



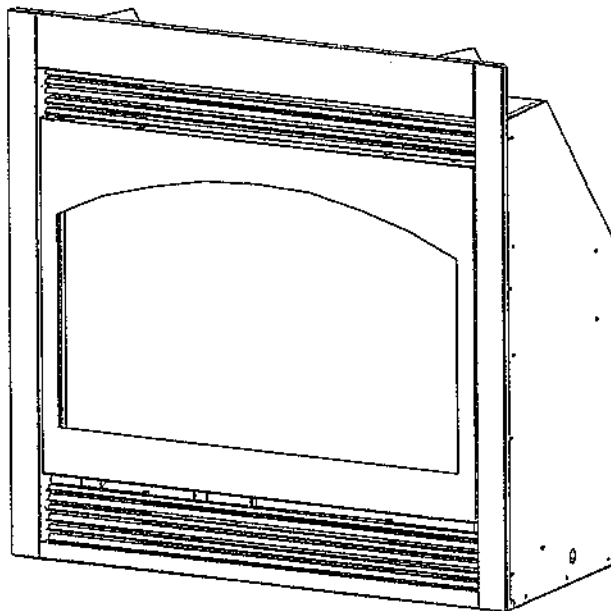
INSTALLATION & OPERATING MANUAL

#842 DIRECT VENT

DESIGN-CERTIFIED TO:

DECORATIVE & WALL FURNACE ANSI PERFORMANCE & SAFETY STANDARDS

PATENT PENDING



Warnock Hersey



IMPORTANT
READ INSTRUCTIONS CAREFULLY BEFORE
INSTALLATION. FAILURE TO INSTALL THIS
FIREPLACE CORRECTLY CAN CAUSE SERIOUS
STRUCTURAL AND FIRE HAZARDS AND
MAY VOID YOUR WARRANTY.

September 1997

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INSTALLATION & OPERATING INSTRUCTIONS

IMPORTANT:

READ THIS MANUAL BEFORE INSTALLING AND USING THIS FIREPLACE

MODEL #842 DIRECT VENT DECORATIVE / ROOM HEATER GAS BURNING FIREPLACE

INSTALLATION AND SERVICE MUST BE PERFORMED BY A QUALIFIED INSTALLER,
SERVICE AGENCY OR THE GAS SUPPLIER.

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.

This fireplace has been tested to and complies with ANSI Z21.44 -1993 "GAS-FIRED DIRECT VENT WALL FURNACES" (manual flue damper closed) and ANSI Z21.50 VENTED DECORATIVE GAS APPLIANCES (manual flue damper open). Installation must conform with local building codes or in the absence of local building codes, with the National Fuel Gas Code, ANSI Z223.1-1992 NFPA 54.

MAY BE INSTALLED IN A MOBILE (MANUFACTURED) HOME AFTER THE FIRST SALE.

FOR YOUR SAFETY

WHAT TO DO IF YOU SMELL GAS

- ◆ Open windows.
- ◆ Extinguish any open flame.
- ◆ Do not try to light any appliance.
- ◆ Do not touch any electrical switch; do not use any phone in your building.
- ◆ Immediately call you gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- ◆ If you cannot reach your gas supplier, call the fire department.
- ◆ Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

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

WARNING: DO NOT REPLACE THIS BURNER UNIT WITH ANY OTHER SIZED BURNER. REPLACEMENT WITH AN UNAUTHORIZED BURNER CAN RESULT IN TEMPERATURES EXCEEDING THE LIMITS FOR THIS UNIT, AND VOID YOUR WARRANTY.

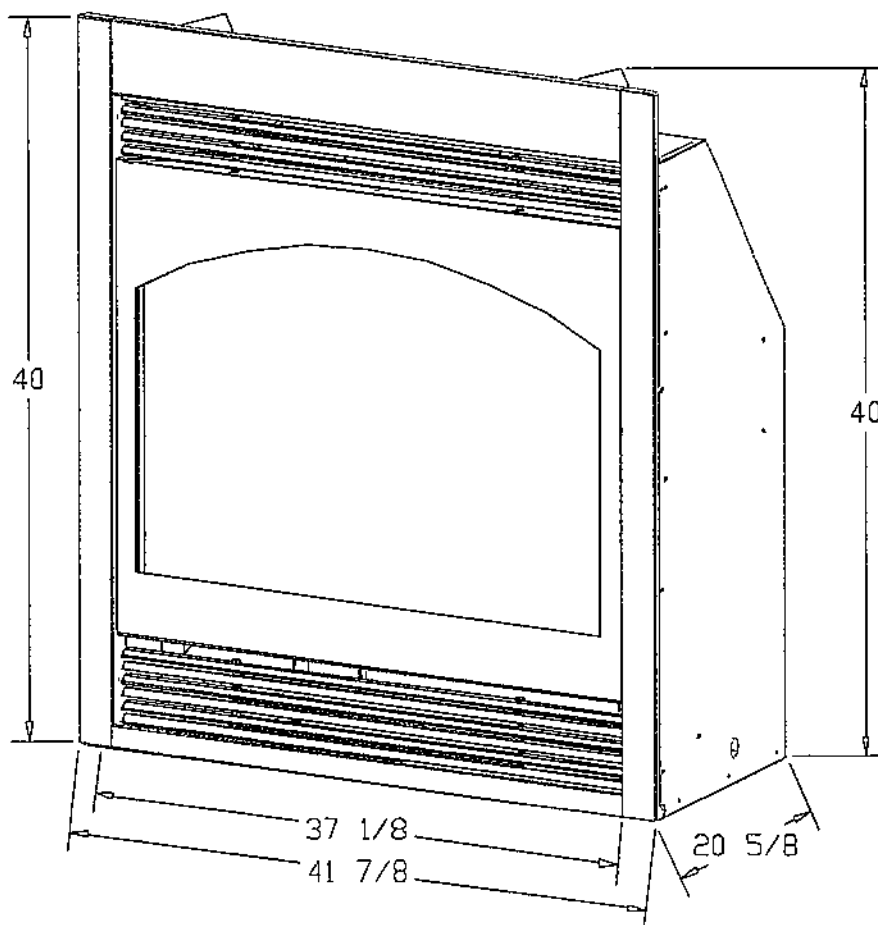
IMPORTANT:

FACING MATERIAL MAY BE APPLIED OVER THE FACE. TO PREVENT THE FACING MATERIAL FROM CRACKING AND FALLING OFF DUE TO EXPANSION OF THE FACE WHEN HEATED, DO NOT ATTACH FACING MATERIAL DIRECTLY TO THE FACE OF THE UNIT.

UNIT SPECIFICATIONS - Figure 1:

HEIGHT (TOP OF FACE):	40"
HEIGHT (TOP OF STAND-OFF):	40"
FRONT WIDTH:	41 7/8"
BACK WIDTH:	31"
DEPTH (INCLUDES FACE):	20 5/8"
FLUE SIZE:	5" exhaust, 8" intake

FIGURE 1



VENTING GUIDELINES

IMPORTANT: THIS UNIT IS APPROVED FOR USE ONLY WITH ONE OF THE FOLLOWING DIRECT VENT SYSTEMS. THESE SYSTEMS MAY USED FOR HORIZONTAL OR VERTICAL TERMINATIONS.

- #844 DIRECT VENT TERMINATION KIT - for terminations of 6' or less.
 - #845 DIRECT VENT TERMINATION KIT - for terminations greater than 6' but less than 8'.
 - #846 DIRECT VENT EXTENSION KIT-6'
- SIMPSON DURA-VENT DV-GS DIRECT VENT CHIMNEY SYSTEM

Refer to pages #8- 13 for complete venting installation instructions / requirements.

CLEARANCES:

Minimum clearance to combustible material:

From units sides & back:	0"	From heat outlet to mantle:	14"
From unit top stand-off:	0"	From unit glazing (glass) to adjacent sidewall:	12"
To flooring:	0"	From unit to enclosure ceiling:	4"
From #800 Series flexible chimney:	2"	From Dura-Vent chimney system:	1"

NOTE: Even though the minimum clearance from the sides and back is 0", we recommend that you allow an expansion space of 1/4" from the sides and back. If this expansion space is not left, the unit will make a loud 'banging' noise when it heats up or cools down and cracking of any face material used may occur.

A) POSITION THE UNIT - figure 2.

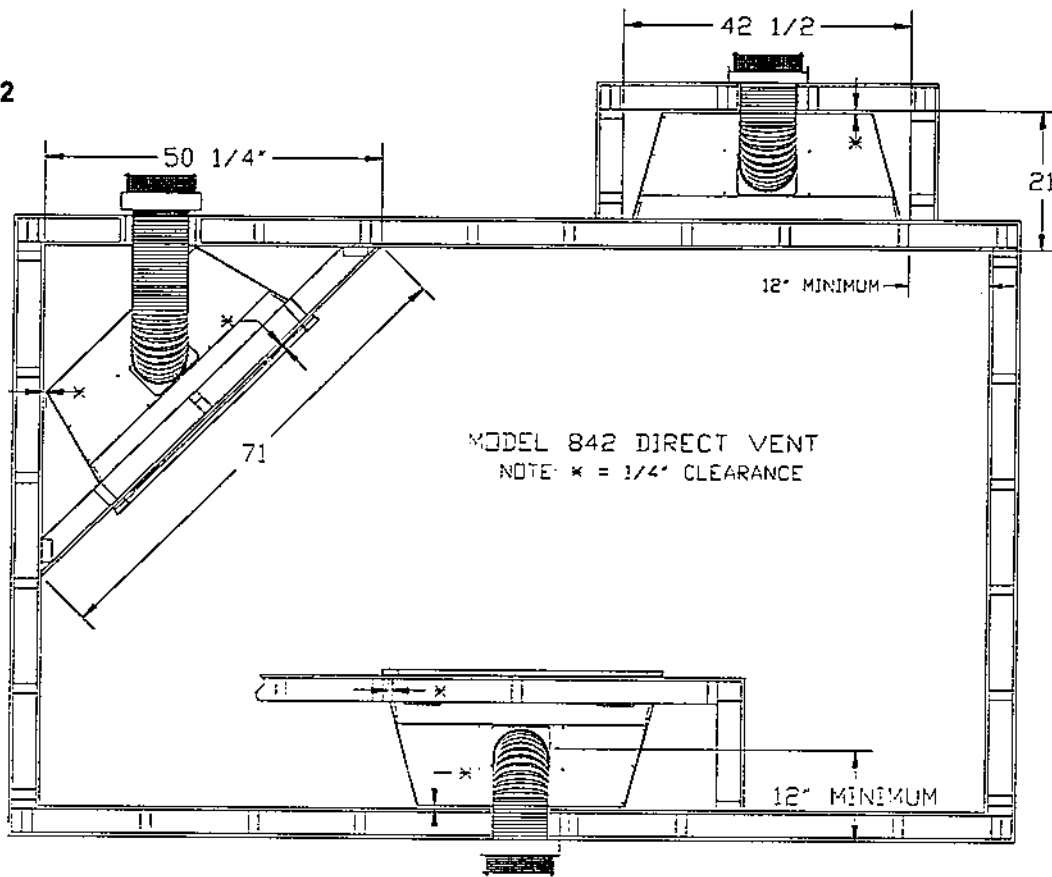
1. Determine the exact position of your fireplace. If possible place the fireplace in such a manner that the piping will be placed between two studs so additional framing is not necessary.
2. The unit may be installed on either the outside or inside of an exterior wall. See figure 2.

