

DIRECT VENT GAS HEATER DV25 OWNER'S GUIDE



**INSTALLATION AND ASSEMBLY PROCEDURES FOR
#2642 NG25 AND #2643 LP25**

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: Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual for correct installation and operational procedures. For assistance or additional information consult a qualified installer, service agency, or the gas supplier.



SAVE THIS MANUAL FOR FUTURE REFERENCE.

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Specifications

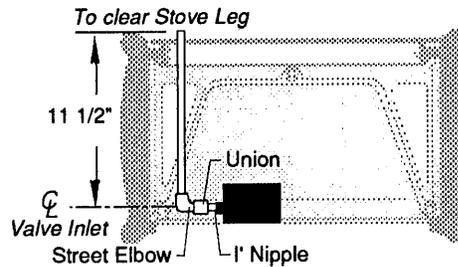
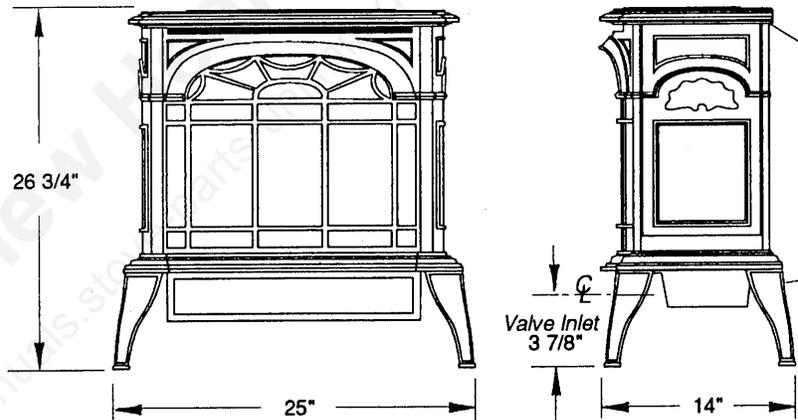
Direct Vent Gas Heater / NG25 2642 and LP2643

Fuel	NG	LP
Manifold Pressure; Min./Max.:	2.2" / 3.5"	6.4" / 10.0"
Min. Inlet Supply Pressure for adjustment:	5.0"W.C.	11.0"W.C.
Output, BTU/hr. Min./Max.:	19,500 / 25,000	
Ignition :	Piezo	
Weight: Firebox w/ Glass & Logs -	110 lbs.	
Fully assembled in Freestanding Shell -	200 lbs.	

Dimensions

Freestanding Stove Shell 2670, 2671, and 2672

See Page 5 for Flue Collar Centerline Dimensions.



Check local codes for approved fittings.

DRAWINGS NOT TO SCALE

General Information

The Direct Vent Gas Heater, DV25, Models #2642 and #2643, is a vented gas appliance listed to the ANSI standard Z21.44b-1993 and CAN/CGA-2.19-M86 for Direct Vent Wall Furnaces. It is also tested to CGA Interim Requirement #41 for Direct Vent Gas Fireplaces.

"Direct vent" is a term used to describe a sealed combustion system in which incoming outside air for combustion and outgoing exhaust enter and exit through two separate concentric passageways within the same sealed vent system.

The direct vent system permits the gas appliance to be vented directly to the outside atmosphere through the side of the house, unlike conventional venting systems that take air from the room for combustion and vent the exhaust vertically through the roof to the atmosphere.

The installation of the DV25 must conform to local codes, or in the absence of local codes, with National Fuel Gas Code, ANSI Z223.1 — latest edition and CAN 1 B1-149.1 and -.2 Installation Code. (EXCEPTION: Do not derate this appliance for altitude. Maintain the manifold pressure at 3.5 inches W.C. for Natural Gas and 10 inches W.C. for LP gas.)

Installation and replacement of gas piping, gas utilization equipment or accessories, and repair and servicing of equipment shall be performed only by a qualified agency. The term "qualified agency" means any individual, firm, corporation, or company that either in person or through a representative is engaged in and is responsible for (a) installation or replacement of gas piping, or (b), the connection, installation, repair, or servicing of equipment, who is experienced in such work, familiar with all precautions required, and has complied with all the requirements of the authority having jurisdiction.

The DV25 should be inspected before use and at least annually by a qualified service agency. 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 Heater be kept clean.

The appliance and its individual shut-off valve must be disconnected from the gas supply piping during any pressure testing of that system at test pressures in excess of 1/2 psig. (3.5 kPa).

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 supply piping system at test pressures equal to or less than 1/2 psig.

A 1/8-inch N.P.T. plugged tapping, accessible for test gage connection, should be installed on the inlet gas connection.

The DV25, 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, (latest edition), or of the current Canadian Electrical Code C22.1.

DUE TO HIGH TEMPERATURES, THE DIRECT VENT GAS HEATER SHOULD BE LOCATED OUT OF TRAFFIC AND AWAY FROM FURNITURE AND DRAPERIES.

WARNING: THIS APPLIANCE IS HOT WHILE IN OPERATION. KEEP CHILDREN, CLOTHING, AND FURNITURE AWAY. CONTACT MAY CAUSE BURNS OR IGNITION OF COMBUSTIBLE MATERIALS.

CHILDREN AND ADULTS SHOULD BE ALERTED TO THE HAZARDS OF HIGH SURFACE TEMPERATURES AND SHOULD STAY AWAY TO AVOID BURNS OR CLOTHING IGNITION.

YOUNG CHILDREN SHOULD BE CAREFULLY SUPERVISED WHEN THEY ARE IN THE SAME ROOM AS THE APPLIANCE.

CLOTHING OR OTHER FLAMMABLE MATERIALS SHOULD NOT BE PLACED ON OR NEAR THE APPLIANCE.

ANY SAFETY SCREEN OR GUARD REMOVED FOR SERVICING AN APPLIANCE MUST BE REPLACED PRIOR TO OPERATING THIS APPLIANCE.

THE APPLIANCE AREA MUST BE KEPT CLEAR AND FREE FROM COMBUSTIBLE MATERIALS, GASOLINE, AND OTHER FLAMMABLE VAPORS AND LIQUIDS.

THE FLOW OF COMBUSTION AND VENTILATION AIR MUST NOT BE OBSTRUCTED.

WARNING: DO NOT OPERATE THIS APPLIANCE WITH THE GLASS PANEL REMOVED, CRACKED OR BROKEN. REPLACEMENT OF THE PANEL SHOULD BE DONE BY A LICENSED OR QUALIFIED SERVICE PERSON.

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.

DO NOT BURN WOOD, TRASH OR ANY OTHER MATERIAL FOR WHICH THIS APPLIANCE WAS NOT DESIGNED. THIS APPLIANCE IS DESIGNED TO BURN EITHER NATURAL GAS OR PROPANE ONLY.

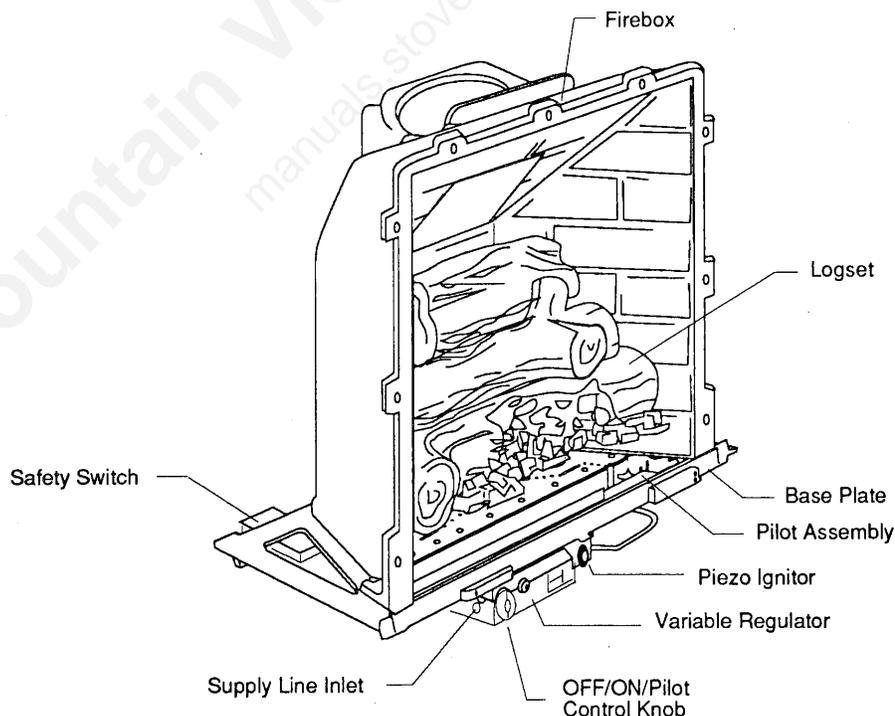
THIS GAS APPLIANCE MUST NOT BE CONNECTED TO A CHIMNEY FLUE SERVING A SEPARATE SOLID FUEL BURNING APPLIANCE.

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

VERIFY PROPER OPERATION AFTER SERVICING.

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

Figure 1. The DV25 Gas Heater / Controls.



Installation Requirements

The installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1 - latest edition. (EXCEPTION: Do not derate this appliance for altitude. Maintain the manifold pressure at 3.5 inches W.C. and 10 inches W.C. for Propane).

In Canada, installation must be in accordance with the current CAN 1 B1-149.1 and -.2 Installation Codes and/or local codes.

The installation should be done by a qualified service person who is familiar with the building codes and installation techniques appropriate for your area to accomplish a safe and effective installation.

Your dealer or your local gas supplier will be able to refer a qualified service person.

WARNING: DUE TO HIGH TEMPERATURES, THE HEATER SHOULD BE LOCATED OUT OF TRAFFIC AND AWAY FROM FURNITURE AND DRAPERIES.

THE SURFACE OF THE HEATER IS HOT WHEN IT IS IN USE. YOUNG CHILDREN SHOULD BE WATCHED CAREFULLY WHEN THEY ARE IN THE SAME ROOM WHEN THE HEATER IS IN USE, AND THEY SHOULD BE TAUGHT TO AVOID THE HOT SURFACE. KEEP ANY OBJECTS THAT CAN BURN WELL AWAY FROM THE HEATER, AND OBSERVE THE RECOMMENDED CLEARANCES THAT FOLLOW.

Hearth Requirements

The DV25 Heater must be installed on rigid flooring. Any carpeting under the unit must be removed. When the heater is installed directly on any combustible surface other than wood flooring, a metal or wood panel extending the full width and depth of the unit must be used as the hearth. There are no other hearth requirements.

Keep the Stove a Safe Distance from Surrounding Materials

The DV25 Heater will heat nearby surfaces when operating. A safe installation requires that adequate *clearance* be maintained between the stove and nearby combustible materials to ensure that such materials do not overheat. The diagrams that follow illustrate the minimum clearances for the appliance in parallel, corner, and alcove installations.

For further information on ventilation guidelines and sizing specifications follow the National Fuel Gas Code NFPA 54/ANSI Z223.1 Section 5.3.

Clearance Requirements

Minimum Clearances to Combustible Materials

Maintain clearance (empty space) between combustible materials and the heater as specified for the appropriate firebox shell being installed.

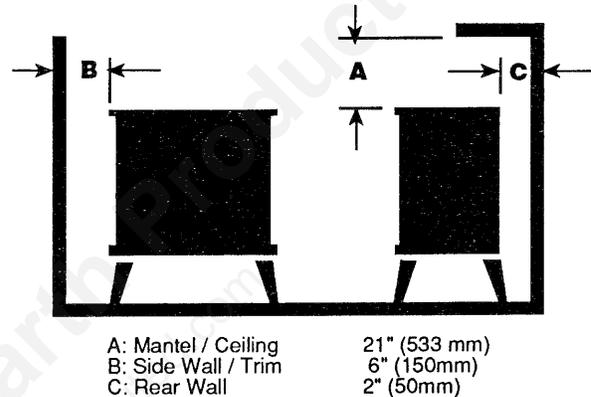


Figure 2. Minimum Clearances for Freestanding Shell 2670.

