

OWNER'S INSTALLATION AND OPERATION INSTRUCTION BOOK

Blaze[®] King

WOOD STOVES

BLAZE KING[®] CATALYST FIREPLACE INSERT
King Model KEI-1300

BLAZE KING[®] CATALYST FIREPLACE INSERT
Princess Model PEI-1200

OM-16B

7/24/84
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SAVE THESE INSTRUCTIONS

BLAZE KING

BLAZE KING CATALYST FIREPLACE INSERT
KING MODEL KEI-1300
BLAZE KING CATALYST FIREPLACE INSERT
PRINCESS MODEL PEI-1200

SAFETY NOTICE

Improper installation of your Blaze King Catalyst Insert, or failure to operate it according to the guidelines detailed in these instructions, may negate your warranty and endanger your home and family.

For years of carefree, efficient home heating, follow building and fire codes during installation and consult these instructions when operating your Blaze King Catalyst Insert.

INSTALLATION AND OPERATION INSTRUCTIONS

You are now the proud owner of a Blaze King Catalyst Fireplace Insert - the finest, cleanest burning insert ever introduced in America. It is the desire of the manufacturer that your insert give you a lifetime of trouble-free operation. We suggest that you read all instructions before installing and using the appliance.

WARRANTY

To register your warranty, fill out the 'Warranty Card' packed with these instructions in the firebox of the unit.

IMPORTANT

While every effort has been made to make these instructions as complete as possible, some installation or operating conditions may not be covered. If you have questions not answered here, contact your Blaze King dealer or your local building or fire inspector.

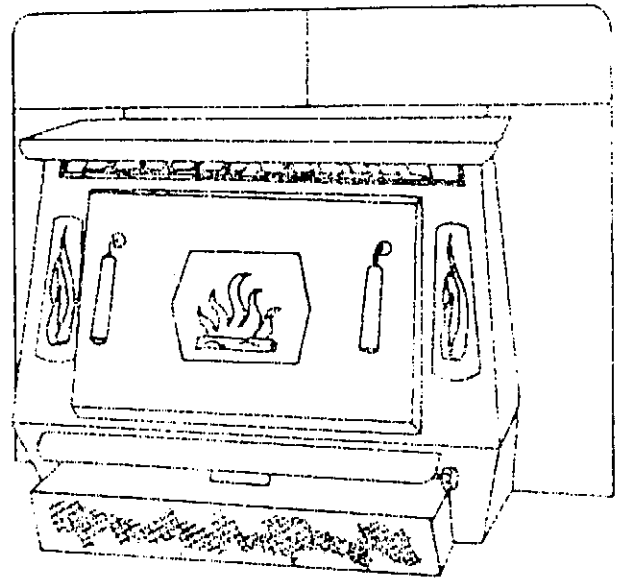


Figure 1

GENERAL INFORMATION

Blaze King fireplace inserts are designed to be installed inside a permanent masonry-type fireplace only. Installation in a zero clearance fireplace is not allowed.

BLAZE KING® FIREPLACE INSERTS MINIMUM FIREPLACE SIZES AND SHROUD SIZES

Model	Minimum Size Fireplace			Shroud		Optional Shroud		Weight (pounds)
	Width	Depth	Height	Width	Height	Width	Height	
KING Model KEI-1300	30"	12-1/2"	23-3/4"	45"	33"	56"	36"	410
PRINCESS Model PEI-1200	26-1/2"	12"	22-1/2"	42"	30"	46"	32"	345

PRODUCT INSPECTION

First, remove all packaged parts from your insert and inspect them. Make sure that the insert is complete. Examine the pieces to see that there is no damage caused by shipping. Should any part be missing or damaged, contact your dealer.

CHECK LIST

1. Insert with firebrick installed.
2. Doors with gasket material installed.
3. Wood handles.
4. Shrouds and mounting hardware.
5. Thermostat Knob.
6. Rheostat Knob.
7. Ceramic rings and screws.
8. Catalytic Combustor.
9. Ceramics (Fig. 2).
10. Leveling bolts and tracks.



