

d. Assembling Vent Sections

Attach a straight section, a 45° elbow or a 90° elbow, depending on your specific installation.

WARNING - RISK OF FIRE!
Always maintain minimum clearances or greater around the vent system. Do not pack air spaces with insulation or other material.

See Section F "ASSEMBLING THE VENT SECTIONS" on page 21 for specific instructions on each type of venting.

Note: Horizontal runs will require the use of one vent support (or metal plumber's strap) for every 3' of vent.

Figures 17-18 show how to install a typical vent system. Use only pipe listed for use with this appliance. See page 5 for a description of listed components.

If the wall being penetrated is of noncombustible materials, a 9" diameter hole is acceptable.

e. Installing the Interior Wall Shield (WS6).

Whenever a combustible wall is penetrated, the hole must be framed with an interior wall shield (WS6) as shown in Figures 19-21. This shield maintains minimum clearances and restricts cold air infiltration.

The termination cap height must meet all local and national codes and not be easily blocked or obstructed.

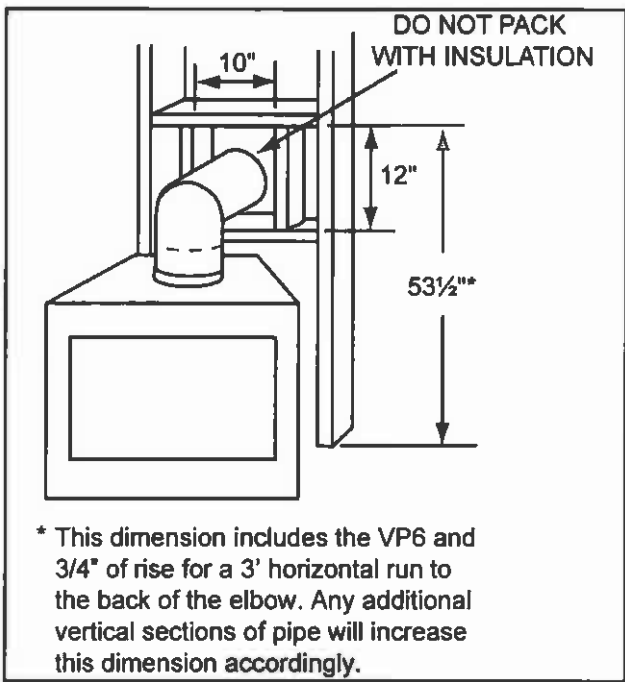


Figure 17
Exterior Wall Hole
(Top Venting)

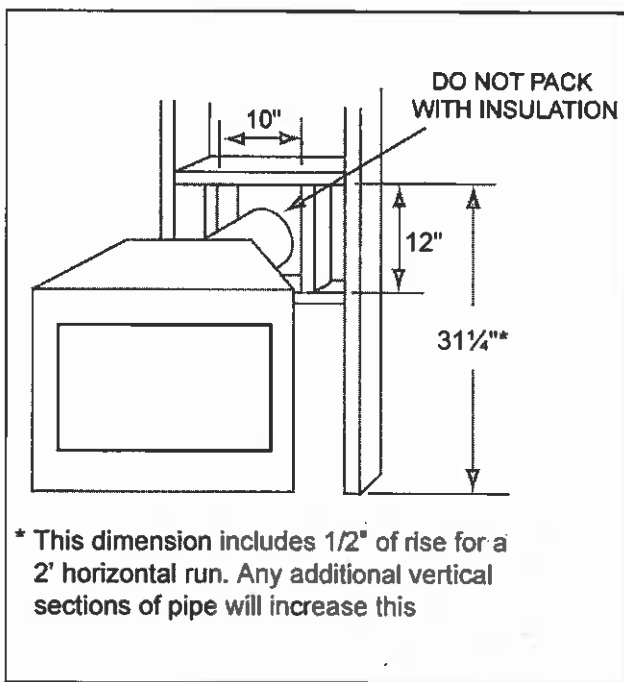


Figure 18
Exterior Wall Hole
(Rear Venting)

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

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Secure the shield to the framing as shown in Figure 19.

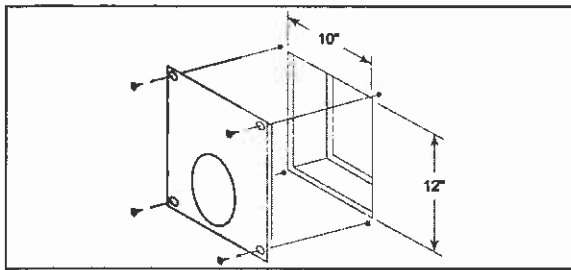


Figure 19
Interior Wall Shield

The termination cap should overlap the vent sections by at least 1-1/2". See Figure 20.

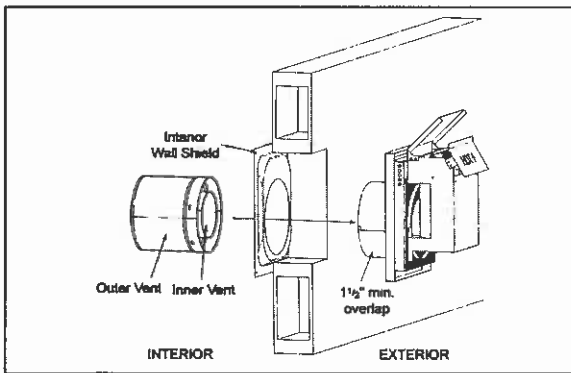


Figure 20
Venting Through the Wall

WARNING - RISK OF FIRE!

Always maintain minimum air space clearances or greater around the appliance and vent system.

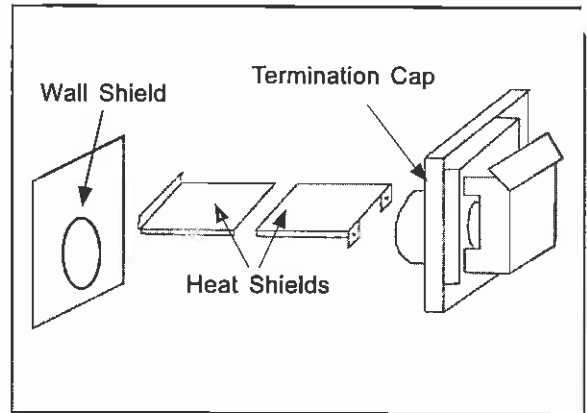


Figure 21
Vent Wall Shield and Termination Cap

g. Termination

Vent termination must not be recessed in the wall. Siding may be brought to the edge of the cap base.

