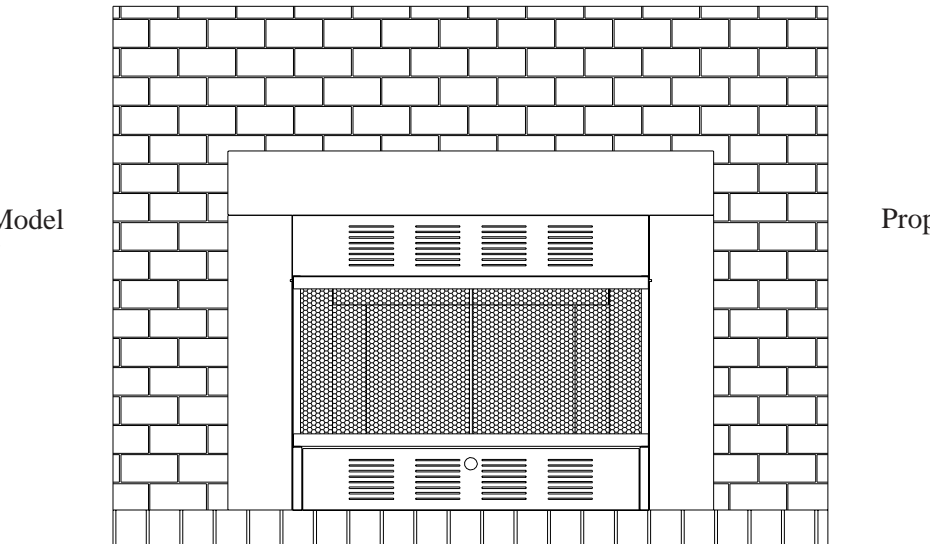




# UNITED STATES STOVE COMPANY

227 Industrial Park Road • P.O. Box 151 • South Pittsburg, TN 37380 • (423) 837-2100

Natural Gas Model  
VF30IN



Propane (LPG) Model  
VF30IL



## VF30I FIREPLACE INSERT VENT-FREE ROOM HEATER

This is an vent-free gas-fired heater. It uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. Refer to "Adequate Combustion And Ventilation Air" on page 7 of this manual.

**THIS APPLIANCE MAY BE INSTALLED IN AN AFTERMARKET\* MANUFACTURED (MOBILE) HOME, WHERE NOT PROHIBITED BY STATE OR LOCAL CODES.**

**\*Aftermarket: Completion of sale, not for purpose of resale, from the manufacturer.**

**THIS APPLIANCE IS ONLY FOR USE WITH THE TYPE OF GAS INDICATED ON THE RATING PLATE. THIS APPLIANCE IS NOT CONVERTIBLE FOR USE WITH OTHER GASES.**

## WARNINGS

**WARNING:** If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- WHAT TO DO IF YOU SMELL GAS
  - 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.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

**WARNING: This appliance is for installation only in a solid-fuel burning fireplace or approved ventless firebox enclosures.**

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**NOTICE**

**Installation and repair must be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional 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.**

# IMPORTANT SAFETY INFORMATION

**INSTALLER:** Please leave these instructions with the owner.

**OWNER:** Please retain these instructions for future reference.

**IMPORTANT:** Read these instructions carefully before installing or trying to operate this heater.

**WARNING**

**ANY CHANGE TO THIS HEATER OR ITS CONTROLS CAN BE DANGEROUS. IMPROPER INSTALLATION OR USE OF THE HEATER CAN CAUSE SERIOUS INJURY OR DEATH FROM FIRE, BURNS, EXPLOSION OR CARBON MONOXIDE POISONING.**

1. **CARBON MONOXIDE POISONING:** Early signs of carbon monoxide poisoning are similar to the flu with headaches, dizziness and/or nausea. If you have these signs, obtain fresh air immediately. Have the heater serviced as it may not be operating properly.
2. The installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1.
3. The VF30IN/VF30IL vent-free gas heater system cannot be installed in a bedroom or bathroom.
4. **Solid-fuels shall not be burned in a fireplace where an unvented room heater is installed.**
5. **WARNING:** Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this owner's manual. Installation and service must be performed by a qualified installer; service agency or the gas supplier.
6. To prevent malfunction and/or sooting, an vent-free gas heater should be cleaned at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, etc. It is imperative that control compartments, burners and circulating air passageways be kept clean.
7. Correct placement of the ceramic fiber logs is necessary to avoid problems with sooting. Sooting can settle on surfaces outside the heater and cause discoloration. See the appropriate sections of this manual for instructions.
8. **WARNING:** Do not allow fans to blow directly into the fireplace. Avoid any drafts that alter burner flame patterns. Do not place a blower inside burn area of firebox. Ceiling fans may create drafts that alter burner flame patterns. Sooting and improper burning will occur.
9. This is an vent-free gas-fired heater. It uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. Refer to installation guidelines.
10. Children and adults should be alerted to the hazard of high surface temperature and should stay away to avoid burns or clothing ignition.
11. Young children should be carefully supervised when they are in the same room with the appliance.
12. Do not place clothing or other flammable material near the appliance.

## IMPORTANT SAFETY INFORMATION

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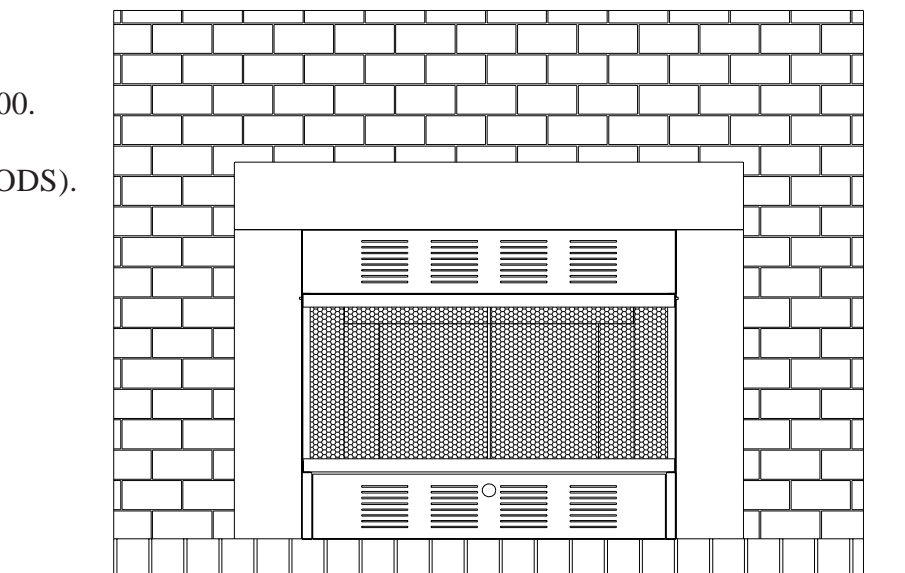
13. Outside air ducts in the fireplace shall be permanently closed at the time of appliance installation.
14. Keep appliance area clear and free from combustible materials, gasoline and other flammable vapors and liquids.
15. Fireplace screen must be closed during operation of the heater.
16. This vent-free gas heater is intended to be smokeless. If logs appear to smoke, turn off the heater and call a qualified service person. Initial burn off may cause slight smoke and odor during the first four hours of operation.
17. Input ratings are shown in BTU per hour and are for elevations up to 2,000 feet. For elevations above 2,000 feet, input ratings should be reduced 4 percent for each 1,000 feet above sea level. Refer to the National Fuel Gas Code.
18. The heater and its individual shut off 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 psig (3.5 kPa).
19. The heater 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 psig (3.5 kPa).
20. Do not use this room heater if any part has been under water. Immediately call a qualified service technician to inspect the room heater and to replace any part of the control system and any gas control which has been under water.

## PRODUCT FEATURES

---

### Features:

- Heating Efficiency - 99.9%
- Wide BTU Range: 16,000 - 30,000.
- Safe Operation -  
Oxygen Depletion Sensor (ODS).
- Thermostatic Condole
- Fibre Ceramic Logs.
- Push-Button Piezo Ignitor.
- Clean Operation.
- Easy Operation.
- Heats up to 1,000 square feet.



**VF30I Vent-free Gas Fireplace Insert**

# SPECIFICATIONS

## Natural Gas

Manifold Pressure Setting 4" w.c.

Gas Inlet Pressure     Maximum 10-1/2" w.c.  
                                  Minimum 5" w.c.

Model Number	Type	Gas Rate		Number of Burners
		Max BTU/Hr	Min BTU/Hr	
VF30IN	Manual	30,000	16,000	1

## Propane / LPG

*Note: An external regulator is required to reduce supply pressure to a maximum of 13" w.c.*

Manifold Pressure Setting 10" w.c.

Gas Inlet Pressure     Maximum 13" w.c.  
                                  Minimum 11" w.c.

Model Number	Type	Gas Rate		Number of Burners
		Max BTU/Hr	Min BTU/Hr	
VF30IL	Manual	30,000	16,000	1

**Controls** - Main control has 4 positions:

1. **OFF** - All gas to the gas logs is shut off at the control
2. **IGN** - Piezo ignitor allows ignition of the pilot without the use of matches or batteries
3. **PILOT** - Valve position to light / maintain a standing pilot
4. **ON** - Gas flow to complete system, front burner ignition

**Burner Control Knob** - Infinite control, rotate clockwise to minimum rate and counterclockwise for maximum rate. Adjust the control knob between Minimum and Maximum to gain the desired room temperature. The control will automatically cycle the heater on and off to maintain the desired heat in the room. There are no exacts with the adjustment, you will need to experiment with the setting to find what works best for you needs.

# CONTENTS

## VF30IN and VF30IL Vent-free Gas Room Heaters

1. Owner's manual.
2. Log box containing four (4) fiber ceramic logs, refer to installation instructions.
3. Vent-free gas heater.