Figure 2

SOME CAUTIONS

1. The Insert must be vented ONLY to the outside, not to other rooms or buildings.
2. NEVER use a chimney cross section smaller than 60 square inches.
3. NEVER vent this fireplace insert into a 'Class B' gas vent chimney. Check with local authorities to make sure that you are not inadvertently using a "class B" chimney.
4. DO NOT CONNECT THIS UNIT TO A CHIMNEY SERVING ANOTHER APPLIANCE.
5. Burn natural wood ONLY. Burning materials other than natural wood will appreciably shorten the life of the Catalytic Combustor. DO NOT burn trash, garbage, artificial or paper logs, gift wrappings, coal, lighter fluids, chemical cleaners, chemical starters, treated or painted wood, driftwood, or foil backed paper such as gum wrappers or cigarette packages.

BUILDING CODES AND PERMITS

Some areas may require a permit from the city, county, Building Inspector, or Fire Marshal. Check local building codes before beginning installation. After the installation is completed, it should be checked by your local Fire Marshal or Building Inspector.

SELECTION OF STOVE LOCATION

This appliance is listed by Underwriters Laboratories, Inc., only if it is connected to a masonry fireplace constructed in accordance with the requirements of the American National Standard for Chimneys, Fireplaces, Vents, and Solid Fuel Burning Appliances (NFPA NO. 211) or applicable local code requirements; and if minimum clearances to combustibles are observed. Installation in a masonry fireplace with a masonry chimney and a listed flue liner would also be acceptable under the above conditions.

PLACEMENT

The insert should be installed no closer than:

- a. 16" from the side of the insert top to unprotected combustible walls.
- b. 27" from the top of the insert to the combustible mantel.
- c. 12" from the side of the insert top to any combustible side trim.
- d. 15" from the top of the insert to any combustible top trim.

See Figures 3 and 4.

WALL PROTECTION

Consideration must be made for following your local building codes regarding necessary air spaces between non-combustible and combustible materials when installing your insert. THESE AIR SPACES CANNOT BE IGNORED. Since sufficient air space constitutes one of the best forms of insulation in the installation of woodburning units, the safety of your home and family will depend largely on how well the local ordinances regarding such air spaces are followed.

FLOOR PROTECTION

Floor Protection Material: 3/8" millboard or a U.L. listed floor protector or a non-combustible material equal to 3/8" thick millboard having a thermal conductivity of $K = 0.84 \text{ BTU in/ft hr degrees F}$.

The floor protector must extend beyond the base:

4" from each side

14" from the front of the fan box

These dimensions provide the required clearances from the door opening.

