

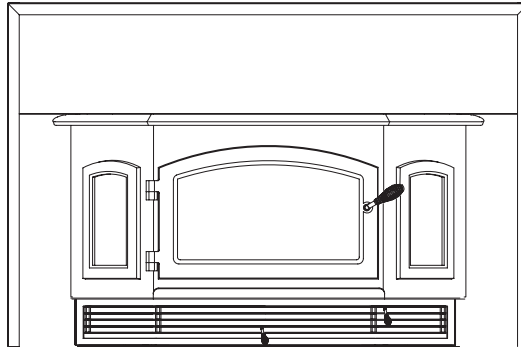
QUADRA-FIRE®

5100-I ACT WOOD INSERT

Advanced Combustion Technology (ACT)

Model:

5100I-GD-B
5100I-NL-B



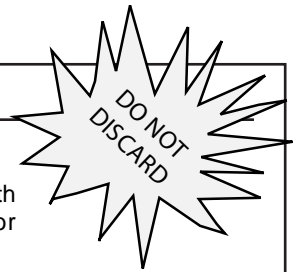
Tested and
Listed by  Portland
Oregon USA
OMNI-Test Laboratories, Inc.

NOTICE



DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation.



WARNING



If the information in these instructions is not followed exactly, a fire may result causing property damage, personal injury, or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Do not overfire - If heater or chimney connector glows, you are overfiring. Overfiring will void your warranty.
- Comply with all minimum clearances to combustibles as specified. Failure to comply may cause house fire.

WARNING



HOT SURFACES!

Glass and other surfaces are hot during operation and cool down.

Hot glass will cause burns.

- Do not touch glass until it is cooled
- NEVER allow children to touch glass
- Keep children away
- CAREFULLY SUPERVISE children in the same room as appliance
- Alert children and adults to hazards of high temperatures

High temperatures may ignite clothing or other flammable materials.

- Keep clothing, furniture, draperies and other combustibles away.



Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends NFI certified professionals, or technicians supervised by an NFI certified professional.



WARNING



Fire Risk.

For use with solid wood fuel only. Other fuels may overfire and generate poisonous gases (i.e. carbon monoxide).





and Welcome to the Quadra-Fire Family!

Hearth & Home Technologies 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. Each unit is meticulously fabricated and surfaces are hand-finished for lasting beauty and enjoyment. Our pledge to quality is completed as each model undergoes a quality control inspection.

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.

NOTE: Clearances may only be reduced by means approved by the regulatory authority having jurisdiction

SAMPLE OF SERIAL NUMBER / SAFETY LABEL

LOCATION: On right side of insert as face the appliance



CAUTION: HOT WHILE IN OPERATION DO NOT TOUCH, KEEP CHILDREN AND CLOTHING AWAY. CONTACT MAY CAUSE SKIN BURNS. KEEP FURNISHINGS AND OTHER COMBUSTIBLE MATERIAL FAR AWAY FROM THE APPLIANCE. SEE NAMEPLATE AND INSTRUCTIONS.

ATTENTION: CHAUD LORS DE L'OPERATION. NE PAS TOUCHER. GARDEZ LES ENFANTS ET LES VÊTEMENTS LOIN DE L'ESPACE DÉSIGNÉ DE L'INSTALLATION. LE CONTACT PEUT CAUSER DES BRÛLURES À LA PEAU. GARDEZ LES MEUBLES ET LES MATÉRIEL COMBUSTIBLES LOIN DE L'ESPACE DE L'APPAREIL. VOIR L'ÉTIQUETTE ET LES INSTRUCTIONS.

OMNI-Test Laboratories, Inc.
Report: 061-S-12-2

Tested to / Testé à:
UL 1482, ULC S628-93

Model / Modèle:
5100-I ACT INSERT

Serial Number
007

LISTED ROOM HEATER, SOLID FUEL TYPE: "For Use with Solid Wood Fuel Only." Also for use in Mobile Home (UM) 84 HUD.

PREVENT HOUSE FIRES

Install and use only in accordance with manufacturer's installation, venting and operating instructions. CONTACT YOUR LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA.

Refer to manufacturer's instructions and local codes for precautions required for passing chimney through a combustible wall or ceiling.

WARNING - For Mobile Homes: Do not install in a sleeping room. An outside combustion air inlet must be provided and unrestricted while unit is in use. The structural integrity of the mobile home floor, ceiling and walls must be maintained. The insert must be properly grounded to the frame of the mobile home. A complete relining of the chimney system with a 6" diameter listed stainless liner is required. Must be equipped with a spark arrestor cap. Outside Air comes standard on the insert and must be installed before operating insert.

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.

Install only on a non-combustible hearth. Approved for installation and use in factory built zero-clearance fireplaces conforming to minimum fire chamber specifications (USA only).

Components required for installation: positive or direct flue connection assembly or listed vent liner.

In Canada a full length 6" S635 flue liner is required as per ULC S635.

WARNING - Inspect and clean chimney frequently. Under certain conditions, creosote can build up in the chimney and cause a fire.

APPAREIL DE CHAUFFAGE DE PIÈCE, DE TYPE DE COMBUSTIBLE SOLIDE, "Pour Usage Avec Bois Solide Seulement" Pour usage dans les maisons mobiles (UM)84 HUD

PRÉVENTION DES FEUX DE MAISON

Installez et utilisez en accord avec les instructions d'installation et d'opération du fabricant. CONTACTEZ LE BUREAU DE LA CONSTRUCTION OU LE BUREAU DES INCENDIES AU SUJET DES RESTRICTIONS ET DES INSPECTIONS D'INSTALLATION DANS VOTRE VOISINAGE.

Référez vous aux instructions du fabricant et des codes locaux pour les précautions requises pour passer une cheminée à travers un mur ou un plafond combustibles, et les compensations maximums.

ATTENTION - Pour les Maisons Mobiles: Ne pas installer dans une chambre à coucher. Un tuyau extérieur de combustion d'air doit être installé et ne doit pas être obstrué lorsque l'appareil est en usage. La structure intégrale du plancher, du plafond et des murs de la maison mobile doit être maintenue intacte. L'appareil de chauffage doit être fixé à la charnière de la maison mobile.

Lorsque vous utilisez un modèle inséré fabriqué en briques, installez un foyer en briques fabriqué selon UBC Chapitre 37. Ne pas enlever de la brique ou du mortier pour accommoder la pièce insérée. L'installation demande un tuyau allant de la cheminée existante avec un couvent hermétique.

Installez seulement sur un foyer incombustible. Approuvé pour l'installation et usage dans les cheminées avec espace libre de zéro, fabriquées en usine et se conformant aux spécifications minimum de chambre de combustion (USA seulement).

ATTENTION! Inspectez et nettoyez la cheminée fréquemment. Sous certaines conditions, il se peut que la créosote s'accumule rapidement.

Ne pas connecter cet appareil à une cheminée servant un autre appareil.

DANGER: Il y a risque de décharge électrique. Déconnectez le fil électrique de la prise de courant avant le service.

Maximum Mantel Depth - 8" (203mm)
Profondeur Maximum de la Manteau de Cheminée

Mantel / Manteau de Cheminée

Side Wall / Mur de Côté

Insert

Hearth Extension / Extension de l'âtre

| | A | B | C | D |
|----------------------------------------------------------------------------------------------|-----------|------------|-----------|----------|
| Masonry, Heat Exchanger & "Zero Clearance" En briques, Circulant la chaleur & d'espace libre | 12"/305mm | 40"/1015mm | 35"/889mm | 7"/178mm |
| with 5" (127mm) Mantel Deflector avec un déflecteur de cheminée de 5" (127 mm) | 12"/305mm | 31"/787mm | 20"/508mm | 7"/178mm |
| with 8" (203mm) Mantel Deflector avec un déflecteur de cheminée de 8" (203 mm) | 12"/305mm | 27"/686mm | 16"/406mm | 7"/178mm |

***Zero Clearance Installations USA Only**
*Installation avec espace libre de zéro seulement aux États-Unis

| | E | F |
|--------------------------------------------------|-----------|----------|
| FLOOR PROTECTION / PROTECTION DU PLANCHER | | |
| USA/États-Unis | 16"/406mm | 8"/203mm |
| CANADA | 18"/457mm | 8"/203mm |

TRIM / Panneau

| | |
|--------------|---------------------|
| Side Trim | 1-1/2" (38mm) thick |
| Muir Panneau | |
| Top Trim | 3/4" (19mm) thick |
| Haut Panneau | |

Non-combustible floor protector must be a minimum 1/2" (13mm) thickness (k value = 0.84, R value = 0.59) and extend 8" (203mm) to both sides.

La protection de plancher non-combustible doit être d'un minimum de 1/2" d'épaisseur (k value = 0.84, R value = 0.59) et étendue à 8" (203mm) de chaque côté.

Manufactured by / Fabriqué par:

HEARTH & HOME
Technologies
1445 N. Highway, Coville, WA 99114
www.quadrafire.com

U.S. ENVIRONMENTAL PROTECTION AGENCY - Certified to comply with July 1990 particulate emission standards.

| 2010 | 2011 | 2012 | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec. |
|------|------|------|-----|-----|-----|-----|-----|------|------|-----|------|-----|-----|------|
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

Made in U.S.A. / Fait Aux États-Unis DO NOT REMOVE THIS LABEL / NE PAS ENLEVER L'ÉTIQUETTE 438-0390

Serial Number

Model Name

Test Lab & Report No.

Manufactured Date

Safety Alert Key:

- **DANGER!** Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- **WARNING!** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- **CAUTION!** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE:** Indicates practices which may cause damage to the fireplace or to property.

