

**OWNER'S
INSTALLATION AND OPERATION INSTRUCTIONS**

**Blaze[®]
King**

WOODSTOVES

**BLAZE KING CATALYST STOVE
King Model KEJ 1102**

**BLAZE KING CATALYST STOVE
Princess Model PEJ 1003**

OM-09C

**8-26-90
LTC**

SAVE THESE INSTRUCTIONS

ROOM HEATER, SOLID FUEL TYPE,
Also for use in MOBILE HOMES

0217EE

BLAZE KING CATALYST STOVE



Model ☐ KEJ 1102 ☐ PEJ 1003

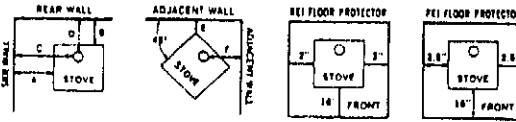
NER-QA 219 TL-116 Tested to: UL 1482 (9/88)

WH-

- **PREVENT HOUSE FIRES.** Install and use only in accordance with Blaze King's installation and operation instructions. Contact local building or fire officials about restrictions and installation inspection in your area.
- **CHIMNEYS.** DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE. Except for installations detailed below, use 8" 23-26 gauge black/blue steel chimney connector with any listed 8" prefabricated chimney system, or a masonry residential type chimney.
- Mobile Home, residential close clearance, and residential alcove installations require 8" listed double wall close clearance chimney connector, with matching prefabricated HT chimney system from one of these: Dura-vent Dura-Plus HT; Ameri-Tec HS; Metalbestos HT; Security 103 HT (in Canada, model S629M).
- Mobile Home installations are only allowed with a roof exit. Do not install in a sleeping room.
- Alcove minimum width 47", minimum height 78", maximum depth 48".
- Penetration through a wall or ceiling requires special methods; see instructions and local building codes.
- Electrical rating: 115 VAC, 60 Hz, 0.98 amps. Risk of electrical shock. Disconnect power before servicing unit. Do not route power cord in front of or beneath heater.

MINIMUM CLEARANCES TO
COMBUSTIBLE MATERIALS,
IN INCHES

(See Owners Manual for complete
description of all requirements)



	KEJ 1102						PEJ 1003					
	A	B	C	D	E	F	A	B	C	D	E	F
RESIDENTIAL INSTALLATIONS												
Roof exit, parallel and corner	16	9	27	16.5	14	25	16	9	25.5	16	14	25
Roof exit, reduced side	10	9	23	16.5	--	--	10	9	19.5	16	--	--
Required: side shields												
Roof exit, reduced corner	--	--	--	--	6	17	--	--	--	--	6	17
Required: side shields, and either fan kit or rear shield												
Roof exit, close clearance	10	6	21	13.5	--	--	10	6	19.5	13	--	--
Required: side shields, and either fan kit or rear shield												
Roof exit, parallel and corner	16	11	27	18.5	14	25	16	11	25.5	18	14	25
Roof exit, reduced side	10	11	23	18.5	--	--	10	11	19.5	18	--	--
Required: side shields												
Roof exit, reduced corner	--	--	--	--	7	18	--	--	--	--	7	18
Required: side shields, and either fan kit or rear shield												
Alcove, roof exit	9	6	20	13.5	--	--	10	6	19.5	13	--	--
Required: side shields, and either fan kit or rear shield												
MOBILE HOME INSTALLATION												
Roof exit, parallel and corner	10	6	21	13.5	6	17	10	6	19.5	13	6	17
Required: side shields, either fan kit or rear shield												
and outside air kit												
Roof exit, reduced side												
Required: side shields, and either fan kit or rear shield												
and outside air kit												

U.S. ENVIRONMENTAL PROTECTION AGENCY

Certified to comply with July, 1990
particulate emissions standards.

This wood heater contains a catalytic combustor, which needs periodic inspection and replacement for proper operation. Consult owner's manual for further information. It is against the law to operate this wood heater in a manner inconsistent with operating instructions in the owner's manual, or if the catalytic element is deactivated or removed.

Fig. 1. Safety Label

Manufactured by BLAZE KING

400 W. Whitman Drive, College Place, WA 99324 (509) 522-2730

DO NOT REMOVE OR COVER THIS LABEL

Made in U.S.A.

Manufacturer Date
☐ 1990 ☐ 1991 ☐ 1992 ☐ 1993 ☐ 1994 ☐ 1995 ☐ JAN ☐ FEB ☐ MARCH
☐ APRIL ☐ MAY ☐ JUNE ☐ JULY ☐ AUG ☐ SEPT ☐ OCT ☐ NOV ☐ DEC

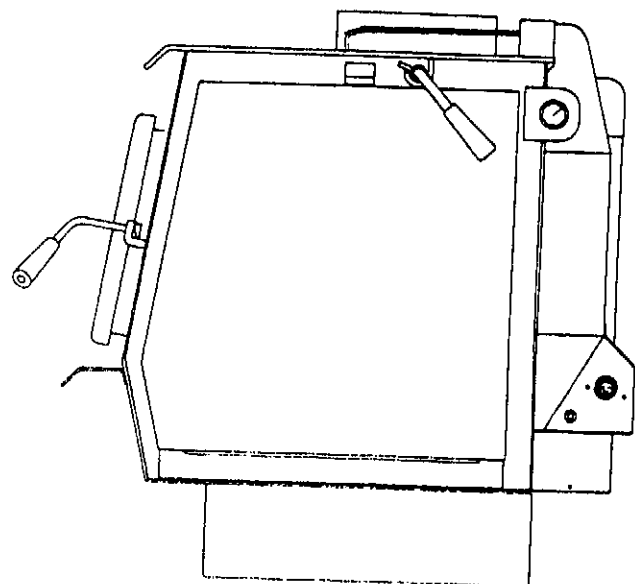
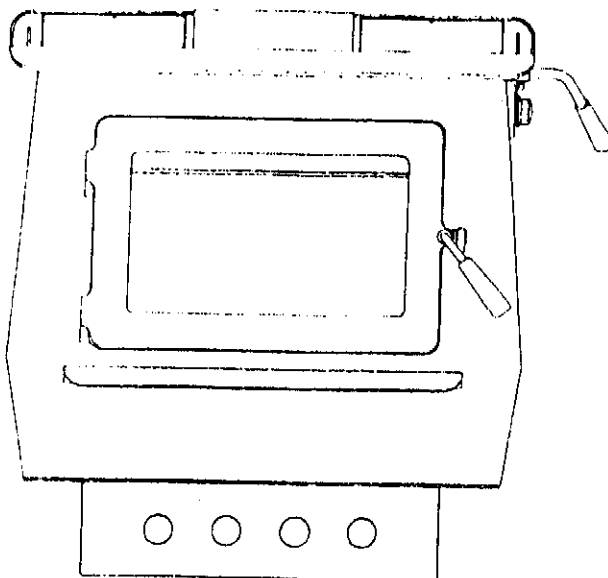


Fig. 2, Front and Side Views

BLAZE KING WOOD STOVES

Blaze King Catalyst stove, KING Model KEJ-1102
Blaze King Catalyst stove, PRINCESS model PEJ-1003

SAFETY NOTICE

IF THIS BLAZE KING STOVE IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT. TO REDUCE THE RISK OF FIRE, FOLLOW THE INSTALLATION INSTRUCTIONS. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA.

THIS STOVE MUST BE CONNECTED TO EITHER:

- 1) A LISTED RESIDENTIAL TYPE AND BUILDING HEATING APPLIANCE CHIMNEY OR
- 2) A LISTED HIGH TEMPERATURE RESIDENTIAL TYPE AND BUILDING HEATING APPLIANCE CHIMNEY, OR
- 3) A CODE-APPROVED MASONRY CHIMNEY WITH FLUE LINER.

PLEASE READ THIS ENTIRE MANUAL BEFORE YOU INSTALL AND USE YOUR NEW ROOM HEATER. FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY, OR EVEN DEATH.

This unit certified by the
United States Environmental Protection Agency.
Certified to comply with July, 1990 particulate emissions
standards.

The following statement is required
by the Environmental Protection Agency:
"This wood heater contains a catalytic combustor, which needs
periodic inspection and replacement for proper operation. It is
against the law to operate this wood heater in a manner
inconsistent with operating instructions in this manual, or if
the catalytic element is deactivated or removed."
See page 63 for Catalytic Combustor, Testing and Replacement.

SAVE THESE INSTRUCTIONS

Dear Customer:

Thank you for purchasing the Blaze King, King or Princess catalytic woodburning stove (hereafter referred to as "stove").

This owner's manual explains the steps required to safely assemble, install, operate, and maintain your new stove. Be a responsible stove owner; carefully read these requirements for safe installation and proper operation BEFORE installing and using your stove.

Obtain permits from the Building Inspector or Fire Department, if local laws require. Check local building and fire codes before installing your stove. When you have completed the installation, have it checked by your local inspector. Disregarding inspection and code requirements may jeopardize your homeowner's insurance. Since some insurance carriers require notification of a stove installation, contact your insurance agent. We want your Blaze King to give you a lifetime of trouble-free operation.

While we have made every effort to make these instructions as complete as possible, some installation or operating conditions may not be covered. If you have any questions that are not answered here, contact your BLAZE KING dealer, Local Building Inspector, Fire Department, or our customer service department at Blaze King, College Place, WA (509) 522-2730.

The Management and Employees of
BLAZE KING

KEEP THIS MANUAL FOR FUTURE REFERENCE.

***** SECTION 1 - TABLE OF CONTENTS *****

Section	Page
SAFETY LABEL	2
2 WARRANTY	7-8
3 DEFINITIONS	9
Alcove	9
Building Codes and Permits	9
Bypass	9
Catalytic Combustor	9
Chimney	9
Chimney Connector	10
Chimney, Masonry	11
Chimney, Prefabricated	11
Close Clearance	11
Combustible Material	11
Combustion Air Intake	11
Creosote, Formation and Need for Removal	12
Door, Loading	12
Draft	12
Fans	12
Fan Speed Control	12
Firebox	13
Flame Shield	13
Flammable Liquids	13
Floor Protector	13
Flue	13
Fuel	13
Hearth	13
Ice - Formation and Prevention	14
Inspections	14
Listed	14
Mobile Home	14
Outside Air Kit	15
Thermometer	15
Thermostat	15
Thimble	15
Tie Down Screws	15
4 SAFETY	16
Chimney Fire	16
Smoke Detectors	16
Fire Extinguishers	17
Building and Fire Codes	17
Children	17
Chimneys	17
Clearances to Combustible Materials	17

Creosote, Formation and Need for Removal	18
Fuel	18
Electrical Power	19
Disposal of Ashes	19
Loading Door	19
5 SPECIFICATIONS	20
6 PREPARATION AND ASSEMBLY	21
Tools Needed for Installation	21
Planning for Your Stove Placement	21
Reduced Wall Clearance	21
Inspect Your Chimney	22
Chimney Height Affects Draft	22
Stove Assembly	22
Product Inspection	23
Installing the Combustor Assembly	23
Flame Shield	23
7 REDUCED WALL CLEARANCES, OPTIONAL	24
Fig. 3, Sheet Metal Clearance Reduction System	25
Fig. 4, Non-combustible Spacer	25
Fig. 5, Masonry Clearance Reduction System	25
Fig. 6, Clearance Reduction System Size	25
8 INSTALLATION	26
Part I General Instructions	26
Floor Protector	26
Fig. 7, Floor Protector Dimensions	26
Venting Systems	26
Chimney Connector	27
Fig. 8, Flue Gas Direction	27
Connection to a Masonry Chimney	27
Fig. 9, Masonry Chimney Construction	28
Fig. 10, Firestopping	29
Fig. 11, Clearances, Masonry to Combustibles	29
Fig. 12, Minimum Chimney Height	30
Thimble	30
Fig. 13, Brick Chimney Thimble	31
Fig. 14, Masonry Chimney Construction	32
Figs. 15 & 16, Metal Prefabricated Thimble	33
Connection to a Metal Prefabricated Chimney	34
Figs. 17 & 18, Metal Prefabricated Chimney, Through Roof	35
Figs. 19 & 20, Metal Prefabricated Chimney, Through Wall	36
Part II Clearances to Combustible Surfaces	37
Table #1, KEJ-1102	37
Table #2, PEJ-1003	37
Figs. 21, 22, 23, 24, 25, 26 Clearance Illustrations	40
Part III Installation Instructions	41
A. Residential, Roof Exit, Standard and Reduced	

Clearance, Prefabricated Chimney	41
Fig. 27	42
B. Residential, Wall Exit, Standard and Reduced Clearance, Prefabricated Chimney	43
Fig. 28	44
C. Residential, Wall Exit, Standard and Reduced Clearance, Masonry Chimney	45
Fig. 29	46
D. Mobile Home and Residential Alcove, Roof Exit, Prefabricated Chimney	47
Fig. 30	49
Table #3, Chimney Systems Listed with KEJ, PEJ	50
Fig. 31, Cutaway View With Major Internal Parts	50
 9. OPTIONAL ACCESORIES	 51
Side Shields	51
Rear Shield	52
Fans	53
Outside Air	54
 10 OPERATION	 56
Fuel	56
Initial Start-Up Sequence	57
Optimum Thermostat Setting	58
Fan Operation	58
Disposal of Ashes	59
Reloading	59
 11 MAINTENANCE	 61
Ash Removal	61
Authorized Service Representative	61
Creosote; Formation, Inspection, Removal	61
Loading Door Gasket, Inspection, Replacement	62
Catalytic Combustor, Testing, Cleaning	63
Catalytic Combustor, Replacement	64
Door Glass, Cleaning	64
Door Glass, Replacement	65
Chimney Drafts	65
Fan Assembly	65
Paint	66
Rheostat Replacement	66
 12 TROUBLESHOOTING	 67
Chimney Fire	67
Heat, not enough	68
Heat, too much	68
Fans	69
Creosote	69
Catalytic Combustor	70
Dirty Door Glass	71
 13 STANDARD AND REPLACEMENT PARTS	 72

BLAZE KING LIMITED WARRANTY

WHAT THE WARRANTY COVERS:

This warranty contains different terms which cover different parts of the stove or fireplace insert. If you have purchased a catalytic combustor-equipped stove or fireplace insert, the catalytic combustor is covered by a separate warranty (also included with the appliance) with different terms.

Blaze King warrants the STEEL COMPONENTS of the Blaze King stove or fireplace insert, which is delivered with this warranty, against defects in material or workmanship to you, the original retail purchaser (hereafter referred to as "purchaser"), for a period of up to five years following the date of original retail purchase, subject to the provision of "OUR RESPONSIBILITIES" below. Blaze King warrants BLOWER MOTORS, DOOR GASKET, WOOD HANDLES, BLOWER MOTOR SPEED CONTROL, FIREBRICK LINING and the BI-METAL THERMOSTAT COIL of the Blaze King stove or fireplace insert, which is delivered with this warranty, against defects in material or workmanship, to the original purchaser, for a period of one year following the date of retail purchase, subject to the provisions of "OUR RESPONSIBILITIES" below. No person is authorized to modify this warranty nor to make any additional warranties on behalf of the manufacturer, Blaze King Industries.

WHAT THE WARRANTY DOES NOT COVER:

Unless otherwise provided by law or covered by this warranty, Blaze King is not responsible for removal, transportation or reinstallation of any product repaired or replaced pursuant to this warranty. Blaze King shall in no event be liable for special, incidental, consequential, indirect or other similar damages arising from any breach of this warranty, even if Blaze King has been advised of the possibility of such damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Blaze King limits all implied warranties, if any, including the warranties of merchant ability or fitness for a particular purpose, to one year (in Oregon, five years) from the date of original retail purchase. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. Actions for breach of this warranty must be brought within one year of the expiration of this warranty.

HOW YOU CAN GET SERVICE:

If this product requires repair or replacement due to defects in material or workmanship covered by this warranty, contact your Blaze King dealer and explain the defect. If the dealer does not repair or replace the product to your satisfaction, contact the Service Department of Blaze King at the address listed below. Please explain the defect and state the model, serial number, date of purchase and the name and address of the Blaze King dealer. Blaze King may request that the defective part, parts, or entire stove be shipped to it at the purchaser's expense.

OUR RESPONSIBILITIES:

If the purchaser has complied with all of the terms and conditions of this warranty and if the purchaser has notified Blaze King of a defect prior to the expiration of the respective warranty period, and after shipment to Blaze King, inspection confirms that a defect covered by this warranty does exist, Blaze King will either repair or replace the product, AT ITS ELECTION, or MAY ELECT to refund a portion of the purchase price, based on the formula below, if it cannot readily and quickly provide the purchaser with a replacement, if the purchaser is willing to accept such a refund. The repaired product or replacement will be returned to the

Blaze King dealer nearest the purchaser at Blaze King's expense. If it is determined by Blaze King that there is no defect, or that the defect resulted from causes not within the scope of this warranty, then the purchaser must bear the costs of storing the product and returning the product to the purchaser. For parts of this stove or fireplace insert warranted beyond the first year, Blaze King will have the same obligations as described in this paragraph, provided however, that the purchaser shall pay the following percentage of the then-current retail cost of the repair or the replacement, according to year after purchase in which the defect is brought to the attention of Blaze King:

- during the second year, purchaser pays 20%;
- during the third year, purchaser pays 40%;
- during the fourth year, purchaser pays 60%;
- during the fifth year, purchaser pays 80%.

For purchases made after June 30, 1990, a third year (25th-36th month) of no-charge replacements will be made when combustor failure is due to thermal degradation of the substrate (crumbling of the ceramic material). The balance of the cost will be Blaze King's expense.

MISUSE OF STOVE NULLIFIES WARRANTY:

The above warranty is conditioned upon the proper installation and use of the stove or fireplace insert according to (a) the directions embodied in the "Owner's Installation and Operation Instructions" published by us and (b) the local building and fire codes in the area in which it is installed. The unit should be inspected by the local building inspector or fire department prior to beginning use. A copy of the "Owner's Installation and Operating Instructions" is provided with each unit, or can be obtained by writing to us at the address listed below. **READ THE "OWNER'S INSTALLATION AND OPERATION INSTRUCTIONS" BEFORE INSTALLING OR USING THE STOVE OR INSERT. SAVE THOSE INSTRUCTIONS FOR MAINTENANCE AND SAFETY PROCEDURES.**

Altercation to, damage to, lack of maintenance of, faulty repair or misuse of the stove, insert or combustor, voids this warranty. Abuse of the combustor in any mechanical way and the use of fuel other than natural, untreated wood (such as artificial logs, wood exposed to salt water, or coal that may burn at excessively high temperatures or may release fumes that can explode) will void this warranty. Burning the stove with the loading and/or bypass doors open (other than during the brief start-up period) will also void this warranty.

OTHER LEGAL RIGHTS OF THE PURCHASER:

This warranty gives you specific rights, and you may also have other rights which vary from state to state.

LIMITED CATALYTIC COMBUSTOR WARRANTY

WHAT THE WARRANTY COVERS:

We (BKI, Inc.) warrant to you (the original retail purchaser of the Blaze King catalytic stove or fireplace insert which is delivered with this warranty) replacement of that stove's or fireplace insert's CATALYTIC COMBUSTOR, at no charge, if (a) the combustor ceases to function, and (b) that failure is brought to our attention within two years of the original purchase date of the appliance, and (c) the conditions specified in the following sections have been met. If the combustor ceases to function due to thermal crumbling or break-up of the catalyst substrate, the warranty is extended to three years, provided that the failure is brought to our attention within three years of the original purchase date of the appliance. If a failure of your CATALYTIC COMBUSTOR is brought to our attention after the initial two-year period (or three-year period if physical crumbling is the cause of the failure) and before the end of the sixth year after the date of original retail purchase of the appliance, a pro-rated warranty applies. This warranty enables you to replace the combustor at the following special discount rates. These discounts are based on the year after retail purchase of the original wood-burning appliance, in which the failure is brought to our attention:

- during the third year, 40% discount off of then current retail;
- during the fourth year, 30% discount off of then current retail;
- during the fifth year, 25% discount off of then current retail;
- during the sixth year, 20% discount off of then current retail.

"Current retail" prices are determined by BKI, Inc.

This pro-rated warranty applies only if the conditions specified in the following sections have been met.

THIS WARRANTY IS AVAILABLE ONLY THROUGH BKI, INC, AND COVERS THE CATALYTIC COMBUSTOR ONLY. OTHER COMPONENTS OF THIS STOVE OR FIREPLACE INSERT ARE COVERED BY THE "BLAZE KING LIMITED WARRANTY." A copy of the "Blaze King Limited Warranty" is also included with this heating appliance. No person is authorized to modify this warranty nor to make any additional warranties on behalf of BKI, INC.

WHAT THE WARRANTY DOES NOT COVER:

Unless otherwise provided by law, we are not responsible for removal, transportation or reinstallation of any product repaired or replaced pursuant to this warranty. WE SHALL IN NO EVENT BE LIABLE FOR SPECIAL, INCIDENTAL, CONSEQUENTIAL, CONTINGENT, INDIRECT OR OTHER SIMILAR DAMAGES ARISING FROM ANY BREACH OF THIS WARRANTY, EVEN THOUGH WE HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. WE LIMIT ALL IMPLIED WARRANTIES, IF ANY, INCLUDING THE WARRANTIES OF MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE, TO ONE YEAR (IN OREGON, SIX YEARS) FROM THE DATE THE APPLIANCE WAS ORIGINALLY PURCHASED AT RETAIL. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Actions for breach of this warranty must be brought within one year of the expiration of this warranty.