CAUTION: THE SURROUNDING WOOD CHASE OF THE OUTSIDE WALL MUST BE INSULATED TO PREVENT COLD AIR FROM ENTERING THE ROOM.

<p>NOTE: Due to high temperatures, this unit should be located out of traffic areas and away from furniture and draperies.</p>

3. Ensure the proper clearances are followed as outlined above.

FIGURE 2



4. Frame an opening for the firestop.

TYPICAL HORIZONTAL INSTALLATIONS:

Dimensions are 12 1/2" wide x 12 1/2" high when using the #800 series direct vent kits and 11" X 11" when using the Dura-Vent chimney system. The center of this opening must be a minimum of 65 1/2" * above the height of the hearth (optional). See Fig. 3.

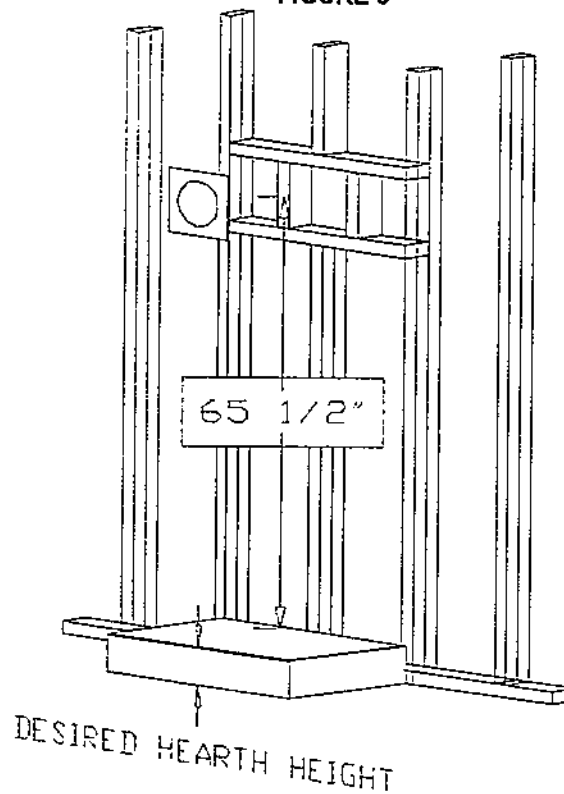
DIRECT THROUGH-THE-WALL INSTALLATIONS:

For direct through-the-wall installations, *Simpson Dura-Vent DV-GS 5" x 8" Chimney system only*, the center of this 11" x 11" framed opening is 39 5/8" above the height of the hearth (optional). Refer to pages #8 & #9 for additional specifications.

5. Secure firestop to framed opening from the inside.

***IMPORTANT:** This measurement is determined by the vertical height and horizontal length of the venting application desired. The measurement is to the CENTER of the pipe. Please refer to pages #8 & #9 of this installation manual for requirements and restrictions.

FIGURE 3



6. Rough in the wall enclosure. The minimum rough opening dimensions are 42 1/2" wide, 40 1/4" high and 21" deep. Build the hearth to the desired size and height. See Figure 4.

NOTE: When the unit is installed directly on carpeting, tile, or other combustible materials other than wood flooring, it must be installed on a metal or wood panel extending the full width and depth of the unit. The minimum for the support platform under the unit is 42" wide by 20 5/8" deep. If masonry is to be used, (optional), prepare the necessary foundation for the masonry load. When masonry construction is being used, a lintel must be used over the top of the unit to support the added weight.

NOTE: A hearth is not required. If a hearth is desired, combustible materials may be used.

NOTE: Provide for a minimum of 6" of clearance in front of the lower grill. This will provide adequate space for opening to operate the control valve.

Do not obstruct the upper and lower grill areas to allow proper ventilation air around the unit. Air enters the unit at the lower grill and exits at the upper grill. Do not block this passage.

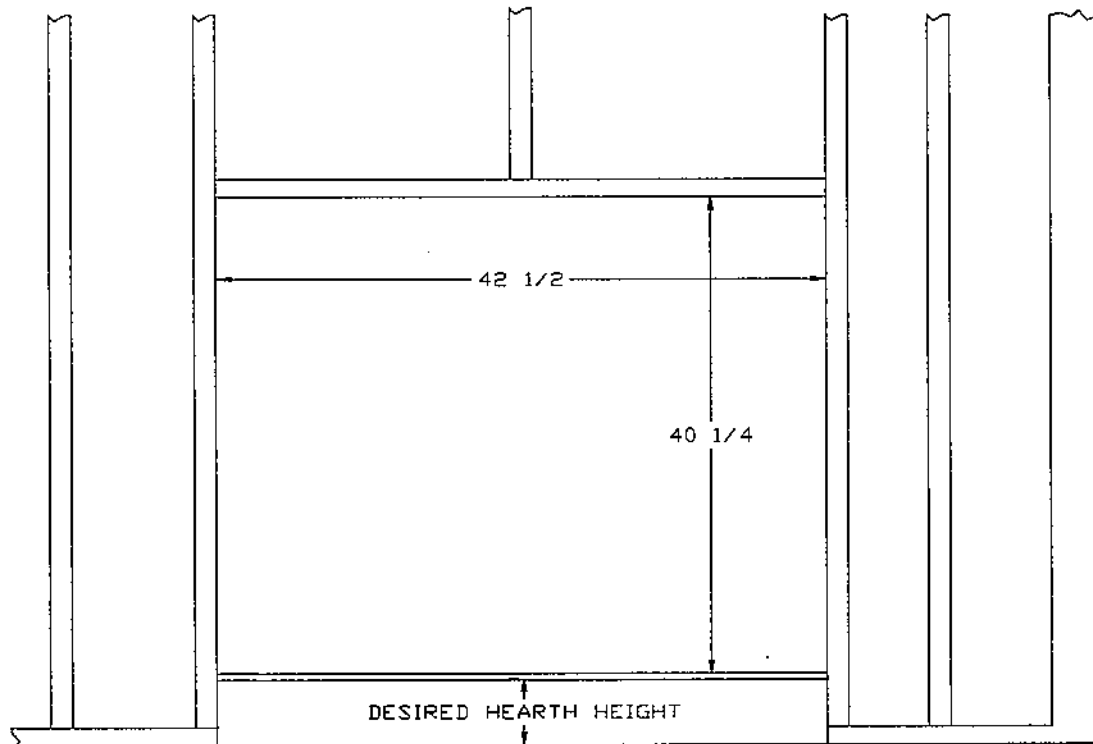


FIGURE 4

B) PREPARE THE UNIT.

1. REMOVE THE UPPER GRILL & ARCHED VALANCE See figure 5.

A. Remove the upper grill by lifting it up far enough to clear the bottom holes and pull the bottom of the grill out.

B. Remove the arched valance by pulling the bottom out, then lifting it up and off the screws.

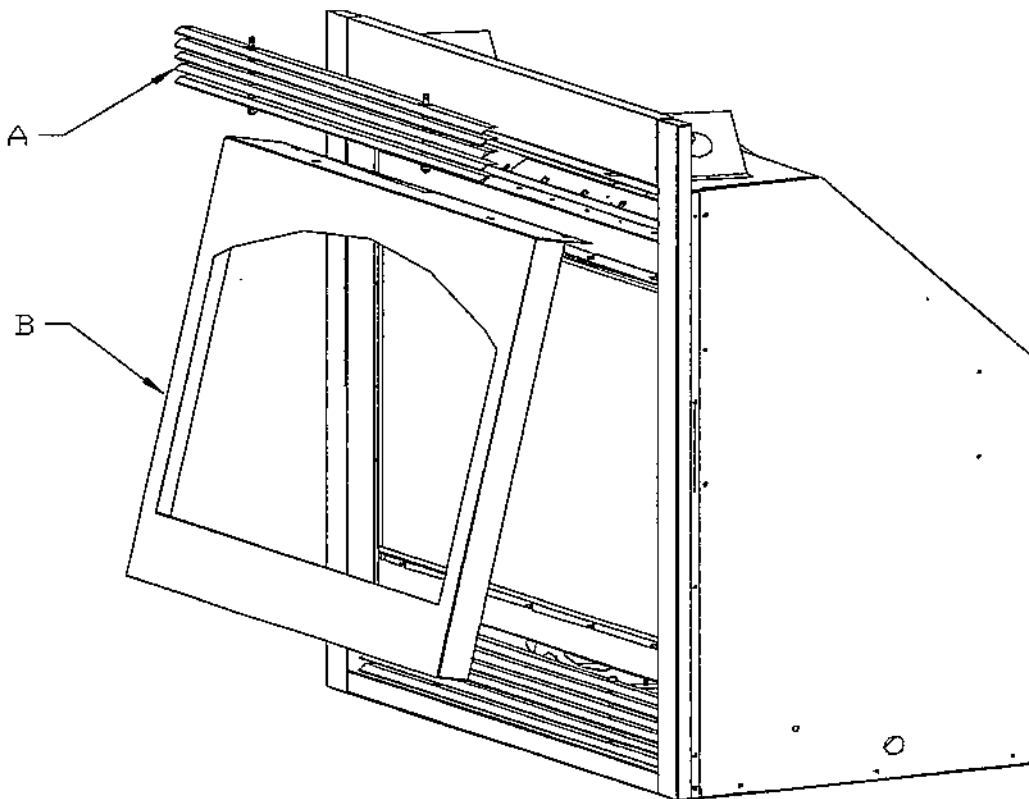


FIGURE 5

2. REMOVE THE GLASS ASSEMBLY. See figure 6, page 7.

- A. Loosen and remove the (5) top glass clip screws and set aside.
- B. Loosen but do not remove the (5) bottom glass clip screws.
- C. Loosen and remove the (4) side glass clip screws.
- D. Place both hands around the glass / glass clip assembly and lift entire assembly off from the bottom screws.
- E. Place the all the items removed aside where they will not be scratched or broken.
NOTE: Do not remove the glass clip frame or gasket material around the glass.
- F. Remove the box of logs from the unit and set aside.
- G. Remove the millivolt board cardboard protector.

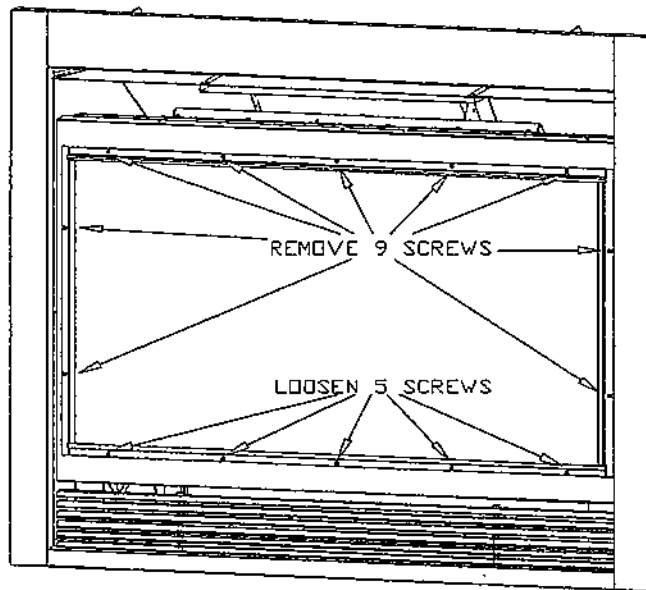


FIGURE 6

3. REMOVE THE LOWER GRILL (FOR OPTIONAL FAN INSTALLATION)

Refer to figure 7.

