

OWNER'S INSTALLATION AND OPERATION INSTRUCTION BOOK

Blaze[®] King

WOOD STOVES

**BLAZE KING COAL STOVE, TOP VENT
KCJ-700**

MANUFACTURED UNDER LICENSEE AGREEMENT

**FROM: WOODCUTTERS MFG., INC.
Route 4, Box 218
Walla Walla, WA 99362**

BY:

OM-13

11/10/82
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BLAZE KING COAL STOVE
THE LATEST ADDITION TO THE BLAZE KING ROYAL FAMILY
INSTALLATION AND OPERATION INSTRUCTIONS

You are now the proud owner of a Blaze King coal stove—the finest, most beautiful coal stove ever introduced in America.

The Blaze King Coal Stove is the only clean-burning bituminous coal stove made in America today.

Unlike anthracite coal, which is mined only in two or three small areas of the U.S., bituminous is widely mined and available. This inexpensive fuel, burned in Blaze King's highly efficient coal stove, produces warm, clean and soft heat.

Though designed to burn bituminous coal, it will work equally well with anthracite, or wood chunks.

The stove hopper holds up to 80 pounds of coal. It is designed to burn "egg" size to "pea" size coal for a burn time up to 36 hours. The automatic thermostat controls the stove burn rate.

The Blaze King coal stove is clean and efficient. You'll be happy you own one.

It is the desire of Woodcutters Mfg., Inc. that your stove give you a lifetime of trouble-free operation. We suggest that before starting installation, you read these installation and operation instructions.

WARRANTY

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

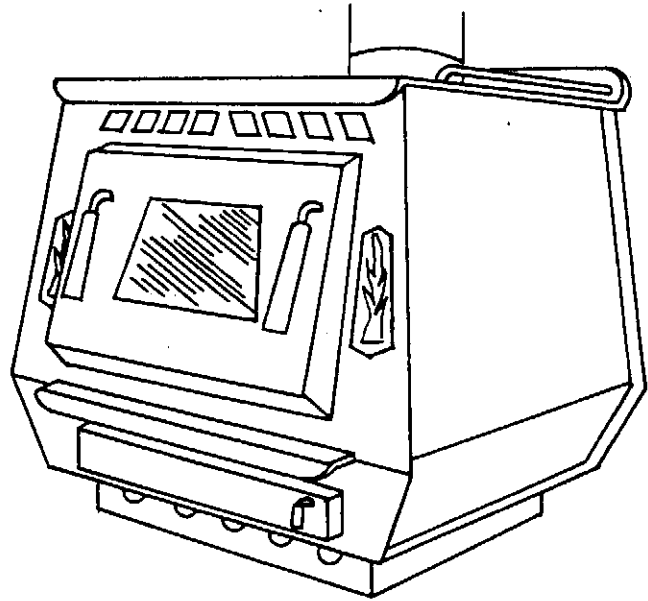


Figure 1.

DIMENSIONS

Model	Width	Depth	Height	Weight (lbs.)
Blaze King KCJ-700	30"	34"	33"	420

PRODUCT INSPECTION

First, remove all packaged parts from your stove and inspect them. Make sure that the stove 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. Stove with firebrick and refractory installed.
2. Doors with gasket material installed.
3. Wood handles.
4. Blower motor and screws.
5. Thermostat knob.
6. Ash Pan.
7. Gasket In By-Pass door.
8. Ceramics (figure 2)

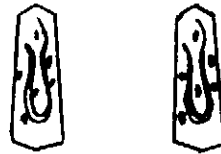


Figure 2.

IMPORTANT

Improper installation of your Blaze King coal stove, 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 coal stove.

SOME CAUTIONS

1. Stove must be vented **ONLY** to the outside, not to other rooms or buildings.
2. **NEVER** use a chimney or chimney connector smaller than the 8" stove exhaust.
3. **NEVER** vent your coal burning stove into a 'Class B' gas vent chimney.
Check with local authorities to make sure that you are not doing so inadvertently if you are using an existing chimney.
4. **DO NOT CONNECT THIS UNIT TO A CHIMNEY SERVING ANOTHER APPLIANCE.**

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

Underwriters Laboratories, Inc. has listed this appliance only to be connected to a suitable masonry chimney or an 8", listed, low heat, prefabricated, metal chimney system and minimum clearances to combustibles are observed. See CHIMNEYS and CHIMNEY CONNECTORS.

When deciding exactly where to position your stove, consider that you will want to place the stove as near as practicable to the center of the lowest level of your home for maximum heat efficiency. Hot air rises, so a layer of warm air will form along the ceiling of the lowest level, and spread outward and upward to other areas of the house. Even if your home is entirely on one level, consider placing your stove in an area that will allow natural circulation of air throughout your home to spread the warmth most effectively.

Moreover, the actual placement of your stove must take into careful consideration, factors in the areas through which the pipe venting will occur, including the presence of the electrical wiring, plumbing, ceiling joists, rafters, and the position of suitably strong floor joists, as well as the pattern of foot traffic through the room.