OUR RESPONSIBILITIES:

Our obligation under this warranty is limited to providing a free or specially-priced catalytic combustor to you, but only if you have complied with all the terms and conditions of this warranty.

HOW YOU CAN GET SERVICE:

If you believe your combustor is defective or may require replacement, you must call Customer Service at (509) 522-2730 (in Oregon only, you may call collect) between the hours of 9 a.m. and 5 p.m. Pacific time, Monday through Thursday. Customer Service will explain several simple procedures for you to follow in testing your combustor's effectiveness. If we (with your help) determine that your combustor is defective or requires replacement, you will be asked to ship the defective combustor to Customer Service, BKI, INC., 400 W. Whitman Drive, College Place, WA 99324. (Oregon residents may ship to BKI, INC., Rt. 3 Box 129-T, Milton-Freewater, OR 97862.) If your combustor falls within the two- or three-year categories described in "What the Warranty Covers," Customer Service will ship a free replacement combustor to you, along with a Combustor Failure Report. You must complete and return the Combustor Failure Report to Customer Service at the above address. If your combustor IS NOT within the two- or three-year limitation, and you are replacing the combustor at one of the pro-rated discount rates listed in "What the Warranty Covers," the replacement combustor and a Combustor Failure Report will be sent to you C.O.D. You must complete and return the Combustor Failure Report (along with the failed combustor) to Customer Service at the above address. **CUSTOMER SERVICE MUST RECEIVE YOUR FAILED COMBUSTOR AND COMPLETE COMBUSTOR FAILURE REPORT OR YOU WILL BE BILLED FOR THE FULL CURRENT RETAIL PRICE OF THE REPLACEMENT COMBUSTOR.**

MISUSE OF STOVE NULLIFIES WARRANTY:

The above warranty is conditioned upon the proper installation and use of the product according to the manufacturer's directions embodied in the "Owner's Installation and Operation Instructions" published by Blaze King and in compliance with the local building and fire codes in the area where it is installed. The unit should be inspected by the local building inspector or fire department prior to beginning use. A copy of the "Owner's Installation and Operation Instructions" is provided with each unit, or can be obtained by writing to Blaze King at the address below. **READ THE "OWNER'S INSTALLATION AND OPERATION INSTRUCTIONS" BEFORE INSTALLING OR USING THE STOVE. SAVE THOSE INSTRUCTIONS FOR MAINTENANCE AND SAFETY PROCEDURES.** Alteration of, abuse of, damage to, lack of maintenance, faulty repair or misuse of the product voids this warranty. Such abuse includes using fuel other than is specified in the "Owner's Installation and Operation Instructions" for your stove or fireplace insert.

OTHER LEGAL RIGHTS OF THE PURCHASER:

This warranty gives you specific legal rights, and you may have other rights which vary from state to state. If you do not agree to the purchase of the stove on the terms and conditions set out in this warranty, then you must return the stove to the dealer prior to use or installation, and the purchase price will be refunded.

***** SECTION 3 - DEFINITIONS *****

ALCOVE

For the purposes of this manual, an alcove is defined as a recess or partly enclosed extension connected to, or forming part of, a room. It may be on either an interior or exterior wall. The minimum dimensions for an alcove in which this stove may be installed are shown on page 37.

BUILDING CODES AND PERMITS

Most areas require a permit from the city or 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.

BYPASS

All catalytic woodburning stoves have a bypass - a device for allowing the smoke from the fire to temporarily bypass, or go around, the catalyst. In these Blaze King models, the bypass is a heavy steel plate which slides front to back, just behind the catalyst. It is controlled by the bypass handle on the right side of the stove. When the handle is down, the bypass is closed. When the handle is up, the bypass is open. The bypass handle is shipped in a separate package in the firebox, and must be attached before the stove is installed. The handle may only be attached and removed when the bypass is in the closed position. If the bypass handle will not attach, reach into the stove and slide the bypass door as far to the front of the stove as possible.

CATALYTIC COMBUSTOR

This wood heater contains a catalytic combustor, which needs periodic inspection and replacement for proper operation. It is against the law to operate this wood heater in a manner inconsistent with operating instructions in this manual, or if the catalytic element is deactivated or removed. The combustor is a ceramic honeycomb on which is coated a catalyst. The catalyst may be a combination of one or more precious metals, including following: platinum, palladium, rhodium and cerium. The catalyst chemically lowers the combustion temperature of the smoke from a wood fire, thereby allowing more smoke to burn, and both increasing efficiency and lowering emissions. The catalyst is generally operational while the stove thermometer registers in the "Active" zone. If the thermometer does not stay in the Active zone, but falls into the "Inactive" zone for most of the burn cycle, the catalyst may need cleaning or replacement. The catalyst is located in the top of the firebox, just inside the door. See CATALYTIC COMBUSTOR, TESTING, page 63.

COAL

DO NOT BURN COAL IN THIS STOVE. Evidence of coal burning automatically voids all warranties.

CHIMNEY

One or more passageways, vertical or nearly so, for sending flue gases (smoke) to the outside atmosphere.

Stoves must be vented ONLY to the outside, never to other rooms or buildings.

Special methods are required when passing through a wall or ceiling. See chimney manufacturers instructions and local building codes.

Three types of chimneys (and four brands, see page 50) are recognized for use with these stoves:

1. Listed Residential Type and Building Heating Appliance Type

Chimney. Listed, 8 inch, manufactured chimney, hereafter referred to as Listed Prefabricated chimney. Components required by manufacturers for installation such as the chimney support base, firestop (as appropriate), attic insulation shield, insulated tee, etc., are necessary to assure a safe chimney installation. Use only components manufactured for the chimney.

2. Listed High Temperature Residential Type and Building Heating

Appliance Type chimney, hereafter referred to as Listed HT Prefabricated chimney. HT chimney systems are required for Alcove, Residential Close Clearance, and Mobile Home installations. Components required by manufacturers for installation such as the chimney support base, firestop (as appropriate), attic insulation shield, insulated tee, etc., are necessary to assure a safe chimney installation. Use only components manufactured for the chimney.

3. Masonry Chimney: A field-constructed, code-approved, chimney of solid masonry units, bricks, stones, listed masonry chimney units or reinforced Portland cement concrete, with at least 5/8" fire clay lining joined with refractory cement or other listed lining system suitable for use with wood stoves. Before connecting to an existing masonry chimney, have it inspected by a certified chimney sweep.

NEVER VENT THE STOVE INTO A CLASS "B" GAS VENT CHIMNEY.

NEVER USE A CHIMNEY CONNECTOR OR CHIMNEY FLUE SMALLER THAN THE STOVE EXHAUST.

Avoid a home fire. Maintain the designated clearance distance to combustibles. Insulation must not touch the chimney. There must be the designated air space clearance around the chimney. This air space around a chimney is necessary to allow natural heat removal from the area. Insulation in this space will cause a heat buildup which may ignite wood framing.

DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

Generally, the taller the chimney, the more dependable the draft. The chimney should be kept warm to enhance the draft. 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. See CREOSOTE, page 12.

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 CONNECTOR

Also known as stove pipe. Connects a fuel-burning appliance to a chimney. A chimney connector shall not pass through an attic or roof space, closet or similar concealed space, or a floor, ceiling, wall or partition of combustible construction. The chimney connector should be 8" in diameter, of not less than 24 gauge black/blue steel, and of either single or double wall construction.

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, see page 27.

(Prefabricated chimney is not normally required as a chimney connector for residential installations).

A chimney connector can also be used horizontally as a connection between the stove and masonry chimneys or prefabricated chimneys, provided that the horizontal 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. The chimney connector is to be attached to the smoke collar with two screws, and at least two screws are required at each joint. Horizontal sections of chimney connector must be AT LEAST 18" from the ceiling.

CHIMNEY, MASONRY

Before installation of any wood burning unit to an existing masonry chimney, be sure the chimney is sound. It must be lined. Have it examined by a certified chimney sweep. There must be no cracks or holes. The cross sectional area must not be less than that of the 8" flue collar. Relining or rebuilding may be necessary to make the chimney safe and efficient. A code-approved chimney with a flue liner is very important for safe, satisfactory operation of any wood heating system.

CHIMNEY, PREFABRICATED

Any prefabricated chimney used with Blaze King stoves must be tested and listed by Underwriters Laboratories, Inc. or another approved laboratory to UL standards. For simple residential installations, this stove is listed to be installed with any listed prefabricated chimney system. For Residential Alcove, Residential Close Clearance and Mobile Home installations, only listed HT prefabricated chimney systems may be used. Prefabricated metal chimney pipe is available from several manufacturers. HT chimney systems are listed on page 50. Special methods are required when passing through a wall or ceiling. See chimney manufacturer's instructions and local building codes.

CLOSE CLEARANCE

Installing a stove closer to combustibles by using side or rear shields, fan kits or double wall close clearance connectors.

Close clearance connectors must be from the same manufacturer as the listed prefabricated chimney.

COMBUSTIBLE MATERIAL

Material made of or surfaced with wood, compressed paper, plant fibers, plastics, or other materials that will ignite and burn, whether flameproofed or not, or whether plastered or unplastered.

COMBUSTION AIR INTAKE

Located on the back of the stove, on the centerline. Combustion air is drawn into this opening, through the thermostat and into the firebox. In tight contemporary homes, using outside combustion air may be desirable. Outside combustion air is required in all mobile home installations.

If national or local codes require it, an OUTSIDE AIR KIT is available from the dealer who sold you the stove.

The outside air inlet hose is a flexible tube which can be bent to take outside air in through the wall or up through the floor. The flexible tube will allow some adjustment over or around the 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. See page 54.

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 FIRES: Inspect Chimney Connector and Chimney TWICE monthly and clean if necessary.

If a chimney fire starts, close the loading door and turn the thermostat to the lowest setting. Call the fire department immediately.

The basic design of this catalyst equipped stove will reduce creosote accumulation to a very low level. However, the frequency of start-up operations and the temperature at which the stove 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.

DOOR, LOADING

The door on the front of the stove, with viewing glass installed. This door must be closed and latched tightly whenever the fire is burning. When cleaning the stove, wait 1/2 hour after the fire is out or until the stove is sufficiently cooled before opening the door.

DRAFT

This appliance may not operate properly if the draft is below .02" of water as measured using a water manamoter. Draft below .02"

will cause excessive smoke spillage, incomplete combustion and fire startup problems. Low draft may sometimes be improved by making a chimney taller.

FANS (Optional)

Two variable speed axial fans (105 CFM each). The fans circulate room air across the firebox and back into the home. The fan speed should be adjusted to match the heat output of the stove.

FAN SPEED CONTROL

Located on the (optional) Fan Assembly, controls the fan speed. When stove is burning on low, set fans to low. When stove is burning on high, set fans to high. Adjust fan speed to match, as much as possible, the burn rate of the stove.

FIREBOX, STOVE

Steel, lined with firebrick. The recommended length log that should be used in this firebox is 16".

FIREPLACE

This stove must not be connected to any type of fireplace.

FLAME SHIELD

The flame shield is a 1/4" steel plate, punched with many 3/8" holes. It is shipped in the firebox and must be installed before the first fire. Hold it in the firebox with the triangular wings facing away. Lift it between the loading door and the catalyst, and rest the bottom of the plate on the two pins that protude below the catalyst. The flame shield should rest at an angle (about 45 degrees) with its bottom near the combustor, and its top near the stove front. Do not operate the stove without the flame shield in position.

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.

FLOOR PROTECTOR

Noncombustible surfacing applied to the floor area underneath and extending in front, to the sides and to the rear of a heat producing appliance. Floor protector sizes are shown on page 26.

FLUE

The general term for a passage through which flue gases (smoke) pass from the combustion chamber to the outside air.

FUEL

THIS STOVE IS FOR USE WITH SOLID WOOD FUEL ONLY.
Do not burn trash, paper, pine branches or artificial fire logs. Such abuse may void the warranty.

When selecting wood for a catalytic stove, 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.

CAUTION

DO NOT USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THIS APPLIANCE. KEEP THESE FLAMMABLE LIQUIDS WELL AWAY FROM THIS APPLIANCE WHILE IT IS IN USE.

HEARTH

The bricked floor area within the fire chamber of a fireplace or fireplace stove. The bottom of the firebox. Build the fire directly on the Hearth.

ICE - FORMATION AND PREVENTION

Most of what you see coming from the chimney of a properly operating catalytic stove 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 for 4 or 5 minutes with the bypass open (and the loading door open) to melt any possible ice buildup. DO NOT LEAVE THE ROOM WHILE BURNING THE STOVE WITH THE DOORS OPEN.

INSPECTIONS

The stove should be inspected periodically for missing fire bricks, corroded metal or deterioration of parts. If anything appears unsafe, contact your stove dealer for advice. Do not operate stove until that condition is corrected. The chimney and chimney connector should be inspected at the beginning of each burning season and twice monthly during the winter to determine if a creosote buildup had occurred. If creosote has accumulated it should be removed to reduce the risk of a chimney fire. See CREOSOTE, page 18.

Chimney caps occasionally will be plugged. See Section 11, Maintenance, page 61.

LISTED

Meeting Underwriter's Laboratories, Inc. standards and specifications when installed properly, and inspected.

MOBILE HOME

A residence mounted on wheels, or capable of having wheels installed for moving to another location. Typically, a residence with a steel frame supporting the structure and providing an axle(s) for the installation of wheels to move it into the location and out again. Frequently referred to as 'Manufactured Homes' to differentiate between travel trailers and more permanent residences. These appliances are tested and listed for mobile home installations utilizing a prefabricated chimney

system, straight up from the stove top, through the ceiling and roof. Under no conditions are elbows and/or Tees permitted in mobile homes. For use in mobile homes, this appliance is only listed to be connected to a chimney system tested with it. See page 50, for acceptable chimney systems. Use of any other venting system or components in mobile homes voids the stove listing and the warranty. Contact local building or fire officials for information regarding local codes. The structural integrity of the mobile home floor, wall and ceiling/roof must be maintained. WARNING: DO NOT INSTALL IN A SLEEPING ROOM.

OUTSIDE AIR KIT (Optional)

An optional kit which draws outside air through a duct. The stove uses the air for combustion. The Outside Air Kit is required in mobile home installations, and occasionally required in residential installations. Check local codes before installing your stove.

THERMOMETER

The probe of the Blaze King catalyst thermometer rests behind the catalyst. The thermometer gives an indication of the temperature of the gasses after the catalyst. Due to the way it is made, the thermometer has a 4 - 8 minute lag time. The thermometer should be periodically cleaned. Lift it from the stove (be careful, it may be hot) and wipe the probe clean. At room temperature (out of the stove) the thermometer indicator generally points to the bottom of the "Inactive" zone. It may, over time, change slightly. Adjust it by loosening the bolt above the dial, and turning the dial face. Be sure the bolt is retightened before placing back on stove. See THERMOMETER, page 66.

THERMOSTAT

The thermostat, sometimes referred to as the Combustion Air Control, is mounted on the back of the stove, near the top. It incorporates a bi-metallic coil which responds to the naturally uneven cycles of the burning wood. This automatic compensation gives you even, comfortable heat. These Blaze King stoves burn cleanest when the thermostat is set and left unchanged. Frequent adjustments are unneeded and reduce efficiency and clean burn.

THIMBLE

A listed, manufactured product installed in combustible walls and ceilings through which the chimney passes to the outside. It is intended to prevent the combustible materials from igniting.

TIE DOWN SCREWS

These lag screws are used to secure the stove to the residence floor. Their use is required in mobile home installations.

***** SECTION 4 - SAFETY *****
SAFETY NOTICE

IF THIS STOVE IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION REQUIREMENTS IN YOUR AREA. PLEASE READ THIS ENTIRE MANUAL BEFORE YOU INSTALL AND USE YOUR NEW STOVE. FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY OR DEATH.

CAUTIONS:

1. NEVER vent the stove to other rooms or building. Stove must be vented ONLY to the outside.
2. NEVER use a chimney or chimney connector smaller than the 8" stove exhaust.
3. NEVER vent the stove into a "Class B" gas vent chimney.
4. NEVER burn materials other than natural wood. 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. Burn natural wood only.
5. NEVER intentionally start a chimney fire to clean the flue.
6. NEVER burn the stove so hot that the stove or chimney connector begins to glow.
7. NEVER burn the stove with the loading door open.

CHIMNEY FIRE

In the event of a fire in the chimney:

- a. Adjust the thermostat to its lowest setting.
- b. Check that the Loading Door is tightly closed.
- c. Get everyone out of the house.
- d. Call the Fire Department immediately.
- e. Check the roof for burning embers that might cause a fire.

Your family should have a prearranged plan so that each person will know what to do and will act immediately if such an emergency arises.

After the fire is out, have your chimney inspected by a Building Inspector or certified chimney sweep. Any damaged chimney components should be replaced before the stove is used again. A masonry chimney that is damaged should be repaired or rebuilt. Contact your Fire Department for further advice.

SMOKE DETECTORS

Install at least one smoke detector on each floor of your home to ensure your safety. It should be located away from the woodstove and close to the sleeping areas. Locating a smoke detector too close to a woodstove can cause the smoke detector alarm to sound if a puff of smoke is emitted while the woodstove door is open during reloading. Follow the smoke detector manufacturers placement, installation, and maintenance instructions. Your local Fire Department may provide assistance in selecting smoke detectors, or contact the Consumer Product Safety Commission, Washington, D.C. 20207.

FIRE EXTINGUISHERS

Every home should have at least one fire extinguisher. An approved "Class A-B-C" extinguisher should be mounted on the wall, near an exit and close to the stove -- but not so close that accessibility to the extinguisher could be blocked by a fire. Your local fire department can advise you concerning the most appropriate location.

BUILDING AND FIRE CODES, PERMITS, AND INSPECTIONS

The installation of this woodstove must comply with your local building and fire codes. Always contact your local Building Inspector and/or Fire Department before beginning the installation process. If required, obtain a permit before installation and have the completed installation inspected. Remember that noncompliance with building and/or fire codes may jeopardize your homeowner's insurance.

CHILDREN

Do not allow children to play near the stove or with the controls. Severe burns may be inflicted by touching the door or door glass, the front, sides or top of the stove. Train children to stay away from the stove and never leave children unattended in the room when the stove is in operation.

CHIMNEYS

See "Definitions", page 9. The use of make-shift chimney installation is not allowed.

Before connecting any wood-burning unit to an existing chimney, inspect the chimney to be sure it is in good condition. There must be no cracks or holes. Often it is impossible to see these from the outside. A certified chimney sweep should inspect your chimney and give you an accurate assesment of its condition. The cross-sectional area must not be less than that of the 8" diameter flue collar (50 square inches). Relining or rebuilding may be necessary to make a Masonry Chimney safe. A code-approved chimney with a flue liner is most important for safe, satisfactory operation of any wood heating system.

Inspect the Chimney and Chimney Connector (if installed) at least twice each month during the heating season. Any leak must be repaired. A chimney fire or deterioration can enlarge the hole. This will admit more air and cause exhaust gases to condense and form creosote. Patches of creosote in your chimney indicate that such leaks are present.

CAUTION: Never look directly up a chimney. The use of a mirror, flashlight and goggles is recommended to prevent eye injury due to falling debris.

If a significant amount of creosote has accumulated, it should be removed to reduce the risk of a chimney fire. (Refer to Creosote - Formation and Need for Removal, below.)

CLEARANCES TO COMBUSTIBLE MATERIALS

For a safe installation, proper clearances to combustible materials must be observed; see pages 37-40. Failure to follow these guidelines voids the certification and warranty, is

illegal, and can result in a fire causing property damage, injury, or death. Keep combustible (burnable) materials at least as far away from the woodstove as the tables on page 37 indicate. Combustible materials include items such as plasterboard or wood-paneled walls, furniture, wooden mantels, bookshelves, carpets and drapes. Firewood should not be stored within the specified clearances. AVOID FIRE. Maintain the designated clearance distance to combustibles. Insulation must not touch the chimney. There must be the designated air space around the chimney. This air space around a chimney is necessary to allow natural heat removal from the area. Insulation in this space will cause a heat buildup which may ignite wood framing.

CREOSOTE -- FORMATION AND NEED FOR REMOVAL

When in good condition and operated properly, your Blaze King catalyst-equipped stove is a clean-burning stove. So if significant creosote buildup occurs, reexamine your firebuilding and burning procedures. Reread pages 56 through 60 of this owner's manual. Most instances of creosote buildup in the chimneys of catalytic woodstoves are due to operator error. If you still have questions, consult your dealer or contact the Customer Service department at Blaze King.

INSPECTION:

Inspect your chimney and chimney connector at least twice each month during the heating season. Patches of creosote in your chimney or chimney connector indicate a possible air leak. Any leak must be repaired. A chimney fire or deterioration can enlarge the leak. This will admit more air and cause exhaust gases to condense and form additional creosote.

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

CLEANING:

NEVER intentionally start a chimney fire to clean the flue. DO NOT clean the chimney while it is still connected to the stove. Remove the bottom section of pipe and attach a bag to the chimney to catch any creosote removed.

Hire a chimney sweep or clean the chimney yourself with a tight-fitting chimney brush. Makeshift equipment--hoses, tire chains, etc.--can damage the flue and will probably do an unsatisfactory cleaning job. After cleaning the chimney, clean inside the top of the stove. Scrape, if needed, and vacuum all creosote and fly ash from around the bypass door.

FUEL

THIS WOODSTOVE IS FOR THE USE WITH SOLID WOOD FUEL ONLY. NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR 'FRESHEN UP' A FIRE IN THIS HEATER. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE HEATER WHILE IT IS IN USE.