- A) Grasp the center of the lower grill and pull down to open.
- B) Remove the 1/4" nuts (B) from the grill assembly.
- C) Pull the entire assembly out of the hinges (A).
- D) Re-attach the 1/4" nuts (B) to the grill assembly and set aside for reinstallation later in this manual.

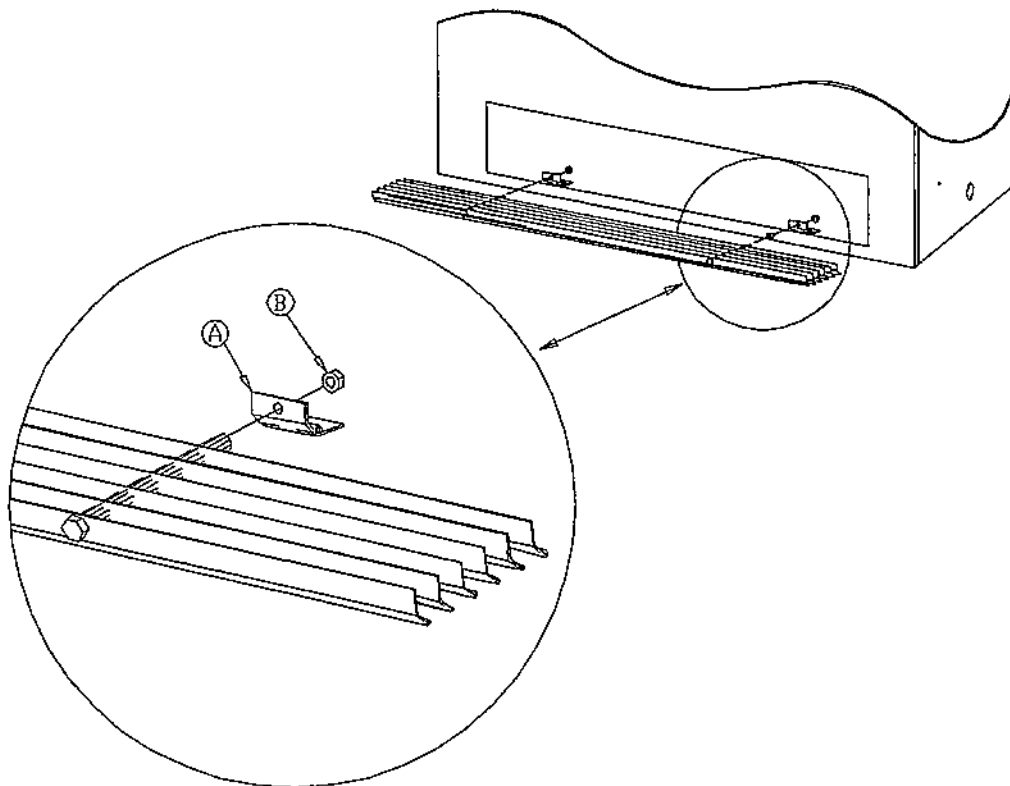


FIGURE 7

C) INSTALL THE DIRECT VENT KIT. See figure 8.

VENTING REQUIREMENTS

IMPORTANT: THIS UNIT IS APPROVED FOR USE ONLY WITH ONE OF THE FOLLOWING DIRECT VENT SYSTEMS:

- #844 DIRECT VENT TERMINATION KIT - for terminations of 6' or less.
- #845 DIRECT VENT TERMINATION KIT - for terminations greater than 6' but less than 8'.
- #846 DIRECT VENT EXTENSION KIT-6'

- SIMPSON DURA-VENT DV-GS DIRECT VENT CHIMNEY SYSTEM

Minimum vertical rise from appliance outlet*: Direct through-the-wall installations - 12"
Typical installations - 32"

Maximum vertical rise from appliance outlet*: 25 ft.

Minimum horizontal run from appliance outlet*: 12"

Maximum horizontal run from appliance outlet*: 12 ½ ft (with 1/4" per foot incline)

Maximum elbows*: (1) 45° elbow at start, (2) 90° elbows thereafter

***EXCEPTION: DIRECT THROUGH-THE-WALL INSTALLATIONS MAY TERMINATE ONLY AS SHOWN IN FIGURE 8 USING THE SIMPSON DURA-VENT DV-GS 5" X 8" CHIMNEY SYSTEM. *HORIZONTAL & VERTICAL RUNS MAY NOT BE EXTENDED OR REDUCED FROM WHAT IS SHOWN.* Follow chimney installation instructions included with the chimney system.**

IMPORTANT: Straight vertical terminations must use restrictor plate #1 for runs 3' - 17' and restrictor plate #2 for runs between 17' - 25'.

VENT PIPE CLEARANCE: Minimum clearance from #800 series vent pipe to combustibles: 2"
Minimum clearance from Dura-Vent DV-GS chimney: 1"

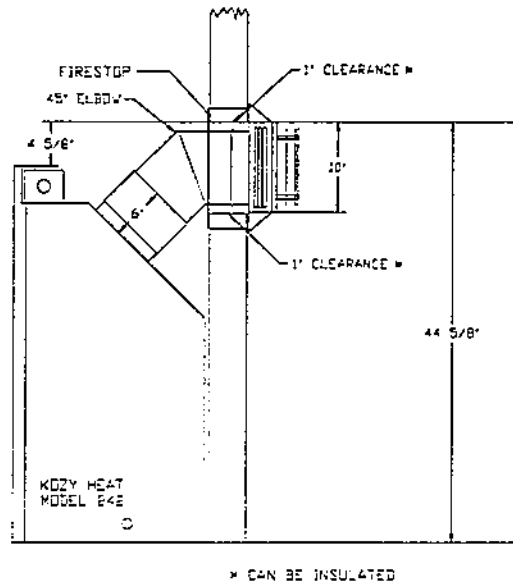
IMPORTANT: VERTICAL TERMINATIONS USING THE #800 SERIES FLEXIBLE CHIMNEY SYSTEMS REQUIRE A SUPPORTING CHASE TO BE BUILT AROUND THE CHIMNEY ABOVE THE ROOFLINE. A 2" CLEARANCE TO COMBUSTIBLE MATERIALS MUST BE MAINTAINED AROUND THE PIPE.

WHEN VERTICALLY TERMINATING THE MINIMUM CHIMNEY HEIGHT ABOVE THE ROOFLINE IS DETERMINED BY THE FOLLOWING CHART:

<u>Roof Pitch</u>	<u>Minimum Height above roof line</u>	<u>Roof Pitch</u>	<u>Minimum Height above roof line</u>
Flat to 6/12	1 ft.	11/12 to 12/12	4 ft.
6/12 to 7/12	1 ft. 3 in.	12/12 to 14/12	5 ft.
7/12 to 8/12	1 ft. 6 in.	14/12 to 16/12	6 ft.
8/12 to 9/12	2 ft.	16/12 to 18/12	7 ft.
9/12 to 10/12	2 ft. 6 in.	18/12 to 20/12	7 ft. 6 in.
10/12 to 11/12	3 ft. 3 in.	20/12 to 21/12	8 ft.

DIRECT THROUGH-THE-WALL INSTALLATIONS

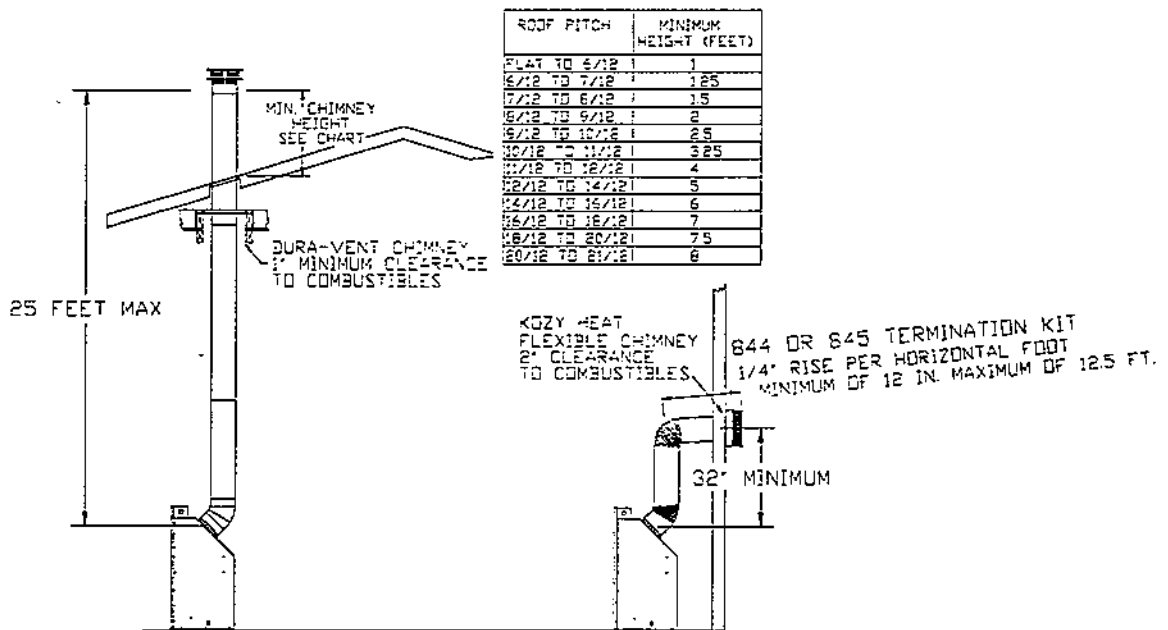
FIGURE 8



HORIZONTAL AND VERTICAL RUNS MAY NOT BE EXTENDED OR REDUCED FROM WHAT IS SHOWN IN FIGURE 8.

EXAMPLE OF TYPICAL HORIZONTAL & VERTICAL TERMINATIONS

FIGURE 8A



Note: Simpson Dura-Vent chimney system shown in vertical termination.

Note: Kozy Heat Direct Vent System shown in horizontal termination.

IMPORTANT:

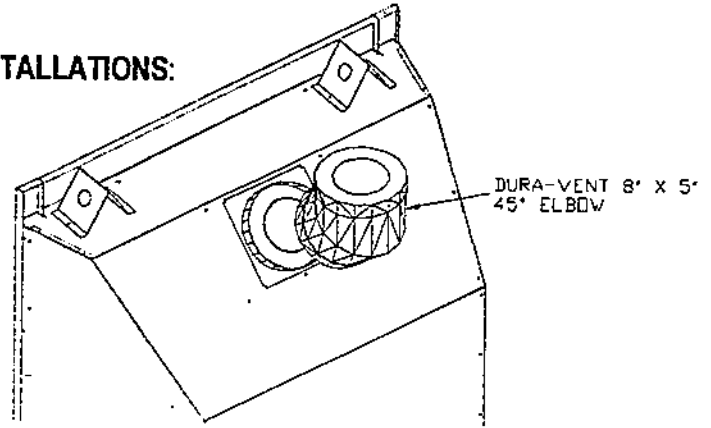
***SIMPSON DURA-VENT DV-GS CHIMNEY SYSTEM INSTALLATIONS:**

Follow the installation instructions included with the chimney system along with the following requirements:

- Vent runs must be in compliance as outlined on page #8 of this installation manual.

