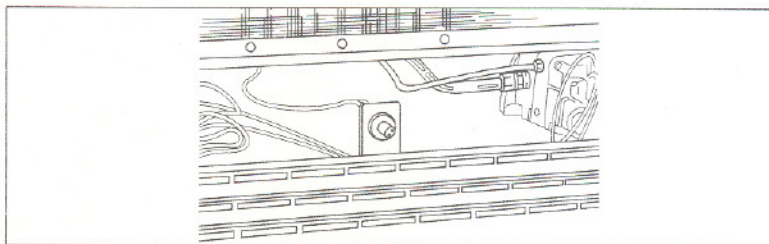



Figure 32  
Standing Pilot Ignition

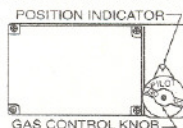
### FOR YOUR SAFETY READ BEFORE LIGHTING

**WARNING:** If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- A. This appliance 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.

### STANDING PILOT LIGHTING INSTRUCTIONS


1. STOP! Read the safety information above.
2. Turn wall switch to the "OFF" position.
3. Turn off all electric power to the appliance.
4. Remove control access panel.
5. Turn gas control knob clockwise  to "OFF".



6. Wait five (5) minutes to clear out any gas. If you then smell gas, STOP! Follow "B" in the safety information above. If you don't smell gas, go to next step.
7. Find pilot - follow metal tube from gas control. The pilot is behind the burner tube.


PILOT BURNER




8. Turn knob on control counterclockwise  to "Pilot".
9. Push in the knob all the way and hold in. Immediately light the pilot by pressing the red ignitor button. Continue to hold the control knob in for about (1) minute after the pilot is lit. Release button and it will pop back up. Pilot should remain lit. If it goes out, repeat step 5 through 9.

If button does not pop up when released, stop and immediately call your service technician or gas supplier.

If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.

10. Turn gas control knob counterclockwise  to "ON".  
Knob can be turned to "ON" only if the control knob is popped out.
11. Replace control access panel.
12. Turn on all electric power to the appliance.

### TO TURN OFF GAS TO APPLIANCE

1. Turn off the wall switch.
2. Turn off all electric power to the appliance if service is to be performed.
3. Remove control access panel.
4. Turn gas control clockwise  to "OFF". Do not force.
5. Replace control access panel.



## ELECTRONIC IGNITION

### FOR YOUR SAFETY READ BEFORE OPERATING

**WARNING:** If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

A. This appliance 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. Follow the supplier's instructions.
- ☐ If you can not reach your gas supplier, call the fire department.

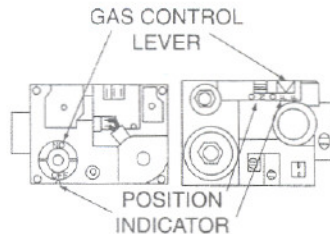
C. Use only your hand to push in and move the gas control lever or turn the gas control knob. Never use tools. If the lever or knob will not move by hand, don't try to repair it - call a qualified service technician. Force or attempted repair may result in a fire or explosion.

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.

### OPERATING INSTRUCTIONS

1. STOP! Read the safety information above on this label.
2. Turn wall switch to the "OFF" position.
3. Turn off all electric power to the appliance.
4. This appliance is equipped with an ignition device which automatically lights the burner. Do not try to light burner by hand.
5. Push gas control lever in and move to the "OFF" position or turn gas control knob clockwise  to the "OFF" position. If knob is in "ON" position turn knob clockwise  to "OFF" or turn lever to "OFF".
6. Wait five (5) minutes to clear out any gas. If you then smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.

7. Move lever to the "ON" position or turn gas control knob clockwise  to the "ON" position.
8. Replace control access panel.
9. To turn on burner, turn on all electric power to this appliance.
10. If the appliance will not operate, follow the instructions "TO TURN OFF GAS TO APPLIANCE" and call your service technician or gas supplier.



### TO TURN OFF GAS TO APPLIANCE

1. Turn off the wall switch.
2. Turn off all electric power to the appliance if service is to be performed.
3. Push gas control lever in and move to the "OFF" position or push gas control knob clockwise  to the "OFF" position. Do not force.
4. Replace control access panel.





