

# QUADRA-FIRE

*North America's Best*

## 2100-I & 3100-I Installation, Operation & Maintenance Instructions



Tested and  
Listed by  Beaverton  
Oregon USA  
OMNI-Test Laboratories, Inc.  
Report No.

**PLEASE READ THIS ENTIRE OWNER'S MANUAL AND SAFETY NOTES.**

### Important Safety Notes...

- Close attention to fire protection is required when installing your insert. If this unit is not properly installed a house fire may result. For your safety, follow the installation instructions and contact local building or fire officials about restrictions and installation inspection requirements in your area.
- Never use gasoline or similar liquids to start a fire in this unit. Keep all such liquids well away from stove.
- If any part of the stove starts to glow during operation, the stove is in an overfired condition. Close the air controls completely until the glowing has stopped. **OVERFIRING VOIDS WARRANTY.**
- Cool ashes should be disposed of carefully- using a metal container.
- Do not burn wet or green wood. Store wood in a dry location.
- Do not burn garbage, treated wood, or wood with salt (driftwood, etc.).
- Do not permit creosote or soot to accumulate excessively in the chimney or inside the firebox.
- Check your chimney system thoroughly when installing into an existing metal or masonry chimney. Seek professional advice if in doubt about its condition.
- Do not connect this unit to a chimney flue already serving another appliance.
- Comply with all minimum clearances to combustibles as shown in this manual.
- Build fire on brick firebox floor - Do not use grates and irons or other methods to support the fuel.
- Install insert so it can be removed for cleaning and inspection.
- Hot while in operation. Keep children, clothing and furniture away. Contact can cause skin burns.

**Thank you,**  
**for purchasing one of the finest stoves in the world for your home.**  
**Before proceeding, please record the stove serial number on the enclosed Warranty Card.**



**SAVE THESE INSTRUCTIONS**

401 N. Wynne Street  
Colville, WA 99114

#832-0520 Revised 03/1999

[www.aladdinhearth.com](http://www.aladdinhearth.com)  
[aladdin@aladdinhearth.com](mailto:aladdin@aladdinhearth.com)

# NOTES & SYMBOLS

## NOTES



MODEL PURCHASED:

SERIAL NUMBER:

DATE PURCHASED:

DEALERSHIP WHERE PURCHASED:

DEALER PHONE NUMBER

ADDITIONAL INFORMATION :


ATTACH YOUR SALES RECEIPT AND WARRANTY STUB HERE:

### *Quick Reference Symbols*



OPERATING TIPS & PROCEDURES



CAUTION AND WARNING !



INSTALLATION INSTRUCTIONS



CLEANING & MAINTENANCE TIPS



IMPORTANT REMINDERS

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# WELCOME!

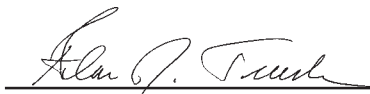


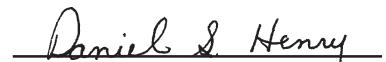
*Aladdin Hearth Products* welcomes you to our tradition of excellence! In choosing a *Quadra-Fire* appliance, you have our assurance of commitment to quality, durability, and performance.

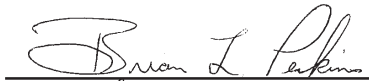
This commitment begins with our research of the market, including 'Voice of the Customer' contacts, ensuring we make products that will satisfy your needs. Our Research and Development facility then employs the world's most advanced technology to achieve the optimum operation of our stoves, inserts and fireplaces. And yet we are old-fashioned when it comes to craftsmanship. During manufacturing each unit is meticulously fabricated and gold surfaces are hand-finished for lasting beauty and enjoyment. Our pledge to quality is completed as each model undergoes a quality control inspection. Additionally, we feel it is important to offer you several finishing options and accessories to compliment your home's décor, individualize the use of your appliance, and provide financial options in acquiring a quality hearth appliance. Ask your *Quadra-Fire* Dealer for information on these options. From design, to fabrication, to shipping: Our guarantee of quality is more than a word, it's *Quadra-Fire* tradition, and we proudly back this tradition with a *Lifetime Warranty*.

Prior to installation, we ask you to take a few moments to read this manual. It has been our experience that your overall enjoyment of your new appliance will be greatly enhanced by becoming familiar with its' installation, operation and maintenance requirements. We wish you and your family many years of enjoyment in the warmth and comfort of your hearth appliance. *Thank you* for choosing *Quadra-Fire*.

With warm regards,

  
President

  
V.P. Research & Development

  
Controller

  
Operations Manager

  
V.P. Sales & Marketing

  
Western Sales Manager

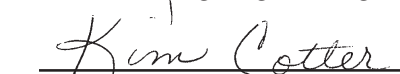
  
Central Sales Manager

  
Eastern Sales Manager

  
Manufacturing Eng. Manager

  
Sr. Purchasing Agent

  
Technical Support Manager

  
Customer Support Manager  
Manager

  
Human Resources Supervisor



3100-I, shown with optional gold accent door and gold accent louvered sides

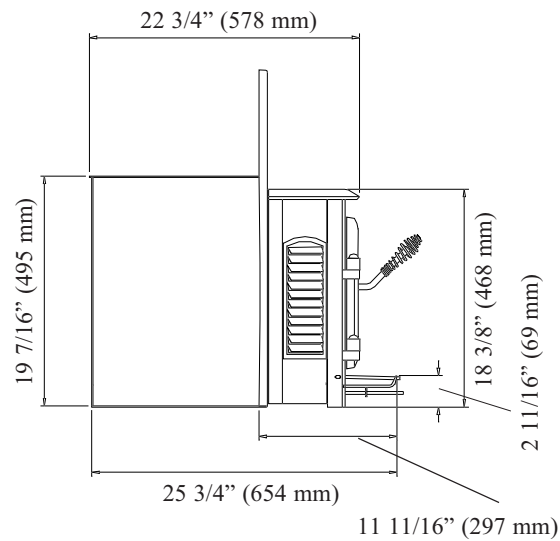
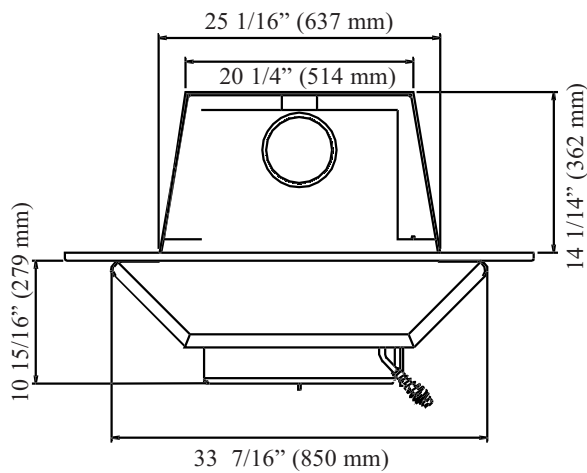
# WELCOME

## DIMENSIONS

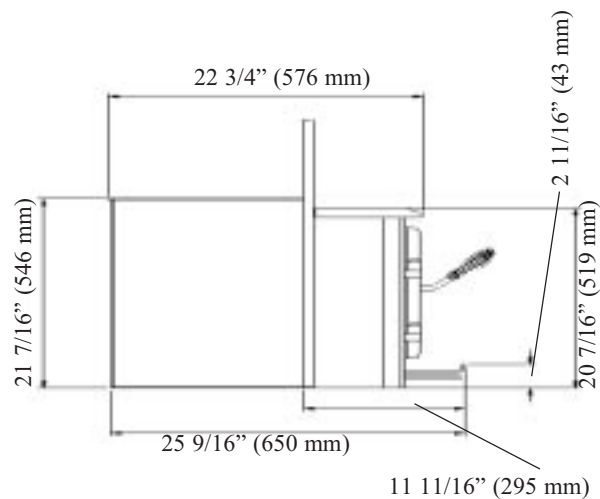
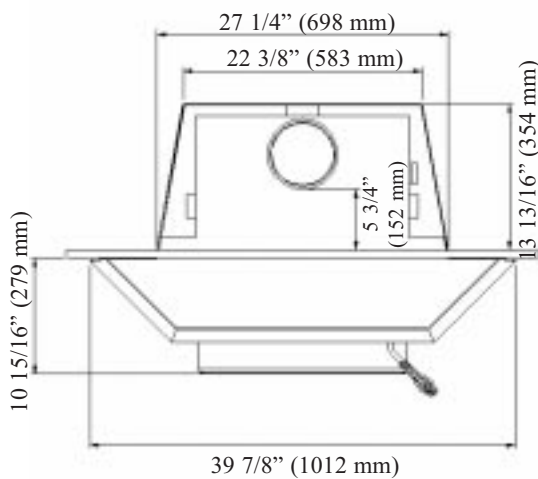
### TOP VIEW

### SIDE VIEW

#### MODEL 2100-I



#### MODEL 3100-I



# DIMENSIONS

CONTACT YOUR LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND  
INSTALLATION INSPECTION IN YOUR AREA

**Model:**  
**QUADRA-FIRE**  
**2100-I**

**Serial No.**

Tested and  
Listed by  
 Beaverton  
Oregon USA  
OMNI-Test Laboratories, Inc.  
Report No. 061-S-09-04

MANUFACTURED BY:



Listed solid fuel heater for installation in masonry or factory built fireplaces.

LISTED TO: UL 1482, ULC S628  
TYPE OF FUEL: SOLID WOOD ONLY

### "PREVENT HOUSE FIRES"

Install and use only in accordance with manufacturer's installation, venting and operating instructions. Do not remove bricks or mortar from masonry fireplace. Install only on a non-combustible hearth. Contact local building or fire officials about restrictions and installation inspections in your area.

Do not connect this unit to a chimney serving another appliance.