Install the cap as shown in Figures 20 and 21. Cap pipe sections should overlap the vent pipe by 1-1/2 inches. Caulk outside edges of cap.

Local codes may require the installation of a shield (CS) which prevents anything or anyone from touching the hot cap.

Figure 22 illustrates cap locations as prescribed by current ANSI Z223.1 and CAN/CGA-B149 Installation Codes.

CAUTION:

A vinyl soffit shield (VSS2) should be installed if a cap is within 30" of a vinyl soffit.

f. Installing the Rear-Vent Heat Shield

For rear vented appliances, a heat shield MUST be placed 1 inch above the top of the vent between the wall shield and the termination cap. There are two sections of the heat shield. One section attaches to the wall shield with two screws. The remaining section is attached to the cap in the same manner. The sections of the heat shield will overlap to match the wall thickness (depth). The small leg on the shield should rest on the top of the vent to properly space it from the pipe section (this heat shield is not necessary on top vented appliances). See Figure 20.

WARNING - RISK OF FIRE!

Be sure there are no present (nor future) obstructions to the termination cap such as trees, bushes, snow drifts, etc.

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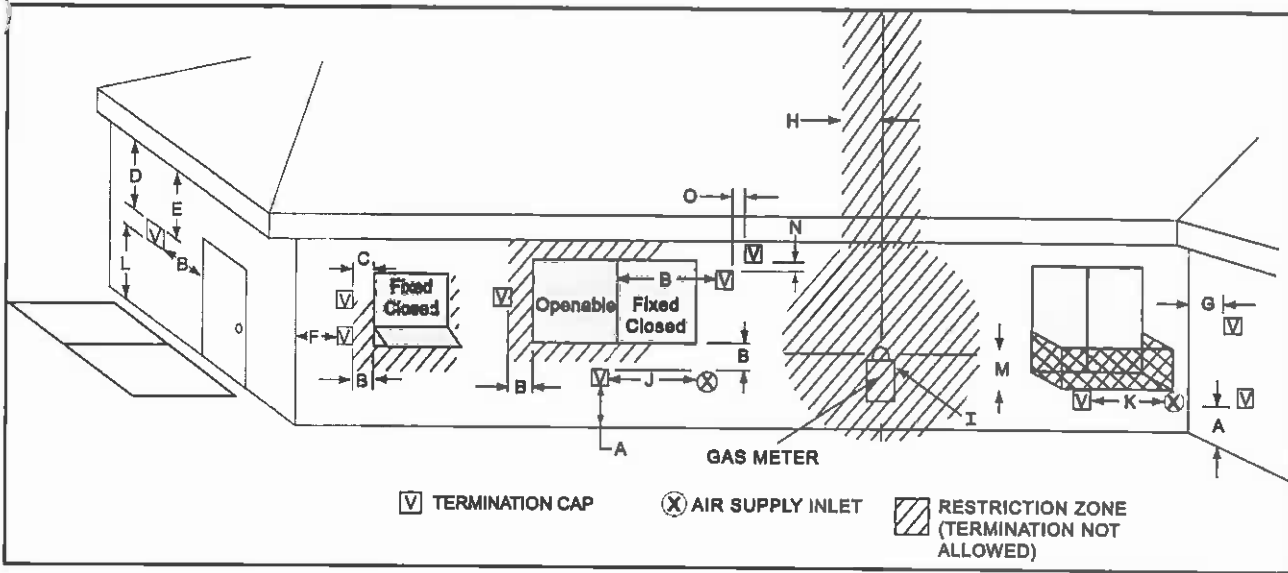


Figure 22
Termination Cap Locations

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 - 10,000 BTUs or less, 6 inches (15 cm) minimum; 10,000-50,000 BTUs, 9 inches (23 cm) minimum; over 50,000 BTUs, 12 inches (30 cm) minimum. *
- C** Clearance to permanently closed window - 12 inches (30 cm) minimum - recommended to prevent condensation on window.
- D** Vertical clearance to ventilated soffit located above the termination within a horizontal distance of 2 feet (60 cm) from the centerline of the termination - 18 inches (46 cm) minimum. **
- E** Vertical clearance to unventilated soffit - 12 inches (30 cm) minimum. **
- F** Clearance to outside corner - 6 inches (15 cm) minimum.
- G** Clearance to inside corner - 6 inches (15 cm) minimum.
- 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 - 6 feet (1.8m) minimum. *
- J** Clearance to non-mechanical air supply inlet into 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.
A vent may not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings.
- M** Clearance under veranda, porch, deck or balcony - 12 inches (30 cm) minimum. * Recommended 30 inches (76 cm) for vinyl or plastic.
Only permitted if veranda, porch, deck or balcony is fully open on a minimum of 2 sides beneath the floor. *

- N** Vertical clearance between two horizontal termination caps - 12 inches (30 cm) minimum.
- O** Horizontal clearance between two horizontal termination caps - 12 inches (30 cm) minimum.
- * As specified in CGA B149 Installation Codes
- Note:** Local codes or regulations may require different clearances.
- ** Clearance required to vinyl soffit material - 30 inches (76 cm) minimum. With a vinyl soffit shield - 18 inches (46 cm) minimum.

WARNING!

In the U.S.: Vent system termination is NOT permitted in screened porches. You must follow side wall, overhang and ground clearances as stated in the instructions.

In Canada: Vent system termination is NOT permitted in screened porches. Vent system termination is permitted in porch areas with two or more sides open. You must follow all side wall, overhang and ground clearances as stated in the Instructions.

Hearth & Home Technologies Inc. assumes no responsibility for the improper performance of the appliance when the venting system does not meet these requirements.

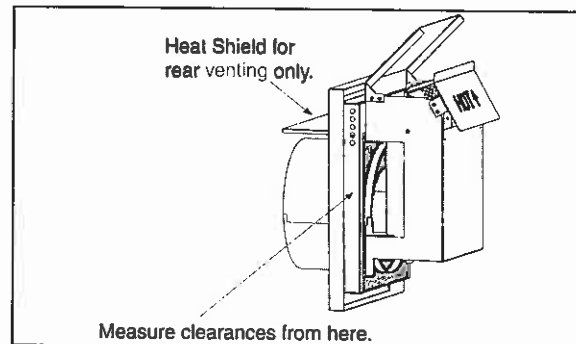


Figure 23 - Cap Clearances

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6. VERTICAL TERMINATION

a. Top and Rear Vent Clearances

See Figure 24 for clearance information.

