

# THE CALDERA

DIRECT VENTED TOP OR REAR VENT GAS ROOM HEATER

FOR USE WITH NATURAL GAS OR PROPANE

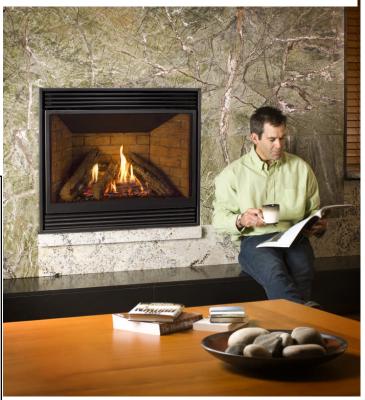
# USERS' INSTALLATION OPERATION & MAINTENANCE

WARNING: If the information in this manual is not followed exactly, 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.

INSTALLER: PLEASE LEAVE THIS MANUAL WITH
THE CUSTOMER
CUSTOMER: PLEASE KEEP MANUAL FOR FU-

**TURE REFERENCE** 



This appliance may be installed in an aftermarket permanently located, manufactured (mobile) home, where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.



Pour la version française de nos manuels S.V.P. vous référez à notre site web : www.blazeking.com



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#### **MANUFACTURED IN CANADA BY:**

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Ph# 1-250-493-7444 Email vcsales@vip.net Patents Pending

## **MANUFACTURED IN USA BY:**

Blaze King Industries 146 A Street Walla Walla, WA. 99362

Ph# 1-509-522-2730 Email bki@bmi.net

#0382ef revOct/09

Note: A copy of the certification label is provided here for your review. Due to constant up-grades it is possible that the information shown here may not coincide with the label as attached to the unit. In the event of a discrepancy between the labels, the label on the unit is considered as the correct



Certified for U.S. and Canada Certifié pour le Canada et les Etas -Unis Listed Vented Gas Fireplace Heater/Foyer chauffé au gaz avec évent

#### The Caldera

Serial No. -

This stove is factory equipped for 0-610m (0-2000 ft) Ce foyer est manufacturé et équipé pour 0-610m (0-2000pied)

ANSI Z21.88 -2009/CSA 2.33 -2009, "Vented Gas Fireplace Heaters", CAN/CGA-2.17-M91 "Gas-Fireplaces For Use At High Altitudes." Test é à ANSI Z21.88 -2009 CSA 2.33 -2009 "Foyer au gaz Avec évent" Et CAN/CGA 2.17-M91 "Appareils de chauffage au gaz utilisés en hautes altitudes"

Model: Caldera rear and top vent appliance Modèle: Caldera à ventilation arrière et de dessus Orifice (DMS) 0-1370 m	NATURAL GAS 35	LP GAS 51
Input rating/Puissance d'entrée (BTU/hr / Kw) 0-1370m 0-4,500 ft Alt. Minimum Input/Entrée Minimum (BTU/hr / Kw) Manifold Pressure High setting /(In w.c. / kPa) - AF-4034 Valves Manifold Pressure Lo setting (In w.c. / kPa) - AF-4034 Valves Minimum Inlet Pressure/Pression d'admission Minimum (In w.c. / kPa)`	35,000 / 10.26 24,000 / 7.04 3.5 / 0.87 1.6 / 0.40 5.0 / 1.24	35,000 / 10.26 26,000 / 7.26 10.0 / 2.49 6.3 /1.57 12.0 / 3.00

This appliance must be installed in accordance with local codes if any: if not follow ANSI Z223.1 and CAN- 1B149 Gas Appliance Installation Code ANSI Z223.1/NFPA 54 Or Natural Gas and Propane Installation Codes CSA B149.1 . Cet appareil doit être installé selon les codes locaux, s'il y en a: sinon suivez l'actuel ANSI Z223.1 and CAN 1-B149 Appareil au Gaz Code ANSI Z223.1/NFPA 54 ou Gaz Naturel et Propane Codes CSA B149

#### VENTED GAS FIREPLACE HEATER —NOT FOR USE WITH SOLID FUEL

#### FOYER AU GAZ AVEC ÉVENT —NE PAS UTILISER AVEC DU COMBUSTIBLE SOLIDE

FOR USE WITH GLASS DOORS CERTIFIED WITH THE APPLIANCE ONLY. /UTILISER SEULEMENT AVEC DES PORTES VITRÉES CERTIFIÉES POUR CET APPAREIL.

ALSO FOR USE IN OEM / MOBILE (MANUFACTURED) HOMES AFTER HOME IS ON SITE. Convertible for use with natural gas or propane as follows:

For natural gas when equipped with orifice # 35. For propane when equipped with orifice # 51. MAY BE INSTALLED IN A BEDROOM OR SITTING ROOM WHEN INSTALLED WITH A LISTED THERMOSTAT CONTROL IN CANADA

AUSSI POUR L'USAGE DANS LES MAISONS (MANUFACTURÉES) MOBILES APRÈS QUE LA MAISON SE TROUVE SUR LE CHANTIER. Convertible pour l'usage avec le gaz

naturel ou le propane comme suit : Pour le gaz naturel une fois équipé orifice # 35. Pour le propane une fois équipé de l'orifice #51.

PEUT ÊTRE INSTALLÉ DANS UNE CHAMBRE À COUCHER OU UN SALON UNE FOIS INSTALLÉ AVEC UN THERMOSTAT ÉNUMÉRÉ AU CANADA.

#### MINIMUM CLEARANCES TO COMBUSTIBLES / ESPACES MINIMUM REQUIS ENTRE L'APPAREIL ET DES MATÉRIAUX COMBUSTIBLES.

Unit to Sidewall/Unité au mur l'atéral

Unit to combustible framing/Unité à un encadrement combustible

Floor to internal ceiling/Plancher au plafond interne

Floor to bottom of mantle/ Plancher au fond du manteau

Floor/Plancher

Vent pipe/Évent (horizontal)

Vent pipe/Évent (vertical)

6" (150 mm)

2" (51 mm)

60" (1524 mm)

50" (1270 mm)

Unprotected (in U.S.A) / Sans protection (U.S.A)

2" (21 mm)

Electrical Rating: 115 Volts, 0.7 Amp, 60 Hz

DANGER: Risk of electrical shock. Disconnect power before servicing unit. Do not route power cord beneath heater.

DANGER: Risque d'électrocution. Débrancher le courant avant de réparer l'unité. Ne pas mettre la corde d'alimentation en dessous de l'appareil de chauffage. This appliance must be installed in accordance with the Standard CAN/CSA Z240 MH, Mobile Housing, in Canada, or with the Manufactured Home

Construction and Safety Standard, Title 24 CFR, Part 3280, in the United States, or when such a standard is not applicable, ANSI/NCSBCS A225.1/NFPA 501 A, Manufactured Home Installations Standard.

Cet appareil doit être installé selon les codesCAN/CSA Z240 MH, maisons (manufacturées) mobiles, au Canada, sinon applicable, utilisez ANSI/NCSBCS A225.1/NFPA 501 A, Manufactured Home Installations Standard.

This appliance is only for use with the type of gas indicated on the rating plate and may be installed in an aftermarket, permanently located, manufactured (mobile) home where not prohibited by local codes. See owners manual for details. This appliance is not convertible for use with other gases unless a certified kit is used. This vented gas fireplace is not for use with air filters.

Cet appareil sert seulement avec le type de gaz indiqué sur la plaque de contrôle et peut être installé dans un marché des accessoires, maison (mobile) de manière permanente placée et manufacturée où non interdit par des codes locaux. Voir le manuel d'installation pour des détails. Cet appareil n'est pas convertible pour l'usage avec d'autres gaz à moins qu'un kit certifié soit employé. Ce foyer au gaz à évent ne peut être utilisé avec des filtres à air.

#### Manufacture Date:

Manufactured in U.S.A. By:	Blaze King Industries 106 A Street , Walla Walla , WA	2008	2009		2010		2011	2012
Fabriqué Par au É.U. par	99362 U.S.A.	JAN	FEB		MAR		APRIL	2013
Manufactured in Canada:	Valley Comfort Systems Inc. 1290 Commercial Way, Penticton, B.C.	MAY	JUNE		JULY		AUGUST	2014
Fabriqué au Canada:	V2A 3H5 Canada	SEPT	OCT	П	NOV	П	DEC	2015

## INTRODUCTION

Thank you for purchasing the Caldera Zero Clearance Fireplace Gas Heater.

The Caldera is one of the most advanced direct vented zero clearance gas heaters on the market. It is designed using the latest technology and manufactured to the highest quality.

Some of the many features are:

\* Heater Classification It is classified as a heating appliance. Therefore, it can be

operated continuously for zone heating.

\* High Efficiency
 \* Adjustable Flame
 It has high efficiency; therefore, it is less expensive to operate.
 \* Adjustable Flame
 The flame aesthetics and heat output can be adjusted to suit the

owner's moods and heating needs.

\* Solid Construction It is constructed mainly heavy gauge steel for long life and

durability.

Please read the manual carefully prior to installation and operation of the appliance. Proper installation, operation and maintenance of the appliance will provide you with many years of enjoyment.

## **CAUTION**

Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.

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

Any parts removed or opened for servicing of the appliance must be properly replaced prior to operating the appliance.

The appliance must be inspected before use and at least annually by a qualified service person. More frequent cleaning maybe required due to excessive lint from carpeting, bedding material, etc. It is imperative that the control compartments, burners and circulating air passageways for the appliance be kept clean.

Venting terminals shall not be recessed into a wall or siding.

This gas appliance must not be connected to a chimney flue serving a separate solid fuel burning appliance.

## **GENERAL INFORMATION**

#### **APPLIANCE CERTIFICATION**

This appliance is tested and certified to the following US and Canadian gas appliance standards.

- ANSI Z21.88-2007 / CSA 2.33-2007 Vented Gas Fireplace Heaters,
- CAN/CGA-2.17-M91 Gas-Fired Appliance fo Use at High Altitudes
- CSA P.4.1-02 Testing Method for Measuring Annual Fireplace Efficiency

Please contact Valley Comfort or Blaze King, if you have any questions regarding the certification of this appliance.

#### **INSTALLATION CODES**

This appliance must be installed by a qualified gas appliance installer. The installation must conform with the local codes or, in the absence of local codes, with the current National Fuel Gas Code, ANSI Z223.1/NFPA 54, in the US or Installation Code, CSA-B149.1, in Canada. Electrical connections and grounding must be in accordance with local codes, if any, if not, follow the current CAN/CSA C22.1 in Canada and ANSI/NFPA 70 in the US. This appliance is certified for installation in a bedroom or a bedsitting room. This appliance is only for use with the type of gas indicated on the rating plate and may be installed in an aftermarket, permanently located, manufactured (mobile) home where not prohibited by local codes. See owner's manual for details. This appliance is not convertible for use with other gases, unless a certified kit is used. This appliance must be installed in accordance with the current Standard CAN/CSA Z240 1411, Mobile Housing, or with the Manufactured Home Construction and Safety Standard Title 24 CFR, Part 3280, or when such a standard is not applicable, ANSI/NCSBCS A225.1/NFPA 501A, Manufactured Home Installations Standard.

Only for direct discharge without duct connection. This appliance must be direct vented using listed and approved Simpson Dura-Vent, Selkirk, Security or American Metal Products vent components.