**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:

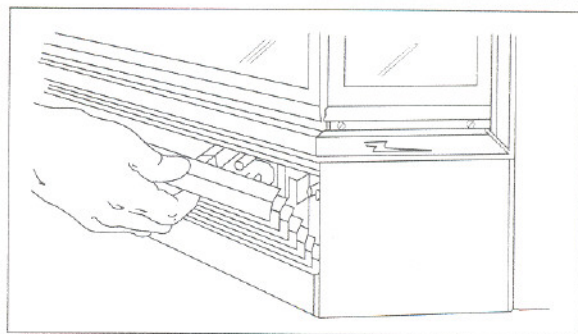
1. Check to make sure the logs, rock wool and vermiculite have all been placed correctly. (Refer to Steps 12 and 13 on page 17 and 18.) The top of the burner and the holes in the sides of the burner should not be covered with vermiculite. If these items are not visible, please adjust before continuing.
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 CS 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**

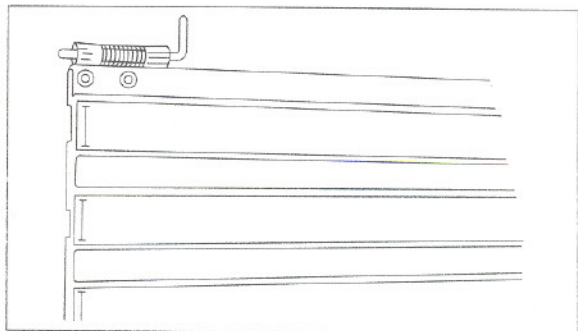
To remove the lower grille, gently lift and tug on the outside top edges of the grille as shown in Figure 33. The top of the grille will rotate downward.

Two spring hinges secure the lower portion of the grille into place. See Figure 34. Simply pull the hinges toward the center of the grille and then pull out the entire grille (Figure 35). To replace the grille, reverse this action.

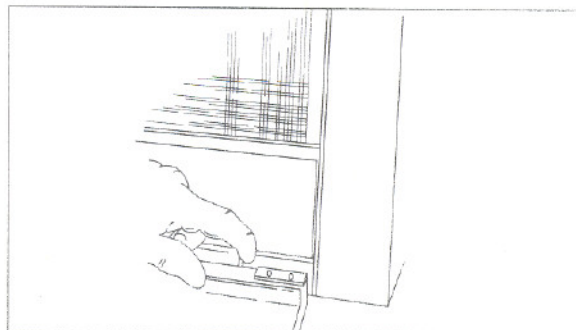
If you own an electronic ignition, at this point skip section A on the following page and continue with section B on page 23.



**Figure 33**  
**Lower Grille Panel Removal**



**Figure 34**  
**Lower Grille Panel Removal**



**Figure 35**  
**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 36. Also, your unit may have a rocker ON/OFF switch installed inside the lower pane; 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 37, 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 38. 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 can 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 rocker ON/OFF switch, if applicable) to the OFF position.

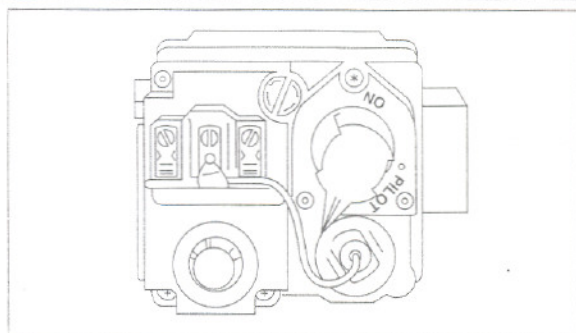
The next step is to remove the lower grille panel to expose the wiring system. (Follow Step 1 on page 20.) Locate the gas knob and turn it to the PILOT position. Press in slightly and continue turning to the OFF position. Your entire system is now shut down.

**3. Lighting Procedure During Regular Use.**

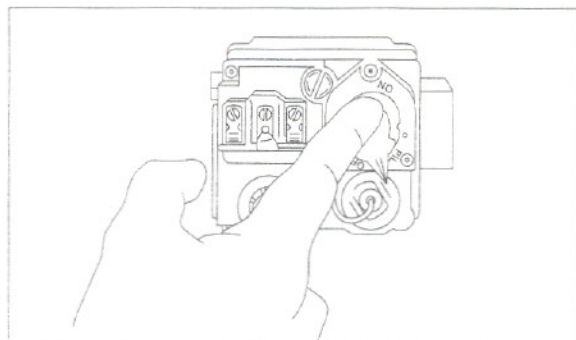
Simply turn the wall switch to the ON position. This will ignite the main burner.