TABLE OF CONTENTS**Section 1: Listing and Code Approvals**

- A. Appliance Certifications4
- B. Mobile Home Approved4
- C. Glass Specifications.....4
- D. BTU & Efficiency Specifications.....4

Section 2: Getting Started

- A. Design, Installation & Location Considerations.....5
- B. Fire Safety5
- C. Negative Pressure6
- D. Flue Draft Considerations7
- E. Tools and Supplies Needed.....7
- F. Inspect Appliance & Components.....7

Section 3: Dimensions & Clearances

- A. Appliance Dimensions8
- B. Clearances to Combustibles9
- C. Mantel Deflector (Optional)9
- D. Floor Protection9
- E. Alternate Floor Protection Worksheet....9
- F. Hearth Extension10

Section 4: Installation Considerations

- A. Outside Air Kit11
- B. Blower Cord Location12
- C. Wiring Diagram13
- D. Optional Offset Adapter13

Section 5: Chimney Requirements

- A. Venting Systems.....14
- B. Inspections14
- C. Larger Chimneys.....14
- D. Masonry Chimney14-15
- E. Metal Heat Circulating Masonry.....16
- F. Prefabricated Metal Chimney.....16-17
- G. Altering Fireplace17
- H. Securing Chimney Components17
- I. Ovalizing Round Stainless Steel Liners18
- J. Chimney Height / Rise & Run18
- K. Air Clearances18
- L. Chimney Termination Requirments19
- M. 2-10-3 Rule19

Section 6: Mobile Home20**Section 7: Appliance Set-Up**

- A. Installation Outline21
- B. Leveling Bolts.....21
- C. Panel & Trim Set.....21-22
- D. Securing Liner to Flue Collar22
- E. Adj. Zero Clearance Trim Support.....23

Section 8: Operating Instructions

- A. Over-Firing Your Appliance.....24
- B. Wood Selection & Storage24
- C. Burning Process.....24-25
- D. Building A Fire.....25
- E. Burn Rates & Operating Efficiencies...26
- F. Opacity (Smoke) Burn Rates26
- G. Air Controls27
- H. Blower Operating Instructions.....27
- I. Correct Baffle & Blanket Placement ...28
- J. Frequently Asked Questions.....29

Section 9: Maintaining & Servicing Appliance

- A. General Maintenance & Cleaning30-31
- B. Quick Reference Maintenance Guide .32
- C. Glass Replacement - Door.....33
- D. Glass Replacement - Side Window33
- E. Door Handle Assembly34
- F. Blower Replacement.....34
- G. Firebrick Replacement35
- H. Baffle & Manifold Tube Removal36

Section 10: Troubleshooting37**Section 11: Reference Material**

- A. Exploded Drawing.....38
- B. Service Parts & Accessories.....39-41
- C. Warranty Policy.....42-43
- D. Contact Information.....44

1

Listing and Code Approvals

A. Appliance Certification

| | |
|--------------------|---------------------------------------------------------------|
| MODEL: | 5100-I ACT Wood Insert |
| LABORATORY: | OMNI Test Laboratories, Inc. |
| REPORT NO. | 061-S-59-2 |
| TYPE: | Solid Fuel Type, Wood Stove Insert |
| STANDARD: | UL1482 and ULC S628 and (UM) 84-HUD, Mobile Home Approved. |

The Quadra-Fire 5100-I ACT Wood Inserts meets the U.S. Environmental Protection Agency's 1990 particulate emission standards.

B. Mobile Home Approved

This appliance is approved for mobile home installations when not installed in a sleeping room and when an outside combustion air inlet is provided. The structural integrity of the mobile home floor, ceiling, and walls must be maintained.

The appliance must be properly grounded to the frame of the mobile home and use only listed double-wall connector pipe. An Outside Air Kit comes standard on the appliance and must be installed in a mobile home installation.

C. Glass Specifications

This appliance is equipped with 5mm ceramic glass. Replace glass only with 5mm ceramic glass. Please contact your dealer for replacement glass.

NOTE: This installation must conform with local codes. In the absence of local codes you must comply with the **UL1482, (UM) 84-HUD and NFPA211** in the U.S.A. and the **ULC S628-93 and CAN/CSA-B365 Installation Codes** in Canada.

D. BTU & Efficiency Specifications

| | |
|----------------------------|------------------------------------------------|
| EPA Certified: | 1.9 grams/hour |
| Efficiency: | up to 84.4% |
| BTU Output: | 11,600 to 48,200 |
| Heating Capacity: | 2,250 to 3,175 sq ft depending on climate zone |
| Maximum Log Length: | 12 inches |
| Firebox Capacity: | 3.0 cubic feet |
| Weight: | 520 lbs |



WARNING

Fire Risk.

Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:

- Installation and use of any damaged appliance.
- Modification of the appliance.
- Installation other than as instructed by Hearth & Home Technologies.
- Installation and/or use of any component part not approved by Hearth & Home Technologies.
- Operating appliance without fully assembling all components.
- Operating appliance without legs attached (if supplied with unit).
- Do NOT Overfire - If appliance or chimney connector glows, you are overfiring.

Any such action that may cause a fire hazard.

NOTE: Hearth & Home Technologies grants no warranty, implied or stated, for the installation or maintenance of this unit and assumes no responsibility for any consequential damage(s).

NOTE: Hearth & Home Technologies, manufacturer of this appliance, reserves the right to alter its products, their specifications and/or price without notice.

Quadra-Fire is a registered trademark of Hearth & Home Technologies.

2

Getting Started

A. Design, Installation & Location Considerations

Consideration must be given to:

- Safety
- Convenience
- Traffic flow
- Chimney and chimney connector required

It is a good idea to plan your installation on paper, using exact measurements for clearances and floor protection, before actually beginning the installation.

We recommend that a qualified building inspector and your insurance company representative review your plans before and after installation.

If this appliance is in an area where children may be near it is recommended that you purchase a decorative barrier to go in front of the appliance. Remember to always keep children away while it is operating and do not let anyone operate this appliance unless they are familiar with these operating instructions.

B. Fire Safety

To provide reasonable fire safety, the following should be given serious consideration:

1. Install at least one smoke detector on each floor of your home to ensure your safety. They should be located away from the heating appliance and close to the sleeping areas. Follow the smoke detector manufacturer's placement and installation instructions, and be sure to maintain regularly.
2. A conveniently located Class A fire extinguisher to contend with small fires resulting from burning embers.
3. A practiced evacuation plan, consisting of at least two escape routes.
4. A plan to deal with a chimney fire as follows:

In the event of a chimney fire:

- a. Evacuate the house immediately
- b. Notify fire department

CAUTION

Check building codes prior to installation.

- Installation **MUST** comply with local, regional, state and national codes and regulations.
- Consult insurance carrier, local building, fire officials or authorities having jurisdiction about restrictions, installation inspection, and permits.



WARNING



Fire Risk.

- Do not operate appliance before reading and understanding operating instructions.
- Failure to operate appliance properly may cause a house fire.



WARNING

Asphyxiation Risk.

- DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVICING ANOTHER APPLIANCE.
- DO NOT CONNECT TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.

May allow flue gases to enter the house.



WARNING

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to the owner's information manual provided with this appliance. For assistance or additional information consult a qualified installer, service agency or your dealer.

C. Negative Pressure

Draft is the pressure difference needed to vent appliances successfully. Considerations for successful draft include:

- Preventing negative pressure
- Location of appliance and chimney

Negative pressure results from the imbalance of air available for the fireplace to operate properly. Causes for this imbalance include:

- Exhaust fans (kitchen, bath) etc.)
- Range hoods
- Combustion air requirements for furnaces, water heaters and other combustion appliances
- Clothes dryers
- Location of return-air vents to furnace or air conditioning
- Imbalances of HVAC air handling system
- Upper level air leaks
 - Recessed lighting
 - Attic hatch opening
 - Duct leaks

tion appliances and exhaust equipment.

- Ensure furnace and air conditioning return vents are not located in the immediate vicinity of the appliance,
- Avoid installing the appliance near doors, walkways or small isolated spaces.
- Recessed lighting should be of “sealed can” design; attic hatches weather stripped or sealed; and attic mounted ductwork and air handler joints and seams taped or sealed.

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| | <p>WARNING</p> |
| <p>Asphyxiation Risk.</p> <ul style="list-style-type: none"> • Negative pressure can cause spillage of combustion fumes and soot • Appliance needs to draft properly for safety. | |

To minimize the affects of negative air pressure the following must be considered:

- Install the outside air kit. Install the intake on the side of the house towards prevailing winds during the heating season.
- Ensure adequate outdoor air is supplied for combus-

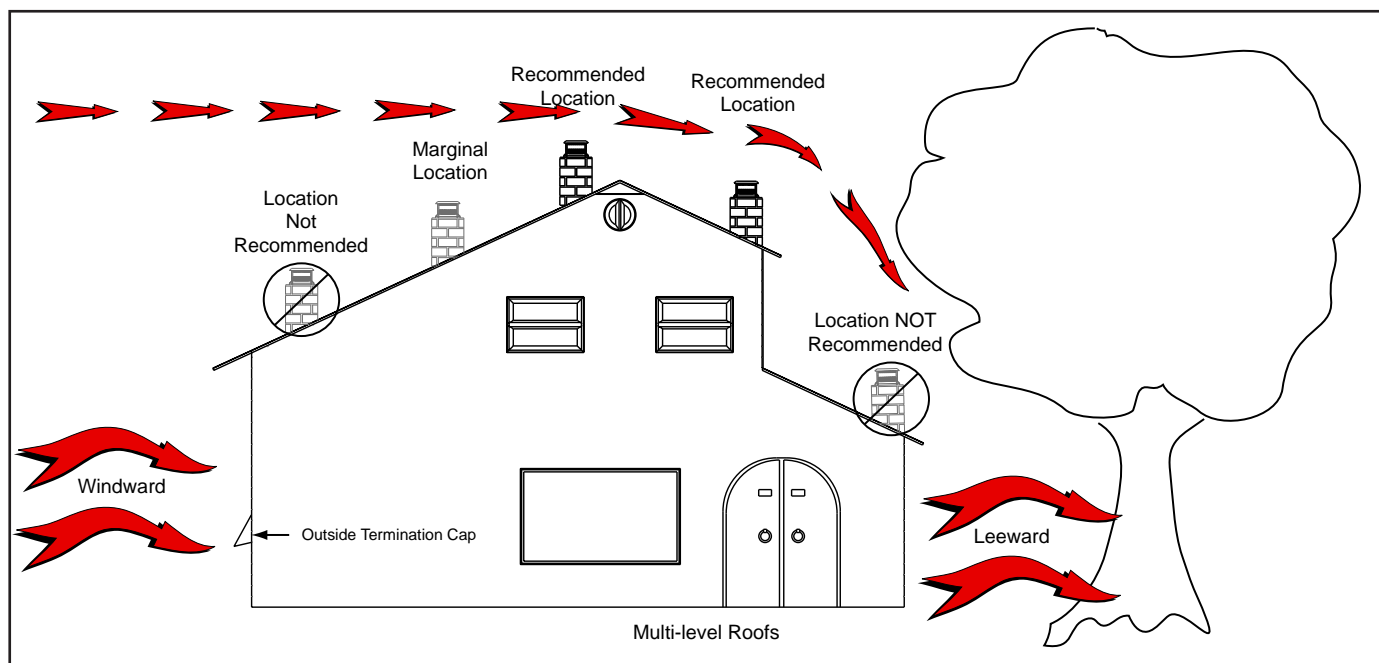


Figure 6.1

D. Flue Draft Considerations

Location of the appliance and chimney will affect performance. As shown in **Figure 6.1 on page 6** the chimney should:

- Be installed through the warm space enclosed by the building envelope. This helps to produce more draft, especially during lighting and die down of the fire.
- Penetrate the highest part of the roof. This minimizes the affects of wind turbulence.
- Consider the appliance location to the floor and ceiling attic joists.