## **SPECIFICATIONS**

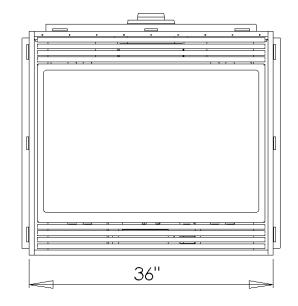
	Natural Gas (NG)	Propane (LP)
Manifold Pressure	3.5 in. W.C. (0.9 kpa)	10.0 in. W.C. (2.5kpa)
Min. Supply Pressure for Purpose of Input Adjustment	5.0 in. W.C. (1.24 kPa)	12.0 in. W.C. (3.0 kPa)
Orifice Size	#35 DMS	#51 DMS
Nominal Input Rating	35,000 - 24,000 BTU/hr (10.26 – 7.04 kW)	35000 - 26,000 BTU/hr (10.26 – 7.26 kW)
Altitude	0 - 4,500 ft. (0 - 1372 m)	0 - 4,500 ft. (0 - 1372 m)
Primary Air Opening	closed	100% open

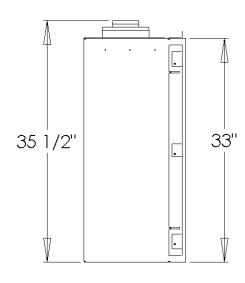
## HIGH ALTITUDE INSTALLATION

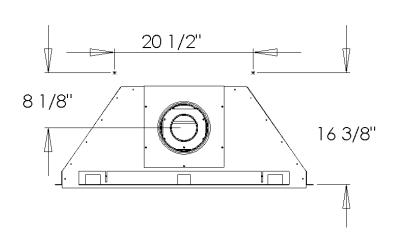
When installing this appliance beyond 4500 ft. (1372 m) above sea level, the appliance must be properly de-rated and installed according to local codes, in the absence of local codes, with the current National Fuel Gas Code, ANSI Z223.1/ NFPA 54, in the US or Installation Code, CSA-B149.1, in Canada.

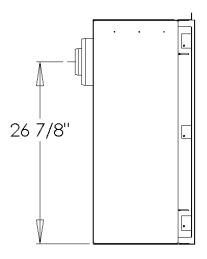
# **APPLIANCE DIMENSIONS**

Figure 1

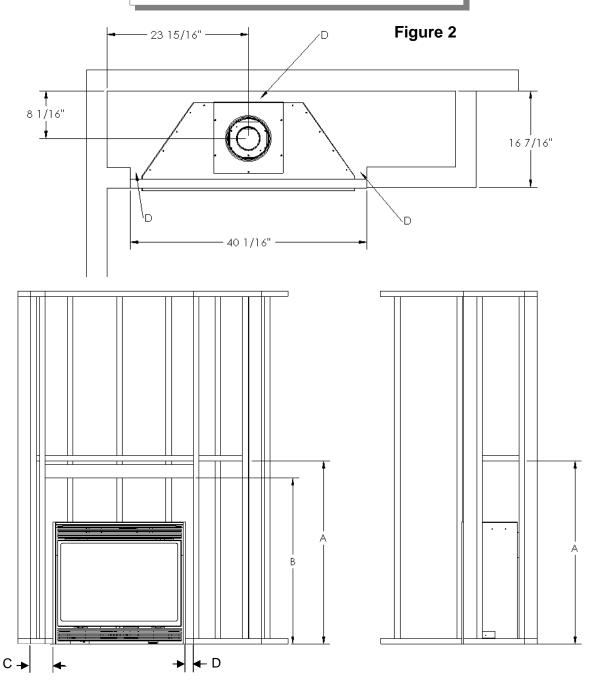








# **INSTALLATION CLEARANCES**



A - Internal Ceiling Height min. 60" (1524 mm) min. 45" (1143 mm) B - Internal Framing C - Sidewall Clearance min. 6" (152 mm) D - Unexposed Back & Sides min. 2" (51 mm)

Mantle - See Chart

Vertical Vent - 1" (25 mm) to outside surface Horizontal Vent - 1" (25 mm) to outside bottom & side surface, 2" (51 mm) to outside top surface Can be installed on a combustible surface.

# **INSTALLATION CLEARANCES**

Figure 3A

Minimum framing dimensions

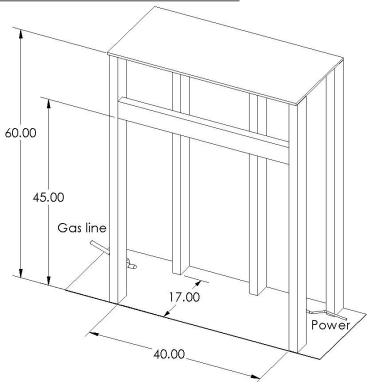
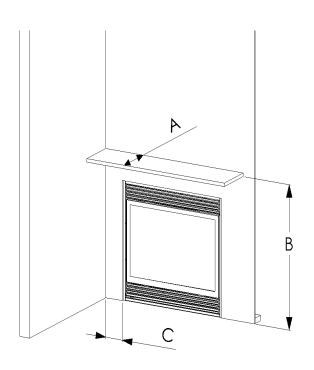


Figure 3B Mantle Clearances to Combustibles



Mantle Height from Floor (B)	Mantle Depth (A) Max.
50" (1270 mm)	12" (300 mm)
49" (1245 mm)	11-5/16" (287 mm)
48" (1219 mm)	10-9/16" (268 mm)
47" (1194 mm)	9-7/8" (251 mm)
46" (1168 mm)	9-3/16" (233 mm)
45" (1143 mm)	8-7/16" (214 mm)
44" (1118 mm)	7-3/4" (197 mm)
43" (1092 mm)	7-1/16" (179 mm)
42" (1067 mm)	6-5/16" (160 mm)
41" (1041 mm)	5-5/8" (143 mm)
40" 1016 mm)	4-15/16" (125 mm)
39" (991 mm)	4-3/16" 106 mm)
38" (965 mm)	3-1/2" (89 mm)
37" (940 mm)	2-13/16" (71 mm)
36" (914 mm)	2-1/16" (52 mm)
35" (889 mm)	1-3/8" (35 mm)
34" (864 mm)	11/16" (17 mm)

# **INSTALLATION CLEARANCES**

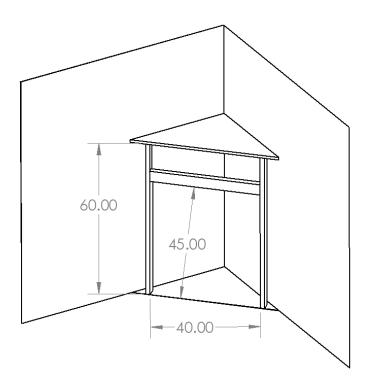


Figure 3C <u>Minimum</u> Framing Dimensions

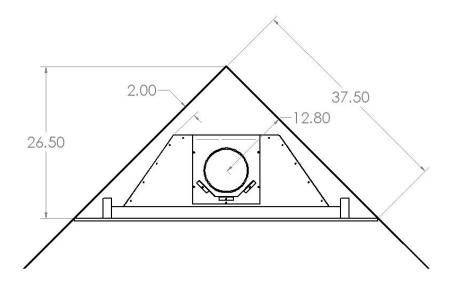
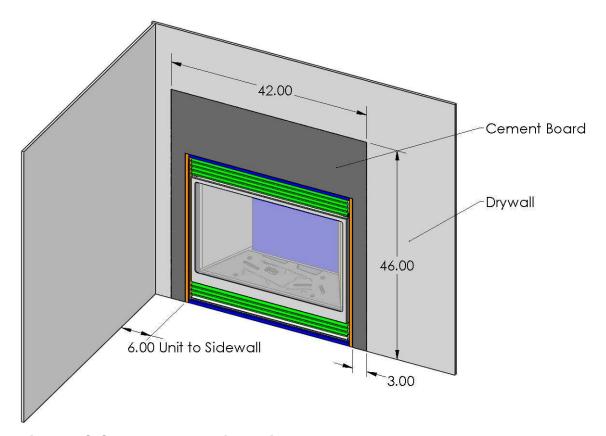


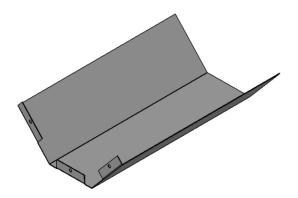
Figure 3D <u>Minimum</u> Framing Dimensions

## **INSTALLATION INSTRUCTIONS**



**Figure 3C Cement Board Dimensions** 

# INSTALL VERTICAL HEAT SHIELD (Top Vent Only)



The heat shield which comes with the appliance, needs to be mounted vertically on top of the appliance. The three holes line up with the ones on top of the appliance, in front of the flue collar. Use three screws to mount the heat shield.

IMPORTANT: When the heat shield is not installed, fire may result, causing property damage, personal injury or loss of life.

(For top vent only)

## **PRECAUTIONS**

- This appliance must be installed by a qualified gas installer and the installation conform to applicable installation codes.
- This appliance needs fresh air for safe operation and must be installed so there are provisions for adequate ventilation air. Provide adequate clearance around air openings of the appliance. Never obstruct front openings.
- Provide adequate clearances for proper operation and servicing of the appliance.
- This appliance must be properly connected to a venting system.
- This appliance must NOT be connected to a chimney flue serving a solid-fuel appliance.

## LOCATING GAS FIREPLACE

The venting system of this appliance must be installed in a location that is free of plumbing, electrical wiring and heating or air conditioning ducts. Select a location that is accessible for venting. See the ALLOWABLE TERMINATION LOCATIONS - page 45, in this manual.

## **ANCHORING UNIT**

After determining the location, the appliance needs to be anchored to framing and floor. Attach to the floor with two screws through the holes in the bottom of the appliance (see Figure 3D) The holes are located behind the bottom louver, one on the left, one on the right.

Attach to the frame by the standoffs on top of the unit (See Figure 3D)
The standoffs can be adjusted by loosening the screws on top of the appliance

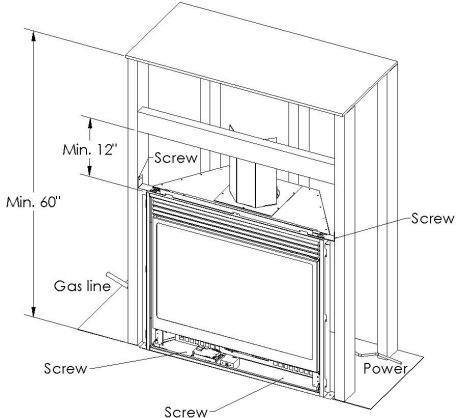


Figure 3D

## **VENT TERMINATION LOCATION**

- Establish a suitable vent termination location. (See ALLOWABLE TERMINATION LOCATIONS - page 45)
- 2. In heavy snowfall areas make sure vent termination is located where it can not be blocked by snowfall or snow from snow removal equipment.
- 3. Locate vent termination away from plants, bushes or any other object on or near the vent termination that will interfere or obstruct the air flow around it.
- 4. DO NOT recess vent termination into walls, sidings or planters.
- 5. Vent terminations located below 7 ft (2130 mm) from grade level or anywhere that it is a burn hazard to the public, such as patios and balconies, must be protected with an approved termination cage.

## **POWER CONNECTION**

• You will need to have an electrician supply 120 volts to the area of the fireplace and terminate in the junction box inside the unit.

## **GAS CONNECTIONS**

Have your gas supplier or a qualified gas fitter run a gas supply line to the gas fireplace. For your convenience the appliance has a shut-off valve and flex line installed, check with your local installation codes if this is to code.

There is an access hole situated under the burner for easier access to the gas valve connection. (Left side under burner, triangular shaped)

**CAUTION:** The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure-testing of that system at test pressures in excess of 1/2 psig (3.5 kPa). The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure-testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa). Failure to do so will damage the appliance's gas valve. Such damage is not covered by the manufacturer's warranty.

Check for proper gas supply pressure by loosening the set screw on supply pressure tap on the gas valve with a small flat tip screw driver and placing a test gauge on the tap.

The minimum permissible gas supply pressure is 5 in. w.c. (1.24 kPa) for natural gas and 12.0 in. w.c. (3.00 kPa) for propane. Maximum gas supply pressure should never exceed 14.0 in. w.c. (3.48 kPa) or 1/2 psi. for both natural gas and propane.

# BE SURE TO TIGHTEN THE PRESSURE TAP SET SCREW AFTER CHECKING THE PRESSURE.

Before connecting the appliance to the gas supply line, double check that the appliance you have purchased is designed for the gas type you are using. The gas type markings are located on the certification label and also on the appliance's gas valve.