WARNING: DO NOT cut ceiling or roof joists without maintaining the structural support of the dwelling.
DO check floor joists for proper support of the stove.

RADIANT AND CONVECTIVE HEAT

These coal burning stoves use radiant heat—the heat that radiates from a warm object in all directions (like light from a bulb) and strikes objects in its path, warming them. Like light, when radiant heat is stopped by an object, it will go no further. A "shadow" of cold then develops behind objects that have stopped the radiant heat. With the patented Jet-Air design, Blaze King coal stoves have added convective heat to the radiant heat already present.

It is important to remember that in order for your Blaze King coal stove to make the most efficient use of both its radiant heating and/or convective capabilities, furniture must be kept well away from your stove. Ra-

diant heat from the stove will strike nearby objects and go no further, creating a "hot spot" in your room, wherein the objects themselves and not the room are warmed. Moreover, the close proximity of furniture and other such combustible objects to your stove may constitute a fire hazard.

Air moves upward when it is warmed and downward when cooled. This air movement helps to spread warmth through the home. In the Blaze King coal stove, cool air is drawn from near floor level, warmed as it passes through the heat exchanger manifolds inside the firebox, and passes through the top heat exchanger into the room. This convection heating distributes the heat to all areas more efficiently.

PLACEMENT: See Fig. 4 & 5.

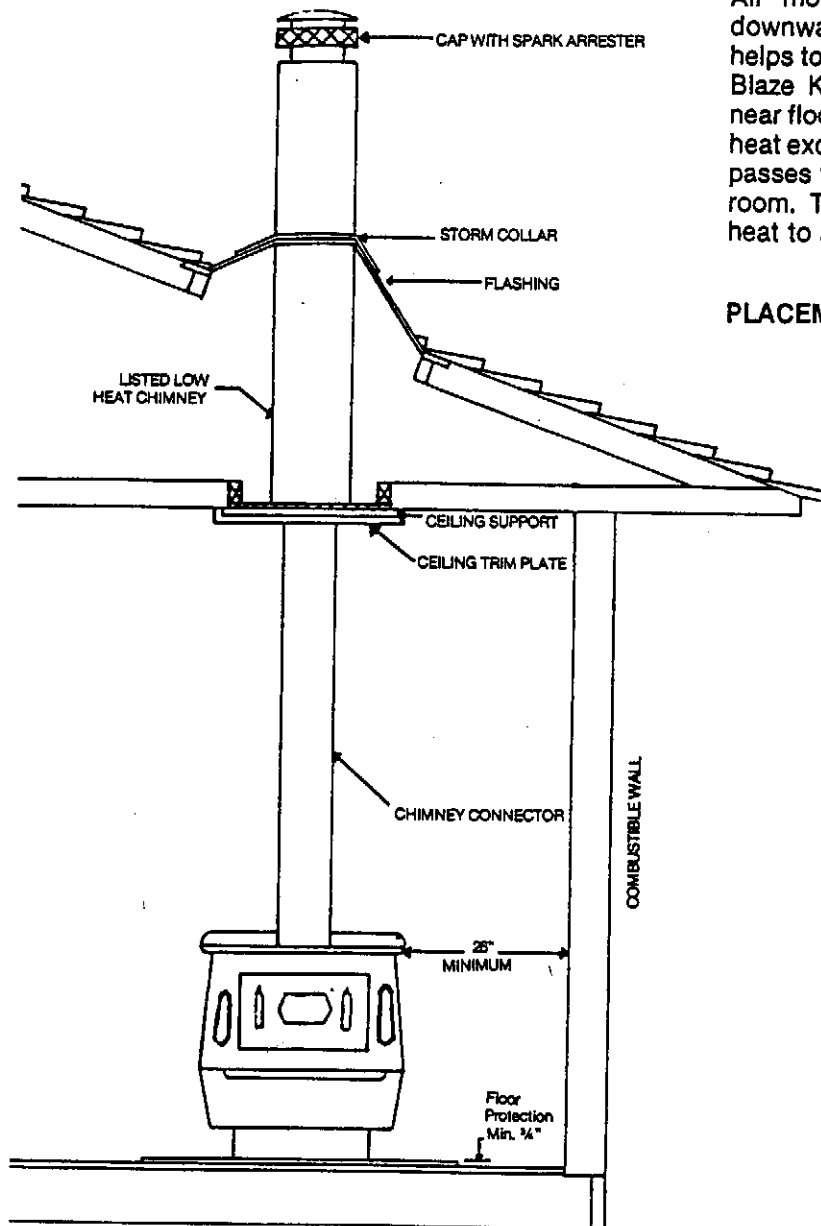


Figure 4

FLOOR PROTECTION

Floor Protection Material: 3/4" millboard or 2 layers of U. L. listed floor protector or a non-combustible material equal to 3/4" thick millboard having a thermal conductivity of K = 0.84 BTU in/ft. hr °F.