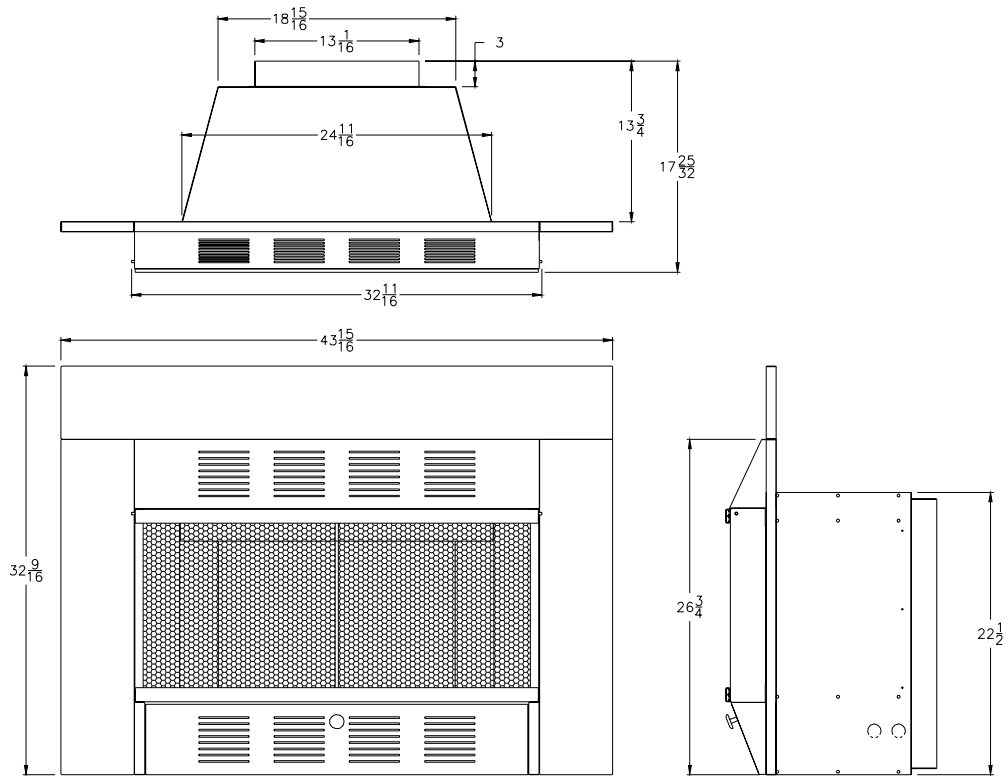
**CHECK THAT ALL LISTED PARTS HAVE BEEN RECEIVED**

**CAUTION**

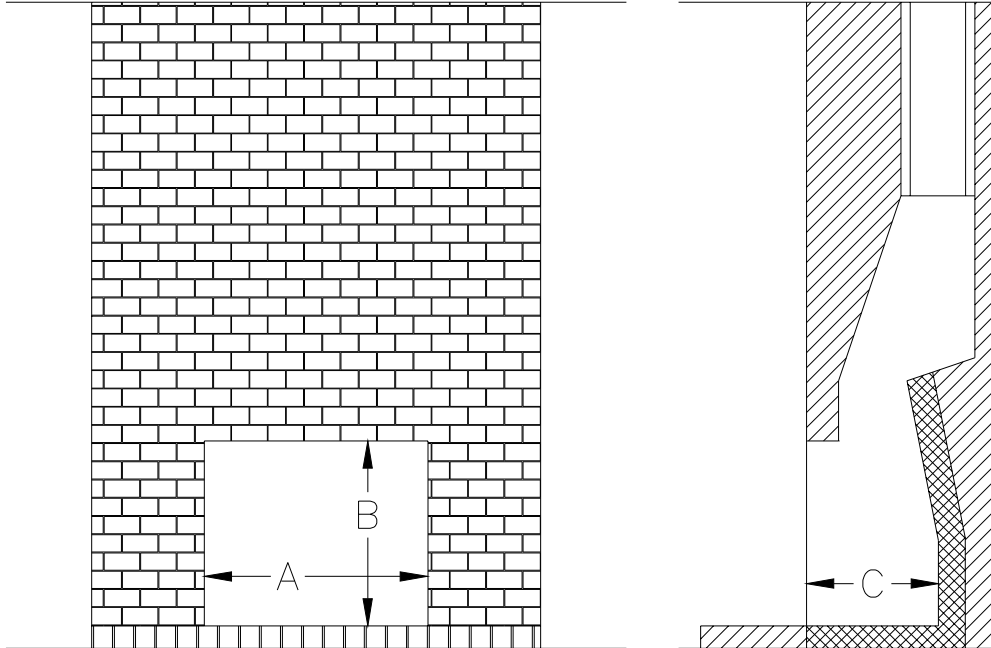
**GLOVES ARE RECOMMENDED WHEN HANDLING CERAMIC FIBER LOGS TO PREVENT SKIN IRRITATION FROM LOOSE FIBERS. LOGS ARE FRAGILE, HANDLE WITH CARE.**

Carefully inspect the contents for shipping damage and immediately inform your dealer if any damage is found.

# UNIT DIMENSIONS



# MINIMUM AND MAXIMUM SIZE OF FIREPLACE



DMENSDN	M NIMUM	MAXIMUM
A	26"	44"
B	22-1/4"	32"
C	13-1/4"	24"

# ITEMS REQUIRED FOR INSTALLATION

## ITEMS REQUIRED FOR INSTALLATION

Ensure that the following items are available before proceeding with installation:

- External regulator (for propane/LPG only)
- Piping which complies with local codes
- Pipe sealant approved for use with propane/LPG (resistant to sulfur compounds)
- Manual shutoff valve
- Sediment trap
- Pipe wrench

## CODES

Adhere to all local codes or in their absence, the latest edition of THE NATIONAL FUEL GAS CODE ANSI Z223.1 or NFPA54 which can be obtained from:

**American National Standards Institute, Inc.**

1430 Broadway  
New York, NY 10018

or

**National Fire Protection Association, Inc.**

Batterymarch Park  
Quincy, MA 02269

**WARNING**

**Due to high temperatures, do not install the heater:**

- **Where curtains, furniture, clothing or other flammable objects are less than 60" from the front of the heater.**
- **In high traffic areas.**
- **In windy or drafty areas.**

**DO NOT PLACE CLOTHING OR OTHER FLAMMABLE MATERIAL ON OR NEAR THE APPLIANCE.**

## AIR FOR COMBUSTION AND VENTILATION

### WARNING

**This fireplace shall not be installed in a confined space unless provisions are provided for adequate combustion and ventilation air. Read the following instructions to insure proper fresh air for this and other fuel-burning appliances in your home.**

Today's homes are built more energy efficient than ever. New materials, increased insulation, and new construction methods help reduce heat loss in homes. Home owners weather strip and caulk around windows and doors to keep the cold air out and the warm air in. During heating months, home owners want their homes as airtight as possible.

While it is good to make your home energy efficient, your home needs to breathe. Fresh air must enter your home. All fuel-burning appliances need fresh air for proper combustion and ventilation.

Exhaust fans, fireboxes, clothes dryers, and fuel-burning appliances draw air from the house to operate. You must provide adequate fresh air for these appliances. This will insure proper venting of vented fuel-burning appliances.

# AIR FOR COMBUSTION AND VENTILATION

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## Providing adequate ventilation

The following is excerpts from *National Fuel Gas Code. NFPA 54/ANSI Z223.1, Section 5.3, Air for Combustion and Ventilation.*

All spaces in homes fall into one of the three following ventilation classifications:

1. Unusually Tight Construction; 2. Unconfined Space; 3. Confined Space.

The information on pages 7 through 11 will help you classify your space and provide adequate ventilation.

## Unusually Tight Construction

The air that leaks around doors and windows may provide enough fresh air for combustion and ventilation. However, in buildings of unusually tight construction, you must provide additional fresh air.

**Unusually tight construction is defined as construction where:**

- a. Walls and ceilings exposed to the outside atmosphere have a continuous water vapor retarder with a rating of one perm ( $6 \times 10^{-11}$  per pa-sec- $m^2$ ) or less with openings gasketed or sealed and
- b. Weather stripping has been added on openable windows and doors and
- c. Caulking or sealants are applied to areas such as joints around window and door frames, between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical, and gas lines, and at other openings.

If your home meets all of the three criteria above, you must provide additional fresh air. See *Ventilation Air From Outdoors*, page 11.

If your home does not meet all of the three criteria above, proceed to page 9.

## Confined Space and Unconfined Space

The National Fuel Gas Code (ANSI Z223.1, 1992 Section 5.3) defines a confined space as a space whose volume is less than 50 cubic feet per 1,000 BTU per hour ( $4.8m^3$  per kw) of the aggregate input rating of all appliances installed in that space and an unconfined space as a space whose volume is not less than 50 cubic feet per 1,000 BTU per hour ( $4.8m^3$  per kw) of the aggregate input rating of all appliances installed in that space. Rooms communicating directly with the space in which the appliances are installed\*, through openings not furnished with doors, are considered a part of the unconfined space.

\* Adjoining rooms are communicating only if there are doorless passageways or ventilation grills between them.



# AIR FOR COMBUSTION AND VENTILATION

## Determining if You Have a Confined or Unconfined Space

Use this worksheet to determine if you have a confined or unconfined space.

**Space:** Includes the room in which you will install the firebox plus any adjoining rooms with doorless passageways or ventilation grills between the rooms.

- Determine the volume of the space (length x width x height).

Length x Width x Height = \_\_\_\_\_ cu. Ft. (volume of space)

*Example:* Space size      22 ft. (length) x 18 ft. (width) x 8 ft. (ceiling height) =  
3168 cu. Ft. (volume of space)

If additional ventilation to adjoining room is supplied with grills or openings, add the volume of these rooms to the total volume of the space.

- Divide the space volume by 50 cubic feet to determine the maximum BTU/Hr the space can support.

\_\_\_\_\_ (volume of space) ÷ 50 cu. Ft. = (Maximum BTU/Hr the space can support)

*Example:* 3168 cu. Ft. (volume of space) ÷ 50 cu. Ft. = 63.3 or 63,300 (maximum BTU/Hr the space can support)

- Add the BTU/Hr of all fuel-burning appliances in the space.

Vent-free Firebox	_____	BTU/Hr
Gas water heater*	_____	BTU/Hr
Gas furnace	_____	BTU/Hr
Vented gas heater	_____	BTU/Hr
Gas firebox logs	_____	BTU/Hr
Other gas appliances*	+ _____	BTU/Hr
Total	= _____	BTU/Hr

<i>Example:</i> Gas water Heater		40,000	BTU/Hr
Vent-free firebox with log heater	+	39,000	BTU/Hr
Total	=	79,000	BTU/Hr

\* Do not include direct-vent gas appliances. Direct-vent draws combustion air from the outdoors and vents to the outdoors.

- Compare the maximum BTU/Hr the space can support with the actual amount of BTU/ Hr used.

	_____ BTU/Hr (maximum the space can support)	
	_____ BTU/Hr (actual amount of BTU/Hr used)	
<i>Example:</i>	63,300 BTU/Hr (maximum the space can support)	
	79,000 BTU/Hr (actual amount of BTU/Hr used)	

The space in the above example is a confined space because the actual BTU/Hr used is more than the maximum BTU/Hr the space can support. You must provide additional fresh air.