Adequate clearance for proper installation and checking of the gas connections must be provided. All gas connections must be checked for gas leaks.

## **ASSEMBLY INSTRUCTIONS**

## **GLASS DOOR REMOVAL**

## **Removing the Glass Door**

- Remove the top & bottom louvers.
- Unhook the door latches found on the bottom of the firebox.
- Carefully lift and remove the door.
- Place the door at a safe location where it cannot be scratched or damaged.
- If the glass door is damaged, it **must** be replaced with another glass door certified with this appliance **only**.
- Replacement glass doors are available through your Blaze King dealer (See Replacement Parts page 51)

## **Replacing the Glass Door**

- Check the condition of the glass and the gasket before installing door.
- Carefully hook the door onto the tabs on the top of the firebox.
- Connect the door latches, at the bottom of the door, and close latches.
- Install the top & bottom louvers.

If the glass has been damaged contact your dealer and replace the glass and gasket with a new glass and gasket provided by your dealer.

#### **WARNING:**

- Do not attempt to remove the glass door when the appliance is hot.
- Do not abuse the glass door.
- Do not strike or slam the glass.
- Do not operate this appliance with cracked or broken glass.
- Do not use any substitute materials.

## **ASSEMBLY INSTRUCTIONS Cont...**

## PLACEMENT OF LOGS AND TWIGS



Step 1: Place rear log in notch on left side and on log pin on right side.



Step 3: Place left log on left front burner and rear log as shown.



Step 2: Place left and right twigs on log pins as shown.



Step 4: Place center twig on rear log and front of burner as shown.

Step 5: Place right log on rear log and front of burner as shown.

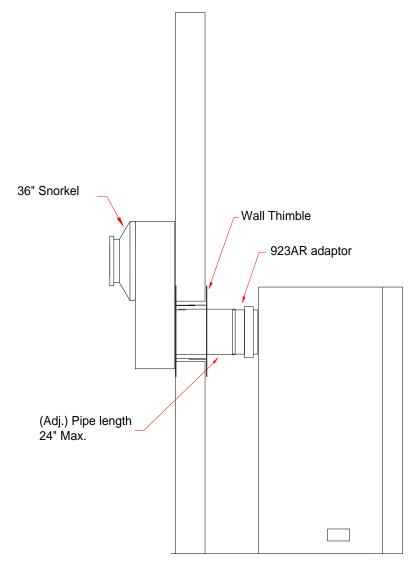
WARNING: Do not place the logs in any other configuration than the one shown. Fire, explosion or excessive carbon monoxide (CO) may result, causing property damage, personal injury or loss of life.

## **VENTING - Rear Vent**

This appliance will not function without being connected to a proper venting system. This appliance uses 4"  $\times$  6-5/8" rigid vent, when used with Simpson Duravent adapter 0923AR (included with appliance). This unit can be used with Selkirk (Direct-Temp), Security Chimneys or Simpson Duravent 4"  $\times$  6-5/8" venting, but for the snorkel only the American Metal can be used Read the manufacturer's installation instructions before installing the venting system.

## **Typical Installation (for rear vented appliance)**

- 7" to 24"(max) horizontal vent pipe exiting wall behind the appliance and a 36" American Metal snorkel.
- One 45° elbow is allowed for corner installations (24" total length max).



## VENTING - Top Vent

This appliance will not function without being connected to a proper venting system. This appliance uses 4" x 6-5/8" rigid vent, when used with Simpson Duravent adapter 0923AR (included with appliance). This unit can be used with Selkirk (Direct-Temp), Security Chimneys or Simpson Duravent 4" x 6-5/8" venting. Read the manufacturer's installation instructions before installing the venting system.

## **Typical Installation**

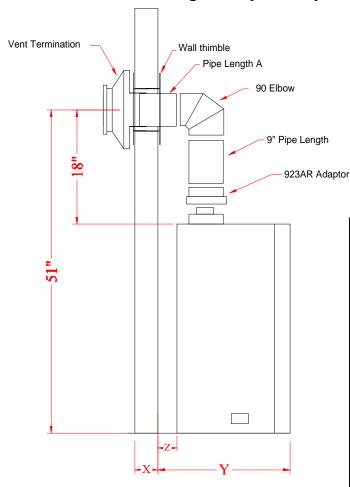
- 9"(min) vertical vent pipe on top of the appliance,
- One 90° elbow, and up to 24" (max) horizontal run to the outside.

#### Other installations

Typical installation

- Up to 4 90° elbows, or equivalent, maximum.
- Minimum 2' (610mm) straight length between bends.
- The total vertical height up to 30' (9.1 m) maximum.
- Use vent restrictor over 20' vertical height (See page 18)
- The total horizontal run up to 16' (4.9 m) maximum (Note: 4' (1.2m) minimum of vertical height required if 16' horizontal).

Note: Maximum vent lengths may be subject to local codes.



X = Wall Thickness

Y = Front Fireplace to Wall

Z = Back Fireplace to Wall

Pipe Length A =  $X+Y-15 \frac{1}{2}$ " =  $X+Z-\frac{1}{2}$ "

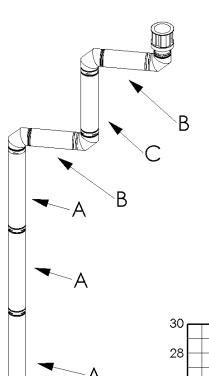
#### Examples:

X= Wall thick- ness	Υ	Z	Length Pipe A
4"	17 ½"	2 ½"	6"
5"	19 ½"	4 ½"	9"
6"	18 ½"	3 ½"	9"
7"	17 ½"	2 ½"	9"
8"	Min. 18 ½"	Min. 3 ½"	11" - 14 5/8" ADJUSTABLE
9"	Min. 17 ½"	Min. 2 ½"	11" - 14 5/8" ADJUSTABLE
10"	Min. 17"	Min. 2"	11" - 14 5/8" ADJUSTABLE

## For best venting performance, here are some general venting rules:

- 1. Use only vent systems and components certified for use with this appliance
- 2. Maintain a minimum of 1" (26 mm) clearance to combustibles from the outside surfaces of vertical vents and minimum of 1" (26 mm) sides and bottom, and 2" (51 mm) from top surfaces of horizontal vents. Always use a wall thimble when passing through combustible construction.
- 3. Observe all local code restrictions, if any, regarding the installation of this type of gas appliance.
- 4. Observe the vent height and length restrictions given in this manual.
- 5. Never slope horizontal vents downwards.
- 6. Maintain at **least** an upward slope of 1/4" (7 mm) for every 1 ft (305 mm) of horizontal vent.
- 7. Terminate the vent with a termination certified for use with this appliance.
- 8. Support horizontal vent every 3 ft (915 mm) to prevent it from sagging.

## **VENTING CHART**



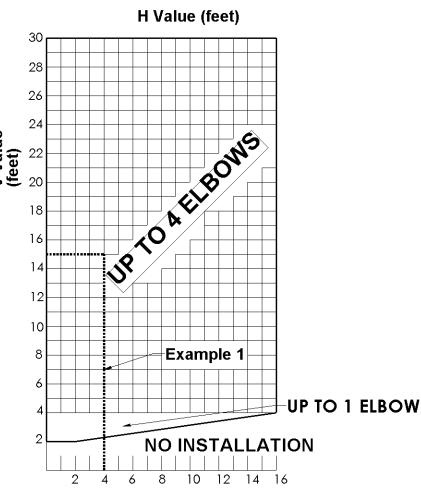
## Example 1

**V Value** = 3A (12') + 1C (3') = 15' **H Value** = 2B (4') = 4'

V Value = Total length of all vertical sections in feet.H Value = Total length of all horizontal sections in feet.

#### Note:

- for H & V values for 45° venting see Chart IV
- elbows are not counted in H or V values
- vent chart starts from the top of the unit



## VENT RESTRICTORS FOR TOP VENT INSTALLATIONS

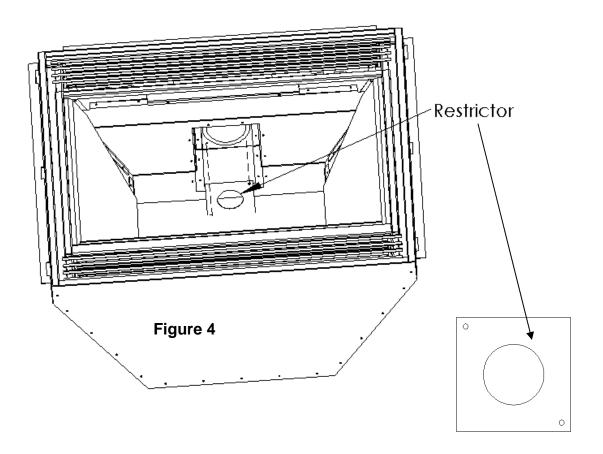
All top vent installations above 20' (6.1 m) require the use of 60% restrictor.

The restrictor is installed in the exhaust of the appliance.

#### **Vent Restrictors**

Due to the extra flow produced by certain venting configurations vent restrictors must be placed in the vent to maintain performance. When your installation requires a vent restrictor you must remove the flue baffle and install the restrictor in the exhaust box as shown below. The restrictor is fastened in with 2 screws represented by the dotted line in the figure below. Once the vent restrictor has been installed the flue baffle must then be re-installed.

**Note:** The unit must be cooled to room temperature before installing the restrictor.

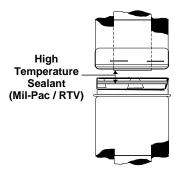


WARNING: A minimum clearance of 1" to combustibles must be maintained on vertical pipe runs and 2" for horizontal pipe runs (sides and bottom 1")

The rigid vent systems use twist lock connections. The adaptor attached to the unit connects to the approved venting system. While you are assembling the pipe bear in mind the best visual appearance. Seams should be aligned and hidden as much as possible. Make sure you twist the mating section all the way to make a solid connection.

Note: As this system is a sealed system, a high temperature sealing compound must be used to seal the metal to metal joint.

Apply a bead of high temperature sealant to both the 4" exhaust and 6-5/8" intake section of the male pipe. The female section of the pipe/fitting has four indentations evenly spaced around the pipe. These indentations are designed to slide over the male section of the pipe and locate into the four entry slots of the male section of pipe. Twist the female section clockwise a quarter turn to fully lock the sections together.



#### **Horizontal Wall Vent Terminations**

The position of the horizontal vent termination must be positioned to meet all local building codes (see termination chart on page 45).

Attach the correct length of vertical section pipe and an elbow fitting to the stove.

Mark the center line of the pipe facing the wall (allowing for a 1/4" rise per foot of horizontal run). Example 10 ft of horizontal would require a rise of 2.5".

NOTE: ALLOWING THE VENT PIPE TO SLOPE DOWN TOWARDS THE VENT TERMINATION COULD CAUSE POOR COMBUSTION AND/OR HIGH TEMPERTURES THAT MAY PRESENT A FIRE HAZARD. Mark a 10" x 10" square around the center mark (inside dimensions).

Cut and frame the exterior wall to accept the wall penetration heat shield. Install the penetration shield using wood screws. If the wall being penetrated is constructed of non-combustible material a 7" hole sufficient for the vent pipe, is acceptable.

Caution: When installing the termination on to vinyl siding, a vinyl siding kit must be used. This prevents the termination from being recessed into the siding.

When the termination is to be attached to vinyl siding apply a bead of non-hardening mastic around the outside edge to form a seal between the standoff and the termination cap. Attach the termination cap to the exterior wall inserting four wood screws through the holes in the corner of the vent termination. Complete the installation by applying a bead of mastic around the outer edge of the vinyl standoff.

With the termination cap installed you can now connect the completed vent assembly by sliding the unit back towards the wall and carefully inserting the pipe into the terminal. Before the final connection is made slide on the decorative wall thimble. Secure the termination cap by securing the termination straps to the pipe as close to the exterior wall as possible using sheet metal screws. Ensure that the straps are hidden by the wall thimble cover. Apply decorative trim if required.