- A 45 degree elbow must be used at the stove connection to achieve vertical rise requirements, except for direct through-the-wall installations.

- The 5" pipe on the elbow or 6" section fits **INSIDE** the 5" collar on the stove.
- The 8" pipe on the elbow or 6" section fits **OUTSIDE** the 8" collar on the stove.



Secure the elbow or 6" section of chimney to the 8" collar with four screws (not provided).

INSTALLATION OF #800 SERIES DIRECT VENT TERMINATION KIT(S)

IMPORTANT:

The flex pipe is permanently attached to the exterior plate. DO NOT ATTACH the #844 or #845 termination kit to the stove (or extension kit) until it has passed through the wall or roof. The termination plates should all be installed on the exterior of the outside wall or top of supporting chase on the roof.

HORIZONTAL TERMINATIONS

IF TERMINATING AGAINST VINYL SIDING, A VINYL SIDING PROTECTOR, INCLUDED WITH THE #844 and #845 DIRECT VENT KITS, MUST BE USED. FOLLOW INSTRUCTIONS INCLUDED.

CAUTION: This gas appliance must not be connected to a chimney flue serving another type of appliance.

Follow Figure 9 for clearances to doors, windows and ground level.

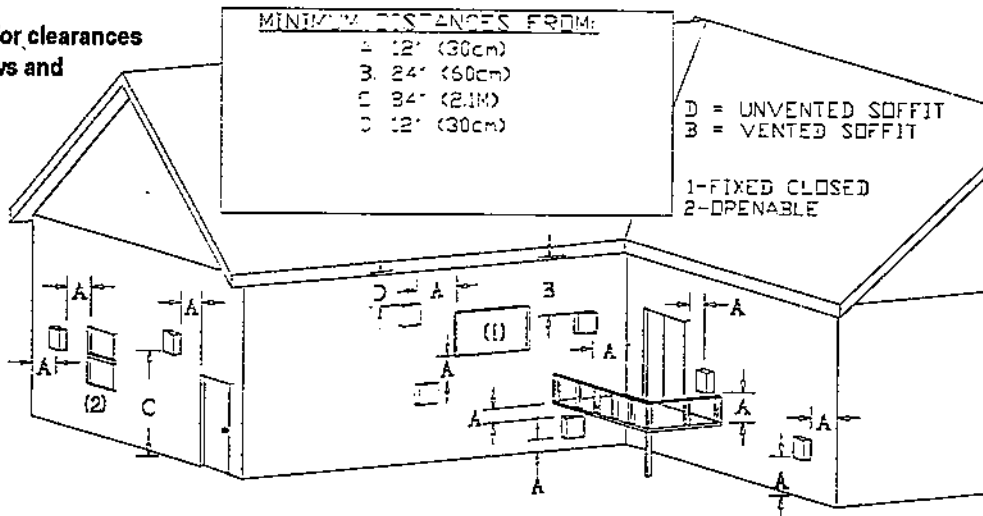


FIGURE 9

IMPORTANT: VENT TERMINATION MUST NOT BE LOCATED WHERE IT WILL BECOME PLUGGED BY SNOW OR OTHER MATERIALS.

1. If your chimney termination is 8' or less from the stove top and doesn't require an extension kit, proceed to step #6.
2. If your chimney termination will require one or more extension kits (part #846), proceed with the following steps. Each #846 extension kit contains enough 5" and 8" flexible aluminum to extend the chimney an additional 6'.
3. Gently stretch the 5" & 8" flexible aluminum pipes on the termination kit (#844 or #845) and on each extension kit, if used, the length required so when all the sections are connected together, the chimney height for your installation is attained.

IMPORTANT: DO NOT STRETCH THE EXTENSION KIT BEYOND 6'. DO NOT STRETCH BEYOND WHAT IS REQUIRED - IT IS VERY DIFFICULT TO RECOMPRESS THE FLEX PIPES ONCE STRETCHED.

4. Using your extension kit pieces, place a bead of sealant outside the 5" flex pipe collar (C) - the end with the EXTERNAL lip - and slide it inside the 5" pipe on top of the stove (D). This is a snap lock connection.

NOTE: The snap lock connection is permanent, you will not be able to remove this pipe once applied without damage.

5. Place a bead of sealant inside the 8" flex pipe collar (E) - the end with the internal lip - and slide it over the 8" pipe on top of the stove (F). This is a snap lock connection.
6. If additional extension kits are being used, repeat steps 4 and 5, placing the 5" & 8" pipes onto the previous extension kit.

Note: The minimum vertical rise is from the connection on the stove to the center of the pipe.

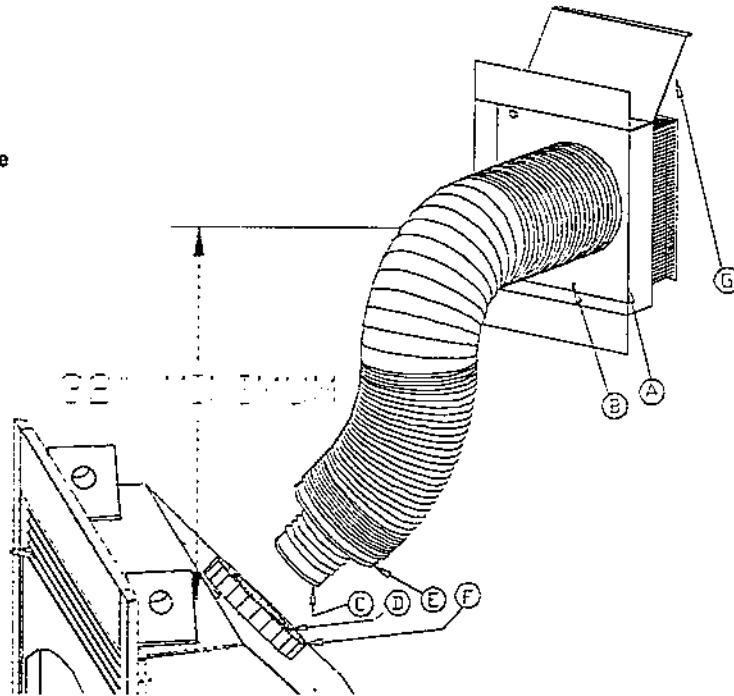


FIGURE 10

Referring to the above figure:

NOTE: Attachment brackets are included with the termination kit. These optional brackets should be screwed or nailed (screws not provided) onto the top and bottom of the 12 1/2" square opening, on the exterior of the house. The termination plates then fit between these brackets, and using the screws provided, screw the brackets to the termination kit box (A). Attach the vinyl siding protector (G).

7. Apply a liberal bead of sealant around the outer edge of the plate (A), and place the assembly through the 12 1/2" square opening in the exterior wall. Place screws through the four slots (B) securing it in place.
 8. Gently pull the 5" & 8" flexible aluminum down to the top of the extension kit, or the top of the unit if no extension kits were used.
 9. Place a bead of sealant outside the 5" flex pipe collar (C) and slide it into the 5" pipe on the extension kit or top of the stove (D).
- NOTE: This snap lock is permanent, you will not be able to remove this pipe once applied without damage.
10. Place a bead of sealant inside the 8" flex pipe collar (E) and slide it over the 8" pipe on the extension kit or top of the stove (F). This is a snap lock connection.
 11. OPTIONAL: Place insulation between the 8" pipe and the wall studs.

VERTICAL TERMINATIONS:

Prepare the chimney:

1. Gently stretch the 5" & 8" flexible aluminum pipes on the termination kit (#844 or #845) and on each extension kit, if used, the length required so when all the sections are connected together, the chimney height for your installation is attained.

IMPORTANT:

DO NOT STRETCH THE EXTENSION KIT BEYOND 6'. DO NOT STRETCH BEYOND WHAT IS REQUIRED - IT IS VERY DIFFICULT TO RECOMPRESS THE FLEX PIPES ONCE STRETCHED.

2. If your chimney is 8' or less from the stove top and doesn't require an extension kit, proceed to the 'Connect the chimney to the stove' section.
3. If your chimney termination will require one or more extension kits (#846), proceed with the following steps. Each #846 extension kit contains enough 5" & 8" flexible aluminum pipe to extend the chimney an additional 6'.

Connect the chimney sections: (Refer to figure 8, page 9)

1. Place a bead of sealant outside the 5" flex pipe collar on the termination kit (#844 or #845) and slide inside the 5" collar - the end with the internal notches - on the extension kit. OPTIONAL: Secure with additional screws.
2. Place a bead of sealant inside the 8" flex pipe collar on the termination kit (#844 or #845) and slide it over the 8" collar - the end with the external notches - on the extension kit. OPTIONAL: Secure with additional screws.
3. If additional extension kits are being used, connect the 5" & 8" flex pipes on each extension kit together in the same manner as described in steps #1 & #2.

Connect the chimney to the stove:

A firestop should be secured to the 12 1/2" x 12 1/2" framed opening whenever passing the chimney through a ceiling or roof.

NOTE: The framing and supporting chase for the termination kit should be at least partially complete.

1. Place a weighted rope around the end of the 5" & 8" flex pipes and carefully guide them down the chase to the top of the stove.
2. Apply a liberal bead of sealant around the outer edge of the plate (A), and place on top of the chase. Secure using the screws provided.
3. The appropriate restrictor plate must be placed inside the 5" flue collar on the top of the stove before connection of the chimney to stove is made. Use restrictor #1 for terminations of 3' to 17' and restrictor plate #2 for terminations over 17' to 25'.
 - a. Bend the (3) tabs on the restrictor plate required for your installation far enough so that it will securely fit inside the groove on the 5" collar on the stove. (Note: The tabs should be in the 'up' position.) Refer to figure #11 below.
4. Connect the flex pipes to the stove as follows: Place a bead of sealant outside of the 5" flex pipe collar (end should have external lip) and slide it inside the 5" pipe on the stove. This is a snap lock connection. OPTIONAL: Secure with additional screws.
5. Place a bead of sealant inside the 8" flex pipe collar (end should have an internal lip) and slide it over the 8" pipe on the stove. This is a snap lock connection. OPTIONAL: Secure with additional screws.
6. OPTIONAL: Place insulation around the pipe.

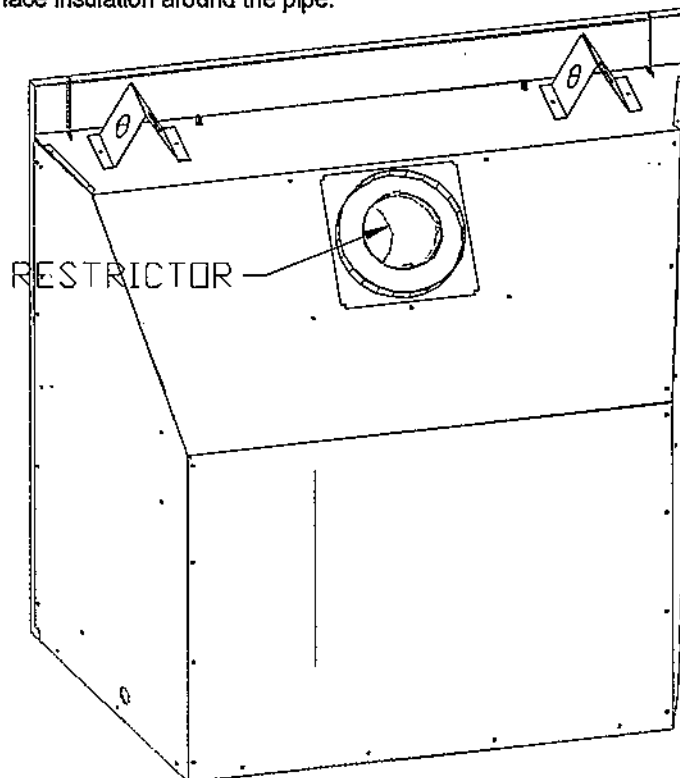


Figure 11

D) FAN INSTALLATION (OPTIONAL)

INSTALLATION OF THIS FAN SHOULD BE DONE ONLY BY A QUALIFIED INSTALLER.