Your options are as follows:

- Rework worksheet, adding the space of an adjoining room. If the extra space provides an unconfined space, remove door to adjoining room or add ventilation grills between rooms. See *Ventilation Air From Inside Building*, page 10.

# AIR FOR COMBUSTION AND VENTILATION

- B. Vent room directly to the outdoors. See *Ventilation Air from Outdoors*, page 11.
- C. Install a lower BTU/Hr firebox, if lower BTU/Hr size makes room unconfined.

If the actual BTU/Hr used is less than the maximum BTU/Hr the space can support, the space is an unconfined space. You will need no additional fresh air ventilation.

## WARNING

If the area in which the firebox and gas log heater may be operated is smaller than that defined as an unconfined space, provide adequate combustion and ventilation air by one of the methods described in the National Fuel Gas Code, ANSI Z223.1, 1992, Section 5.3.

## VENTILATION AIR

### Ventilation Air From Inside Building

This fresh air would come from an adjoining unconfined space. When ventilating to an adjoining unconfined space, you must provide two permanent openings: one within 12" of the ceiling and one within 12" of the floor into adjoining room ( see options in Figure 1).

Follow the *National Fuel Gas Code NFPA 54/ ANSI Z223.1, Section 5.3, Air for Combustion and Ventilation* for required size of ventilation grills or ducts.

## WARNING

Rework worksheet, adding the space of the adjoining unconfined space. The combined spaces must have enough fresh air to supply all appliances in both spaces.

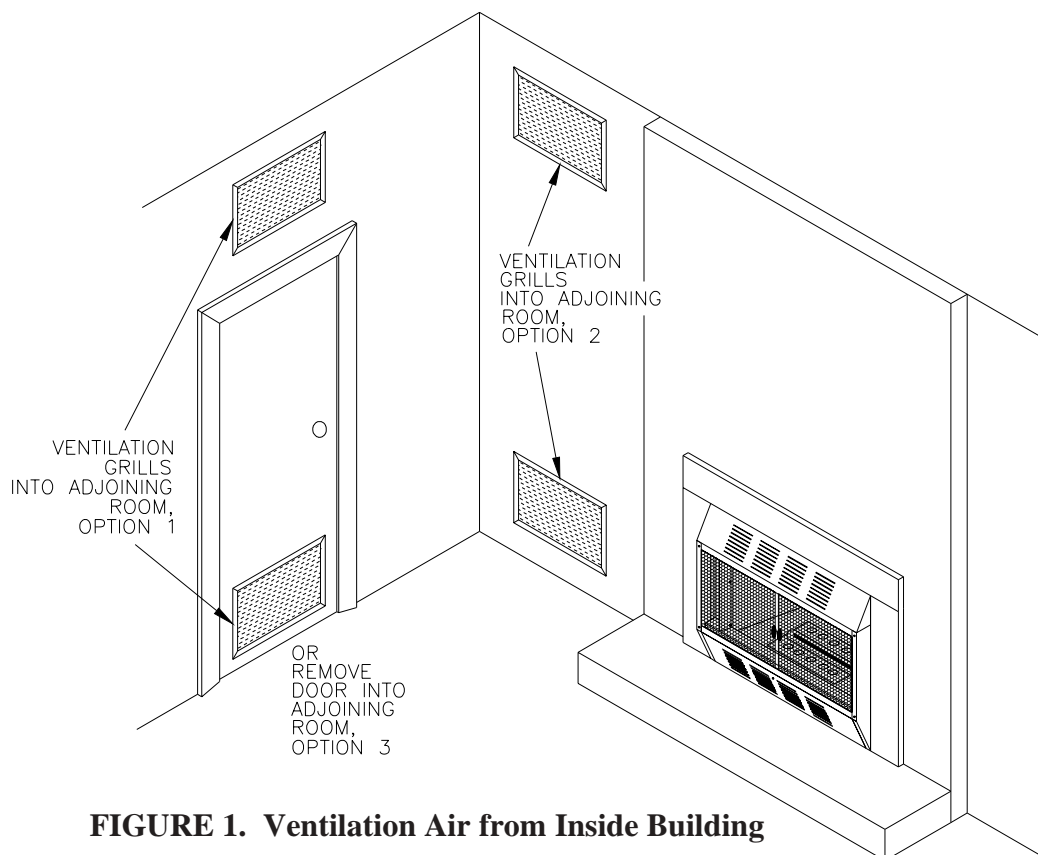


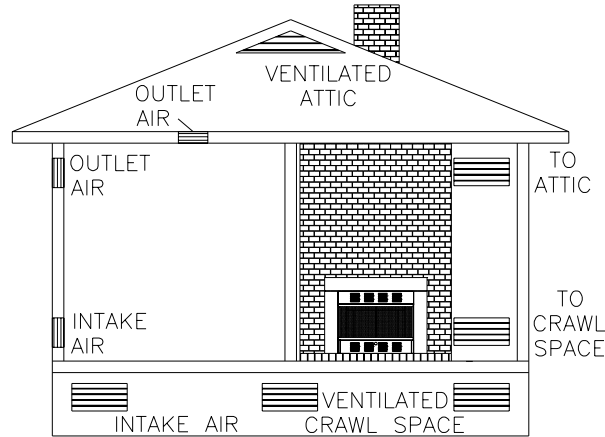
FIGURE 1. Ventilation Air from Inside Building

# AIR FOR COMBUSTION AND VENTILATION

## Ventilation Air From Outdoors

Provide extra fresh air by using ventilation grills or ducts. You must provide two permanent openings: one within 12" of the ceiling and one within 12" of the floor. Connect these items directly to the outdoors or spaces open to the outdoors. These spaces include attics and crawl spaces. (See Figure 2)

**IMPORTANT:** Do not provide openings for inlet or outlet air into attic if attic has a thermostat-controlled power vent. Heated air entering the attic will activate the power vent.

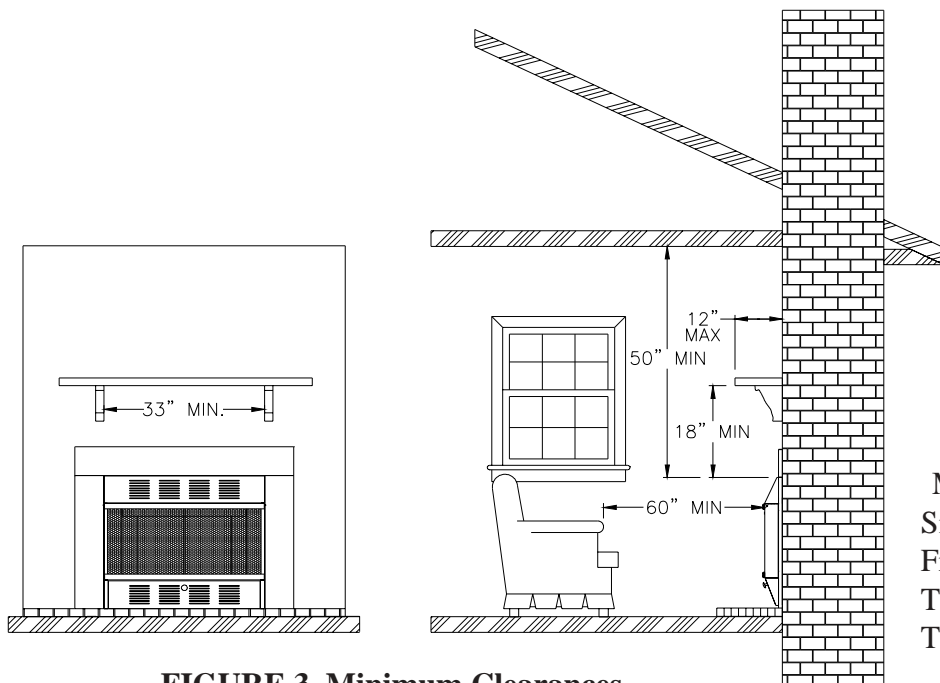


**FIGURE 2. Ventilation Air from Outdoors**

## CLEARANCES TO COMBUSTIBLES

**WARNING**

Ensure the minimum clearances shown in FIGURE 3 are maintained for accessibility for purposes of servicing and proper operation.



**Maintain these clearances to ensure adequate space around air opening for proper operation.**

- Minimum clearances to combustibles:
- Sides of heater.....8" MIN
- Front of heater.....60" MIN
- Top of heater.....50" MIN
- Top to Mantel.....18" MIN