## **Vertical Installations**

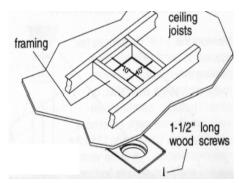
Always maintain the 1" clearance around the vent pipe (vertical), when passing through ceilings, walls, roofs, enclosures, attic rafters or any combustible surfaces.

DO NOT PACK AIR SPACES WITH INSULATION.

Refer to the vent chart for maximum allowable vertical and horizontal installations.

When planning your installation determine if ceiling joists, roof rafters or other framing will obstruct the vent system. You may have to use 45° elbows to navigate around any obstacles. When passing through a flat ceiling install a Box/Wall thimble. Cut a 10" square hole and frame as shown in the diagram opposite.

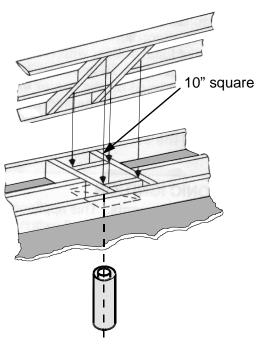
Ensure all pipe sections are fully twist locked.



NOTE: ALWAYS CHECK YOUR LOCAL CODES BEFORE INSTALLING VENTING. NECESSARY CLEARANCES AND REQUIRMENTS MAY VARY FROM STATE TO STATE (PROVINCE TO PROVINCE).

## **Through Roof Framing**

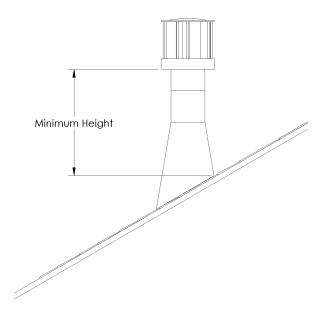
Maintain 10" opening relative to the pitch of the roof.



Use a suitable round or square support through the roof. Ensure adequate heat shield protection is provided.

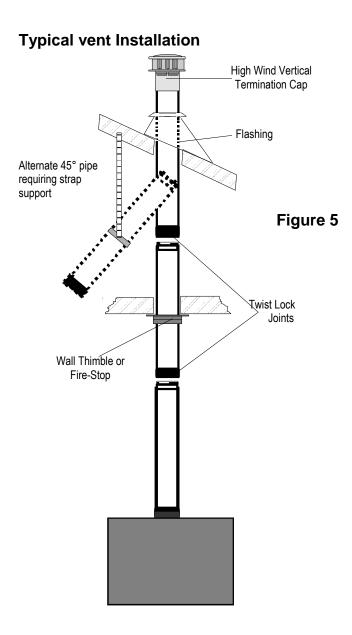
## **Termination Above Roof**

Consult local codes for minimum vent cap height above the roof, vent must be a minimum 2' from any wall.



To prevent water seepage install the flashing with upper portion slid under the roofing material and the lower portion over the roofing material.

Note: Do not fasten down until the final adjustments to the vent have been made.



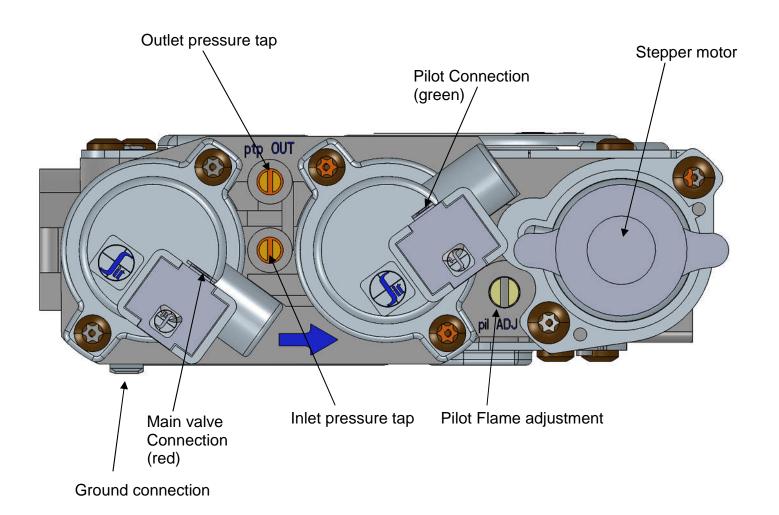
SIMPSON DURAVENT DIRECTVENT PRO / GS SYSTEM PARTS LIST		
Description	Part #	Old Part #
Horizontal Termination Kit - In Canada—Mandatory to add a wall thimble (46DVA-KHC.)	46DVA-KHA	971
Vertical Termination Kit	-	978
6" Pipe Length -Black	46DVA-06B	908B
6" Pipe Length –Galvanized	46DVA-06	908
8,5" Black Extension (3"-7")	46DVA-08AB	-
8,5" Galvanized Extension (3"-7")	46DVA-08A	-
9" Pipe Length-Black	46DVA-09B	907B
9" Pipe Length-Galvanized	46DVA-09	907
12" Pipe Length-Black	46DVA-12B	906B
12" Pipe Length-Galvanized	46DVA-12	906
16" Black Extension (3"-14.5")	46DVA-16AB	-
16" Galvanized Extension (3"-14.5")	46DVA-16A	-
24" Pipe Length-Black	46DVA-24B	904B
24" Pipe Length-Galvanized	46DVA-24	904
36" Pipe Length-Black	46DVA-36B	903B
36" Pipe Length-Galvanized	46DVA-36	903
48" Pipe Length-Black	46DVA-48B	902B
48" Pipe Length-Galvanized	46DVA-48	902
11"- 14 5/8" Adjustable Pipe Length-Black	-	911B
17"- 24" Adjustable Pipe Length-Black	-	917B
45° Elbow-Black	46DVA-E45B	945B, 945B
45° Elbow-Galvanized	46DVA-E45	945, 945G
90° Elbow-Galvanized	46DVA-E90	990, 990G
90° Elbow-Black	46DVA-E90B	990B, 990B
Vertical High Wind Termination Cap (must be used for all vertical terminations)	46 DVA-VCH	991
Horizontal. DV Termination with 1" return	-	984GL
Horizontal. Square Termination Cap	-	984
Horizontal. Square High Wind Termination Cap	46DVA-HC	985
Horizontal Round Termination Cap	46DVA-HRCS	-
Sconce Termination Cap	46DVA-HSC	-
Wall Thimble Cover—Support Box	46DVA-DC	940
Cathedral Ceiling Support Box	46DVA-CS	941
Brass Trim fro Ceiling Support Box		3951
Firestop Spacer	46DVA-FS	963
Flashing 0/12-6/12	46DVA-F6	943
Flashing 7/12-12/12	46DVA-F12	943S
Storm Collar	46DVA-SC	953
Vinyl Siding Standoff	46DVA-VSS	950
Wall Strap	46DVA-WS	988
Wall Pen Heat Shield (Wall Thimble)	46DVA-WT	942

SELKIRK PARTS LIST	PART NUMBER	DESCRIPTION
4" x 6 <sup>5</sup> / <sub>8</sub> " LENGTHS		
1604006	4DT- 6	DIRECT-TEMP 6" PIPE LENGTH
1604006B	4DT- 6B	DIRECT-TEMP 6" PIPE LENGTH BLACK
1604009	4DT- 9	DIRECT-TEMP 9" PIPE LENGTH
1604009B	4DT- 9B	DIRECT-TEMP 9" PIPE LENGTH BLACK
1604012	4DT-12	DIRECT-TEMP 12" PIPE LENGTH
1604012B	4DT-12B	DIRECT-TEMP 12" PIPE LENGTH BLACK
1604018	4DT-18	DIRECT-TEMP 18" PIPE LENGTH
1604018B	4DT-18B	DIRECT-TEMP 18" PIPE LENGTH BLACK
1604024	4DT-24	DIRECT-TEMP 24" PIPE LENGTH
1604024B	4DT-24B	DIRECT-TEMP 24" PIPE LENGTH BLACK
1604036	4DT-36	DIRECT-TEMP 36" PIPE LENGTH
1604036B	4DT-36B	DIRECT-TEMP 36" PIPE LENGTH BLACK
1604048	4DT-48	DIRECT-TEMP 48" PIPE LENGTH
1604048B	4DT-48B	DIRECT-TEMP 48" PIPE LENGTH BLACK
1604082	4DT-AJ12	DIRECT-TEMP 12" ADJ PIPE LENGTH
1604082B	4DT-AJ12B	DIRECT-TEMP 12" ADJ PIPE LENGTH BLACK
1604084	4DT-AJ14	DIRECT-TEMP TELESCOPE ADJ LENGTH
1604084B	4DT-AJ14B	DIRECT-TEMP TELESCOPE ADJ LEN BLACK
4" x 6 <sup>5</sup> / <sub>8</sub> " FITTINGS		
1604215	4DT-EL45	45 DEGREE ELBOW
1604215B	4DT-EL45B	45 DEGREE ELBOW BLACK
1604230	4DT-EL90S	90S DEGREE ELBOW
1604230B	4DT-EL90SB	90S DEGREE ELBOW BLACK
4" x 6 <sup>5</sup> / <sub>8</sub> " ACCESSORIES		
1604460B	4DT-WTB	WALL THIMBLE BLACK
1604500	4DT-FS	FIRESTOP SPACER
1604502	4DT-TP	TRIM PLATE BLACK
1604806	4DT-VS	VINYL SIDING STANDOFF
4" x 6 <sup>5</sup> / <sub>8</sub> " SUPPORTS		
1604400	4DT-CS	CEILING SUPPORT
1604424	4DT-CCS	CATHEDRAL SUPPORT BOX
1604430	4DT-WS/B	WALL SUPPORT/BAND
1604435_	4DT-OS	OFFSET SUPPORT
$4'' \times 6^{5}/_{8}''$ TERMINATIONS		
AND FLASHINGS		
1604620	4DT-VKC	VERTICAL TERMINATION KIT
1604621	4DT-HKA	HORIZONTAL TERMINATION KIT "A"
1604622	4DT-HKB	HORIZONTAL TERMINATION KIT "B"
1604802	4DT-VC	HIGH WIND VERTICAL CAP
1604804	4DT-HC	HIGH WIND HORIZONTAL CAP
1604810	4DT-SC	STORM COLLAR
1604825	4DT-AF6	ADJ FLASH 0/12-06/12
1604830	4DT-AF12	ADJ FLASH 6/12-12/12