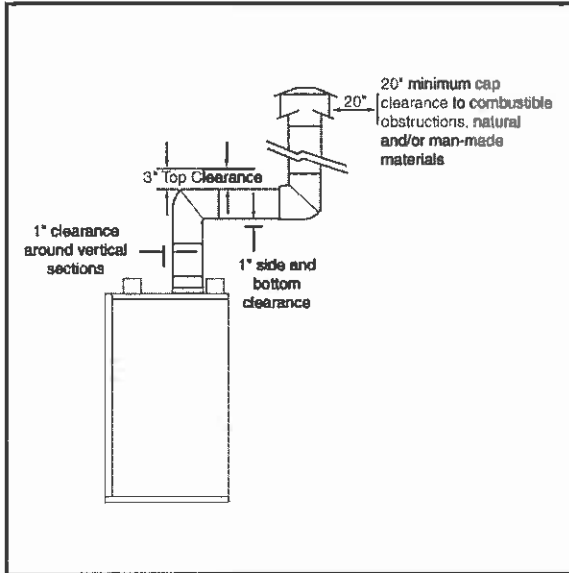


Figure 24
Vertical Termination Clearances
(Top Vent Shown)

b. Top Vent Lengths

Various venting configurations are shown in Figures 25-26 from which maximum vent runs can be determined.

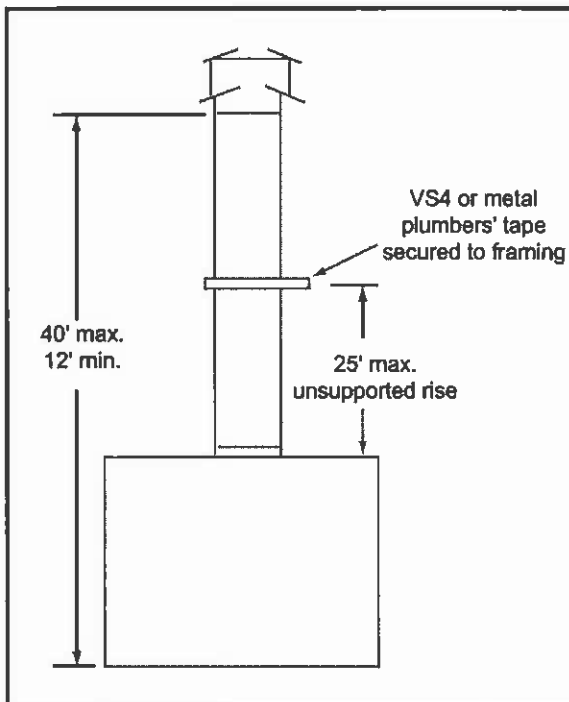


Figure 25 - Vertical Termination Vent Lengths

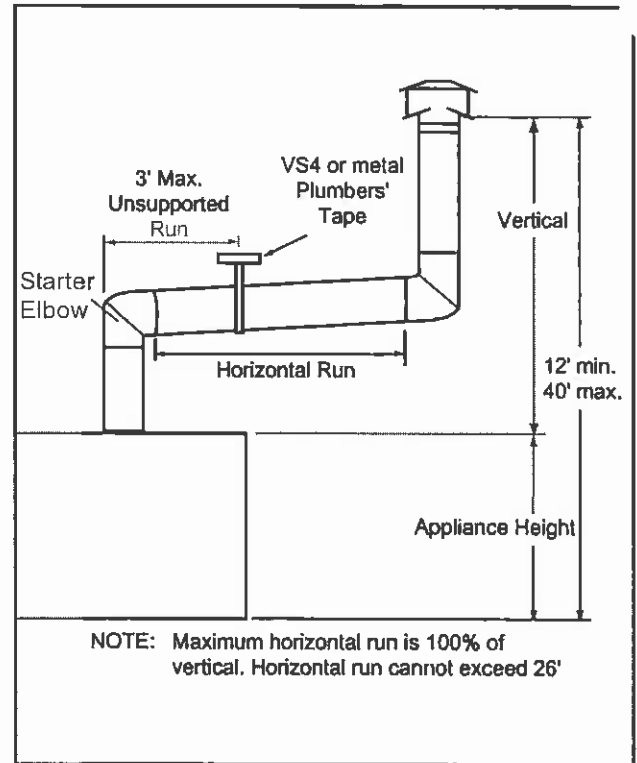


Figure 26
Vertical Termination Vent Lengths

CAUTION:

Provisions shall be made to provide adequate combustion and ventilation air.

WARNING - RISK OF FIRE!

Always maintain minimum clearances or greater around the vent system. Do not pack air spaces with insulation or other material.

WARNING!

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

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c. Rear Vent Lengths

Attach either a straight section, a 90° elbow, or a 45° elbow (depending upon your specific installation) to the appliance. See Figure 27. **DO NOT USE** a starter elbow when venting out the rear of the appliance. A maximum of three elbows is allowed in the vent system. Use only pipe listed with this appliance.

See Section F "ASSEMBLING THE VENT SECTIONS" for specific instructions on each type of venting.

WARNING - RISK OF FIRE!
Always maintain minimum clearances or greater around the vent system. Do not pack air spaces with insulation or other material.

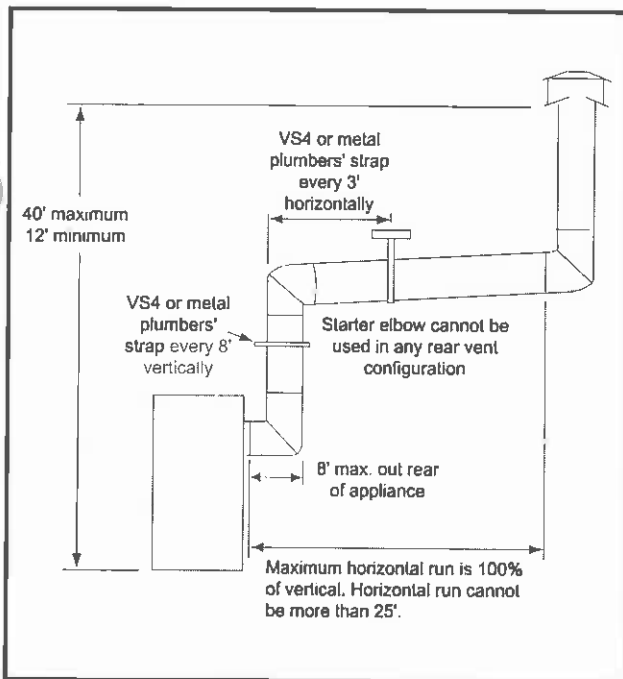


Figure 27
Length Allowances for Vertical Termination Only

Note: Horizontal runs will require the use of one vent support (or metal plumber's strap) for every 3' of vent.

d. Firestop Spacer/Vent Installation

Frame an opening and install an FS6 Firestop Spacer whenever the vent penetrates a ceiling/floor area, as shown in Figure 28. Frame the opening with the same sized lumber as used in the ceiling/floor joists. Unless the flue is offset, the hole should be directly above the appliance. **DO NOT** pack insulation around the vent.