Do not burn materials soaked in flammable liquids, trash, garbage, plastics, gift wrappings, coal, charcoal, naptha, engine oil, chemical cleaners, chemical fire starters, treated or painted wood, saltwater driftwood, railroad ties, plywood,

particle board. Do not burn sawdust, wood shavings or chips in this woodstove. Using saltwater driftwood damages the firebox. Any indication of saltwater driftwood use will void the manufacturers warranty.

When selecting wood for a Blaze King Catalytic Stove, it is preferable that you use seasoned wood. Dry, seasoned wood will burn cleaner and produce less creosote. The wood for these stoves should be cut to lengths that are not more than 16" long.

CAUTION: Do not store wood fuel within the space heater installation clearances for even a short period of time.

ELECTRICAL POWER

If the optional fans are installed, connect this unit to a properly grounded, 110-volt electrical outlet. Do not route the power in front of, or under, the stove.

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 noncombustible 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.

Do not store other waste in the ash container. Ashes should never be placed in wooden or plastic containers, or in paper or plastic bags, no matter how long the fire has been out. Coals have been known to stay hot for several days when embedded in ashes.

WARNING

REMOVE ASHES ONLY WHEN THEY ARE COLD. NEVER STORE HOT ASHES IN A GARAGE OR BASEMENT. HOT ASHES WILL GENERATE CARBON MONOXIDE AND/OR FLAMMABLE GASES. THESE GASES MAY CAUSE SUFFOCATION.

LOADING DOOR

Do not operate your stove with the loading door open. This stove is not designed or intended to be operated with the loading door open. Do not leave your stove unattended when the loading door is not tightly closed, such as when starting a fire. Leaving the loading door open AFTER the fire is well started can cause overheating of the stove. Such overheating can cause the stove to warp. Check the loading door gasket for deterioration at least twice each heating season. Inspect the gasket for physical deterioration missing sections or obvious leakage. To check the gasket further, insert a piece of paper into the door opening and close and latch the door. Obvious resistance should be felt when pulling the paper out. Repeat this check several times around the perimeter of the door.

***** SECTION 5 - SPECIFICATIONS *****

	KEJ-1102	PEJ-1003
Minimum heat output Method, CSA-B415	8,750 Btu/hr	12,000 Btu/hr
Maximum heat output Method, CSA-B415	43,600 Btu/hr	43,000 Btu/hr
Overall efficiency, weighted average Method, CSA-B415	79.3%	82.5%
Emissions, weighted average Method, EPA 5G	3.9 gr/hr	3.5 gr/hr
Wood capacity (approximate)		
White oak	90 lbs	60 lbs
Fir	60 lbs	40 lbs
Recommended wood length	18 inches	16 inches
Total weight, with firebrick	410 lbs	350 lbs
Width, without removable bypass handle	30.00 inches	27.00 inches
Depth, with optional fan kit	30.17 inches	29.17 inches
Height	32.76 inches	26.90 inches
Minimum size floor protector	34x45 inches	32x44 inches
Door opening width	17.69 inches	16.40 inches
Door opening height	9.77 inches	8.20 inches
Flue size, diameter	8 inches	8 inches
Optional fans, two variable speed	105 CFM each	
Door glass	Corning, Pyrocera II, Clear View Plus (TM)	
	KEJ, 5mm x 16.00 x 10.00 inches	
	PEJ, 5mm x 14.875 x 8.875 inches	
Minimum allowed chimney cross-sectional area		50 sq. inches

Tested and listed to U.L. 1482 by Warnock Hersey International,
8431 Murphy Drive, Middleton, WI 53562
608-836-4400

Certified to comply with July 1990 particulate emissions
standards of the U.S. Environmental Protection Agency.
KEJ-1102, certificate number 274.
PEJ-1003, certificate number 278.

***** SECTION 6 - PREPARATION AND ASSEMBLY *****

WARNING

IMPROPER ASSEMBLY AND/OR INSTALLATION OF YOUR BLAZE KING WOODSTOVE OR FAILURE TO OPERATE IT ACCORDING TO THE GUIDELINES DETAILED IN THESE INSTRUCTIONS, WILL VOID THE STOVE WARRANTY, CAN CAUSE A HOUSE OR CHIMNEY FIRE, AND MAY ENDANGER YOUR FAMILY. FOR YOUR SAFETY, FOLLOW THE ASSEMBLY AND INSTALLATION INSTRUCTIONS CAREFULLY. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA. PLEASE READ THIS ENTIRE MANUAL BEFORE YOU INSTALL AND USE YOUR NEW STOVE.

These Blaze King woodstoves are Listed by Warnock Hersey ONLY if: they are connected to a code-approved masonry chimney with a flue liner, OR an 8" Listed Residential Type and Building Heating Appliance Type Chimney System OR a Listed High Temperature Residential Type and Building Heating Appliance Type Chimney System (hereafter referred to as Prefabricated Chimney or Prefabricated HT Chimney) and minimum clearances to combustible (burnable) materials are observed. See CHIMNEY and CHIMNEY CONNECTOR, pages 9 and 10, and Tables 1 and 2, page 37 for minimum clearances.

DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

TOOLS NEEDED FOR INSTALLATION

If you are planning to install this stove yourself, you will need the tools listed below. Consult the chimney and chimney connector manufacturer's installation instructions for tools needed for chimney installation.

- a. 1/4" Wrench, Nutdriver, or Socket with Handle.
- b. Medium Flat Blade Screwdriver and Phillips Screwdriver.
- c. Tape Measure.
- d. Carpenter's Level.
- e. See OPTIONS section for tools needed.

PLANNING FOR YOUR STOVE PLACEMENT

As you plan your installation, consider the following:

- a.) Stove should be placed as central in the home as possible. Consider safety, convenience, traffic flow, and the fact that the the stove will need a chimney and chimney connector.
- b.) MINIMUM CLEARANCES SHOWN ON PAGE 37 ARE TO PREVENT WALLS AND CEILINGS FROM CATCHING ON FIRE.
- c.) The dimensions and position of the Floor Protector. See page 26.
- d.) The type of chimney system to be used. See page 50.
- e.) Electrical Power. (Optional) The stove can be equipped with a fan assembly with a seven-foot electrical cord. Do not route the cord in front of the stove.

REDUCED WALL CLEARANCE

The stove and chimney connector may be placed closer to the wall

than shown on pages 37-40 if the wall is properly protected. The two wall protection systems are described beginning on page 24. allow a reduced clearance from the wall to the stove, but ONLY IF ACCEPTABLE TO YOUR BUILDING AND/OR FIRE INSPECTOR.

INSPECT YOUR CHIMNEY

Before connecting any wood-burning unit to an existing chimney, inspect the chimney to be sure that it is in good condition. There must be no cracks or holes. The cross-sectional area must not be less than that of the flue collar (8" diameter, 50 square inches). A proper chimney is crucial for safe, satisfactory operation of any wood heating system. Relining or rebuilding may be necessary to make the chimney safe, efficient, and in conformity with local codes.

Masonry Chimneys that have a very large cross-section (60 square inches or more) may experience poor draft and may require relining to reduce the cross-section and provide a proper draft. This is also an ideal time to clean the existing chimney. For peak efficiency, a clean chimney flue is essential. A qualified professional chimney sweep can perform both inspection and cleaning. If you choose to clean your own chimney, use the proper tools. Homemade cleaners, may damage your chimney.

Be sure the Ash Clean-Out Door for the masonry chimney is closed and sealed tightly. This door may be in the wall below the chimney, in the room below the chimney or outside near the ground level of the chimney. This is frequently overlooked, and can cause severe drafting and creosote problems in masonry chimney installations. The chimney MUST extend above the roof at least three feet or two feet above any area of the roof within ten feet of the termination of the chimney.

CHIMNEY HEIGHT AFFECTS DRAFT

Tall chimneys usually provide a strong, dependable draft. The chimney should be kept warm to enhance the draft. This will also reduce creosote accumulation caused by smoke and a condensation of water vapor. A buildup of creosote can reduce the draft and will become a potential fire hazard. Chimney tops should NEVER be near trees or other tall objects that might cause downdrafts. In new homes, or homes that have been weatherized and are very air-tight, exhaust fans, such as those installed in kitchens and bathrooms, can create a negative pressure in the room and a resulting downdraft in a chimney, when the fans are operating. Smoke may be drawn into the room, particularly when the loading door is open while the stove is being loaded. If this problem arises, open a window while the exhaust fan is being used or do not operate the exhaust fan while reloading the stove. If make-up air (with outside air kit) is NOT supplied, the negative pressure may also draw gases from a gas furnace.

If you have a forced-air heating system, you can use the existing ducts and furnace fan to circulate air through the house, but DO NOT connect any ducting between the stove and the heating system ducts or any other air-distribution ducts.

STOVE ASSEMBLY

Remove all items packed in the firebox.

IF YOU HAVE NOT ALREADY DONE SO, PLEASE TAKE A FEW MINUTES TO COMPLETE THE WARRANTY CARD FOUND IN THE FIREBOX AND MAIL IT TODAY.

PRODUCT INSPECTION

BLAZE KING Stoves are known for their quality materials and construction. However, mistakes occasionally occur. Inspect all parts for damage due to shipping and to be sure that all needed parts are enclosed. If you discover a part is missing or damaged, contact your dealer immediately for replacement or repair. Refer to the part number listed under STANDARD PARTS on page 72 and the model and serial numbers of your stove (see the tag on the back of the stove).

COMBUSTOR ASSEMBLY, INSTALLATION

See page 50 for proper parts nomenclature. This stove is generally shipped from the factory with the combustor installed. If the combustor is not installed, follow the instructions in Section 11, Maintenance, page 64 under Catalytic Combustor, Replacement, beginning with Step 6.

FLAME SHIELD, INSTALLATION

The flame shield is a 1/4" steel plate, punched with many 3/8" holes. It is shipped in the firebox and must be installed before the first fire. Hold it in the firebox with the triangular wings facing away. Lift it between the loading door and the catalyst, and rest the bottom of the plate on the two pins that protrude below the catalyst. The flame shield should rest at an angle (about 45 degrees) with its bottom near the combustor, and its top near the stove front.

TOP RAILS, INSTALLATION

Insert the long end of the rail through the hole in the back of the stove top, and rotate the rail until it drops through the hole in the stove top. Hold the rail down from above, put a bowed washer on from below, place a push-nut in the open end of a 1/2" socket and push or tap it into place.

OPTIONAL ACCESSORIES

See Section 9, page 51.

REPLACEMENT PARTS

See Section 13, page 72.

***** SECTION 7 - REDUCED WALL CLEARANCES, OPTIONAL *****

NOTE: Before planning on or using the clearance reduction systems described below, consult local building authorities, as local codes may vary.

The stove and chimney connector MAY be placed closer to the wall than shown in Tables 1 and 2, page 50 IF the wall is properly protected. The two wall protection systems described below allow a reduced clearance from the wall to the stove, but ONLY IF ALLOWED BY LOCAL BUILDING AND/OR FIRE INSPECTORS.

The National Fire Protection Association Standard 211 recognizes 8 different wall protection/clearance reduction systems. Two of these clearance reduction systems are galvanized steel sheet metal with a minimum thickness of 24 gauge, or 4-inch nominal thickness brick (Figures 3-6). Either of these materials must be spaced out 1 inch from the wall surface. With sheet metal, non-combustible spacers are used to maintain the 1-inch air space. With a brick wall, metal wall ties are used to anchor the brick to the wall and maintain the 1-inch air space. To avoid excessive heat transmission, the spacers or wall ties should not be placed directly behind the heater or chimney connector. The 1-inch space provides free air circulation. It is also required that there be openings completely around the system including the bottom, so that cooling air can circulate in the 1-inch air space.

(This clearance reduction system is independent of side and back shields described and minimum clearances detailed on pages 37-40. Both clearance reduction systems may, with local code approval, be combined.)

The clearance reduction system should extend 38 inches beyond each side of the heater measured diagonally from the back stove corner (Figure 6), 38 inches above the stove top in ceiling exit installations (measured diagonally from the back of the stove top), and it must extend as high as the thimble penetration of the wall to the chimney in wall exit installations to protect the wall behind the vertical run of the chimney connector.

A variety of prefabricated clearance reduction systems may be available through your stove dealer. Always look for a safety listing label on the product when selecting a prefabricated clearance reduction system and make sure it is designed for use with a wood stove. Follow, exactly, the installation instructions provided with the system.

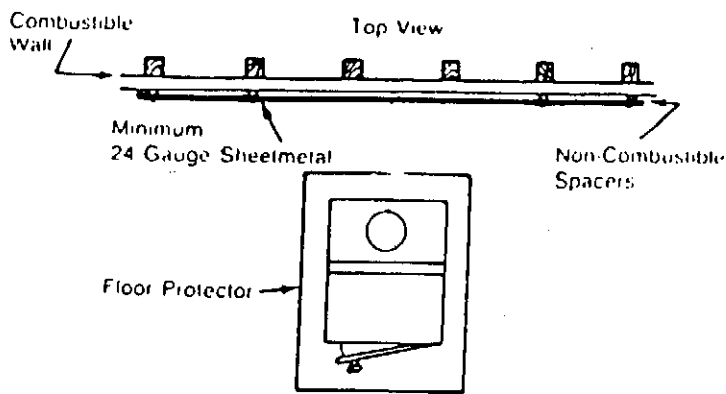
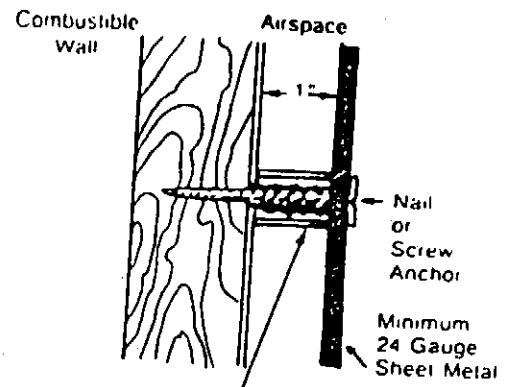


Fig. 3, Sheet Metal Clearance Reduction System



1 Inch Non-Combustible Spacer Such As Stacked Washers, Small Diameter Pipe, Tubing, or Electrical Conduit

Fig. 4, Non-combustible Spacer

Do Not Use Fasteners Directly Behind Chimney Connector or Stove

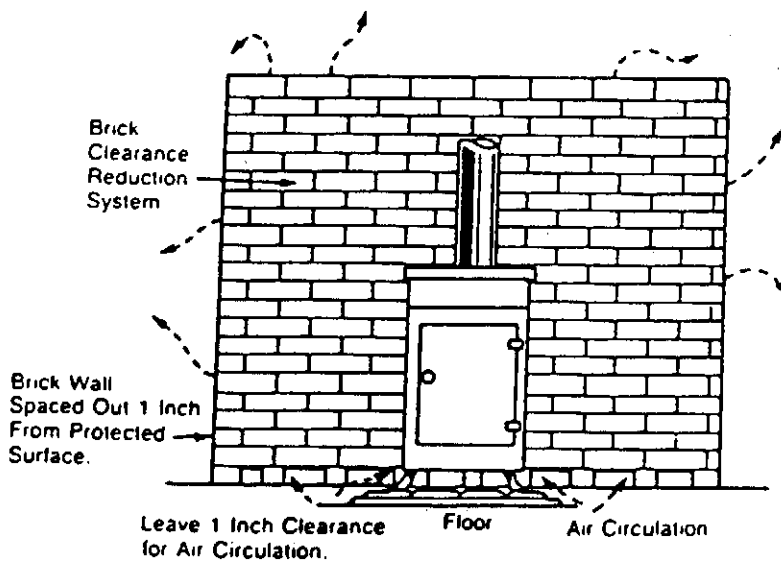


Fig. 5, Masonry Clearance Reduction System

Brick Walls May be Attached to Combustible Walls Using Wall Ties

If Brick is Used, Be Sure Floor Can Withstand Weight of Brick.

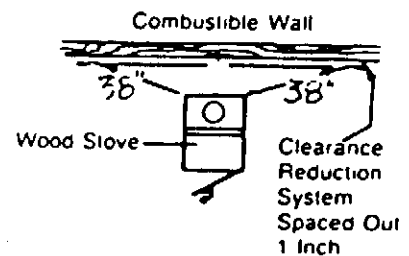


Fig. 6, Clearance Reduction System Size

***** SECTION 8 - INSTALLATION *****

PART I GENERAL INSTRUCTIONS

FLOOR PROTECTOR

The stove must be placed on a floor protector.

A floor protector is a noncombustible surfacing applied to the floor area underneath and extending in front, to the sides and to the rear of a heat producing appliance.

To provide the proper clearances, the floor protector must extend 16" in front of the loading door opening.

8" from each side of the loading door opening.

KEJ floor protector must be no smaller than 34" x 45".

PEJ floor protector must be no smaller than 32" x 44".

The floor protector must extend to the wall under a wall exit installation and must extend 2" beyond each side of the horizontal section of chimney connector.

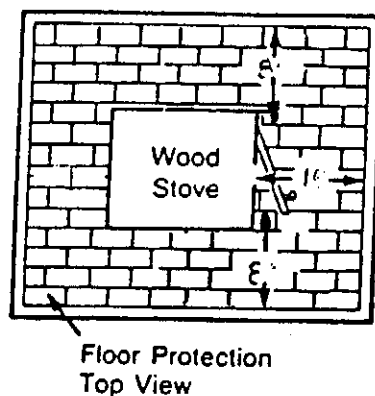


Fig. 7, Floor Protection Dimensions

WARNING

FAILURE TO PROVIDE ADEQUATE FLOOR PROTECTION CAN CAUSE A HOUSE FIRE. SUCH A FIRE CAN RESULT IN DAMAGE TO PROPERTY AND SERIOUS INJURY OR DEATH.

VENTING SYSTEMS

(Many of the illustrations in this section are courtesy of the Consumer Products Safety Commission)

The venting system consists of a chimney connector and a chimney. These get extremely hot during use. Temperatures inside the chimney may exceed 2000 degrees in the event of a creosote fire. To protect against the possibility of a house fire, the chimney connector and chimney must be properly installed and maintained. A listed thimble must be used when a connection is made through a combustible wall to a chimney. A chimney support package must be used when a connection is made through the ceiling to a listed prefabricated chimney. These accessories are absolutely necessary

to provide safe clearances to combustible wall and ceiling material.

This stove may be connected to a lined masonry chimney or a listed high temperature prefabricated residential type building heating appliance chimney. Do not connect it to a chimney serving another appliance. To do so will affect the safe operation of both appliances, and will void the stove warranty.

CHIMNEY CONNECTOR

The chimney connector must be 8 inch diameter 24/26 MSG Black/Blue steel. Do not use aluminum or galvanized steel. They cannot properly withstand the extreme temperatures of a wood fire. Do not use chimney connector pipe as a chimney. You must connect your stove to a chimney comparable to those illustrated in this manual.

Chimney connector sections must be attached to the stove and to each other with the crimped end toward the stove (Fig. 8). This allows creosote to run into the stove and not onto the outside of the pipe. All joints should be secured with three metal screws. Otherwise, in the event of a creosote fire, the connector may vibrate apart.

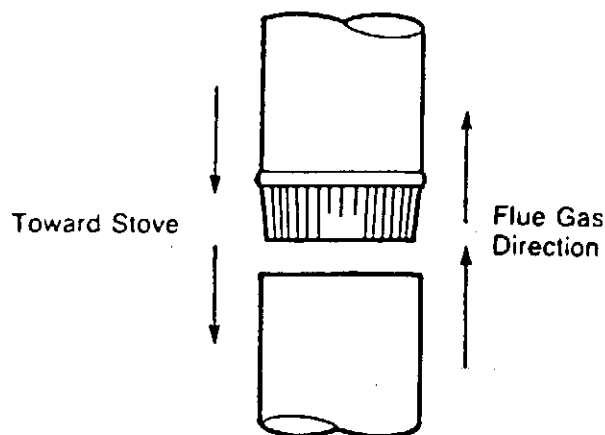


Fig. 8, Flue Gas Direction

For proper operation the chimney connector should be as short as possible. Horizontal lengths of chimney connector should have an upward slope from the stove of 1/4 inch per foot. Maintain 18 inches clearance between the chimney connector and the ceiling.

CONNECTION TO A MASONRY CHIMNEY

CHIMNEY

Should the stove be connected to a masonry chimney, the chimney should be examined for cracks, loose mortar, other signs of deterioration, and blockage. The stove should not be installed until it is determined that the chimney is safe for use. Since an oversized flue contributes to the accumulation of creosote, the size of the flue should be checked to determine that it is not

too large for the stove. For this stove, it is recommended that the flue size should not exceed the overall area of an 8" flue (50 square inches). The chimney should also be checked to assure it meets the minimum standards of the National Fire Protection Association (NFPA) Standard 211. Following is a list of the more critical minimum requirements for a properly constructed chimney.

1. The masonry wall of the chimney, if brick or modular block, must be a minimum of 4 inches nominal thickness. A mountain or rubble stone wall must be at least 12 inches thick.
2. The chimney must have a fire clay flue liner (or equivalent) with a minimum thickness of 5/8 inch and must be installed with refractory mortar. There must be at least 1/2-inch air space between the flue liner and the chimney wall (Fig. 9). An equivalent liner might be a listed chimney liner system or other approved material.