When used as a masonry insert stove, install only in a masonry fireplace built to UBC Chapter 37. Do not remove brick or mortar to accommodate insert. Installation requires minimum of a starter pipe into existing chimney with an airtight face seal.

Operate only with doors closed. Replace glass only with 5mm ceramic available from your dealer.

Approved for installation and use in factory built zero-clearance fireplaces conforming to minimum fire chamber specifications.

Components required for installation: positive or direct flue connection assembly or listed vent liner. Inspect and clean vent system frequently in accordance with manufacturer's instructions.

In Canada a full length S635 flue liner is required.

For use with solid wood fuel only. Do not use grate or elevate fire. Build wood fire directly on hearth.

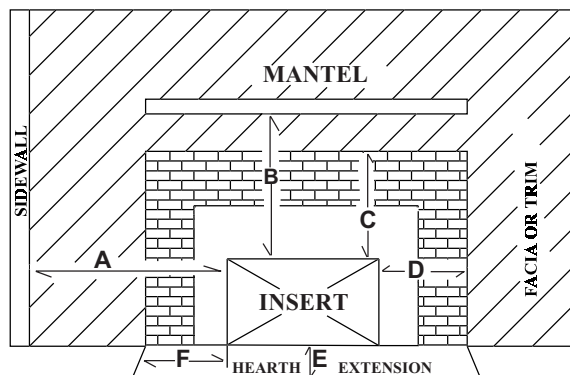
Route power cord away from unit. Do not route cord over or under appliance.

**DANGER:** Risk of electrical shock. Disconnect power supply before servicing.

Optional component:  
Blower Assembly: Part #831-0911  
Electrical Rating:  
115 VAC, .6 Amps, 60 Hz.

### Minimum Clearances to Combustible Materials (in inches)

Install insert with a minimum of 26" clearance to combustible sidewall, 10" to side and 14" to top trim, 22" from top of insert to mantel. Floor protector must be 3/8" minimum non-combustible material or equivalent, extending 16" in front and 8" to both sides.



### INSTALLATION

UNITED STATES  
CANADA

| A     | B     | C     | D     | E     | F     |
|-------|-------|-------|-------|-------|-------|
| 26"   | 22"   | 14"   | 10"   | 16"   | 8"    |
| 32"   | 27"   | 14"   | 12"   | 16"   | 8"    |
| 815mm | 685mm | 355mm | 305mm | 405mm | 200mm |

### U.S. ENVIRONMENTAL PROTECTION AGENCY

Certified to comply with July 1990 particulate emissions standards.

### Date of Manufacture

1999 2000 Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

CONTACT YOUR LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND  
INSTALLATION INSPECTION IN YOUR AREA

**Model:**  
**QUADRA-FIRE**  
**3100-I**

**Serial No.**



MANUFACTURED BY:



Listed solid fuel heater for installation in masonry or factory built fireplaces.

LISTED TO: UL 1482, ULC S628

TYPE OF FUEL: SOLID WOOD ONLY

**"PREVENT HOUSE FIRES"**

Install and use only in accordance with manufacturer's installation, venting and operating instructions. Do not remove bricks or mortar from masonry fireplace. Install only on a non-combustible hearth. Contact local building or fire officials about restrictions and installation inspections in your area.

Do not connect this unit to a chimney serving another appliance.

When used as a masonry insert stove, install only in a masonry fireplace built to UBC Chapter 37. Do not remove brick or mortar to accommodate insert. Installation requires minimum of a starter pipe into existing chimney with airtight face seal.

Operate only with doors closed. Replace glass only with 5mm ceramic available from your dealer.

Approved for installation and use in factory built zero-clearance fireplaces conforming to minimum fire chamber specifications.

Components required for installation: positive or direct flue connection assembly or listed vent liner. Inspect and clean vent system frequently in accordance with manufacturer's instructions.

In Canada a full length S635 flue liner is required.

For use with solid wood fuel only. Do not use grate or elevate fire. Build wood fire directly on hearth.

Route power cord away from unit. Do not route cord over or under appliance.

**DANGER:** Risk of electrical shock. Disconnect power supply before servicing.

Optional component:

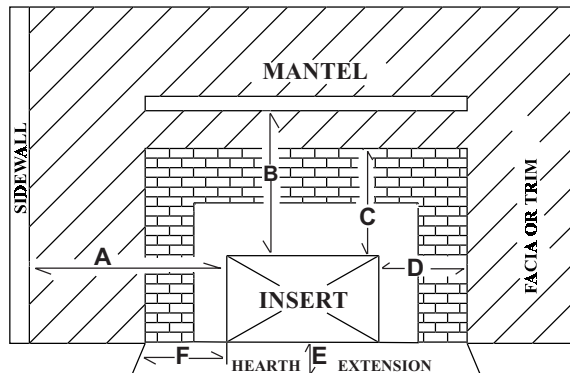
Blower Assembly: Part #831-1101

Electrical Rating:

115 VAC, .6 Amps, 60 Hz.

**Minimum Clearances to Combustible Materials (in inches)**

Install insert with a minimum of 32" clearance to combustible sidewall, 10" to side and 14" to top trim, 22" from top of insert to mantel. Floor protector must be 3/8" minimum non-combustible material or equivalent, extending 16" in front and 8" to both sides.



**INSTALLATION**  
**UNITED STATES**  
**CANADA**

| <b>A</b> | <b>B</b> | <b>C</b> | <b>D</b> | <b>E</b> | <b>F</b> |
|----------|----------|----------|----------|----------|----------|
| 32"      | 22"      | 14"      | 10"      | 16"      | 8"       |
| 32"      | 27"      | 14"      | 12"      | 16"      | 8"       |
| 815mm    | 685mm    | 355mm    | 305mm    | 405mm    | 200mm    |

**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**Certified to comply with July 1990 particulate emissions standards.**

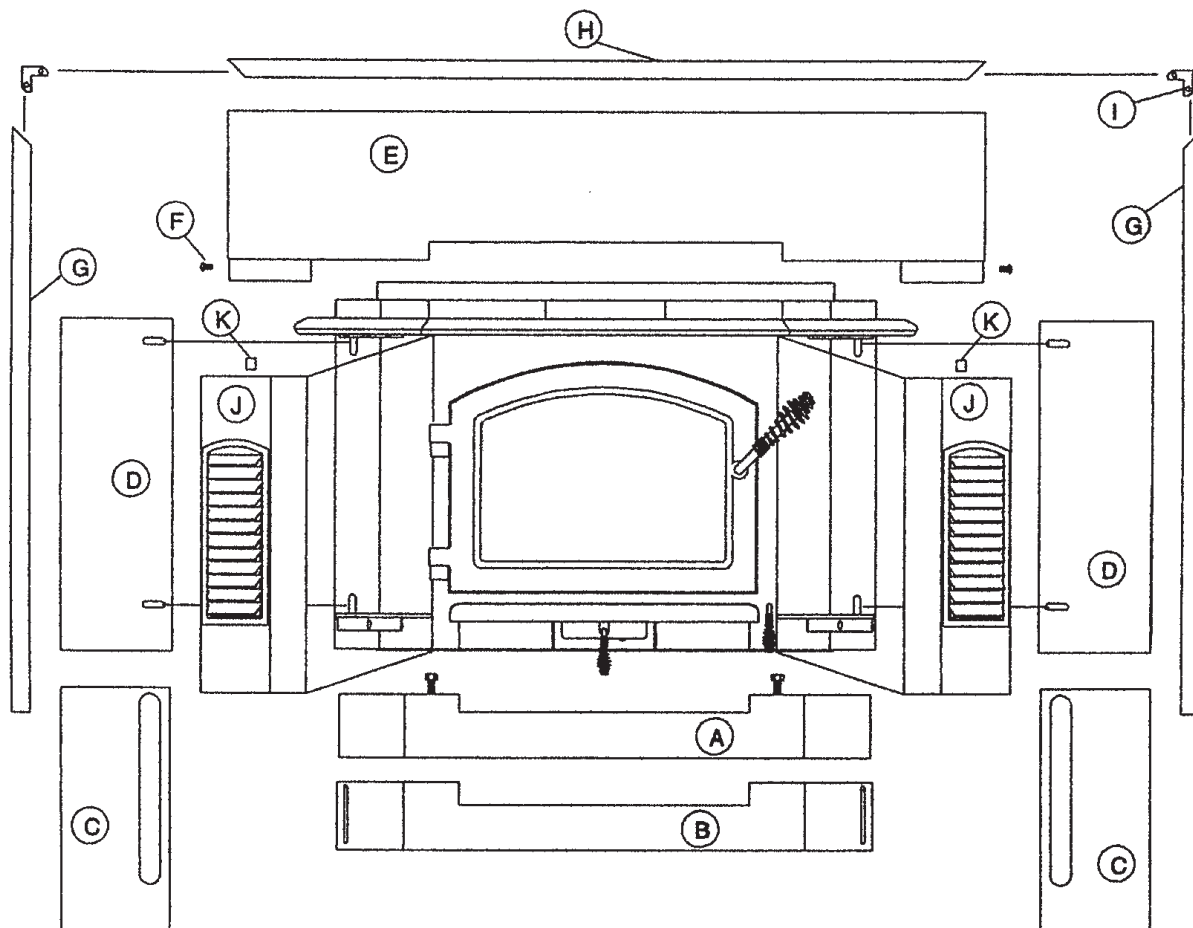
**Date of Manufacture**

1999 2000 Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

**SAFETY LABELS**



# COMPONENT PARTS DIAGRAM



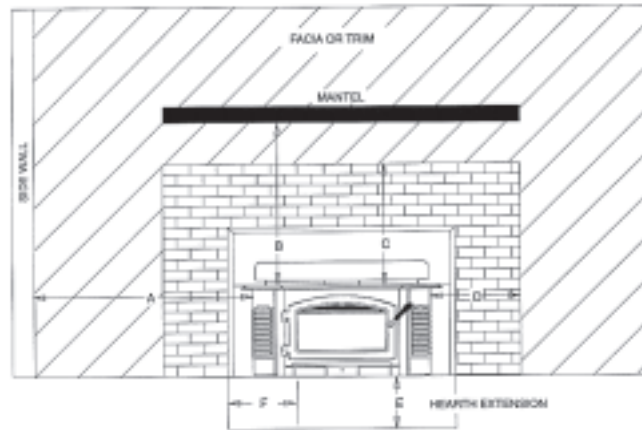
- A. Hearth Support
- B. Hearth Support
- C. Panel Extensions (Left & Right)
- D. Side Panels (Left & Right)
- E. Top Panel
- F. Panel Fasteners