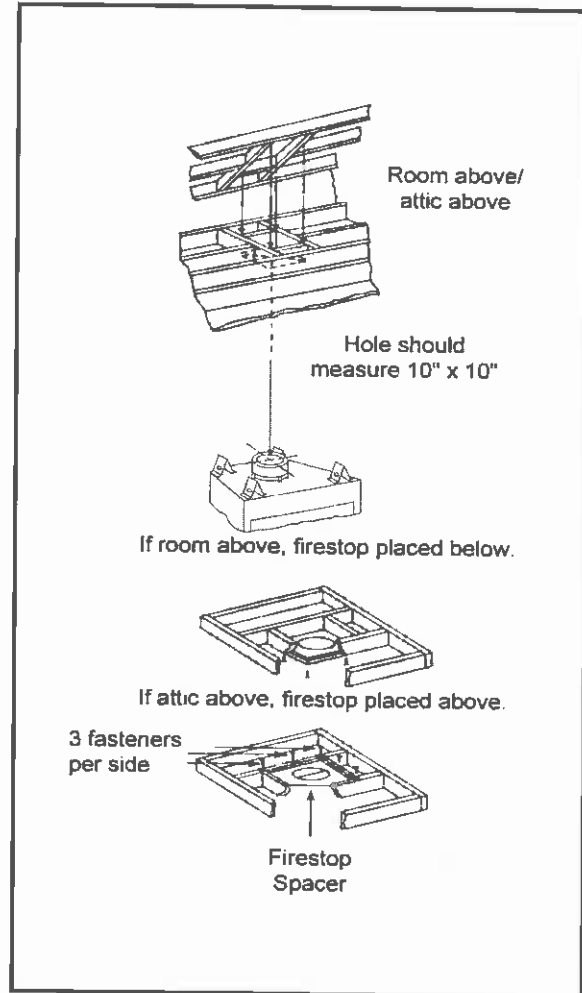


Figure 28
Installing the Firestop Spacer

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e. Chase/Termination Installation

Figures 29 and 30, and Table 1 specify minimum vent heights for various pitched roofs.

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

Figure 30 shows minimum clearances to termination caps in a chase.

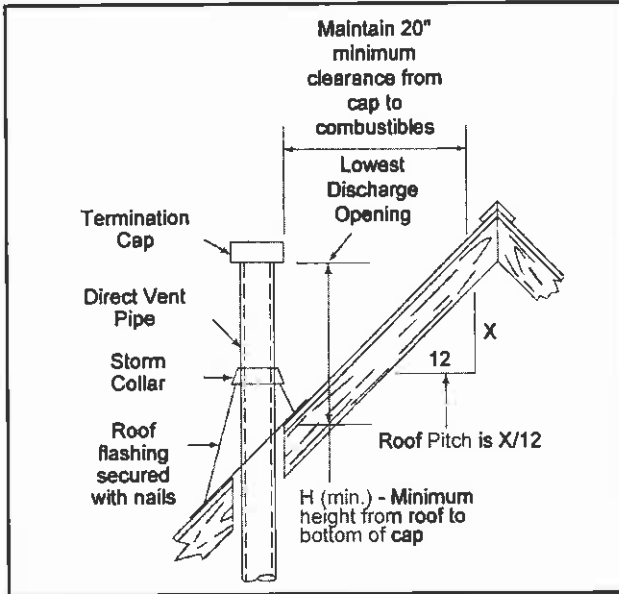


Figure 29
Vent Height for Vertical Termination

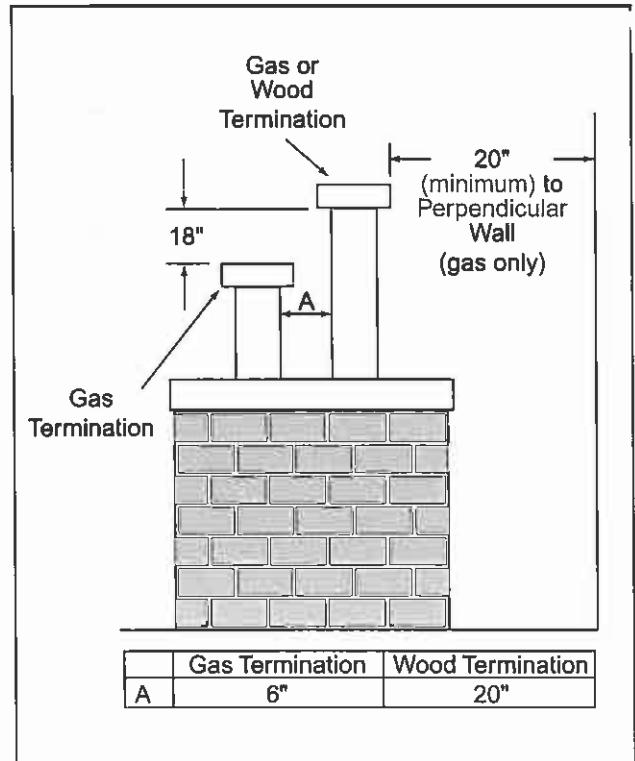


Figure 30 - Multiple Vertical Termination

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

Table 1
Vent Height

Note: To ensure proper operation, verify all venting and the termination is unobstructed.

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F. ASSEMBLING THE VENT SECTIONS

1. ATTACHING THE VENTING TO THE APPLIANCE

To attach the first VP section to the appliance collars, simply slide the flared end of the inner flue of the VP section over the inner collar of the appliance. At the same time, insert the outer flue into the outer collar on the appliance. Push the vent section into the appliance collar until all the lances have snapped into place. Tug slightly on the vent to confirm it has completely locked in place.