IMPORTANT: THE LOWER GRILL MUST BE REMOVED TO PROPERLY INSTALL THIS FAN.

NOTE: If a fan is going to be installed, the wiring must be done prior to enclosing the sides of the unit. An electrical box is pre-installed in the fireplace and a receptacle and cover is included in the fireplace components packet.

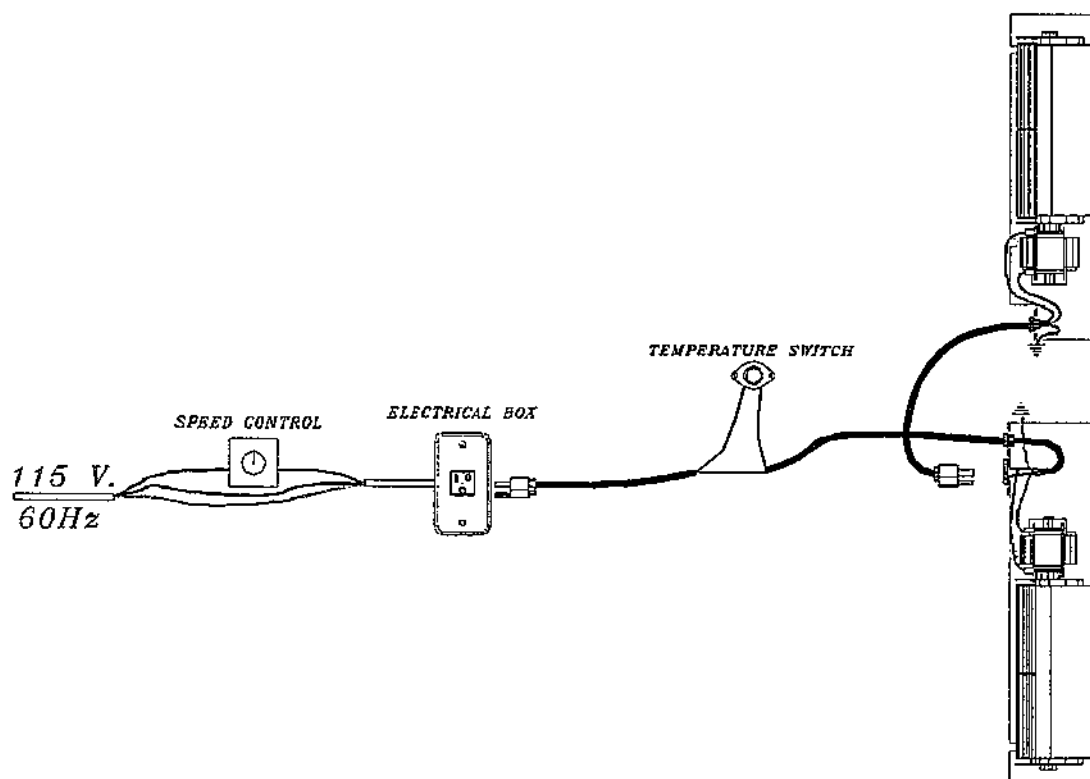
Your optional fan kit includes:

1. Right and left fan assemblies with fan and limit switch already mounted.
2. Components package: Includes speed with mounting bracket, nut & knob*, (4) nuts, installation instructions.

NOTE: To wall-mount the speed control, you will need to purchase: (1) Electrical box
(1) Cover / switch plate

IMPORTANT: CODE APPROVED LINE VOLTAGE WIRING 16 GAUGE OR BETTER MUST BE USED WHEN WIRING THIS SYSTEM.

WARNING: This appliance is equipped with a three-prong (grounding) plug for protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove the grounding prong from this plug.



INSTALLATION INSTRUCTIONS. REFER TO FIGURE #12.

1. Remove the lower grill, if not previously removed. (Refer to figure 6, page #7 for instructions).
2. Slide the right fan(with receptacle) (A) through the lower grill opening and place over the (2) right side mounting studs (B) located towards the back of the unit.
3. Slide the remaining fan assembly through the lower grill opening and place over the (2) left mounting studs (B) located towards the back of the unit.
4. Place nuts on mounting studs and tighten.
5. Install electrical box and mount the speed control on a wall, if desired.
6. Snap the receptacle into the cover (included in the components packet included with this fireplace).
7. Insert 115V wiring (with ground) through the romex connector installed in the electrical box in the side of the unit and wire to the receptacle.
8. Place the cover on the electrical box (in the side of the unit) and secure with screws.
9. Place the thermostatic control switch (C) on the bottom of the unit, directly behind the control valve.
10. Plug fans together by inserting the three-prong fan cord on the left fan assembly into the receptacle in the right fan assembly.
11. Plug cord (E) into receptacle in the electrical box.
12. Turn on/off speed control clockwise until it clicks.

NOTE: The fan will not operate unless the speed control has been turned on. The fan will not turn on until sufficient heat is applied to the thermostatic control switch (C). The fan will turn on and off automatically when the fireplace heats and cools. Adjust fan to desired speed while it is running.

NOTE: This system, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70-Current edition.

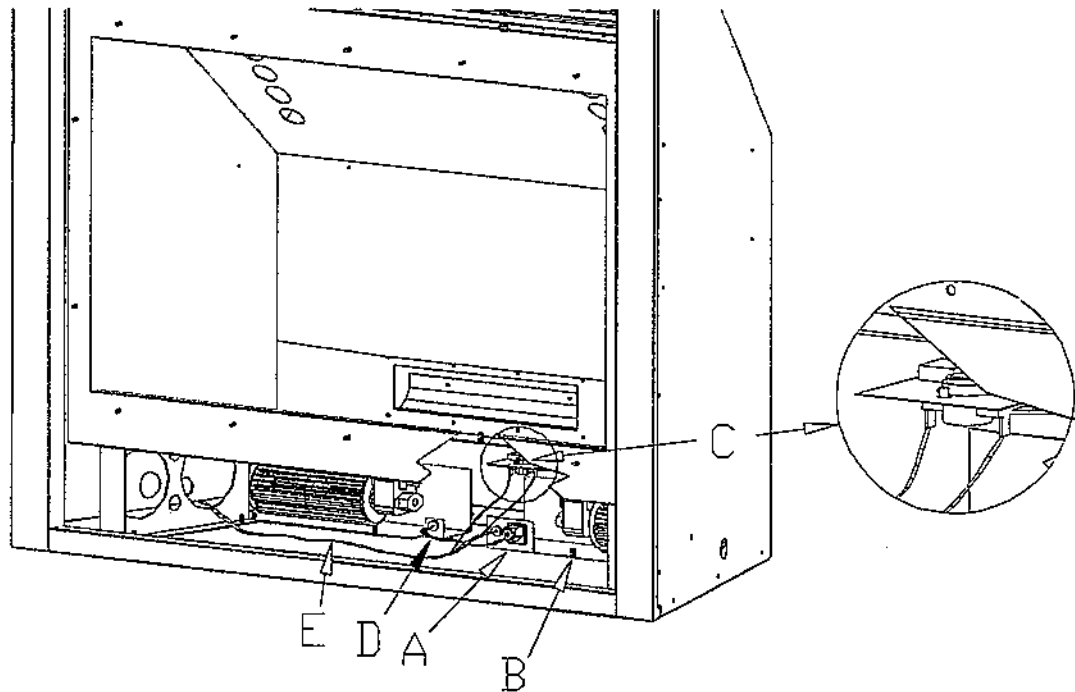


FIGURE 12

E) RUN THE GAS LINE.

CAUTION: Installation of the gas line must only be done by a qualified person in accordance with local building codes.

This unit is equipped with a 3/8" flexible gas line connection 18" long.

NOTE: The gas line should be run to the point of connection where the manual shut off valve and flexible gas line will connect.

CAUTION: The manual shut off valve or flexible gas line must not extend outside the unit cavity. See the **WARNING** label affixed to the flexible gas line for additional installation instructions and warnings.

1. Run the gas line. An accessible shut off valve (included with the unit) must be installed up stream from the regulator.

IMPORTANT: DO NOT RUN THE GAS LINE IN A MANNER THAT WOULD OBSTRUCT THE OPERATION OF THE OPTIONAL FAN.

2. This unit is designed to accept either a 3/8" or 1/2" gas line approved for gas appliances. Consult local building codes to properly size the gas supply line leading to a 3/8" reduction. Also, see the chart on page #17 for proper supply line sizing.

3. A gas line knockout is positioned on either side of the unit to run the gas line to the unit cavity.

4. Connect the manual shut off valve to the previous run gas line.

5. Connect the flexible gas line (installed on the millivolt board valve) to the manual shut off valve.

IMPORTANT:
ALL CONNECTIONS WHETHER FIELD OR FACTORY MADE MUST BE CHECKED FOR LEAKS.

NOTE: This appliance 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 psi.

NOTE: This appliance must be isolated from the gas supply piping system by closing its individual manual shut off valve during any pressure testing of the gas supply piping systems at test pressures equal to or less than 1/2 psi.

Pressure check taps for both the manifold (outgoing) and inlet (incoming) pressures are located in front of the gas valve. The top pressure tap is the manifold pressure and the bottom pressure tap is the incoming pressure. Follow instructions on page # 25 for checking these pressures.

NATURAL GAS ONLY:

The minimum inlet gas supply pressure: 5.0 inches W.C.
 The maximum inlet gas supply pressure: 10.5 inches W.C.
 Manifold Pressure: 3.5 inches W.C.
 Manifold Pressure (to setting): 1.7 inches W.C.

Orifice size (0-2000 ft): 32 Input rating: 34,000 BTU

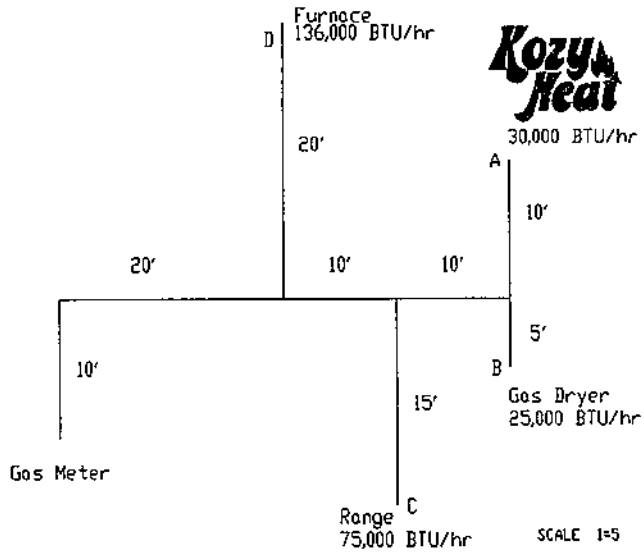
LP GAS ONLY:

The minimum inlet gas supply pressure: 11.0 inches W.C.
 The maximum inlet gas supply pressure: 13.0 inches W.C.
 Manifold Pressure: 10.0 inches W.C.
 Manifold Pressure (to setting): 5.4 inches W.C.