- G. Panel Side Trim
- H. Top Panel Trim
- I. Panel Trim Corner Brackets
- J. Fan Covers (Left & Right)
- K. "S" Clips for Fan Covers

**COMPONENTS**



## CLEARANCES TO COMBUSTIBLES



### UNITED STATES INSTALLATION MINIMUM CLEARANCES TO COMBUSTIBLES IN INCHES

| MODEL  | INSTALLATION              | A   | B   | C   | D   | E   | F  |
|--------|---------------------------|-----|-----|-----|-----|-----|----|
| 2100-I | Masonry or Heat Exchanger | 26" | 22" | 14" | 10" | 16" | 8" |
|        | Zero Clearance            | 26" | 22" | 14" | 10" | 16" | 8" |
| 3100-I | Masonry or Heat Exchanger | 32" | 22" | 14" | 10" | 16" | 8" |
|        | Zero Clearance            | 32" | 22" | 14" | 10" | 16" | 8" |

NOTE: When installing into a masonry fireplace, the fireplace must be built to UBC Chapter 37 standards. Do not remove brick or mortar from masonry fireplace to accommodate insert. The permanent metal warning plate label provided must be attached to the back of the fireplace stating the fireplace may have been altered to accommodate the insert and must be returned to original condition for use as a conventional fireplace.

### INSTALLATION IN CANADA MINIMUM CLEARANCES TO COMBUSTIBLES IN INCHES & MILLIMETERS

| MODEL  | INSTALLATION              | A     | B     | C     | D     | E     | F     |
|--------|---------------------------|-------|-------|-------|-------|-------|-------|
| 2100-I | Masonry or Heat Exchanger | 32"   | 27"   | 14"   | 12"   | 16"   | 8"    |
|        |                           | 815mm | 685mm | 355mm | 305mm | 405mm | 200mm |
| 3100-I | Masonry or Heat Exchanger | 32"   | 27"   | 14"   | 12"   | 16"   | 8"    |
|        |                           | 815mm | 685mm | 355mm | 305mm | 405mm | 200mm |

### HEARTH REQUIREMENTS

There must be 3/8" minimum non-combustible material or equivalent extending 16" in front of insert and 8" to both sides. If the hearth extension is lower than the fireplace opening, the portion of the insert extending onto the hearth requires support. Manufacturer support kits can be ordered by the necessary adjustment size.

| ADJUSTMENT | 2100-I PART # | 3100-I PART # |
|------------|---------------|---------------|
| 2" - 4"    | 831-1370      | 831-1400      |
| 4" - 7"    | 831-1380      | 831-1410      |
| 7" - 10"   | 831-1390      | 831-1420      |

# CLEARANCES



## INSTALLATION RECOMMENDATIONS

The Quadra-Fire 2100-I and 3100-I have met and surpassed the most stringent emissions standards in the United States. The sophistication of the interior firebox design requires that a proper draft be supplied by the chimney, therefore adherence to the following factors will enable your stove to operate at its optimum capability:

### REQUIRED

A minimum starter pipe reaching to the base of the existing chimney and an airtight face seal.

### BETTER

Direct connection to the first flue liner in accordance with the requirements of the NFPA 211.

### BEST

A complete relining of the chimney system with a six inch (6") diameter listed, stainless liner.

## INSTALLATION IN CANADA

### MASONRY, HEAT-EXCHANGER & FACTORY-BUILT FIREPLACES

- Whether installed in a masonry, heat-exchanger or factory-built fireplace, a full chimney liner meeting ULC S635, CLASS III (stainless steel) must be installed from the insert to the chimney top and securely attached to both.
- Do not remove bricks or mortar from fireplace to accommodate insert.
- The permanent metal warning label provided must be affixed to the back of the fireplace stating that the fireplace may have been altered to accommodate the insert, and must be returned to original condition for use as a conventional fireplace.
- The face of the fireplace must be sealed to prevent room air passage into the chimney cavity.
- Circulating air chambers in factory-built fireplaces may not be blocked.

## GENERAL INSTALLATION PROCEDURE



- Install liner, if required, for your chosen installation.
- Attach metal warning plate to the back of the fireplace.
- Set appliance on the hearth (See Hearth Requirements and Support Kits information on page 9.)
- Complete the vent connection required for your installation type.
- Install optional blower, if purchased.
- Install panel set. (See instructions on page 13)
- Install trim. (See instructions on page 13)
- Position unit into fireplace leaving width enough for fiberglass batt to be inserted around face seal.
- Work unit securely into the fireplace.
- Install door handle. (See instructions on page 13)
- Ensure that all labels are removed from glass prior to building first fire.
- Ensure that gold plated surfaces are cleaned prior to building first fire. (See instructions on page 22)
- Read Operation Instructions found on pages 20-22.

## UNPACKING AND USE OF LEVELING BOLTS

Your **Quadra-Fire** insert is secured to the pallet by means of two 1/2" x 6" bolts which also serve as leveling bolts in the event that the hearth is higher than the fireplace floor. Follow the procedures below for moving the insert from the pallet and use of the leveling bolts.

1. Remove 1/2" nuts from 1/2" x 6" bolts.
2. Bring 1/2" bolts up level to bottom of insert.
3. Position insert on hearth with rear of insert extending into fireplace opening.
4. Extend leveling bolts downward to level insert.
5. Make proper connection for desired venting technique.

# INSTALLATION

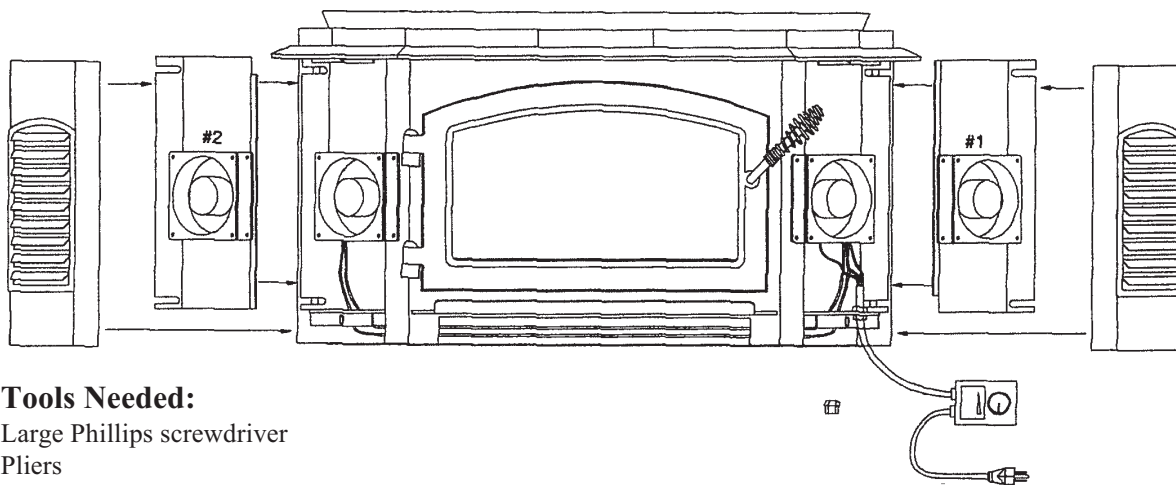


## BLOWER ASSEMBLY

### (OPTIONAL PURCHASE ACCESSORY)

Available through your **Quadra-Fire** Dealer: Order Part #831-0911 for model 2100-I

Order Part #831-1101 for model 3100-I



#### Tools Needed:

Large Phillips screwdriver

Pliers

**Parts Supplied:** (2) Fan mounts/fan assemblies. (1) speed control, power cord/wire assembly.

(1 Set) Fan connector wires, must be high temperature wire. (1) Strain relief.

1. Remove fan covers.
2. Install fan mounts to outer wall with panel mounting screws.
3. Feed fan and motor wires up through large hole in floor.  
**NOTE:** Power cord can be mounted on left or right side.
4. Connect white and black wires to fan motor terminals.
5. Feed #3 fan motor wires through smaller hole in bottom and across to #2 fan motor.
6. Install strain relief onto power cord.
7. Using a pair of pliers, squeeze strain relief and push through large hole in floor.
8. Plug in and test blower operation.
9. Replace screens. (Power cord comes out through opening in bottom of screen.)

The blower speed control is pre-set at the factory. However, if you determine that an adjustment is needed, follow these steps:

1. With the unit plugged in, turn the speed control knob to slow. (Full clockwise.)
2. Use a small screwdriver to adjust the fan speed by turning the adjustment mechanism through the hole on the side of the speed control.
3. Adjust the speed so the fan runs slowly but does not stop. Turn clockwise to slow the fan and counterclockwise to increase the speed.