Alcove Installation

The Direct Vent Gas Heater is approved for installation into alcove constructed of combustible materials to the dimensions and clearances shown below.

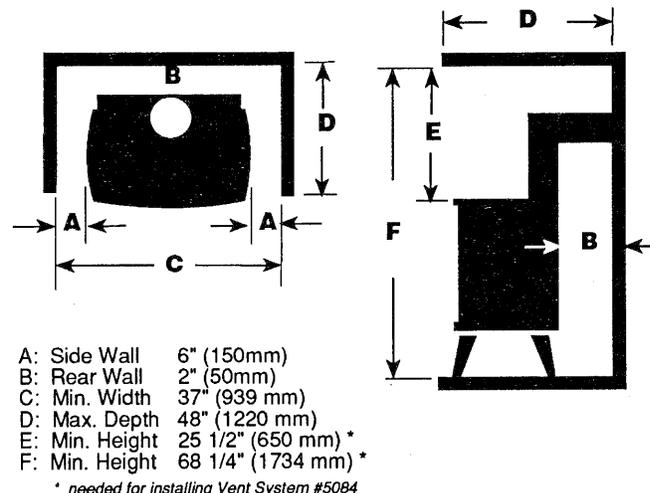


Figure 3. Alcove Installation, Dimensions and Clearances.

Clearance Requirements, cont'd.

Wall Thimble Centerline from Floor

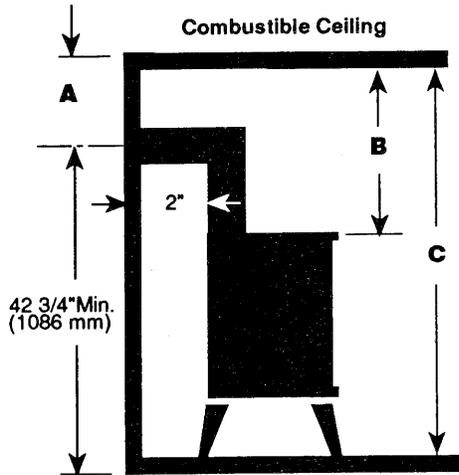


Figure 4. Minimum Clearances to Ceiling or Mantel

	A	B	C
Effective Minimum using Wall Thimble and 2" Rear Clearance:	9 1/2" 241 mm	25 1/2" 648 mm	52 1/4" 1327 mm

Flue Collar Centerline from the Wall

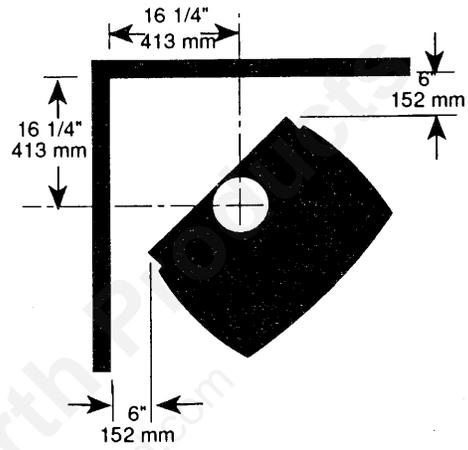


Figure 5. Flue collar centerline from wall; Corner Installation.

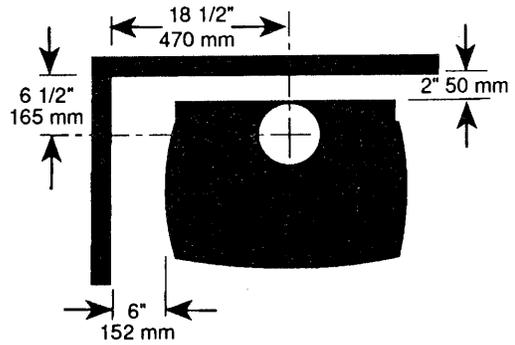


Figure 6. Flue collar centerline from wall; Parallel Installation.

Venting Requirements and Options

Approved Vent System Components

The DV25 Heater is approved to be vented to the outdoors through an adjacent exterior wall or through the roof. The venting system must be comprised of the appropriate listed venting components specified in Table 1. These parts are available from DuraVent Corporation or your DV25 dealer.

All Straight vent pipe sections have a net length 1 1/2" (37mm) less than the nominal dimension; i.e., a 6" (152mm) Straight pipe section has an effective length of 4 1/2" (115mm).

The Appliance Adaptor 923V, when installed, terminates 9 1/4" (235mm) above the stove.

See Fig.8 for dimensions relevant to the #5084 Standard Vent System pipe.

Table 1. Approved Venting Components

VCI NO.	COMPONENT	DURAVENT NO.
923V	APPLIANCE ADAPTOR	923V
990B	90° ELBOW, BLK.*	990B
N/A	90° ELBOW, GAL.	990
945G	45° ELBOW, GAL.	945
908B	6" STRAIGHT, BLK.*	908B
907B	9" STRAIGHT, BLK.	907B
906B	12" STRAIGHT, BLK.	906B
906G	12" STRAIGHT, GAL.	906
904B	24" STRAIGHT, BLK.	904B
904G	24" STRAIGHT, GAL.	904
903B	36" STRAIGHT, BLK.	903B
903G	36" STRAIGHT, GAL.	903
N/A	48" STRAIGHT, BLK.	902B
N/A	48" STRAIGHT, GAL.	902
911B	11" - 14 5/8" STRAIGHT	911B
984B	HORIZONTAL VENT CAP*	984
940B	WALL THIMBLE / CEILING SUPPORT BOX*	940
950B	VINYL SIDING STANDOFF	950
982B	SNORKEL TERMINATION - 14"	982
981B	SNORKEL TERMINATION - 36"	981
5084	MINIMUM HORIZONTAL VENT KIT	N/A
988G	WALL STRAP	988
941B	CATHEDRAL CEILING SUPPORT BOX	941
953G	STORM COLLAR	953
963G	FIRESTOP SPACER	963
943G	FLASHING 0/12 - 6/12	943
943S	FLASHING 6/12 - 12/12	943S
991G	VERTICAL TERMINATION CAP	991

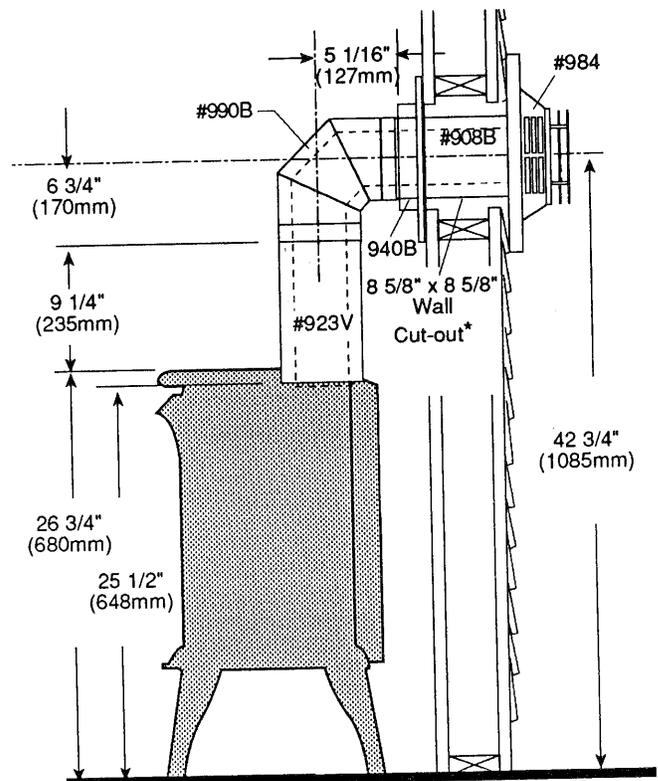
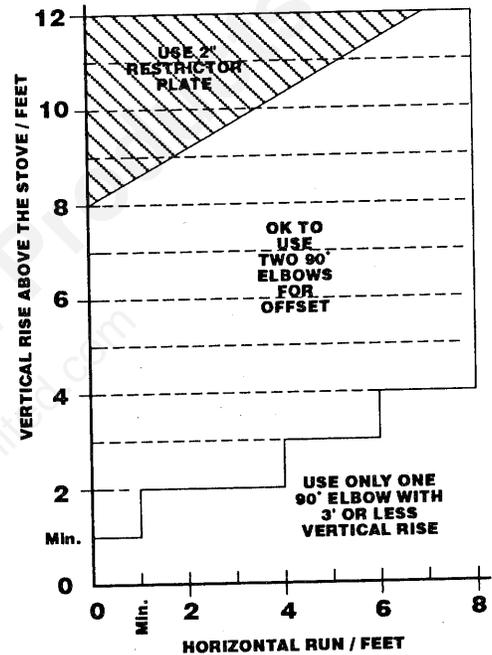
*Included in Vermont Castings Standard Vent System #5084

Figure 8. Standard Vent System #5084 through a combustible wall with the minimum approved rear clearance, (2").
* The 8 5/8" x 8 5/8" wall cut-out will provide the required clearance of 1" around the vent pipe.

Horizontal Termination

The maximum permissible horizontal run is 8 ft (2.4m). The maximum vertical run ending in a horizontal terminations is 12 ft (3.6m). The vent run must extend a minimum of 2 ft (.6m) See Fig. 7 for specifications concerning offsets and overall vent run lengths.

Figure 7.



Vertical Vent Termination

The maximum permissible vertical run is 25 ft. (7.5m) measured from the heater flue collar to the lowest discharge opening at the termination. See Figs.9 and 10 for offset and run length specifications.

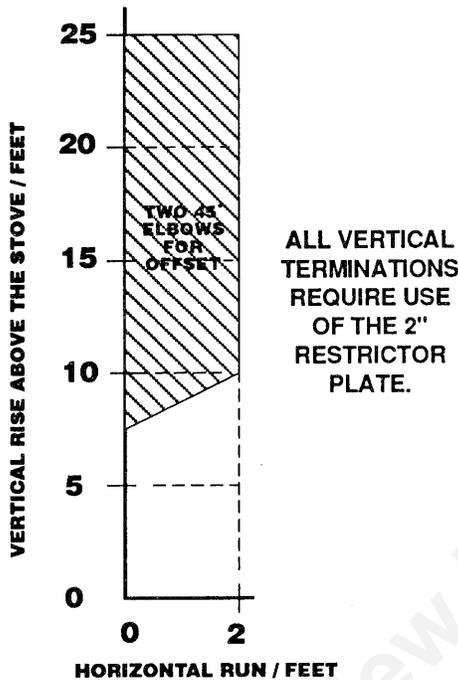


Figure 9. Maximum Offset/Vent Run.

Vent Terminus Clearances

When planning the installation, the location of the vent terminal and clearances must be considered. Some of the most common clearances to keep in mind are shown in Fig. 48.

IMPORTANT: ALL VENT CLEARANCES MUST BE MAINTAINED. CHECK YOUR VENT TERMINUS CLEARANCES AGAINST FIG.48, PAGE 23, APPENDIX A.