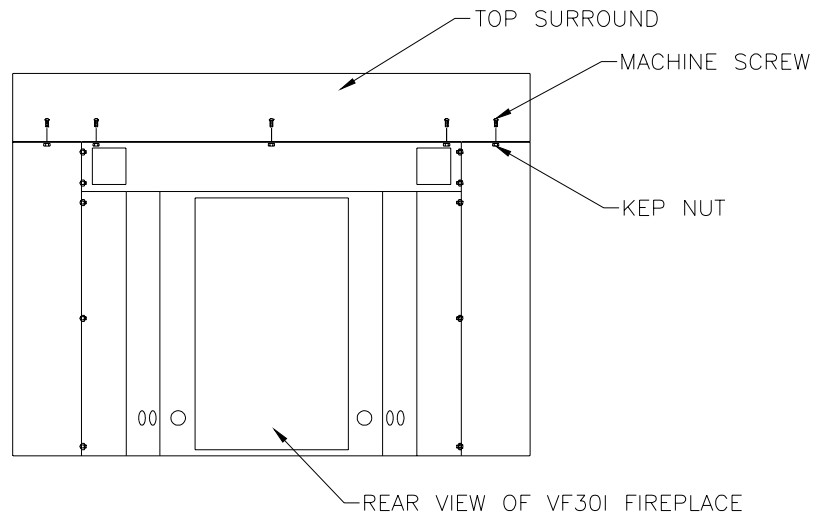
**FIGURE 3. Minimum Clearances**

# INSTALLING TOP SURROUND & BRASS TRIM

## INSTALLING TOP SURROUND

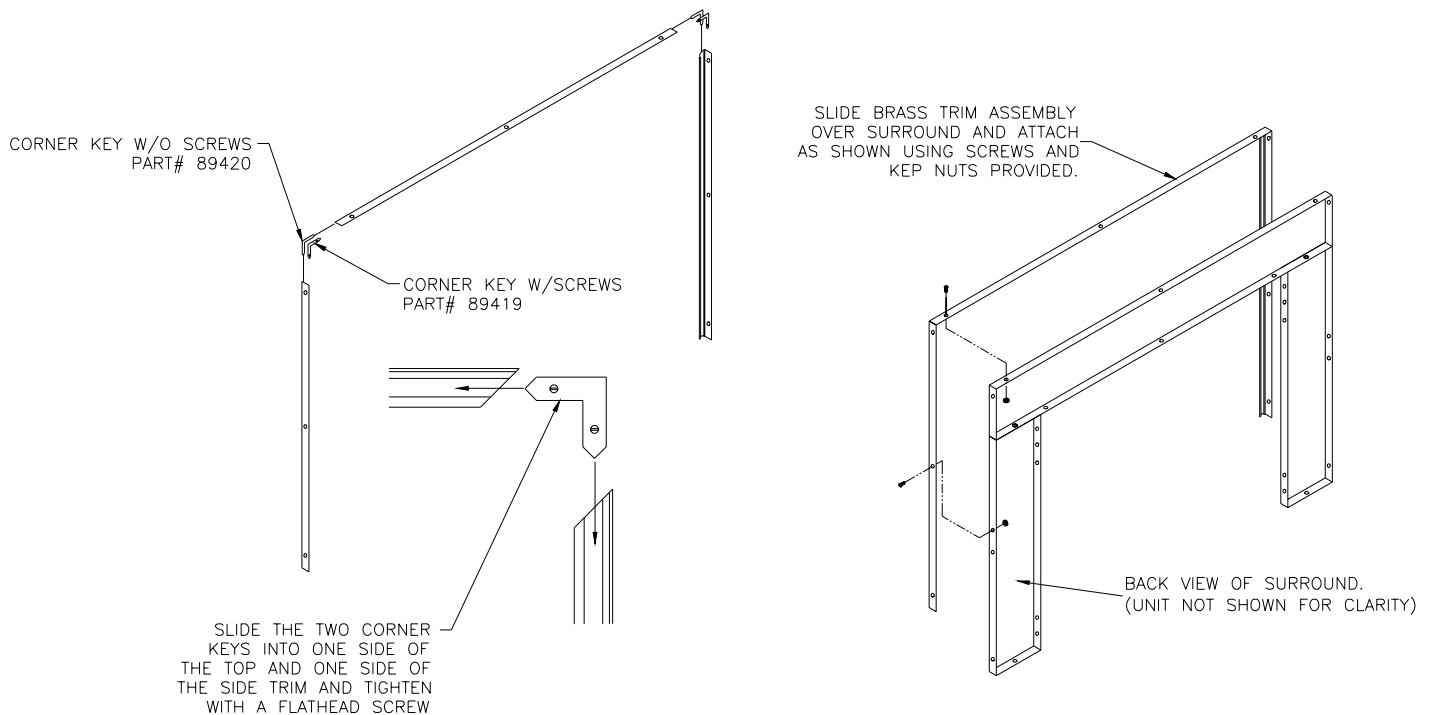
**NOTE: YOU WILL NEED A FLATHEAD SCREW-DRIVER AND A 3/8" NUT-DRIVER TO ATTACH THE SURROUND AND BRASS TRIM.**

The top surround is shipped unassembled for shipping purposes only. To install the top surround place the surround on top of the unit and line up the holes. Attach the top surround to the heater using (5) of the machine screws and kep nuts provided in the parts bag and tighten firmly.



## INSTALLING BRASS TRIM

Before attaching the brass trim to the surround you must first assemble the (3) brass trim pieces together. Do this you will use the (2) blank corner keys and the (2) corner keys w/screws. Place one each of the keys together for each side and slide them into the back grooves of the trim as shown below. Tighten the set screws with a flathead screw driver. (Do this for both sides) Now slide the Brass Trim Assembly over the surround and attach using the (9) remaining screws and kep nuts provided in the parts bag.



## BRASS KNOB INSTALLATION

For shipping purposes the brass knob on the lower access door comes mounted inside the door. Simply unscrew the knob using a screwdriver, turn the knob around to the outside and reattach.

# PREPARING FIREPLACE

**WARNING:** IF THIS APPLIANCE IS INSTALLED IN A FACTORY-BUILT FIREPLACE, DO NOT BLOCK OR RESTRICT ANY OF THE GRILLES ON THE FACTORY-BUILT FIREPLACE. THE GRILLES ALLOW AIR CIRCULATION WHICH PREVENTS THE FACTORY-BUILT FIREPLACE FROM OVERHEATING. BLOCKING OR RESTRICTING THE AIR CIRCULATION CAN CAUSE A FIRE HAZARD.

**WARNING:** BEFORE INSTALLING IN A SOLID FUEL FIREPLACE, THE CHIMNEY FLUE AND FIREBOX MUST BE CLEANED OF SOOT, CREOSOTE, ASHES AND LOOSE PAINT BY A QUALIFIED CHIMNEY CLEANER.

**WARNING:** DO NOT USE A BLOWER INSERT, HEAT EXCHANGER INSERT OR OTHER ACCESSORIES NOT APPROVED FOR USE WITH THIS HEATER.

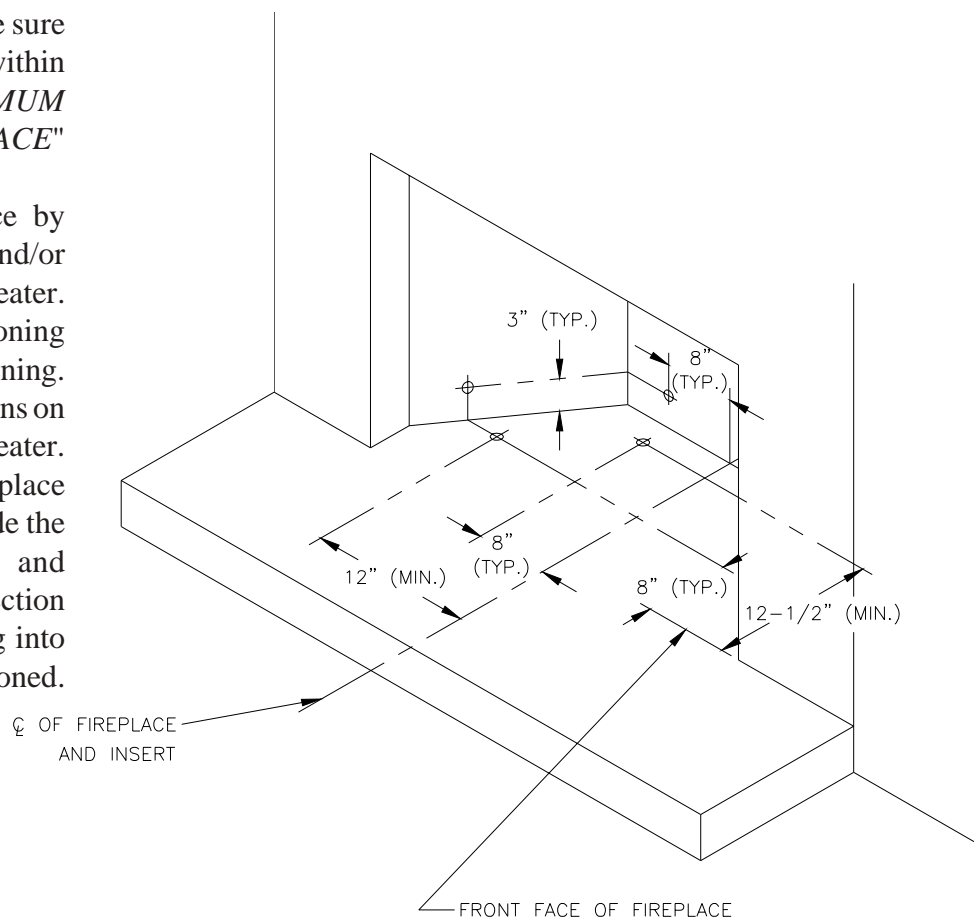
## IMPORTANT:

**THIS HEATER IS TO BE INSTALLED ONLY IN A NONCOMBUSTIBLE FIREPLACE SUITABLE FOR BURNING SOLID FUELS (WOOD OR COAL).**

**ANY OUTSIDE AIR DUCTS AND/OR ASH DUMPS IN THE FIREPLACE SHALL BE PERMANENTLY CLOSED AT THE TIME OF APPLIANCE INSTALLATION.**

### Preparing Fireplace:

1. Carefully check the fireplace to be sure it is large enough and constructed within the guidelines given in the "*MINIMUM AND MAXIMUM SIZE OF FIREPLACE*" section of this manual.
2. You must prepare the fireplace by cutting holes in the fireplace walls and/or base to run the gas inlet pipe into the heater. Below are basic guidelines for positioning the gas inlet pipe into the fireplace opening. See the following pages for instructions on connecting the gas inlet pipe to the heater.
3. Once you have prepared the fireplace for the heater, you will be able to slide the heater into the fireplace opening and complete the gas inlet pipe connection inside the heater. Do not run piping into the fireplace until the heater is positioned.



# GAS CONNECTION

## NOTICE

A qualified gas appliance installer must connect the fireplace to the gas supply. Consult all local codes.