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

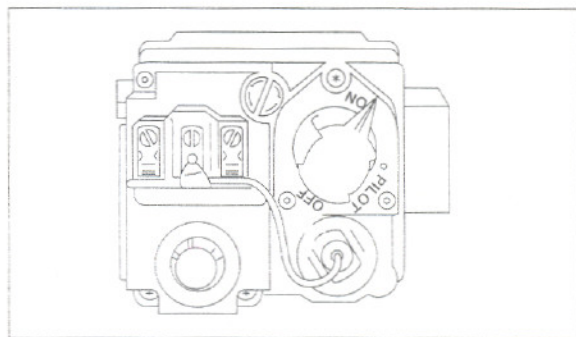
When first operated, this unit may release an odor for the first several hours. This is caused by the curing of the paint and the burning off of any oils remaining from manufacturing. Glass will also require cleaning after the initial burn. (Instructions for cleaning the glass are given on page 25.)



**Figure 36**  
Standing Pilot Ignition valve "OFF"



**Figure 37**  
Standing Pilot Ignition valve to "PILOT"



**Figure 38**  
Standing Pilot Ignition to "ON"

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.

**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 39. 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.

Locate the gas valve knob inside the lower grille panel and turn it to the ON position. See Figure 40. 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.

### WARNING

If the electronic unit does not light on the first attempt, you must allow the appliance to sit for five minutes for any gas that may have accumulated in the burner to escape.

**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 down below, if applicable) 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 25.)

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 41. The grille should connect smoothly back into place.

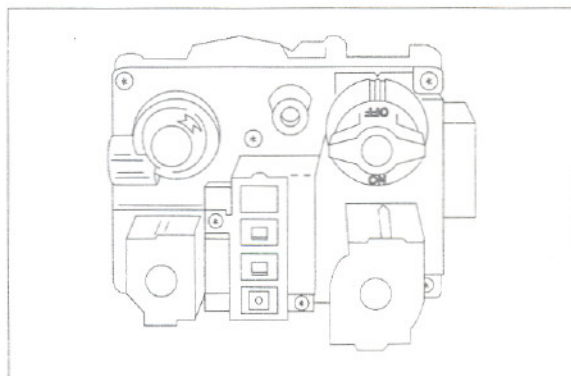


Figure 39  
Electronic Ignition valve to "OFF"

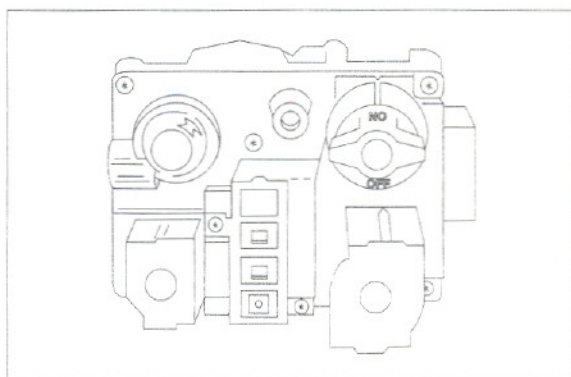


Figure 40  
Electronic Ignition valve to "ON"