2. ASSEMBLING VENT SECTIONS

- a. Start the flared inner flue of Section "A" over the inner flue of Section "B".
- b. Insert the outer flue of Section "A" into the outer flue of Section "B". See Figure 31.

Note: Squeezing the pipe slightly to fit may be necessary.

Once both inner and outer flues are started, press Section "A" into Section "B" firmly until all lances have snapped into place. Tug slightly on Section "A" to confirm it has completely locked into place. See Figure 32.

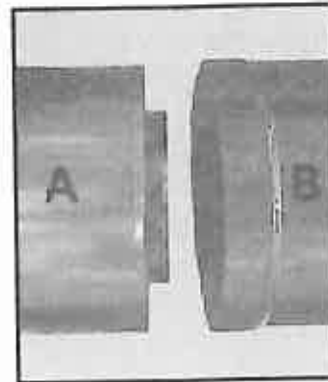


Figure 31



Figure 32

3. ASSEMBLING MINIMUM INSTALLATION (MI) SECTIONS

Note: Make sure that the seams are NOT aligned in order to prevent unintentional disconnection.

MI sections are non-unitized so that they can be cut to a certain length. To use these sections, they must be cut to length from the non-expanded end. See Figure 33. They can then be attached by first connecting the expanded end of the MI inner flue with the inner flue from the adjacent vent section and securing with three screws. The expanded portion of the MI inner flue must overlap completely with the untreated end of the adjacent vent section. The outer flue can then be inserted into the adjacent outer flue expanded end and attached to the next vent section with three screws. The other end of the MI vent section can then be attached by fitting a snap lock section to it and snapping it together as normal.

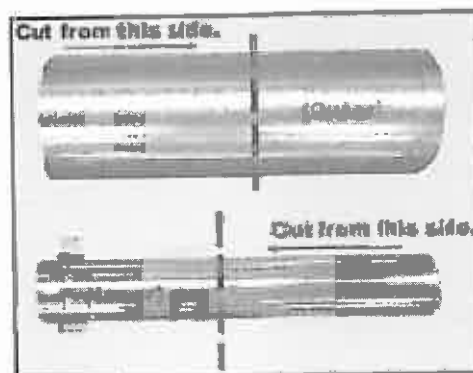


Figure 33

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4. ASSEMBLING THE SLIP SECTIONS

Slip sections should be snapped into the first mating piece, then expanded to their desired length, making sure that a 1.5" overlap is maintained between the two sections of the slip section. The two sections of the slip section then need to be secured by driving two screws through the overlapping portions of the vent. See Figure 34. This will secure the slip section to the desired length and prevent it from separating. The slip section can then be attached to the next section of vent.

5. DISASSEMBLING VENT SECTIONS (only if necessary)

To disassemble any two pieces of pipe, rotate either section so that the seams on both pipe sections are aligned as shown in Figure 35. They can then be carefully pulled apart.

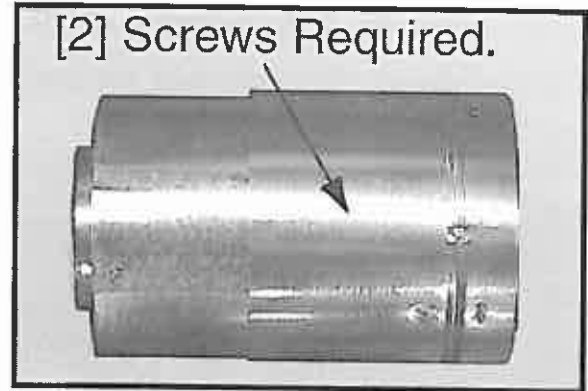


Figure 34

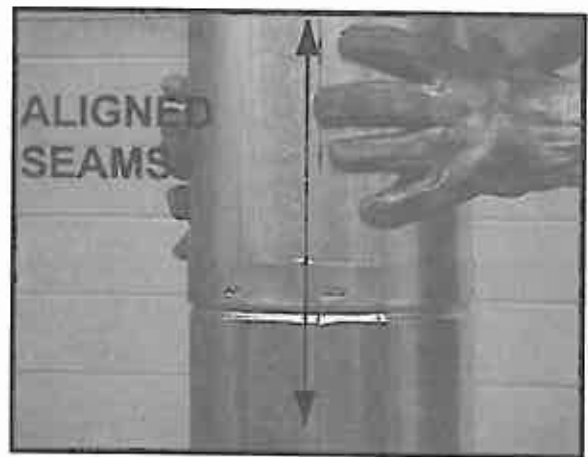


Figure 35

G. UTILITIES

1. HIGH ALTITUDE INSTALLATION

For U.S. installation, appliances are tested and approved for elevations from 0-2000 feet. When installing this appliance at an elevation above 2000 feet, National Fuel Gas Codes require a decrease of the input rating by changing the existing burner orifice to a smaller size. Input should be reduced 4% for each 1000 feet above sea level. Check with the local gas utility for proper orifice size identification. The correct orifice is available from your Heatilator distributor.

For Canada, appliances are certified for elevations from 0-4500 feet. When installing this appliance at an elevation between 0-4500 feet in Canada, the input rating does not need to be reduced. When installing this appliance at an elevation above 4500 feet in Canada, check with local authorities.

2. GAS LINE CONNECTION

Open the control access panel as shown in Figure 36. The appliance is provided with a stainless steel flexible connector and manual shutoff valve. The incoming gas line should be piped into the valve compartment and connected to the 1/2" FIP connection provided on the manual shutoff valve. See Figure 37 to connect the gas line. Optional: Seal around the gas line to prevent cold air leakage.

All connections must be tightened and checked for leaks with a soap and water solution or a leak detector.

Upon completing the gas line connection, a small amount of air will be in the lines. When first lighting the pilot light, it will take a few minutes for the lines to purge themselves of this air. Once the purging is complete, the pilot and burner will light and operate.

Subsequent lightings of the appliance will not require such purging.

CAUTION:

(Standing Pilot Ignition) During the initial purging and subsequent lightings, NEVER allow the gas valve control knob to remain depressed in the "pilot" position without pushing the red ignitor button at least once every second.