- The floor protector must extend beyond the base: 8" from each side
- 21" from the front
- 12" from the back

These dimensions provide the required clearances from the door opening.

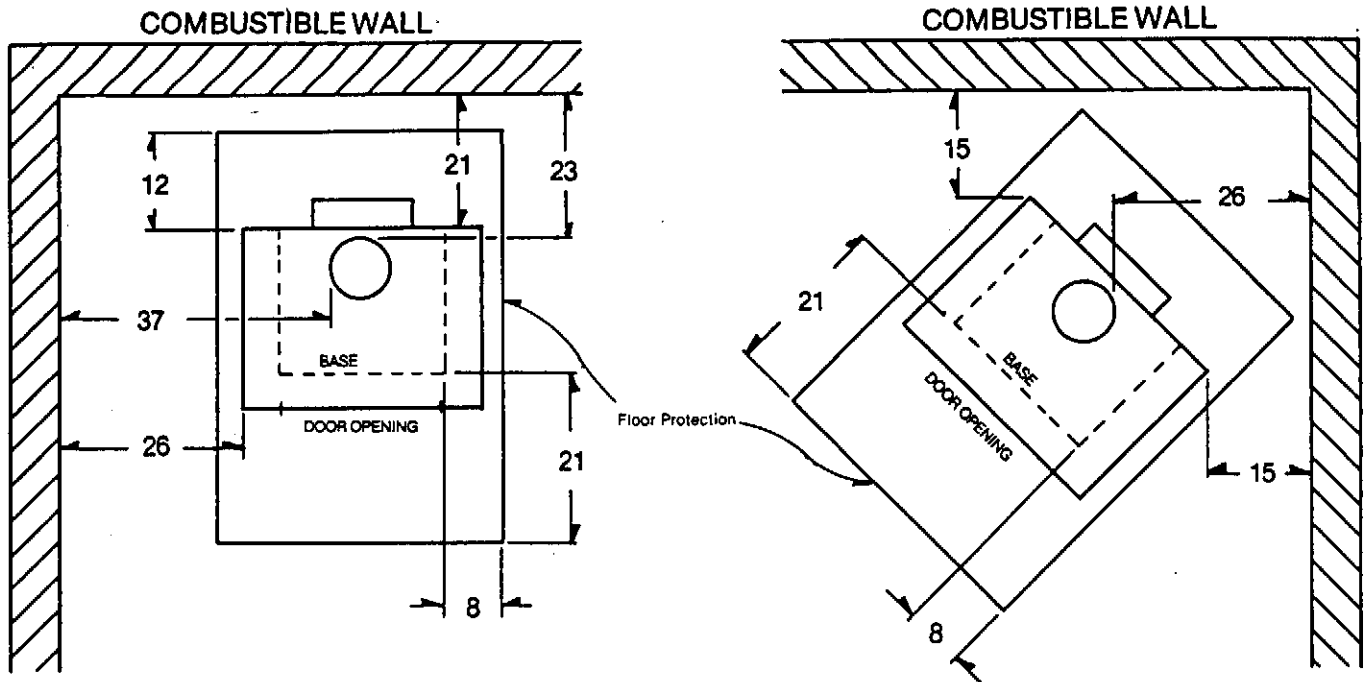


Figure 5

CHIMNEYS

There are two major types of stove pipes, insulated and not insulated. Insulated stove pipe and air cooled stove pipe are listed as CLASS A and are actually pre-fabricated chimney.

Freestanding coal stoves can only be vented into existing chimneys or into a listed, 8", low heat, pre-fabricated, metal chimney system (listed by Underwriters Laboratories, Inc. or other approved laboratory) installed through the ceiling. Horizontal installations are not allowed. Before installation of any coal burning unit to an existing chimney, take care that the chimney is sound. There should be no cracks or holes. Relining or rebuilding may be necessary to make the chimney safe and efficient and bring it into conformity with local codes. **UNDER NO CONDITIONS MAY MORE THAN ONE APPLIANCE BE CONNECTED TO A CHIMNEY.** A proper chimney is most important for safe, satisfactory operation of any coal heating system.

Generally, the taller the chimney, the stronger more dependable the draft. The chimney should be kept warm to enhance the draft. When burning wood this will also protect against creosote accumulation caused by condensation of water vapor and smoke. A build-up of creosote can reduce the draft and will become a potential fire hazard. Soot, a similar point for concern when burning coal, should also be considered. See **SOOT AND CREOSOTE.**

A Chimney should extend at least three feet above a flat roof, or at least two feet above any part of the roof within 10 feet. Chimney tops should **NEVER** be near trees or other tall objects that might cause down-drafts.

CHIMNEY/CONNECTORS

CLASS A chimney is not normally required as a chimney connector for these models. Generally speaking, heavy duty, single wall, pipe (not less than 24 gauge) is used to connect the stove to a masonry or CLASS A factory built, pre-fabricated chimney.