## INSTALLATION OF PANEL SET



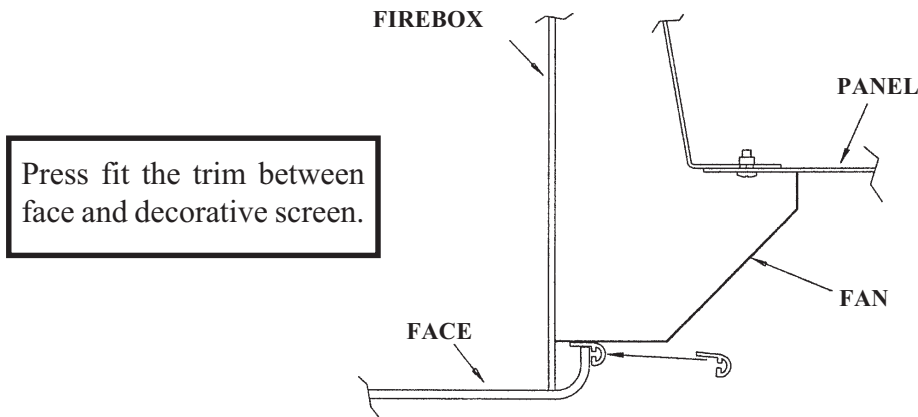
Materials needed: Phillips Screwdriver and double sided tape or contact adhesive.

1. Remove four 1/4" - 20 screws from nuts attached to insert outer wall.
2. Slide side panels in front on insert outer wall, align horizontal and vertical slots and install 1/4" - 20 screws (do not tighten).
3. Remove two 1/4" - 20 screws from top panel.
4. Attach top panel by means of two clips welded on the back side of panel.
5. Insert two 1/4" - 20 screws through holes in outer edges of side panels into nuts welded inside top panel. Tighten.
6. Center the panels and tighten screws holding side panels.
7. Install screen covers.
8. Attach insulation strip to the outside edge of the backside of top and side panels. Use double sided tape or a contact adhesive to hold insulation in place.

## INSTALLATION OF FACE TRIM PACKAGE

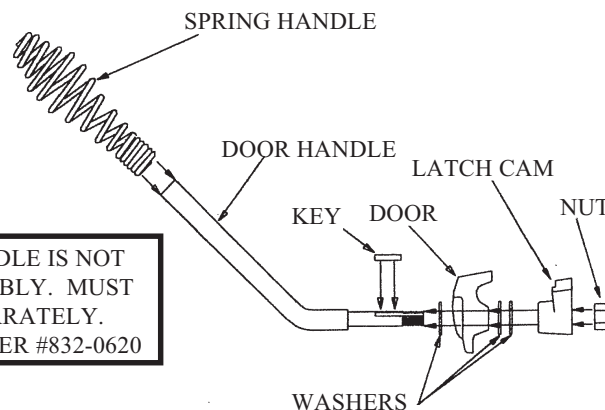
(For use with part # 831-1150, Black Side Screens Only)

(TOP VIEW)



## INSTALLATION OF DOOR HANDLE

DOOR HANDLE ASSEMBLY



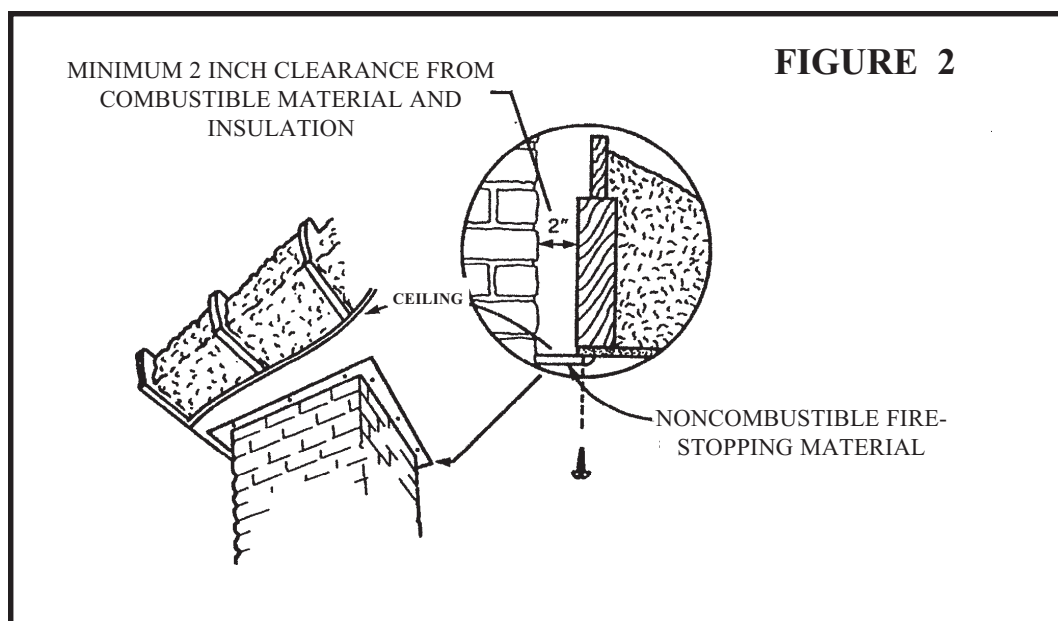
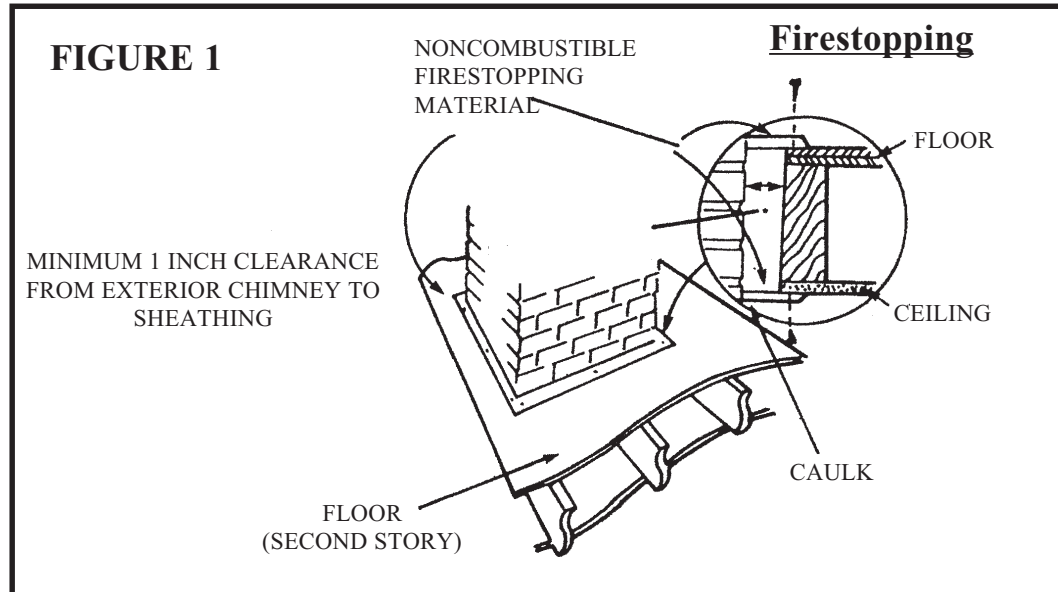
NOTE: SPRING HANDLE IS NOT INCLUDED IN ASSEMBLY. MUST BE ORDERED SEPARATELY.  
SPRING HANDLE ORDER #832-0620

**INSTALLATION: PANEL, TRIM & DOOR HANDLE**

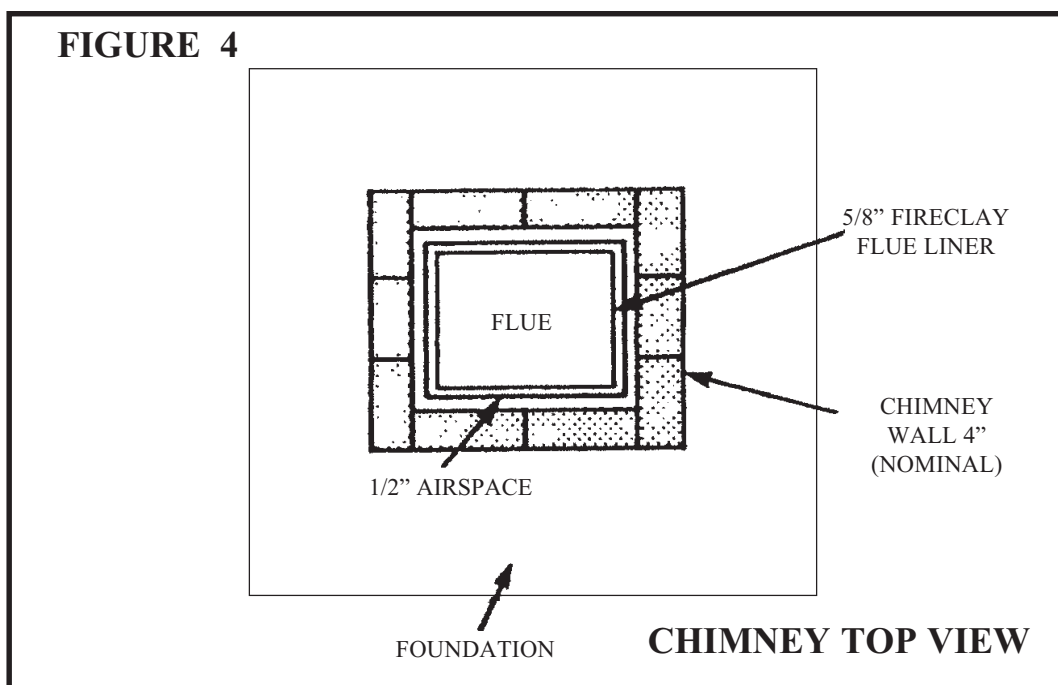
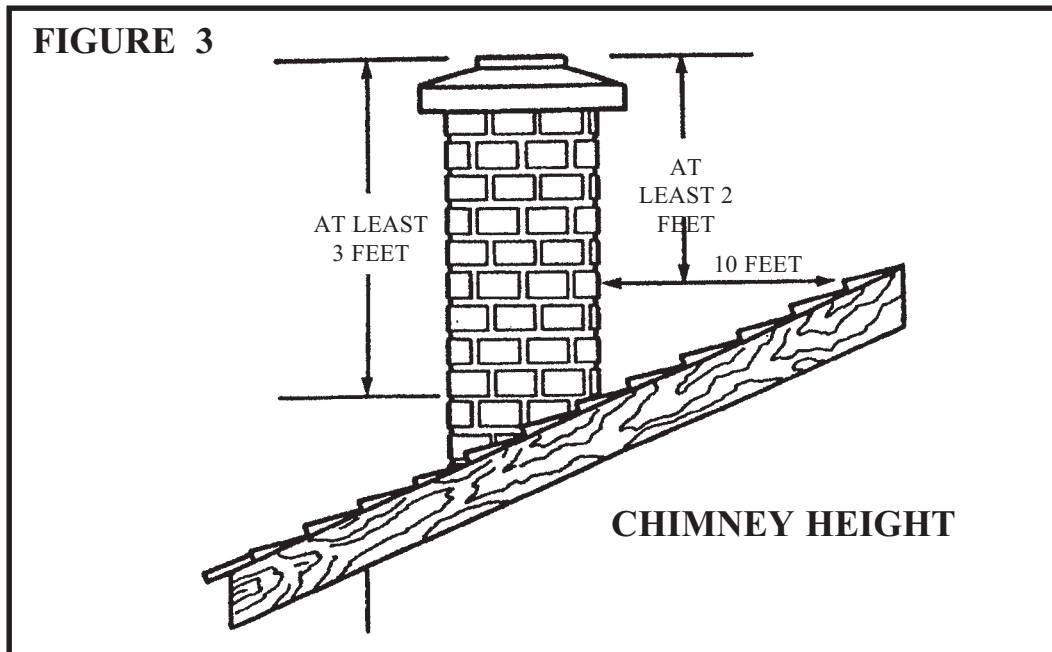