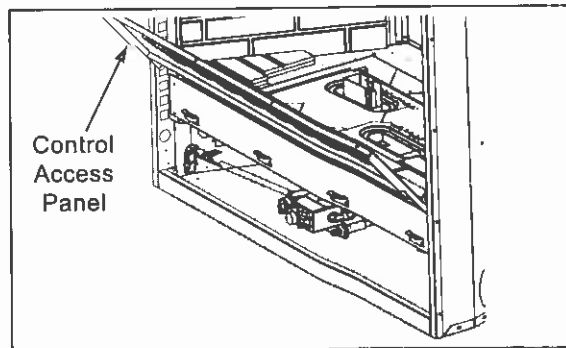


Figure 36
Control Access Panel

Note: This appliance and its manual 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 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).

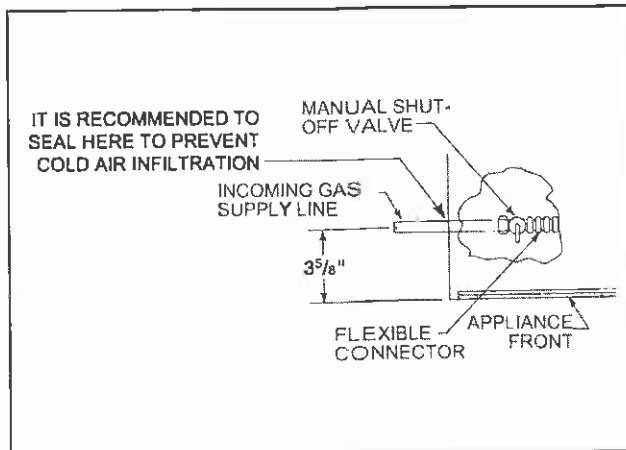


Figure 37
Gas Line

WARNING!

This valve has been preset at the factory. Altering settings may result in fire hazard or bodily injury.

3. GAS PRESSURE

An Inlet pressure tap and an outlet pressure tap are available on the faces of the standing pilot and the electronic ignition gas valves. Table 2 shows optimum gas pressure information. Consult your local gas company for assistance in determining the proper orifice for your altitude or refer to ANSI Z223.1-latest edition, Appendix F.

4. FUEL CONVERSIONS

Natural or propane gas conversions necessary to meet the application need to be made by a qualified technician using Hearth & Home Technologies Inc. specified and approved parts.

In the event your appliance must be converted to use propane, you must use a **CKMAX6P** Conversion Kit. To be converted to use natural gas, you must use a **CKMAX6N** Conversion Kit.

MAXUS 60	
Inlet Gas Supply Pressure (N.G.)	4.5 (min.) - 7.0 (max.) in. w.c.
Optimal Manifold Pressure (N.G.)	3.5 in. w.c.
Inlet Gas Supply Pressure (L.P.)	11.0 (min.) - 14.0 (max.) in. w.c.
Optimum Manifold Pressure (L.P.)	10 in. w.c.

Table 2
Gas Information for Electronic and Standing Pilot Appliances

MAXUS 60	
Input Rate (N.G.)	40,000 BTU/hr.
Input Rate (L.P.)	37,000 BTU/hr.
Orifice Size (N.G.)	.125 inches
Orifice Size (L.P.)	.073 inches

Table 3
Gas Information for Standing Pilot

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WIRING

a. Electronic Ignition

- 1) This electronic ignition appliance requires a 110V AC supply to operate. It is suggested that a switched 110V junction box with two switched outlets be installed to power the optional remote control and/or fan.
- 2) This heater listed appliance may be connected to a thermostat. If connecting a 24V thermostat (not supplied), disconnect the black wire from the transformer at the ignition control. Connect the thermostat wires between the ignition control and the black wire (from transformer). See Figures 38a and 38b.

Note: This appliance must be electrically wired and grounded in accordance with local codes or, in the absence of local codes, with National Electric Code ANSI/NFPA 70-latest edition or the Canadian Electric Code CSA C22.1.

CAUTION:
Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify Proper operation after servicing.