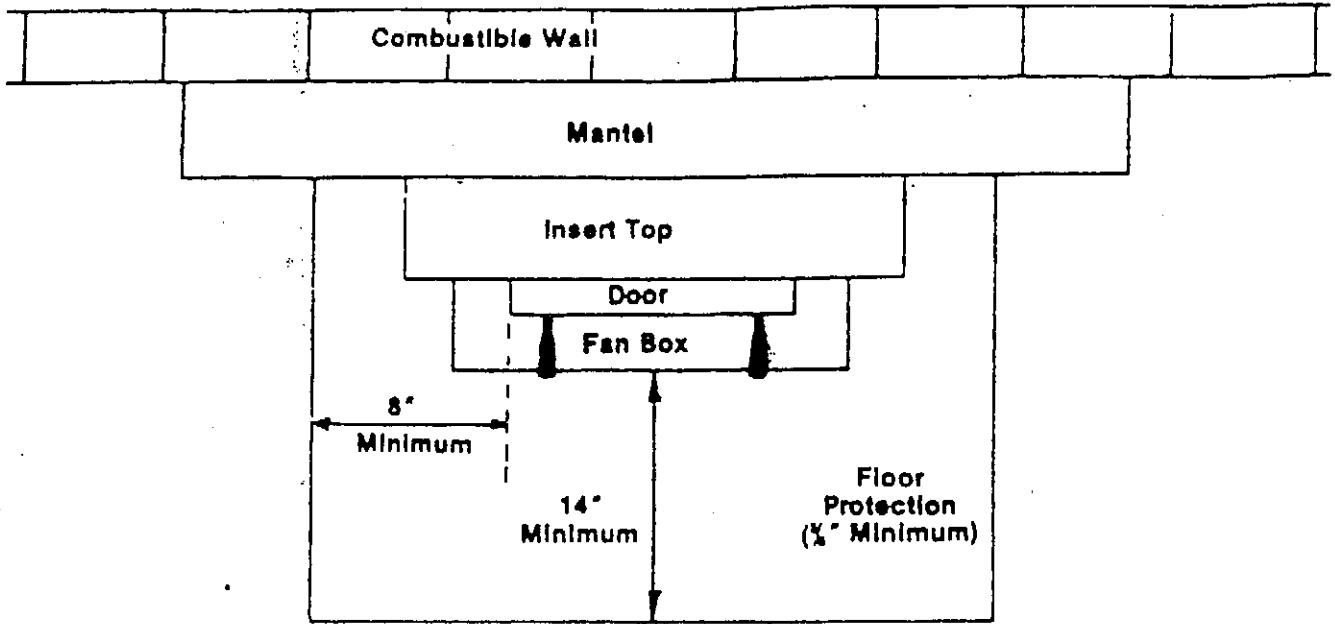


Figure 3

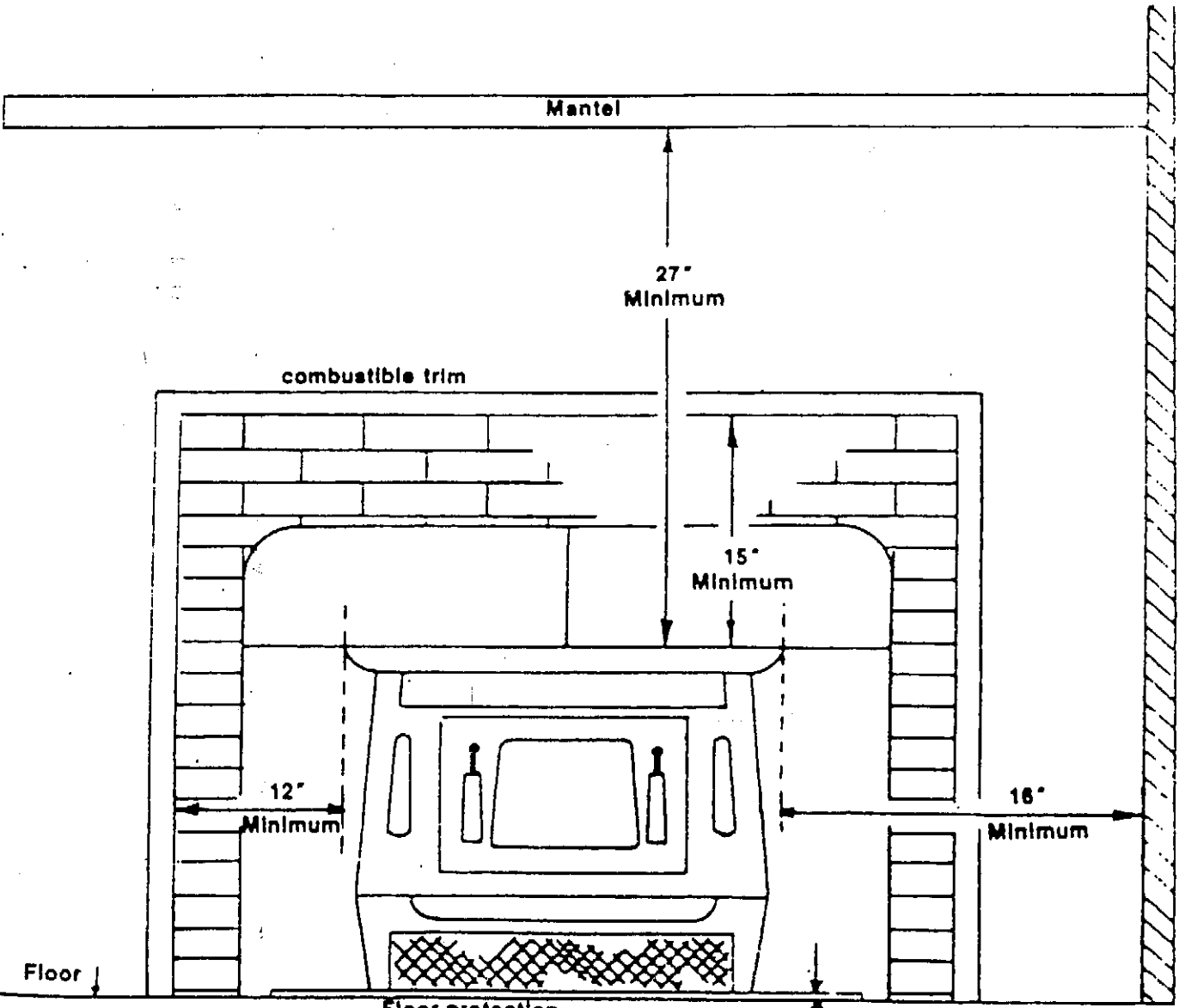


Figure 4

INSTALLATION INSTRUCTIONS

1. If a Woodcutters Fireplace Insert Flue Connector is to be installed, proceed to those instructions now.
2. Remove the existing fireplace flue damper or securely fasten it in an open position.
3. For convenience, remove the insert door.
4. Screw leveling bolts (furnished) into the two 1/2" nuts located on the left and right rear corners
5. Set fireplace insert on hearth with back portion extending part way into the fireplace.
6. Place the two "U" shaped tracks on the hearth so that the leveling bolts will slide in them when they are extended.
7. Screw leveling bolts down so they make contact with the tracks placed in Step 6 above. This will keep the insert level when it is pushed into the fireplace.
8. Using two 1/4" x 1/2" bolts with flat washers, bolt the side shrouds on. Do not tighten bolts. Slide one "tinnerman nut" (illustrated in Fig. 5) over each hole in the Top Shroud Angle located on top of the insert. Position the top shroud with the tabs on each side shroud. Install two 1/4" x 3/4" screws through the holes in the top shroud and into the "tinnerman nuts" previously installed. Adjust the side shroud to line up with the top shroud. Tighten side shroud bolts, then tighten top shroud screws. Refer to Figure 6.