Orifice size (0-2000 ft): 51 Input rating: 33,000

For high altitude installations, consult the local gas distributor or the authority having jurisdiction for proper rating methods.

<u>Tubing size</u>	<u>Maximum run</u>
3/8"	10'
1/2"	70'
5/8"	100'
3/4"	125'



SOLUTION TO EXAMPLE

- (1) Maximum demand for outlet "A" 30 CFH
- Maximum demand for outlet "B" 25 CFH
- Maximum demand for outlet "C" 75 CFH
- Maximum demand for outlet "D" 136 CFH

TOTAL DEMAND 266 CFH

- (2) The length of pipe from the gas meter to the most remote outlet (outlet "A") is 60'. THIS IS THE ONLY DISTANCE USED.
- (3) Using horizontal line marked 60', outlet "A" supplying 30 cubic feet an hour requires 1/2 inch pipe. Outlet "B" supplying 25 cubic feet an hour requires 1/2 inch pipe. Section 1 supplying outlets "A" & "B", 55 cubic feet an hour requires 1/2 inch pipe.

F) MILLIVOLT BOARD INSTALLATION. See Figure 13.

NOTE: This unit is equipped with the millivolt board system already installed. Follow these procedures should the regulator board need replacing or is removed for servicing or fan installation.

MILLIVOLT BOARD REMOVAL:

1. Shut off the gas supply at the manual shut off valve.
2. Disconnect the flexible gas line from the manual shut off valve.
3. Disconnect any remote control, wall switch or thermostat wires from the valve.
4. Loosen and remove the (8) 1/4" nuts and while grasping the board, gently lift it off the (8) bolts and remove the board from the unit.

INSTALLING THE MILLIVOLT BOARD:

NOTE: The millivolt board is fitted with a gasket to seal the board. Make certain this gasket is properly placed around the opening before installing the millivolt board.

1. Grasp the burner with both hands and place into the unit, lining up the eight 1/4" holes.

CAUTION: BEFORE SECURING THE BOARD INTO PLACE, MAKE CERTAIN THAT ALL OF THE WIRES (ATTACHED UNDER THE BOARD) ARE CLEAR AND UNOBSTRUCTED.

2. Attach the 1/4" nuts (included with the board assembly).
3. Connect the flexible gas line to the manual shut off valve.
4. Reconnect any remote control, wall switch or thermostat wires.

IMPORTANT: CHECK ALL CONNECTIONS, WHETHER FIELD OR FACTORY MADE FOR LEAKS.

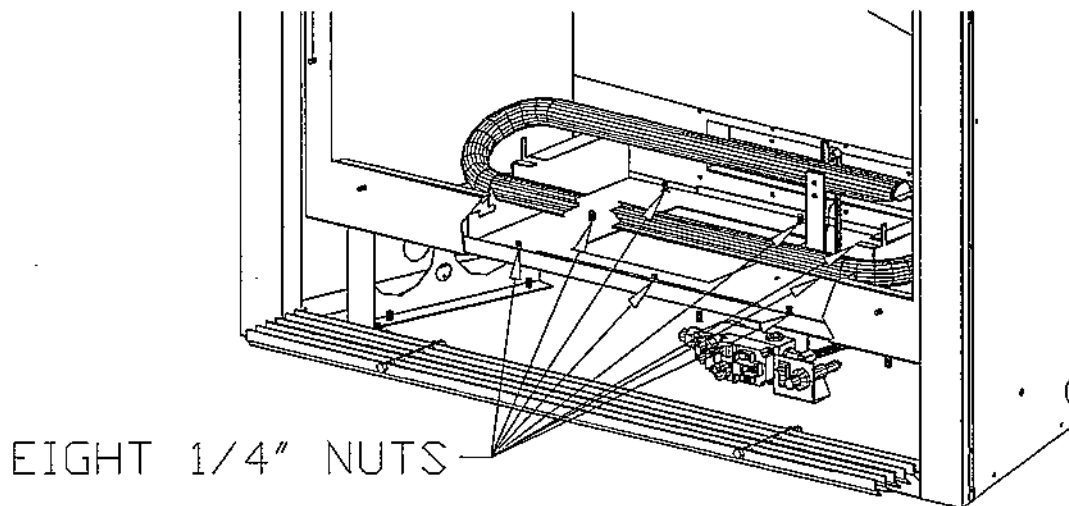


FIGURE 13

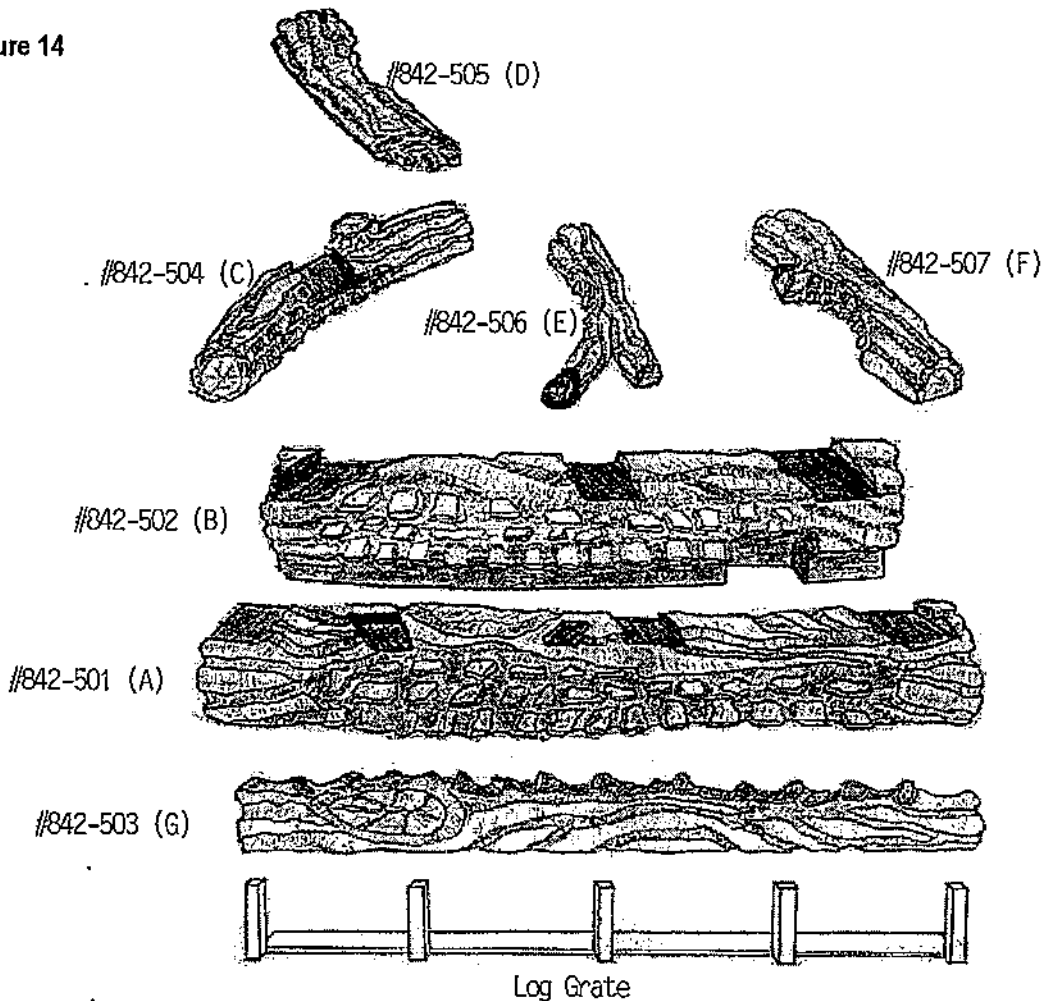
G) LOG INSTALLATION. See Figure 14.

This log set includes:

1 - #842-501 Front Log (A)	1 - #842-506 Center 'Y' Log (E)
1 - #842-502 Back Log (B)	1 - #842-507 Side Knot Log (F)
1 - #842-504 Small Curve Log (C)	1 - #842-503 Bark Log (G)
1 - #842-505 Top Left Log (D)	

1. Place the front log (A) and back log (B) into position aligning the tabs on the millivolt board to the holes in the bottom of the logs.
2. Align the remaining top logs (C, D, E, & F) to the notched-out sections on the front and back logs as shown in the diagram below.
3. Position the bark log (G) between the log grate (pre-installed on the millivolt board) and the front log (A).

Figure 14



INITIAL BURN PERIOD

DUE TO THE MAKEUP OF THE FIBER LOGS, THE CURING PROCESS MAY TAKE UP TO 4 HOURS OF BURN TIME. DURING THIS PERIOD, THE LOGS WILL GIVE OFF A STRONG ODOR, AND WILL DISCOLOR. ONCE THE CURING PROCESS IS COMPLETE, THE TRUE COLOR OF THE LOGS WILL RETURN AND THE SMELL WILL NOT RETURN. DO NOT BURN THIS FIREPLACE WITHOUT THE GLASS PROPERLY IN PLACE.

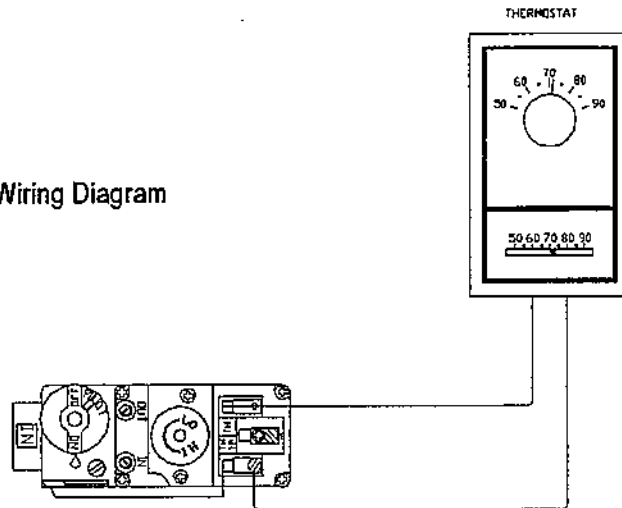
****MAKE SURE THE HOMEOWNER IS AWARE OF THIS****

H) THERMOSTAT - WALL SWITCH - REMOTE CONTROL INSTALLATION (OPTIONAL).

CAUTION: DO NOT CONNECT HIGH VOLTAGE WIRE TO THE SWITCH.

1. If desired, a thermostat, wall switch or remote control may be used to turn the unit off and on. Only one of these may be installed. Follow instructions are included with each kit.