## CHIMNEY REQUIREMENTS

To insure that insulation or any other combustible material does not contact the chimney, a chimney inside the house must have at least two (2) inches of air space clearance around the chimney. A chimney outside the house must have at least one (1) inch clearance to the combustible structure. Fire stops must be installed at the spaces where the chimney passes through floors and/or ceilings. Refer to Figures 1 & 2 below. **Canadian installations require a full re-line of the chimney.**



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 three (3) feet higher than the highest point where it passes through the roof, and at least two (2) feet higher than the highest part of the roof or structure that is within ten (10) feet of the chimney, measured horizontally. Refer to Figure 3 below.



# CHIMNEY





## INSTALLATION OPTIONS



Please refer to:

Clearances to Combustibles on page 9.  
Canadian Installation requirements on page 9 & 10.  
Hearth Requirements and Support Kits on page 9.

## MASONRY FIREPLACE USING DIRECT-CONNECT METHOD

The Quadra-Fire 2100-I and 3100-I models conform with the UL Standard for Safety 1482 in all respects, and are approved to UL safety standards for installation and use within a fireplace with a masonry chamber in accordance with NFPA No. 211, with or without a direct flue collar connection. A starter pipe is required to reach to the bottom of the existing flue.

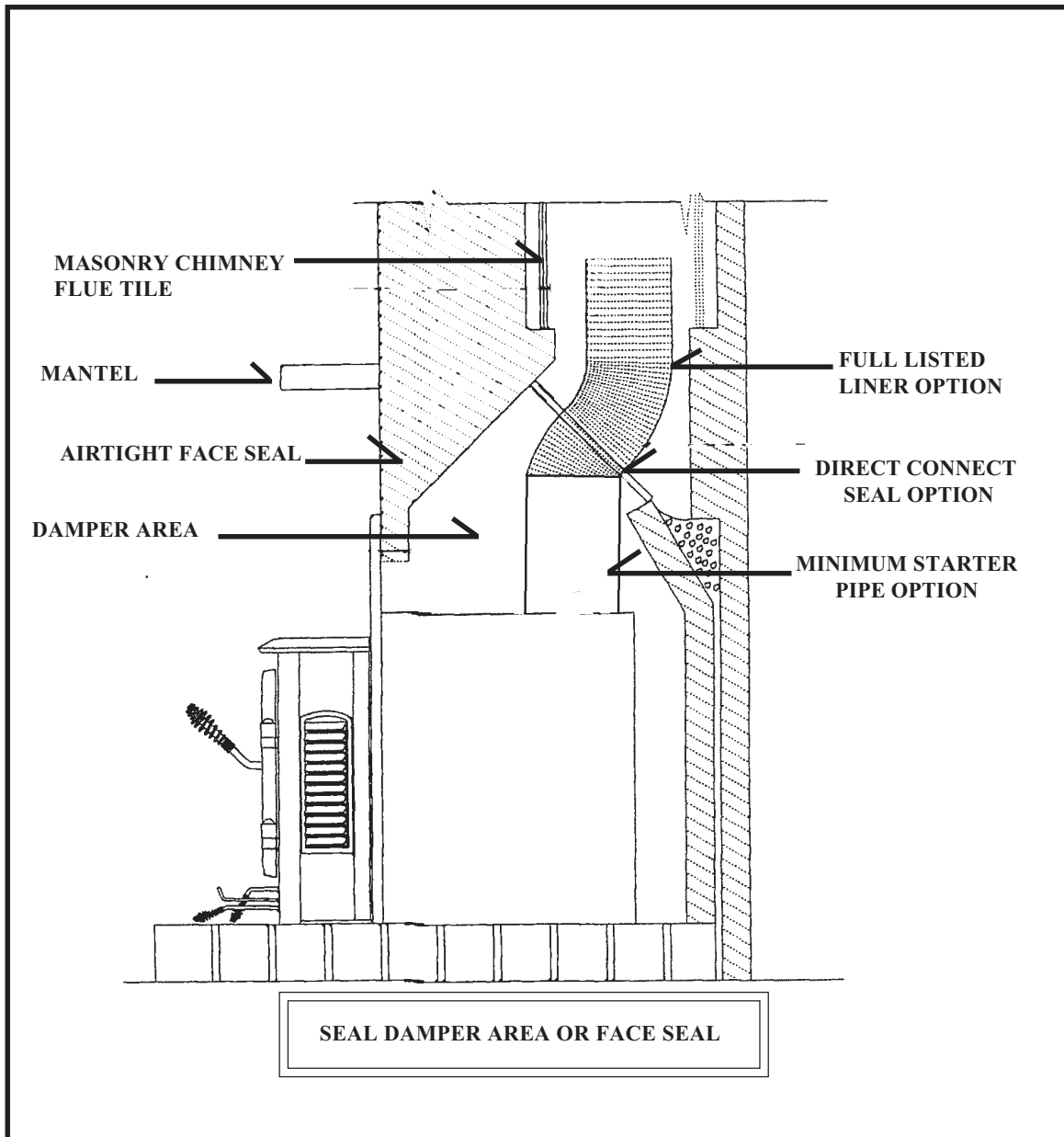
1. Secure the fireplace damper in the open position. If this cannot be accomplished, it will be necessary to remove the damper.
2. Seal either the damper area around the chimney liner with a high temperature sealant or the fireplace front with fiberglass batting.



3. The chimney should be examined for cracks, loose mortar, and other signs of deterioration and blockage. The insert should not be installed until it is determined that the chimney is safe for use. Since an over-sized 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 insert. The chimney should also be checked to assure it meets the minimum standard of the National Fire Protection Association (NFPA) Standard 211. The following bullets list the more critical requirements for a properly constructed chimney:
  - The masonry wall of the chimney, if brick or modular block, must be a minimum of four (4) inches nominal thickness. A chimney of rubble stone must be at least twelve (12) inches thick.
  - The chimney must have a fire clay flue liner (or equivalent) with a minimum thickness of 5/8" and must be installed with refractory mortar. An equivalent liner must be a listed chimney liner system or other approved material.
  - A chimney inside the house must have at least two (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 (See Figure 1 on page 14). **In Canada, a full reline is required.**



# INSTALLATION: MASONRY FIREPLACE



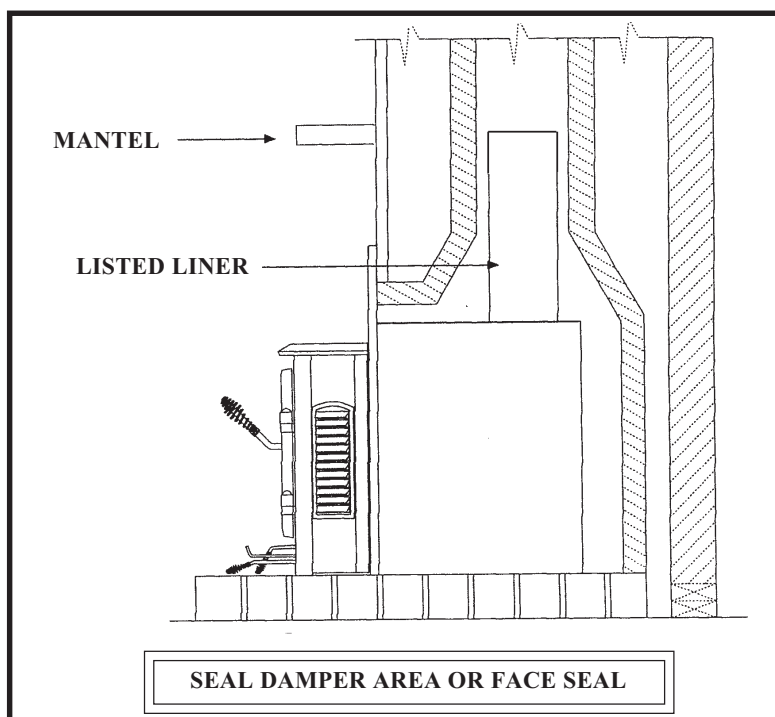
**SAMPLE INSTALLATION INTO MASONRY FIREPLACE**



## METAL HEAT EXCHANGER MASONRY

The Quadra-Fire 2100-I and 3100-I models conform with the safety standard UL-1482 in all respects and is approved to UL safety standards for installation and use within a fireplace with masonry chamber, in accordance with NFPA No. 211, with or without a direct flue collar connection. A starter pipe is required into existing chimney.