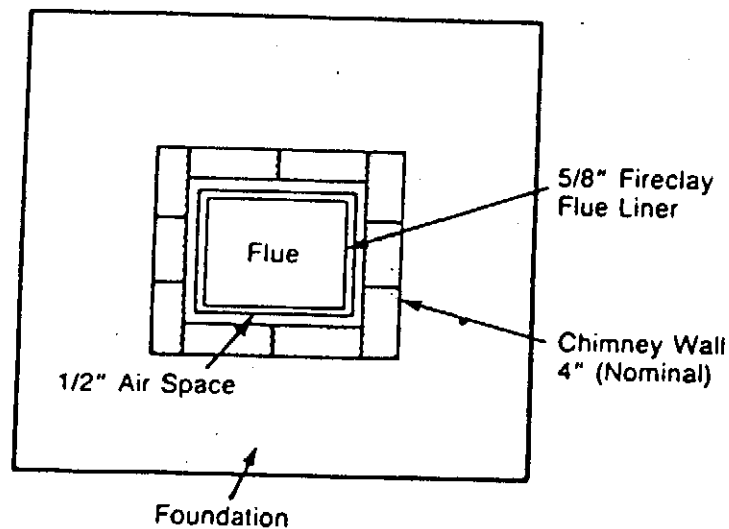


Fig. 9, Masonry Chimney Construction

3. A chimney inside the house must have at least 2 inches of clearance to the combustible structure. A chimney outside the house must have at least one inch clearance to the combustible structure. Fire stops must be installed at the spaces where the chimney passes through floors and/or ceiling (Fig. 10).

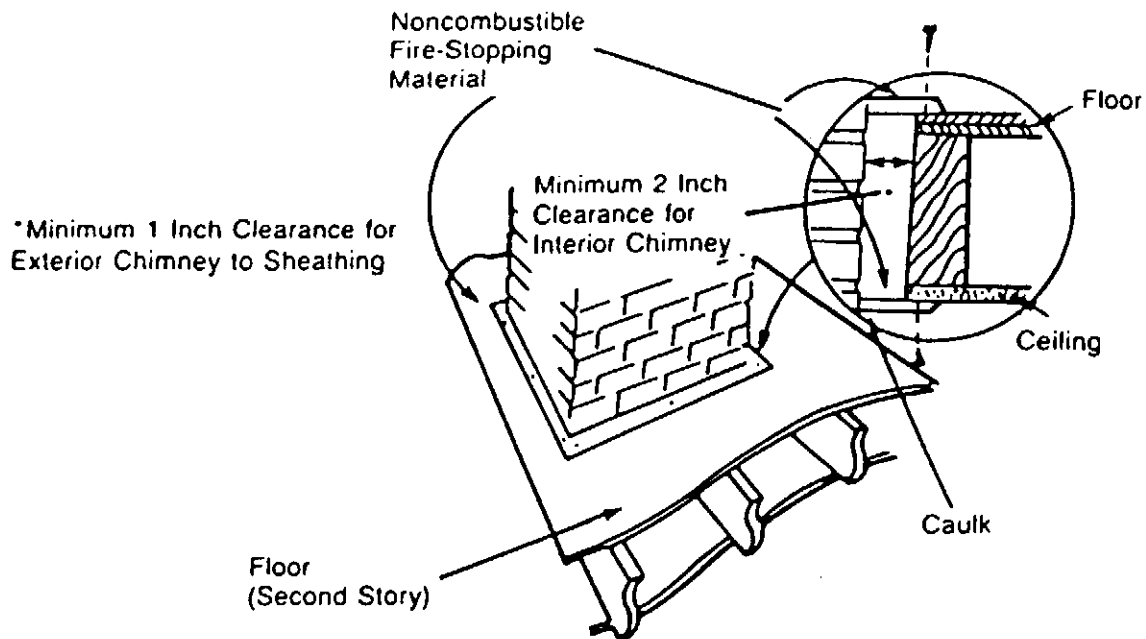


Fig. 10, Fire Stopping

Remember that insulation must not contact the chimney. There must be air space around the chimney. Insulation must be 2 inches or more from the chimney (Fig. 11).

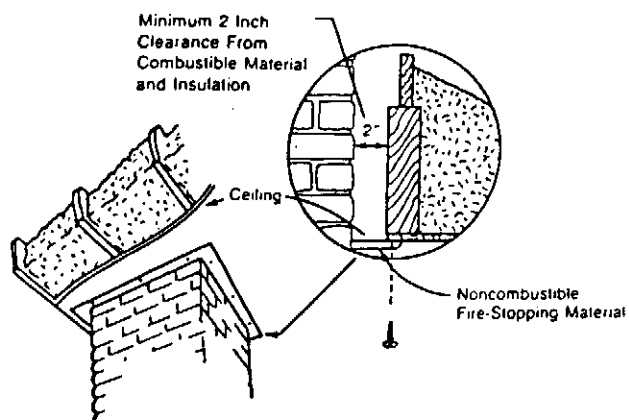


Fig. 11, Clearances, Masonry to Combustibles

4. A chimney must be the required height above the roof or other obstruction for safety and for proper draft operation. The requirement is that the chimney must be at least 3 feet higher than the highest point where it passes through the roof and at least 2 feet higher than the highest part of the roof or structure that is within 10 feet of the chimney, measured horizontally (Fig. 12).

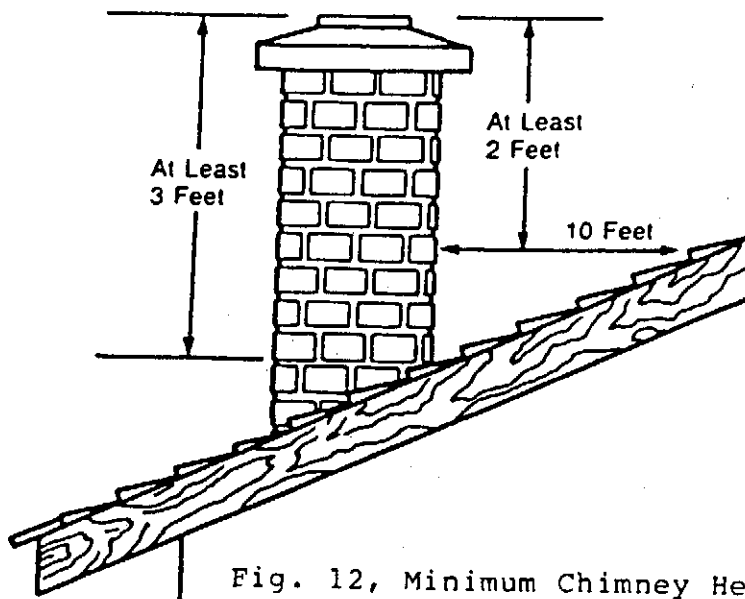


Fig. 12, Minimum Chimney Height

THIMBLE

A thimble must be used when the connection from the stove is made through a combustible wall to a masonry chimney. There are several methods to use for connection through a combustible wall, two of which are illustrated in this manual. Local building authorities may be consulted or NFPA 211 may be used for additional methods of chimney connection.

Also, listed prefabricated metal thimbles may be purchased for use with wood stoves. The manufacturer's installation instructions for the thimbles must be strictly followed to assure the safety of the system. Be sure to maintain the designated clearance to combustible materials.

1. Brick chimney thimble assembly

Construction of the brick thimble assembly requires 12 inches of brick around a fire clay liner. Be sure the point of penetration allows an 18 inch clearance from the connector to the ceiling. An appropriate opening for an 8 inch chimney connector must be cut in the wall to maintain the required 12 inches of brick separation from combustibles. It will be necessary to cut wall studs and install a header and sill frame to maintain proper dimensions and to hold the weight of the brick (Fig. 13).

NOTE: Whenever cutting through a wall, check first with local building authorities to be sure building integrity is maintained.

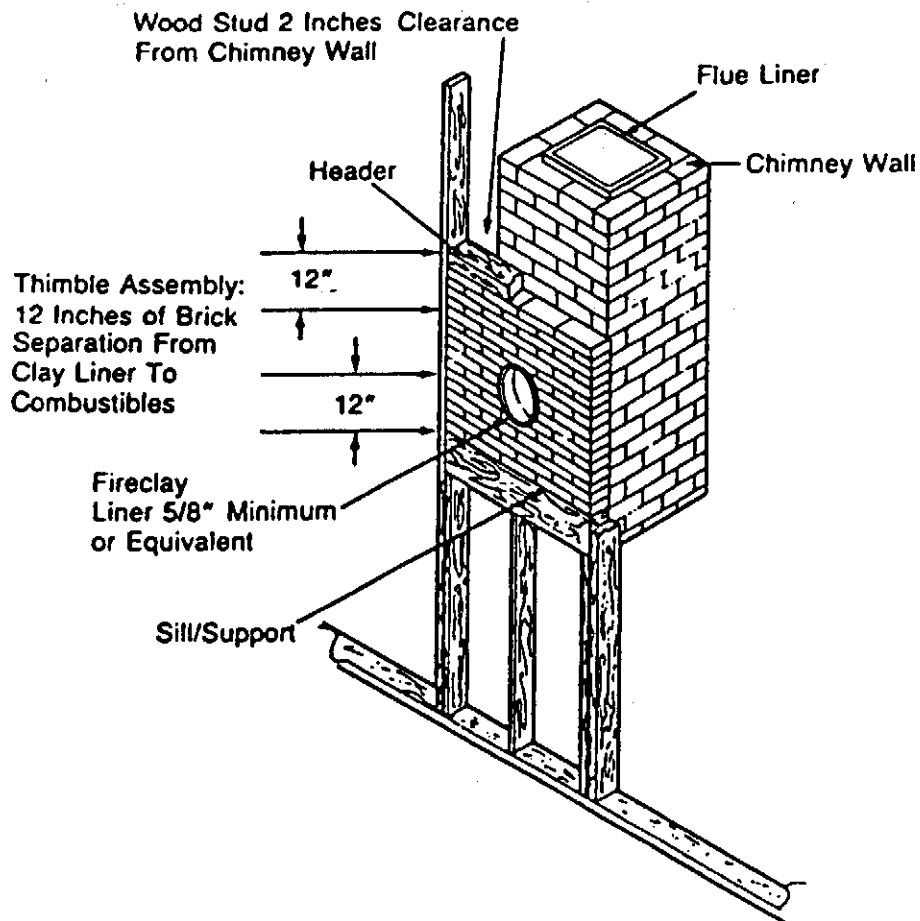


Fig. 13, Brick Chimney Thimble

Minimum 3 1/2-inch (4-inch nominal) thick solid bricks are to be used. The fire clay liner (ASTM C35 or equivalent), minimum 5/8-inch wall thickness, must not penetrate into the chimney beyond the inner surface of the chimney flue liner and must be firmly cemented in place. If it is necessary to cut a hole in the chimney liner, use extreme care to keep it from shattering. Refractory mortar must be used at the junction to the chimney liner (Fig. 14). After the assembly is complete, insert the chimney connector in the fire clay liner. Do not push it beyond the inside edge of the chimney liner because this will affect the draw of the chimney.

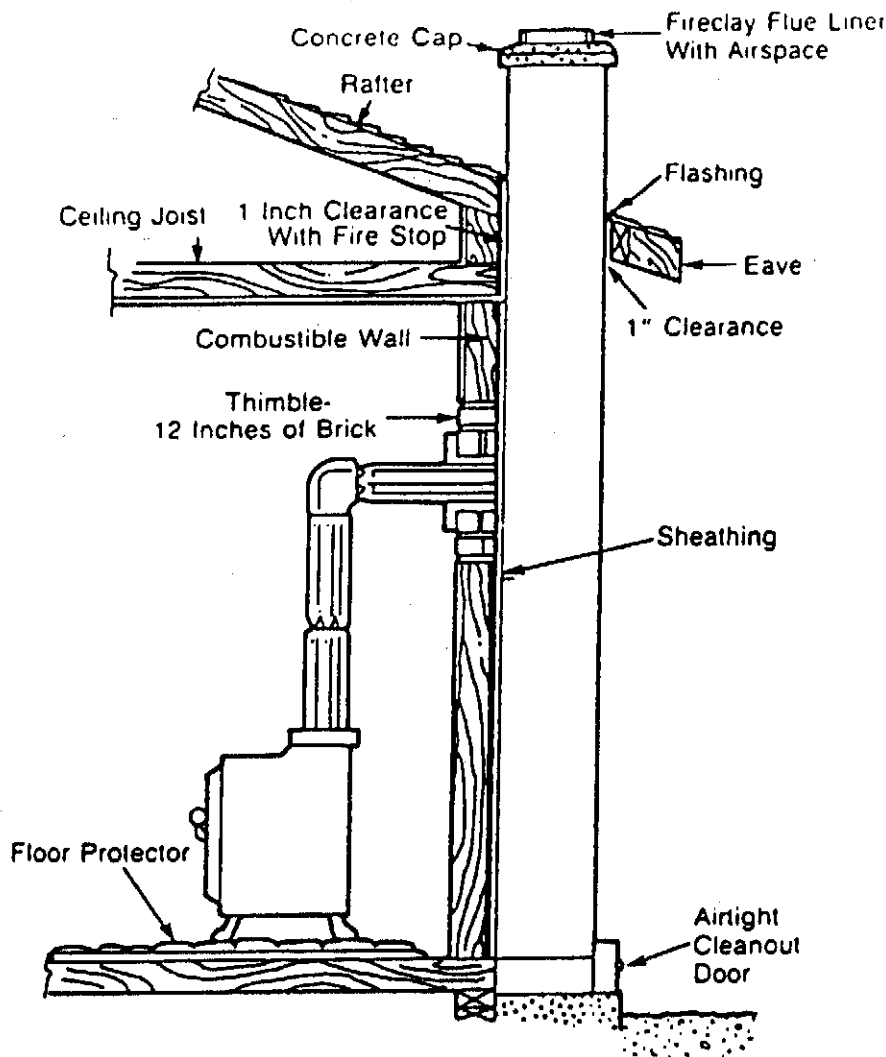


Fig. 14, Masonry Chimney Construction, with Clearances

2. 8 inch prefabricated chimney with metal supports as a thimble

For the method of installation to a masonry chimney shown in Fig. 15 and 16, it will be necessary to purchase an 8 inch inside diameter 12-inch long section of prefabricated listed chimney to use as a thimble. Purchase a wall spacer, trim collar and wall band that are manufactured to fit the chimney section you purchase.

The safety features of this system are: the 2-inch air space between the chimney section and combustible wall, and the 1-inch air space around the chimney connector as it passes through the chimney section to the chimney.

The location of the opening through the wall to the chimney must leave a minimum 18 inch vertical clearance between the connector pipe and the ceiling to prevent the ceiling from catching fire.

For instructions on installation of the thimble, refer to chimney manufacturer's instructions.

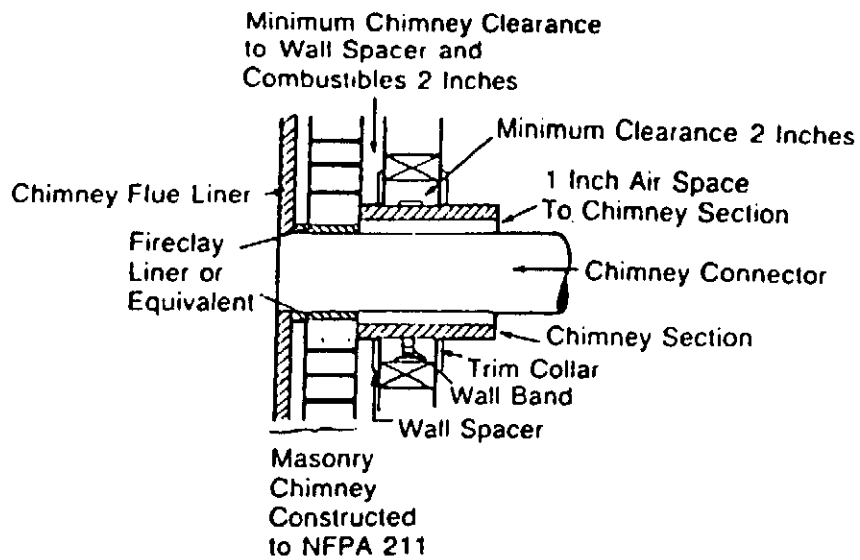


Fig. 15, Metal Prefabricated Thimble

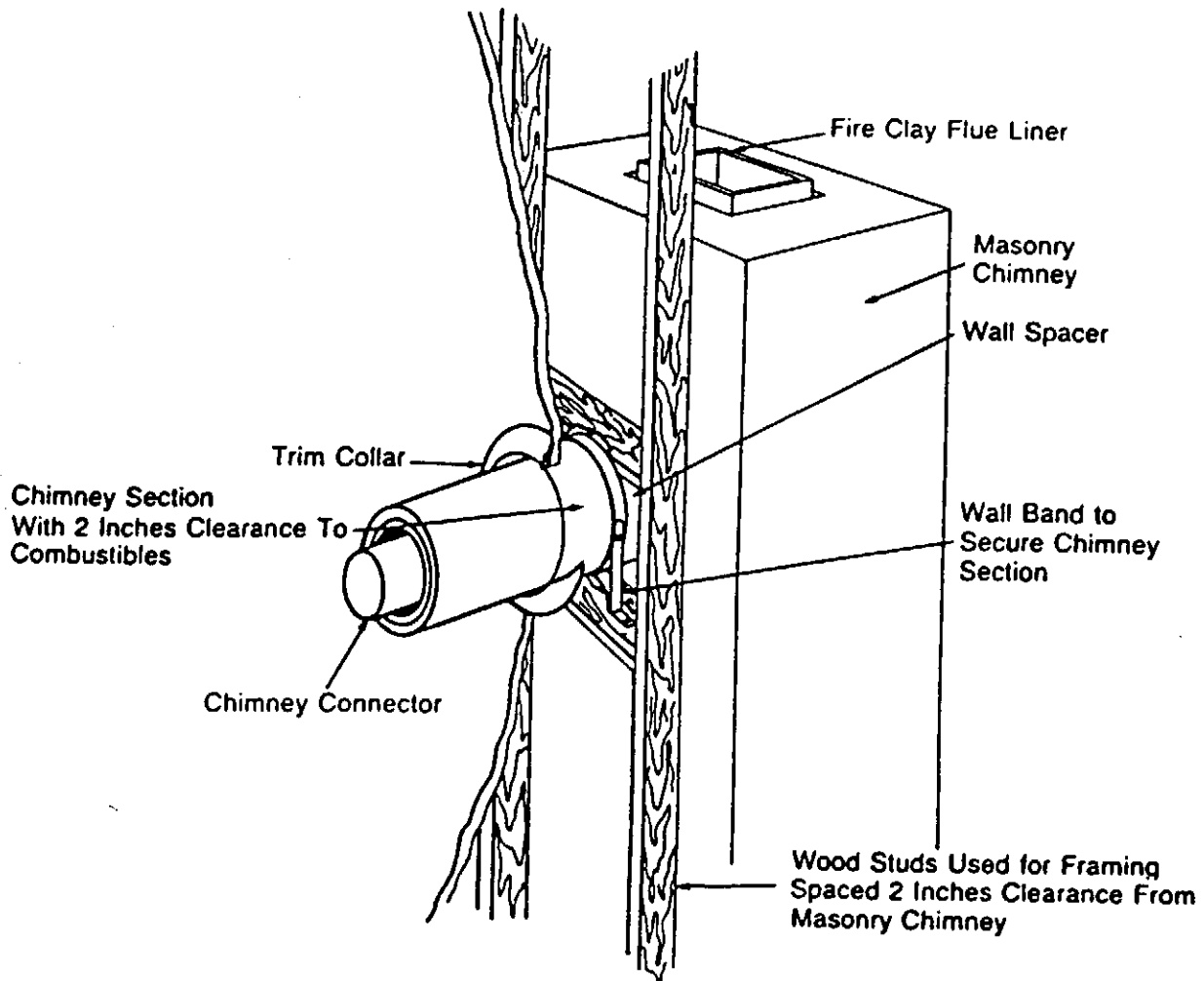


Fig. 16, Metal Prefabricated Thimble

CONNECTION TO A METAL PREFABRICATED CHIMNEY

CHIMNEY

When a metal prefabricated chimney is used, the manufacturer's installation instructions must be followed precisely. You must also purchase (from the same manufacturer) and install the ceiling support package or wall pass through and "T" section package, firestops (when needed), insulation shield, roof flashing, chimney cap, etc. Maintain the proper clearance to the structure as recommended by the manufacturer. This clearance is usually a minimum of 2 inches, although it may vary by manufacturer or for certain components.

There are basically two methods of metal chimney installation. One method is to install the chimney inside the residence through the ceiling and the roof (Fig. 17 and 18). The other method is to install an exterior chimney that runs up the outside of the residence (Fig. 19 and 20). The components illustrated may not look exactly like the system you purchase, but they demonstrate the basic components you will need for a proper and safe installation.

The chimney must be the required height above the roof or other obstruction for safety and for proper draft operation. The requirement is that the chimney must be at least 3 feet higher than the highest point where it passes through the roof and at least 2 feet higher than the highest part of the roof or structure that is within 10 feet of the chimney, measured horizontally (Fig. 12).

THIMBLE

When a wall exit installation is used, a thimble must be installed. Either a manufactured or a site-constructed (brick) thimble may be used.

In a roof exit installation, the ceiling support box supplied with the manufactured chimney acts as a thimble.

REMEMBER: Follow the manufacturer's installation instructions and maintain the manufacturer's specified clearance distances.

Install an attic insulation shield to maintain the specified clearance to insulation. Insulation in this air space will cause a heat buildup which may ignite the ceiling joists.