Insulated and not insulated pipe is available from numerous manufacturers. Consult local building codes and fire codes to determine which types of pipe may be safely installed. Ask your local dealer about the availability of types of pipe which meet local codes.

The stove collar accepts only 8" pipe. The small end of the pipe fits into the collar to enable any distillates which may form in the chimney to fall back into the stove.

The chimney connector can also be used horizontally as a connection between the stove and masonry chimneys or CLASS A chimneys, provided that the length does not exceed three (3) feet AND THE PIPE SLOPES UPWARD TOWARD THE CHIMNEY AT A RATE OF 1/4" PER FOOT. This slope in the horizontal connection is required to facilitate the drainage of creosote deposits back into the stove.

Attach the chimney connector to the stove collar with two screws.

OUTSIDE AIR SUPPLY

For proper installation, it is not mandatory that outside air for combustion be used. However, if local codes require it, an Outside Air Kit is available from your local dealer. See Figure 6.

The outside air hose is a flexible tube which can be bent to take outside air in through the floor. The flexible tube will allow some adjustment over or around floor joists or plumbing. DO NOT CHANGE THE STRUCTURAL INTEGRITY OF THE FLOOR. This air hose must be kept open at all times to provide outside air for combustion.

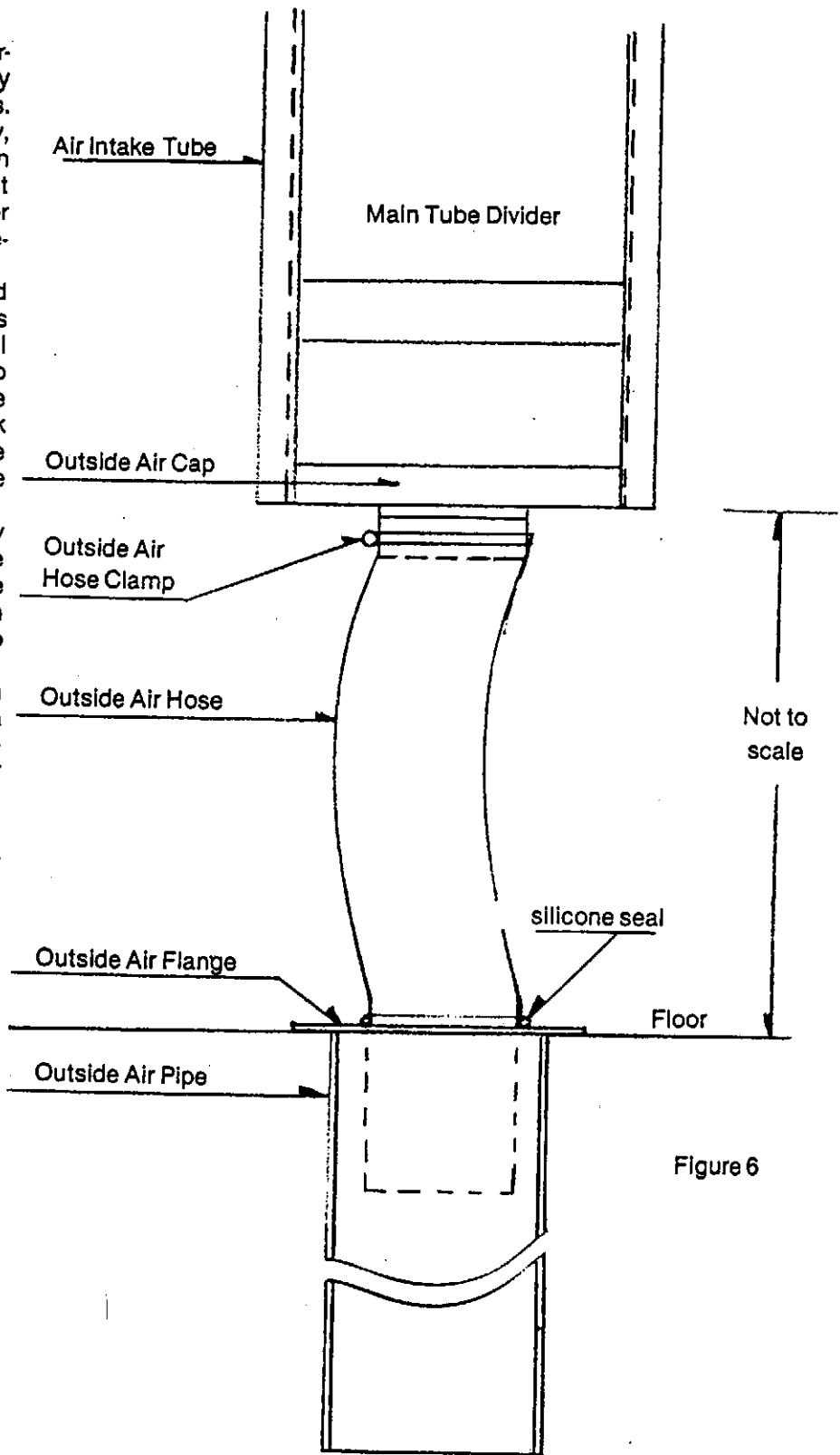
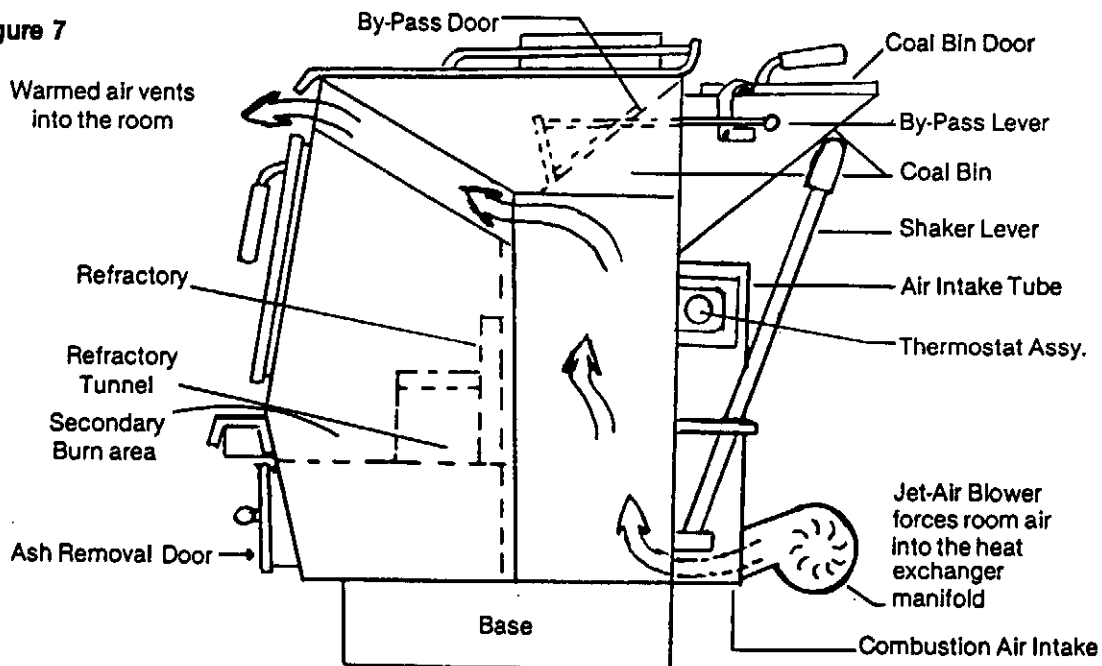