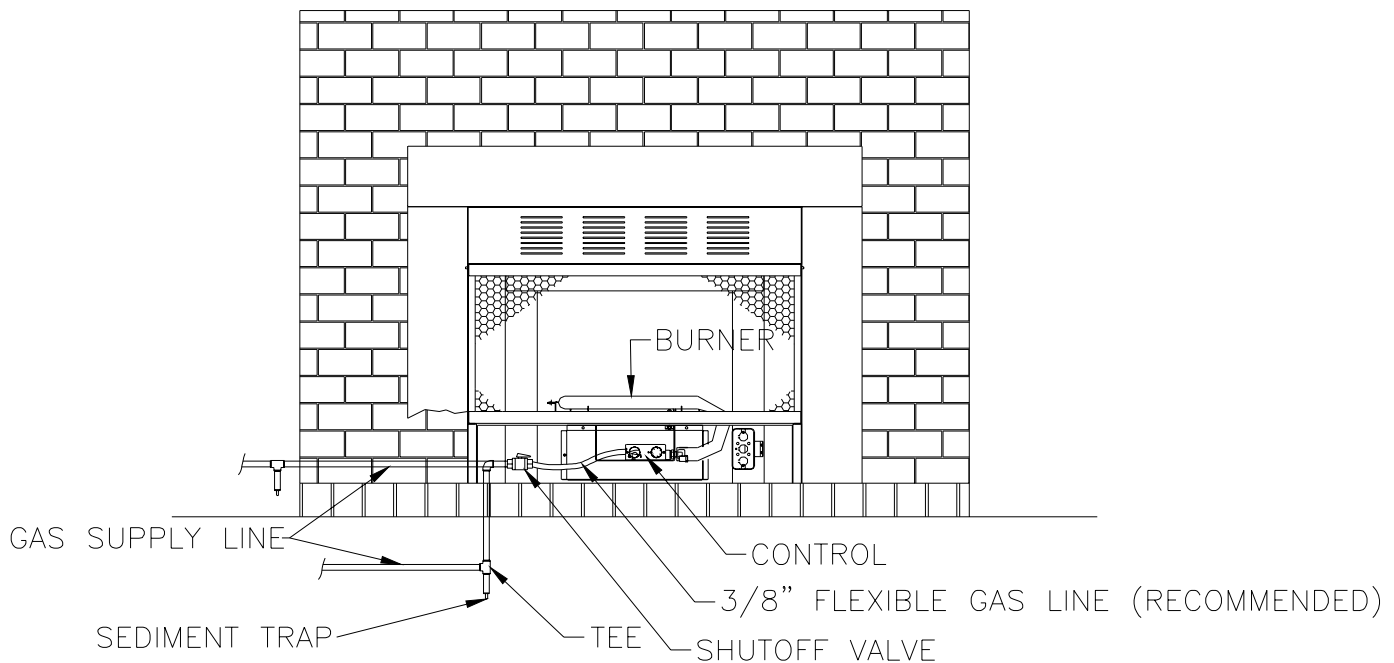
## CAUTION

Use new black iron or steel pipe only. Internally tinned copper tubing can be used in some areas when permitted by local codes. Only use pipe of 1/2" or greater diameter to allow full gas volume to heater. Excessive pressure loss will occur if the pipe is too small.

A manual shutoff valve, union and plugged 1/8" NPT pressure tapping point must be installed upstream of the heater (FIGURE 4).

A sediment trap must be installed upstream of the heater to prevent moisture and contaminants from passing through the pipe to the heater controls and burners. Failure to do so could prevent the heater from operating reliably (FIGURE 4).

**IMPORTANT:** Loosen the pipe adapter on the flex tube before installing to the system piping.



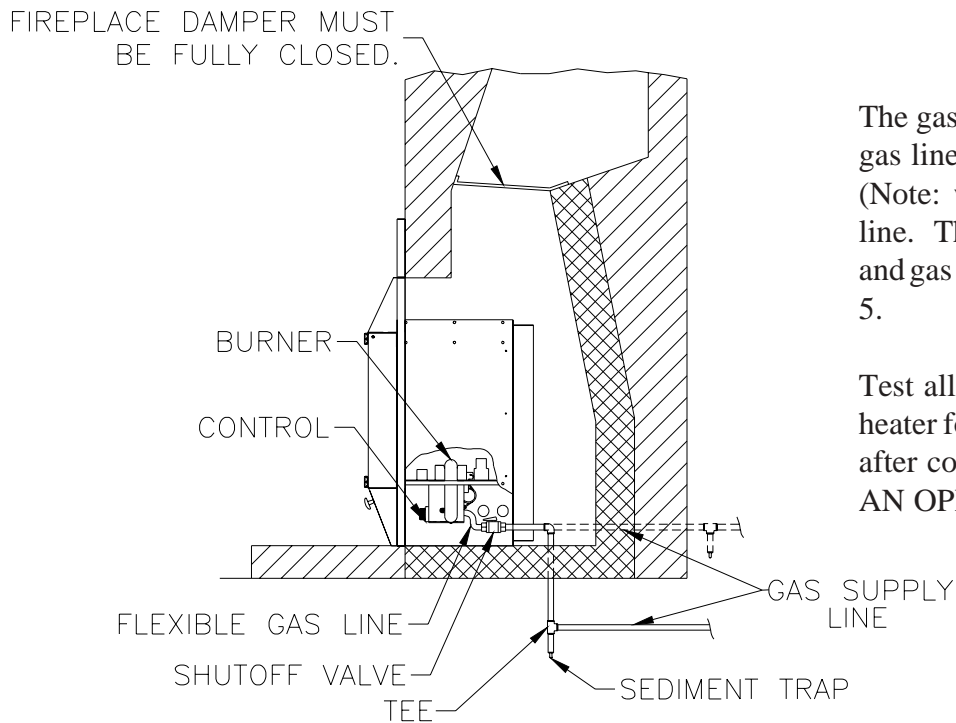
**FIGURE 4. Option #1 for gas connection**

**CHECK GAS TYPE:** The gas supply must be the same as stated on heater's rating plate. If the gas supply is different, DO NOT INSTALL the heater. Contact your dealer for the correct model.

## WARNING

Connecting directly to an unregulated propane/LPG tank can cause an explosion.

# GAS CONNECTION



The gas inlet connection is 3/8" NPT. Connect gas line to gas inlet on rear of control valve (Note: we recommend a 3/8" Flexible Gas line. Then connect a Manual Shutoff Valve and gas supply line as shown in FIGURES 4 & 5.

Test all gas joints from the gas meter to the heater for leaks using soap and water solution after completing connection. DO NOT USE AN OPEN FLAME.

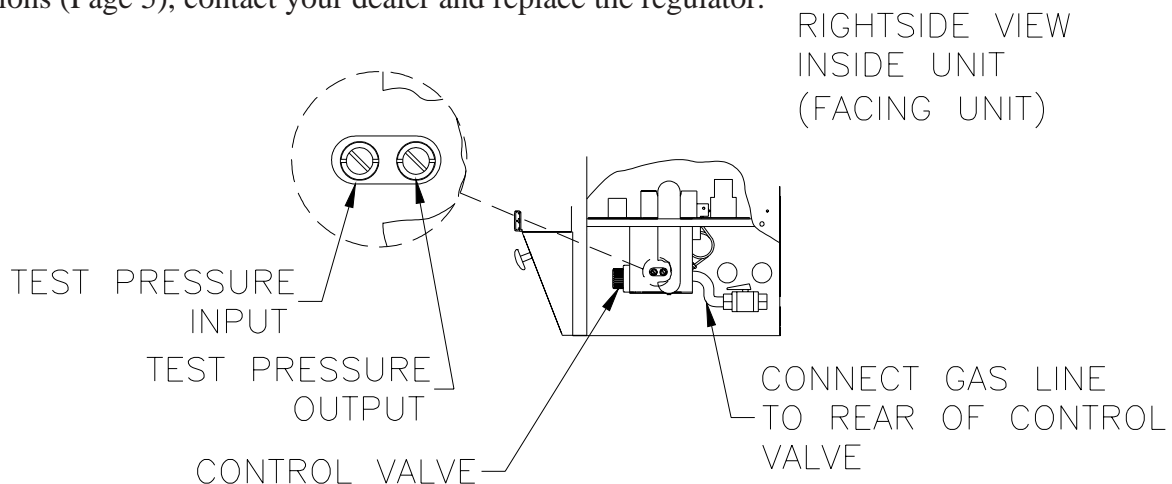
**FIGURE 5. Option #2 for gas connection**

## GAS PRESSURE CHECK

The heater regulator controls the burner pressure which should be checked at the pressure test point located on the right side of the main control and is accessible from the side of the gas log assembly (see FIGURE 6).

The pressure should be checked with the heater burning and the control set to high (HI).

The pressure regulator is preset and locked to avoid tampering. If the pressure is not as specified in Product Specifications (Page 5), contact your dealer and replace the regulator.

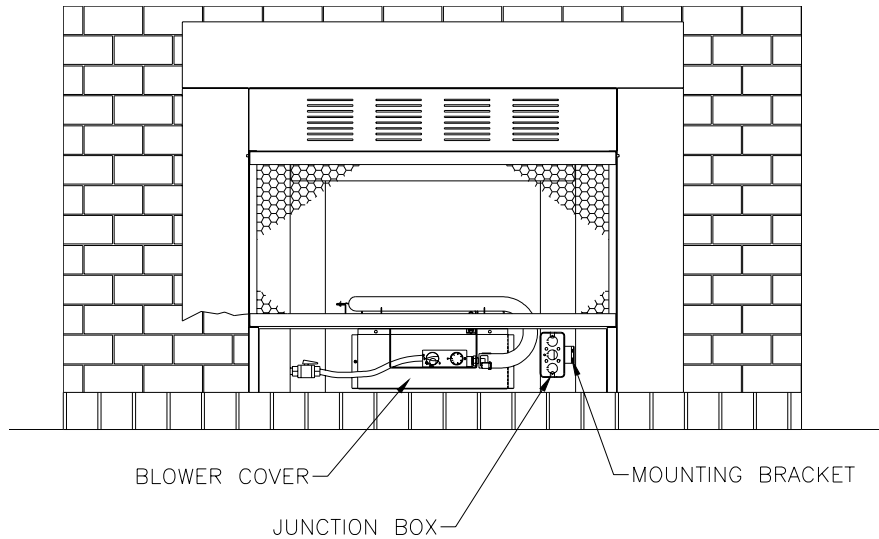


**FIGURE 6. Pressure Test Point Location**

# WIRING BLOWER ASSEMBLY

To locate the blower, open the lower access door and locate the blower cover as shown in FIGURE 7. The blower is located directly behind the blower cover. The blower comes partially pre-wired into the junction box. To complete wiring, run the house power supply into the heater through one of the knockouts located on either side of the firebox. Run house supply into junction box and wire as shown in wiring diagram below (Attach grounding wire to junction box). NOTE: Junction box and bracket comes mounted to the right side (facing unit). You can also mount the junction box on the left side if necessary.