9. Push the insert back to within several inches of the fireplace face.
10. Insulation (furnished) must be placed around the entire perimeter of the shroud back to form a seal between the shroud and the fireplace face. Using a high temperature silicone sealant (not furnished) such as "G.E. Silicone Sealant" or the equivalent, run a bead about 1" in from the edge of the shroud at point "A" around the perimeter to Point "B" (see Figure 7). Apply the insulating material just in from the edge, sticking it to the silicone, allowing no gaps or skips.
NOTICE: A complete seal must be obtained between shroud and fireplace or the insert will not draw properly, causing smoking and inefficient burning, among other problems.
11. Push the insert tight against the fireplace.
12. Install the combustor. See INSTALLING THE COMBUSTOR ASSEMBLY.
13. Put the door back on.
14. Install the ceramics in the ceramic rings. Mount the ceramic ring assembly to the Insert with the 6-32 x 1/4" screws provided.
15. This Fireplace Insert is equipped with a fan assembly for increasing heat circulation in the room. It has a three prong (grounded) plug to prevent shock hazard. THIS PLUG SHOULD BE INSERTED DIRECTLY INTO A PROPERLY GROUNDED, THREE PRONG RECEPTACLE FOR 115 VOLT, 60 HZ POWER. DO NOT CUT OR REMOVE THE GROUNDING PRONG FROM THIS PLUG. Do not route power cord in front of, or through this insert.