Figure 6

INSTALLATION

1. Set hearth and stove in location for marking holes in accordance with the dimensions listed in Figures 4 and 5 of these instructions.
2. Mark the position for the hole in the ceiling and roof by using a string and plumb-bob.
3. Check that the intended location will not interfere with floor joists, ceiling joists, or rafters before proceeding further.
4. (If required), mark the positions of the hole for the outside air pipe.
5. (If required), move the stove and, using a saber saw with a masonry blade, cut a 6" diameter hole for the outside air pipe.
6. Cut a pilot hole in the ceiling.
7. Cut a 14½" square hole and frame in both sides of this hole in both ceiling and roof. (FOR SAFE INSTALLATION, THIS HOLE MUST NOT BE SMALLER THAN 14½".)
8. Slide the stove back into position.
9. To start installing pipe, turn the first section of pipe upside down and slip the small end of the pipe inside the stove flue. Follow manufacturers installation instructions.
10. Install the remaining lengths of pipe one on top of the other to the finished height of the chimney connector, and secure to each other. When approaching the ceiling, slip the ceiling trim plate over the chimney so that after the chimney is extended through the ceiling, the ceiling trim plate can be secured to the ceiling.
11. Slip the roof flashing down over the chimney and nail to the roof being careful to keep the pipe centered in the opening. NOTE: To meet the code, the chimney must extend above the roof at least three feet and two feet above any area of the roof within ten feet of the chimney.
12. (If required) attach the Outside Air Cap to the bottom of the Air Intake Tube with two screws. Install the Outside Air Pipe and Flange pipe down through the hole cut in Step 5. Push the Outside Air Hose about halfway into the Outside Air Flange. Place the Outside Air Hose Clamp over the top end of the Outside Air Hose and install the hose to the ring on the Outside Air Cap. Tighten the Outside Air Hose Clamp near the base of the ring. Seal the Outside Air Hose to the Outside Air Flange with a high temperature silicone caulk. (see Fig. 6)
13. Install the side ceramics by holding each carefully in place within the raised outline. Gently fold the tabs on the stove face around the ceramic tiles. REMEMBER, these ceramics are a clay product and must be handled carefully. THEY ARE FRAGILE.
14. On Jet-Air models, attach the blower motor. This motor is attached to the blower intake on the rear of the stove with four self-tapping screws. It is equipped with a three prong (grounded) plug to prevent shock hazard. THIS PLUG SHOULD BE INSERTED DIRECTLY INTO A PROPERLY GROUNDED, THREE PRONGED RECEPTACLE. DO NOT CUT OR REMOVE THE GROUNDING PRONG FROM THIS PLUG.