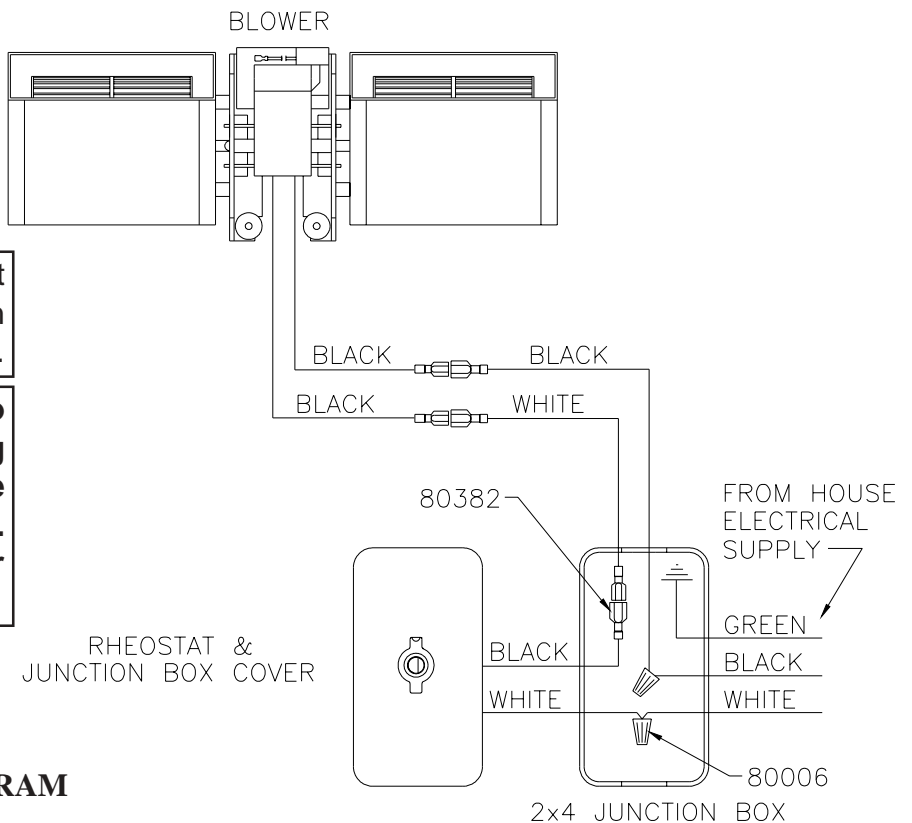
See "*Blower replace instructions*" supplied with replacement blower to remove blower.



**FIGURE 7. Blower Location**

**NOTE:** If any of the original wire must be replaced, it must be replaced with 600 volt, 150 C. wire or its equivalent.

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



**WIRING DIAGRAM**



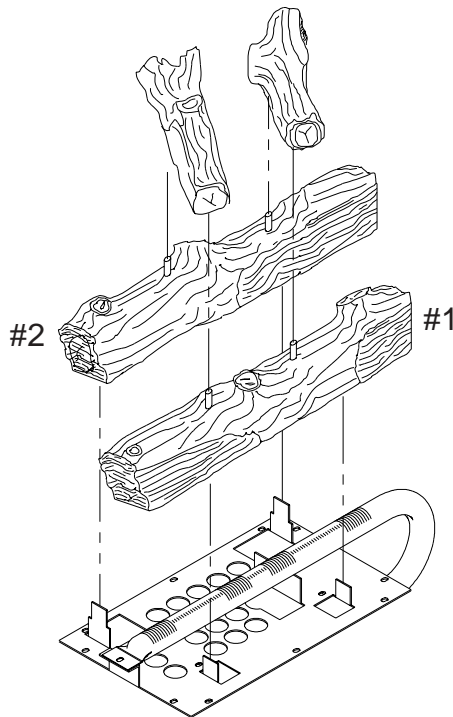
# LOGS AND LOG STOP ASSEMBLY

## LOG POSITIONING

This unit is supplied with a set of four ceramic fiber logs. Do not handle these logs with your bare hands! Always wear gloves to prevent skin irritation from ceramic fibers. After handling logs, wash your hands gently with soap and water to remove any traces of fibers.

## PROPER INSTALLATION SEQUENCE:

1. Install the rear log (#2) on the rear set of locators. Visually check to verify the log is securely placed on the locators.
2. Install the front log (#1) on the front locators. Visually check to verify the log is securely placed on the locators.
3. Install the left and right cross twigs as illustrated, on the locator pins provided in the front and rear logs. Holes provided in the bottom of the cross twigs should allow them to seat completely over these pins.



**WARNING:** Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this heater may result in property damage or personal injury.

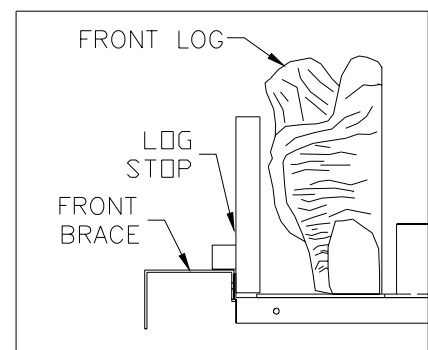
FIGURE 8. Log Set Assembly

**WARNING**

The positioning of the logs is critical to the safe and clean operation of this heater. Sooting and other problems may result if the logs are not properly and firmly situated in the appliance. Never add additional logs or embellishments such as pine cones, vermiculite or rock wool to the heater.

## LOG STOP POSITIONING

This unit is also supplied with a decorative Log Stop. To install the Log Stop simply place it in front of the Front Log, resting on the Front Brace as shown in the illustration to the right.



Cross section of firebox

# OPERATING INSTRUCTIONS

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Avoid any drafts that alter the burner flame patterns. Do not allow fans to blow directly into the heater. Do not place a blower inside burn area of firebox. Ceiling fans may create drafts that alter burner flame patterns. Sooting and improper burning will occur.

This unvented gas heater is intended to be smokeless. If logs appear to smoke, turn off the heater and call a qualified service person. Initial burn off may cause slight smoke and odor during the first four hours of operation.

## FOR YOUR SAFETY READ BEFORE LIGHTING

**WARNING**

**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 is equipped with an ignition device (Piezo) which automatically lights the pilot. If Piezo fails, then light the pilot using matches. Refer to match lighting instructions (page 20). 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 attempt 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 gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control 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. 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.

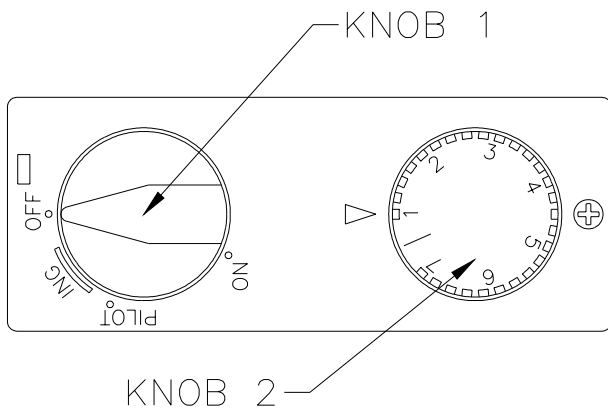
## FOR YOUR SAFETY

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

# OPERATING INSTRUCTIONS

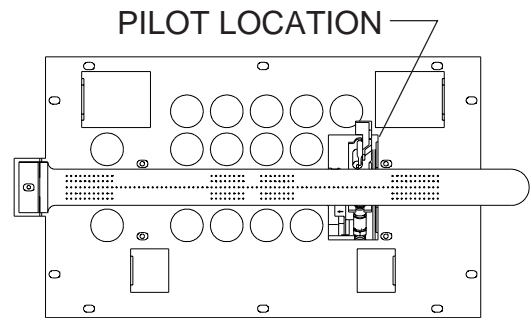
## LIGHTING INSTRUCTIONS

1. STOP! Read the safety information on the previous page.
2. Turn off all electrical power and open the access door.
3. Turn off the rear burner and set the front burner to low.
4. Push in gas control (knob 1) slightly and turn clockwise  to "OFF".







NOTE: Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly. Do not force.



5. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information on the previous page. If you don't smell gas, go on to the next step.



TOP VIEW OF BURNER ASSEMBLY

6. Push in the control (knob 1) all the way and rotate counter-clockwise  to "PILOT". The piezo ignitor will light the pilot as the knob passes "IGN" traveling to the "PILOT". Continue to hold the control (knob 1) in for about ten (10) seconds after the pilot is lit. Release knob and it should pop back up. Pilot should remain lit. If it goes out, repeat steps 4 through 6. If the control (knob 1) 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 1) to "OFF" and call your service technician or your gas supplier.
7. Turn gas control (knob 1) counter-clockwise  to "ON".
8. Set the burner (knob 2) to the desired setting rotating counter-clockwise  to MAX. and clockwise  to MIN.
9. Close access door and turn on electrical power.

## TURN OFF GAS TO APPLIANCE

1. Open access door.
2. Set burner to Min. by rotating knob clockwise  until stop.
3. Unplug all electric power if service is to be performed.
4. Push in gas control knob slightly and turn clockwise  to "OFF". Do not force.
5. Close access door.

# OPERATING INSTRUCTIONS

**WARNING**

**Wait 30 seconds before readjusting the heater when the control has been turned down to a lower setting.**

## MATCH LIGHTING INSTRUCTIONS

If the pilot will not light using the piezo ignitor, you can light the pilot with a match. First, locate the pilot. The pilot is located behind the burner tube on the right end (facing the unit), inside the firebox. To light pilot with a match, move the gas control (knob 1, pg. 19) to the pilot position and hold down. Light match and place near pilot. Once pilot is lit, continue to hold the knob for about ten seconds. Then follow steps 7 thru 9 on page 19.

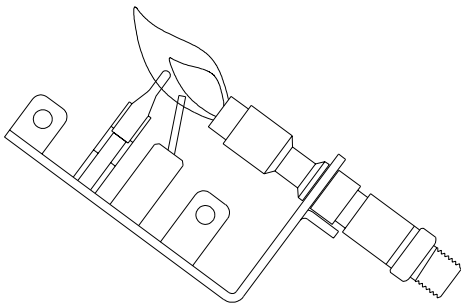
## CHECKING FLAME APPEARANCE

Flames from the pilot, front and rear burner should be visually checked when the heater is installed. In addition a periodic visual check of the flames should be made.

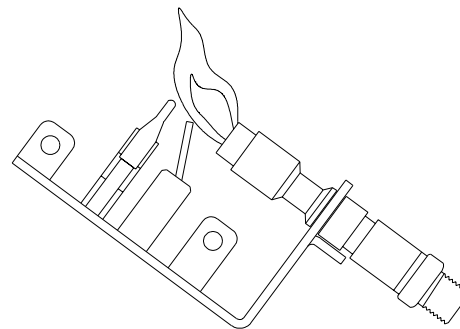
## PILOT FLAME

The pilot flame should always be present when the heater is in operation and should just touch the top of the thermocouple tip (FIGURE 9).

If the pilot flame does not touch the thermocouple, then the main burner is unlikely to function reliably (FIGURE 10).



**FIGURE 9. Pilot Flame**



**FIGURE 10. Incorrect Shape of Pilot Flame**

## CLEANING / SERVICING

Annual inspection and cleaning by your dealer or qualified service technician is recommended to prevent malfunction and/or sooting.