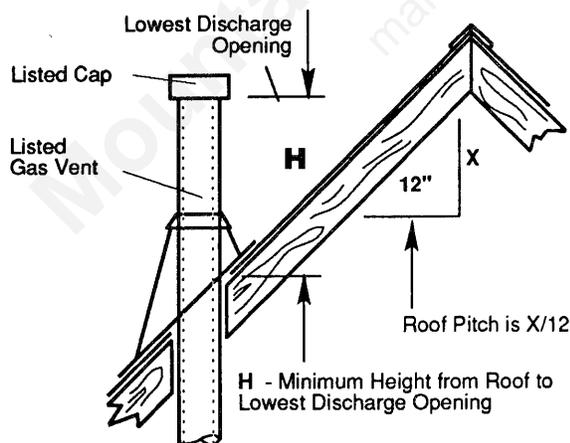
The vent should be placed so that people cannot be burned by accidentally touching the vent surfaces when the stove is operating.

The vent termination should be located where it cannot be damaged by such things as automobile doors, lawnmowers or snowblowers and it should be located away from areas where it could become obstructed by snow, etc.

Some considerations are:

- Obstructions or impediments to venting.
- Nearby combustible materials that could come into contact with combustion exhaust gases.
- Other nearby openings (within 9" (23mm)) through which exhaust gas could re-enter the building.
- All vegetation within 3' (.9m) that may interfere with the draft.
- **Vinyl siding requires protection from vented heat directly above the vent opening. Use Vinyl Siding Heat Shield Kit #950 or 950B.**

Other factors that influence where the installation will be sited include the location of outside walls, where additional heat may be desired in the home, where the family members gather most regularly, and perhaps most importantly, the distance limitations of the venting system.



Roof Pitch	H (Min.) Ft.
Flat to 6/12	1.0
6/12 to 7/12	1.25
Over 7/12 to 8/12	1.5
Over 8/12 to 9/12	2.0
Over 9/12 to 10/12	2.5
Over 10/12 to 11/12	3.25
Over 11/12 to 12/12	4.0

Figure 10. Vent (Chimney) Height.

**WARNING:**

• ALWAYS MAINTAIN REQUIRED CLEARANCES (AIR SPACES) TO NEARBY COMBUSTIBLES TO PREVENT FIRE HAZARD. DO NOT FILL AIR SPACES WITH INSULATION. ALL VENTING COMPONENTS MUST MAINTAIN A 1" (25MM) CLEARANCE TO COMBUSTIBLE MATERIALS.

• THE GAS APPLIANCE AND VENT SYSTEM MUST BE VENTED DIRECTLY TO THE OUTSIDE OF THE BUILDING AND NEVER BE ATTACHED TO A CHIMNEY SERVING A SEPARATE SOLID FUEL OR GAS-BURNING APPLIANCE. EACH DIRECT VENT APPLIANCE MUST USE IT'S OWN SEPARATE VENT SYSTEM. COMMON VENTS ARE PROHIBITED.

• REFER TO THE MANUFACTURER'S INSTRUCTIONS INCLUDED WITH THE VENTING SYSTEM FOR COMPLETE INSTALLATION PROCEDURES.

**IMPORTANT**

- The horizontal termination must not be recessed into the exterior wall or siding.
- Horizontal vent runs must be level or rise 1/4" per foot toward the vent termination.
- Clearances around the vent termination must be maintained.
- Parallel installations with minimum wall clearance have restricted access for connecting the Horizontal Vent Cap straps to the vent pipe. See Page 13 of the Assembly section for recommended installation procedures.

Assembly Procedures

WARNING

FAILURE TO POSITION THE PARTS IN ACCORDANCE WITH THESE DIAGRAMS OR FAILURE TO USE ONLY PARTS SPECIFICALLY APPROVED FOR USE WITH THIS HEATER MAY RESULT IN PROPERTY DAMAGE OR PERSONAL INJURY.

THIS HEATER AND COMPONENTS ARE VERY HEAVY. HAVE ASSISTANCE AVAILABLE FOR ASSEMBLY.

Unpack the DV25 Firebox, Logset and Stove Shell

Cut the shipping straps and remove the Rear Shroud from its carton. Remove the cardboard packing material from the top of the firebox, Fig. 12. Do not remove the firebox from the shipping pallet yet.

Tools Required

- Phillips screwdriver
- power drill
- utility knife
- size 28 (.140"/3.5mm) dia. metal drill bit

Parts Bag Contents:

- 9 Phillips 1/4-20 x 5/8" screws
- 4 Phillips 1/4-20 x 3/8" screws
- 4 Phillips # 10 x 1/2" sheet metal screws
- 3 Phillips # 10 x 1" sheet metal screws
- 1 Wire tie
- 1 Vent Gasket
- 1 Vent Restrictor Plate
- Owner Registration Card

See Page 22, Fig. 47 / Scw Identification Chart.

Remove the Log Set

The Log Set has been packed inside the firebox in a protective wrap. The Glass Panel must be removed to install the Log Set onto the burner.

- Use a Phillips screwdriver to remove the three screws from the glass retainer frame. Fig. 13. Keep the screws for later re-installation with the other 9, 1/4-20 x 5/8" phillips screws in the parts bag.
- Carefully remove the glass and frame assembly and place it out of the way on a flat, padded surface such as a counter protected by a towel.

Unpack the cast iron stove shell parts from the shipping carton. Inspect each part for shipping damage and set it aside on a protective surface. **Porcelain enamelled surfaces are fragile. Handle porcelain enamelled castings tenderly.**

Before you begin assembly, read this section of the manual to familiarize yourself with the procedures. The installation will be most easy if you follow the steps in the order presented.

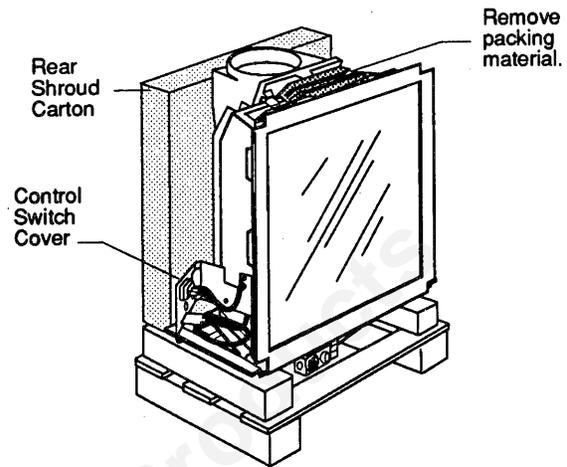


Figure 12. DV25 Firebox with Switch Cover as shipped.

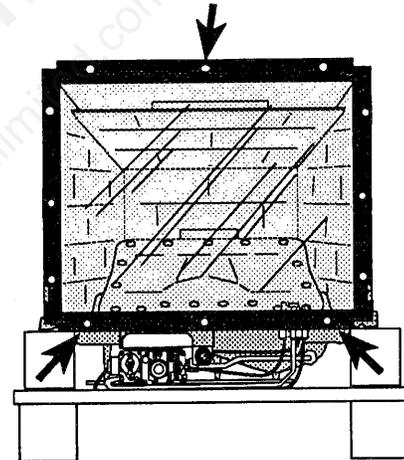


Figure 13. Remove the three frame screws from the locations indicated.

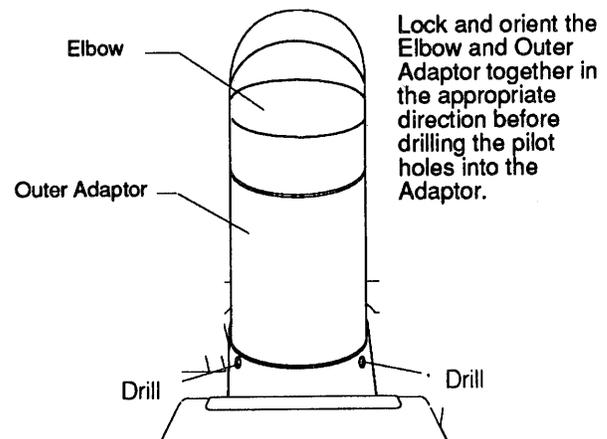


Figure 14. Pre-drill pilot holes into the Outer Adaptor pipe.

Venting Pre-assembly

The vent starter pipe must be pre-fit and its pilot holes drilled before proceeding with the heater assembly.

- Insert the Outer Adaptor Pipe, seam facing back, into the flue collar. If applicable, insert and fully engage an elbow into the starter pipe and rotate the pipe so that the elbow is facing the appropriate direction for connection to the vent termination. Fig. 14.
- Drill .14" dia. pilot holes into the pipe through the three existing screw holes in the firebox flue collar. Remove the pipe.

Heater Assembly

Step 1. Attach the Rear Shroud to the Left End plate by aligning the key holes with the two wingbolts in the side. If necessary, turn the wingbolts to orient the blades vertically. Fig. 15. Slide the shroud downward to engage it behind all three washers on the side plate bolts and then tighten both wingbolts.

Step 2. Repeat Step 1 to attach the Right Side Plate to the Rear Shroud. Fig. 16. Move this assembly close to the stove's final position. Align the two side plates to be perpendicular to the Back Panel as in Fig. 17.

Step 3. Hang the Switch Cover over the flue collar rim, as in Fig. 17, to keep it out of the way while installing the firebox. **DO NOT PULL ON THE SAFETY RELAY WIRE LOCATED OVER THE FIREBOX.** Lift the DV25 firebox assembly as a unit and slide it back to position it within the shell. The base of the firebox should rest on the side support shelves as in Figs. 17 and 18. The large washer at the forward leg of each Side Plate should engage the corresponding notch in the underside of the firebox base as shown in Fig. 18. Properly positioned, the firebox will be level and locked in place. If not, adjust the levelling screws in the legs to keep the entire unit level.

If you are installing the optional convection Fan Kit #5081, proceed to Step 4. If you will not install a Fan Kit, proceed to Step 7.

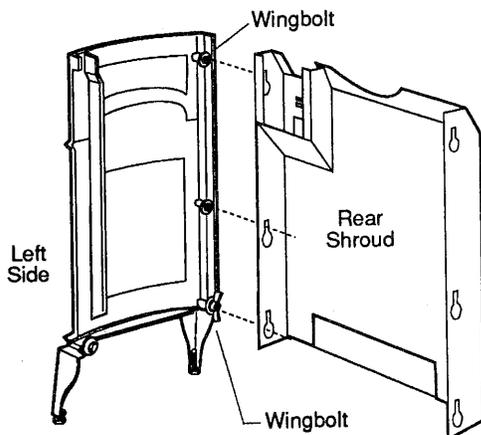


Figure 15. Secure Left End to the Rear Shroud.

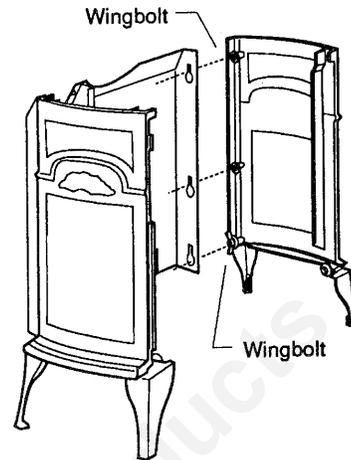


Figure 16. Secure Right End to the Rear Shroud.

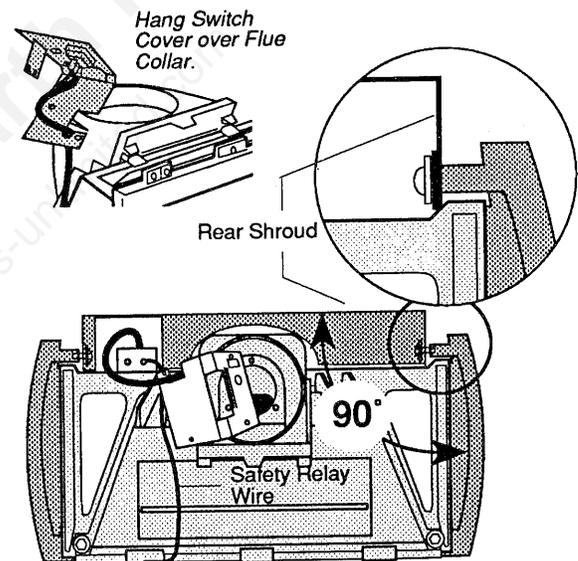


Figure 17. Align both sides with the rear.