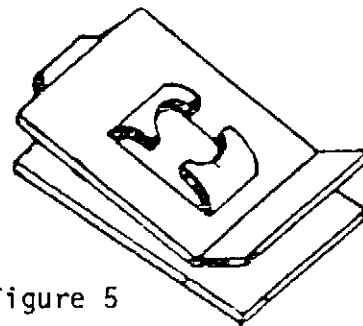


Figure 5

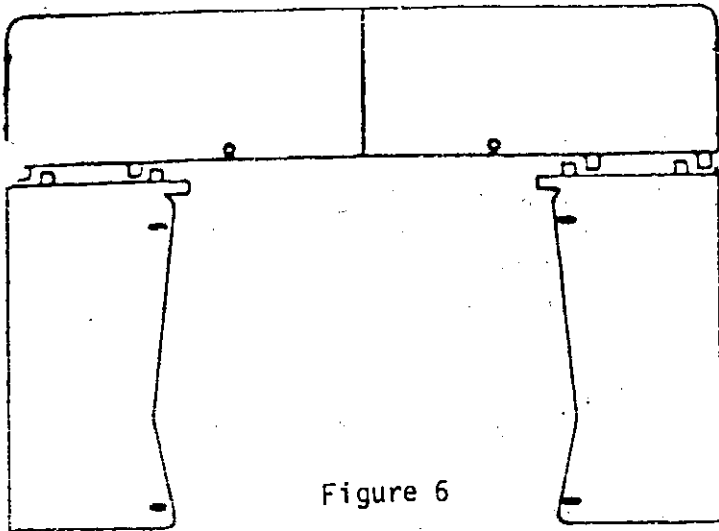


Figure 6

FUEL

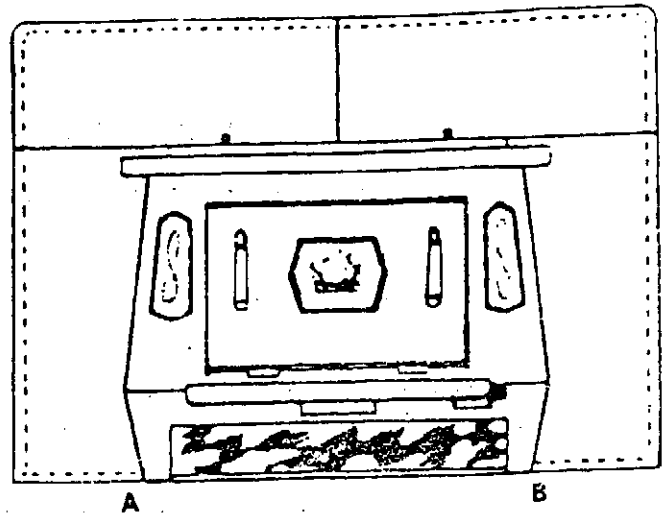


Figure 7

THIS FIREPLACE INSERT IS FOR USE WITH WOOD ONLY!

Do not burn trash, paper, pine branches or artificial fire logs. Such abuse may void the warranty.

When selecting wood for a catalytic insert, do not use extremely dry wood or small pieces. Dry or small pieces of fuel will release too many volatiles early in the burn and flood the catalyst, keeping it from reaching the clean burn stage. In extreme cases, the catalyst may not reach clean burn for up to three hours.

FLAMABLE LIQUIDS

Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this stove. Keep all such liquids well away from the stove while it is in use.

INSTALLING THE COMBUSTOR ASSEMBLY

1. If the secondary air pipe is in place, loosen the 1/4-20 x 3/4" bolt on the clamp and remove the pipe temporarily. Open the By-Pass door.
2. Hold the combustor assembly upside down with the insulating gasket toward the insert top.
3. Lift the combustor assembly up through the By-Pass door and set it in the combustor seat on top of the dome with the insulating gasket down. You can gain additional support for the combustor assembly by reaching up through the opening in the flame shield with your other hand.
4. When the combustor assembly is in place, install the secondary air pipe. Place the open end of the pipe in the clamp on the side of the insert. Position the pipe so that:
 - a. The pipe is tight against the flame shield below the combustor.
 - b. The air spreader on the pipe is level and centered in the opening of the flame shield.
5. Tighten the 1/4-20 x 3/4" bolt on the clamp.

REPLACING THE COMBUSTOR ASSEMBLY - FIREPLACE INSERT

The Blaze King Catalytic Thermometer on the top of the insert should read between 500 degrees and 1800 degrees F after the combustor has been in operation for several hours. (This does not mean the catalyst must reach 500 degrees F before it is operative. Some components of wood smoke will ignite at 150 degrees F.)

If the temperature does not exceed 1000 degrees F, even with a hot fire, over a 7-10 day period of regular use, contact your dealer. If the combustor must be replaced, follow this procedure:

1. The bolt holding the secondary air pipe in place will occasionally break while being removed. Before replacing the combustor have a 1/4-20 x 3/4" bolt and nut on hand.
2. Allow the insert to burn out and cool down.
3. Remove the secondary air pipe as follows:
Remove the 1/4-20 x 3/4" bolt on the pipe clamp, and remove the pipe. Open the By-Pass door.
4. Reach up through the By-Pass door opening and remove the combustor assembly. The insulating material will have expanded (as compared to the new assembly) but it should come out without leaving any residue.
5. Inspect the combustor seat to determine if any residue is present. Wipe clean with a dry cloth. DO NOT USE DETERGENTS, STEEL OR METALLIC BRUSHES, OR SOLVENTS.
6. Hold the combustor assembly upside down with the insulating gasket toward the insert top.
7. Lift the combustor assembly up through the By-Pass door, and forward, then set it in the combustor seat on top of the dome with the insulating gasket down. You can gain additional support for the combustor assembly by reaching up through the opening in the flame shield with your other hand.
8. When the combustor assembly is in place, re-install the secondary air pipe. Place the open end of the pipe in the clamp on the insert side. Position the pipe so that:
 - a. The pipe is tight against the flame shield below the combustor.
 - b. The air spreader on the pipe is level and centered in the opening.
9. Tighten the 1/4-20 x 3/4" bolt on the clamp.