Exterior conditions such as roof line, surrounding trees, prevailing winds and nearby hills can influence appliance performance. Your local dealer is the expert in your geographic area and can usually make suggestions or discover solutions that will easily correct your flue problem.

To be sure that your appliance burns properly, the chimney draft (static pressure) should be approximately -.10 inch water column (W.C.) during a high burn and -.04 inch W.C. during a low burn, measured 6 inches (152mm) above the top of the appliance after one hour of operation at each burn setting.

NOTE: These are guidelines only, and may vary somewhat

F. Inspect Appliance and Components

- Open the appliance and remove all the parts and articles packed inside.
- Inspect all the parts and glass for shipping damage.
- Contact your dealer if any irregularities are noticed.
- Removed all labels from the glass doors.
- Wipe clean all plated surfaces before first fire.



WARNING

Inspect appliance and components for damage. Damaged parts may impair safe operation.

- Do NOT install damaged components.
- Do NOT install incomplete components.
- Do NOT install substitute components.

Report damaged parts to dealer.

E. Tools And Supplies Needed

Before beginning the installation be sure that the following tools and building supplies are available.

| | |
|------------------------|------------------------------------------------------------------------|
| Reciprocating saw | Framing Material |
| Pliers | Hi-Temp Caulking Material |
| Hammer | Gloves |
| Phillips Screwdriver | Framing Square |
| Flat Blade Screwdriver | Electric Drill & Bits (1/4") |
| Plumb Line | Safety Glasses |
| Level | 1/2" - 3/4" length, #6 or #8 |
| Tape Measure | self drilling screws (you will need 3 per pipe section connection +10) |

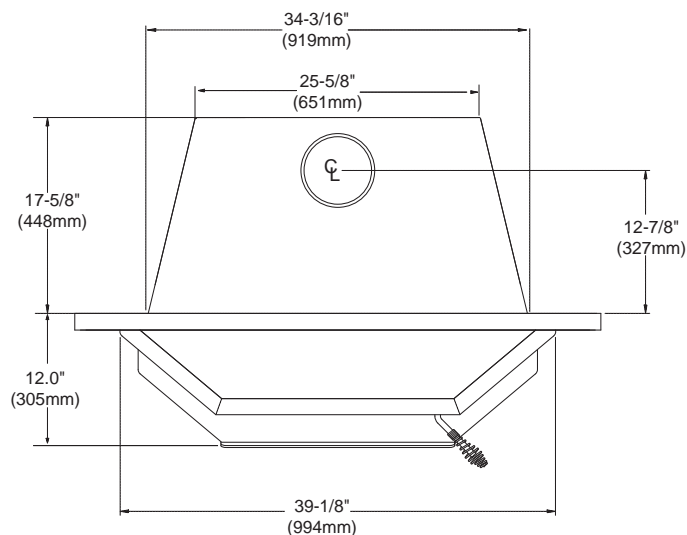
3

Dimensions and Clearances

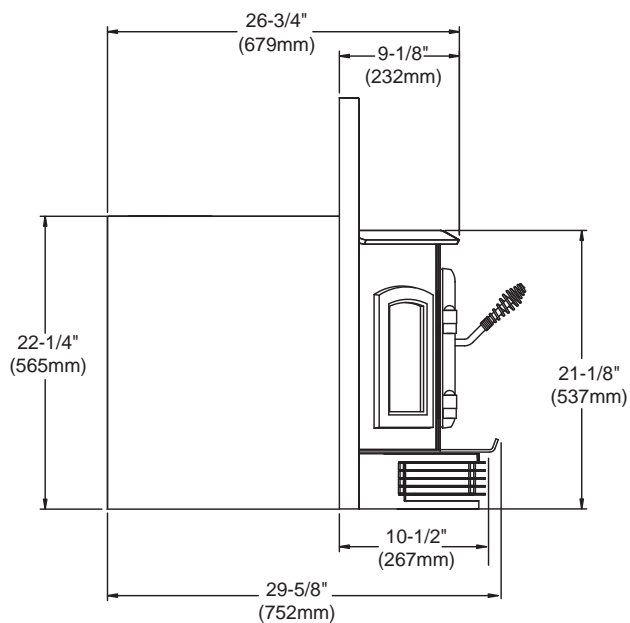
A. Appliance Dimensions

NOTE: Flue Collar: 6 inch (152mm) diameter (ID)

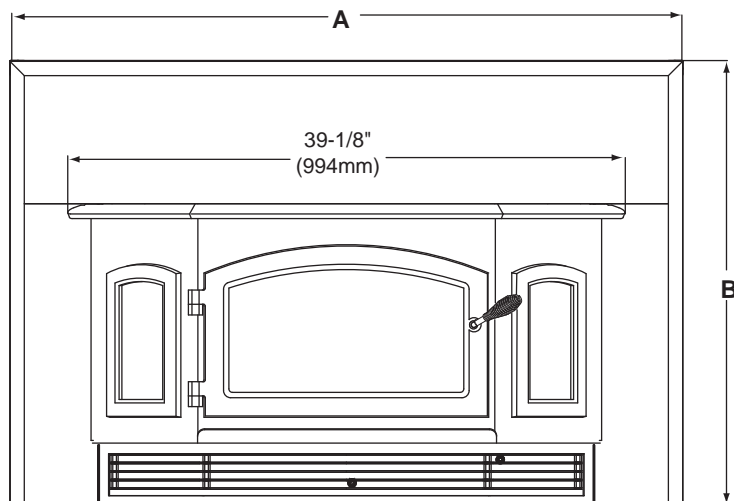
TOP VIEW



SIDE VIEW

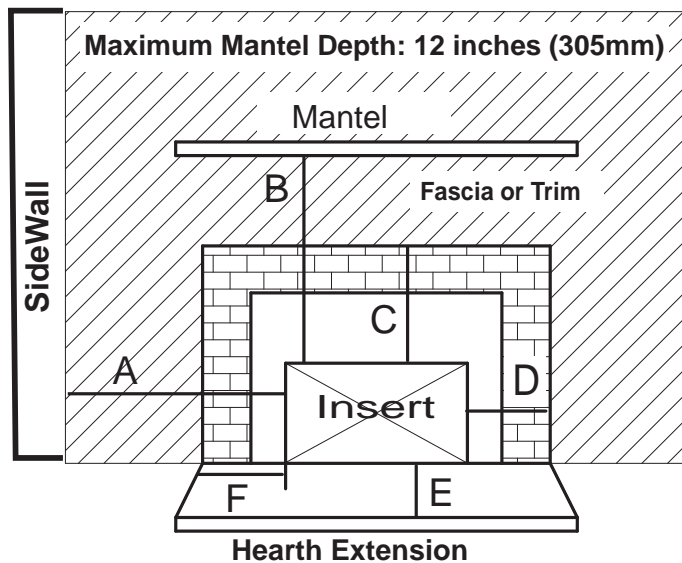


FRONT VIEW



| Panel Size | A | B |
|------------|------------|------------|
| Standard | 47 in. | 30-1/2 in. |
| Large | 51-1/4 in. | 34-1/4 in. |

B. Clearance to Combustibles



Minimum Clearances To Combustible Material

| | | | | |
|-------------------------------------------|-----------|-------------|-------------------------------|----------|
| Masonry, Heat Exchanger & *Zero Clearance | A | B | C | D |
| | 12"/305mm | 40"/1015mm | 35"/889mm | 7"/178mm |
| With 8 inch (203mm) Mantel Deflector | 12"/305mm | 27"/686mm | 16"/406mm | 7"/178mm |
| Maximum Mantel Depth | 12"/305mm | | | |
| FLOOR PROTECTION | | TRIM | | |
| | E | F | Side Trim 1-1/2" (38mm) thick | |
| USA | 16"/406mm | 8"/200mm | Top Trim 3/4" (19mm) thick | |
| CANADA | 18"/450mm | 8"/200mm | | |

*Zero Clearance Installations USA Only

C. Optional Mantel Deflector

Optional mantel deflectors may be purchased from your dealer to reduce clearances to a mantel. An 8 inch (203mm) deflector allows a reduction down to 27 inches (686mm).

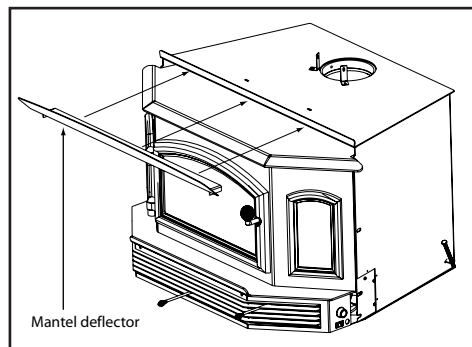


Figure 9.1

D. Floor Protection USA & Canada

Thermal protection must be 1/2 inch (13mm) minimum thickness ("k" value = 0.84, R value = 0.59) or equivalent material.

All floor protection must be non-combustible (i.e., metals, brick, stone, mineral fiber boards, etc.). Any organic materials (i.e., plastics, wood paper products, etc.) are combustible and must not be used. The floor protection specified includes some form of thermal designation such as R-value (thermal

E. Calculating Alternate Floor Protection Material

Thermal Conductivity: k value

The k value indicates the amount of heat (in BTU's) that will flow in 1 hour through 1 square foot of a uniform material 1 inch thick for each degree (F) of temperature difference from one side of the material to the other. The LOWER the k factor means less heat is being conducted through the non-combustible material to the combustible material beneath it. The k value of a material must be equal or smaller then the required k value to be acceptable.

(BTU) (inch)
(foot² (hour) (°F)

Thermal Resistance: R value

The R value is a measure of a material's resistance to heat transfer. R value is convenient when more than one material is used since you can add the R values together, whereas you can not do this for k value. The HIGHER the R factor means less heat is being conducted through the non-combustible material to the combustible material beneath it. The R value of a material must be equal or larger then the required R value to be acceptable.