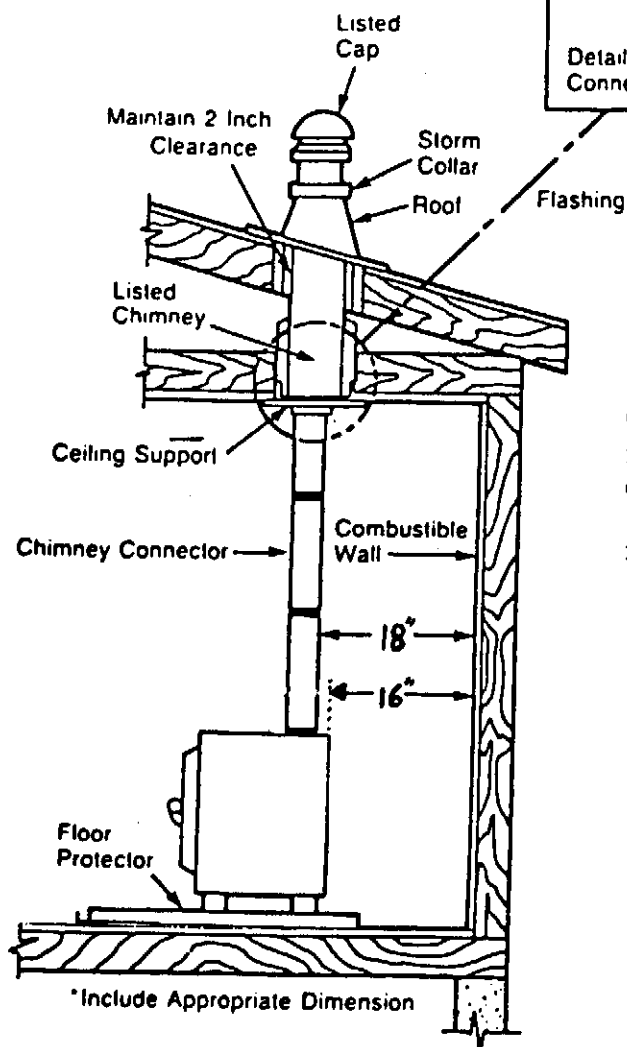


Fig. 17, Metal Prefabricated Chimney Through Roof

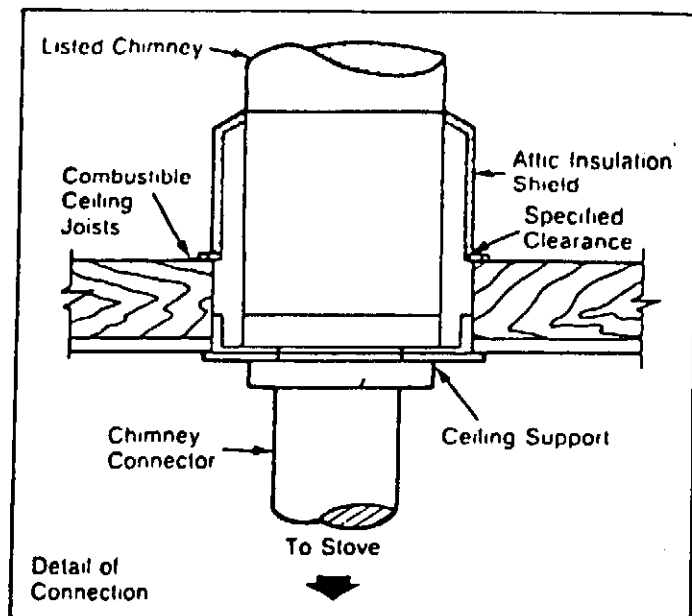


Fig. 18

This method of installation requires at a minimum a ceiling support package, an insulation shield and roof flashing

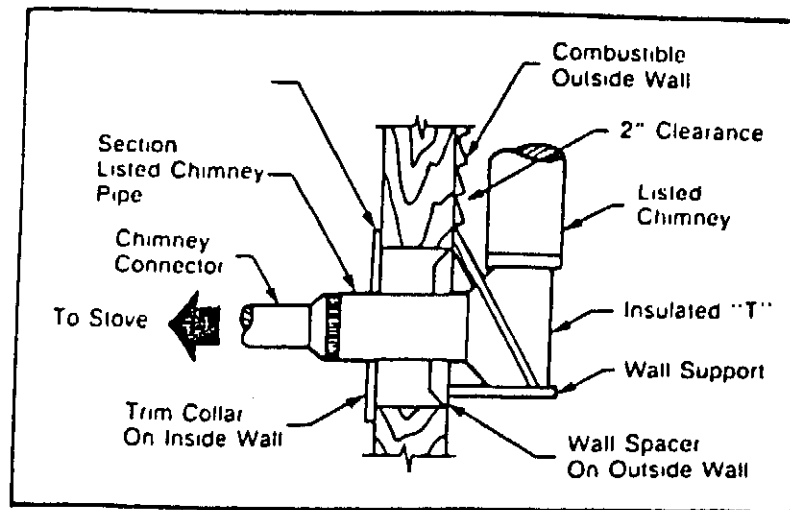
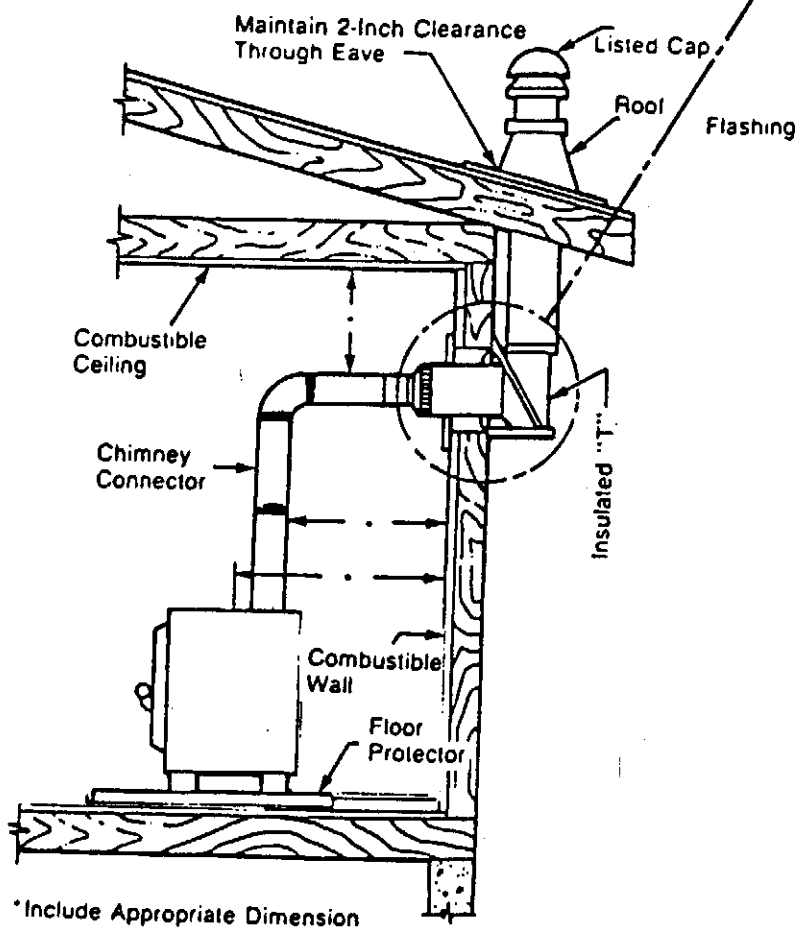


Fig. 20



This method of installation requires at a minimum a wall pass through device, a wall support package and insulated "T" section and roof flashing.

Fig. 19, Metal Prefabricated Chimney Through Wall

PART II CLEARANCES TO COMBUSTIBLE SURFACES

WARNING

FAILURE TO ALLOW THE REQUIRED CLEARANCES TO COMBUSTIBLE MATERIALS OR TO PROVIDE ADEQUATE FLOOR PROTECTION CAN CAUSE A HOUSE FIRE. SUCH A FIRE CAN RESULT IN DAMAGE TO PROPERTY AND SERIOUS INJURY OR DEATH.

TABLE #1, KEJ-1102

SEE NOTES PAGE 38	MINIMUM CLEARANCES IN INCHES, see page 40						ILL. FIG.
	A	B	C	D	E	F	
	See note 10, page 39						
↓	RESIDENTIAL INSTALLATIONS						↓
	Roof exit						
1) Parallel and corner	16	9	27	16.5	14	25	21, 23
2) Reduced side	10	9	21	16.5	--	--	21, 23
3) Reduced corner	--	--	--	--	6	17	21, 23
4) Close clearance	10	6	21	13.5	--	--	21, 23
	Wall exit						
5) Parallel and corner	16	11	27	18.5	14	25	24, 25, 26
6) Reduced side	10	11	21	18.5	--	--	24, 25, 26
7) Reduced corner	--	--	--	--	7	18	24, 25, 26
8) Alcove, roof exit	9	6	20	13.5	--	--	22
	MOBILE HOME INSTALLATIONS						
	Roof exit						
9) Parallel and corner	10	6	21	13.5	6	17	21, 23

TABLE #2, PEJ-1003

SEE NOTES PAGE 38	MINIMUM CLEARANCES IN INCHES, see page 40						ILL. FIG.
	A	B	C	D	E	F	
	See note 10, page 39						
↓	RESIDENTIAL INSTALLATIONS						↓
	Roof exit						
1) Parallel and corner	16	9	25.5	16	14	25	21, 23
2) Reduced side	10	9	19.5	16	--	--	21, 23
3) Reduced corner	--	--	--	--	6	17	21, 23
4) Close clearance	10	6	19.5	13	--	--	21, 23
	Wall exit						
5) Parallel and corner	16	11	25.5	18	14	25	24, 25, 26
6) Reduced side	10	11	19.5	18	--	--	24, 25, 26
7) Reduced corner	--	--	--	--	7	18	24, 25, 26
8) Alcove, roof exit	10	6	19.5	13	--	--	22
	MOBILE HOME INSTALLATIONS						
	Roof exit						
9) Parallel and corner	10	6	19.5	13	6	17	21, 23

NOTE

Following are requirements for both KEJ and PEJ, to attain above clearances on previous page. Various shield and fan kits are further described in the OPTIONS section, starting on page 51.

- 1) Residential roof exit, parallel or corner installation, may employ any 8" listed, prefabricated chimney system and 24 gauge blue/black single wall chimney connector. Neither side shields nor rear heat shield/fan kit are required. Installation instructions begin on page 41.
- 2) Residential roof exit with reduced side clearances is possible by adding side shields. Single wall chimney connector, 8", 24 gauge, is permitted with any listed prefabricated chimney system. Installation instructions begin on page 41.
- 3) Residential roof exit with reduced corner clearances is possible with both side shields and either rear shield OR fan kit installed. Single wall chimney connector, 8", 24 gauge, is permitted with any listed prefabricated chimney system. Installation instructions begin on page 41.
- 4) Residential close clearance installations require side shields, a rear shield OR fan kit, and one of the 8" listed, prefabricated HT chimney systems with matching double wall close clearance connector shown on page 50. These requirements are the same as for a Mobile Home installation, except for the outside air kit. Installation instructions begin on page 41.
- 5) Residential wall exit, parallel and corner, use 8" 24 gauge blue/black single wall chimney connector through a listed wall thimble assembly, or a site-built brick thimble, into any 8" listed, prefabricated chimney system, or a site-built masonry chimney with tile liner. Neither side shields nor rear heat shield/fan kit are required. The horizontal section of the chimney must be at least 18" below the ceiling. Installation instructions begin on page 43.
- 6) Residential wall exit with reduced side clearances is possible by adding side shields. Single wall chimney connector, 8", 24 gauge, is permitted. Connector must pass through a listed wall thimble assembly, or a site-built brick thimble, into any 8" listed, prefabricated chimney system, or a site-built masonry chimney with tile liner. The horizontal section of the chimney must be at least 18" below the ceiling. Installation instructions begin on page 43.
- 7) Residential wall exit with reduced corner clearances is possible with both side shields and either rear shield OR fan kit installed. Single wall chimney connector, 8", 24 gauge, is permitted. Connector must pass through a listed wall thimble assembly, or a site-built brick thimble, into any 8" listed, prefabricated chimney system, or a site-built masonry chimney

with tile liner. The horizontal section of the chimney must be a least 18" below the ceiling. Installation instructions begin on page 43 (prefabricated chimney) or page 45 (masonry chimney).

8) Residential alcove, roof exit, requires a minimum ceiling height of 76". Also required are side shields, rear shield OR fan kit, and one of the 8" listed, prefabricated HT chimney systems with matching double wall close clearance connector shown on page 50. For both KEJ and PEJ, minimum alcove width is 47". Maximum alcove depth is 48". Minimum distance from bottom of either stove model, to ceiling of alcove, is 76". Installation instructions begin on page 47.

9) Mobile Home installations are only allowed with a roof exit. Mobile homes require side shields, either rear shield OR fan kit, an outside air kit, and one of the 8" listed, prefabricated HT chimney systems with matching double wall close clearance connector shown on page 50. In Mobile Homes, overall installed height of stove with chimney system must be no less than 10.5 feet nor more than 20 feet. Installation instructions begin on page 47.

10) Clearance A is measured from the side of the stove top. Clearance B is measured from the back center of the stove. Clearances C and D are measured from the 8" round chimney connector collar on the stove top, not from the chimney connector. Clearance E is measured from the back corner of the stove top.

CLEARANCE ILLUSTRATIONS

Fig. 21
Roof exit,
Corner,
Mobile Home,
Residence,
and
Residential
Close clearance

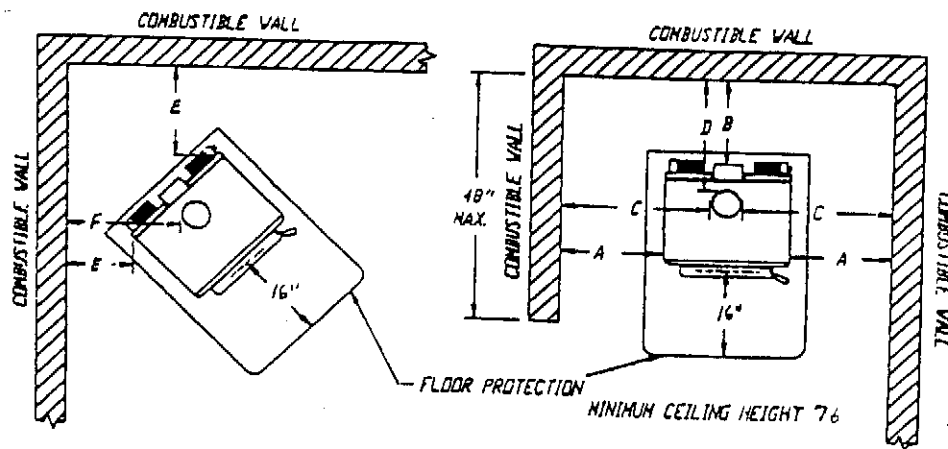


Fig. 22
Roof exit,
Alcove,
Residence

Fig. 23
Roof exit,
Parallel,
Mobile Home,
Residence
and
Residential
Close clearance

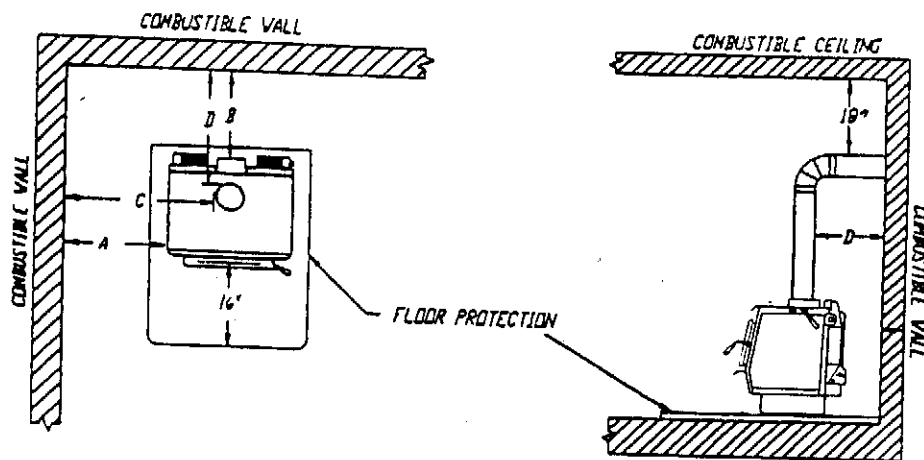


Fig. 24
Wall exit.
Side view
of Figs.
25 and 26.

Fig. 25
Wall exit,
Parallel,
Residence.

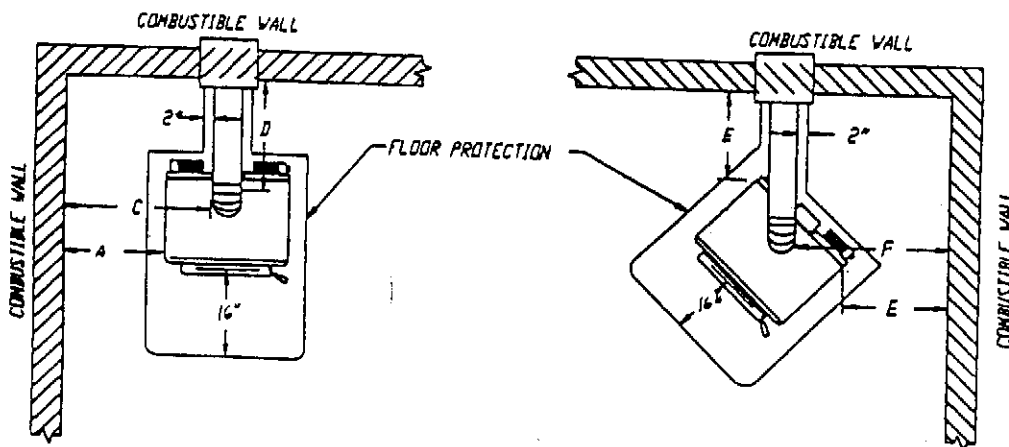


Fig. 26
Wall exit,
Corner,
Residence.

PART III INSTALLATION INSTRUCTIONS, Models KEJ-1102 and PEJ-1003

A. RESIDENTIAL, ROOF EXIT, STANDARD AND REDUCED CLEARANCE, WITH PREFABRICATED CHIMNEY.

Refer to Fig. 21 and 23.

KEJ Clearances from Table #1, PEJ Clearances from Table #2

BEFORE INSTALLATION

If the optional kits for the Jet Air fan, the Rear Shield, or the Side Shields are purchased, they are easiest to mount before the stove is installed. See instructions packed with each kit.

1. Set floor protection and stove in location; refer to the clearance dimensions listed on the label and in 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, be sure to mark the hole for Outside Air Kit.
5. Move the stove out of the way, and if outside air is required, use a saber saw with a masonry blade and cut a 6.5" hole for the outside air pipe.
6. Cut a pilot hole in the ceiling.
7. Cut a hole for the ceiling penetration components and frame in the sides of this hole in both ceiling and roof. Refer to the pipe manufacturer's installation instructions.
8. Install the Support Box and Chimney through roof. Install the slip section for the Chimney Connector at this time. Refer to the pipe manufacturer's installation instructions.
9. Following the Manufacturer's Installation Instructions, slip the roof flashing down over the chimney and secure 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 termination of the chimney. Be sure all pieces (including outside air cap, flange, collar and pipe) are installed at this point before putting the stove in its final position.
10. Slide the stove back into position.
11. To install the Chimney Connector, slip the lower (crimped) edge of the pipe inside the smoke collar. 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.
12. IF REQUIRED, install the Outside Air Flex Pipe.
13. If the OPTIONAL Fan Kit is installed the fan motors are 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. Do not route the power cord in front of or under this heater.

ROOF EXIT, PREFABRICATED CHIMNEY

For Figures 21 and 23, Page 40

Residential Stove Installation Only

Parallel and Corner, See Note 1, Page 38.
Reduced Side and Reduced Corner Clearance,
See Notes 2 and 3, Page 38.