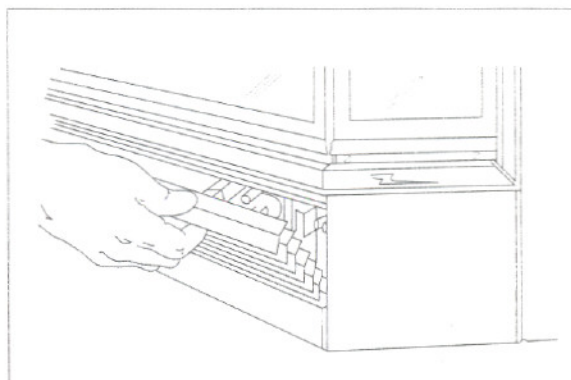


Figure 41  
Lower Grille Panel Replacement

**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

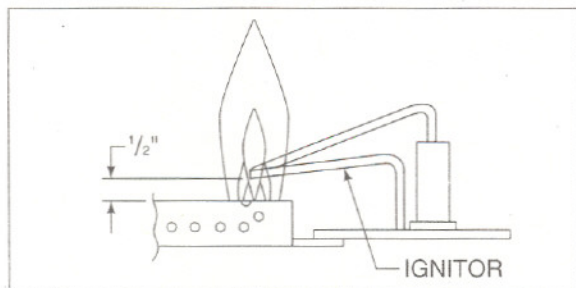
Keep the burner and control compartment clean by brushing and vacuuming at least once a year. Always turn off the gas valve and the remote wall switch before cleaning.

### Checking flame patterns

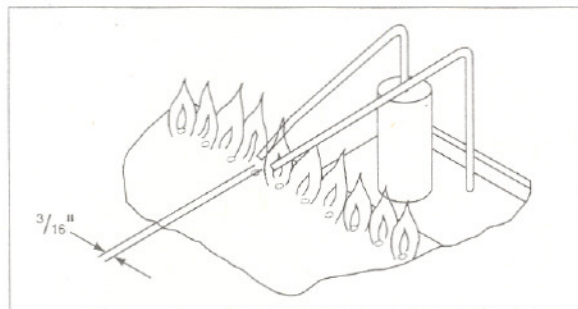
Visually check the flame of the burner periodically, making sure the flames are steady; not lifting or floating. The flame color should be blue with yellow tips. The thermopile tip should be covered with flame. See Figure 42-45.

**NOTE:** If the air shutter is open all the way and the flames remain sooty, shut off gas to the appliance and contact a qualified gas service technician.

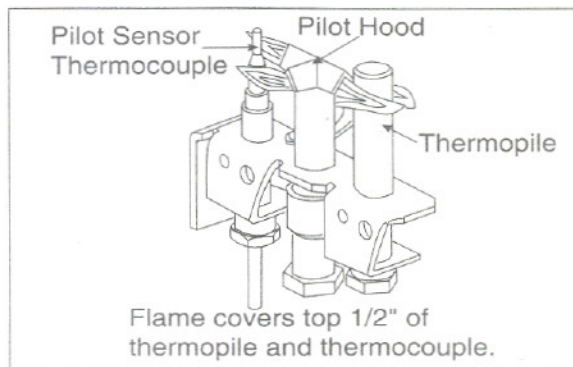
If the vent configuration is installed incorrectly, the vent may cause the flames inside the appliance to lift or "ghost" - a dangerous situation. Inspect the flames after installation to ensure proper performance. If the vent configuration is correct, yet the flames are lifting or ghosting, shut off gas to the appliance and contact the dealer for information on remedying the problem.



**Figure 42**  
Electronic Ignition



**Figure 43**  
Electronic Ignition



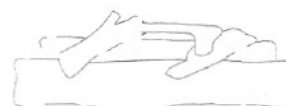
**Figure 44**  
Standing Pilot



**Correct**  
Flames should be blue at the base, yellow-orange on the top.



**Not Enough Air**  
If the flames are tall or sooty on the ends, open the air shutter.



**Too Much Air**  
If the flames are all blue, short and transparent, close the air shutter.

**Figure 45**  
Flame Patterns





### Cleaning the Glass

**Note:** When cleaning the glass, **NEVER** use abrasive materials. **NEVER** clean glass when hot. 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, follow Step 12 on page 17. 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.

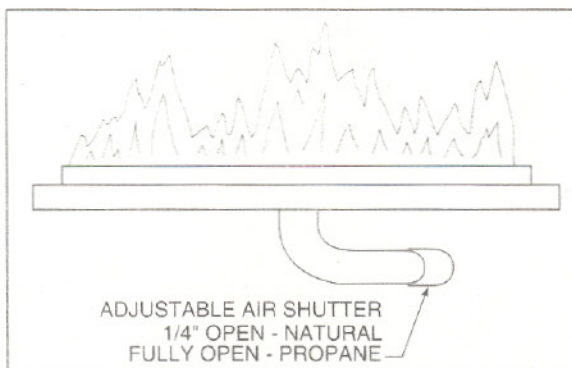
This will allow the removal of all glass fragments and sheet metal edge protection strips. Vacuum all remaining glass pieces with a shop vac. (DO NOT VACUUM IF PIECES ARE HOT.) Replace glass only with Heatilator replacement parts as shown on page 26, ordered direct or through your local distributor.