**WARNING**

**Turn off heater and allow to cool before cleaning.**

Remove logs, handling carefully by holding gently at each end. Gloves are recommended to prevent skin irritation from ceramic. If the skin becomes irritated, wash gently with soap and water. Refer to manual for correct log placement.

## Periodic Cleaning

- Do not use cleaning fluid to clean logs or any part of heater.
- Logs - Brush with soft bristle brush or vacuum with brush attachment.
- Vacuum loose particles and dust from the front and rear burner, control, and piezo.
- Inspect burner's and air intake hole. Remove lint or particles with vacuum.
- External case should be dusted and wiped with a wet soapy cloth.

## Annual Cleaning/Inspection

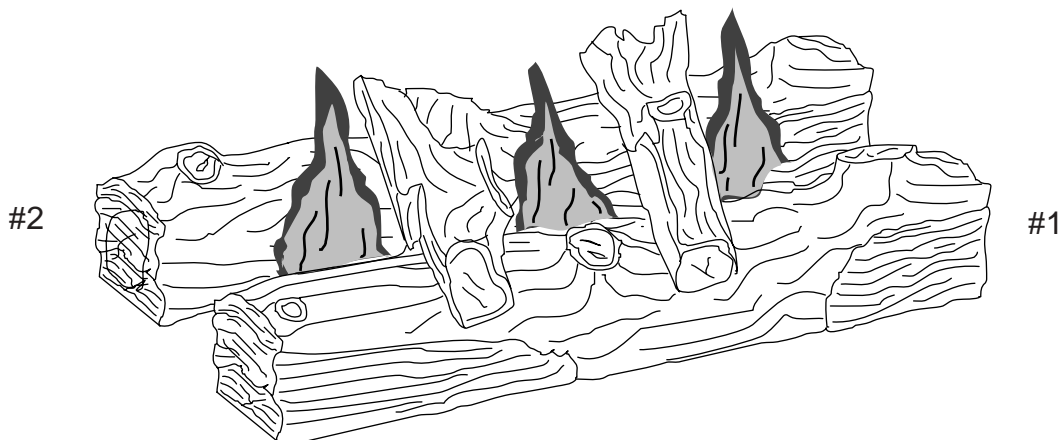
- Inspect and clean burner air intake holes.
- Inspect and clean all burner ports.
- Inspect ODS pilot for operation and accumulation of lint at air intake holes.
- Verify flame pattern and log placement for proper operation.
- Verify smooth and responsive ignition of the burner.

## FLAME APPEARANCE

In normal operation at full rate after 15 minutes the following flame appearance should be observed.

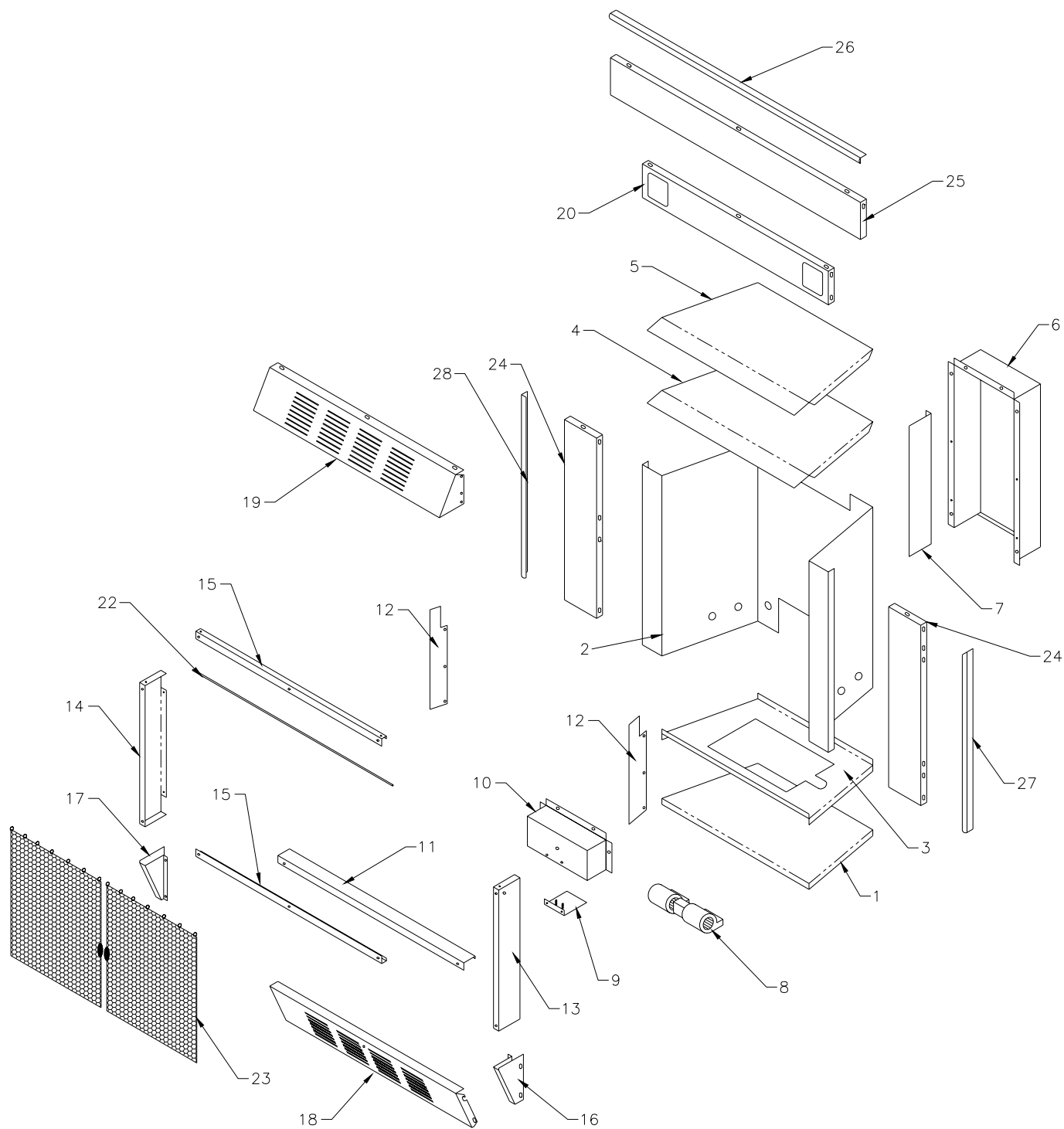
### FLAMES

The flames behind log #1, and in front of log #2, should be yellow with a blue base. The flames should not be impinging on the small cross twigs enough to cause sooting. (See Below, Figure 11)



**FIGURE 11. Flames - Natural Gas and LP Gas**  
(For illustration purposes only. See Figure 8 on page 17, for correct log placement.)