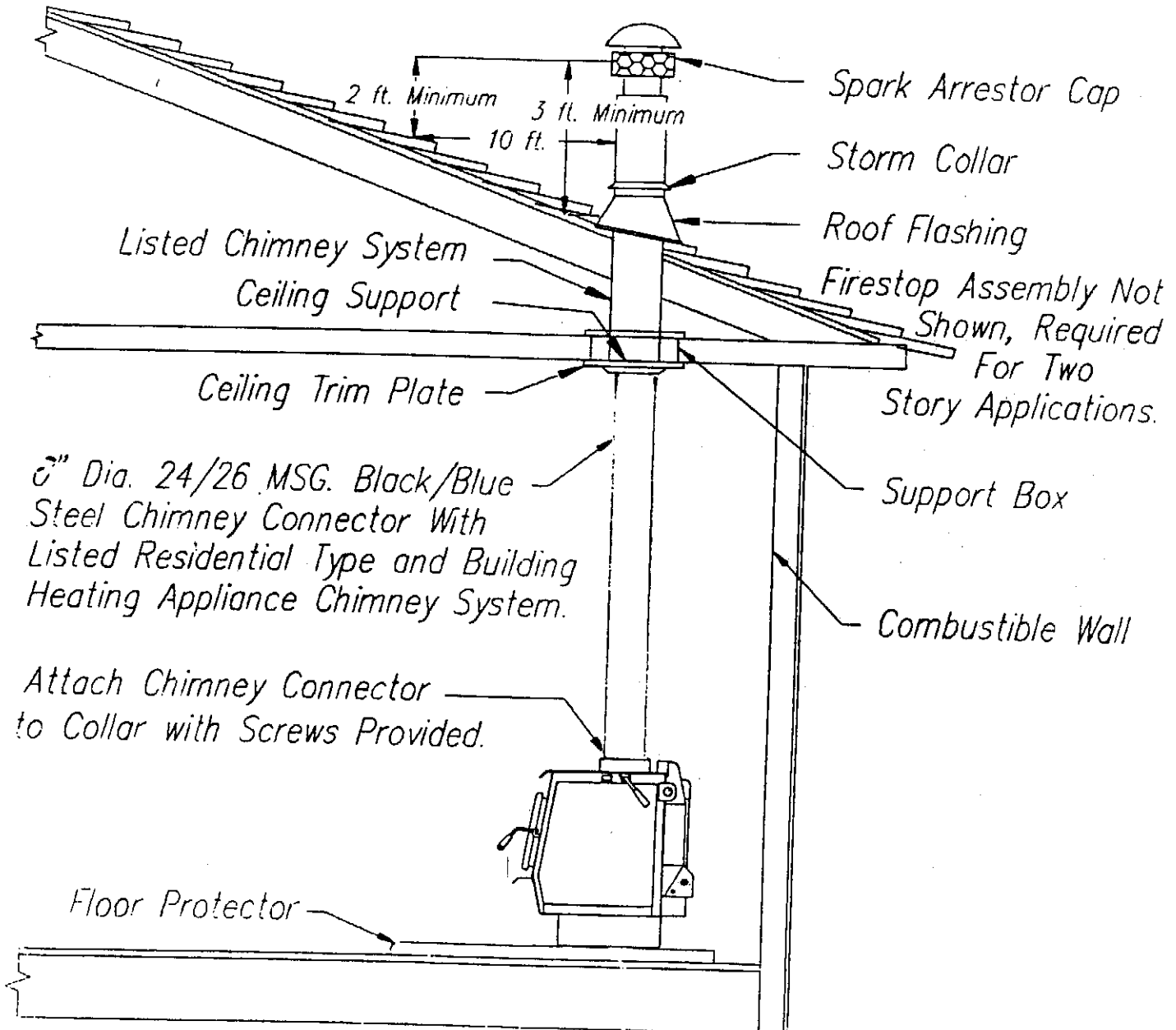


Fig. 27, Residential Roof Exit,
Prefabricated Chimney System.

B. RESIDENTIAL, WALL EXIT, STANDARD AND REDUCED CLEARANCE, WITH
PREFABRICATED CHIMNEY

Refer to Figures 24, 25, 26.

KEJ Clearances from Table #1, PEJ Clearances from Table #2

BEFORE INSTALLATION

If the optional kits for the Jet Air fan, the Rear Shield, or the Side Shield are purchased, they are easiest to mount before the stove is installed. See instructions packed with each kit.

1. Set floor protection and stove in location; refer to the clearance dimensions listed on the label and in these instructions.
2. Mark the position for the hole in the wall.
3. IF REQUIRED, be sure to mark the hole for Outside Air Kit.
4. Move the stove out of the way.
5. If outside air is required, use a saber saw with a masonry blade and cut a 6.5" hole for the outside air pipe.
6. Cut pilot hole in the wall.
7. Cut the hole for the thimble components and frame in the sides of this hole. Install Listed thimble. Refer to the pipe manufacturer's installation instructions.
8. Follow the Manufacturer's Installation Instructions to install Prefabricated Chimney system. 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 termination of the chimney.
Chimney connectors can be used horizontally between the stove and chimney if the horizontal length does not exceed three feet AND THE CONNECTOR SLOPES UPWARD TOWARD THE CHIMNEY AT 1/4" PER FOOT. The slope is required for water vapor to drain back into the stove. Use a carpenter's level to check the slope and the vertical alignment of the chimney connector. The connector may have no more than one 90 degree or two 45 degree bends. The distance between horizontal connector and ceiling must not be less than 18". All sections must be secured together and to the stove with no less than three sheet metal screws per joint. Be sure all options are installed before putting the stove in its final position.
9. Slide the stove back into position.
10. To install the Chimney Connector, slip the lower (crimped) edge of the pipe inside the smoke collar. Install the remaining lengths of pipe, one on top of the other, to the wall thimble. The last (horizontal) section must also be attached to the thimble with screws.
11. IF REQUIRED, install the Outside Air Flex Pipe.
12. If the OPTIONAL Fan Kit is installed, the fan motors are 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. Do not route the power cord in front of or under this heater.

WALL EXIT, PREFABRICATED CHIMNEY

For Figures 24, 25, and 26. Page 40.

Residential Stove Installation Only

Parallel and Corner, See Note 5, page 38.

Reduced Parallel and Reduced Corner Clearance,
See Notes 6 and 7, Page 38

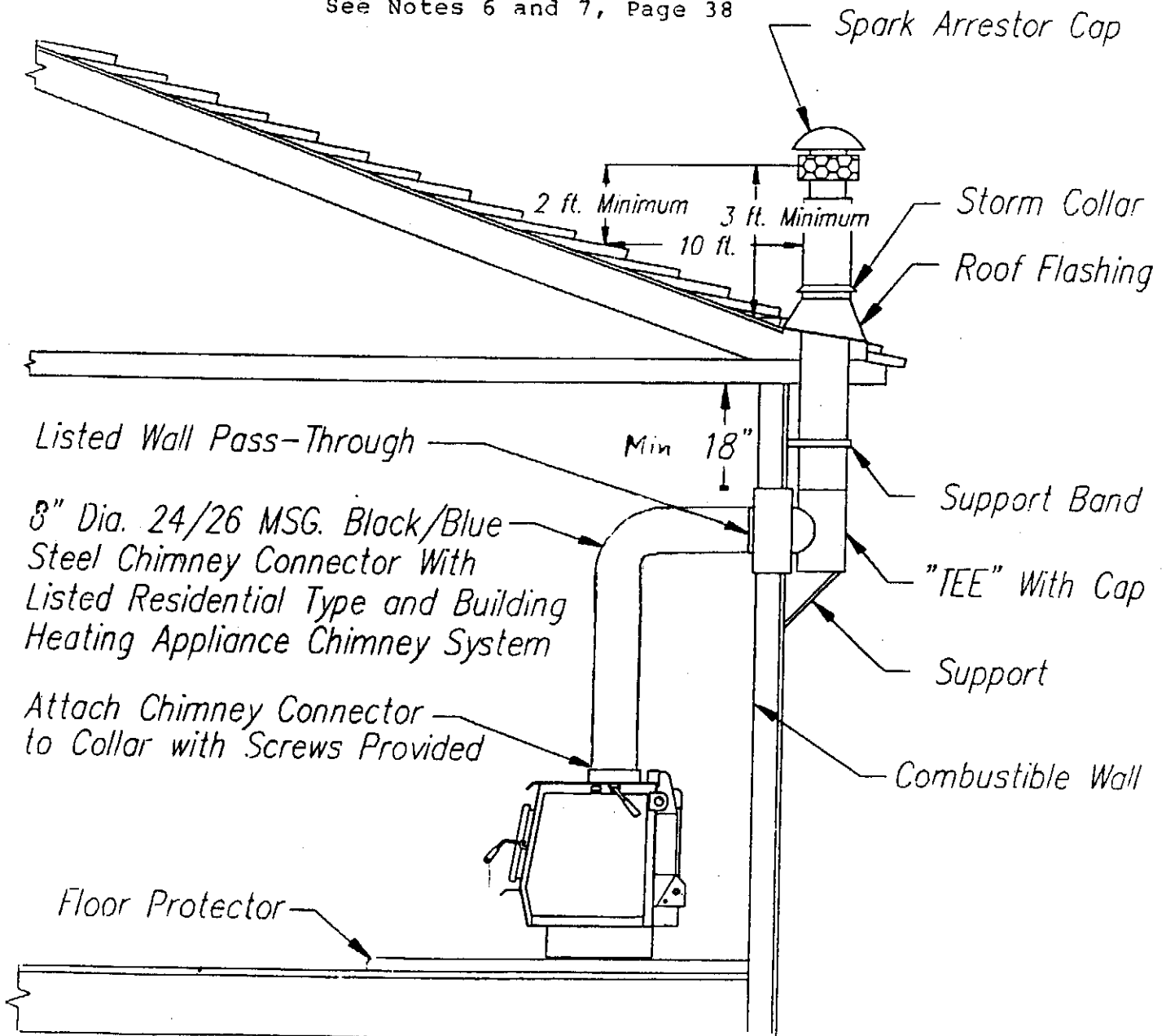


Fig. 28, Residential, Wall Exit,
Prefabricated Chimney System.

C. RESIDENTIAL, WALL EXIT, STANDARD AND REDUCED CLEARANCE, WITH
MASONRY CHIMNEY

Refer to Fig. 24, 25, 26.

KEJ Clearances from Table #1, PEJ Clearances from Table #2

BEFORE INSTALLATION

If the optional kits for the Jet Air fan, the Rear Shield, or the Side Shield are purchased, they are easiest to mount before the stove is installed. See instructions packed with each kit.

1. Set floor protection and stove in location; refer to the clearance dimensions listed on the label and in these instructions.
2. Mark position for the hole in the wall or masonry chimney.
3. IF REQUIRED, be sure to mark the hole for Outside Air kit.
4. Move the stove out of the way.
5. If outside air is required, use a saber saw with a masonry blade and cut a 6.5" hole for the outside air pipe.
6. Cut the pilot hole in the wall and/or masonry chimney.
7. Cut the hole for the wall penetration (thimble) components and frame in the sides of this hole. Install Listed Thimble or build masonry thimble. See pages 30 through 33. Refer to the pipe manufacturer's installation instructions.
8. 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 termination of the chimney. Chimney connectors can be used horizontally between the stove and a masonry chimney, provided the horizontal length does not exceed three feet AND THE CONNECTOR SLOPES UPWARD TOWARD THE CHIMNEY AT THE RATE OF 1/4" PER FOOT. This slope in the horizontal section is required to allow the water vapor to drain back into the stove. Use a carpenter's level to check the slope. Also check the vertical alignment of the chimney connector exiting the stove. The chimney connector may have no more than one 90 degree bend or two 45 degree bends. The distance between the horizontal connector and the ceiling must not be less than 18". All sections must be attached together and to the stove's flue collar with three screws per joint. Be sure all options are installed before putting the stove in its final position.
9. Slide the stove back into position.
10. To install the Chimney Connector, slip the lower (crimped) edge of the pipe inside the smoke collar. Install the remaining lengths of pipe, one on top of the other, to the wall thimble.
11. IF REQUIRED, install the Outside Air Flex Pipe.
12. If the OPTIONAL Fan Kit is installed, the fan motors are 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. Do not route the power cord in front of or under this heater.

WALL EXIT, MASONRY CHIMNEY

For Figures 24, 25, and 26. Page 40

Residential Stove Installation Only

Parallel and Corner, See Note 5, page 38

Reduced Parallel and Reduced Corner Clearance,
See Notes 6 and 7, Page 38

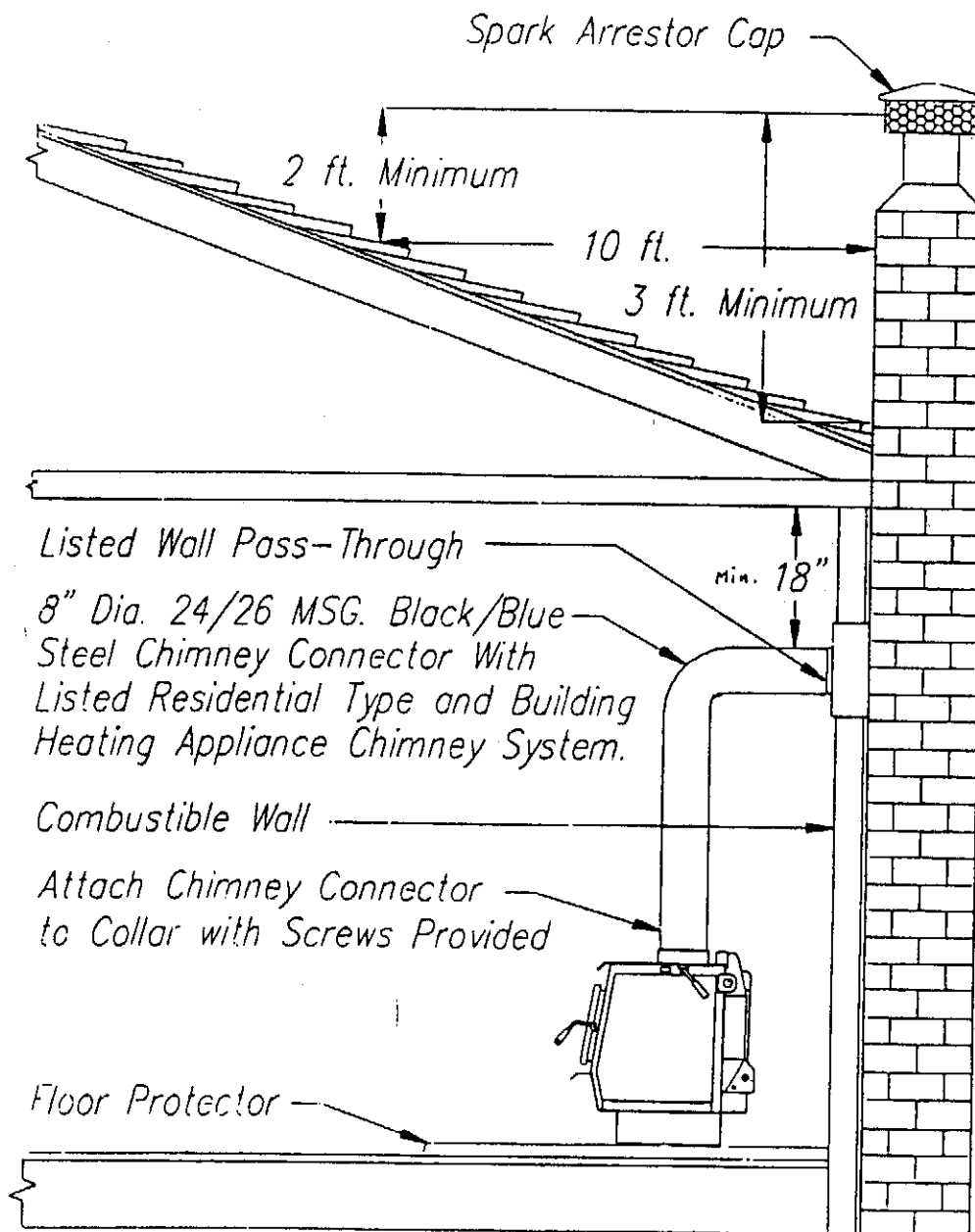


Fig. 29, Residential, Wall Exit,
Masonry Chimney

D. MOBILE HOME AND RESIDENTIAL ALCOVE, ROOF EXIT,
PREFABRICATED CHIMNEY
Refer to Fig. 21, 22, 23

KEJ Clearances from Table #1, PEJ Clearances from Table #2

BEFORE INSTALLATION

Side Shields and either Rear Shield OR Fan kit are required for these installations. They are easiest to mount before the stove is installed. See instructions packed with each kit.

NOTES:

1. For MOBILE HOME installations, use these instructions with Side Shield Kit (KEJ, #4905AA; PEJ, #4904AA) and either Rear Shield (KEJ, #1736AA; PEJ, #1735AA) or Fan Kit 4908AA and Outside Air Kit 1726B. Chimney connector must be double wall close clearance type, and must be of same brand and model as listed prefabricated chimney. Single wall pipe is not allowed in Mobile Homes or in Alcove Installations. Insulated chimney components may be any listed in Table 3, page 50. The use of pipe other than what is listed in Table 3 is not allowed in Mobile Homes.
2. For RESIDENTIAL ALCOVE installations, use these instructions with Side Shield Kit (KEJ, #4905AA; PEJ, #4904AA) and either Rear Shield Kit (KEJ, #1736AA; PEJ, #1735AA) or Fan Kit #4908AA. Chimney connector must be double wall close clearance type and must be of same brand and model as listed prefabricated chimney. Single wall pipe is not allowed in Mobile Homes or in Alcove installations. Insulated chimney components may be any listed in Table 3, page 50. The use of pipe other than what is listed in Table 3 is not allowed.

WARNING - DO NOT INSTALL IN SLEEPING ROOM

CAUTION - THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL AND CEILING/ROOF MUST BE MAINTAINED.

1. Set floor protection and stove in location; refer to the clearance dimensions listed on the label and in these instructions.
2. Mark the position for the hole in the ceiling and roof 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. Mark the positions for the tie down and the hole for the outside air pipe.
5. Move the stove and using a saber saw with a suitable blade, cut a hole for the outside air pipe and install as per instructions. Drill a pilot hole for the tie down.
6. Cut a pilot hole in the ceiling.
7. Cut a hole for the ceiling penetration components and frame in the sides of this hole in both the ceiling and roof. Refer to pipe manufacturers installation instructions. In-

- stall the support box. Be sure all pipe parts, including outside air cap, flange, collar and pipe (and all stove options) are installed at this point before putting the stove in its final position.
8. Slide the stove back into position.
 9. Install the tiedown.
 10. To install close clearance connector to the stove, slip the lower (crimped) end inside the smoke collar. Fasten chimney connector to stove with screws provided. Slide connector up and snap into ceiling support. (Make sure it "snaps" in place.) Refer to the pipe manufacturer's Installation Instructions.
 11. Following the pipe manufacturer's Installation Instructions, install chimney system into support box, slip the roof flashing down over the chimney and secure 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 termination.
 12. Install the Outside Air Pipe 3" flex tube.
 13. If the OPTIONAL Fan Kit is installed, the fan motors are 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. Do not route the power cord in front of or under this heater.

NOTE: In mobile home installations, the stove must be securely fastened to the floor using the tie-downs provided. ALSO, a #8 ground wire must be attached to the stove and an appropriate ground.

MOBILE HOME, RESIDENTIAL CLOSE CLEARANCE AND
RESIDENTIAL ALCOVE, ROOF EXIT, PREFABRICATED CHIMNEY

For Figures 21, 22 and 23. Page 40
Residential Reduced Back Clearance & Alcove,
See Notes 8 and 9, Page 39.
Mobile Home Parallel, Corner and Alcove,
See Notes 8 and 9, Page 39.

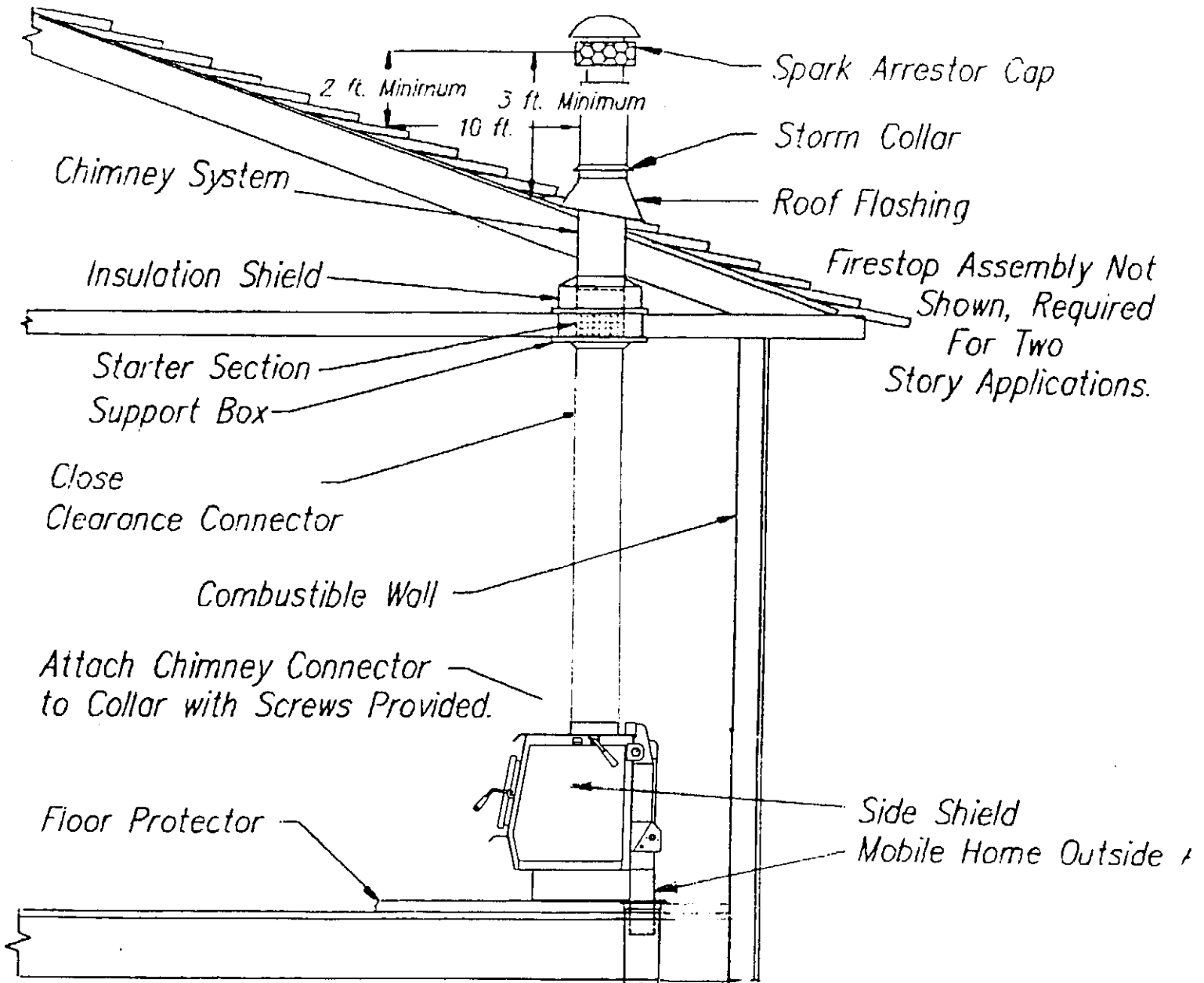


Fig. 30, Mobile Home, Residential Close Clearance and
Residential Alcove, Roof Exit, with Close Clearance
Connector

Table #3, Listed Prefabricated Chimney Systems

Listed for use with PEJ, KEJ.