NOTE: Any time the combustor is removed, the insulating material forming the seal between the combustor and the combustor seat MUST be replaced.

CREOSOTE - FORMATION AND NEED FOR REMOVAL

When wood is burned slowly, it produces tar and other organic vapors which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire.

PREVENT CREOSOTE FIRE: Inspect fireplace and chimney TWICE monthly and clean if necessary.

The basic design of this catalyst equipped insert will reduce creosote accumulation to a very low level. However, the frequency of start-up operations and the temperature at which the insert is operated on a regular basis can affect that accumulation. The inspection frequency noted above is still a vital step in the safe operation of any woodburning system.

ICE - FORMATION AND PREVENTION

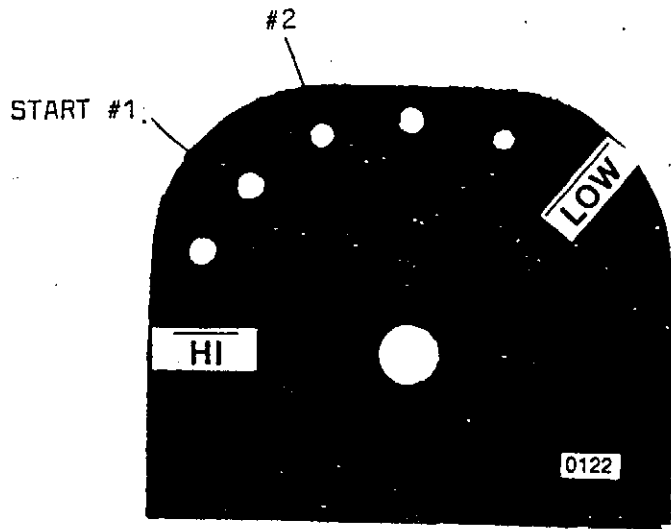
Most of what you see coming from the chimney of a properly operating catalytic insert is water vapor. In extremely cold weather - and with some exterior chimneys - this vapor may freeze in the chimney, to the point of actually blocking the chimney and extinguishing the fire. In such weather, occasionally burn the stove with the bypass open, to melt any possible ice buildup.

OPTIMUM THERMOSTAT SETTING FOR CATALYTIC MODELS (refer to Fig. 8)