Figure 15A
Thermostat Wiring Diagram



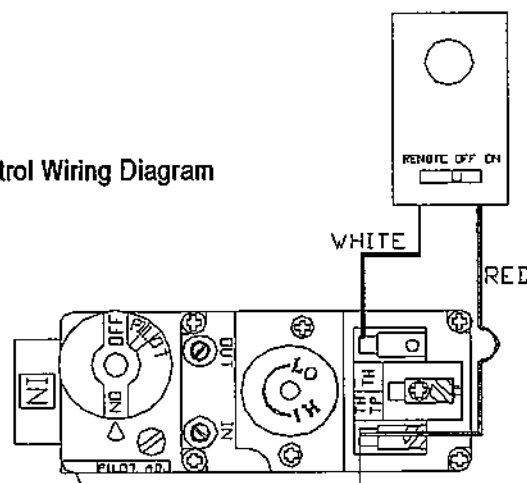
NOTE: INSTALLATION OF A THERMOSTAT OR WALL SWITCH SHOULD ONLY BE DONE BY A QUALIFIED INSTALLER.

2. Run low voltage (thermostat) wire from the valve terminals to the desired location of the thermostat or wall switch. Do not run the wire more than 30'.

NOTE: If too heavy of wire is used or run more than 30', the electricity generated by the unit's generator will not be sufficient to make the regulator work properly. The pilot may light, but will go out when the burner is turned on.

IMPORTANT: No high voltage is required to operate any of these systems.

Figure 15B
Remote Control Wiring Diagram



The on/off rocker switch on the millivolt board must be in the 'off' position if any of the above systems are installed on the unit.

If the unit is turned on with a remote, wall switch or thermostat, it must be turned off by the same method.

I) COMPLETE THE INSTALLATION

1. Complete the fireplace walls and the unit facing. Optional edging brackets are available.

CAUTION: THE SURROUNDING WOOD CHASE OF THE OUTSIDE WALL MUST BE INSULATED TO PREVENT COLD AIR FROM ENTERING THE ROOM.

2. THIS STEP SHOULD ONLY BE DONE BY A QUALIFIED INSTALLER OR SERVICE TECHNICIAN:

A) Perform lighting and shutdown procedures as described on pages #23-24. This should be done prior to replacing the glass so that any necessary adjustments can be made and proper operation verified.

3. Replace the glass. Refer also to Figure 6, page 7.

- A) Place the glass / glass clip assembly on the (5) lower clip screws and tighten.
- B) Replace the (5) top clip screws. Do not tighten at this time.
- C) Replace the (4) side clip screws. Do not tighten at this time.
- D) Make certain the glass is in a level position.
- E) Tighten the top and side clip screws.

4. Replace the valance. Refer also to Figure 5, page 6.

A) Align the (3) holes in the upper flange of the valance to the protruding screw heads in the upper grill opening and set in place. Lower the bottom of the valance into position.

5. Replace the upper grill. Refer to Figure 5, page 6.

- A) Line the rods of the grill up with the upper holes. Ensure the spring are in place.
- B) Place the rods in the holes and push up until the bottoms of the rods clear the valance.
- C) Place the bottom of the rod into the lower holes and release. The grill will set down into place.

6. Replace the lower grill (if removed). Refer to Figure 7, page 7.

- A) The one the bolts through the hinge in the lower grill opening (A).
- B) Attach the 1/4" nut (B).
- C) Repeat for remaining hinge.
- D) Tighten both 1/4" nuts.

The grill is now in place and may be lowered for lighting purposes, etc.

J) DAMPER CONTROL OPERATION

This unit has been design-certified to be operated with the damper in the fully opened or completely closed positions, depending on the heat output desired.

To reduce the amount the heat entering the room, slide the damper control (A) to the right to the fully open position. This allows more of the heat generated to exit through the flue rather than into the home through the upper grill.

If more heat is desired, slide the damper control (A) all the way to the left to the fully closed position.

NOTE: The damper position is located in the upper portion of the firebox and may be visually checked by looking through the front viewing glass. Refer to Item (B) in the figure below.

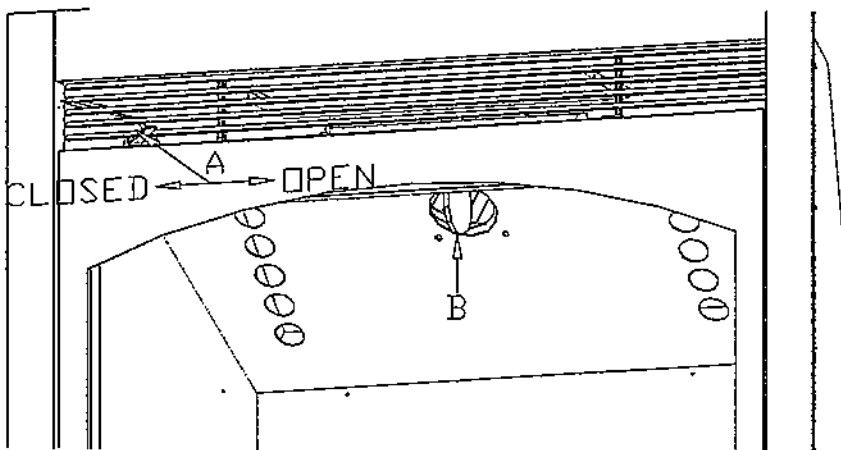


FIGURE 16

K) LIGHTING & SHUTDOWN

NOTE: Prior to lighting, check all fittings for leakage. This is accomplished by applying soapy water on all connections made. If there is any leakage, bubbles will appear at the point of connection. If bubbles occur, tighten the fittings until the bubbles no longer appear.

IMPORTANT: TEST ALL CONNECTIONS WHETHER FIELD OR FACTORY MADE.

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 ½ psi.

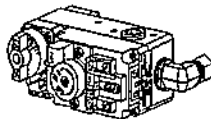
NOTE: The appliance must be isolated from the gas supply piping system by closing its individual manual shut off valve during any pressure testing of the gas line at test pressures equal to or less than 1/2 psig (3.5 kPa).

Pressure check taps for the manifold (outgoing) and inlet (incoming) pressures are located in front of the gas valve. The top pressure tap is the manifold pressure and the bottom pressure tap is the incoming pressure. Follow instructions of page 25 for checking these pressures.

NOTE: Read 1-8 before lighting the unit for the first time.

1. Open the lower grill by grasping the center of the top louver, and pull out and down.
2. Set the thermostat, if used, to the lowest setting
3. Turn off all electric power to the appliance.
4. Push in control knob (A) slightly and turn clockwise ↘ to "OFF"

Gas control knob
shown in "on" position



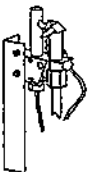
NOTE: Knob cannot be turned from "PILOT" to "Off" unless knob is pushed in slightly. Do not force.

5. Wait five (5) minutes to clear out any gas. If you then smell gas, STOP! Follow the safety information on page 2 of this installation manual. If you don't smell gas, go to the next step.

6. Find the pilot - follow metal tube from gas control. The pilot is behind the burner tube.
7. Turn the black knob on gas control counterclockwise ↙ to "PILOT".
8. Push in the black control knob all the way and hold in. Press the RED igniter button (C). The pilot will generally light with two or three pushes on the igniter. Hold the knob in for about one (1) minute after the pilot is lit. Release knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 4 through 8.

- * If knob 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.

9. Turn gas control knob counterclockwise ↙ to "ON".
10. Flip the on/off switch (B) to the "on" position, the red is exposed.
11. Set thermostat, if used, to desired setting.



NOTE: When the unit is initially lit, condensation will appear on the glass, this is normal in all gas fireplaces, and will disappear in one to three minutes.

12. If you wish to turn the burner off, flip the on/off switch. If a wall switch has been installed, simply turn it off. If a thermostat has been installed, simply adjust temperature setting.

NOTE: The pilot will stay lit.

13. To turn off the pilot, push in and turn the knob to the "off" position.

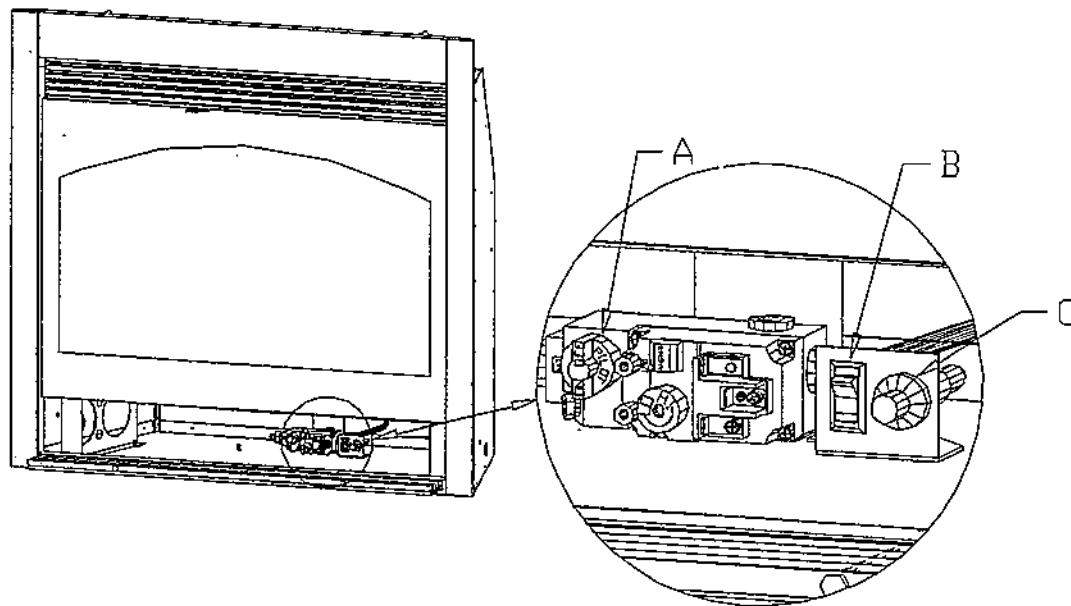


FIG. 17

NOTE: A PAINT SMELL WILL OCCUR DURING THE FIRST FEW HOURS OF BURNING. IT IS RECOMMENDED TO LEAVE THE FAN OFF DURING THIS PERIOD AS THIS WILL SPEED UP THE PAINT CURING PROCESS.

INITIAL BURN PERIOD

DUE TO THE MAKEUP OF THE FIBER LOGS, THE CURING PROCESS MAY TAKE UP TO 4 HOURS OF BURN TIME. DURING THIS PERIOD, THE LOGS WILL GIVE OFF A STRONG ODOR, AND WILL DISCOLOR. ONCE THE CURING PROCESS IS COMPLETE, THE TRUE COLOR OF THE LOGS WILL RETURN AND THE SMELL WILL NOT RETURN. DO NOT BURN THIS FIREPLACE WITHOUT THE GLASS PROPERLY IN PLACE.

****MAKE SURE THE HOMEOWNER IS AWARE OF THIS****

NOTE: Children and adults should be alerted to the hazards of high surface temperature 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.

Clothing or other flammable material should not be placed on or near the appliance.

PRESSURE TESTING MANIFOLD & INLET PRESSURE

IMPORTANT NOTICE: A pressure check tap for both the manifold (outgoing) and inlet (incoming) pressure has been incorporated into the valve by Robertshaw. The top pressure tap is the manifold pressure and the bottom pressure tap measures the incoming pressure. Follow the instructions below for proper pressure testing procedures.