Figure 7



FUEL

THIS STOVE IS FOR USE WITH BITUMINOUS COAL, ANTHRACITE COAL AND WOOD.

Blaze King coal stoves are designed to burn coal from "pea" size to "egg" size coal. Small particle coal such as "stoker coal" is not recommended as it will not allow enough air to enter the coal bin of the stove for proper combustion.

When using wood, you should keep in mind that the small volume of the coal bin will reduce the size of the wood load and consequently, the burn time.

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

FUEL STORAGE

Coal should be stored outside in a covered area. Complete isolation from the elements is not essential as coal will not absorb moisture to any great extent. Wood should be cut and stacked outside where it can 'season' for several months prior to use.

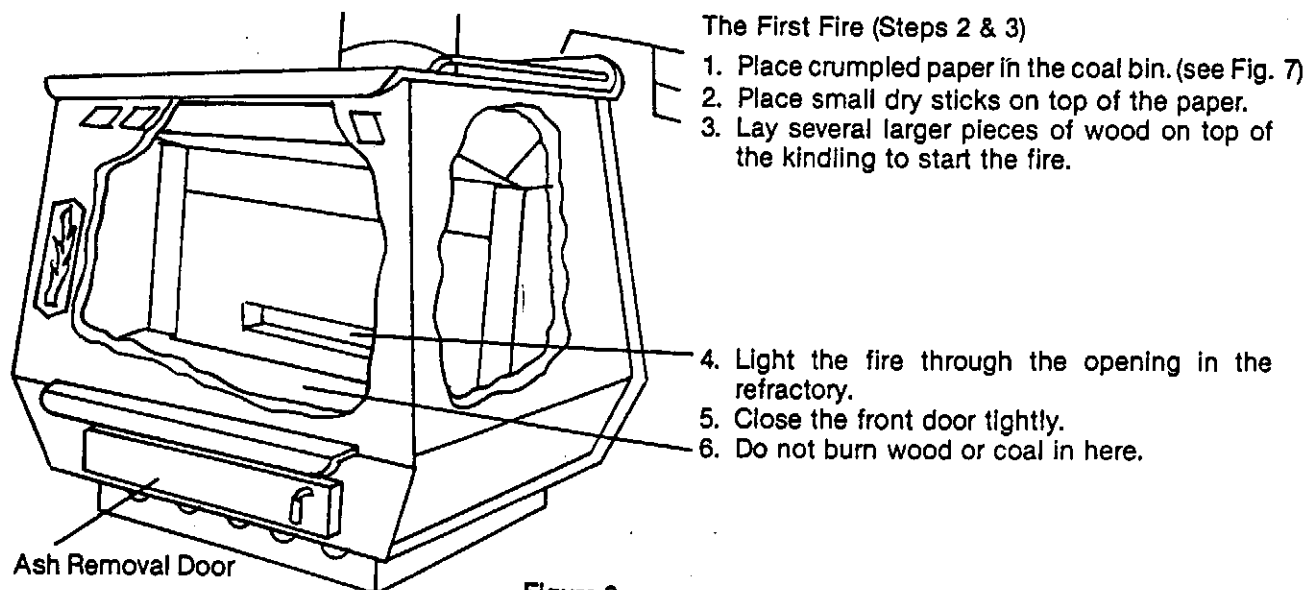
Fuel placed near the stove for daily use should be kept well away from the heater while it is in use.

FLAMMABLE 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.

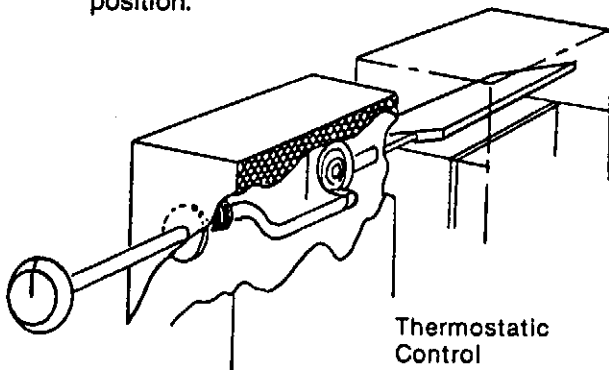
THE FIRST FIRE

1. Set the thermostat to HIGH (fully counterclockwise).
2. Place two or three large balls of crumpled paper in the bottom of the coal bin. Lay some small dry sticks or wood chips on top of the paper as kindling. Use enough to establish a good firebase. Lay several large pieces of wood on top of the kindling. Close the coal bin door with the latch in the closed position, allowing the door to remain open about 1". The By-Pass door will remain open.
3. Open the front door and light the paper. Close the door and allow the fire to get a good start. When all the wood in the bin is burning, open the coal bin door and load the bin with wood, close the coal bin door and move the By-Pass lever to the back (closed) position.
4. Set the thermostat to LOW (fully clockwise).
5. Allow the fire to burn at this setting for 4-8 hours to warm the refractory and cast iron parts before proceeding further.
6. Steps 1-5 are required the FIRST time the stove is operated ONLY. This operation allows the refractory and castings to 'cure' thoroughly before regular use.
7. As you heat up the stove 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 stove 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.