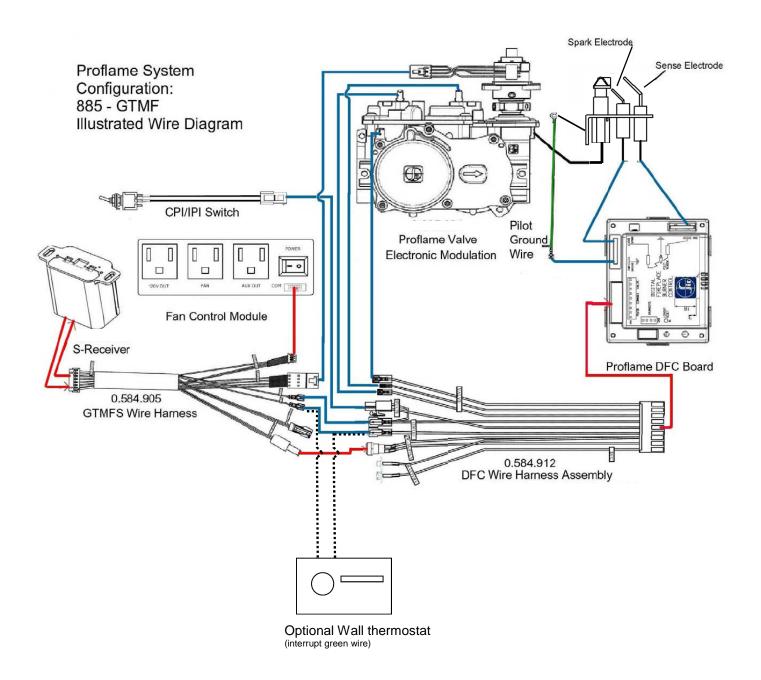
AMERICAN METAL PRODUCTS COMPONENTS LIST			
Description	Part #		
7" Pipe Length	4D7		
12" Pipe Length	4D12		
2' Pipe Length	4D2		
3' Pipe Length	4D3		
4' Pipe Length	4D4		
4" - 10" Adjustable Length	4D12A		
45° Elbow	4D45L		
90° Elbow	4D90L		
Vertical Termination	4DVC		
Horizontal Termination	4DHC		
36" Snorkel	4D36S		
Wall Thimble	4DWT		
Wall Strap	4DWS		
Fire stop Support Plate	4DFSP		
Faceplate, Ceiling Support / Wall Thimble	4DFPB		
Roof Support	4DRSB		
Storm Collar	4DSC		
Standard Flashing	4DF		
Steep Pitch Flashing	4DF12		
Attic Insulation Shield	4DAIS12		
SECURITY VENTING COMPONENTS LIST			
6" Pipe Length	SV4L6		
12" Pipe Length	SV4L12		
24" Pipe Length	SV4L24		
36" Pipe Length	SV4L36		
48" Pipe Length	SV4L48		
6" Adjustable Length	SV4LA		
12" Adjustable Length	SV4LA12		
45° Elbow	SV4E45		
90° Elbow	SV4E90		
Wall Band	SV4BM		
Insulated Attic Shield	SV4RSA		
Wall Shield	SV4RSM		
Fire stop	SV4BF		
Adjustable Roof Flashing 1/12 — 7/12	SV4FA		
Horizontal Termination	SV4CHC		
Vertical Termination	SV4CGV		

# **INTERMITTENT PILOT & VALVE**

## **SIT 885 Proflame Valve**



# INTERMITTENT PILOT & VALVE (cont'd)

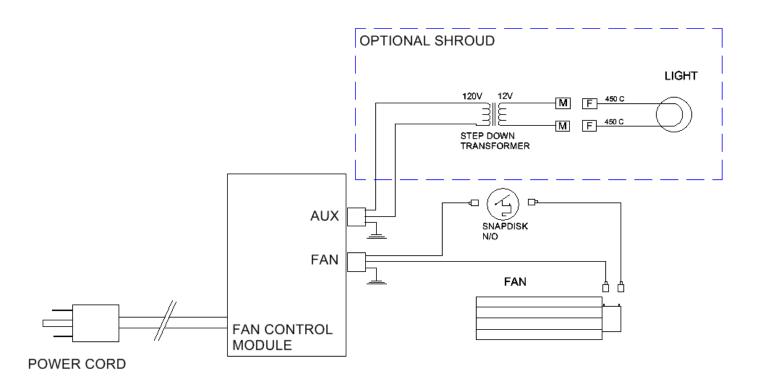


## **WIRING DIAGRAM**

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

Figure 16

# 120/12V CIRCUIT CALDERA



## **LIGHTING INSTRUCTIONS - Intermittent Pilot**



## 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 is equipped with an ignition device which automatically lights the pilot. Do not try to light the pilot by hand.
- B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the filloor because some gas is heavier than air and will settle on the floor.

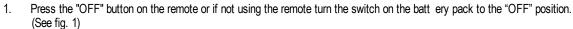
#### WHAT TO DO IF YOU SMELL GAS:

- Do not try to light any appliance.
- Do not touch any electric switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- C. Do not use this appliance if any part has been under water. Immediately call a qualified se rvice technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

## LIGHTING INSTRUCTIONS

- STOP! Read the safety information above on this label.
- Set the thermostat to the lowest setting.
- 3. Turn off all electric power to the appliance.
- 4. Do not attempt to light the pilot by hand.
- 5. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
- 6. Turn on all electric power to the appliance.
- 7. You must now synchronize the remote with the Receiver/Battery Pack (for 1st time use) by pressing the PRG button on the Battery Pack (fig. 1 (Battery Pack is situated behind the Pedestal front or Louvers)) fol lowed by pressing the "ON" button on the Remote.
- 8. Press the "ON" button on the Remote (fig. 2) or if not using the Remote turn the switch on the Battery Pack to the "ON" position (see figure1).
- 9. If the appliance will not operate, follow the instructions "To Turn Off Gas To Ap pliance" and call your service technician or gas supplier.

## TO TURN GAS OFF TO APPLIANCE



2. Turn off all electric power to the appliance.

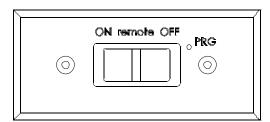
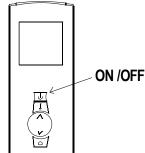


FIG 1: RECEIVER / BATTERY PACK



**FIG 2: REMOTE CONTROL** 

## LIGHTING INSTRUCTIONS

## FOR YOUR SAFETY, READ BEFORE LIGHTING

#### **INITIAL OPERATION**

- Check that the appliance is properly vented and connected to the gas supply.
- Check the logs and twigs are properly placed.
- Check all external parts, such as grills, door and control cover are properly attached and fastened.

**NOTE**: When operated for the first few times, the appliance will emit some odor and fumes. This is due to the evaporation of oils and solvents used in fabricating the appliance. Close off the room to the rest of the house and open all windows. Keep the room well ventilated.

#### **OPERATING PROCEDURE**

#### Initializing the System for the first time

Install the 4 AA batteries into the receiver battery bay. Note the polarity of the battery and insert into the battery bay as indicated on the Battery cover (+/-). Place the 3 position slider switch in the "Remote" position. (fig. 3) Using the end of a paper clip, or other similar object, insert the end of the paper clip into the hole marked "PRG" on the Receiver front cover (fig 3). The Receiver will "beep" three (3) times to indicate that it is ready to synchronize with a Transmitter. Install the 3 AAA type batteries in the Transmitter battery bay, located on the base of the Transmitter. With the batteries already installed in the Transmitter, push the On button. The Receiver will "beep" four times to indicate the Transmitter's command is accepted and sets to the particular code of that Transmitter. The system is now initialized.

#### **Temperature indication Display**

With the system in the "OFF" position, press the Thermostat Key and the Mode Key at the same

time. Look at the LCD screen on the Transmitter to verify that a C or F is visible to the right of the Room Temperature display. (Fig. 6)

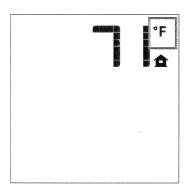




Fig. 6: Remote Control display in Farenheit and Celsius.



Fig. 3: Receiver body



Fig. 7: Remote Control display.

#### Turn on the Appliance

Press the ON/OFF Key on the Transmitter. The Transmitter display will show all active Icons on the screen. At the same time the Receiver connects the thermopile to the gas valve millivolt coil and the appliance main burner turns on. A single "beep" from the Receiver will confirm reception of the command.

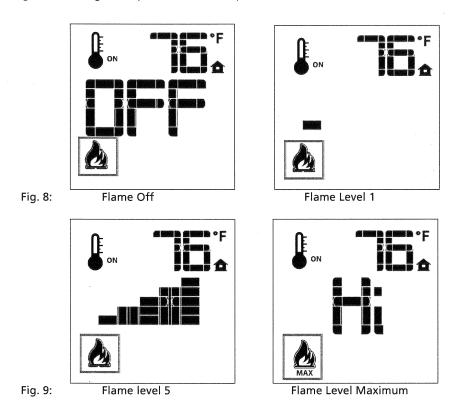
#### Turn off the Appliance

Press the ON/OFF Key on the Transmitter. The Transmitter LCD display will only show the room temperature and Icon (Fig. 7). At the same time the Receiver disconnects the thermopile from the gas valve millivolt coil and the appliance burner turns off. A single "beep" from the Receiver confirms reception of the command.

#### **Remote Flame Control**

The proflame GTMF has six (6) flame levels. With the system on, and the flame level at the maximum in the appliance, pressing the Down Arrow Key once will reduce the flame height by one step until the flame is turned off.

The Up Arrow Key will increase the flame height each time it is pressed. If the Up Arrow Key is pressed while the system is on but the flame is off, the flame will come on in the high position. (Fig. 8 & 9) A single "beep" will confirm reception of the command.



#### **ROOM THERMOSTAT (Transmitter Operation)**

The Remote Control can operate as a room thermostat. The thermostat can be set to a desired temperature to control the comfort level in a room.

To activate this function, press the Thermostat Key (Fig. 1). The LCD display on the Transmitter will change to show that the room thermostat is "ON" and the set temperature is now displayed (Fig. 10). To adjust the set temperature, press the Up or Down Arrow Keys until the desired set temperature is displayed on the LCD screen of the Transmitter.

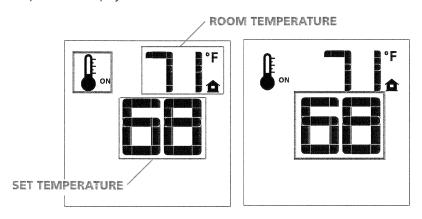
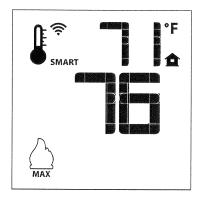


Fig. 10

Fig. 11

#### **Smart Thermostat (Transmitter Operation)**

The Smart Thermostat function adjusts the flame height in accordance to the difference between the set point temperature and the actual room temperatures. As the room temperature gets closer to the set point the Smart Function will modulate the flame down. To activate this function, press the Thermostat Key (Fig. 1) until the word "SMART" appears to the right of the temperature bulb graphic (Fig. 12). To adjust the set temperature, press the Up or Down Arrow Keys until the desidered set temperature is displayed on the LCD screen of the Transmitter (Fig. 13).



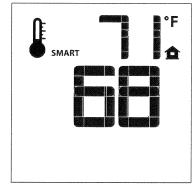


Fig. 12: Smart flame function

Fig. 13

## **Fan Speed Control**

If the appliance is equipped with a hot air circulating fan, the speed of the fan can be controlled by the Proflame system. The fan speed can be adjusted through six (6) speeds. To activate this function use the Mode Key (fig.1) to index to the fan control icon (Fig. 14). Use the Up/Down Arrow Keys (Fig.1) to turn on, off or adjust the fan speed (fig. 15). A single "beep" will confirm reception of the command.

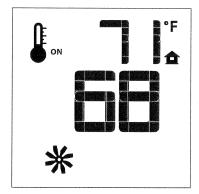


Fig. 14

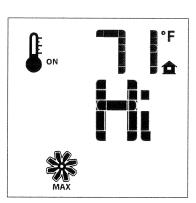


Fig. 15

#### **Remote Actuated 120V Auxiliary Outlet**

The auxiliary function controls the AUX power outlet on the Fan Control Module. To activate this function use the Mode Key (fig. 1) to index to the AUX icon (fig. 16 & 17). Pressing the Up Arrow Key will activate the outlet. Pressing the Down Arrow Key will turn the outlet off. A single "beep" will confirm the reception of the command.



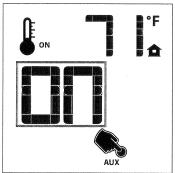


Fig. 16

Fig. 17

#### **Key lock**

This function will lock the keys to avoid unsupervised operation.

To activate this function, press the MODE and UP Keys at the same time (fig. 18).

To de-activate this function, press the MODE and UP Keys at the same time.

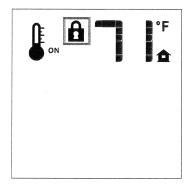


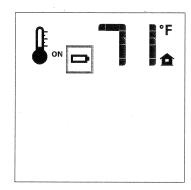
Fig. 18

#### LOW BATTERY POWER DETECTION

#### **Transmitter**

The life span of the remote control batteries depends on various factors: quality of the batteries used, the number of ignitions of the appliance, the number of changes to the room thermostat set point, etc.