Converting k to R:

Divide 1 by k and multiply the results times the thickness in inches of the material.

$$R = 1/k \times \text{inches of thickness}$$

Converting R to k:

Divide the inches of thickness by R.

$$k = \text{inches of thickness} / R$$

Calculatons:

Example: Floor protection requires k value of 0.84 and 3/4 inch thick.

Alternative material has a k value of 0.6 and is 3/4 inch thick.

Divide 0.6 by .75 = k value of 0.80. This k value is smaller than 0.84 and therefore is acceptable.



WARNING

Fire Risk.

- Comply with all minimum clearances to combustibles as specified.
- Failure to comply may cause fire.

F. Hearth Extension

If the hearth extension is lower than the fireplace opening, the portion of the insert extending onto the hearth must be supported. Manufacturer designed adjustable support kit can be ordered from your dealer. **Refer to page 23.**

| Hearth Extension Insulation Alternatives, R Value = 1.03 | | | |
|-----------------------------------------------------------------|---------------------------------|---------------------------------|-------------------------------------------|
| Material | k per inch thick | R per inch thick | Minimum thickness required |
| Hearth & Home HX3 & HX4 | 0.49 | 2.06 | 1/2 in. |
| USG Micore 300™ | 0.49 | 2.06 | 1/2 in. |
| USG Durock™ Cement Board | 1.92 | 0.52 | 2-1/4 in. |
| Cement Mortar | 5.0 | 0.20 | 5-7/8 in. |
| Common Brick | 5.0 | 0.20 | 5-7/8 in. |
| Ceramic Tile | 12.50 | 0.08 | 14-5/8 in. |
| Marble | 14.3 to 20.0 | 0.07 to 0.05 | 16-5/8 in. to 23-3/8 in. |

4 Installation Considerations

A. Outside Air Installation

NOTE: If your home is fairly airtight, it is recommend that you install the outside air that comes standard with the appliance. If you are installing into a Mobile Home, outside air is required. **NOTE: The fireplace must have an outside air supply coming into it in order for the insert outside air kit to be used.**

The grille assembly must be removed before you can install the outside air. If you plan on moving the blower cord to the left side of the appliance, do it now while the grille is removed to save you time. See page 12 for detailed instructions.

1. Remove the 2 air control spring handles. **Figure 11.1.**
2. Remove the grille by removing 2 screws in the center of the grille. **Figure 11.2**
3. Unplug the snap disc by-pass switch and speed control from the wiring harness. **Figure 11.2**
4. Remove cover from rear of insert by removing 2 screws. **Figure 11.1**
5. Attach the cover to the front of the insert to block room air from entering through the front grille. **Figure 11.2.**

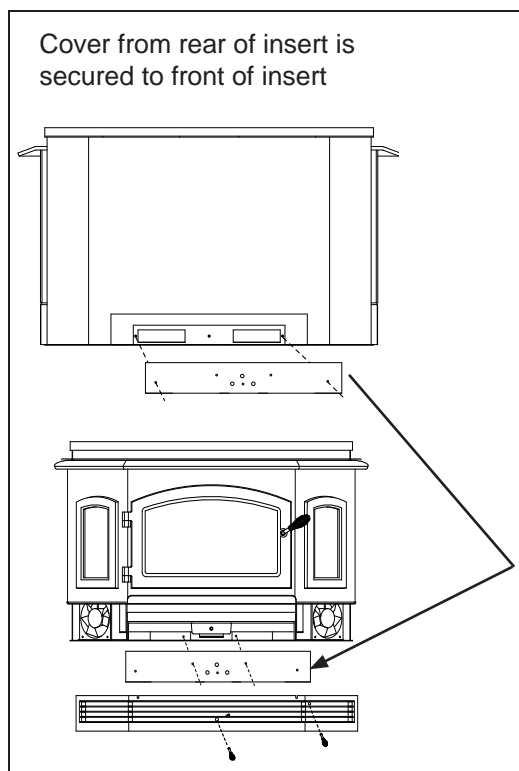


Figure 11.1

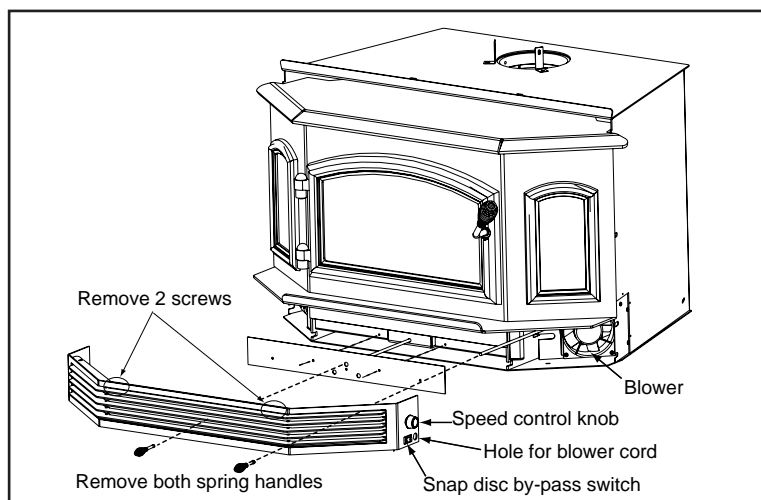


Figure 11.2

6. Re-connect snap disc & speed control to wiring harness.
7. Re-install grille and spring handles in reverse order.
8. Seal around the body of the insert to prevent cold air from coming into the room. Fiberglass insulation may be used to close the gap between the panel set and the face of the fireplace.

CAUTION

Risk of Smoke Spillage

Outside air inlet must be located to prevent blockage from:

- Leaves
- Snow or ice
- Other debris
- Blockage may cause combustion air starvation
- Smoke spillage may set off smoke alarms



WARNING

Asphyxiation and Fire Risk

Do not draw outside combustion air from:



- Wall, floor or ceiling cavity
- Enclosed space such as an attic or garage
- Close proximity to exhaust vents or chimneys
- Fumes or odor may result.

B. Blower Cord Location

The 5100-I Insert comes standard with 2 blowers, installed at the factory with the power cord on right side of insert (as you face the unit). Do not route the power cord under or in front of appliance.

The power cord can also be installed on the left side. Follow instructions below.

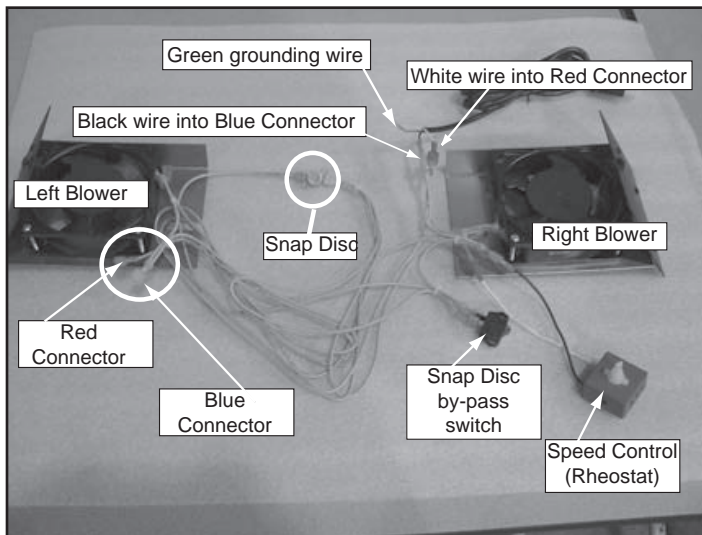


Figure 12.1 - Blower Assembly Components

1. **Disconnect the appliance from power supply.**
2. Remove the grille following instructions on **page 11**.
3. Unplug the blower cord wires from the wire harness.
4. Remove green grounding wire from grounding screw.
5. Using a pair of pliers, squeeze the strain relief and remove the blower cord wires and strain relief from the grille.
6. Locate the wire harness wires tucked up under the ash-catcher on the left side of the appliance. Cut the zip tie that is holding the wires in place.
7. Remove the button plug from the left side of grille. Thread the blower cords wires through the hole and snap the strain relief in place. **Figure 12.3.**
8. Attach grounding wire to ground screw.
9. Connect the white blower cord wire to the red connector on the wire harness.
10. Connect the black blower cord wire to the blue connector on the wire harness.
11. Tuck the wire out of the way of the blower motor.
12. Re-install grille.

NOTE: Each wire has a label to denote which component it connects to.

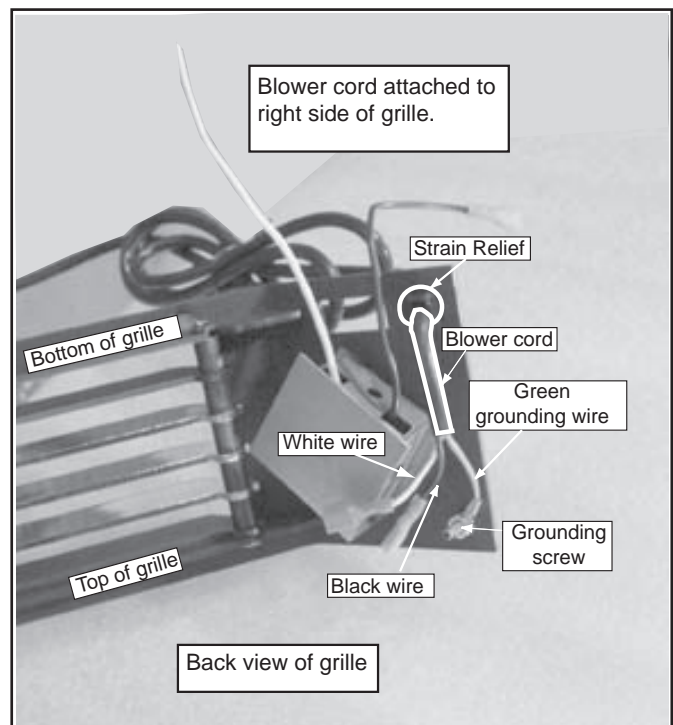


Figure 12.2

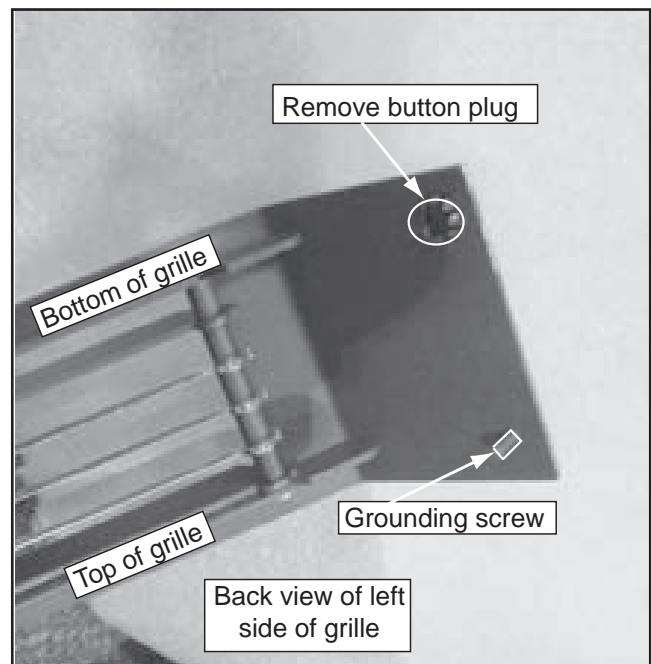


Figure 12.3

⚠

CAUTION

Shock hazard.