### SAMPLE INSTALLATION INTO METAL HEAT EXCHANGER SHOWING USE OF STARTER PIPE



### FACTORY BUILT FIREPLACE (ZERO CLEARANCE)

The Quadra-Fire 2100-I and 3100-I are also listed to UL Standards for Safety 127, and approved for installation and use in factory built zero clearance fireplaces conforming to the following specifications:

|                                  | <b>2100-I</b> | <b>3100-I</b> |
|----------------------------------|---------------|---------------|
| Minimum Width of cavity opening: | 29" (737mm)   | 32" (813mm)   |
| Minimum Height:                  | 21" (533mm)   | 23" (584mm)   |

Depth of the firebox may vary according to brand name, however the top rear corners of the insert require a 2" (51mm) space between the insert and the side and back walls of the fireplace unit. Installation into larger sizes of factory built fireplaces of the above-named brands is permissible.

The following modifications of factory built fireplaces are permissible. 1) Removal of damper. 2) Removal of smoke shelf or baffle. 3) Removal of ember catches. 4) Removal of fire grate. 5) Removal of viewing screen/curtain. 6) Removal of doors.

**NOTE:** Installation into fireplaces without a permit will void the listing.

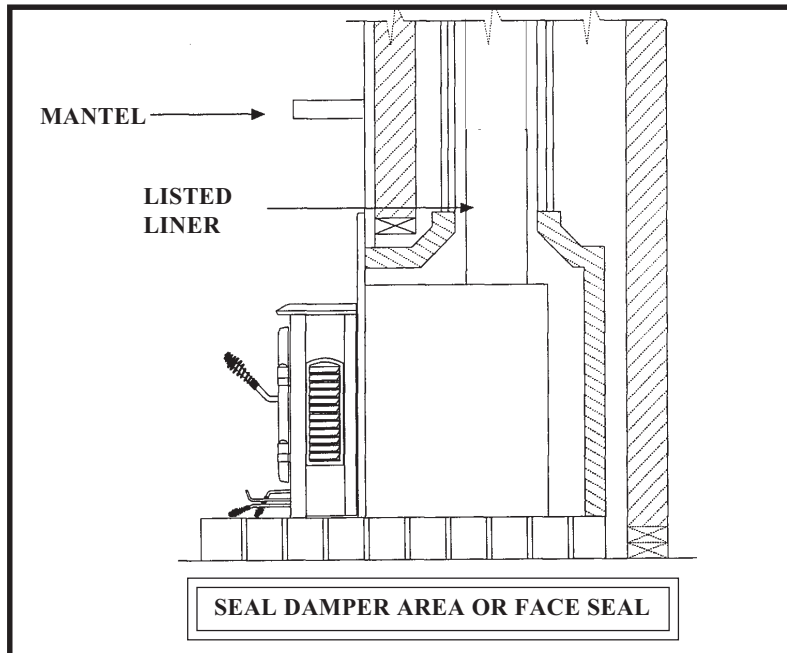
The factory built chimney must be listed per UL 127 (US) or ULC S610 (Canada), and meet the type HT requirements of UL 103 (US) or ULC S629M (Canada). Factory built fireplace chimneys tested to UL 127-1998 are tested to the same criteria as UL 103 HT requirements. If the chimney is not listed as meeting HT requirements (factory built fireplaces tested prior to 1988), a full height listed chimney liner must be installed from the appliance flue collar to the chimney top. The liner must meet type HT requirements (2100°F) per UL 1777 (US) or ULC S635 (Canada). The liner must be securely attached to the insert flue collar and the chimney top. To prevent room air passage to the chimney cavity of the fireplace, seal either the damper area around the chimney liner with high temperature sealant or the fireplace front with fiberglass batting.

The fireplace must not be altered, except that the damper may be removed to accommodate a direct-connect starter pipe or chimney liner, and external trim pieces which do not affect the operation of the fireplace may be removed providing they can be stored on or within the fireplace for reassembly if the insert is removed. The permanent metal warning label provided must be attached to the back of the fireplace, stating that the fireplace may have been altered to accommodate the insert, and must be returned to original condition for use as a conventional fireplace.

The air flow within and around the fireplace shall not be altered by the installation of the insert (no louvers or cooling air inlet or outlet ports blocked). The circulating air chambers (in a steel fireplace liner or metal heat circulator) shall be blocked.

If the hearth extension is lower than the fireplace opening, the portion of the insert extending onto the hearth must be supported. Manufacturer designed support kits can be ordered by size (see page 9).

Final approval of this installation type is contingent upon the authority having jurisdiction.



**SAMPLE INSTALLATION INTO A FACTORY BUILT FIREPLACE  
(ZERO CLEARANCE)**



## OPERATION

### WOOD SELECTION AND STORAGE

***Burn only dry seasoned wood.*** Dry, well-seasoned wood will not only minimize the chance of creosote formation but will give you the most efficient heat output. Even dry wood contains at least 15% moisture by weight and should be burned hot enough to keep the chimney high enough to maintain particulate (smoke) burning. Burning unseasoned wood of any variety defeats the stoves' efficiency.

Dead wood lying on the forest floor should be considered wet, and requires full seasoning time. Standing wood can be considered to be about two-thirds seasoned. Wood is dry enough to burn if the ends of the logs have cracks radiating in all directions from the center. If your wood sizzles in the fire, even though the surface is dry, it may not be fully cured.

Drying time can be reduced by splitting wood prior to storage. Since the majority of drying occurs through the cut ends rather than the sides, stack the wood so both ends of each piece are exposed to air. Store wood under cover, such as in a shed, or covered with a tarp, plastic, tarpaper, sheets of scrap plywood, etc.



### OVERFIRING

Do not overfire. Overfiring can result in crazing, an effect causing a white, non-removable film to be deposited on the inside of the glass. Using flammable liquids or too much wood, or burning trash in the insert, may result in overfiring. If the chimney connector or insert glows red, or worse, white, the insert is overfired. This condition may ignite creosote in the chimney, possibly causing a house fire. If any part of the insert starts to glow, you are in an overfire situation. If you overfire, immediately close the insert dampers and door, if open, to reduce the air supply to the fire. **Overfiring your insert voids your warranty.**



### BUILDING A FIRE

**NOTE: Remove all labels from glass front prior to lighting the first fire.**

There are many ways to build a fire. The basic principle is to light easily ignitable tinder or paper, which ignites the fast-burning kindling, which in turn ignites the slow burning firewood. Here is one method that works well:

1. Ensure that no matches or other combustibles are in the immediate area of the insert, that the room is adequately ventilated, and the flue is unobstructed.
2. Open primary and secondary air controls fully.
3. Place several wads of crushed paper on the firebox floor.
4. Lay small dry sticks of kindling on top.
5. Light the wadded paper in the insert. Never light or rekindle insert with kerosene, gasoline, or charcoal lighter fluid; results can be fatal.
6. Once kindling is burning quickly, add several full length logs three or four inches in diameter. Be careful not to smother the fire. Stack the pieces of wood carefully, near enough to keep each other hot, but far enough away to allow adequate air flow between them. Large logs burn slowly, holding a fire longer. Small logs burn fast and hot, giving quick heat.
7. Adjust the primary and secondary air controls, maintaining flames above the fuel. The more you close down the controls, the lower and slower the fire will burn. The more you open

the controls the more heat will be produced. Remember: **PUSH IN** air controls to **OPEN** for ventilation, **PULL OUT** air controls to **CLOSE** ventilation.

As long as there are hot coals, repeating steps 6 and 7 will maintain a continuous fire.

NOTE: The special high temperature finish paint applied to the insert will cure as your insert heats. You will notice an odor and perhaps see some vapor rise from the insert surface, this is normal. We recommend that you open a window until the odor dissipates and the paint is cured.

### OPERATING TIPS

1. When loading the insert leave both controls open until the new wood load is burning well enough to maintain flames above the fuel.
2. Regulate the heat output by using the secondary air control (located in the center of the insert under the ash catcher). The primary air control, on the right of insert, is mainly for initial start-up, reloading, or high burns.
3. Heat output settings: To obtain the following desired heat output setting, first follow step 1, above. Then follow the Primary and Secondary air control openings as described below:

### HIGH BURN RATE

Fully open both controls by pushing in completely. It is especially important to fully open both controls when reloading the insert as failure to do so could result in excessive emissions, also referred to as 'opacity'.

### MEDIUM BURN RATE

After a wood load has been burning on high for 5 to 15 minutes, or longer for very large pieces, close the primary air control (located on the right side of the insert) by pulling it out. Leave the secondary air control (under the ash catcher) open (pushed in).

### LOW BURN RATE

After a wood load has been burning on high for 5 to 15 minutes, or longer for very large pieces, close the primary air control. Then gradually close down the secondary air control by pulling out. Ensure that flames are maintained in the insert. It is very important to maintain flames in your insert during the first few hours of a low burn to avoid excessive air pollution.

### OPACITY

Opacity is the measure of how clean your insert is burning and is measured in percentages. An opacity of 100% in the smoke column from a chimney will totally obscure an object. Whereas 0% opacity means that no smoke column can be seen. A periodic check of the opacity emitted from your chimney will enable you to burn your insert as smoke free as possible.