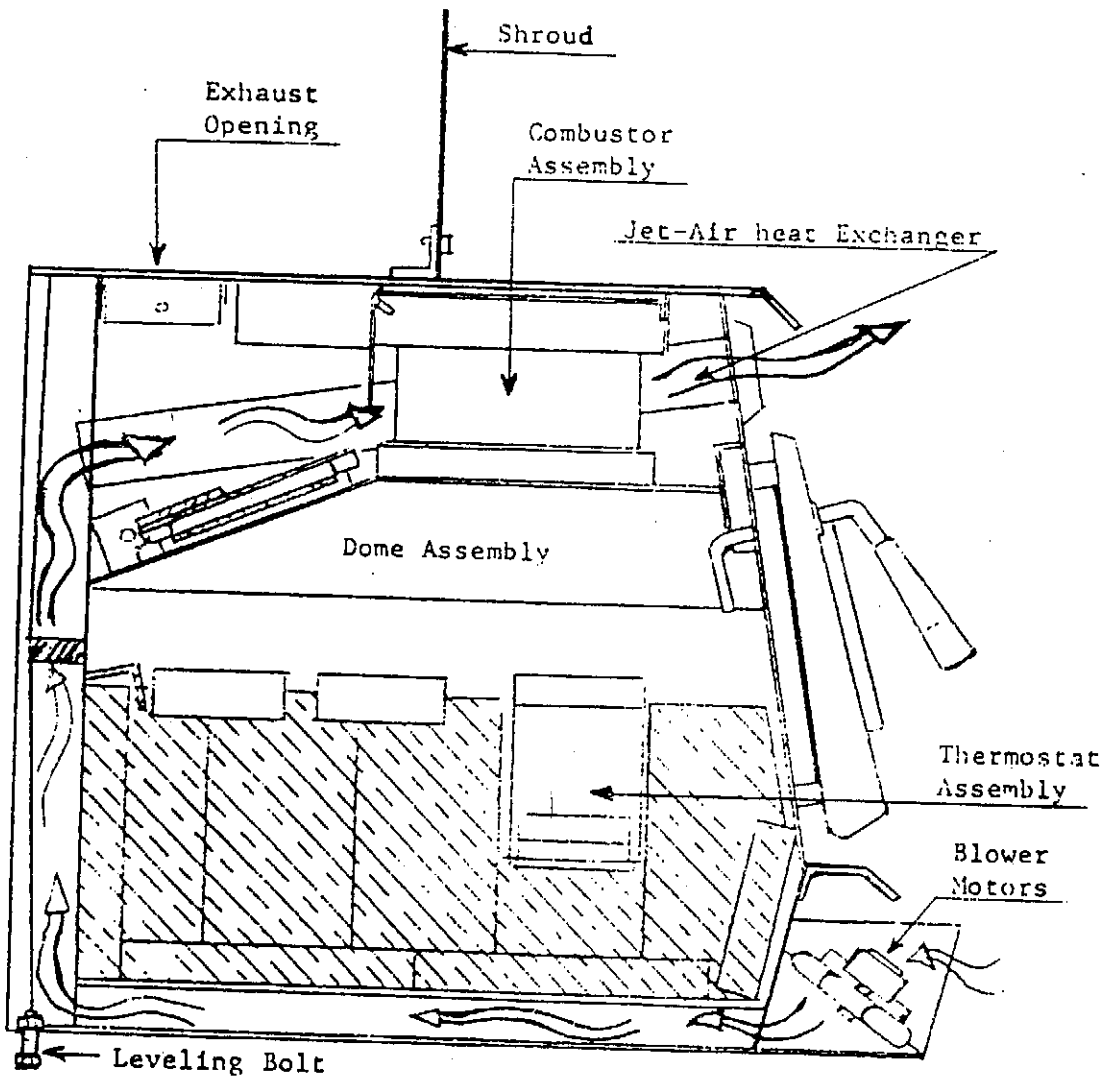
The optimum clean burning range is from "low" to Position #1. The Position #1 setting will produce a maximum heat output of approximately 50,000 BTU/HR - a rating more than suitable for heating the average size home.

1. Cold start position - set the thermostat knob to position #1. DO NOT exceed this setting for at least 45 minutes. This time factor allows the combustor and the insert to achieve a clean burning temperature.
2. Further adjustment to achieve the desired room temperature should be made in small increments (for instance; from position #1 to position #2) for the most effective cleaner burning operation. Even this small change may reduce the clean burn slightly for 10 - 15 minutes. Changes, generally speaking, should be made as few times each day as possible.
3. Reload Position - when you reload the insert you will reduce the clean burning characteristics for several minutes until the new wood gets a good start. After reloading, set the thermostat to Position #2 or lower for at least 45 minutes and possible as long as 1 hour.
4. After this delay the thermostat can be reset in small increments (as in note 2 above) as required to maintain the room temperature.
5. The thermostat is set at the factory and should not be tampered with. If the thermostat breaks, the damper will close automatically.

CLEAN BURNING RANGE



Thermostat Decal - Figure 8



Fireplace Insert Cutaway - Figure 9.

INITIAL START-UP SEQUENCE

NOTE: As you heat up the insert for the first time, the paint will go through a curing process and it will give off an odor. To minimize this inconvenience, burn the insert at a low temperature setting for several hours. If the odor gets too unpleasant, you may have to open a door or window slightly until the odor dissipates. It might even be a good idea to burn the first fire with the insert outside.

1. DO NOT USE GRATE. BUILD FIRE DIRECTLY ON THE HEARTH.
2. Set the thermostat to position #1. (Fig. 8)
3. Open the loading door and open the By-Pass door.
4. Place several balls of paper toward the back of the firebox and place a fairly large quantity of kindling on top of the paper.
5. Lay two or three medium size (approx. 3" square) pieces of wood on top of the kindling. Light the fire and allow it to get a good start - keep the door open but DO NOT LEAVE THE INSERT UNATTENDED.
6. When the fire has the larger pieces of wood burning readily, close the loading door. The By-Pass door will close automatically.