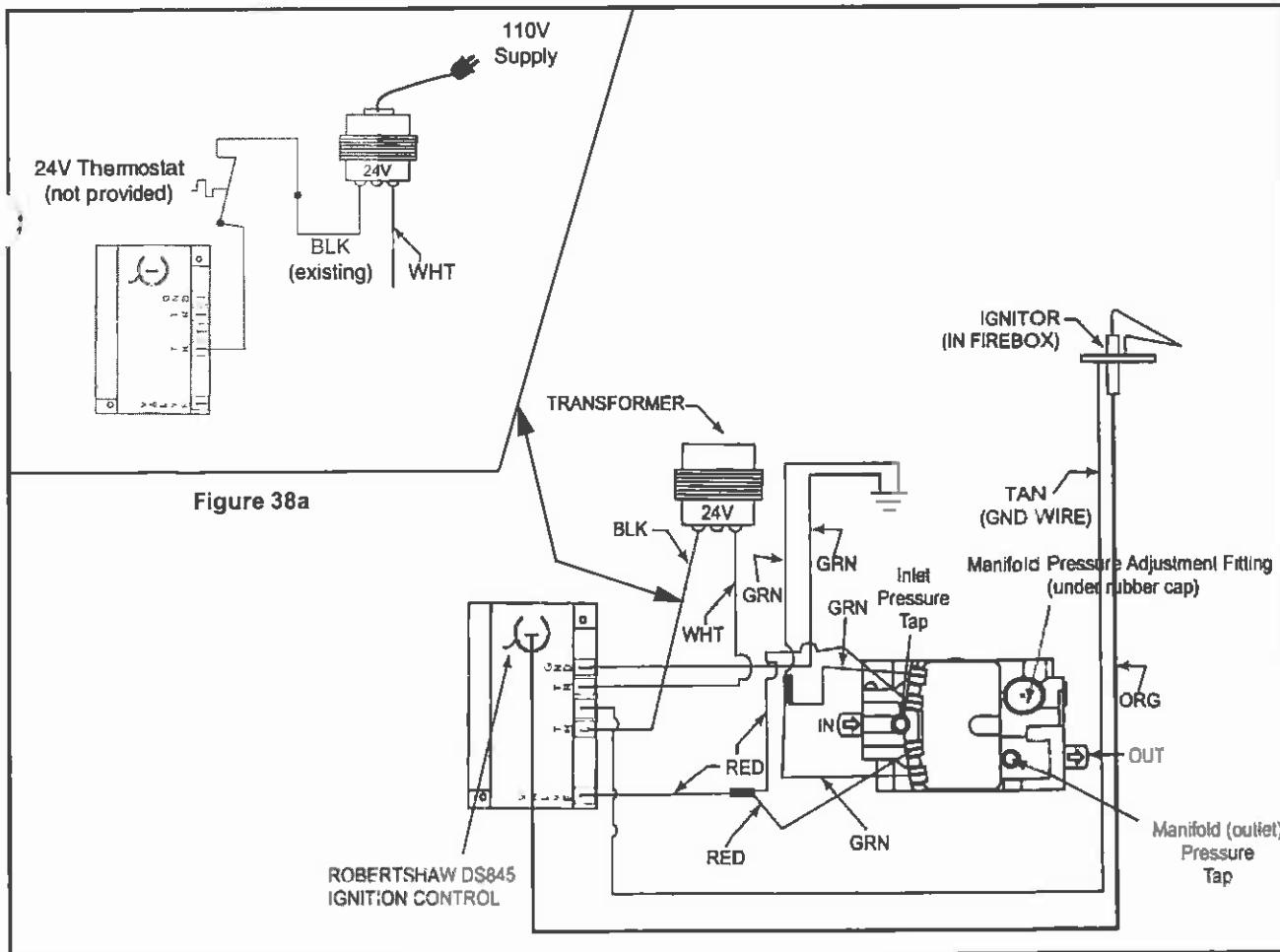


Figure 38b
Electronic Ignition Wiring Diagram

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b. Standing Pilot Ignition

- 1) This standing pilot appliance does not require a 110V AC supply to operate. It is suggested that a 110V junction box be installed with a switched outlet for the optional fan and an always-powered outlet for the optional remote control.
- 2) Only heater listed appliances may be connected to a thermostat (not supplied). Use a thermostat that is compatible with a millivolt gas valve. See Figure 39.

Note: This appliance must be electrically wired and grounded in accordance with local codes or, in the absence of local codes, with National Electric Code ANSI/NFPA 70-latest edition or the Canadian Electric Code CSA C22.1.

WARNING!

This standing pilot appliance **DOES NOT** require a 110V AC supply for operation. Connecting the appliance/wall switch to 110V AC supply will cause the appliance to malfunction and destroy the valve and thermopile.

CAUTION:

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

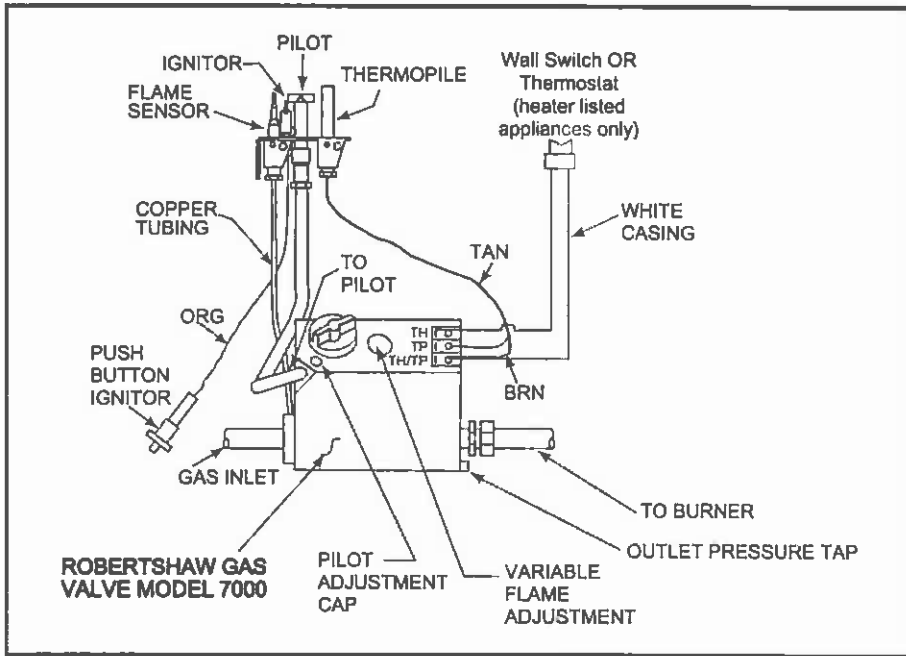


Figure 39 - Standing Pilot Ignition Wiring Diagram

c. Junction Box Wiring

We recommend you operate the two outlets on separate circuits. This allows independent operation of the appliance and fan. Independent operation is obtained by using minimum 14-3 with ground romex and separating the two outlets by breaking out the tab as shown. See Figure 40.

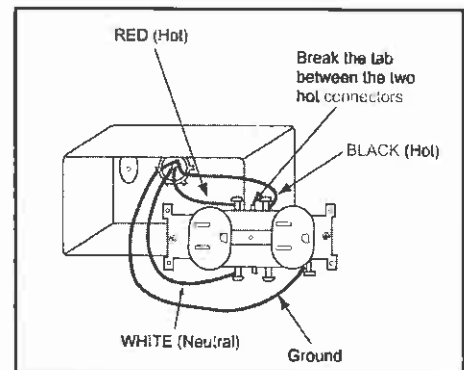


Figure 40

JUNCTION BOX INSTALLATION INSTRUCTIONS

- a. Remove the junction box assembly from the valve compartment.
- b. If the box is being wired from the OUTSIDE of the appliance:
 - 1) Loosen two screws on the Romex connector, feed the necessary length of wire through the connector and tighten the screws.
 - 2) Make all necessary wire connections to the receptacle and assemble the receptacle and cover to the junction box.
 - 3) Attach the junction box assembly to the outside of the appliance with the two screws provided.
- c. If the box is being wired from the INSIDE of the appliance:
 - 1) Pull the electrical wires from outside the appliance through this opening into the valve compartment.
 - 2) Loosen the two screws on the Romex connector, feed the necessary length of wire through the connector and tighten the screws.
 - 3) Make all necessary wire connections to the receptacle and assemble the receptacle and cover to the junction box.
 - 4) Attach the junction box assembly to the inside of the appliance with the two screws provided.
- d. If the box is not to be wired at the time of appliance installation, assemble the receptacle and cover to the box and install on the inside of the appliance.

H. FINISHING

1. 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 (this includes drywall).

2. NONCOMBUSTIBLE 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 a UL Fire rating of Zero (0).

3. HIGH TEMPERATURE SEALANT MATERIAL

Sealants that will withstand high temperatures: General Electric RTV103 (Black) or equivalent; Rutland, Inc. Appliance Mortar #63 or equivalent.