- Do NOT remove grounding prong from plug.
- Plug directly into properly grounded 3 prong receptacle.
- Route cord away from appliance.
- Do NOT route cord under or in front of appliance.

C. Wiring Diagram

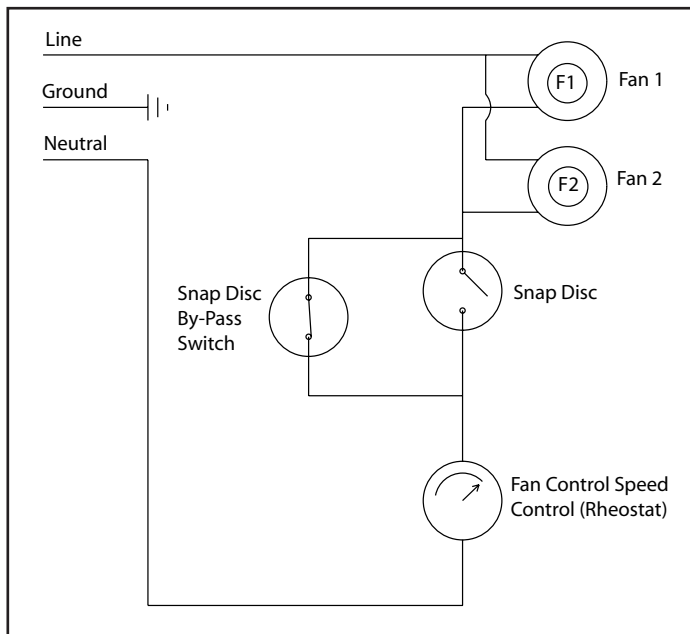


Figure 13.1

D. Optional Offset Adapter

Determine offset needed and adjust adapter accordingly however, **DO NOT OVER EXTEND ADAPTER**. Follow the detailed instructions that are supplied with the offset adapter.

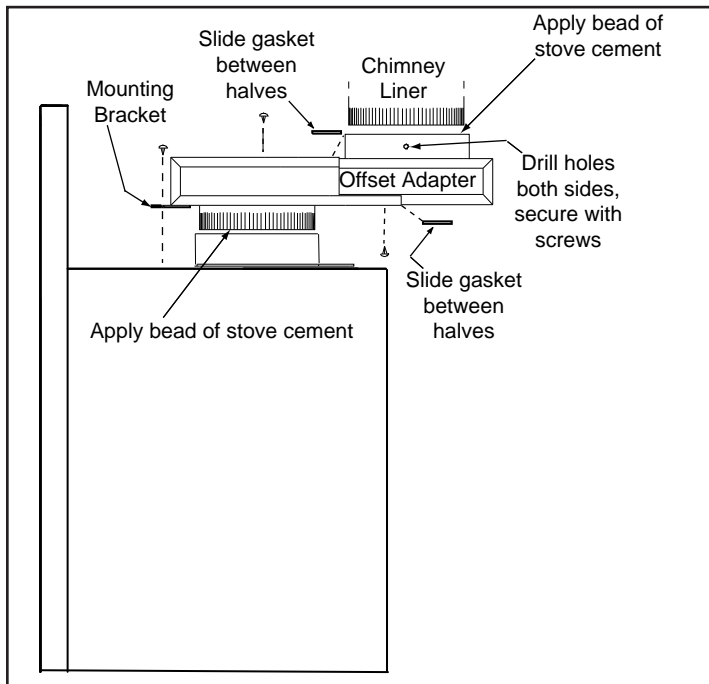


Figure 13.2

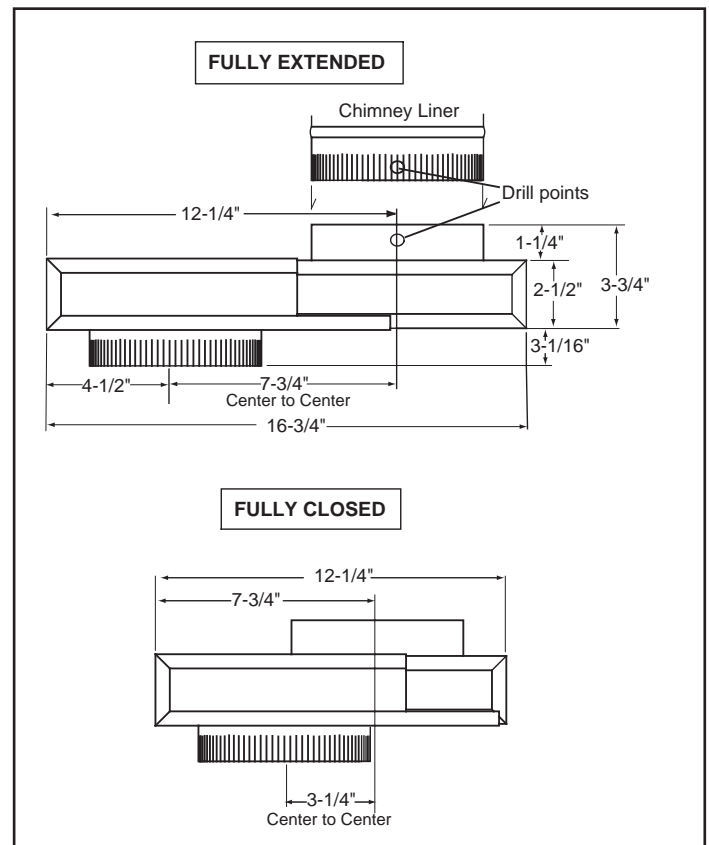


Figure 13.3

4 Chimney Requirements

A. Venting Systems

Chimney Connector:

It is also known as flue pipe or stove pipe. It must be 6 inches (152mm) minimum diameter stainless steel connector pipe.

Chimney:

The chimney can be new or existing, masonry or prefabricated and must meet the following minimum requirements as specified below.

WARNING! Risk of Fire!

Follow venting manufacturer's clearances and instructions when installing venting system.

B. Inspections

Existing chimneys should be inspected and cleaned by a qualified professional prior to installation. The chimney must not have cracks, loose mortar or other signs of deterioration and blockage. Hearth & Home recommends a NFI or CSIA certified professional or a technician, under the direction of a certified professional, conduct a Level II inspection per NFPA 211.

| | |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>WARNING</p> <p>Fire Risk</p> <p>Inspection of Chimney:</p> <ul style="list-style-type: none"> • Chimney must be in good condition. • Meets minimum standard of NFPA 211 • Factory-built chimney must be 6 inch (152mm) UL103 HT. |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

C. Larger Chimneys

It is recommended that chimneys with larger diameters than 6 inches (152mm) be relined. An oversized flue can affect draft and impair performance and will allow increased build-up of creosote.

NOTICE: Check with your local building authorities and/or consult the National Fire Protection Association (NFPA 211).

D. Masonry Chimney

- Must meet minimum standards of NFPA 211.
- Must have at least 5/8 inch (16mm) fireclay lining joined with refractory cement. (Installations into a clay flue without a stainless steel liner may reduce draw which affects performance, will cause the glass to darken and produce excessive creosote).
- The masonry wall of the chimney, if brick or modular block, must be a minimum of 4 inches (102mm) nominal thickness.
- A chimney of rubble stone must be at least 12 inches (305mm) thick.
- Cross-sectional area should be no more than 3 times the cross-sectional area of the flue collar of the insert. (28 sq inch flue area x 3 inches = 84 square inches maximum chimney area).
- Should be lined with a 6 inch (152mm) stainless steel flue liner to improve performance and reduce creosote build-up.
- An equivalent liner must be a listed chimney liner system or other approved material.
- No dilution air is allowed to enter the chimney.
 1. Secure the fireplace damper in the open position. If this cannot be accomplished, it will be necessary to remove the damper
 2. Seal damper area of chimney around chimney connector with a high temperature sealant or seal insert against the face of the fireplace.
 3. Both methods must be removable and replaceable for cleaning and re-installation.
- When possible, install an airtight clean-out door to the rear of the smoke shelf.

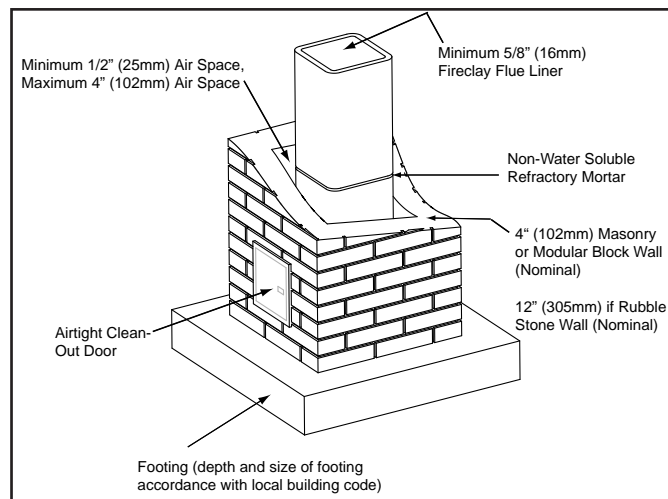


Figure 14.1

Masonry Chimney (Cont'd)

The Quadra-Fire 5100-I Insert conforms with the UL 1482 and ULC S628 (Canada) in all respects, and is approved to UL & ULC safety standards for installation and use within a fireplace with a masonry chimney in accordance with NFPA 211 and CAN/CSA-B365-01.