TO CHECK THE MANIFOLD PRESSURE:

1. Light pilot.
2. Loosen the manifold pressure tap [C] by turning the screw counter-clockwise.
3. Attach manometer to pressure tap using a 5/16" I.D. hose [E].
4. Turn black control knob [A] to the 'on' position.
5. Turn the burner on by depressing the rocker switch [B] to expose the 'red' and note manometer reading.
5. Turn the rocker switch [B] to the 'off' position.
6. Disconnect manometer hose and tighten screw (clockwise). Screw should be snug, do not over tighten.
7. Attach manometer to manifold pressure tap to verify that it is completely sealed. Manometer should read no pressure when the rocker switch is turned on..

NOTE: If manifold pressure reading is within the normal range, an incoming pressure check is not necessary. A too high or too low pressure reading warrants an inlet (incoming) gas pressure check.

TO CHECK THE INLET PRESSURE:

1. Loosen Inlet pressure tap screw [D] by turning screw counter-clockwise.
2. Attach manometer using a 5/16" I.D. hose [E].
3. Light the pilot.
4. Turn the black control knob [A] to the 'on' position. (Burner should not come on) and note manometer reading.
5. Turn the rocker switch [B] to the 'on' position and check the pressure to ensure that it stays near the maximum inlet pressure.
6. Turn the rocker switch [B] to the 'off' position.
7. Turn the pilot to the 'off' position.
8. Disconnect hose and tighten screw (clockwise). Screw should be snug, do not over tighten.
9. Relight pilot and turn the control knob [A] to the 'on' position. Attach manometer to the inlet pressure tap to verify that it is completely sealed. Manometer should read no pressure.

NOTE: If Inlet pressure reading is too high or too low, contact the gas company. Only a qualified gas service technician should adjust the incoming gas pressure.

CAUTION: A LOW PRESSURE READING CAN CAUSE DELAYED IGNITION.

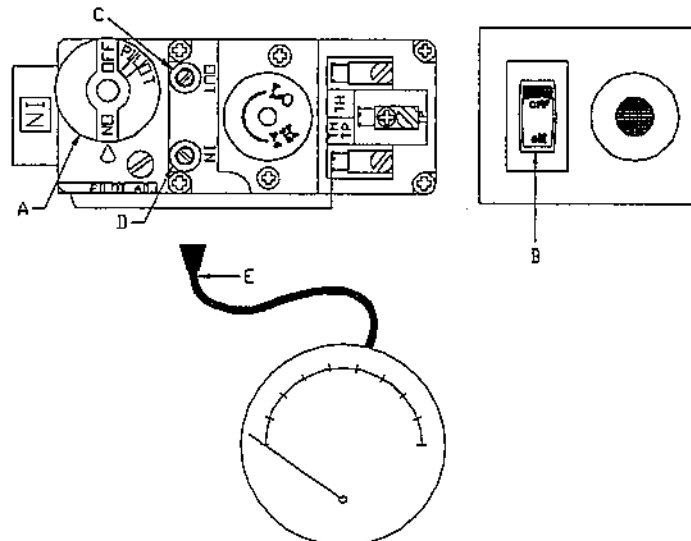


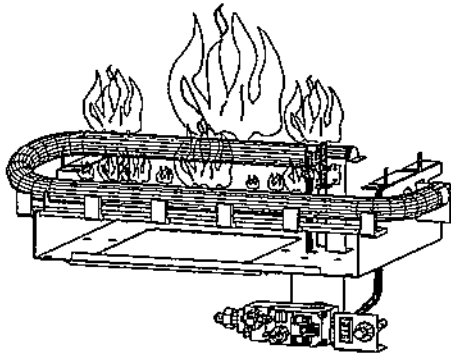
FIGURE 18

L) MAINTENANCE REQUIREMENTS

1. The appliance should be inspected at least once a year by a professional service person.

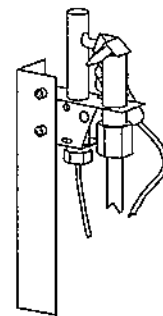
NOTE: INSTALLATION AND REPAIR SHOULD BE DONE ONLY BY A QUALIFIED SERVICE PERSON. THE APPLIANCE SHOULD BE INSPECTED BEFORE USE AND AT LEAST ANNUALLY BY A QUALIFIED SERVICE PERSON. MORE FREQUENT CLEANING MAY BE REQUIRED DUE TO EXCESSIVE LINT FROM CARPETING ETC. IT IS IMPERATIVE THAT CONTROL COMPARTMENTS,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

2. The compartment below the firebox (behind the lower grill) must be cleaned at least once a year, more frequent cleaning may be required due to excessive lint from carpeting, or other fibrous materials. It is imperative that the burner be cleaned once a year.
3. The fan should be disconnected from electrical current, removed, and cleaned every six months. The bearings are sealed and require no oiling.
4. Yearly examination of the venting system by a qualified agency is required. First, remove the glass on the front of the unit. The burner should be covered or removed for easier access.
5. Annual cleaning of the burner is required. The burner may be removed for easier access. See Figure 13. Visually check for blocked port holes, especially near the pilot. Blocked port holes may cause delayed ignition.
6. Visually check the pilot light and burner when they are burning. See Figure 19. The flames should be steady, not lifting or floating.
7. Clean glass only when cool and only with non-abrasive cleansers.



Burner Orifice

FIG. 19



Pilot

CAUTION: EXCEPT FOR THE FIRST LIGHTING, DO NOT OPERATE THIS APPLIANCE WITHOUT THE GLASS ENCLOSURE IN PLACE. REPLACEMENT SHOULD BE DONE BY A LICENSED OR QUALIFIED SERVICE PERSON. DO NOT OPERATE THIS APPLIANCE WITH CRACKED OR BROKEN GLASS.

IMPORTANT: ANY SAFETY SCREEN OR GUARD REMOVED FOR SERVICING MUST BE REPLACED PRIOR TO OPERATING THE APPLIANCE.

CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION. VERIFY PROPER OPERATION AFTER SERVICING.

CAUTION: Keep the appliance area clear of combustible materials, such as gasoline and other flammable vapors and liquids.

M) TROUBLE SHOOTING GUIDE

NOTE: The regulator board includes the following items: Regulator, generator, pilot, piezo, electrode, rocker switch, burner, orifice and orifice holder. If any of these items are defective, contact your dealer for the appropriate repair / replacement procedures to follow.

WARNING: DO NOT ATTEMPT TO SERVICE THIS UNIT IF YOU ARE NOT A QUALIFIED INSTALLER OR REPAIRMAN.

1. If the unit fails to ignite a qualified service person should check the unit installation.
2. It is imperative that the control compartment, burner and circulation air passageways of the unit be kept clean. This is necessary to provide adequate combustion and ventilation air.
3. All of the working parts of this unit can be removed at one time. Before removing regulator board, check for loose wires.

<u>PROBLEM</u>	<u>CAUSE</u>	<u>SOLUTION</u>
Pilot won't light	Gas shut off	Turn Gas On
	Gas line not bled out	Hold valve knob in long enough to bleed out line.
	Not holding regulator valve in long enough	Hold in longer
Pilot won't stay lit	Not holding pilot button in long enough	Hold button in longer to heat generator
	Generator wires loose at regulator terminals	Reposition wire and tighten screws. See Figure 20 for wiring instructions.
	Generator wire grounded out due to pinching of wires	1/4" nuts on regulator board may need loosening to remove pinched wire. See Fig. 13.

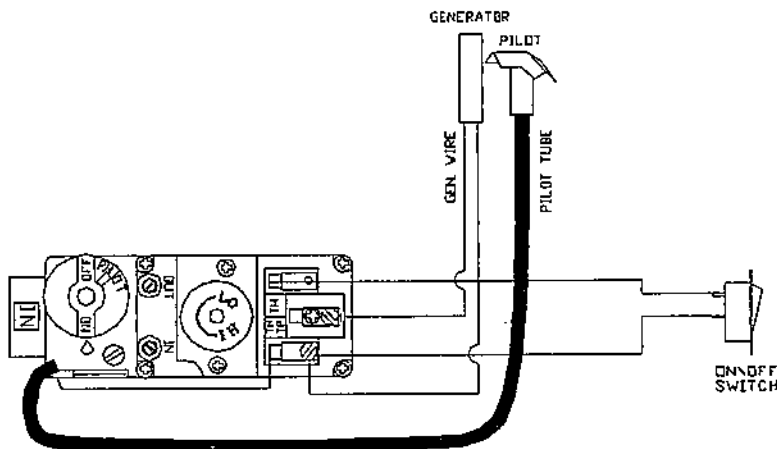


Figure 20

PROBLEM

CAUSE

SOLUTION

No spark when piezo button is depressed

The nut which holds the piezo in place is loose

Tighten nut.

Wire on back of piezo button is loose or off

Put wire back into place.

Wire from piezo to electrode is loose at electrode

Reconnect wire.

Electrode moved out of position

Realign electrode with 1/8" space between it and pilot.

Burner won't light

Pilot not lit

Relight pilot

Regulator valve not turned on

Turn valve to "on"

Rocker switch not turned

Press bottom of switch exposing the "Red" or "on" indicator.

Rocker switch wire not connected

Check wiring diagram Figure 20 and ensure that all wires are secure.

Remote control not connected properly or turned to wrong setting. See figure 15.

Connect properly or disconnect and use on/off switch only.

Burner won't stay lit

Wall switch wire too thick or run more than 30 ft.

Disconnect wall switch wire. If burner stays lit, change location of wall switch or use on/off switch only.

REPLACEMENT PARTS

Replacement parts are available through your local dealer. Contact them for availability and pricing.

<u>PART #</u>	<u>DESCRIPTION</u>
404-4	Limit Switch Assembly (#614 fan kit)
614	Fan Kit
617	Lintel Iron
796	Remote Control with Thermostat
797	Remote Control
847	Vinyl Siding Protector
860	Millivolt board - Natural Gas
861	Millivolt board - LP Gas
500111	Upper Grill Spring
500842	Arched Valance Brass Trim (4 pc.)
500843	Rectangular Valance Brass Trim (4 pc.)
700001	35" x 21" 5MM Borofloat Glass
700032	Piezo Ignitor
700033	On/Off Toggle Switch
700036	Millivolt Generator
700037	Pilot with Electrode
700038	Hi/Lo Regulator - Natural Gas
700040	Hi/Lo Regulator - LP Gas
700041	Log Grate
700213	18" Flexible Gas line
700220	3/8" Flexible gas line (valve to burner orifice)
700222	1/4" Flexible gas line (valve to pilot)
700258	Pilot orifice - LP Gas
842001	Upper Grill - Black
842003	Lower Grill - Black
84201B	Upper Grill - Brass
84203B	Lower Grill - Brass
842004	Full Frame Glass clip
842006	3/4" Glass gasket with PSA
842035	Burner Tube
842-060	Firestop
842100	Arched Black Valance
842102	Rectangular Black Valance
842103	Screen Assembly
842149	Damper Control Lever assembly
842081A	Large Restrictor (17' - 25' vertical terminations)
842081B	Medium Restrictor (3' - 17' vertical terminations)
842500	7 pc. Log set
842-501	Front Log
842502	Back Log
842503	Bark Log
842504	Left Knothole Log
842505	Top Left Log
842-506	Center 'Y' Log
842507	Right Knothole Log
842900	3 pc. Refractory Brick Panels
842901	Refractory panels - Bottom (2 pc.)

PATENT PENDING

Model #842 DV - US INSTALLATIONS ONLY
5-97

MANUFACTURED BY:
Hussong Manufacturing Company, Inc.
204 Industrial Park Drive
Lakefield, MN 56150