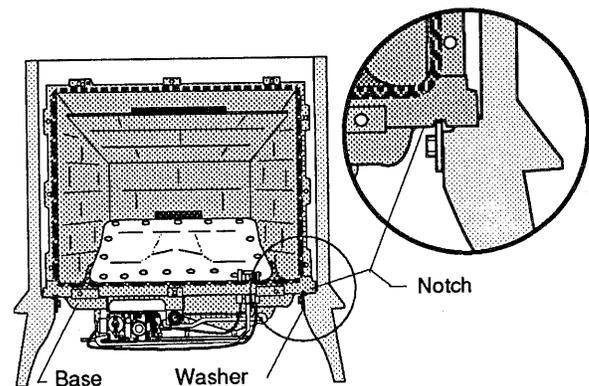


Figure 18. Install the Firebox Assembly. Be sure that the two large front washers engage the notches on both ends of the Base.

Step 4. The fan kit consists of a Blower Assembly and a Rheostat Assembly that are connected by a cable. Fig. 19. The Blower Assembly mounts to the bottom rear of the the stove and the Rheostat mounts within the switch box on the left rear corner of the stove. The Rheostat contains a "snapstat" which senses the temperature within the stove heat exchanger and automatically turns the fan On (or Off) above (or below) approximately 109°. The Rheostat also provides a range of fan speed settings from Off (which overrides the snapstat function) to High.

Unpack and inspect the Blower assembly. Confirm that the fan spins freely.

⚠ WARNING
THIS APPLIANCE IS EQUIPPED WITH A THREE-PRONG (GROUNDED) PLUG FOR YOUR 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.

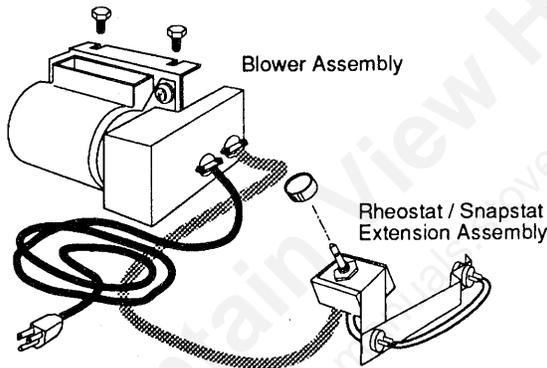


Figure 19. Fan Kit Components

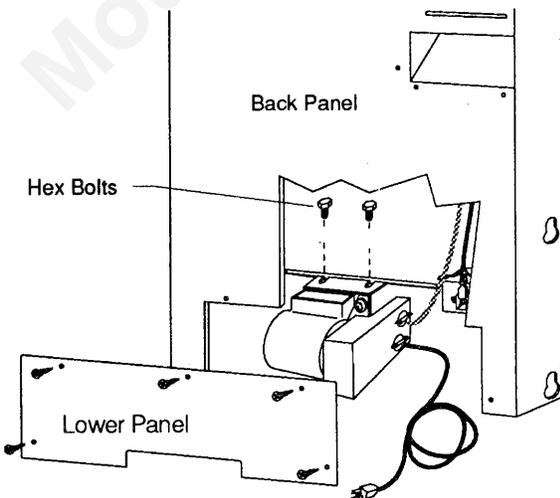


Figure 20. Install Blower.

Step 5. Remove the panel at the bottom of the Rear Shroud and secure the blower assembly to the firebox base using the two hex bolts supplied with the kit. Fig. 20.

Step 6. Remove the plug from the Control Switch. Reach under the Back Panel and feed the Fan Rheostat/Snapstat assembly up to the top of the firebox. Secure the rheostat assembly to the Switch Cover the sheet metal screws supplied with the fan kit. Fig. 21.

Step 7. Install the Control Switch Cover onto the Back Panel using the four #10 x 1/2" sheet metal screws supplied in the parts bag. Fig. 22.

Push the Control Knob onto the rheostat shaft. Secure the wire harness to the hole in the side of the shroud using the plastic wire tie supplied.

Fan Kit users: Be sure that the snapstat extension is positioned against the cast iron at the top of the firebox.

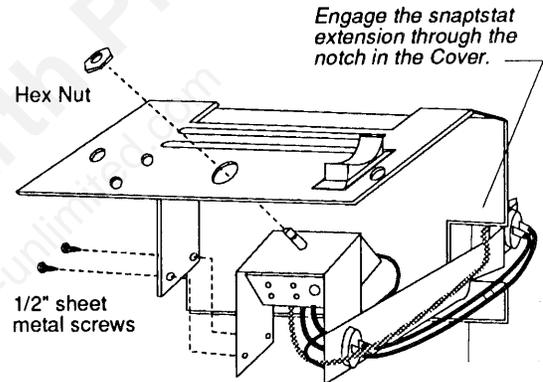


Figure 21. Install Rheostat/Snapstat assembly.

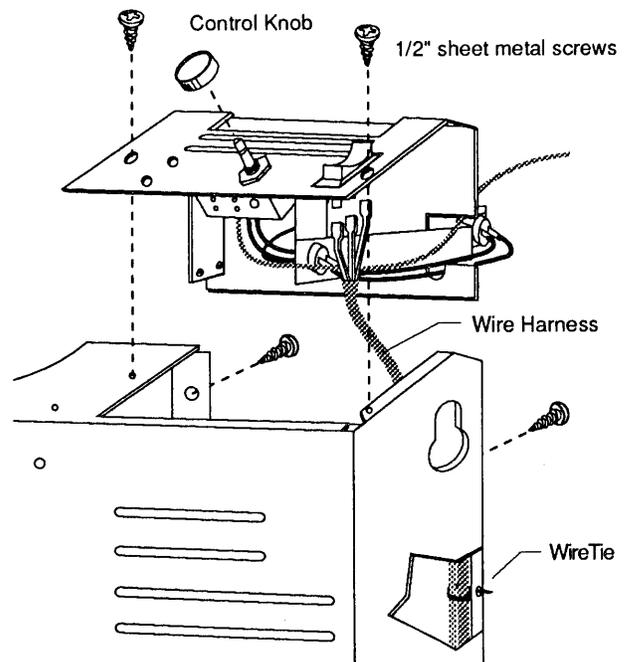


Figure 22. Install Off/On Switch Cover plate. Place the four sheet metal screws as shown. Push on the knob.

Step 8. Connect the wall thermostat leads to the double terminal block at the lower left corner of the firebox base. Fig. 23. Either wire may be connected to either terminal. Note in the table below the appropriate gauge wire to use for the length of lead needed.

Wire Gauge	Maximum Run
18	40'
20	25'
22	16'

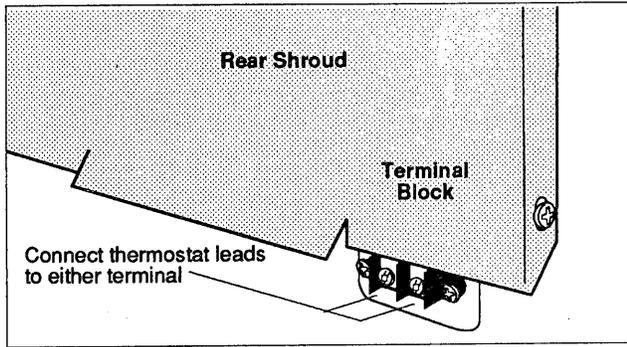


Figure 23. Thermostat Connection.

Attach the Venting

The DV25 is approved for installation only with the vent components listed on Page 6. Follow the vent manufacturer's instructions exactly.

Paint Option - Porcelain Enamel Stoves

You may wish to use the Medium-temperature paint provided to paint the vent components to match your stove before assembling the system.

Appliance Adaptor Connection

Step 1. Attach the adhesive-backed gasket (located in the parts bag) to the flat flange of the Inner Adaptor Pipe. Fig.24. If you need to use the Restrictor Plate, attach the gasket to that plate and install the plate, gasket-side down, under the Inner Adaptor Pipe. See Figs. 7 and 9 to determine if you need to install the Restrictor Plate.

Step 2. Attach the Inner Adaptor Pipe to the stove with three 1/4-20 x 3/8" Phillips screws (see parts bag). Fig. 25.

Step 3. Insert the Outer Adaptor pipe into the flue collar as previously fit and secure with three #10 x 1" sheet metal screws supplied in the parts bag. Fig. 26.

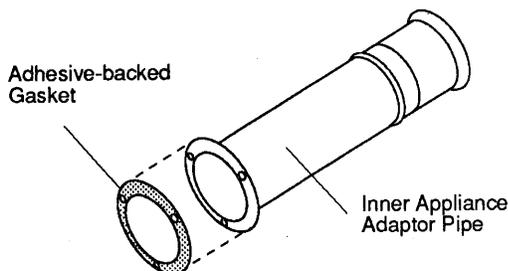


Figure 24. Attach the gasket to the Inner Adaptor.

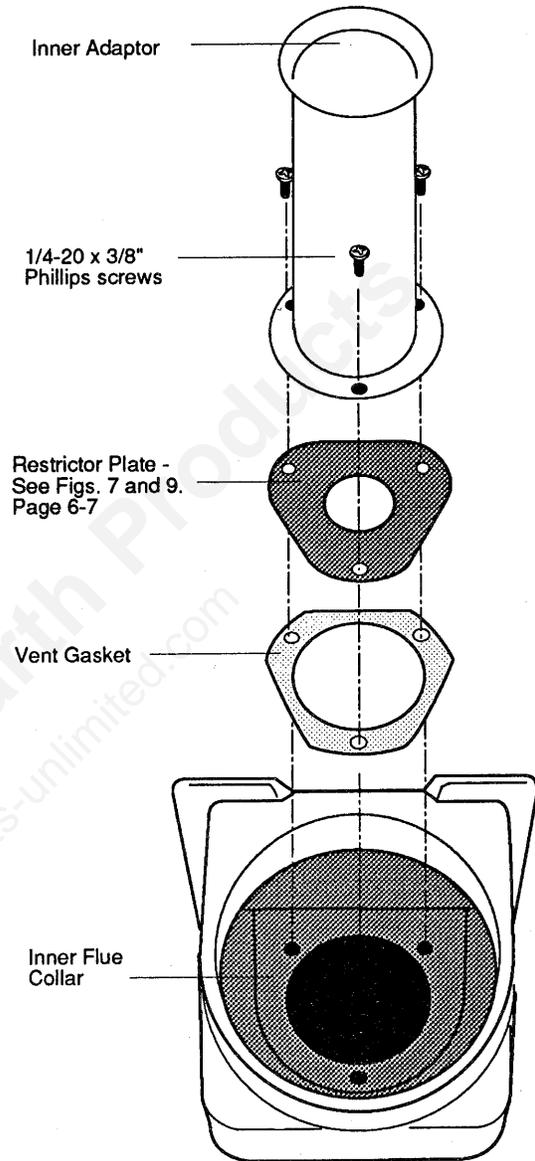


Figure 25. Secure the Inner Adaptor to the flue collar.