## SUMMARY OF OPERATING INSTRUCTIONS

| <b>BTU/HR.</b> | <b>Primary</b>      | <b>2100-I</b>        | <b>Secondary</b> | <b>3100-I</b>        |
|----------------|---------------------|----------------------|------------------|----------------------|
| Below 10,000   | Closed after 5 min. | Pull to stop         |                  | Pull to stop         |
| 10-15,000      | Closed after 5 min. | 1 3/8" - 1 1/2" Open |                  | 7/8" - 1 1/8" Open   |
| 15-30,000      | Closed after 5 min. | 7/8" - 2 1/8" Open   |                  | 1 5/8" - 1 7/8" Open |
| Max. Heat      | Full Open           | Full Open            |                  | Full Open            |

# OPERATION





## FAN OPERATING INSTRUCTIONS

Follow these instructions if your Quadra-Fire insert is equipped with a fan:

1. Initial (cold) startup: Leave fan off until your insert is hot and a good coal bed is established, approximately 30 minutes after fuel is lit.
2. High Burn Setting: The fan may be left on throughout the burn.
3. Medium Burn Setting: The fan should be left off until a good burn is established, then turned on a medium or high rate.
4. Low burn Setting: The fan tends to cool the insert. Leave fan off until the burn is well established. Then if you wish, turn the fan on at a low rate. Too high a fan setting with a low burn rate may adversely affect emissions.
5. The fan is equipped with a rheostat. The highest fan speed is obtained by turning the rheostat on, then adjusting back towards "OFF" as far as possible without turning the fan off. For a low fan speed, turn the control knob clockwise as far as possible.



## MAINTENANCE

### CARE AND CLEANING OF GOLD PLATED SURFACES

**IMPORTANT:** You must clean all the fingerprints and oils from the 24K gold plated surfaces before firing the insert for the first time. Use warm soapy water and a soft rag, glass cleaner and a paper towel, or vinegar and a paper towel to remove the oils. **DO NOT** use abrasive cleaners! If not cleaned properly prior to lighting the first fire, the oils can cause permanent stains. The gold plating will be cured upon firing of the insert and oils will no longer affect the finish. Subsequently, little maintenance is then required. Wipe clean as needed with a soft towel.

### CARE AND CLEANING OF GLASS



**NOTE: Remove all labels from glass prior to lighting the first fire.**

Quadra-Fire stoves are equipped with "Pyroceram II" super heat resistant glass which can only be broken by impact or misuse. Do not slam stove door or impact the glass. When closing door, make sure that logs do not protrude against glass. The glass is coated with a thin layer of infra-red reflective material which cannot be washed off and does not wear out. When the glass is cool it has a rainbow effect. Clean glass with any non-abrasive glass cleaner as abrasive cleaners may scratch and cause glass to crack. Inspect glass regularly. If you find a crack or break, immediately put fire out and return door to your dealer for replacement of glass before further use. **Do not substitute materials for glass replacement.**

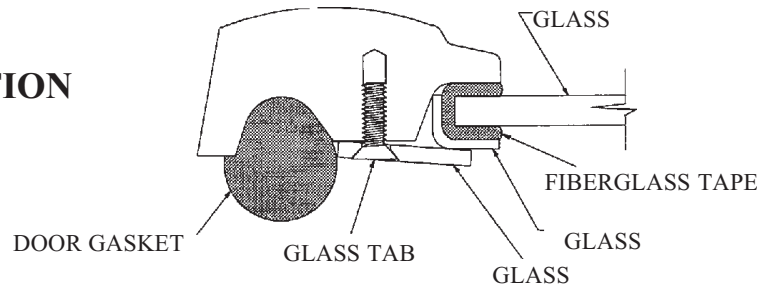
### GLASS REPLACEMENT INSTRUCTIONS

1. Remove door from stove and lay on a padded flat surface.
2. Remove glass tabs and screws with a Phillips screwdriver.
3. Lift glass frame pieces and glass out of the door frame.
4. Lay new glass with fiberglass tape around it into door frame making sure the Quadra-Fire logo reads correctly to the outside.



5. Place glass frame pieces over the fiberglass tape on the edges of the glass. Be sure glass is centered in the opening (i.e. same space top and bottom, left and right).
6. Reinstall screws and glass tabs tightly enough to hold frame and glass in place.
7. Check again for centering of glass in door frame and give all screws a final tightening.

### DOOR CROSS SECTION



### CHIMNEY



When wood is burned slowly it produces tar and other organic vapors which combine with expelled moisture, which in turn forms creosote. These creosote vapors condense in the relatively cool chimney flue when a fire is newly started, or from a slowly burning fire, and accumulate on the flue lining of the chimney.

A build up of creosote can then be ignited by sparks rising up the chimney. When ignited, this situation makes an extremely hot fire which may damage the chimney and even destroy your home. Therefore it is extremely important that this residue is removed at regular intervals, usually once a year depending on your burning habits, to prevent the occurrence of a chimney fire. It is highly recommended that you contact a professional chimney cleaner for this area of maintenance.

If your type of installation involves a full re-line of the chimney, it will be necessary to either remove the baffle from the insert, or remove the insert from the fireplace and disconnect the vent prior to cleaning the chimney. Refer to pages 24-25 in this manual for instructions on Baffle Removal.

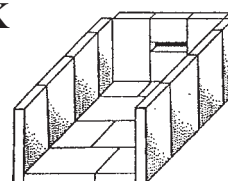
If your type of installation is direct connect within a masonry chimney, the insert will need to be pulled out from the fireplace and disconnected from the flue prior to cleaning the chimney. The creosote can either be caught in a large garbage bag secured to the pipe or swept

### ASH REMOVAL

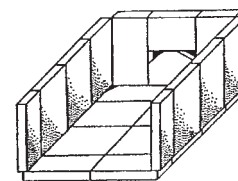
Remove cold ashes (not hot) from the insert at regular intervals, depending on your usage, by shoveling them into a metal container with a tight-fitting lid. Always treat ashes as if they contain hot coals and store the container on a non-combustible floor away from combustible material pending final disposal.

### FIREBRICK

The firebox of your Quadra-Fire insert is lined with high quality firebrick which has exceptional insulating properties. There is no need for a grate, simply build a fire on the firebox of your insert.



2100-I



3100-I

BRICK PATTERNS

# MAINTENANCE

# REMOVAL & RE-INSTALLATION BAFFLE:



## BAFFLE REMOVAL & INSTALLATION

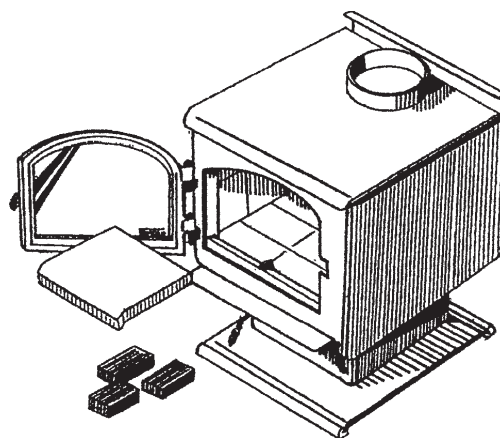


### PLEASE NOTE:

Baffles in Quadra-Fire stoves are heavy. The 2100-I baffle weighs 25 lbs. The 3100-I baffle weighs 29 lbs. Moving the baffle around inside the stove takes strength and patience. Removing hardware exposed to combustion processes can be frustrating. Please read the following instructions thoroughly before proceeding.

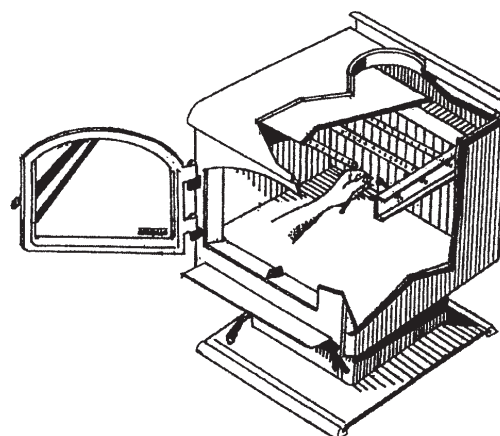
**Note:** The illustrations shown in this section depict the freestanding models. However, the procedures for removing and installing the baffles are the same for the 2100-I and 3100-I inserts.

1. Remove all ash from the firebox and extinguish all hot embers before disposal.
2. Remove the Kaowool blanket from above the baffle.
3. Remove the firebrick from the sides of the stove. **See Figure 1.**



**FIGURE 1**

4. Soak the secondary combustion tube retainer bolts, on the secondary air channel under the end of each tube, with penetrating oil for at least 15 minutes. Use a 3/16" Allen Wrench to remove the bolts. **See Figure 2.**



**FIGURE 2**

5. To remove the secondary combustion tubes, slide them to one side until one end is out of its hole. Then, while lifting that end of the baffle plate, pull the tube up over the secondary air channel and out of the hole at its other end. See **Figure 3**

**Note:** When replacing the secondary tubes on the 3100-I, the tube with the larger holes is installed in front.

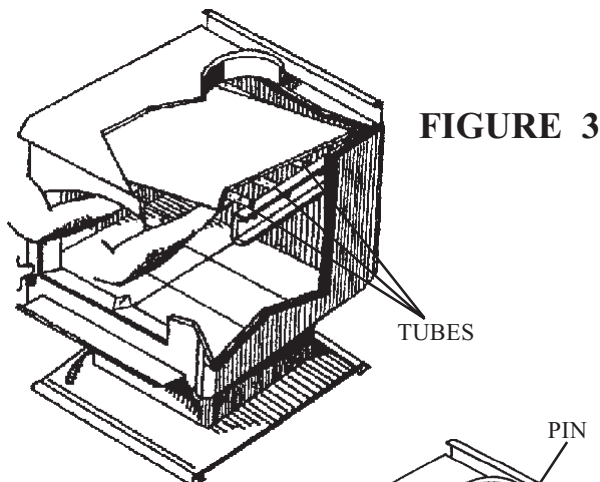
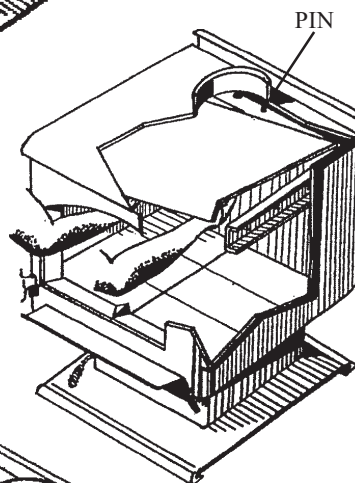


FIGURE 3

6. To remove the baffle plate, use both hands to lift it off of the alignment pin at the center rear. One edge of the bent baffle front will have a diagonal cut. Tilt this side up as you slide the baffle towards that side until the other side clears its shelf and the baffle can be lowered. See **Figure 4**.