When the Transmitter batteries are low, a Battery Icon will appear on the LCD display of the Transmitter (Fig. 19) before all battery power is lost. When the batteries are replaced this Icon will disappear.



#### Receiver

The life span of the Receiver batteries depends on various factors: quality of the batteries used, the number of ignitions of the appliance, the number of changes to the room thermostat set point, etc.

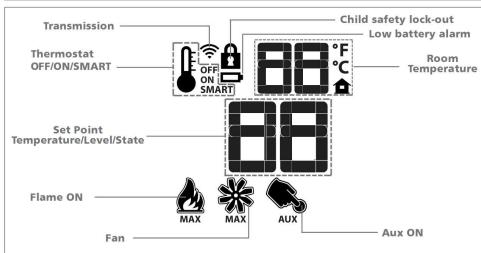
When the Receiver batteries are low, No "beep" will be emitted from the Receiver when it receives an On/Off command from the Transmitter. This is an alert for a low battery condition for the Receiver. When the batteries are replaced the "beep" will be emitted from the Receiver when the ON/OFF Key is pressed (See Initialization of The System).

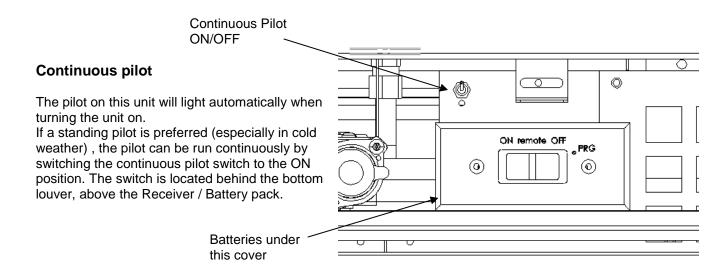
Fig. 19

#### MANUAL BYPASS OF THE REMOTE SYSTEM

If the batteries of the Receiver or Transmitter are low or depleted, the appliance can be turned on manually by sliding the three position slider switch on the Receiver to the ON position. This will bypass the remote control feature of the system and the appliance main burner will come on if the gas valve is in the "On" position.







## MAINTENANCE

**CAUTION**: Do not conduct maintenance on the appliance while it is operating or while it is still hot.

Make sure Remote switch on the Module is in OFF position (See figure 9 page 29) and turn burner switch OFF. Turning the electric supply off will not prevent unexpected ignition!!

#### **CLEANING THE APPLIANCE**

The exterior surfaces and glass may be cleaned with a soft, non-abrasive cloth and water or a suitable, mild, non-abrasive cleaner.

#### Regularly,

- Clean and remove any lint accumulations or debris from the grills and in any combustion and convection air passage ways.
- Keep the appliance area free from combustible materials, such as paper, wood, clothing, gasoline and flammable solids, liquids and vapors.
- Check for unusual noise, odor and operation of the appliance.
- Check the vent terminal for any damage, or obstruction by plants or debris accumulation.
- Visually check the height and color of the burner and pilot flames.

#### **MAIN FLAME**





#### **INTERMITTENT PILOT FLAME:**

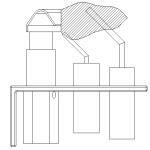


Figure 14

#### Once a Year,

- Remove the glass door and clean the inside of the glass with a soft, non-abrasive cloth and water or a suitable, mild, non-abrasive cleaner.
- Carefully remove the logs and gently brush off any loose carbon deposits. This job is best done outside the house, wearing a dust mask. The logs are very fragile, take care not to break them. After cleaning, the logs must be replaced as per the instructions in this manual.

#### Once a Year have a qualified service technician,

- Completely inspect the appliance and the venting system.
- Clean and remove any lint accumulations or debris in the firebox, on the burners, on the pilot, at the primary air opening, on the convection air blower and in any combustion and convection air passage ways.
- Check the safety shut-off system of the gas valve.

**WARNING:** All parts removed or disturbed must be properly replaced after maintenance. Service and repair must be conducted by a qualified service person. If these instructions are not followed, a fire or explosion may result, causing property damage, personal injury or loss of life.

VERIFY PROPER OPERATION AFTER SERVICING.

### **MAINTENANCE**

#### **PLATING:**

- 1. The plating requires little maintenance and needs only to be cleaned with a soft damp cloth. **Do not use any abrasive cleaning materials.**
- 2. Avoid fingerprints on gold. Wipe off fingerprints before firing.

#### DOOR:

Check the gasket to see that it is still forming a seal. Replace gasket if there is any sign of wear.

#### **VIEWING GLASS REPLACEMENT:**

This appliance is supplied with high temperature 5mm high temperature ceramic glass that will easily withstand the heat your unit was designed to produce. In the event the glass breaks, contact your dealer or BLAZE KING to arrange for your glass to be replaced / repaired (see page 12).

#### **IMPORTANT - GLASS CLEANING - WHITE MINERAL DEPOSITS**

One of the byproducts of the combustion process in a gas appliance, is a mineral which can show up as a white film on the ceramic glass of the viewing door. The composition of the deposit varies widely from various locations and also from time to time in the same location. You may have the problem for a time and then not see it for many months when it will reappear in your area. It seems this is associated with the varying sulfur content of the gas. We have discussed this problem with ceramic glass manufacturers and they cannot give us a definitive answer to this problem. Dealers have tried various cleaning products with varying results. The following recommendations will not guarantee results in your particular case. Ensure the stove is completely cooled before you change the bulb. Make sure switch on the Battery pack / Receiver is in OFF position.

#### Turning the electric supply off will not prevent unexpected ignition!!

- 1. Clean the glass regularly as soon as you notice the buildup (white film). If the film is left for a long period of time build up will bake on. It is then much harder, if not impossible, to remove.
- 2. NEVER use an abrasive cleaner on the ceramic glass. Any abrasion of the surface has the immediate effect of lessening the strength of the glass. An emulsion type cleaner is recommended.
- 3. Use a soft damp cloth to apply the cleaner. Dry the glass with a soft, dry, preferably cotton cloth. Most paper towels and synthetic materials are abrasive to ceramic glass and should be avoided.
- 4. Our dealers have had good results from the products listed below. We can not however guarantee the results of these products.
  - a) BRASSO

- b) POLISH PLUS by KEL KEM
- c) COOK TOP CLEAN CREME by ELCO

d) WHITE OFF by RUTLAND

NOTE: This is a problem beyond Blaze King's control and is not covered under warranty.

#### **NOTICE: COLD WEATHER OPERATION**

When using any gas appliance (LPG or NAT Gas) water is a byproduct of the combustion process. Under normal conditions this moisture is expelled through the vent into the atmosphere and does not cause any harm. In extreme cold weather the vapor may condense and freeze on any exposed surface it comes into contact with. This can cause a problem by restricting or blocking the vent, particularly with direct vent wall terminations as the exhaust is only a few inches away from the outside wall surface. What happens to the moisture after it leaves the vent cannot be controlled by the manufacturer. To extend the vent further out from the wall can sometimes but not always be an advantage. Extending the vent out from the wall may present other design problems such as ice falling from the eaves above. It is the homeowners responsibility to ensure that there is not an excessive build-up of ice on the termination.

# CAUTION: WHEN OPERATING YOUR APPLIANCE DURING COLD WEATHER YOU MUST FREQUENTLY CHECK THE EXHAUST CAP FOR EXCESSIVE ICE BUILD UP.

If the appliance begins to operate abnormally—Poor flame pattern, shutting down, etc..., this could be an indication of ice build up.

## **MAINTENANCE**

#### REPLACING HALOGEN LIGHT BULB (OPTIONAL SHROUDS ONLY)

The light is situated at the inside of the shroud. Replace with the light bulb specified in the replacement parts list on page 49. To replace the light bulb follow these instructions:

Ensure the stove is completely cooled before you change the bulb. Make sure switch on the Battery pack / Receiver is in OFF position.

Turning the electric supply off will not prevent unexpected ignition!!

- 1. Turn off electric supply
- 2. Open the right door (arched shroud) or take off shroud (rectangular shroud)
- 3. Using a screw driver, remove the cover plate (rectangular shroud only)
- 4. Remove old bulb by pulling straight out, to insert new bulb, push straight in. (Avoid touching glass with bare hands, hold bulb with clean cloth or tissue)
- 5. Re-install and turn power back on.

### **SERVICING**

#### **SERVICING UNDER WARRANTY**

Before servicing, read the terms and conditions of the Blaze King warranty at the back of this manual. Contact the Blaze King authorized dealer which you purchased the appliance from and provide him with details of the problem and the installation information which the installer filled out at the back of the manual.

**WARNING:** Servicing of this appliance must be conducted by a qualified service technician. Improper servicing, adjustment or alteration of this appliance may cause property damage, personal injury or loss of life. All servicing should be conducted with the appliance cold.

#### **ADJUSTING PRIMARY AIR**

- Remove the lower louver (open doors/remove optional front first if used) to gain access to the shutter.
- Loosen the primary air shutter screw (above burner rocker switch) (caution, make sure unit is not hot as burns may result).
- Sliding the shutter lever right increases aeration while sliding the lever to the left decreases aeration.
- Tighten screw.

#### **CHANGING MAIN BURNER ORIFICE**

- Remove the glass door, logs and firebox liner panels.
- Remove the burner. Remove the screws holding the aeration box to the firebox floor and lift it out.
- Use a 1/2" wrench to unscrew the orifice
- Change the orifice. Do not over tighten.
- Replace all parts in reverse order and properly set the primary air shutter according to the specifications.
- Check for leaks.

#### CHECKING INLET AND OUTLET GAS PRESSURE

- The pressure test taps are located on the valve.
- The taps are located in the front.
- Loosen the set screw inside the tap with a 1/8" wide flat screw driver.
- Connect a 1/4" rubber tube to the tap and a pressure gauge.
- Be sure to tighten the set screw inside the tap after you are finish taking pressure readings.

## **SERVICING** Cont...

#### **GAS COMPONENTS ASSEMBLY**

The gas component assembly can be taken out of the appliance for easier servicing.

#### **Replacing Gas Component Assembly**

- Disconnect electricity to the appliance.
- Shut off the gas supply to the appliance and disconnect the gas line at the valve
- Remove the glass door, logs and burner.
- Disconnect the wires from the module-box
- Remove the screws holding the gas component assembly to the appliance firebox bottom.
- Gently lift the assembly out and remove through the front.
- Replacing the assembly is the reverse of the above instructions.
- \* Check the tray sealing gasket. Replace if damaged.

### **FUEL CONVERSION**

#### "WARNING"

This 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 these 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 is responsible for the proper installation of this kit. The installation is not proper and complete until the operation of the converted appliance is checked as specified in the manufacturer's instructions supplied with the kit.

#### **Conversion Kit Contents**

This conversion kit contains the following parts:

- 1) For LPG # 51 orifice and LPG Stepper motor
- 2) For NG # 35 orifice and NG stepper motor

#### To convert from NG to LPG or reverse, follow the next steps.

- Replace burner orifices,
- Replace stepper motor (see next page).
- Convert pilot fuel (see instructions below)

#### How to convert Pilot fuel:

Use a 7/16" wrench to loosen the pilot hood Push the little tab in and the little tab with hole should pop out. The hole stamp tab (LP) out is used for Propane The stamped tab (NA) out is for Natural Gas Re-tighten the pilot hood.

Fill out the fuel conversion label on the appliance (inside side doors)

All valves have been pre-set and certified for installation at elevations from 0 - 4500 feet (1 - 1372m) above sea level.

#### **High Elevations**

When installing this unit at higher elevations, it is necessary to decrease the input rating by replacing the existing burner orifice with a smaller size for installations over 2000 feet (608 m). The appliances input should be reduced 4% for each additional 1000 feet (305 m) above sea level. For the USA, derate the unit from sea level according to the gas installation code.