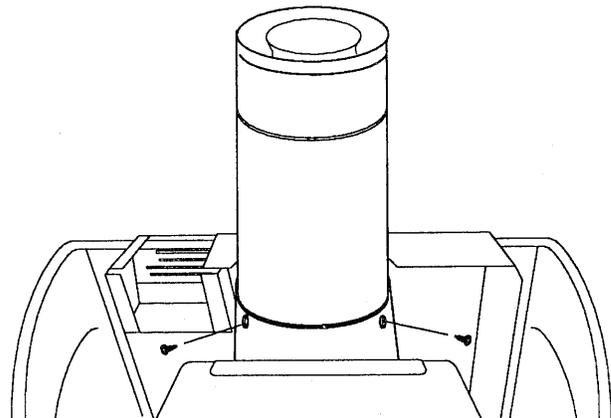


Figure 26 Install the Outer Adaptor.

Complete the Vent System

Install the rest of the vent system according to the manufacturer's instructions included with the components.

NOTE: If the heater will be installed parallel to the wall with minimum rear clearance (2") use the following procedure, in conjunction with the vent manufacturer's instructions, to complete the vent connection. Be sure to follow the venting guidelines in the Installation section and Appendix A of this manual as well as those specified by the vent manufacturer.

Standard Parallel Installation (min. rear clearance)

Step 1. Cut the opening. Determine the location and cut and frame an 8 5/8" x 8 5/8" square hole in the wall. **Be sure that the exterior and interior cutouts are level with each other.**

Step 2. Trim the Straps. Install the Vinyl Siding Stand-off if applicable. Position the Horizontal Vent Cap within the opening on the outside wall and temporarily secure it in place with one of the wood screws provided. Mark and trim each of the mounting straps to extend no more than 2 1/4" (55mm) beyond the interior wall. See Fig.27. Remove the Vent Cap from the outside wall.

Step 3. Drill Wall Thimble. With the stove installed at minimum clearance, insufficient room exists to back the wall thimble away from the cutout to allow access for attaching the vent cap mounting straps. Before assembly, drill a 9/16" dia. access hole through the side of the thimble near the seam to allow attachment of the straps. Fig.28.

Step 4. Locate the Stove. Position the stove with vent assembly (including appliance adaptor, elbow, straight section and wall thimble) in the final location. Be sure to center the straight pipe section within the wall cutout.

Step 5. Install the Vent Cap. Run a bead of non-hardening mastic around the outside edge of the Horizontal Vent Cap. The arrow on the vent cap should point UP. Position the cap in the center of the hole on the outside wall, making certain that the cap and pipe mate properly. Also, be sure that the mounting straps are visible through the wall thimble access hole. Secure the Vent Cap to the wall with the wood screws provided.

Step 6. Secure the Straps. Rotate the Wall Thimble around the elbow to provide access to secure the two mounting straps to the straight vent pipe. Attach the straps with the sheet metal screws supplied with the Vent Cap. Fig. 29.

Step 7. Secure the Wall Thimble. Rotate the thimble to hide the access hole. Secure the thimble plate to the interior wall using the four screws provided.

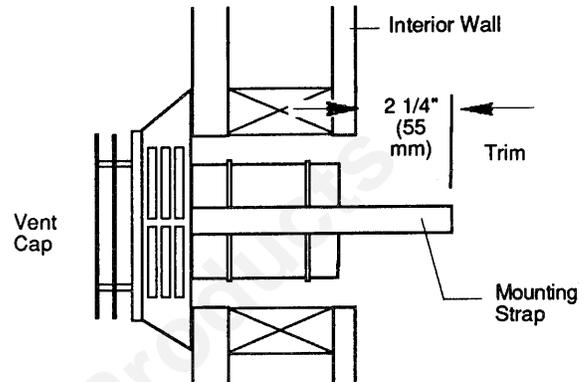


Figure 27. Trim the mounting straps.

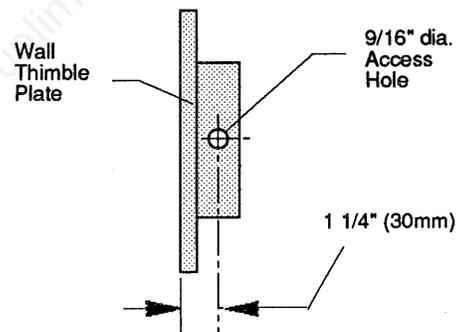


Figure 28. Drill out the wall thimble access hole.

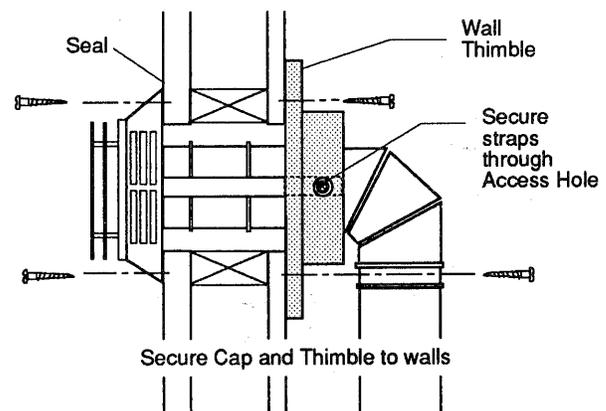


Figure 29. Secure the straps to the vent.

Install the Log Set

Step 1. The logs are pre-assembled and install as a unit. Center the Log Set on the burner behind the cast iron tabs. The Logs must set tight against the top of the burner plate. Fig 30.

Step 2. Position the glass and frame against the firebox and hold it in place with one hand against the top center of the frame. The bottom of the frame will be supported by the iron ledge. Adjust the glass as needed so that it contacts the gasket evenly all around. In the parts bag, find the 9 1/4-20 x 5/8" screws needed. Install and turn them so that they are only finger tight.

Step 3. To avoid uneven pressure on the glass when tightening the screws, tighten them alternately, one half-turn at a time, until they are all snug. Fig. 31.

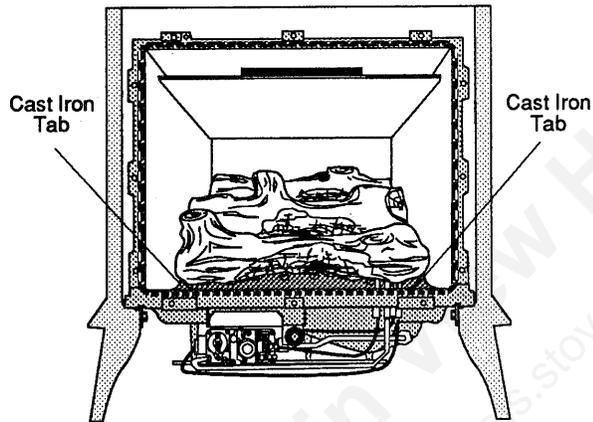


Figure 30. Align the Logset with the screws on the burner plate.

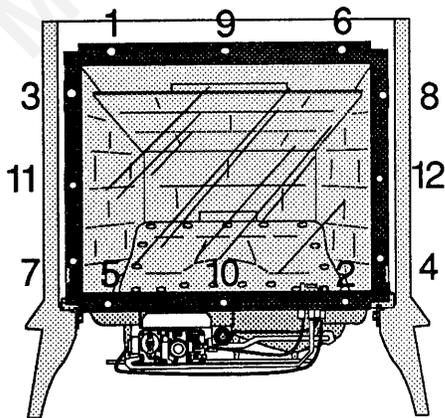


Figure 31. Tighten the screws in an alternating sequence.

Install the Front and Top Plates

Step 1. Grasp the Front Plate by the window bars and lift it into position engaging the two steel tabs behind the adjacent bosses in the Side Plates. Fig. 32. Then seat the Front against the sides so that the tabs at the bottom lip engage with the notches in the stove legs.

When properly installed, the bottom of the Front Plate cannot be pulled away from the sides without also lifting it.

NOTE: Be sure that the steel safety switch relay cable is positioned over the Heat Exchanger door on top of the firebox. See Figs. 32 and 40a.

Step 2. Place the Top Plate over the sides and front. The upper edge of the side plates should seat into the channel in the underside of the Top. Fig. 33.

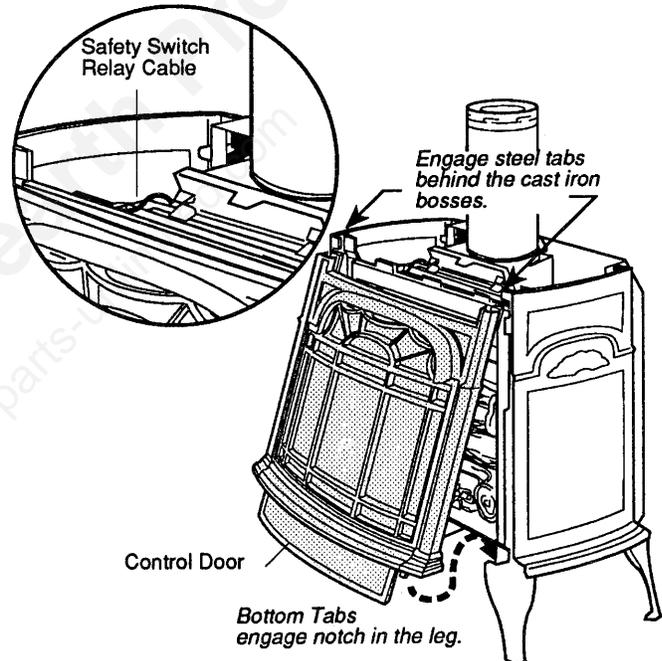


Figure 32. Install the Front Plate.

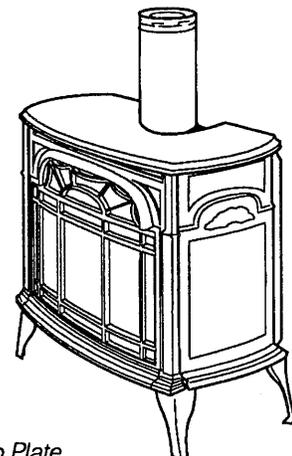


Figure 33. Install the Top Plate.

Burner Conversion

The DV25 Gas Burner 2642 is shipped configured to burn Natural Gas only.

The DV25 Gas Burner 2643 is shipped configured to burn Propane only.

The label on the front of the stove indicates which fuel the burner is configured to use.

If conversion for use of either alternative gas is necessary it should be done at this time, before connecting the gas supply line. Conversion should be made only by a qualified service agency.

To convert from Natural Gas to Propane, use only LP Conversion Kit #2655 with this stove.

To convert from Propane to Natural Gas, use only NG Conversion Kit #2654 with this stove.

WARNING

THE CONVERSION KIT SHALL BE INSTALLED BY A QUALIFIED SERVICE AGENCY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND ALL APPLICABLE CODES AND REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. IF THE INFORMATION IN THE INSTRUCTIONS IS NOT FOLLOWED EXACTLY, A FIRE, EXPLOSION, OR PRODUCTION OF CARBON MONOXIDE MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE. THE QUALIFIED SERVICE AGENCY PERFORMING THIS WORK ASSUMES RESPONSIBILITY FOR THE PROPER CONVERSION OF THIS APPLIANCE WITH THE KIT.

Safety Switch

This heater is equipped with a safety switch which will prevent burner operation if the relay pin becomes disengaged for any reason. Check that the relay pin is in place before attempting to operate the heater. See Fig. 40, Page 19.

If the relay pin has become disengaged during transit or installation, follow the reset procedure outlined on Page 19.

If the relay pin becomes disengaged during normal operation, DO NOT attempt to re-install the pin. Turn off the gas supply and call your local dealer for assistance.

Connect the Gas Supply

Check the rating plate on the cable under the valve to confirm that you have the appropriate burner for the type of fuel to be used.

CAUTION

THIS APPLIANCE SHOULD BE CONNECTED TO THE GAS SUPPLY ONLY BY A QUALIFIED GAS SERVICE TECHNICIAN. FOLLOW ALL LOCAL CODES.