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

NOTE: In Canada, this fireplace insert must be installed with a continuous chimney liner of a 6 inch (152mm) diameter extending from the fireplace insert to the top of the chimney. The chimney liner must conform to the Class 3 requirements of CAN/ULC-S635, Standard for Lining Systems for Existing Masonry or Factory-Built Chimneys and Vents, or CAN/ULC-S640, Standard for Lining Systems for New Masonry Chimneys.

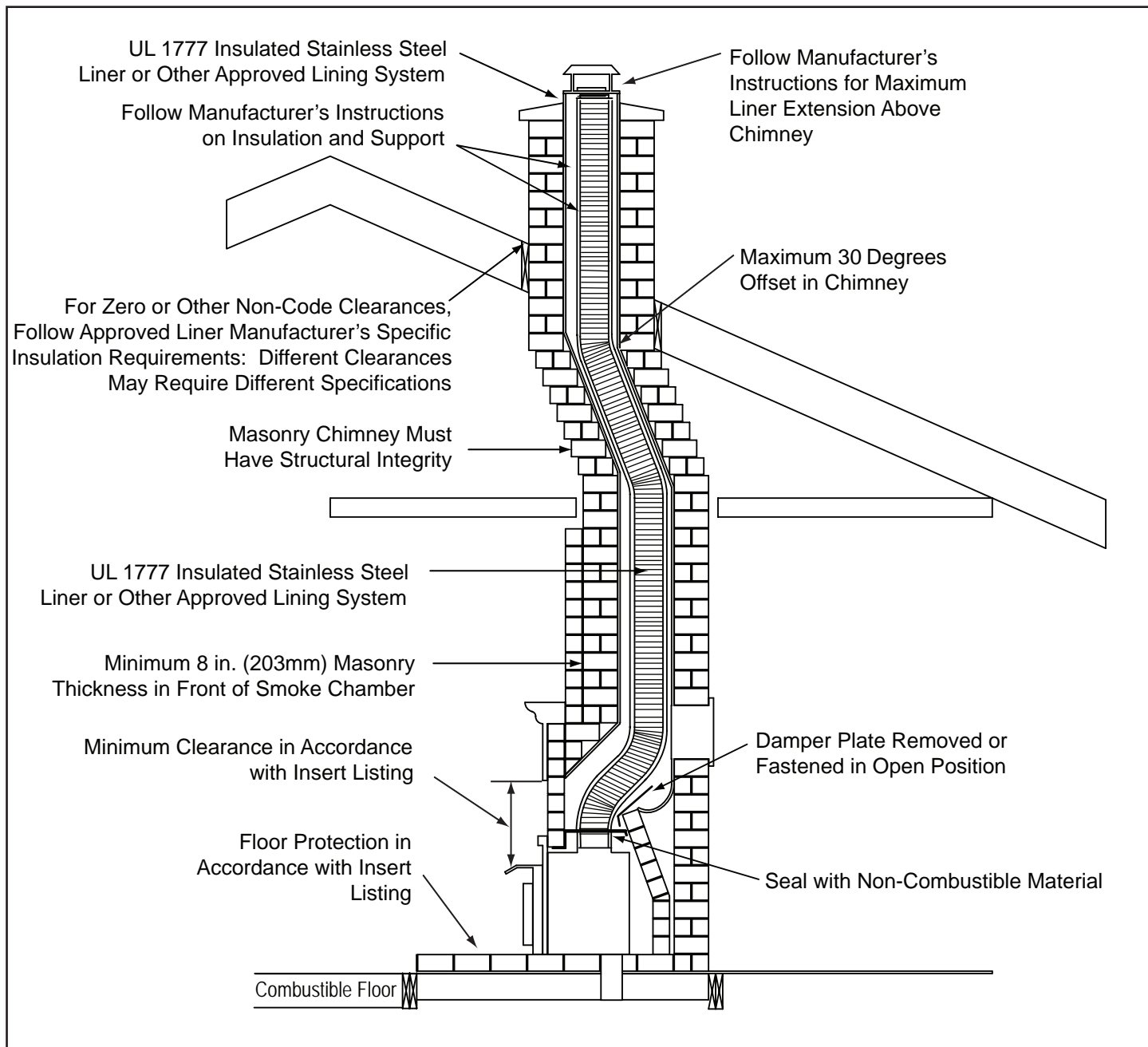


Figure 15.1

E. Metal Heat Circulating Masonry

This insert conforms with the safety standard UL-1482 and ULC S628 (Canada) in all respects and is approved to UL & ULC safety standards for installation and use within a fireplace with masonry chimney, in accordance with NFPA 211, with a direct flue collar connection.

F. Prefabricated Metal Chimney

The chimney can be new or existing, masonry or prefabricated and must meet the following minimum requirements:

- Must be minimum 6 inch (152mm) inside diameter of high temperature chimney listed to UL 103 HT (2100°F) or ULC S628.
- Must use components required by the manufacturer for installation.
- Must maintain clearances required by the manufacturer for installation.
- Refer to manufacturers instructions for installation
- This insert is listed to UL 1482 Standard and is approved for installation into listed factory-built zero clearance fireplaces listed to UL 127 conforming to the following specifications and instructions:

- The original factory-built clearance fireplace chimney cap must be re-installed after installing the approved chimney liner meeting type UL 103 HT requirements (2100°F) per UL 1777.
- If the chimney is not listed as meeting HT requirements, or if the factory built fireplace was tested prior to 1998, a full height listed chimney liner must be installed from the appliance flue collar to the chimney top.
- The liner must be securely attached to the insert flue collar and the chimney top.
- The air flow of the factory-built zero-clearance fireplace system must not be altered. The flue liner top support attachment must not reduce the air flow for the existing air-cooled chimney system.
- No dilution air is allowed to enter the chimney.
 1. Secure the fireplace damper in the open position. If this cannot be accomplished, it will be necessary to remove the damper
 2. Seal damper area of chimney around chimney connector with a high temperature sealant or seal insert against the face of the fireplace.
 3. Both methods must be removable and replaceable for cleaning and re-installation.

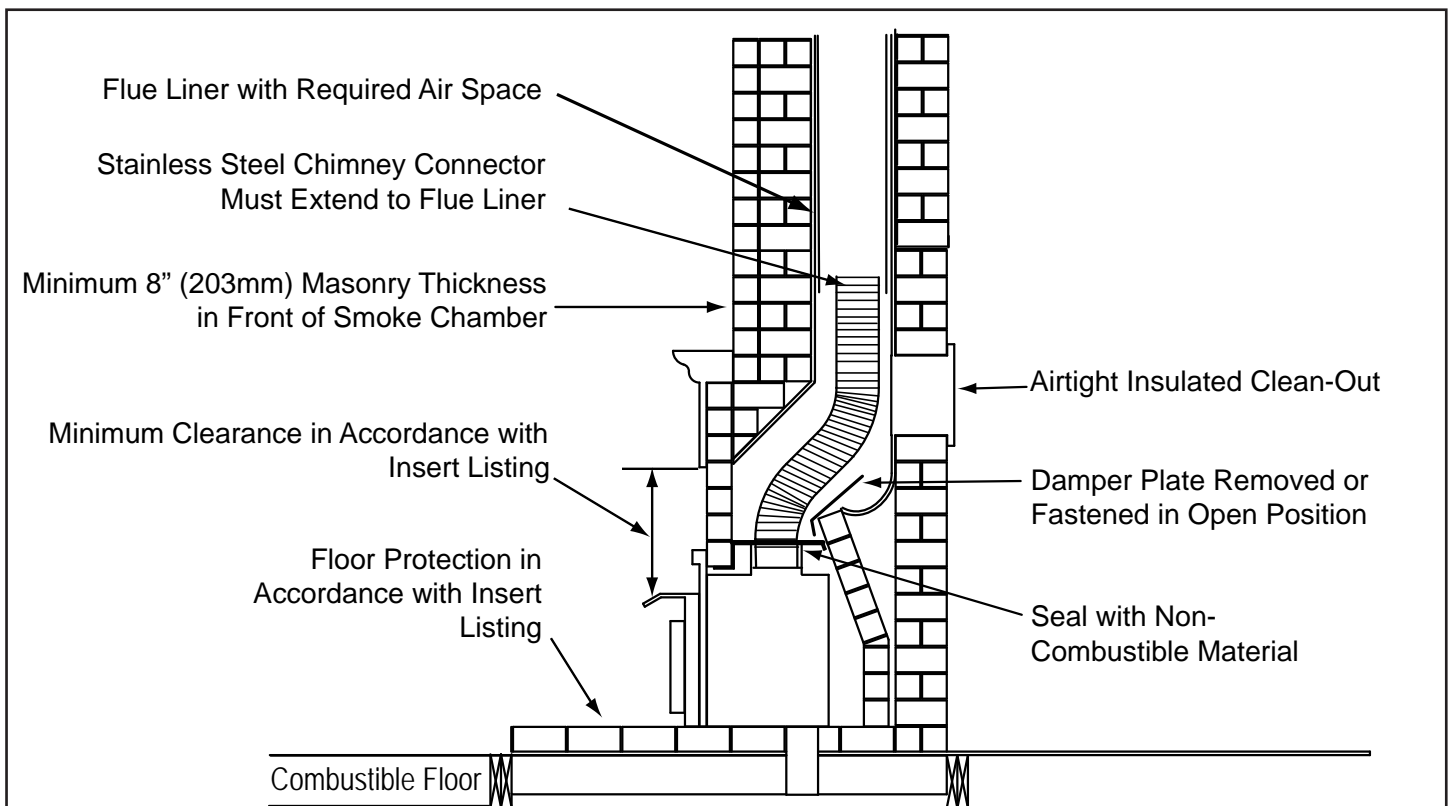


Figure 16.1

Prefabricated Metal Chimney (Cont'd)


| | Inches | Millimeters |
|----------------------------------|--------|-------------|
| Minimum Width of Cavity Opening | 36 | 914 |
| Minimum Height | 24 | 607 |
| Minimum Depth from Front to Rear | 19 | 483 |

NOTE: Refer to chimney liner manufacturer for recommendations on supporting the liner. Installation into fireplaces without a permit will void the listing.

NOTICE: In Canada when using a factory-built chimney it must be safety listed, **Type UL103 HT (2100°F) [1149°C] CLASS "A"** or conforming to **CAN/ULC-S629M, STANDARD FOR 650°C FACTORY-BUILT CHIMNEYS.**

NOTE:

In Canada, installations into factory-built zero clearance fireplaces are **NOT** allowed.