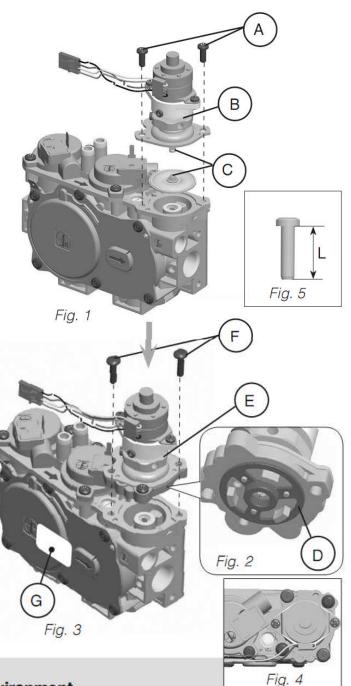
Altitude	Natural Gas Orifice Size	Propane Orifice Size
0 – 4,500 ft (0 – 1372 m)	35	51
4,500 – 6,500 ft (1372 – 1981 m)	36	52
6,500 - 8,000 ft (1981 - 2438 m)	37	53

### **FUEL CONVERSION**

#### STEPPER MOTOR PRESSURE REGULATOR CONVERSION KIT INSTALLATION OR REPLACEMENT INSTRUCTIONS.

Verify that the following items are present in the package.

- Pressure regulator assembly (E)
- Two (2) screws (F)
- Identification label (G)
- Installation instructions (this document).
- 1 Shut off the gas supply to the valve and shut down the electric supply.
- 2 See Fig. 1. Using a Torx T20, or slotted screwdriver, remove and discard the two (2) pressure regulator mounting screws (A), pressure regulator tower (B), and the spring and diaphragm assembly (C), (If applicable).
- 3 Ensure the rubber gasket (D), which is prefitted as part of assembly (E), is properly positioned, see Fig. 2, otherwise fit the gasket as shown Fig. 2.
- 4 Install the new STEPPER MOTOR pressure regulator assembly, as shown in Fig. 3 and Fig. 4. Use the supplied screws (F), M4 x 0.7 threaded, length of thread L=(16 mm + 0 0.5 mm), steel material, resistance class 8.8 (see Fig. 5).
- Manually thread the two conversion kit mounting screws into the valve body. Use a standard screwdriver or T20 Torx bit and tighten to the screws with a fixing torque of 25lb-in ± 5%.
  - IN THE EVENT THAT THE THREADS OF THE VALVE ARE STRIPPED OR DAMAGED, **REPLACE** THE VALVE.
- 6 Install the enclosed identification label (G) to the valve body where it can be easily seen.
- 7 Make STEPPER MOTOR and valve electrical connections, apply gas to system and relight appliance according to manufacturers instructions.
- **8** With the main burner "ON", test the new pressure regulator assembly for leaks using a soap solution.
- 9 Relight the main burner and verify proper burner ignition and operation.



#### WARNING!

Installation should be carried out in a clean environment.

#### WARNING!

This modulating conversion kit must ONLY be applied as part of a conversion kit supplied by the APPLIANCE MANUFACTURER for the specific appliance, and type of gas, being converted.

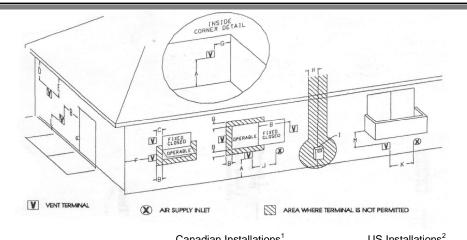
#### **WARNING!**

Correct operation of the system cannot be guaranteed if the conversion kit or valve has been dropped or has sustained a strong impact.

INSTALLER NOTICE. These instructions must be left with appliance.

## **ALLOWABLE TERMINATION LOCATIONS**

Figure 19



	Canadian Installations <sup>1</sup>	US Installations <sup>2</sup>
A= Clearance above grade, veranda porch, deck or balcony	*min. 12"(30 mm)	*min. 12"(30 mm)
B= Clearance to window or door that may be opened	*min. 12"(30 mm)	*min. 12"(30 mm)
C= Clearance to permanently closed window	*min. 12"(30 mm)	*min. 12"(30 mm)
D= Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2' (61 cm) from the centerline of the terminal	*min. 20-1/2" (521 mm) from center of termination	*min. 20-1/2" (521 mm) from center of termination
E= Clearance to unventilated soffit	*min. 20-1/2" (521 mm) from center of termination	*min. 20-1/2" (521 mm) from center of termination
F=Clearance to outside corner	*min. 10"(250 cm) from center of termination	*min. 10" (250 cm) from center of termination
G=Clearance to inside corner	*min. 12-1/2" (318 mm) from center of termination	*min. 12-1/2" (318 mm) from center of termination
H= Clearance to each side of centerline extended above meter/regulator assembly	3' (91cm) within a height 15' (4.5m) above the meter/regulator assembly	*
I= Clearance to service regulator vent outlet	3' (91cm)	*
J= Clearance to no mechanical air supply inlet to building or the combustion air inlet to any other appliance	12" (30cm)	9" (23cm)
K= Clearance to a mechanical air supply inlet	6' (1.83 m)	3' (91 cm) above if within 10' (3 m) horizontally
L= Clearance above paved sidewalk or paved driveway located on public property	7' (2.13 m)†	*
M = Clearance under veranda, porch, deck or balcony	12" (30 cm)‡	*

In accordance with the current CSA B149.1, Natural Gas and Propane Installation Code

<sup>&</sup>lt;sup>2</sup> In accordance with the current ANSI Z223.1/NFPA 54, *National Fuel Gas Code* 

<sup>†</sup> A vent shall not terminate directly above a sidewalk or paved driveway that is located between two single family dwellings and serves both dwellings.

<sup>‡</sup> Permitted only if veranda, porch, deck or balcony is fully open on a minimum of two sides beneath the floor.
\* For clearances not specified in ANSI Z223.1/NFPA 54 or CSA B149.1, one of the following shall be indicated:

a) A minimum clearance value determined by testing in accordance with section 2.23.7, or ;

b) A reference to the following footnote: "Clearance in accordance with local installation codes and the requirements of the gas supplier"

## **TROUBLESHOOTING**

Please check to make sure the instructions are followed exactly before attempting trouble shooting of the appliance.

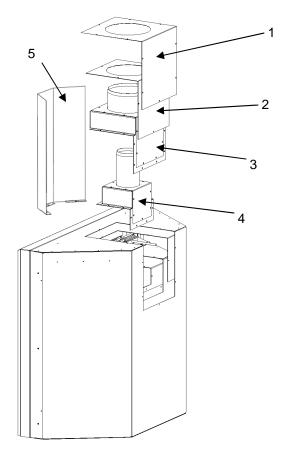
**WARNING:** Troubleshooting and servicing of gas and electrical devices of the appliance should only be conducted by a qualified service technician.

The pilot will not stay lit.	<ol> <li>Confirm that the Spark electrode and sense electrode wires are properly connected to the DFC board (See page 27 for terminal locations)</li> <li>Confirm that the Pilot burner is properly grounded to the DFC board and stove chassis.</li> <li>Check the power source or the battery pack connections and condition of batteries.</li> </ol>
If the main burner does not come ON when the manual switch or remote control is turned ON.	<ol> <li>Confirm that the pilot sparks and lights.</li> <li>Confirm that the Spark electrode and sense electrode wires are properly connected to the DFC board (See page 27 for terminal locations)</li> <li>If using the remote control check the condition of the batteries.</li> <li>Check if there is gas supply to the appliance</li> </ol>
Pilot will not light.	<ol> <li>When lighting the appliance for the first time after installation or after servicing, there is air in the gas line. It takes a while for all the air to purge out of the pilot before gas can reach the pilot and ignite. Remove the glass door and try lighting the pilot many times to purge the air.</li> <li>Check to make sure the gas supply to the appliance is turned on and there is adequate gas supply pressure to the appliance.</li> <li>Check for sparks between the spark electrode and the pilot head when the unit is turned on. If there are no sparks,         <ol> <li>Check for broken or poor connection from the sparker to the electrode.</li> <li>Check for the spark shorting or arcing at other locations.</li> </ol> <li>Check for defective sparker.</li> <li>Check for defective spark electrode.</li> <li>Check the power source or the battery pack connections and condition of batteries.</li> </li></ol>

# TROUBLESHOOTING Cont...

SYMPTOM	ACTION
The main burner shuts off when the appliance is warm.	<ol> <li>This may be the normal operation of a wall thermostat installed to appliances.</li> <li>Check for good pilot flames on the flame sensor (see fig.3 page 9).</li> <li>Check for proper functioning of venting system (including termination for blockage).</li> <li>Check wire connections. Expansion from heat affects a loose connection</li> <li>Check for adequate grounding from the Module ( page 27)</li> </ol>
Sooty deposits on the glass door.	<ol> <li>If the flame is yellow and lazy, check for lint etc. around primary air shutter. Increase primary air by opening the primary air shutter if necessary (See page 39for adjusting primary air)).</li> <li>Check for proper placement of the logs and branches. Ensure logs and burner are clean. See that section in the instruction manual.</li> <li>Check for proper venting and blockage of the vent termination.</li> <li>Check manifold pressure and clock input rating for over-firing.</li> </ol>
Sharp blue flames with flames lifting off the burner at the ends.	Too much primary air. Reduce primary air by closing the primary air shutter. During cold temperatures, some flame lifting may occur during start-up (See page 34 for adjusting primary air).
Convection blower does not turn on.	<ol> <li>The convection fan is thermostatically controlled. It will only turn on when the appliance is warmed-up. This may take up to 15 minutes with the appliance on high.</li> <li>Check for 120VAC electrical supply to the appliance. (Is the cord plugged in?)</li> <li>Check if speed controller is not in OFF position</li> <li>Check for proper mounting of the thermal snap disc (under firebox).</li> <li>Check electrical connections.</li> <li>Check for defective thermal snap disc.</li> <li>Check for defective convection blower speed controller.</li> <li>Check for defective convection blower.</li> </ol>

# **TOP/REAR VENT CONVERSION**



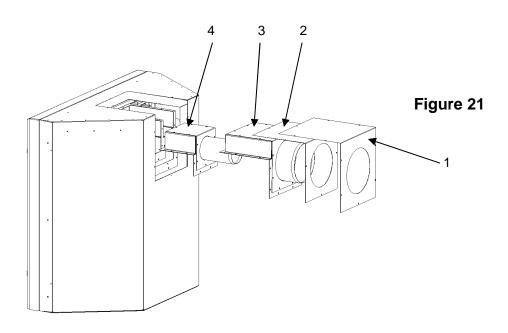
### Figure 20

Note: When converting from rear to top vent, make sure heat shield (#5) is installed (see page 9)

The appliance is easily converted from top vent to rear vent.

The steps for converting are as follows:

- 1. Remove the outer shell cover plate (# 1).
- 2. Remove the heat shield cover plate (# 2).
- 3. Remove the air intake assembly (# 3).
- 4. Remove the exhaust assembly (# 4).
- 5. Rotate the exhaust (# 4) and air intake (# 3) assemblies into the rear vent position and re-install.
- 6. Rotate the heat shield cover plate (# 2) and re-install.
- 7. Insert the round blanket cutout into hole on top.
- 8. Rotate the flue collar plate (# 1) and re-install.