The DV25 Heater and its individual shutoff valve must be disconnected from the gas supply piping during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa).

The DV25 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.

Step 1. Connect the main Gas Supply to the control valve inlet. Fig.34. A 1/8-inch N.P.T. plugged tapping, accessible for test gauge connection, must be installed on the inlet gas connection.

Step 2. Test for leaks at all joints before operating.

This completes assembly procedures for the DV25 Gas Heater.

CAUTION

THERE MUST BE A GAS SHUTOFF BETWEEN THE STOVE AND THE SUPPLY.

With Natural Gas, use a 3/8" or 1/2" natural gas supply line with an input of 25,000 BTUs at a manifold pressure of 3.5" and minimum inlet supply for adjustment of 5.0" W.C.

With Propane, use a 3/8" or 1/2" propane gas supply line with an input of 25,000 BTUs at a manifold pressure of 10.0" and minimum inlet supply for adjustment of 11.0" W.C.

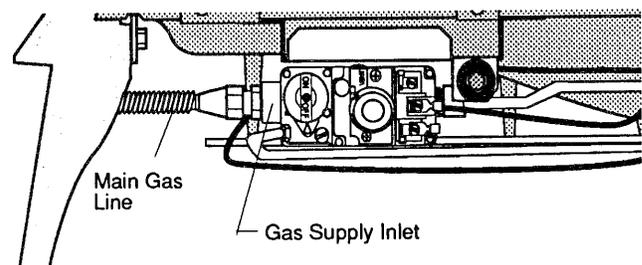


Figure 34. The gas supply line connects to the inlet to the left of the control valve.

Operation

Your First Fire

Read these instructions carefully and familiarize yourself with the burner controls shown in Figs. 35 and 36. Locate the Pilot assembly, Fig. 37. Follow the lighting instructions on Page 17 exactly.

During the first fire, it is not unusual to smell some odor associated with new logs, paint and metal being heated. Odors should dissipate within an hour or so, however, you can open a window to provide fresh air to alleviate the condition.



CAUTION

If the entire burner is not lit within five (5) seconds of turning the switch ON, immediately push the switch OFF. Allow 5 minutes for gas to dissipate and repeat from Step 5.

If unsuccessful again, completely turn off all gas to the heater and call your local gas service technician.

Pilot and Burner Inspection

Each time you light your heater check that the pilot flame and burner flame pattern are as shown in Fig. 37 or Fig. 38. If flame patterns are incorrect, turn the heater off. Contact your dealer or a qualified gas technician for assistance. Do not operate the heater until the pilot flame is correct.

Follow regular maintenance procedures as described on Page 18.

3-Way Switch Settings

ON: Continuous burning.

OFF: Gas is shut off.

T'STAT: Gas flow to burner is controlled by external thermostat setting.

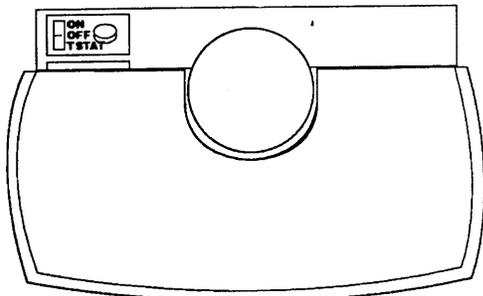


Figure 35. 3-way Control Switch

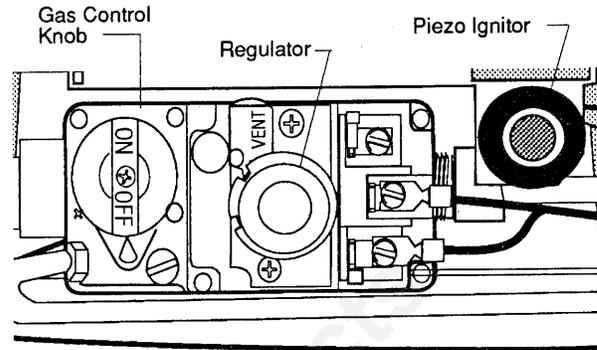


Figure 36. Pilot Assembly location and flame pattern.

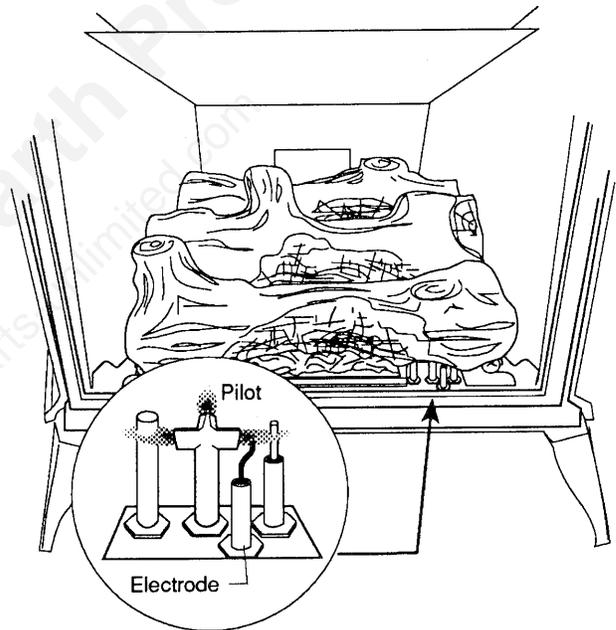


Figure 37. Pilot Assembly location and flame pattern.

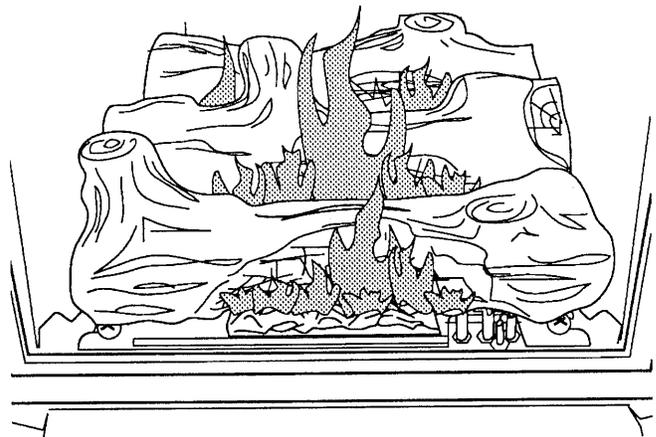


Figure 38. Correct burner flame pattern.

FOR YOUR SAFETY READ BEFORE LIGHTING

WARNING: IF YOU DO NOT FOLLOW THESE INSTRUCTIONS EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY, OR LOSS OF LIFE.

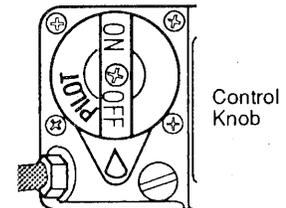
- A. This appliance has a pilot. When lighting the pilot, follow these instructions exactly.
- B. **BEFORE OPERATING** smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any gas 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 turn the gas control knob. Never use tools. If the knob will not 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 that has been under water.

LIGHTING INSTRUCTIONS

1. **STOP!** Read the safety information above on this label.
2. Turn off all electric power to the appliance.
3. Turn the thermostat to the lowest setting, (if applicable).
4. Place the OFF/ON/T'STAT switch in the OFF position.
5. Push in gas control knob slightly and turn clockwise  to "OFF."



Control Knob

- NOTE:** Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly. Do not force.
6. Wait five (5) minutes to clear out any gas. If you then smell gas, **STOP!** Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
 7. Turn knob on gas control counterclockwise  to "PILOT."

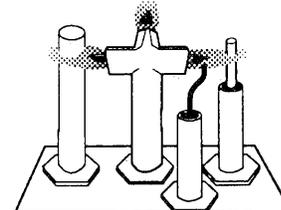
8. Find pilot. The pilot is located below the logset in the forward lower right area of the firebox.

9. Push in control knob all the way and hold in. Immediately light the pilot by pushing the red ignitor button. Continue to hold the control 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 5 through 9.

• 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.

10. Turn gas control knob counterclockwise  to "ON."
11. Place the OFF/ON/T'STAT switch in the ON or T'STAT position.
12. Turn on all electric power to the appliance.



Pilot Assembly

TO TURN OFF GAS TO APPLIANCE

1. Turn off all electric power to the appliance if service is to be performed.
2. Push in gas control knob slightly and turn clockwise  to "OFF."

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

Maintenance

Your DV25 Gas Heater will provide years of service with minimal upkeep. The following procedures will help ensure that your stove continues to function properly.

Annual System Inspection

Have the entire heater and venting system inspected annually by a qualified gas technician. Replace any worn or broken parts.

Logset and Burner / Cleaning and Inspection

Cleanliness is critical to the proper function of the heater. The log set and burner must all be kept free of dust and unobstructed by debris. Inspect these areas before each use and clean as necessary.

Step 1. Turn the burner OFF and let the heater cool completely before cleaning.

Step 2. Remove the Top plate.

Step 3. Lift the Front Plate up and then swing the bottom out to disengage it from the heater shell.

Step 4. The glass panel and frame must be removed to gain access to the firebox and log set.

- Use a Phillips screwdriver to first alternately loosen and then remove the twelve screws that hold the glass frame to the stove. **Follow the pattern shown in Fig. 39. Uneven pressure can break the glass.**
- Carefully remove the glass and frame assembly and place it out of the way on a flat, padded surface such as a counter protected by a towel. Disengage the side clips to remove the screen from the Firebox.

Step 5. Carefully inspect the Logset for damage. Contact your local dealer if any damage is evident. **DO NOT OPERATE THE HEATER WITH A DAMAGED LOGSET.**

Use a soft bristled brush to sweep dust or debris from the Logset, Pilot and Burner. Use care as the Logset is fragile and susceptible to damage. **DO NOT USE A VACUUM TO CLEAN THE LOGSET OR BURNER.**

Step 6. Replace the Glass panel and frame. Alternately tighten the screws in the same pattern as was followed in removing them.

Step 7. Replace the Front and Top Plates.

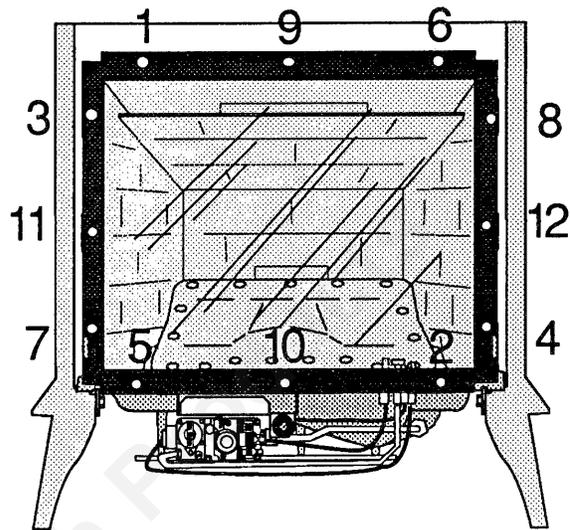


Figure 39. Remove the glass frame screws in an alternating pattern.

Care of Cast Iron

An occasional dusting with a dry rag will help keep the painted surfaces looking new. Use high-temperature stove paints, available through your local dealer, to touch-up areas as needed. Clean areas to be painted with a wire brush and be sure to cover the Logset, Burner and Valve assembly. Apply the paint sparingly; two light coats of paint will give better results than a single heavy coat.

WARNING

**TURN THE PILOT OFF BEFORE PAINTING
ALLOW THE HEATER TO COOL COMPLETELY
BEFORE PAINTING.**

Porcelain enamel surfaces should be cleaned with a soft, damp cloth. Do not use abrasive cleaning agents. If necessary, use only a cleaning agent formulated specifically for use on porcelain enamel surfaces.