WARNING

Fire Risk.

When lining air-cooled factory-built chimneys:

- Run chimney liner approved to UL 1777 Type HT requirements (2100 degrees F)
- Re-install original factory built chimney cap ONLY
- DO NOT block cooling air openings in chimney
- Blocking cooling air will overheat the chimney

H. Securing Chimney Components

All joints should be secured with 3 sheet metal screws. The sections must be attached to the insert and to each other with the crimped (male) end pointing toward the insert. **Figure 15.1.**

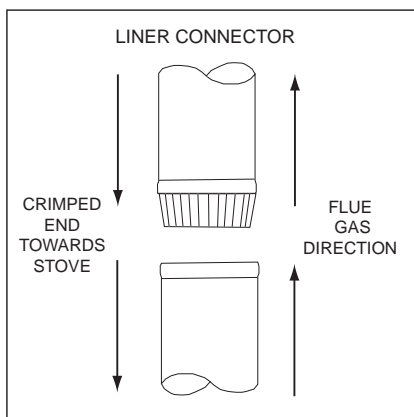


Figure 17.1

G. Altering the Fireplace

The following modifications of factory-built fireplaces are permissible:

The following parts may be removed:

| | |
|------------------------|-----------------------|
| Damper | Smoke Shelf or Baffle |
| Ember Catches | Fire Grate |
| Viewing Screen/Curtain | Doors |

- The fireplace must not be altered, except that the damper may be removed to accommodate a direct-connect starter pipe or chimney liner,
- 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, with screws or nails, 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. **Figure 17.2.**
- If the hearth extension is lower than the fireplace opening, the portion of the insert extending onto the hearth must be supported.
- Manufacturer designed adjustable support kit can be ordered from your dealer.
- Final approval of this installation type is contingent upon the authority having jurisdiction.

WARNING! Risk of Fire!

Follow venting manufacturer's clearances and instructions when installing venting system.

WARNING

THIS FIREPLACE MAY HAVE BEEN ALTERED TO ACCOMMODATE AN INSERT. IT MUST BE RETURNED TO ITS ORIGINAL CONDITION BEFORE USE AS A SOLID FUEL BURNING FIREPLACE.

250-2061

Figure 17.2

I. Ovalizing Round Stainless Steel Liners

Ovalizing round stainless steel liners to accommodate the liner passing through the damper region of a fireplace is an allowable and acceptable practice.

Ensure that the ovalization is minimized to the extent required to fit through the damper.

J. Chimney Height / Rise and Run

To be sure that your Quadra-Fire insert burns properly, the chimney draft (static pressure) should be approximately -0.10 inches water column (W.C.) during a high burn and -0.04 inches W.C. during a low burn, measured 6 inches (152mm) above the top of the insert after one hour of operation at each burn setting.

NOTE: These are guidelines only, and may vary somewhat for individual installations.

- This product was designed for and tested on a 6 inch (152mm) chimney, 14 to 16 feet (4.27-4.87m) high, (includes appliance height) measured from the base of the appliance.
- The further your stack height or diameter varies from this configuration, the possibility of performance problems exists.
- Chimney height may need to be increased by 2 - 3% per each 1000 feet (304.8m) above sea level.
- It is not recommended to use offsets or elbows at altitudes above 4000 feet (1219.2m) above sea level or when there are other factors that affect flue draft.

K. Air Clearances

To ensure that insulation or any other combustible material does not contact the chimney follow clearances below:

- A chimney inside the house must have at least 2 inches (51mm) of clearance to the combustible structure.
- A chimney outside the house must have at least 1 inch (25mm) clearance to the combustible structure.
- Non-combustible fire stops must be installed at the spaces where the chimney passes through floors and/or ceilings.

Figures 18.1 and 18.2.

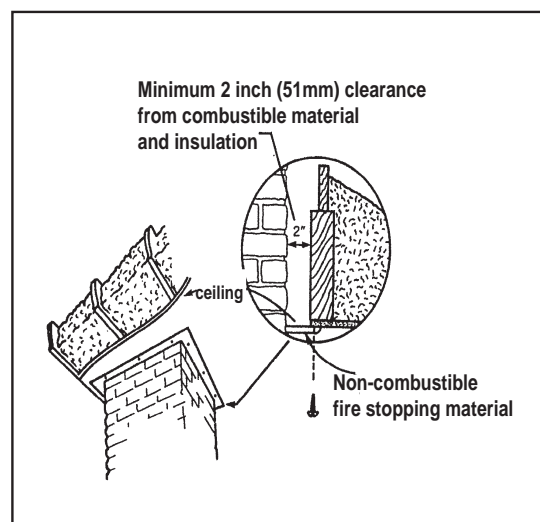


Figure 18.1

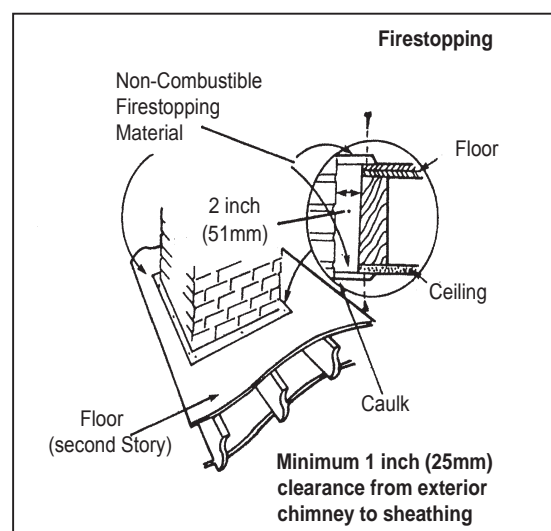


Figure 18.2

WARNING

Fire Risk.
Do NOT pack insulation or other combustibles between spacers.

- ALWAYS maintain specified clearances around venting and spacers.
- Install spacers as specified.

Failure to keep insulation or other material away from vent pipe may cause fire.

WARNING! Risk of Asphyxiation!

- **DO NOT CONNECT THIS APPLIANCE TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE OR TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.**

This may allow flue gases to enter the house.

L. Chimney Termination Requirements

Follow manufacturers instructions for clearances, securing, flashing and terminating the chimney.

- Must have an approved and listed cap
- Must not be located where it will become plugged by snow or other material
- Must terminate at least 3 feet (91cm) above the roof **and** at least 2 feet (61cm) above any portion of the roof within 10 feet (305cm).
- Must be located away from trees or other structures

NOTE:

- Chimney performance may vary.
- Trees, buildings, roof lines and wind conditions affect performance.
- Chimney height may need adjustment if smoking or overdraft occurs.

M. 2-10-3 Rule

These are safety requirements and are not meant to assure proper flue draft

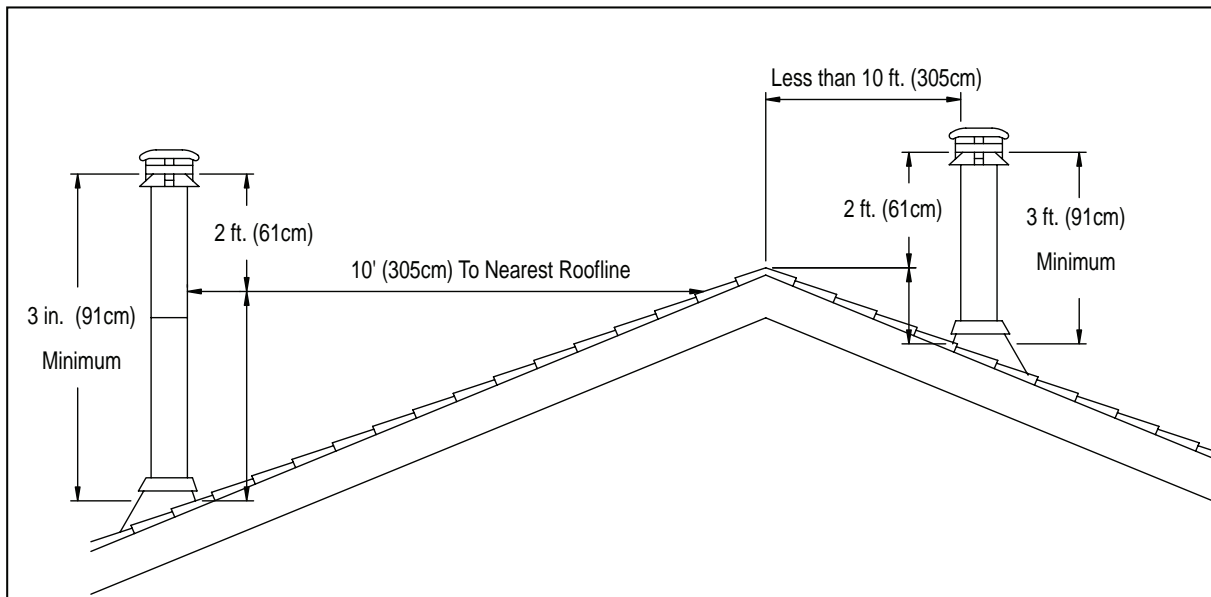


Figure 19.1

Pitched Roof

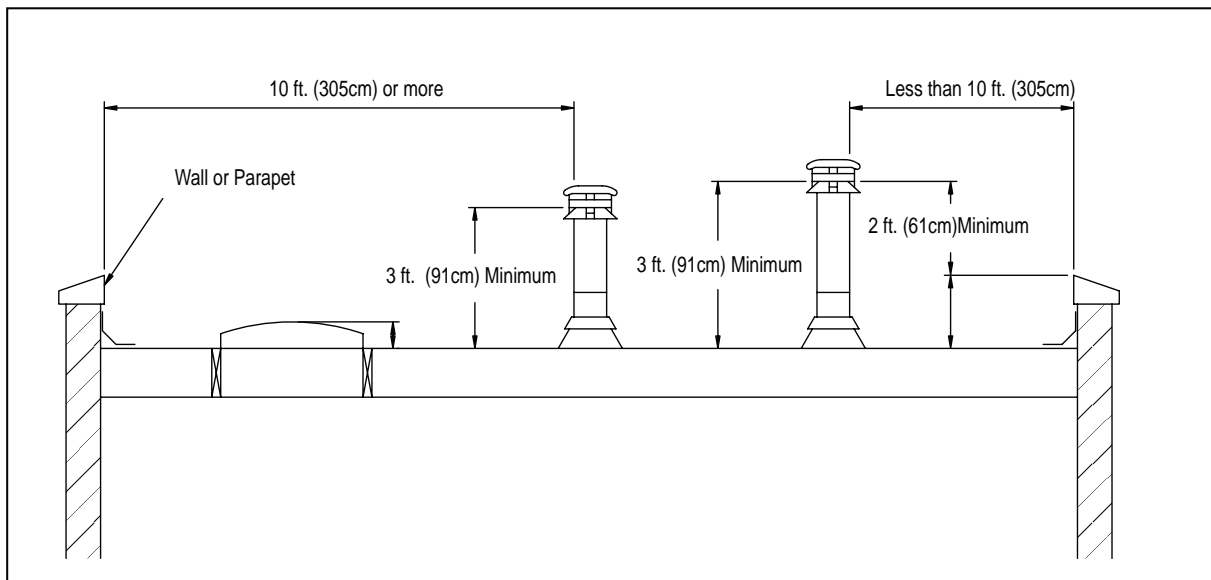


Figure 19.2

Flat Roof

6 Mobile Home Installation

Installations Into Zero-Clearance Fireplaces in Mobile Homes (USA Only)