# HEATER ASSEMBLY REPLACEMENT PARTS

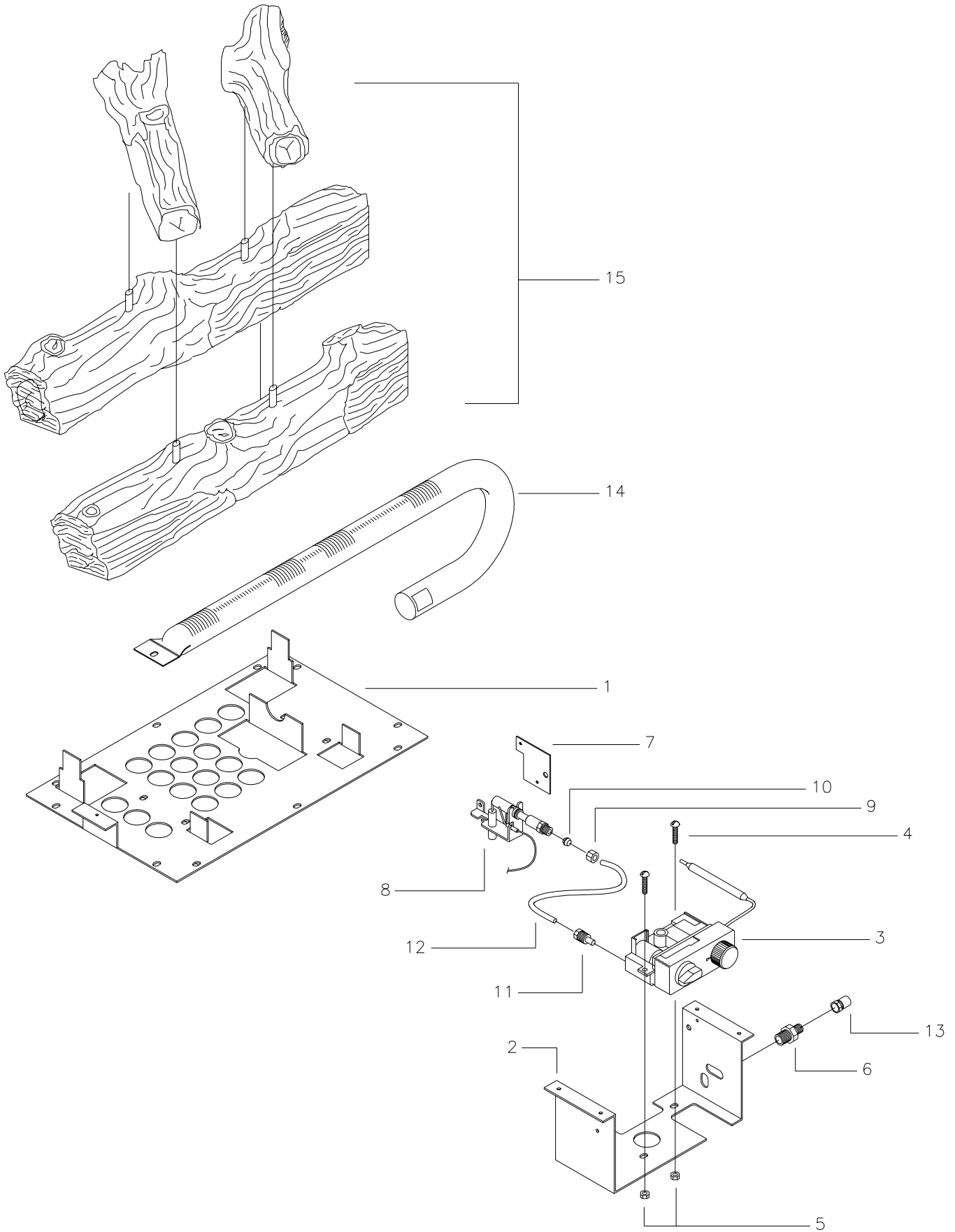


## PARTS LIST FOR HEATER ASSEMBLY

KEY	PART #	DESCRIPTION	QTY.
1	24731	CABINET BOTTOM	1
2	24732	FIREBOX	1
3	24733	FIREBOX BOTTOM	1
4	24734	INNER TOP	1
5	24735	OUTER TOP	1
6	69184	BLOWER CHANNEL	1
7	24738	DIVIDER	1
8	80337	120 CRM BLOWER	1
9	24759	BLOWER BASE	1
10	24761	BLOWER COVER	1
N/S	89390A	3/8" RUBBER GROMMET	1
11	24739	FRONT BRACE	1
12	24742	AIR SHIELD	2
13	24743	RIGHT WINDOW SIDE	1
14	24744	LEFT WINDOW SIDE	1
15	24745	WINDOW TOP/BOTTOM	2
16	24746	RIGHT SIDE COVER	1
17	24747	LEFT SIDE COVER	1
18	24748	ACCESS DOOR	1
N/S	83477	SHOULDER SCREW	4
N/S	89899	BRASS KNOB	1
N/S	83323	8-32 x 3/8" PH MACHINE SCREW	1
19	24749	TOP GRILL	1
20	24750	REAR AIR SHIELD	1
21	89659	BRASS TRIM	2
22	89902	CURTAIN ROD	1
23	89903	DRAW CURTAIN	2
N/S	83818	CLIP SPRING	2
24	24755	SIDE TRIM	2
25	24756	TOP TRIM	1
26	89905	TOP SURROUND BRASS TRIM	1
27	89906	RIGHT SURROUND BRASS TRIM	1
28	89907	LEFT SURROUND BRASS TRIM	1
N/S	83887	THERMOCOUPLE BRACKET	1

**N/S = NOT SHOWN**

# BURNER & LOG ASSEMBLY





# PARTS LIST FOR GAS LOG ASSEMBLY

KEY	PART#	DESCRIPTION	QTY.
1	24751	BURNER PLATE	1
2	24752	CONTROL BRACKET	1
3	81195	CONTROL VALVE (NATURAL)	1
	81196	CONTROL VALVE (L.P.)	1
4	83251	10-24 x 1 SL ROD	2
5	83244	10-24 KEP NUT	2
6	89831	BURNER CONTROL FITTING	1
7	24754	PLOT BRACKET	1
8	89872	NATURAL PLOT	1
	89873	L.P. PLOT	1
9	89841	3/16 NUT	1
10	89842	3/16 COMPRESSON SLEEVE	1
11	89856	3/16 LOXIF	1
12	89855	PLOT TUBE	1
13	89909	#38 NATURAL ORFCE	1
	89910	#.0625 L.P. ORFCE	1
14	89904	BURNER	1
15	89826	LOG SET	1
N/S	89676	LOG STOP W ELDMENT	1

# TROUBLESHOOTING

**WARNING**

**Turn off and let cool before servicing. Only a qualified service person should service and repair heater.**

*NOTE: All troubleshooting items are listed in order of operation.*

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
When ignitor button is pressed, there is no spark at ODS/Pilot.	<ul style="list-style-type: none"> <li>Ignitor electrode positioned wrong</li> <li>Ignitor electrode is broken</li> <li>Ignitor electrode not connected to ignitor cable.</li> <li>Ignitor cable pinched or wet keep ignitor cable dry.</li> <li>Broken ignitor cable</li> <li>Bad piezo ignitor</li> </ul>	<ul style="list-style-type: none"> <li>Replace ignitor.</li> <li>Replace ignitor.</li> <li>Reconnect ignitor cable.</li> <li>Free ignitor cable if pinched by any metal or tubing.</li> <li>Replace ignitor cable.</li> <li>Replace piezo ignitor.</li> </ul>
Appliance produces unwanted odors.	<ul style="list-style-type: none"> <li>Appliance burning vapors from paint, hair spray, glues, etc.</li> <li>Gas leak.</li> </ul>	<ul style="list-style-type: none"> <li>Ventilate room. Stop using odor-causing products while heater is running.</li> <li>Locate and correct all leaks.</li> </ul>
Appliance shuts off in use.	<ul style="list-style-type: none"> <li>Not enough fresh air is available for ODS/Pilot to operate.</li> <li>Low line pressure.</li> <li>ODS/Pilot is partially clogged.</li> </ul>	<ul style="list-style-type: none"> <li>Open window and/or door ventilation</li> <li>Contact local gas company.</li> <li>Clean ODS/Pilot.</li> </ul>
Gas odor even when control knob is in OFF position.	<ul style="list-style-type: none"> <li>Gas leak.</li> <li>Control valve defective.</li> </ul>	<ul style="list-style-type: none"> <li>Locate and correct all leaks.</li> <li>Replace control valve.</li> </ul>
When ignitor button is pressed, there is spark at ODS/Pilot, but no ignition.	<ul style="list-style-type: none"> <li>Gas supply turned off or manual shutoff valve closed.</li> <li>Control knob not in PILOT position.</li> <li>Control knob not pressed in while in Pilot position</li> <li>Air in gas lines when installed.</li> <li>ODS/Pilot is clogged.</li> <li>Gas regulator setting is not correct.</li> </ul>	<ul style="list-style-type: none"> <li>Turn on gas supply or open manual shutoff valve.</li> <li>Turn control knob while in PILOT position.</li> <li>Press in control knob while in PILOT position.</li> <li>Continue holding down control knob. Repeat igniting operation until air is removed</li> <li>Replace ODS/pilot assembly or get is serviced</li> </ul>
ODS/Pilot lights, but flame goes out when control knob is released.	<ul style="list-style-type: none"> <li>Control knob not fully pressed in.</li> <li>Control knob not pressed in long enough.</li> <li>Manual shutoff valve not fully open.</li> </ul>	<ul style="list-style-type: none"> <li>Replace gas regulator.</li> <li>Press in control knob fully.</li> <li>After ODS/pilot lights, keep control knob pressed in 30 seconds.</li> </ul>

• Fully open manual shutoff valve.

## TROUBLESHOOTING, CONTINUED...

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
<p>ODS/Pilot lights, but flame goes out When control knob is released. (continued from page 25)</p>	<ul style="list-style-type: none"> <li>• Thermocouple connection loose at control valve.</li> <li>• Pilot flame not touching thermocouple, which allows thermocouple to cool, causing pilot flame to go out. This problem could be caused by either low gas pressure, or a dirty or partially clogged ODS/pilot.</li> <li>• Thermocouple damaged.</li> <li>• Control valve damaged.</li> </ul>	<ul style="list-style-type: none"> <li>• Hand tighten until snug, then tighten 1/4 turn more.</li> <li>• Contact local gas company.</li>   <li>• Replace thermocouple.</li> <li>• Replace control valve.</li> </ul>
<p>One or both burner do not light after ODS/pilot is lit.</p>	<ul style="list-style-type: none"> <li>• Burner orifice is clogged.</li> <li>• Burner orifice diameter is too small.</li> <li>• Inlet gas pressure is too low.</li> </ul>	<ul style="list-style-type: none"> <li>• Clean burner or replace burner orifice.</li> <li>• Replace burner orifice.</li> <li>• Contact qualified service person.</li> </ul>
<p>Burner backfires during combustion.</p>	<ul style="list-style-type: none"> <li>• Manifold pressure is too low.</li> <li>• Burner orifice is clogged.</li> </ul>	<ul style="list-style-type: none"> <li>• Contact local gas company.</li> <li>• Clean burner or replace burner orifice.</li> </ul>
<p>Slight smoke or odor during initial operation.</p>	<ul style="list-style-type: none"> <li>• Burner orifice is clogged or damaged.</li> <li>• Burner is damaged.</li> <li>• Gas regulator defective.</li> </ul>	<ul style="list-style-type: none"> <li>• Clean burner or replace burner orifice.</li> <li>• Replace burner.</li> <li>• Replace gas regulator.</li> </ul>
<p>Logs appear to smoke after initial operation.</p>	<ul style="list-style-type: none"> <li>• Vapors from paint or curing process of logs.</li> </ul>	<ul style="list-style-type: none"> <li>• Problem will stop after a few hours of operation. Run the heater with the damper open if you have one, or open a window for the first few hours.</li> <li>• Log heater is intended to be smokeless. Turn OFF heater and call qualified service person.</li> </ul>
<p>Heater produces a whistling noise when burner is lit.</p>	<ul style="list-style-type: none"> <li>• Turning control knob to HIGH (3) position when burner is cold.</li> <li>• Air in gas line.</li> <li>• Dirty or partially clogged burner orifice.</li> </ul>	<ul style="list-style-type: none"> <li>• Turn control knob to LOW (2) position and let warm up for a minute.</li> <li>• Operate burner until air is removed from line. Have gas line checked by local gas company.</li> <li>• Clean burner or replace burner orifice.</li> </ul>
<p>No gas to pilot.</p>	<ul style="list-style-type: none"> <li>• LP-regulator shut down due to inlet pressure too high.</li> </ul>	<ul style="list-style-type: none"> <li>• Verify LP tank regulator is installed and set to 11" to 13" w.c. Replace regulator on heater.</li> </ul>

**WARNING**

**If the gas quality is bad, your pilot may not stay lit, the burners may produce soot and the heater may backfire when lit. If the gas quality or pressure is low, contact your local gas supplier immediately.**

---

# OWNERS MANUAL

## HOW TO ORDER REPAIR PARTS OR "OPTIONS"

THIS MANUAL WILL HELP YOU TO OBTAIN EFFICIENT, DEPENDABLE SERVICE FROM THE FURNACE, AND ENABLE YOU TO ORDER REPAIR PARTS CORRECTLY.

KEEP IN A SAFE PLACE FOR FUTURE REFERENCE.

WHEN WRITING, ALWAYS GIVE THE FULL MODEL NUMBER WHICH IS ON THE NAMEPLATE ATTACHED INSIDE THE FRONT OF THE HEATER.

WHEN ORDERING REPAIR PARTS OR OPTIONS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST:

1. The **PART NUMBER**
2. The **PART DESCRIPTION**
3. The **MODEL NUMBER:**  VF30IN  VF30IL
4. The **SERIAL NUMBER** \_\_\_\_\_

BEFORE INSTALLING YOUR HEATER, FILL IN THE SERIAL NUMBER IN THE SPACE PROVIDED ABOVE FOR YOUR RECORDS.



## UNITED STATES STOVE COMPANY

227 Industrial Park Rd., P.O. Box 151  
South Pittsburg, TN 37380  
(423) 837-2100

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