The following pipe systems are required for Residential Close Clearance, Residential Alcove and Mobile Home configurations. Close clearance chimney connectors must be from the same manufacturer as the chimney system.

1. Duravent, Model Dura-Plus HT
2. Ameri-Tec, Model HS
3. Metalbestos, Model HT
4. Security, Model 103 HT; in Canada, Model S629M

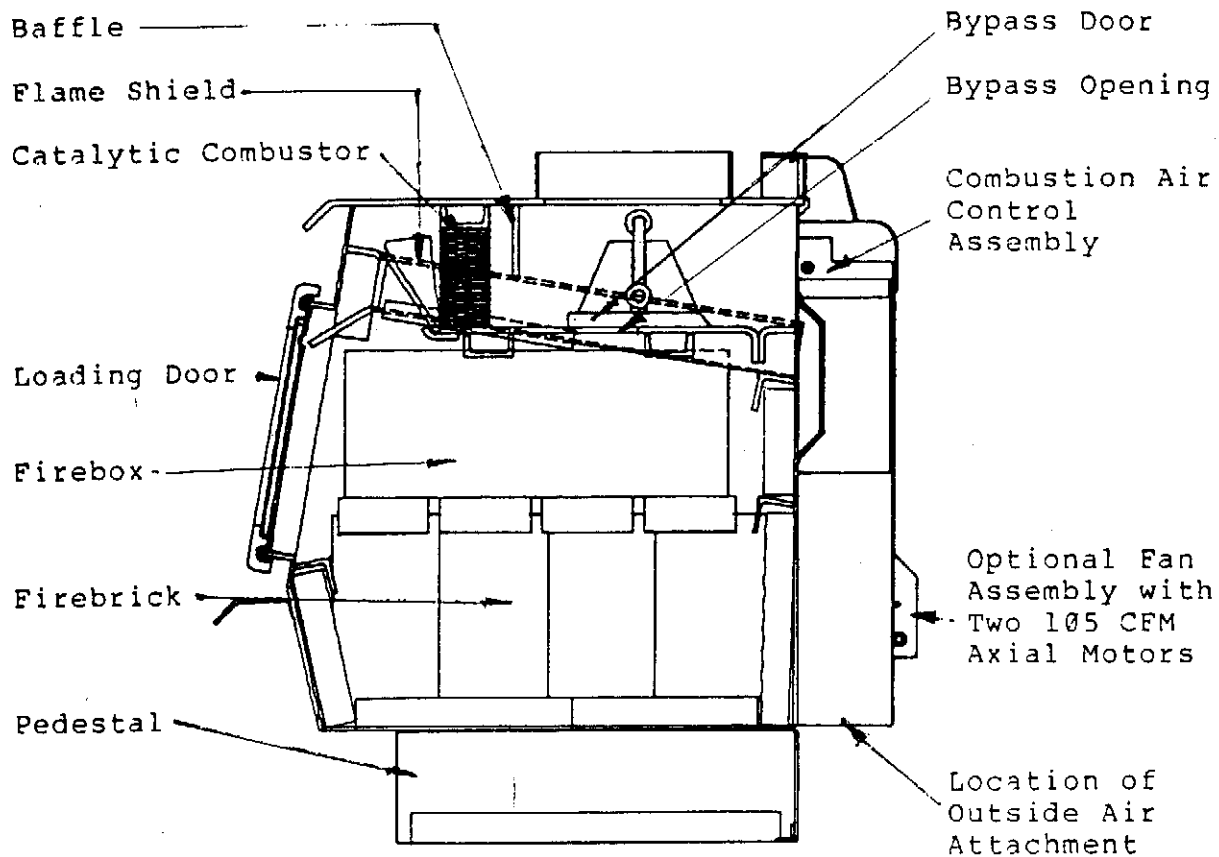


Fig. 31, Cutaway View, with Major Internal Components, Model PEJ

***** SECTION 9 - OPTIONS *****

SIDE SHIELD KIT, KEJ (P/N 4905AA)
SIDE SHIELD KIT, PEJ (P/N 4904AA)

REQUIRED FOR: MOBILE HOME, any installation
RESIDENTIAL REDUCED CLEARANCE
RESIDENTIAL ALCOVE

CHECK LIST, KEJ

QTY	PART NUMBER	DESCRIPTION
1	4546AA	Side Shield, Left
1	4547AA	Side Shield, Right
4	0672A	Bolts
4	0490A	Nuts

CHECK LIST, PEJ

QTY	PART NUMBER	DESCRIPTION
1	4470AA	Side Shield, Left
1	4471AA	Side Shield, Right
4	0672A	Bolts
4	0490A	Nuts

TOOLS NEEDED FOR INSTALLATION

1. Pliers, or wrench

INSTALLATION (both models)

1. Place one of the Side Shields in place on the stove. (The shields will only fit on the sides for which they are intended.) Slide the tab on top under the clip that is just under the top of the stove.
2. Hold the shield tight on the side of the stove. Slide to front and to back until holes in bottom of side shield align with holes in bottom of stove.
3. Drop one bolt through each hole. Place nut on bottom of bolt and tighten.
4. Install the other shield.

REAR SHIELD KIT, KEJ (P/N 1736AA)
REAR SHIELD KIT, PEJ (P/N 1735AA)

EITHER this Rear Shield OR the Fan Kit (P/N 4908AA) is
REQUIRED FOR: MOBILE HOME, any installation
RESIDENTIAL ALCOVE
RESIDENTIAL CLOSE CLEARANCE

CHECK LIST, KEJ

QTY	PART NUMBER	DESCRIPTION
1	3342B	Rear Shield
2	0106	Self tapping screws, 1/4" x 1 1/4"

CHECK LIST, PEJ

QTY	PART NUMBER	DESCRIPTION
1	2342B	Rear Shield
2	0106	Self tapping screws, 1/4" x 1 1/4"

TOOLS NEEDED FOR INSTALLATION

1. Phillips or square drive screwdriver.
2. Electric or hand drill.
3. 3/16" drill bit.

INSTALLATION (both models)

1. The rear shield goes across the back of the stove, just below the thermostat knob. Hold in position, making sure it is level, and that no part of the shield makes contact with the thermostat rod. Mark for the two holes that must be drilled in the back of the main tube.
2. Drill two 3/16" holes into the back of the main tube.
3. Place shield into position, insert and tighten the two 1/4" x 1 1/4" screws provided.

FAN KIT ASSEMBLY, KEJ and PEJ (P/N 4908AA)

EITHER this Fan Kit OR the Rear Shield (KEJ #1736AA or PEJ #1735AA) is
REQUIRED FOR: MOBILE HOME, ANY INSTALLATION
RESIDENTIAL ALCOVE
RESIDENTIAL CLOSE CLEARANCE

NOTE: Fan Kit should be installed before the stove is placed
into position

CHECK LIST (both models)

QTY	PART NUMBER	DESCRIPTION
1	4445AA	Jet Air fan tube, left
1	4446AA	Jet Air fan tube, right
1	1714C	Fan Set, with wiring harness
10	0106	Screws, 1/4" x 3/4"
1	0149A	Cable Clamp
1	4443BA	Fan screen, left
1	4444AA	Fan screen, right

TOOLS NEEDED FOR INSTALLATION

1. Square (Robertson) screw driver.

INSTALLATION (both models)

Fan kits are shipped fully assembled and electrically wired.
Each fan assembly is held to the back of the stove with three
screws.

To begin, remove the two plates behind the vents at the top
back of the stove. Replace all screws.

Remove fan kit from packaging and inspect, paying particular
attention to the fans. The fan blades must turn freely.

Each fan/fan tube assembly attaches with the fan at the
bottom, and the assembly with the speed control switch on the
same side as the thermostat and bypass controls.

Hook the top of the fan tube over the stove top and inside
the stove top vent. Start the screw that is below the fan, into
the slotted bracket on the bottom back of the stove body. Align
the assembly so that the fan tube is parallel with the main air
tube down the center of the stove.

Tighten the screw below the fan to push the fan tube up.
Tighten the two top screws so the entire assembly is snug against
the stove body.

Manufacturing tolerances allow some space around control
shafts and welds. The intent is to minimize the air gaps around
the tube, and to lessen the possibility of rattles.

ELECTRICAL CONNECTION

Your Blaze King fan kit is equipped with a three-prong
(grounded) plug to decrease shock hazard. THIS PLUG SHOULD BE
INSERTED DIRECTLY INTO A PROPERLY-GROUNDED, THREE-HOLE
RECEPTACLE. DO NOT CUT OR REMOVE THE GROUNDING PRONG FROM THIS
PLUG. Do not route the power cord in front or under the stove.

OUTSIDE AIR KIT, KEJ and PEJ (P/N 1726B)

REQUIRED FOR: ALL MOBILE HOME INSTALLATIONS
OPTIONAL: ALL RESIDENTIAL INSTALLATIONS

CHECK LIST

QTY	PART NUMBER	DESCRIPTION
9	Ø1Ø4	#1Ø x 3/8" blunt point sheet metal screw (3-cap, 3-flange, 3-pipe)
4	Ø1Ø6	1/4" x 3/4" sheet metal screw
1	Ø639AA	3" outside air flex hose (3" flexible ducting)
1	Ø164AA	Outside air hose clamp (3" hose clamp)
1	Ø513AA	1/4" x 3" lag screw
1	8317A	Outside air cap & collar assembly
1	8318A	Outside air flange & collar assembly
1	Ø649A	Outside air pipe
1	Ø1Ø7	3/8" flat washer (use with 1/4"x3" lag screw)

TOOLS NEEDED FOR INSTALLATION

1. 1/4" or 3/8" drill motor
2. Saber saw
3. Saber saw wood & metal blades
4. 5/16" nut driver or wrench
5. 7/16" wrench
6. Small tube of hi-heat silicone

The outside air inlet hose is a flexible tube to bring outside air for combustion into the stove from outside the residence, through the wall or up 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.

INSTALLATION (both models)

1. Set floor protector and stove in location for marking holes in accordance with the dimensions listed on the label and figures of these instructions.
2. Check that the intended location will not interfere with floor joists, ceiling wiring or plumbing.
3. Mark the positions for the tie down and the hole for the outside air pipe.
4. Move the stove and using a saber saw with a suitable blade, cut a 6-1/2" hole for the outside air pipe. Drill a pilot hole for the tie down.
5. Install the outside air cap on the bottom of the main tube with three #1Ø x 3/8" screws.
6. Install the outside air pipe to the outside air flange and collar with three #1Ø x 3/8" sheet metal screws.

***** SECTION 10 - OPERATION *****

Your stove's performance (including its efficiency, pollutant emission level and service lifetime) depends largely on how it is operated. You, then, are the most important factor affecting performance. Read these operation instructions carefully.

BEFORE PROCEEDING FURTHER, be sure to read the following
SAFETY INFORMATION: Section 4, pages 16 through 19.
CLEARANCES TO COMBUSTIBLE MATERIALS: pages 37 through 40.
FLOOR PROTECTION INFORMATION: page 26.

The six major needs of a well-controlled fire are:

1. A knowledgeable and conscientious operator,
2. Adequate air supply,
3. Firewood of good quality and proper size,
4. Catalytic combustor in good condition,
5. Clean chimney, properly sized and installed.
6. Clean heat exchangers with tight gaskets and seals.

All of these needs are interrelated. A deficiency in any one will affect all of the others. If you encounter a problem, determine the source of the problem and then follow up by checking the other needs for possible problems.

All things considered, point number one is the most important for the safe and efficient operation of any stove. Please study the following carefully, so you may become, and remain, a knowledgeable and conscientious operator.

WARNING - PROVIDE ADEQUATE AIR CIRCULATION

It is essential that a source of fresh air for combustion be provided at all times when this woodstove is in operation. In extremely tight houses, partially open a window near the woodstove or install an Outside Air Kit.

FUEL

THIS WOODSTOVE IS FOR USE WITH SOLID WOOD FUEL ONLY. NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR 'FRESHEN UP' A FIRE IN THIS HEATER. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE HEATER WHILE IT IS IN USE.

Do not burn materials soaked in flammable liquids, trash, garbage artificial or paper logs, plastics, gift wrappings, coal, charcoal, naptha, engine oil, chemical cleaners, chemical fire starters, treated or painted wood, saltwater driftwood, railroad ties, plywood, particle board. Do not burn sawdust, wood shavings, pellets or chips in this woodstove.

The use of saltwater driftwood will void the warranty.

The wood for these Blaze Kings should be cut to lengths that are not more than 18" long; while 18" lengths will fit, 16" lengths are much preferred.

CAUTION: Do not place wood fuel within the space heater installation clearances or within the space required for fueling and ash removal.

***** SECTION 10 - OPERATION *****

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The use of saltwater driftwood will void the warranty.

The wood for these Blaze Kings should be cut to lengths that are not more than 18" long; while 18" lengths will fit, 16" lengths are much preferred.

CAUTION: Do not place wood fuel within the space heater installation clearances or within the space required for fueling and ash removal.

CAUTION: Do not overfire. If heater or chimney connector glows, you are overfiring. Keep loading door and bypass door closed when stove is in operation.

INITIAL START-UP SEQUENCE

NOTE: As you heat up the stove for the first time, the paint will go through a curing process and will give off an odor. To minimize the inconvenience, burn the stove at a low temperature setting for several hours. If the odor gets 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 stove outside.

1. DO NOT USE A GRATE. BUILD THE FIRE DIRECTLY ON THE BRICK IN THE BOTTOM OF THE STOVE.
2. Set the thermostat to position #3.
3. Open the loading door and open the by-pass door.
4. Place five to ten balls of paper in the firebox and place a fairly large quantity (15-20) pieces of kindling on top of the paper.
5. Lay two or three medium size (approx. 3") pieces of wood on top of the kindling. Light the fire and allow it to get a good start - keep the door open at least part way, but DO NOT LEAVE THE STOVE UNATTENDED.
6. When the fire has the larger pieces of wood burning, close and latch the loading door, but leave the by-pass door open. Closing and latching 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 latching the loading door. DO NOT leave your BLAZE KING unattended when the doors are not tightly closed. Leaving the loading door open AFTER the fire is well started may cause premature failure of the catalytic combustor.
7. When nearly all the wood in the firebox is burning, finish loading the stove. Lay the wood front to back, as far to the back of the stove as possible. THEN CLOSE AND LATCH THE LOADING DOOR AND CLOSE THE BY-PASS.

CAUTION: Do not abuse the glass door by slamming it or striking it. Do not force the door closed if there is wood in the firebox that is obstructing it.

Other than during the initial startup sequence, DO NOT burn the stove with the by-pass open. Leaving the by-pass open may APPEAR to achieve a hotter fire (the flames look more active) but, in fact, just the opposite is true. Bypassing the catalyst allows as much as 50% of the potential fuel - and therefore heat - to go directly up the chimney. These Blaze King catalytic stoves produce their greatest amount of heat when the by-pass is closed, and the catalyst is active.

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 wood to sustain a fire. Put as much fuel into the stove as it will hold. Don't be afraid to fill it completely. With the Blaze King automatic thermostat, the wood will only burn at the rate set on the thermostat. Loading with a half load of fuel, and therefore reloading more

often, causes the catalyst to lose efficiency and may result in a faster creosote deposit. A good bed of hot coals will maintain a more even temperature as well as getting the new load of wood started easily.

8. With optional fans. After the firebox has warmed up (about 30 minutes) turn the fans on. The fans should be run at low when the stove is burning on low. With the stove on medium, set the fans to medium. Set them on high when the stove is burning high.
9. Let the fire burn on setting 2-3 for 20-30 minutes, or until the fire is well established, then turn the thermostat to the desired setting.

OPTIMUM THERMOSTAT SETTING

Any thermostat position between 1 and 3 will produce the desired clean burning characteristics. A thermostat setting of 3 will produce a maximum heat output of more than 35,000 BTU/HR - an output more than suitable for heating the average size home.

1. Starting the fire (see Initial Startup Sequence, page 57).

Each stove/home/installation/homeowner combination works a little differently. The first several times you fuel the stove, it may not react as you expect. A little experimentation may be needed to find the right combination of fuel and thermostat setting to achieve the maximum efficiency.

This is one of the joys of burning wood. You, the woodburner, make it work. And you can see what happens as it is working. Be patient. The air/fuel mixture and temperature must be stabilized before maximum combustion efficiency can be achieved.

2. As the combustor temperature (as indicated by the thermometer on top of the stove) passes into the active zone, further adjustment to achieve the desired room temperature should be made in small increments (for instance, from position 3 to position 2.5) 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.

When the thermostat knob is moved from high to low, more smoke is produced, so the catalyst has more fuel; consequently the catalyst thermometer may register a higher heat for several hours after the thermostat is turned down.

3. When you reload the stove you will reduce the clean burning characteristics until the new wood gets a good start.
4. The thermostat is adjusted at the factory and should not be tampered with. If the thermostat breaks, the damper will close automatically.

FAN OPERATION (Optional)

If you have the Optional Fan Assembly installed, wait about 30 minutes before you turn on the fans to begin circulating the warm air into the room. Use a LOW speed setting when the stove is set for a low burn, and a MEDIUM speed setting with a medium fire and a HIGHER speed setting with hotter fires.

DISPOSAL OF ASHES

WARNING

NEVER STORE HOT ASHES IN A GARAGE OR BASEMENT. HOT ASHES WILL GENERATE CARBON MONOXIDE AND/OR FLAMMABLE GASES. THESE GASES MAY CAUSE SUFFOCATION.

Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible 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.

RELOADING

Maintaining an efficient fire.

A bed of hot coals is the most important requirement for keeping an efficient fire. A bed of hot coals will help the stove maintain a more even temperature as well as getting the new load of wood started easily. Many new woodstove users hesitate to load enough wood to sustain a fire, fearing that a full woodstove automatically means a hot fire. The combustion air control, set at the lowest air control setting, permits a low fire even with the firebox full.

At each reloading, load the stove fully. It is neither necessary nor desirable 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 coal bed. Frequent reloading may cause major fluctuations in temperature and fuel/air mix, thereby reducing efficiency.

A full load of fuel may burn for 24 hours or more. This will change considerably with the variables of stove 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 stove can be FULLY loaded without increasing the heat output. The fire will simply burn longer.

RELOADING SEQUENCE

1. As much as possible, let each load of fuel burn down to a few coals before reloading.
2. Open the bypass by lifting the handle from the downward position to nearly straight up. Turn the thermostat to high.
3. Open the loading door gently. Pulling it open quickly could pull smoke or flames into the room. This stove is not designed to be operated with the door open. Except for loading or reloading, operate only with the door closed.

WARNING

ALWAYS OPEN THE BYPASS AND THE LOADING DOOR TO ALLOW THE FIRE TO BUILD UP SLIGHTLY BEFORE FULLY OPENING THE LOADING DOOR. IF

THE LOADING DOOR IS OPENED TOO FAST, THE SUDDEN INTRODUCTION OF AIR CAN CAUSE THE FIRE TO FLARE AND DISCHARGE SMOKE AND FLAME INTO THE ROOM. SUCH A DISCHARGE MAY BURN PERSONS WHO ARE NEAR THE WOODSTOVE.

4. With a poker, pull the glowing coals to the front center of the firebox. Load the fuel front to back (rather than sideways) and as far to the back of the stove as possible. Leave, as much as possible, an open channel between pieces of wood in the center of the stove. (This channel makes a natural chimney and gets the fire started quickly). Leave the door standing open long enough to know the new fuel will ignite.
5. When the new load has ignited, close and latch the door, but leave the by-pass open.
6. When the fuel is burning well, close the bypass, turn the thermostat to the desired setting, and turn the room air fans to the proper speed.

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 (and possibly flame) into the room.

Always open the bypass door BEFORE opening the loading door. Keep the by-pass door closed at all other times.

7. Thermostat Adjustment. Leave the air control in the fully open position (3) for 15 minutes, (or until the fire is well established) before making further adjustments. Turning down the thermostat too soon may cause creosote formation in the chimney. Once the fire is well established, adjustments may be made for a low, medium or high fire, depending on heat needs of the home. The glass will stay cleanest when the new load of fuel is burned on high for up to 30 minutes. The moisture in a new load contributes a large part of the deposit on the glass. Burning that moisture off, before turning the thermostat to low, helps keep the glass clean.

For a low fire, (12,000 to 15,000 btu/hour) getting the fire well established is particularly critical. If the wood being used is not well seasoned, it may be necessary to leave the air control setting in the fully open position for much longer than 15 minutes to assure a clean, low burn. When the fire is burning well on high, reset the air control in steps to medium, then lower, over a 5-10 minute period.

For a medium burn (16,000 to 22,000 btu/hour) leave the air control set at high for 15 minutes, or until the fire is well established. Then move the air control to the medium setting. For a high fire (30,000 to 40,000 btu/hour) the air control setting may be left on high at all times.

NOTE: Turning the thermostat down will often cause the catalyst temperature to go up, for a period of up to several hours. This is due to the greater amount of smoke (catalyst fuel) produced by a lower fire.

***** SECTION 11 - MAINTENANCE *****

ASH REMOVAL

Ashes may be removed at any time, but must be removed when they approach the level of the door opening. DO NOT remove all ashes from the stove as a wood fire burns best when made on a bed of ashes. Or, if you prefer, several quarts of sand spread on the brick will work as well.