CAUTION: Closing the loading door too soon may cause a new fire to go out. Allow the kindling and most of the larger logs to get started before closing the loading door. DO NOT leave your Blaze King unattended when the doors are not tightly closed.

CAUTION: Leaving the loading doors open after the fire is well started may cause premature failure of the catalytic combustor.

7. Turn on the fan as desired.
8. When nearly all the wood in the firebox is burning, finish loading the insert. Proceed to "reload sequence", below.

NOTE: Probably the least understood requirement in maintaining a good fire is that of establishing a good base of coals. Many new woodstove users hesitate to load enough wood to sustain a fire. A good bed of coals will maintain a more even temperature as well as getting the new load of wood started easily.

RELOADING

CAUTION: This insert is not designed to be operated with the door open. Operate it only with the door closed.

At each reloading, load the insert fully, so it is not necessary to open the door often. Every time the door is opened, more creosote is deposited in the chimney.

Let each load burn down to a small coal bed. Frequent reloading will cause major fluctuations in temperature and wood/air mix, thereby reducing efficiency.

Four or five 5" or 6" diameter logs may burn for up to 24 hours. This will vary considerably with the variables of insert model, type of wood, whether the wood is "seasoned", the thermostat setting, the position of the stove in the house, and how well the house is insulated. The insert can be fully loaded without increasing the heat output. The insert will simply burn longer.

RELOADING SEQUENCE

1. To add fuel to the insert, rotate the loading door handles outward but do not open the loading door. This short release area will allow the automatic By-Pass door closing mechanism to release.
2. Open the By-Pass door, then open the loading door and load the firebox.
3. Close the loading door. The By-Pass door will close automatically.

NOTE: FOR BEST OPERATING PERFORMANCE, LOAD THE INSERT WITH THE LOGS PLACED SO THAT THE LOG ENDS ARE TOWARD THE SIDE OF THE INSERT.

CAUTION: After the fire has been allowed to liven up and the door closed, DO NOT open the door for at least 4 - 5 minutes. Hot gasses build up right after the door is closed and the addition of oxygen when the door opens will cause a rapid combustion, sending smoke into the room.

CAUTION: Always open the By-Pass door BEFORE opening the loading door completely to feed the fire. Keep the By-Pass door closed at all other times.

DOOR GASKETS

Check the loading door gasket for deterioration at least twice each heating season. The By-Pass door gasket should be checked for deterioration before the start of each heating season.

ASH REMOVAL

Ashes should be removed any time they start to cover the draft inlet into the firebox. The frequency with which you need to empty the ashes depends on the type of fuel being used. Remove ashes only when they are cold so the hot coals are not dumped where they may start a fire.

DISPOSAL OF ASHES

Ashes should be placed in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

PAINT

If the finish on the insert ever becomes blemished, you can repaint with high temperature paint available from your dealer. DO NOT paint the insert while it is HOT.

AUTHORIZED SERVICE REPRESENTATIVE

Your local Blaze King dealer is your authorized service representative. Should you have any problems with operations or maintenance of your Blaze King insert, contact him as soon as possible. He will assist you in resolving any operation problems, provide replacement parts, and/or arrange warranty repairs as required. He will need information such as model, serial number, date of purchase, and a summary of the problem. A list of some of the more common replacement parts is given in the following table.

REPLACEMENT PARTS

<u>ITEM</u>	<u>PART #</u>	<u>DESCRIPTION</u>
Thermostat Knob	0102	
Ceramics		
King	0114	Orange, Brown, Blue, Green, Black
Princess	0116	Orange, Brown, Blue, Green, Black
Door Handles	0118	
Spray Paint	0128	Aerosol Can
Rheostat (with nut)	0136 & 0139	
Rheostat Knob	0137	
Door Gasket	0180	
By-Pass Door Gasket	0182	
Combustor Seat Gasket	0341	Replacement Gasket
Blaze King Catalytic		
Thermometer	0342	
Fan Assembly	3700	
Combustor Assembly	4500 (King)	
Combustor Assembly	4400 (Princess)	

OPTIONAL PARTS

OVERSIZE SHROUD - 36" X 56" (FOR KING INSERT ONLY).....SEE YOUR BLAZE KING DEALER
 OVERSIZE SHROUD - 32" X 46" (FOR PRINCESS INSERT ONLY).SEE YOUR BLAZE KING DEALER

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FROM: WOODCUTTERS MFG., INC.
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