A high temperature sealant, 1/8" wide minimum, must be used to close off gaps between the appliance and facing to prevent cold air leaks. See Figure 41.

4. COMBUSTIBLE MANTEL

A combustible mantel may be installed. Please refer to Figure 3.

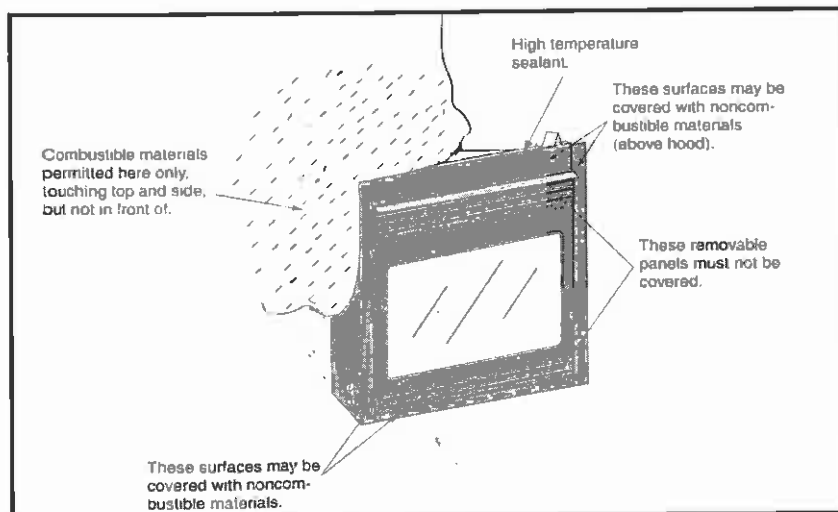


Figure 41 - Finishing Materials



I. APPLIANCE PREPARATION

WARNING - RISK OF CARBON MONOXIDE!

Never operate this appliance with the glass removed or not sealed.

WARNING - RISK OF CARBON MONOXIDE!

Do not hit or strike glass. Do not operate this appliance if the glass is broken or cracked. Replacement of the glass should be done by a licensed or qualified service person.

1. FACE ASSEMBLY REMOVAL

Lift the face assembly upward and pull away.

2. GLASS REMOVAL

See Figure 55, page 35.

3. LOG SET INSPECTION

The log set is shipped in one piece and should look similar to that in Figure 42.

4. PLACING THE ROCK WOOL

Place a small amount of 1/2" diameter pieces (dime-size) of rock wool on the burner pan so that the rock wool touches, but does not cover, the holes in the burner pan. See Figure 43. This will provide the "glowing embers" look. It is not necessary to use the entire bag. Save the remainder for future use.

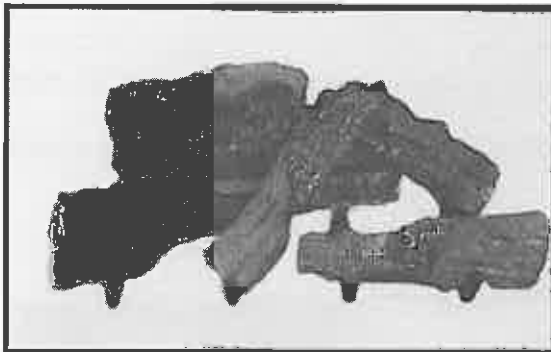


Figure 42 - MAX60 Gas Log Set

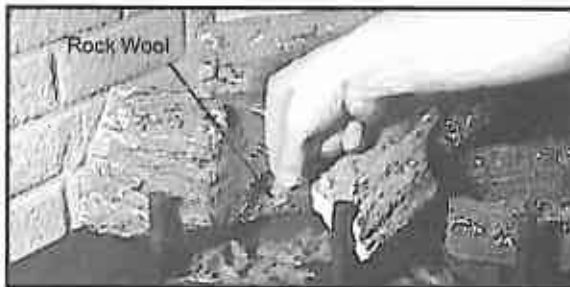


Figure 43 - Placing the Rock Wool

5. PLACING THE LAVA ROCK

This appliance is shipped with a refractory floor. You may remove this floor and replace it with lava rock.

To remove the refractory floor, lift and slide it towards you, bringing it out of the appliance. Install the lava rock rail. There are hooks on the ends of the lava rock rail. These hooks are to be inserted into the slots located in the front of the appliance opening below the front corners of the side refractories. Insert the hooks into the slots. After insertion, slide the rail towards the rear until it goes around the corner. Then the front can be lowered. Please refer to Figures 44 and 45.

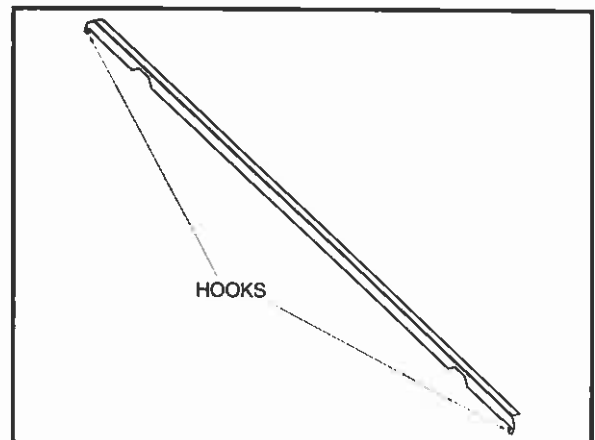


Figure 44 - The Lava Rock Rail
(Shipped with the appliance in the valve compartment.)

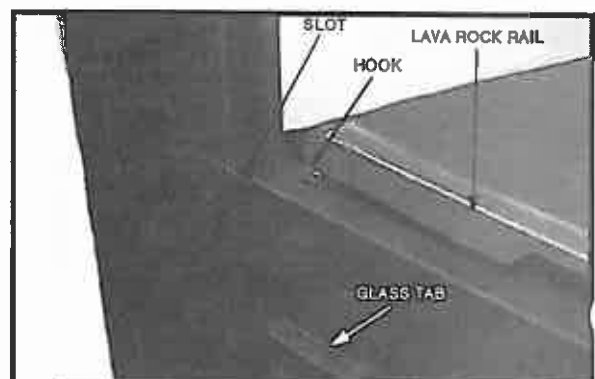


Figure 45 - Installing the Lava Rock Rail