Never use substitute material. Only high temperature ceramic 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 possibility of soot, we have provided your fireplace with an adjustable air shutter. Your air shutter is provided in an open position to ensure clean operation under normal situations. In the event that soot is accumulating in your appliance, the air shutter should be opened farther as shown in Figure 46.

This can be done with a screwdriver or a 1/4" wrench. Also, ensure logs are positioned correctly to minimize flame and log contact.



**Figure 46**  
**Both Ignitions**





## VIII. TROUBLE SHOOTING

### ELECTRONIC IGNITION

Problem	Cause	Corrective Action
1. Spark ignitor will not light burner after repeated attempts.	A. Defective ignitor; loose wire.  B. Misaligned electrode at ignitor.	Check for loose connections on electrode and ignitor. Refer to the wiring diagram on page 13 for assistance.  Check for spark. If electrode connection is correct and there is no spark, replace ignitor.  Spark should be extending approx. 3/16" to ground wire. See Figure 43. Adjust gap to give proper spark. Remove hands from electrode before attempting.
2. Burner will not stay lit.	A. Defective ignitor.    B. No ground.	Check burner flame. See Figure 42. Adjust ignitor if necessary.  Be sure ignitor is secured tight into bracket and bracket is secured tightly to the unit.  Be sure wiring connections are tight throughout system, including high limit switch.  Check that wiring is grounded as shown in Figure 18.
3. With valve and wall switch in "ON" position, no gas to burner.	A. Manual on/off valve(s) shut off. B. Plugged burner orifice. C. Wall switch defective. D. No Power	Check all gas valves leading to appliance. Turn to the "ON" position. Check for 24 volt power off secondary on the transformer. Check burner orifice; remove blockage. Check continuity. Check 110VAC supply (Fuses/Breaker)
4. Glass doors fog up.	A. A normal result of gas combustion.	No action is necessary. After the fireplace has warmed up, the glass will clear.
5. Blue flames.	A. A normal result during the first 20 minutes of burning.  B. Improper air mixture.	No action is necessary. Flames will begin to turn more yellowish after about 20 minutes of burning. If blue flames persist, check air shutter setting and check log and embers are positioned correctly.  Check air shutter setting.
6. Appliance turns itself off after a period of time.	A. High limit safety switch is activated.	Have a qualified service technician check venting system for blockage, e.g., bird nests, damage. Ensure proper venting condition. High limit switch will reset automatically as unit cools.