SUBSEQUENT OPERATION

1. After the stove has been started and allowed to warm sufficiently (see "The First Fire"), open the By-Pass door by moving the lever toward the front of the stove. Open the coal bin door and add 5 or 6 pieces of 4-5" diameter coal. Close the coal bin door with the latch in the closed position, allowing the door to remain open about 1". The By-Pass lever will not be "tripped" and the By-Pass door will remain open.
2. In about 20 minutes, this coal should be burning readily. Open the coal bin door and add several more pieces of coal. Close the bin door with the latch in the closed position as in Step 1.
3. Repeat Step 2, above, until the bed of coals is above the opening in the refractory when viewed through the glass window in the door. Until this base of coals is established, filling the coal bin could smother the fire. When that level has been established, the bin can be filled to the level desired. Now close the coal bin door tightly and allow the By-Pass door to close normally.
4. This stove may show some smoke for up to 60 minutes as the internal temperatures build up. The stove will burn very clean after that time. Note that a clean burn will require some fire in the secondary burn area between the door and the refractory. This is easily viewed through the glass window in the door.
5. The coal in the bin should not be allowed to burn low enough to be viewed through the refractory opening. This will destroy the clean burning operation. The refractory opening can be seen through the glass window in the door.
6. After the bin has been filled with coal and the stove allowed to burn for 2-3 hours, stoke the coal in the coal bin. Experience has shown that large lump coal (for instance) has a tendency to burn away in the lower part of the bin leaving the larger lumps wedged together at the top. This void prevents the stove from burning at a consistent rate, and the fire may, in fact, go out.
7. Ash should not be allowed to build up to the level of the opening of the refractory. This will reduce combustion air flow and the fire will begin to cool down. When this occurs, shake the grates with the handle on the back of the stove.
8. Ash in the ash pan should not be allowed to build up to the bottom of the grates. Such build-up blocks combustion air flow into the bin and could allow the grates to exceed a safe operating temperature.
9. Probably the least understood requirement in maintaining a good fire is that of establishing a good base of coals. Many new stove users hesitate to load enough coal/wood to sustain a fire. A good bed of hot coals will maintain a more even temperature as well as getting the new load of coal/wood started easily.
10. When you add fuel to the stove, open the By-Pass lever by pushing it toward the front of the stove. Open the coal bin door and fill the bin with coal. Close the door. Return the By-Pass lever to its closed position.



11. Under normal operations, the thermostat should be set on LOW (clockwise), and at this setting the stove is capable of heating an average size home. The setting may be increased as required to achieve the desired room temperature. The thermostat is set at the factory and should not be tampered with. If the thermostat breaks, the damper will close automatically.
12. You may notice that the arrow indicating the damper position is in the OPEN position when the stove is cold and the thermostat is set on LOW. This is normal. (It will close down automatically after the fire is started.)

DOOR GASKETS

Check front door and coal bin door gaskets at least twice each heating season for deterioration. Check By-Pass door gasket before each heating season.

GLASS DOOR

To install the door with the glass window, set the hinge rods in the hinges with the door in the vertical position. Open or close as desired.

The basic design of the door will keep the glass from becoming clouded rapidly. However, after some amount of use, the glass will have to be cleaned. After the door has been removed and allowed to cool, it can be cleaned with soap and water or non-abrasive cleanser.

If the glass becomes broken, your Blaze King dealer can provide a replacement. After the door has been removed and allowed to cool, remove the screws and the retaining strips on the inside of the door. Retain these parts. Remove the broken glass. Install the braided gasket to the top and both sides of the glass, fold the gasket so that it adheres to both sides of the glass. Insert the lower edge into the bottom channel. Attach the top retainer with the screws previously removed. Attach the right and left glass retainers as above.

PAINT

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

ASH REMOVAL

Shake the grate any time the fire begins to cool down significantly. Shake the grate only enough to remove the ash. Do not shake large quantities of hot coals into the ash removal box. Ashes should be removed any time they start to build up close to the grate or begin to cover the draft inlet into firebox; but not less than once each week. 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.

SOOT/CREOSOTE—FORMATION AND NEED FOR REMOVAL

Soot - When coal is burned, the products of combustion combine with moisture to form a soot residue which accumulates on the flue lining. When ignited, this soot makes an extremely hot fire.