Cleaning the Glass

Glass should be cleaned only with a soft, damp cloth. Do not use abrasive cleaning agents.

WARNING: Let the glass cool completely before attempting to clean.

Glass Replacement

Replace glass only with Vermont Castings Part # 160-1691. See Fig 39. and previous instructions for removal of the damaged glass panel.

Gasket Replacement

The DV25 Gas Heater uses 5/16" rope-type fiberglass gaskets to seal between the glass panel and the firebox. In time, this gasket can become brittle and compressed and should be replaced. New gasket is available from your dealer.

Shut off the gas supply and allow the stove to cool. Wear safety goggles and a dust mask.

Step 1. Remove the Front, Glass Frame and Glass Panel as Remove the old gasket. Use a wire brush to clean the channel of any remaining cement or bits of gasket. Use a cold chisel if necessary.

Step 2. Determine the correct length of gasket by laying it out in the channel. Allow an extra 1-2" (25-50 mm), and mark the spot to be cut. Use a utility knife. Twist the ends slightly to prevent unraveling.

Step 3. Lay an unbroken 1/8" (3 mm) bead of gasket cement in the channel. Starting at one end, press the gasket into the channel. Ensure a good joint where the gasket ends meet before trimming excess. Do not overlap the gasket ends or leave ends with ragged edges.

Step 4. Press the glass frame firmly against the gasket to seat it evenly in its channel.

Step 5. Clean excess cement from around the channel. Allow the cement to dry for at least 24 hours before using your stove.

Safety Switch

The DV25 heater is equipped with a safety switch which will prevent burner operation if the relay pin becomes disengaged from its normal position for any reason. Normally set, the pin will be engaged with the switch through the hole in the top of the switch box.

If the relay pin has become disengaged during transit or installation, follow the reset procedure outlined below.

If the relay pin becomes disengaged during normal operation, DO NOT attempt to re-install the pin. Turn off the gas supply and call your local dealer for assistance. It is important to determine what condition caused the pin to be removed.

Step 1. Push the switch lever fully back as shown in Fig.40 and insert the cotter pin/cable all the way through the top and bottom of the switch box. The pin must hold the lever back to engage the switch mechanism.

Step 2. Be sure that the switch cable is slack and positioned over the top of the Heat Exchanger Door as in Fig. 40a.

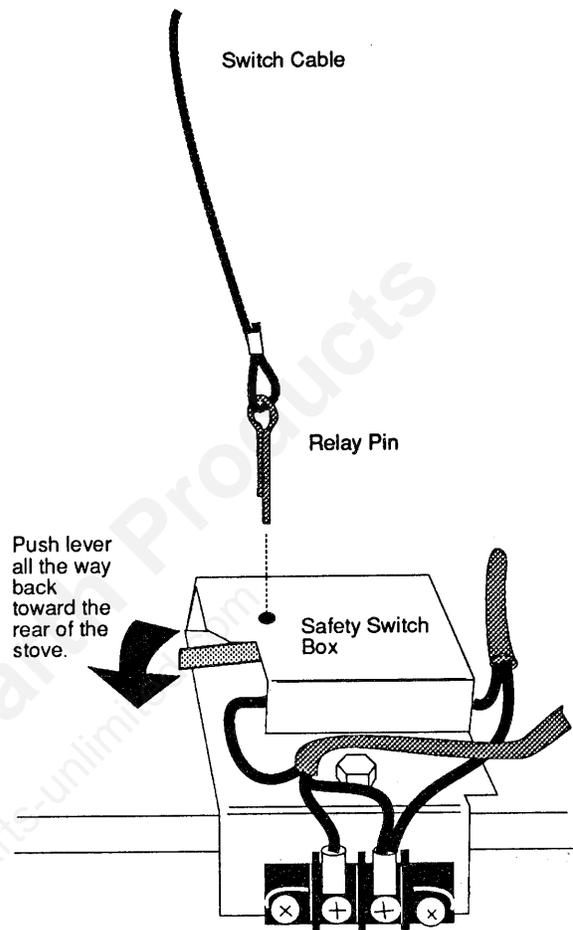


Figure 40. Reset the relay pin into the Safety Switch.

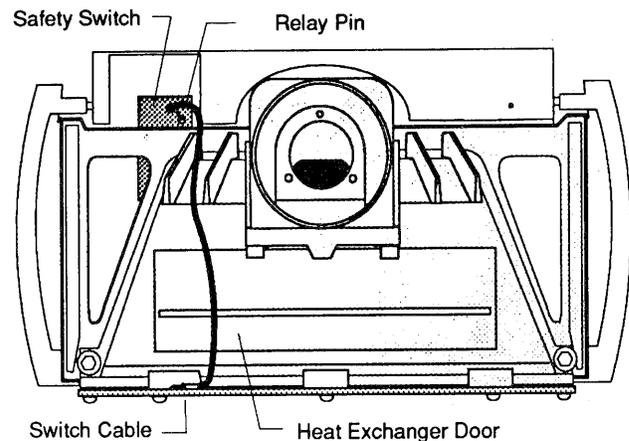


Figure 40a. Switch Cable Position.

Burner Adjustment

An air shutter, located on the burner, has been set at the factory for either Propane or Natural gas and should not require further adjustment. Installation characteristics vary, however, and adjustment may be necessary to improve flame picture or eliminate sooting. Generally, the shutter should be set open $5/16$ " for Natural gas and $7/16$ " open for Propane. Closing the shutter, (less air), produces a yellow flame, (more prone to sooting). Opening the shutter, (more air), produces a bluer flame. After adjusting the shutter, the stove should be burned for at least one hour to see the effect of the setting change. If soot appears on the glass, logset, or firebox, the air shutter must be opened to eliminate the condition. **Adjustment should be made only by a qualified gas technician.**

Step 1. Shut off the gas supply to the stove. Turn off all power to the stove. Remove the Front Panel, Glass, and Log Set as described on Page 18 of the Owner's Guide.

Step 2. Remove the two Burner retainer screws. Lifting the back of the Burner, slide it to the rear and lift it out of the firebox to access the air shutter on the end of the J-tube. Fig. 41.

Step 3. Loosen the shutter locking screw enough to adjust the setting as needed and re-tighten. Fig. 42.

Step 4. Set the burner back into the firebox taking care to ensure that the end of the J-tube fully engages and aligns with the injector, Fig. 43.

Step 5. Replace the retainer screws, log set, glass, and Front Panel.

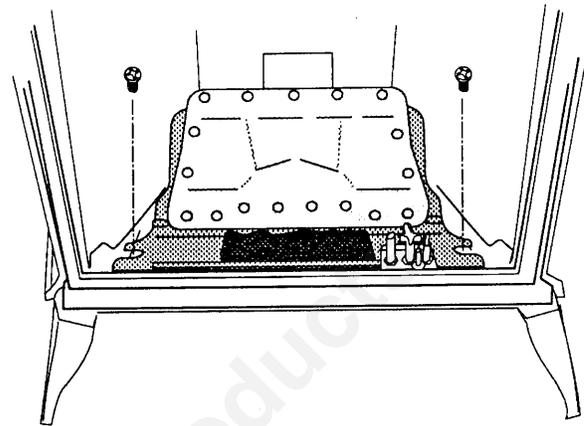


Figure 41. Remove the burner retainer screws.

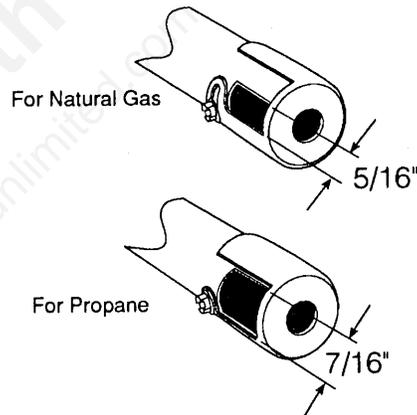


Figure 42. Air Shutter Settings.

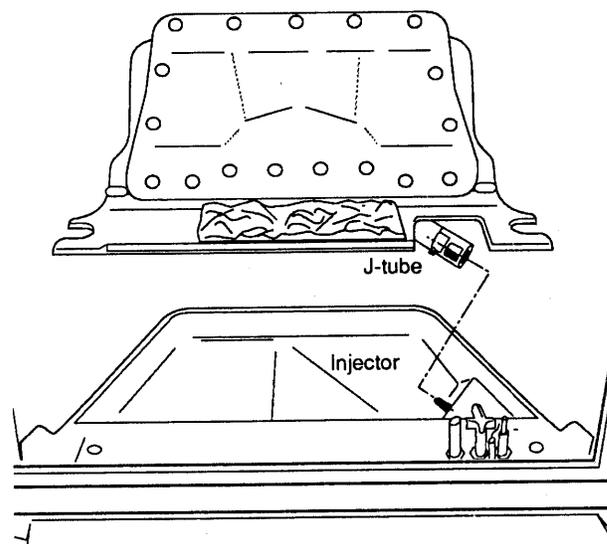


Figure 43. Align the J-tube with the injector.

Parts List

DV25 FIREBOX #2642 (NG) AND #2643 (LP)

1. Firebox Assembly / NG	000-2642	14. Washer, Wingbolt	120-2470
Firebox Assembly / LP	000-2643	15. Washer	120-2474
2. Rear Shroud	500-2968	16. Fender Washer	120-2527
3. Top Cover, Shroud	140-8881	17. 1/4-20 Wingbolt	120-3110
4. End, Left	130-1085	18. Snap Ring	120-1987
5. End, Right	130-1086	19. Levelling Bolt	120-1745
6. Top Plate	130-1102	20. Glass	160-1691
7. Front Plate	130-1084	21. Gas Log Set	500-2964
8. Hinge, Control Door	160-1670	22. Door, Heat Exchanger	130-1095
9. Control Door	130-1087	23. Air Passage	130-1097
10. Top Heat Shield	140-8868	24. Firebox Baffle	130-1099
11. Tab, Steel	160-1488	25. Firebox	130-1100
12. 1/4-20x3/8" Phillips Screw	120-0993	26. Flue Outlet	130-1101
13. 1/4-20x1/2" Hex Head Screw	120-1338	27. Gasket, Flue Pipe	120-3686
		28. Flue Restrictor Plate	140-8869
		29. Gasket, Glass Panel	700-0909
		30. Frame, Glass Panel	140-8865
		31. Bottom Heat Shield	140-8822
		32. Safety Switch	500-2965
		33. OFF/ON Switch	160-1597
		34. Gasket, Heat Exchanger	120-3689
		35. Gasket, Firebox	120-3588