FIGURE 4



7. Keep the baffle tilted as you lift it out the door. See **Figure 5**.

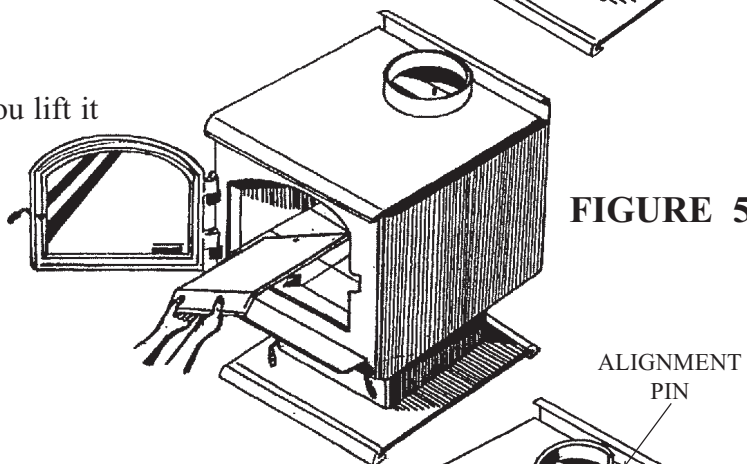


FIGURE 5

8. To install the baffle, reverse Steps 1 through 7. The hole in the baffle must be on its alignment pin on the rear shelf. See **Figure 6**.

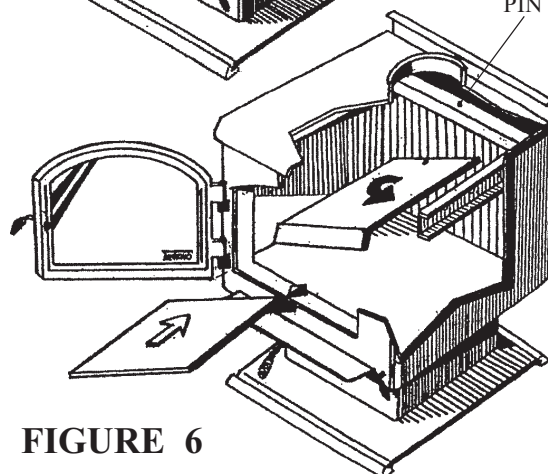


FIGURE 6

# BAFFLE: REMOVAL & RE-INSTALLATION

## AIR QUALITY AND YOUR QUADRA-FIRE INSERT

In recent years there has been an increasing concern about the quality of our air. Much of the blame for poor air quality has been placed on the burning of wood for home heating. In order to improve this situation we at Quadra-Fire have developed cleaner burning inserts that surpass the stringent requirements for emissions established by our governing agencies.

### ***PROPER OPERATION AND MAINTENANCE GIVES YOU MORE HEAT FROM YOUR FUEL . . .***

Properly operated and maintained, your 2100-I or 3100-I wood burning insert will obtain the peak efficiency and lowest emissions possible, resulting in better air quality for your community and more heat output per pound of wood. *Improper operation and maintenance* may cause any wood burning unit to release more particulate, adversely affecting the environment.

### ***THE STORY OF THE THREE BURNING STAGES . . .***

It helps to know a little about the actual burn process, what our Lab at AHP refers to as 'pyro physics', in order to understand what is happening inside the firebox. This process entails three discernible burning stages. The **first stage** is called the kindling stage. During this stage the fuel reaches the boiling temperature of water, 212°F, evaporating the moisture found to some degree in all wood.

Because the process takes heat from the insert during this initial drying stage, each new load of wood reduces the chances for a good, clean burn. For this reason it is always best to burn dry, seasoned firewood, and operate the controls properly. The control on the right side of your insert is called the **primary control**, and is used primarily during this first kindling stage of burning, or later to activate a secondary stage to achieve a maximum burn rate. Opening this control will enable the insert to operate at a higher burn setting which is necessary to quickly ignite the fuel.

During the **secondary stage**, the wood gives off flammable gases which burn above the fuel with bright flames. These flames above the fuel must be maintained until the third stage to insure proper burning. During this stage you may adjust your insert for a low burn rate. To achieve a low burn rate it is necessary to close down the air while still maintaining some flames. If the flames tend to go out, the setting is too low. The **secondary control**, located in the center of the insert beneath the ash catcher, will assist you in adjusting the insert for a low burn rate.

The **third stage** of burning is the charcoal stage. This happens when the flammable gases have been burned and the charcoal remains. The coals burning with hot blue flames is a naturally clean portion of the burn. It is very important to reload your insert while enough lively hot coals remain in order to provide the amount of heat needed to dry and rekindle the next load of wood. Open up both controls for a short while before reloading to liven up the coal bed. You should also break up any large chunks and distribute the coals so the new wood is laid on hot coals. Leave both controls open until the new wood load is burning well enough to maintain the secondary stage of burning and then set controls to your desired heat output setting. (See Summary of Operating Instructions box on page 21.)

### ***MORE ABOUT THOSE CONTROLS . . .***

**Primary control = Primary Air System :** The primary combustion air enters at the rear of the firebox through the primary air tubes. This air supply is controlled by the push rod located at the front right side of the insert. For maximum burn rates (more heat) push rod in, for minimum burn rates (less heat) pull rod out.

**Secondary control = Secondary Air System :** The secondary air enters at the upper front of the firebox near the top of the glass door. This preheated air supplies the necessary fresh oxygen to mix with the unburned gases, helping to create secondary, tertiary and quaternary combustion. This air is regulated by the push rod beneath the ash catcher. For more secondary air (more heat), push rod in. For less secondary air (less heat), pull rod out.

### ***IN OTHER WORDS . . .***

**Pulling** either control towards you closes off the air available to the insert in that area. **Pushing** either control opens it, allowing air circulation to the area. A good analogy to remember for this procedure is the gas pedal on your car. Pushing in the gas pedal makes the engine run faster. Letting off (pulling the control back) makes the car run slower.



*North America's Best*



## *Lifetime Warranty*

Aladdin Hearth Products, warrants their wood heating appliances to the original purchaser for the lifetime of the appliance, to be free from defects in material and workmanship. This warranty gives you specific legal rights; you may have other rights which may vary from state to state.

This limited Lifetime Warranty covers items such as, but not limited to, combustion chambers, doors, gold plating, steel baffles, manifold tubes, ash removal systems, and glass damaged by thermal breakage.

All parts to be replaced must be returned to an authorized Aladdin Hearth Products dealer at purchaser's expense for inspection and approval by Aladdin Hearth Products prior to repair or replacement. No repair or replacement costs will be honored without approval of Aladdin Hearth Products.

This new Quadra-Fire product must be installed by a competent, authorized service contractor. It must be installed and operated at all times in accordance with the Installation and Operating Instructions in this manual, as well as any applicable local and national codes. Any alteration, willful abuse, accident, or misuse of the product shall void this warranty.

Any installation, construction, transportation, or other related costs or expenses arising from defective part(s), repair, replacement, etc., will not be covered by this warranty, nor will Aladdin Hearth Products assume responsibility for them. Further, Aladdin Hearth Products will not be responsible for any incidental, indirect, or consequential damages, except as provided by law.

All electrical components such as, but not limited, to blowers, wiring, speed controls, and thermodisc switches are covered by Aladdin's one year warranty program.

Aladdin Hearth Products will not be responsible for any alteration to the unit which causes sooting that results in damage to the interior or exterior of the building in which this appliance is installed.

This warranty is void if the stove has been operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals, or if the stove is subjected to prolonged periods of dampness or condensation, or there is any damage to the stove or other components due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation.

This limited Lifetime Warranty does not extend to or include paint, door gasketing, glass gasketing, firebrick, kaowool or other ceramic insulating materials. It does not cover installation or operational-related problems such as overfiring, use of corrosive driftwood, downdrafts or spillage caused by environmental conditions, nearby trees, buildings, hilltops, mountains, inadequate venting or ventilation, excessive offsets, or negative air pressures caused by mechanical systems such as furnaces, fans, clothes dryers, etc.

This limited Lifetime Warranty does not apply to venting components, hearth components or other accessories used in conjunction with the installation of this product not manufactured by Aladdin Hearth Products.

This limited Lifetime Warranty is effective on all wood stoves sold after September 1, 1996, and supersedes any and all warranties currently in existence.

### **—IMPORTANT—**

This warranty is not valid unless the warranty registration card has been properly completed in full and returned within 10 days from the date of purchase.

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# WARRANTY



**2100-I & 3100-I FIREPLACE INSERT  
OWNER'S MANUAL**

**Part #832-0520**