The chimney connector and chimney should be inspected at least once every two months during the heating season to determine if a soot build-up has occurred.

If soot has accumulated, it should be removed to reduce the risk of a chimney fire.

Creosote—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.

The chimney connector and chimney should be inspected at least once every two months during the heating season to determine if a creosote build-up has occurred.

If creosote has accumulated, it should be removed to reduce the risk of a chimney fire.

LUBRICATION

Lubricate the fan motor bearings of Jet-Air models every 6 months with 10 to 20 drops of SAE 10W or 20W non-detergent oil (ML type) or with electric motor oil.

CAUTION: DO NOT over-lubricate. The excess oil may damage the windings or electrical wiring on the motor.

FURTHER INFORMATION

For further information on using your heater, obtain a copy of the National Fire Protection Association publication, "Using Coal and Woodstoves Safely" NFPA #HS-10. The address is:

National Fire Protection Association
Batterymarch Park
Quincy, MA 02269

AUTHORIZED SERVICE REPRESENTATIVE

Your local Blaze King dealer is your authorized service representative. Should you have any problems with operation or maintenance of your Blaze King stove, 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 below.

REPLACEMENT PARTS

Item	Part #	Description
Ceramics		
Blaze King	0314	orange, brown, blue, green, black
Door Handles	0118	
Ash Door Handle	0119	
Motor	0112	
Spray Paint	0128	Aerosol Can
Thermostat Knob	0102	
Outside Air Kit	0150	
Door Gasket	0180	
By-Pass Door Gasket	0182	
Ash Bin Door Gasket	0182	
Coal Bin Door Gasket	0182	
Door Glass	0257	
Glass Gasket	0254	

BLAZE KING COAL STOVE TROUBLESHOOTING GUIDE

SYMPTOM: The stove smokes too much.

1. Less than 60 mins. has elapsed since the coal bin was loaded. If the coal in the bin has been allowed to burn down to below the opening in the refractory, the base of coal should be built up gradually to cover that opening before loading the coal bin completely. See "The First Fire".
2. Stoke the coal bin to ensure that larger pieces of coal have not become wedged together forming a void between the bed of coals and the fresh coal at the top of the bin. See "The First Fire".
3. Ash has been allowed to block the secondary air intake opening in the front of the firebox. Open this air passage by carefully moving the ash. Do NOT damage the secondary air intake damper assembly. Clean this area thoroughly when the stove is cold.
4. Check the coal bin loading door gasket. Replace if damaged. (See Notes 1 and 2)
5. Operate the By-Pass Door quite vigorously two or three times using the By-Pass lever. This will loosen any carbon build-up which may have occurred. This is a good preventative maintenance technique as well.
6. Check the By-Pass Door gasket. This will require that the stove be out and cold. Remove the pipe from the flue collar. The By-Pass Door is visible through the flue collar. Open the door with the By-Pass lever and inspect the gasket. Replace if damaged. Re-position the pipe in the flue collar and start the fire as described in "Subsequent Operation." (See Note 1)

SYMPTOM: The stove will not burn hot enough.

1. Check thermostat setting.
2. Check that the thermostat will operate through its full range. The damper position indicator between the thermostat and the main air intake tube should move approximately 90° without restriction. If thermostat or damper operation is suspected, contact your dealer.
3. Remove ashes. A high level of ashes in the ash pan could restrict combustion air to the grates. Ashes should not be allowed to reach the bottom of the grates. To do so could cause excessively high temperatures in the castings and damage them.
4. Ash build-up above the castings may also be reducing combustion air flow. Shake the grates, with the lever on the back of the stove, until live coals start to fall through the grates. DO NOT shake the grates further. See "Ash Removal."

SYMPTOM: The stove burns too hot.

1. Check thermostat setting.
2. Check that the thermostat will operate through its full range. The damper position indicator between the thermostat and the main air intake tube should move approximately 90° without restriction. If thermostat or damper operation is suspected, contact your dealer.
3. Check the coal bin loading door gasket. Replace if damaged. (See Notes 1 and 2)
4. Operate the By-Pass Door quite vigorously two or three times using the By-Pass lever. This will loosen any carbon build-up which may have occurred. This is a good preventative maintenance technique as well.
5. Check the By-Pass Door gasket. This will require that the stove be out and cold. Remove the pipe from the flue collar. The By-Pass Door lever is visible through the flue collar. Open the door with the By-Pass lever and inspect the gasket. Replace if damaged. Re-position the pipe in the flue collar and start the fire as described in "Subsequent Operation." (See Note 1)

NOTE 1: Door Gaskets should not be high failure rate items, but should be checked at regular intervals.

NOTE 2: Failure of the coal bin door gasket will allow air to enter the top of the coal bin. This will, typically cause the coal to burn higher up in the bin. This higher burn area creates a higher and less controllable heat, and if allowed to continue could cause structural failure in the stove.

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