The frequency with which you need to empty the ashes depends on the type of fuel being used. Hardwoods, unless the coals are raked to the front of the firebox before each reloading, will leave more ashes than softwoods. Remove ashes only when they are cold so the hot coals are not dumped where they may start a fire.

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.

AUTHORIZED SERVICE REPRESENTATIVE

Your local BLAZE KING dealer is your authorized service representative. Should you have any problems with operating or maintaining your BLAZE KING stove, contact him as soon as possible. The dealer will help you solve operating problems, provide replacement parts, and/or arrange warranty service repairs as required. Dealers will need information such as model, serial number, date of purchase, and a summary of the problem.

CREOSOTE FORMATION

When wood is burned slowly, it produces tar and other organic vapors which combine with expelled moisture to form creosote. If not burned by the catalyst, the creosote vapors condense in the 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.

When in good condition and operated properly, your Blaze King catalyst-equipped stove is clean-burning. So, if significant creosote buildup occurs, reexamine your firebuilding and burning procedures. Most instances of creosote buildup in the chimneys of catalytic woodstoves are due to operator error. If you still have questions, consult your dealer or contact the Customer Service department at Blaze King.

INSPECT CHIMNEY TWICE MONTHLY

Inspect your chimney and chimney connector at least twice each month during the heating season.

Creosote may form in the chimney connector or the entire flue and flue cap, or may appear as patches in one or more places in the system. It may be a thin, hard glaze that is very difficult to remove, a large fluffy mass, barely harder than cotton candy,

or a solid plug, literally closing the chimney so that the fire will not burn.

Patches of creosote in your chimney connector indicate a possible air leak. Any leak must be repaired. A chimney fire or deterioration can enlarge the leak. This will admit more air and cause exhaust gases to condense and form additional creosote.

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

REMOVAL

NEVER intentionally start a chimney fire to clean the flue. DO NOT clean the chimney while it is still connected to the stove. Remove the bottom section of pipe and attach a bag to the chimney to catch any creosote removed.

Hire a certified chimney sweep or clean the chimney yourself with a tight-fitting chimney brush. Makeshift equipment--hoses, tire chains, etc.--can damage the flue and will probably do an unsatisfactory cleaning job. After cleaning the chimney, clean inside the top of the stove. Scrape, if needed, and vacuum all creosote and fly ash from area around the by-pass door.

Re-install the first section of pipe to the stove. Refer to the Installation Instructions.

LOADING DOOR GASKET

INSPECT TWICE YEARLY. REPLACE WHEN NEEDED.

Safe and efficient operation of an airtight woodstove depends greatly on the integrity of the gaskets. Therefore, it is imperative that the loading door gasket be checked at least twice each heating season. A loose or improperly adjusted loading door may make the stove hard to control, and will speed door gasket deterioration.

INSPECTION

Inspect the gasket for physical deterioration, missing sections or obvious leakage. The stove front should make a groove in the gasket material - one side of the groove (toward the inside) will often be dark or black, and the other side (toward the outside) should be light or white. Dark smudges on the outside of the groove may indicate a smoke leak. If the groove is very shallow or missing, or if there is a heavy ash or creosote deposit along the bottom edge of the gasket, it may need to be replaced. Frayed or broken gasket material, or a gasket that is hard and unyielding, will also indicate need for replacement. Any time a piece of gasket is missing, or is broken anywhere, the entire gasket must be replaced.

To check the gasket further, insert a piece of paper (a dollar bill will work) into the door opening and close and latch the door. Obvious resistance should be felt when pulling the paper out. Repeat this check several times around the perimeter of the door.

REPLACEMENT

1. If the door gasket is to be replaced, be sure you have some 7/8" fiber glass gasket material, ready to re-install. See your Blaze King dealer.

2. Be sure the fire is out and the stove has cooled down. The door does not have to be removed from the stove.
3. With a pair of pliers, pull the old door gasket out of the channel and dispose of it.
4. Thoroughly clean out the channel so the new silicone adhesive will adhere and the gasket will fit smoothly.
5. Run a small bead of a high temperature silicone adhesive (such as G.E. Silicone Sealer, or the equivalent) along the center of the channel. DO NOT USE HOUSEHOLD SILICONE CAULKING. High temperature silicone may be obtained from most auto parts stores.
6. Start the new gasket in the lower right corner. Do not stretch or cut the gasket. Distribute the gasket evenly around the frame.
7. Close the Loading Door and allow the adhesive to dry.
8. Check the fit of the door gasket. Insert a piece of paper into the door opening and close and latch the door. Obvious resistance should be felt when pulling the paper out. Repeat this check several times around the perimeter of the door.

CATALYTIC COMBUSTOR, TESTING

Test the catalyst in your Blaze King as follows:
Build a fire using the same technique (paper, kindling, logs) you have used in the past. Leave the thermostat knob on a medium (2) setting. When the fire is well established (within one to three hours) turn the thermostat knob to 1 or 1 1/4. A properly operating catalyst will remain active, and the catalyst thermometer will remain in the "active" zone until the wood load is mostly consumed. A "tired" or "dead" catalyst will, with the thermostat on 1 1/4 or lower, go out completely, and the thermometer needle will fall into the "inactive" zone. Repeat this procedure several times over several days. (Remember that the catalyst thermometer has a built-in lag of 4-8 minutes.) If, after several test burns, the thermometer will not indicate an "active" catalyst, it may require cleaning or replacement. It is also possible that the thermometer, itself, may not be reading accurately. Before condemning the catalyst, read "Thermometer", on page 66.

CATALYTIC COMBUSTOR, CLEANING

Under certain conditions, ash particles may become attached to the face of the catalyst. These may be seen while the catalyst is in the glowing stage, or when the fire is out. Any deposit on the visible face of the catalyst should be removed. Wait until the fire is out and the stove is cold. (Hot ash in a vacuum cleaner bag will burn.) Brushing the catalyst with an old toothbrush will remove some deposits. Passing a plastic vacuum cleaner wand or brush near the face of the catalyst will remove most deposits. Never scrape the catalyst with any hard tool. Some stove owners have run pipe cleaner through every individual cell of the catalyst. This is not needed, and may actually do more harm than good. Limit cleaning to the face of the catalyst.

CATALYTIC COMBUSTOR, REPLACEMENT

The catalytic thermometer on top of the stove should read in the active zone after the stove has been in operation for several hours.

If the thermometer's indicator needle does not stay above the 1/3 mark in the active zone, even with a hot fire, over a 7-10 day period of regular use, the catalyst may need replacement.

If the combustor must be examined or replaced, follow this procedure:

1. Allow the stove to burn out and cool down.
2. Open the door and remove the flame shield - the perforated plate that is just above the inside of the door opening. Lift it slightly and pull it forward and down.
3. The combustor may now be seen. The combustor is held together by a stainless steel band. Use a screwdriver and gently pry under the band at each end. The combustor will loosen enough that it can be pulled forward, lowered and out through the door.
4. The insulating material around the stainless band will probably disintegrate as the combustor is removed. If the combustor is placed back in the stove, the insulating material MUST be replaced. Obtain a piece 2" x 30" from your dealer. When installing the insulation, overlap the ends slightly.
5. Do not burn the stove with the combustor removed, or without the insulation around the combustor.
6. To replace the combustor, first clean the combustor seat and the area around it. Also take this opportunity to clean the area around the by-pass -- use a vacuum cleaner.
7. Lift the new combustor into position, with the stainless flanges on each end and the bottom. The combustor should easily slide into position, as far to the back of the stove as possible. Don't be concerned if it appears a bit loose. The insulation around the outside of the stainless band will expand during the first fire and will hold the combustor in.
8. Replace the flame shield (the perforated plate) by holding it inside the firebox with the triangular wings facing away from you. Lift it into position, between the door and the catalyst, and rest the bottom of the plate on the two pins that protude below the catalyst. The flame shield should rest at an angle (about 45 degrees) with its bottom near the combustor, and its top near the stove front.

DOOR GLASS, CLEANING

The best way to keep the glass clean is to leave the stove on high burn for a period of time after each reloading. The moisture which is driven from a new load of wood contributes much of the creosote on the inside of the glass. Removing that moisture at the beginning of the burn cycle helps to keep the glass clean. Leaving the thermostat on a higher setting for 30 minutes to an hour before turning to low for an overnight burn will also help. Even then the glass may coat during a low burn. Heavier deposits may require hand cleaning. Manual glass cleaning should be done when the stove and glass are cool. DO NOT CLEAN THE GLASS WHILE IT IS HOT. Use a soft cloth and a NONABRASIVE household cleaner. After using any cleaner, thoroughly rinse the glass with water to remove any deposits left by the cleaner. Failure to remove

all traces of glass cleaner will result in the glass cleaner residue baking on. This residue may be very difficult to remove.

DOOR GLASS, REPLACEMENT

Your BLAZE KING is equipped with a door which uses a strong, heat-resistant ceramic glass intended to withstand extremely high temperatures and tested for continuous use above 1200 degrees Fahrenheit. However, this glass can be broken through improper use. If glass replacement becomes necessary, use only BLAZE KING GLASS, King P/N 0259ABK, Princess P/N 0257CCBK. DO NOT SUBSTITUTE ANY OTHER MATERIAL FOR THIS PURPOSE.

WARNING

BROKEN DOOR GLASS IS SHARP. ALWAYS WEAR EYE PROTECTION AND PROTECTIVE GLOVES WHEN HANDLING GLASS. DISCARD THE GLASS IN A CLOSED CONTAINER INACCESSIBLE TO CHILDREN.

1. Allow the fire to completely burn out and the stove to cool down.
2. Retain all metal parts for re-installation.
3. Open the door and remove the #10 x 3/8" screws holding the retainers to the inside of the door.
4. Remove the damaged glass and the old glass gasket.
5. The replacement glass has the gasket installed on its outer perimeter. Place the glass in the door frame. Be sure the words "Blaze King" etched in the glass read correctly when the door is closed.
6. Reinstall the retainers with the #10 x 3/8" round head screws.

CHIMNEY DRAFTS

If you suspect a draft problem in an existing chimney, determine the draft by using a water manometer (draft gauge). The draft should be measured with the stove at medium burn. After the measurement is completed, fill any holes that were made in the chimney connector by using a sheet metal screw of proper size. The draft should measure .02" or above. Drafts below .02" will cause excessive smoke spillage, incomplete combustion and fire start-up problems.

OPTIONAL FAN ASSEMBLY

Routine maintenance of the OPTIONAL Fan Assembly on the back of the stove is not required. However, should it become necessary to replace an individual fan, order P/N 0174A from your local dealer. Fan screens are P/N 4443AA, left, and 4444AA, right.

PAINT

If the 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.

RHEOSTAT REPLACEMENT

The fan rheostat seldom fails. But, if it does, follow this procedure after obtaining a BLAZE KING P/N 0136 replacement thermostat.

1. Unplug the fan power cord from the wall.
2. Remove the four screws on the fan cage containing the rheostat switch.
3. Remove the blower from the cage, DO NOT DISCONNECT THE WIRES; locate the two wires coming from the rheostat switch.
4. Unplug the two wires from the rheostat switch.
5. Pull the knob straight off the switch.
6. Unscrew the nut holding the switch to the cage.
7. Replace the switch, making sure the small position locating pin is fitted into the hole in the cage.
8. To reinstall the switch, reverse the above steps being sure to tuck the wires back into the assembly so they do not come in contact with the fan blade.

THERMOMETER

The catalyst thermometer, with its built-in lag of 4-8 minutes, tells you what was happening 4-8 minutes ago. And remember, it is only an indication of the temperatures of the gasses, after they pass through the catalyst.

The thermometer probe, the part that fits into the stove, must be cleaned at least once a year. Lift it from the stove (be careful, it may be hot) and wipe or scrape it clean. At room temperature, away from the stove, the indicator should point near the bottom of the "Inactive" zone. If, after several years use, you find that the needle no longer points to the bottom of the "Inactive" zone when the thermometer has been at room temperature for 10 minutes or longer, it may need adjustment. Holding the probe with a pair of pliers, loosen the bolt on the top of the dial. Turn the dial to align the pointer with the bottom of the "Inactive" zone, then retighten the bolt.

THERMOSTAT

Under normal operations, the thermostat should be set on a mid-range setting. At this setting the stove is capable of heating an average size home. The thermostat is adjusted at the factory and should not be tampered with. If the thermostat breaks, the damper will automatically close.

***** SECTION 12 - TROUBLESHOOTING *****

Your Blaze King is designed to allow a wide selection of heat output levels. If you begin to lose control of the amount of heat the stove is emitting, determine the cause early so that major problems may be avoided.

The six major needs of a well-controlled fire are:

1. Knowledgeable, interested operator.
2. Adequate air supply.
3. Firewood of good quality and proper size.
4. Catalytic combustor in good condition.
5. Clean chimney, properly sized and installed.
6. Door gasket tight and firm.

Considering all of the above, number one is the most important for safe and efficient operation of any woodstove. Please study the operation instructions carefully. Consult your BLAZE KING Dealer or call the Customer Service Department at Blaze King (509-529-9820) if you have any questions not answered in this manual.

All of the six above-mentioned needs are interrelated. A deficiency in any one will affect all of the others. If you encounter a problem, determine the source of the problem and then follow-up by checking the other needs as possible contributing factors.

PROBLEM: Chimney Fire

CAUSE	SOLUTION
Act immediately regardless of cause	Turn the thermostat to lowest setting, check loading door to be sure it is tightly closed. Call Fire Department.

After the fire is out, have your chimney and flue connector inspected by a certified chimney sweep. A damaged masonry chimney should be repaired or rebuilt. A prefabricated chimney (factory built) that is damaged should be replaced. Any damage to the flue connector should be corrected before the system is used again.

Possible causes of a chimney fire, and remedies for those causes, can be found further in this section: "Excessive Creosote Formation", and "Spots of Creosote Accumulation in Chimney or Flue Connector".

PROBLEM: Not enough heat.

CAUSE

Green or wet wood.
Not enough fuel in stove.

Obstruction in chimney or cap screen.
Combustor plugged or coated.

Combustor not functioning.

Thermostat set too low.
Thermostat not operating properly.

Poor draft caused by an oversize
flue

Strong, gusting winds causing
downdraft in chimney

Tightly sealed house, inadequate
air supply.
Reloading too much wood on top of
too few coals.

PROBLEM: Too much heat.

CAUSE

By-Pass door left open.
Thermostat not operating properly.

Thermostat set too high.
Loading door gasket leaking,
admitting excess air into
firebox.
Excessive draft in the chimney.

Wood is too dry.

Wood is too small.

SOLUTION

Use seasoned wood.
Don't be afraid to
FULLY load the stove.
A FULL load of wood won't
burn any hotter than the
thermostat is set.

Remove obstruction.
Test combustor, page 63
Clean combustor, page 63
Test combustor, page 63
If needed, replace
combustor, page 64
Raise thermostat setting.
Consult your Blaze King
dealer.
Measure draft with Mano-
meter. See CHIMNEY DRAFTS,
page 65
See CHIMNEY, page 9.
Consult your Blaze King
dealer or a chimney sweep
Install wind-resistant
chimney cap.
Directional caps may not
stay freely rotating. If
you have a directional
cap, check it frequently.
Open a window, slightly,
near the stove.
Allow a larger bed of
coals to build up.

SOLUTION

Close the by-pass door.
Consult your Blaze King
dealer.
Lower thermostat setting.
Replace door gasket
and/or adjust door,
page 62.
Measure draft with a
Manometer. See DRAFTS,
page 65.
Consult your Blaze King
dealer or a chimney
sweep. Install a cap.
Replace wood or mix with
not-so-dry pieces.
Use larger pieces.

PROBLEM: One or both fans will not run, or there is no adjustment for fan speed.

CAUSE

Fans mounted improperly.

Fan speed control.

SOLUTION

Check that fan blades do not touch edges of hole. Consult your Blaze King dealer. For replacement, see Rheostat Replacement, page 65

PROBLEM: Fans' minimum speed too fast or maximum speed too slow.

CAUSE

Fan speed control out of adjustment.

SOLUTION

Consult your Blaze King Dealer.

PROBLEM: Excessive creosote formation in chimney and chimney connector.

CAUSE

By-pass door left open

By-pass door not sealing tightly

SOLUTION

Close by-pass door.

Inspect by-pass door and seal for warping. Ash or creosote buildup may occur on door or seat. With stove cold scrape and vacuum area around by-pass. Be sure all mating steel surfaces are clean and smooth.

Improper operation.

Check thermostat setting and operating procedures, page 58

Use seasoned wood.

Inspect the combustor.

See catalytic combustor testing, page 63

Measure draft with Manometer. See DRAFTS, page 65

See CHIMNEY, page 9.

Consult your Blaze King dealer or a chimney sweep.

Wood too green or wet.
Catalytic combustor not operating properly.

Poor draft caused by an oversize or short flue, etc.

Chimney too cold or poorly insulated. Upgrade chimney system.
Consult your Blaze
King dealer or a
chimney sweep.

PROBLEM: Catalytic combustor thermometer (on top of stove) does not go into "Active" zone, or does not stay there for long.

CAUSE

Improper operation.

Obstruction in chimney or cap.

Faulty catalyst thermometer.

Wood too green or wet.

Combustor plugged or coated.

Combustor not functioning.

Thermostat not operating properly.

By-pass door leaking or not closing completely.

SOLUTION

Check thermostat setting and operating procedures. See page 58

Clean chimney, remove obstructions.

Replace thermometer and recheck combustor operating temperature.

Use seasoned wood.

Clean combustor, see page 63

Check and test combustor. If needed replace combustor. See page 64

Consult your Blaze King dealer.

Inspect and clean area around by-pass doors.

Adjust or repair as necessary. Consult your Blaze King dealer.

PROBLEM: Spots of creosote accumulation in chimney or chimney connector.

CAUSE

Air leaks in chimney or chimney connector.

SOLUTION

Inspect chimney and/or chimney connector. Repair or replace as necessary. Check to be sure that the chimney connector is installed correctly.

CAUTION: a leaking chimney connector is a fire hazard and demands immediate attention.

Measure draft with Manometer. See DRAFTS, page 65.

See CHIMNEY, page 9.

Consult your Blaze King dealer or a chimney sweep.

Poor draft caused by an oversize flue, etc.

PROBLEM: Door glass quickly becomes coated with creosote.

CAUSE
Low thermostat setting or
lowering the thermostat setting
too far, too quickly.

SOLUTION
Turn the thermostat to
the warmest setting
during the first 20-30
minutes or until the
fire is well estab-
lished after each re-
loading.

Poor draft caused by an oversize
or short flue, etc.

Measure draft with Mano-
meter. See DRAFTS,
page 65.
See CHIMNEY, page 9.
Consult your Blaze King
dealer or a chimney
sweep.

Obstruction in chimney or cap screen.

Remove obstruction.
Clean chimney and/or
cap screen.

Strong, gusting winds causing
downdraft in chimney.

Install wind-resistant
chimney cap.

Tightly sealed house, inadequate
air supply.

Open a window, slightly,
near the stove.

Burning poorly seasoned wet wood, or
wood with high pitch content,
such as some types of pine.

Use seasoned wood with
low pitch content.

PROBLEM: The catalyst temperature cannot be controlled. Turning
the thermostat down often makes the catalyst temperature go up.

CAUSE

Turning the thermostat down, particularly in the first half of
the burn cycle, causes the fire to emit more smoke, which is
fuel for the catalyst. The catalyst temperature therefore
climbs for up to several hours. This is normal, and is of no
concern. As long as only the catalyst temperature is elevated,
there is nothing to worry about.

***** SECTION 13 - STANDARD AND REPLACEMENT PARTS *****

STANDARD PARTS

Owners Manual	OM-09C
Stove Warranty Card	0480F
Combustor Warranty Card	0591E
Combustor assembly, King	4500F
Combustor assembly, Princess	4400G
Thermometer, for stove top	0342B
Door assembly, painted, King	4901A
Princess	8305A
OR	
Door assembly, gold, King	G4901A
Princess	G8305A
Bypass handle assembly	4902AA
Flame shield assembly	4903AA
Gold trim rails	2317BB

Two, with bowed washers
and push nuts

REPLACEMENT PARTS

Thermometer, for stove top	0342B
Thermostat knob	0102
Combustor, KEJ	4500F
Combustor, PEJ	4400G
Wood Handle, loading and bypass doors	0121B
Spray Paint	
(specifiy color)	0515AA
	0527AA
	0128
Fan rheostat knob	0137
Fan rheostat	0136
Fan motor	0174A
Fan screen, right	4444AA
Fan screen, left	4443AA
Door glass, KEJ,	0259ABK
Door glass, PEJ,	0257CCBK
Door gasket, KEJ	0381A
Door gasket, PEJ	0381A
Firebrick	0134

Aerosol Can 13 oz.
Charcoal #6201
Golden Fire Brown #6230
Satin Black #1990

With blades

With glass gasket attached
With glass gasket attached
65.25"
61"

OPTIONAL KITS

Outside Air kit	1726B
Side Shield kit, KEJ	4905AA
Side Shield kit, PEJ	4904AA
Rear Shield kit, PEJ	1735AA
Rear Shield kit, KEJ	1736AA

**OWNER'S
INSTALLATION AND OPERATION INSTRUCTIONS**

**Blaze[®]
King**

WOODSTOVES

**BLAZE KING CATALYST STOVE
King Model KEJ 1102**

**BLAZE KING CATALYST STOVE
Princess Model PEJ 1003**

OM-09C

**8-26-90
LTC**

SAVE THESE INSTRUCTIONS