### **FAN KIT REMOVAL & INSTALLATION**

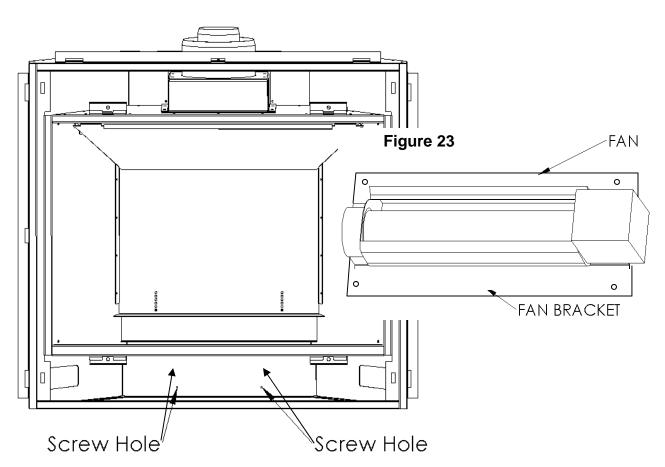
Before removing the fan be sure to let unit cool to room temperature, disconnect electrical power to the unit, shut off gas to the unit and disconnect the gas line to the appliance.

#### To remove fan, for maintenance or replacement:

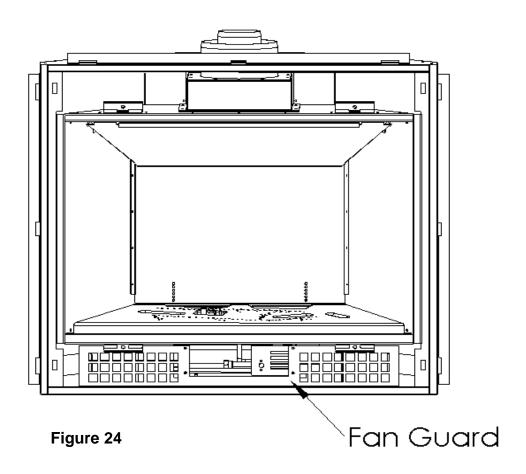
- 1) Remove the louvers and door.
- 2) Remove the logs, brick panels and burner. **Note:** Be careful when handling these items as they may break if dropped or handled roughly.
- 3) Remove fan guard (figure 24) and valve tray.
- 4) Disconnect wires, be sure to label wires prior to disconnecting to ensure they are replaced in the correct location.
- 5) Remove the four screws (Figure 22) and take fan out.
- 6) Installation is the reverse order of the previous steps

See next page for continued installation instructions.

Figure 22



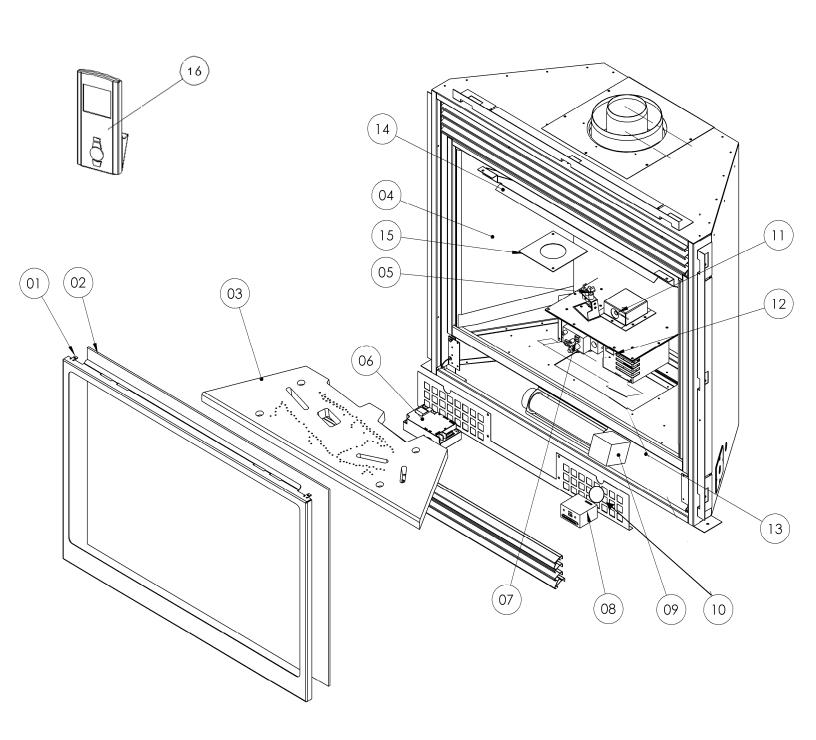
# **FAN KIT INSTALLATION - continued**



## **Replacement Parts list for Caldera**

No expl. view	Part #	Description	QTY	Unit
	OM7405	OWNERS MANUAL, CALDERA DVT/DVR	1	EA
	Z0758A	CONVERSION KIT-NATURAL GAS TO PROPANE 0-4,500ft	1	EA
	Z0758B	CONVERSION KIT-NATURAL GAS TO PROPANE 4,500-6,500ft	1	EA
	Z0758C	CONVERSION KIT-NATURAL GAS TO PROPANE 6,500-8,500ft	1	EA
	Z0759A	CONVERSION KIT-PROPANE TO NATURAL GAS 0-4,500ft	1	EA
	Z0759B	CONVERSION KIT-PROPANE TO NATURAL GAS 4,500-6,500ft	1	EA
	Z0759C	CONVERSION KIT-PROPANE TO NATURAL GAS 6,500-8,500ft	1	EA
01	0254C	DOOR GASKET (part # FTI 1071, 114" long)	1	EA
02	0244	GLASS CERAMIC (33-1/8" x 22-15/16")	1	EA
03	M \Z7405B	BURNER TRAY	1	EA
04	Z7454	BRICK PANEL SET	1	EA
05	0712A	PSE PILOT (PSE-C7-520)	1	EA
06	M \SIT0584302	CONTROL MODULE	1	EA
07	M \SIT0885001	SIT VALVE - MODEL PROFLAME 885	1	EA
08	M \SIT0584521	RECEIVER / BATTERY PACK	1	EA
09	0719D	FAN	1	EA
10	0136	RHEOSTAT FAN SPEED CONTROL	1	EA
	M \SIT0584121	FAN MODULE	1	EA
13	1144AA	SNAPDISK	1	EA
14	7412	FLUE BAFFLE	1	EA
15	7480	60 % VENT RESTRICTOR	1	EA
16	M \SIT0584023	REMOTE TRANSMITTER SIT	1	EA
	M \SIT0584912	MODULE/VALVE WIRE HARNESS	1	EA
	M \SIT0584905	WIRE HARNESS RECEIVER	1	EA
	0822	LOG SET (6 PIECES)	1	EA
	0779A	LIGHT BULB HALOGEN BI-PIN 12V 20W G6.35	1	EA

## **Replacement Parts list for Caldera**



# Blaze King Warranty

Gas stoves manufactured by Blaze King Industries and/or Valley Comfort Systems Inc. are covered by a limited lifetime warranty against manufacturers defects in material and workmanship. Details of this comprehensive warranty program are outlined below. In addition to the terms outlined for the limited lifetime warranty, our products carry a 5 year warranty which covers mechanical and electrical components including labor costs outlined below. The combination of these warranty policies provide a very strong coverage package that we are proud to offer you, our customers. Our Blaze King tradition of building high quality products for over 25 years is really your most important assurance of quality but it's nice to know that should something fail (and it occasionally does) you are covered by a warranty policy that leads the industry. To ensure the coverage is in place you must have your unit properly installed by an authorized Blaze King dealer and you must register your ownership. Blaze King's warranty policy applies only to units sold, installed and/or for use in the USA or Canada. No person is authorized to modify this warranty or make any additional warranties on behalf of the manufacturer, Blaze King.

#### Components and parts 5 year warranty:

Blaze King warrants the following parts; blower motors, door gasket, blower speed control, logs, pilot assembly, gas valve, gas lines, thermocouple and/or thermopile against defects in material or workmanship to the original purchaser, for five years following the date of purchase. Consumable items, such as batteries and light bulbs are not covered by warranty.

#### Labor costs during the 5 year warranty period:

Blaze King manufacturers warranty covers labor costs to the original purchaser based on our schedule of approved charges, provided to our authorized dealers. Blaze King will only be responsible for labor costs provided by our authorized dealers and based upon the schedule. Limited Lifetime Coverage

This warranty contains different terms that cover specific parts of the gas appliance. Blaze King warrants the following parts of the gas appliance against defects in material or workmanship to the original retail purchaser. For the first five years of ownership, the combustion chamber, heat exchanger and burners will be replaced by Blaze King, conditional upon production availability. From year 6 through to the end of ownership by the original purchaser, Blaze King will provide replacement or repair of the aforementioned parts, conditional upon current production availability, at 50% of current retail price but does not cover any charges relating to labor. This portion of the warranty coverage is not transferable and applies only to the original purchaser.

#### How to Get Service

If this product requires repair or replacement due to defects in material or craftsmanship during the first five years of ownership, contact your Blaze King dealer and explain the nature of the problem. If the dealer is unable to repair or replace the product to your satisfaction then contact Blaze King at 509-522-2730 in the USA or 250-493-7444 in Canada. If a replacement part is sent directly to you, please contact Blaze King to obtain a Return Authorization Number (RA#) for all defective parts. Blaze King will refuse delivery of any returned packages not clearly showing an (RA#). All expenses relating to the shipping of defective parts or entire stoves will be at purchaser's expense. Blaze Kings Responsibilities:

If the purchaser has complied with all the terms and conditions of this warranty and if the purchaser has notified Blaze King of the defect prior to the expiration of any warranted items, the following procedure will occur. Blaze King will inspect the product to determine that there is indeed a defect and that the defect is covered by warranty. Blaze King will either repair or replace the product at its' discretion. Under no condition whatsoever does Blaze King provide or imply warranty coverage for venting components used in the installation of our products. This warranty details the obligations and liabilities of Blaze King and no other warranties are expressed or implied. Blaze King reserves the right to investigate and settle all claims against warranted parts at their discretion. In no event shall Blaze King be held responsible for indirect or consequential damages of any nature which are in excess of the original purchase price of the product. Blaze King may at its' discretion discharge any or all obligations by refunding the wholesale price of any defective part or parts.

#### Misuse of Stove Nullifies Warranty:

The above warranty is conditioned upon the proper installation and use of the product according to the manufacturers instructions as specified in the "Owners Installation & Operations Instructions" and in compliance with applicable local building and fire codes. Blaze King recommends the local building inspector or fire department inspect the unit prior to initial use. Consult the "Owners Installation & Operations Instructions" supplied with each unit prior to installation or operation. Alteration, abuse, lack of maintenance, faulty repairs or misuse will void the warranty. Abuse includes but is not limited to the use of fuels other than as specified in the "Owners Installation & Operations Instructions."

#### Legal Rights of Purchaser:

This warranty gives you specific legal rights and you may have other rights that vary from state to state (or province to province). Blaze King Assurance Plan:

Included with each gas stove manufactured by Blaze King is a Warranty Card, which must be completed in its entirety and returned to Blaze king within ten days from the date of purchase. Blaze King will be unable to properly administer the warranty if the card is not completed and registered on file. The Protection Plan will pay to repair and or replace parts which fail under normal usage at labor rates established by this Agreement. Extra charges such as mileage, overtime or shipping are not covered. Nuisance calls are not covered by the Plan. This Plan is for residential stoves and does not apply to commercial applications. Only repairs attributed to normal failure of the electronic and mechanical functions of the stove are covered. Failure due but not limited to, abuse, negligence, impact, fire, lightning, power failures and or surges, rust and corrosion are not covered. Damage and or repairs to cabinets and all exterior components, remote controls, and normal maintenance, related duct work, power surges, electrical spikes or electrical circuit overloads, filters, knobs, glass, gaskets, block and tile etc., are not covered. Additional or unusual utility bills incurred due to any malfunction or defect in equipment listed on the Plan, labor cost of gaining access to or removal of a unit that requires special equipment or tools such as cranes, ladder trucks, etc., are not covered. These include but are not limited to, cleaning, adjustments of the customer controls and customer product education. Labor, materials, expenses or equipment required to comply with the law and or regulations set forth by any governmental agencies are not covered by this Plan.

NOTES		
SERVICE HISTO		
DATE	CORRECTIVE ACTION (INCLUDE REPLACEMENT PARTS)	