## STANDING PILOT

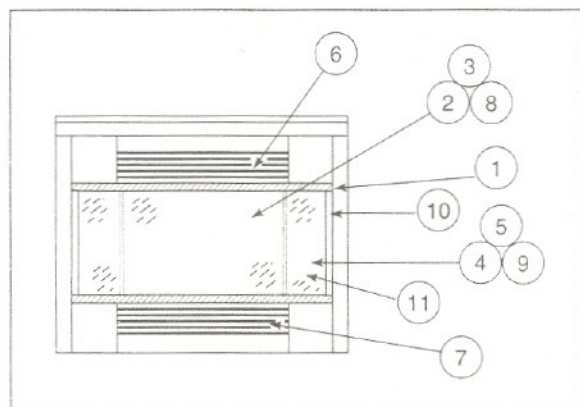
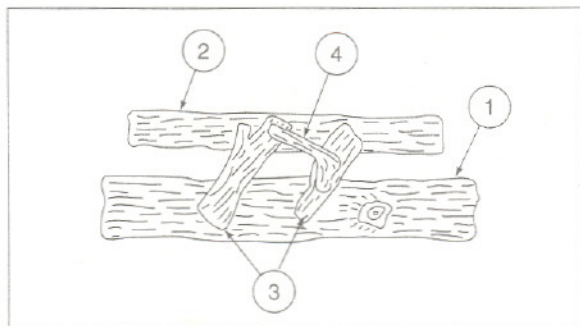
Problem	Cause	Corrective Action
1. Spark ignitor will not light pilot after repeated pressing of red button.	<p>A. Defective ignitor.</p> <p>B. Misaligned electrode.</p> <p>C. No gas to pilot/plugged orifice.</p> <p>D. Ignitor wire grounding out.</p> <p>E. Loose ignitor wiring.</p>	<p>Replace ignitor.</p> <p>Spark should be approximately 1/8" to bottom of pilot hood. Adjust gap to give proper spark. Remove hands from electrode before pressing red button.</p> <p>Check valve knob position &amp; any shut-off valves. If propane, check for empty tank. Check pilot orifice; remove any blockage.</p> <p>Replace pilot assembly.</p> <p>Check for spark. If electrode connection is correct &amp; no spark, replace ignitor.</p>
2. Pilot will not stay lit.	<p>A. Pilot flame not in constant contact with pilot sensor.</p> <p>B. Pilot sensor not tightened/seated in valve properly.</p> <p>C. Defective pilot sensor thermocouple.</p> <p>D. Faulty valve.</p>	<p>Check log placement. Check pilot flame; adjust flame if necessary.</p> <p>Check that pilot sensor connector is tight in valve.</p> <p>Replace pilot sensor thermocouple.</p> <p>Replace valve.</p>
3. With pilot lit, valve and ON/OFF switch in "ON" position, burner will not light.	<p>A. 110 volts of electricity has burned out valve.</p> <p>B. ON/OFF wall switch defective.</p> <p>C. Plugged burner orifice.</p> <p>D. Defective thermopile.</p> <p>E. Burner not on orifice.</p> <p>F. Loose or faulty wiring.</p> <p>G. Faulty valve.</p> <p>H. Faulty high limit switch/microswitch.</p>	<p>Remove voltage and replace valve.</p> <p>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 doesn't come on, connect to ON/OFF switch junctions at valve. If burner comes on, replace wires.</p> <p>Check burner orifice, remove blockage.</p> <p>Replace thermopile.</p> <p>Check burner; place on orifice.</p> <p>Check for loose connections; verify wiring (See Figure 19).</p> <p>Replace valve.</p> <p>Replace high limit switch or microswitch.</p>
4. Appliance turns itself off after a period of time, but pilot stays lit.	<p>A. High limit safety switch is activated.</p> <p>B. Intermittent short in ON/OFF wiring system.</p> <p>C. Defective thermopile.</p>	<p>Have a qualified service technician check venting system for blockage (i.e. bird nests, damage). Ensure proper venting condition. High limit switch will reset automatically as appliance cools.</p> <p>Check/ replace ON/OFF wiring system.</p> <p>Replace thermopile.</p>
5. Appliance turns itself off after a period of time, pilot no longer lit.	<p>A. Pilot flame not in constant contact with pilot sensor.</p> <p>B. Defective pilot sensor thermocouple.</p>	<p>Check log placement; check pilot flame, adjust flame if necessary.</p> <p>Replace pilot sensor thermocouple.</p>
6. Glass doors fog up.	<p>A. Normal result of gas combustion.</p>	<p>No action necessary - glass will clear as appliance warms.</p>
7. Blue flames.	<p>A. Normal result during first 20 minutes of burning.</p>	<p>No action necessary - flames will turn more yellow after about 20 minutes.</p>
8. Glass has film on it.	<p>A. Normal result during initial few hours of operation.</p> <p>B. Improper log placement causing soot.</p> <p>C. Dark yellow tipped flame.</p>	<p>Clean glass with Brasso or silver polish.</p> <p>Check log placement; reposition if necessary.</p> <p>Open air shutter to increase air to gas ratio.</p>



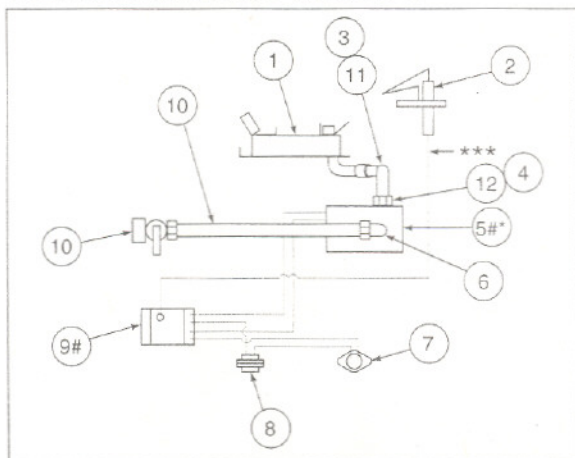


## IX. REPLACEMENT PARTS

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



### ELECTRONIC IGNITION - GC400SFE



\* 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.