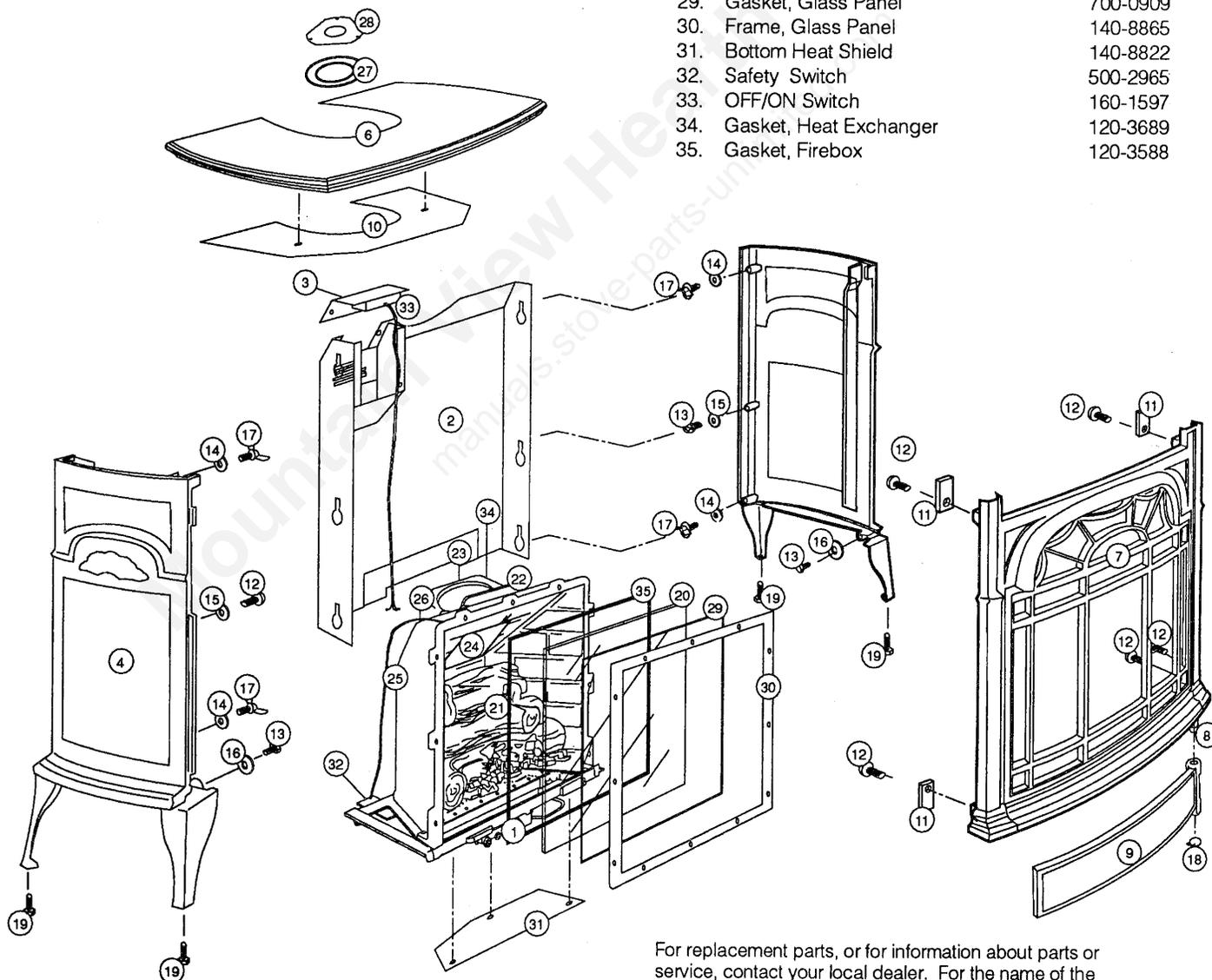


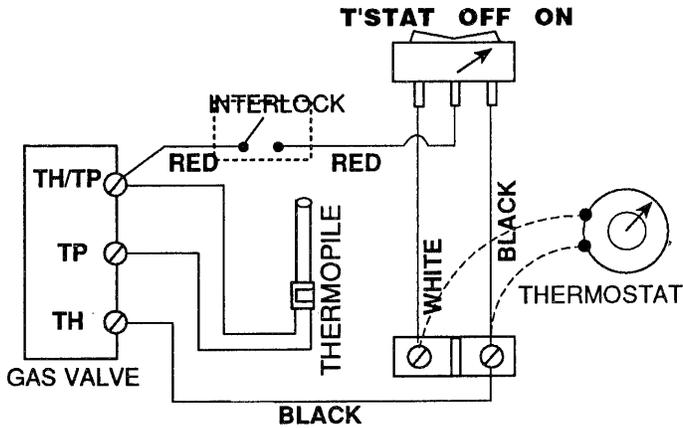
Figure 44. Illustrated Parts

For replacement parts, or for information about parts or service, contact your local dealer. For the name of the dealer nearest you, call or write:

Vermont Castings, Inc.
Route 107 • P.O. Box 501
Bethel, Vermont 05032
1-800-227-8683

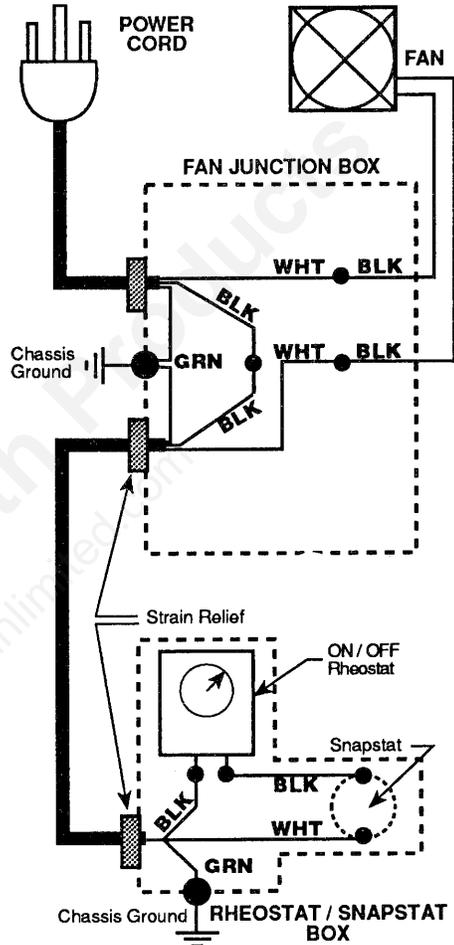
Wiring Diagrams

Figure 45. DV25 Firebox Circuit



NOTE: IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THE APPLIANCE, MUST BE REPLACED, IT MUST BE REPLACED WITH TYPE SF-2, 200°C WIRE OR ITS EQUIVALENT.

Figure 46 DV25/ Convection Fan Circuit



CONNECTION DIAGRAM

Screw Identification Chart

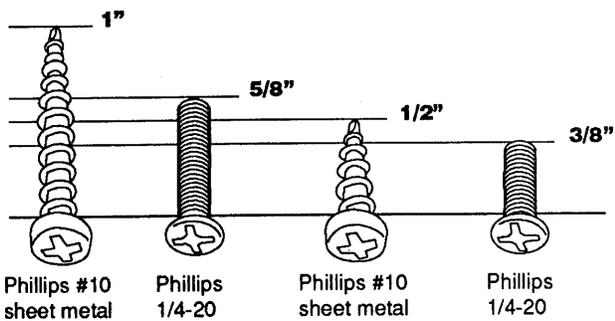
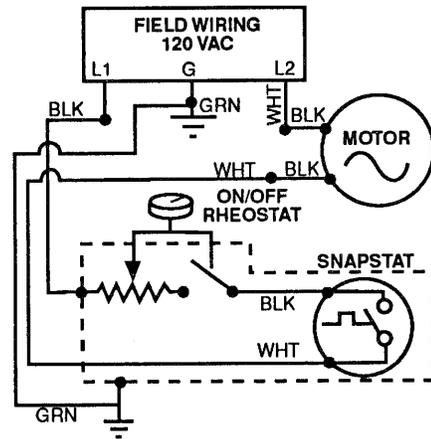


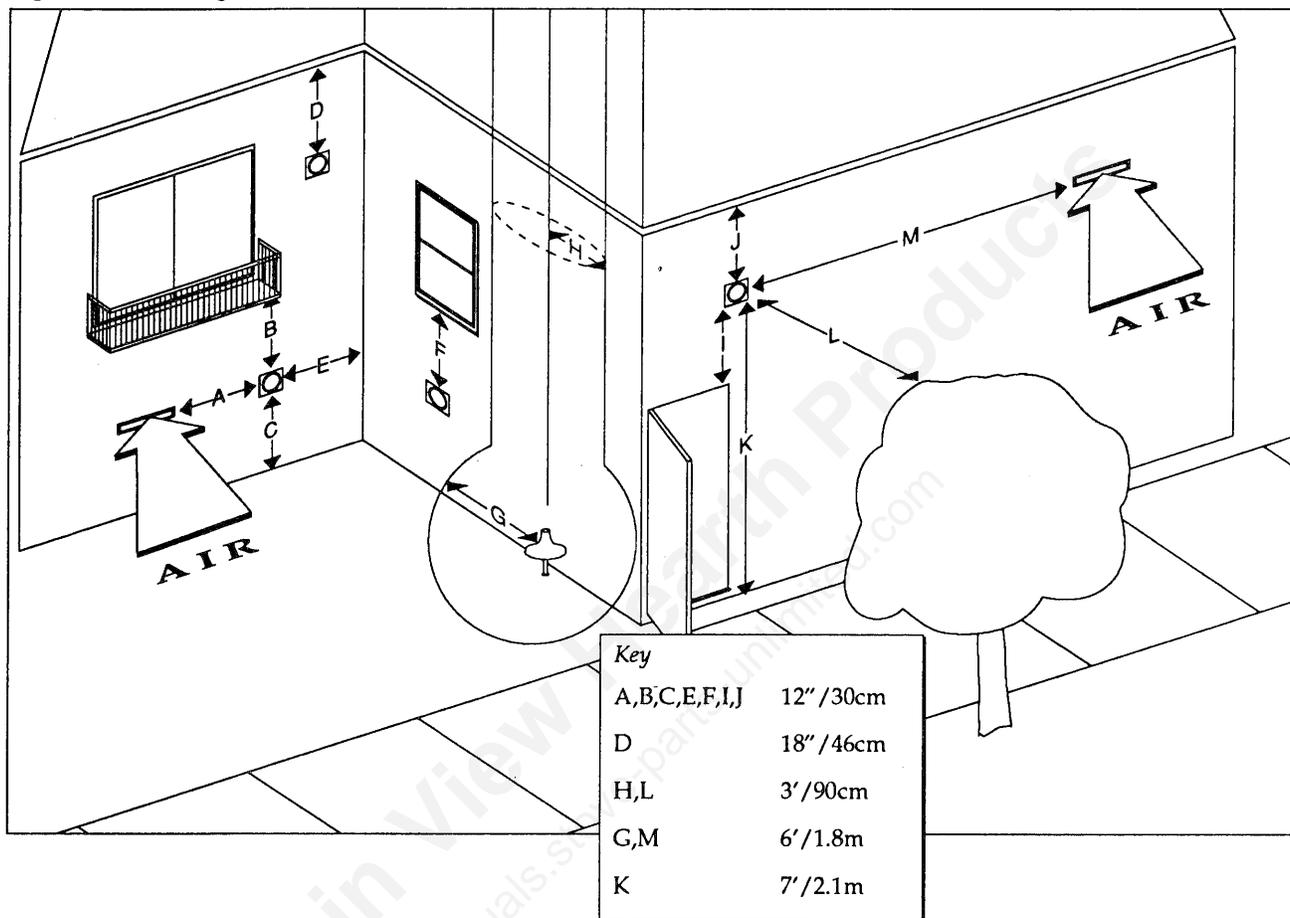
Figure 47.



SCHEMATIC DIAGRAM

Appendix A

Figure 48. Venting Clearances



- A. Clearance to non-mechanical air supply inlet or combustion air inlet of any other appliance.
- B. Clearance under deck, porch, veranda or balcony.
- C. Clearance above grade, deck, porch, veranda or balcony.
- D. Clearance to ventilated soffit located above the terminal within a horizontal distance of 2 feet (60 cm) from the center line of the terminal
- E. Clearance to adjacent wall (inside corner.)
- F. Clearance to permanently closed window.
- G. Clearance around service regulator vent outlet.
- H. Clearance around center line above service regulator.
- I. Clearance to door or window that may be opened.
- J. Clearance to non-ventilated soffit
- K. Clearance above a paved sidewalk or driveway on public property.
- L. Clearance to vegetation.
- M. Clearance to a mechanical air supply.