ITEM	PART NO.	DESCRIPTION
1	17561	Front Log
2	17648	Back Log
3	17133	Top Logs
4	17229	Top Twig

ITEM	PART NO.	DESCRIPTION
1	20248	Trim-Top and Bottom
2	19734	Glass Panel
3	19735	Glass Seal
4	19114	Glass Panel
5	19116	Glass Seal
6	19693	Louver (Top)
7	19733	Louver Assembly (Bottom)
8	19698	Glass Retainer, Right and Left
9	20202	Glass Frame Assembly
10	25375	Side Glass Strip

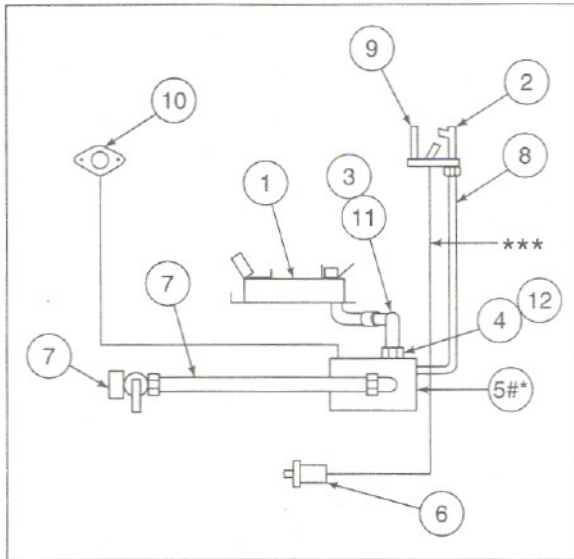
ITEM	PART NO.	DESCRIPTION
1	17202	Burner Assembly
2	17003	Ignitor
3	17811	Orifice - Natural
4	13425	Brass Fitting, Male
5#*	71511 71512	Valve - Natural (White-Rodgers) Valve - Natural (Robertshaw)
6	17069	Brass Fitting, Male
7	24968	High Limit Switch
8	17836	Transformer
9*	15695	Ignition Control
10	12303	On/Off Valve Flexible Line
11	17237	Elbow
12	17073	Burner Gas Tubing
13	13426	Microswitch (not shown)

### IF CONVERTED TO PROPANE

3	17812	Orifice - Propane
5#*	71513 71514	Valve - Propane (White-Rodgers) Valve - Propane (Robertshaw)



## STANDING PILOT - GC400SF



\*\*\* 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.

ITEM	PART NO.	DESCRIPTION
1	17202	Burner Assembly
2	25729	Pilot Assembly - Natural
3	17811	Orifice - Natural
4	13425	Brass Fitting, Male
5#*	12191 12191	Valve - Natural (Robertshaw) Valve - Natural (White-Rodgers)
6	13416	Push Button Ignitor
7	12303	Flexible Line On/Off Valve
8	17865 18703	1/4" Pilot Tubing (Robertshaw) 1/4" Pilot Tubing (White-Rodgers)
9	13411	Thermopile (Pilot Sensor)
10	24968	High Limit Switch
11	17237	Brass Fitting, Elbow
12	17073	3/8" Burner Gas Tubing
13	13426	Microswitch (not shown)
<b>IF CONVERTED TO PROPANE</b>		
2	25730	Pilot Assembly - Propane
3	17812	Orifice - Propane
5#*	25812	Valve - Propane (Robertshaw)





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# *Attention*

*To prevent damage to the top trim of your unit, it has been packaged separately, on top of this unit. You must refer to page 18, Step 15 and Figure 23 for directions on installation procedures.*

## *APPLIANCE*

## *INSTALLER*

*Please return these Operating &  
Installation Instructions to the  
Appliance for Consumer Use*

**heatilator®**  
*The first name in fireplaces*

Heatilator Inc.  
1915 W. Saunders Street  
Mt. Pleasant, IA 52641  
a HON INDUSTRIES company  
319-385-9211 FAX 319/385-9225