1. An outside air inlet must be provided for combustion and must remain clear of leaves, debris, ice and/or snow. It must be unrestricted while unit is in use to prevent room air starvation which can cause smoke spillage and an inability to maintain a fire. Smoke spillage can also set off smoke alarms. See **page 11** for detailed information.
2. Appliance must be secured to the mobile home structure. Drill a hole on each side of the insert into the outer skin and into the floor. Use plumbers tape to secure to structure (washers may be required).
3. Appliance must be grounded with #8 solid copper grounding wire or equivalent and terminated at each end with N.E.C. approved grounding device.
4. The factory-built fireplace must meet (UM)84-HUD requirements for outside combustion air supply to the fireplace fire chamber and the chimney must be listed to UL103 HT or a listed UL 1777 full length 6 inch (152mm) diameter liner must be used. It must be equipped with a spark arrestor cap and the outside air must be installed on the insert.
5. In Canada, this appliance must be connected to a 6 inch (152mm) factory-built chimney conforming to CAN/ULC-S610, STANDARD FOR FACTORY BUILT CHIMNEYS.
6. Follow the chimney and chimney connector manufacturer's instructions when installing the flue system for use in a mobile home.
7. Maintain clearance to combustibles.
8. Floor protection requirements must be followed precisely.
9. Use silicone to create an effective vapor barrier at the location where the chimney or other component penetrates to the exterior of the structure.
10. Burn wood only. Other types of fuels may generate poisonous gases (e.g., carbon monoxide).
11. If unit burns poorly while an exhaust blower is on in home, (i.e., range hood), increase combustion air.

NOTE: Top sections of chimney must be removable to allow maximum clearance of 13.5 feet (411cm) from ground level for transportation purposes.

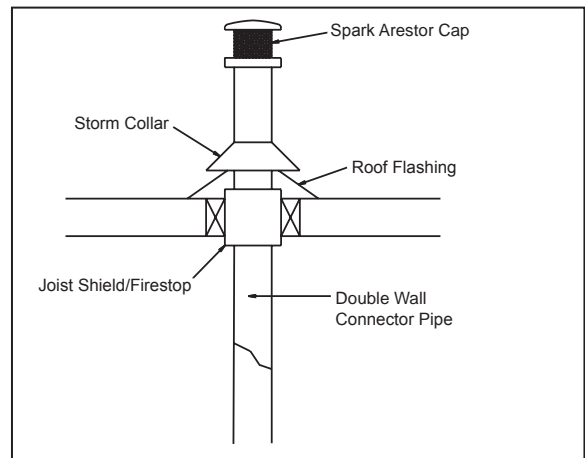


Figure 20.1

WARNING



Fire Risk.



Asphyxiation Risk.

Do not draw outside combustion air from:

- Wall, floor or ceiling cavity
- Enclosed space such as an attic or garage
- Close proximity to exhaust vents or chimneys.

Fumes or odor may result

CAUTION

THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL AND CEILING/ROOF MUST BE MAINTAINED
Do NOT cut through:

- Floor joist, wall, studs or ceiling trusses.
- Any supporting material that would affect the structural integrity.

WARNING



Asphyxiation Risk.

- NEVER INSTALL IN A SLEEPING ROOM.
Consumes oxygen in the room.

7

Appliance Set-up

A. Installation Outline

1. Record serial number on back cover of manual.
2. Remove the leveling bolts from the component pack and start the bolts in the weld nuts. **Figure 21.1.**
3. Position insert on hearth with rear of insert extending into fireplace opening. Slide insert on its base into the opening leaving approximately 4 inches (102mm) protruding out the front.
4. Assemble the panels and temporarily attach to insert. Push insert into opening leaving 1 inch (25mm) protruding out the front. Confirm the panel size is correct for the opening and that the face can be sealed off from room air when installation is complete. **Figures 21.2 & 21.3.**
5. Remove the panels and secure liner to the chimney ring.
6. Level the insert in its final position in the fireplace. If an offset adapter is required for installation, install it first and then secure liner to offset adapter.
7. Install the Panel & Trim set and (if applicable) the Zero Clearance Trim Support.

B. Leveling Bolts

Two leveling bolts, 3/8" x 4" are shipped inside the component pack found inside the firebox.

NOTE: Not all installations will require the use of the leveling bolts.

1. Remove the bolts from the component pack and insert into weld nuts welded to each side of the insert bottom **Figure 21.1.**
2. After securing the liner to the flue collar (or offset adapter) and the insert is in its final position, extend bolts downward to level insert.

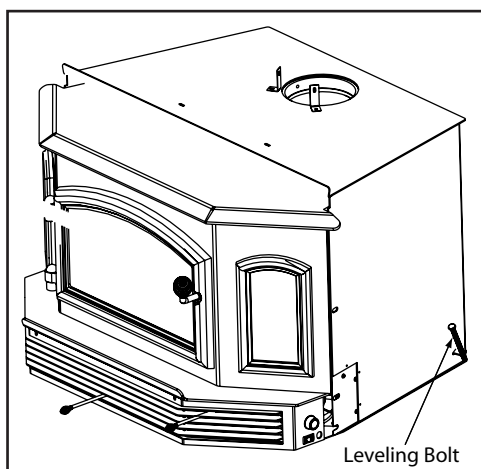


Figure 21.1

C. Panel & Trim Set Installation

Standard Size: 30-1/2" h x 47" w

Large Size: 34-1/4" h x 51-1/4" w

Kit Includes:

- (2) Side panels, left & right
- (1) Panel top & fastener package
- (2) Side trim, left & right
- (1) Trim top & fastener package.

Tools Needed:

- Screwdrivers:
- Powered Phillips head
 - Long-handled Phillips head

1. Attaching Panels to the Insert

- a. Loosely install the 2 side panels, do not tighten, using the cage nuts already attached to the appliance. (Note: The sides are not interchangeable). **Figure 21.3.**
- b. Put top panel in place pushing straight back and then to the right to lock onto top of side panels. Attach the top panel to the sides using the panel brackets included in the fasteners package. **Figure 21.2.**
- c. Tighten side panels to the appliance using a long-handle screw driver.

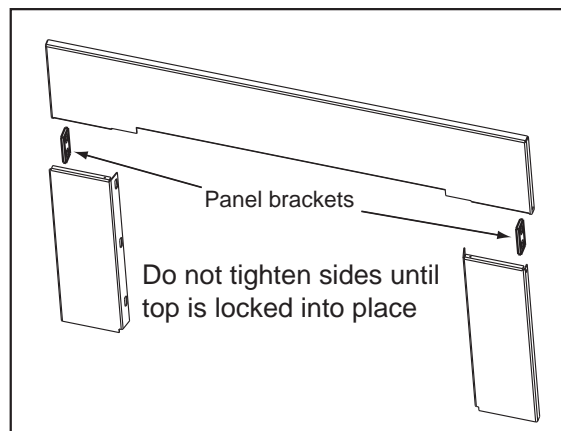


Figure 21.2

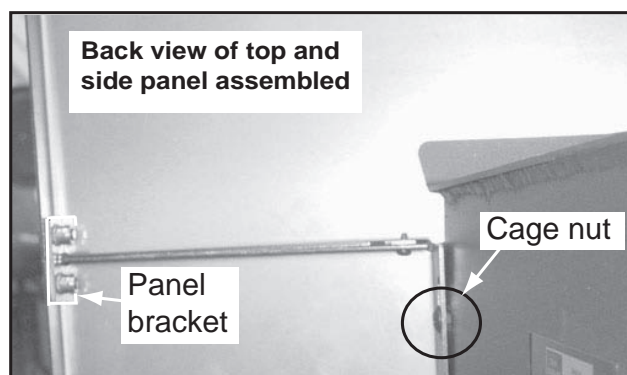


Figure 21.3

2. Assembling Trim

- Place protective covering on surface to be used to assemble the trim pieces. Lay the trim face down.
- Attach the 2 side trim pieces to the top trim at each corner using the "L" bracket included in fasteners package. Slide assembled trim over panel set.

Figure 22.1.

NOTE: If you have a mantel, you may need to install the trim on your panels before you push the insert into the fireplace opening. If not, you can slide the trim over the panel set after the insert is in its final position.

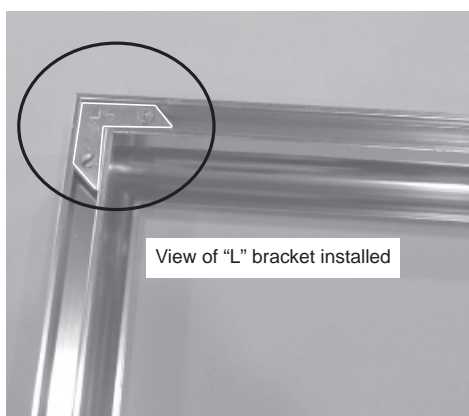


Figure 22.1

D. Securing Liner to Flue Collar

There are two options to secure the liner to the flue collar:

Option One: If there is enough room on the top of the insert to work, hand bend the 2 tabs upward 90°. Secure the liner with the supplied hex head bolts 1/4-20-3/4.

Option Two: Remove the manifold tubes, fiberboard baffle and ceramic blanket. From inside the firebox, pull liner down through the chimney ring below the outer skin. There are 2 pre-drilled holes in the chimney ring 180° apart. Secure the liner with the supplied hex head bolts 1/4-20-3/4. **See Figures 36.1 and 36.2 on page 36** for details for removing the manifold tubes, baffle and ceramic blanket.

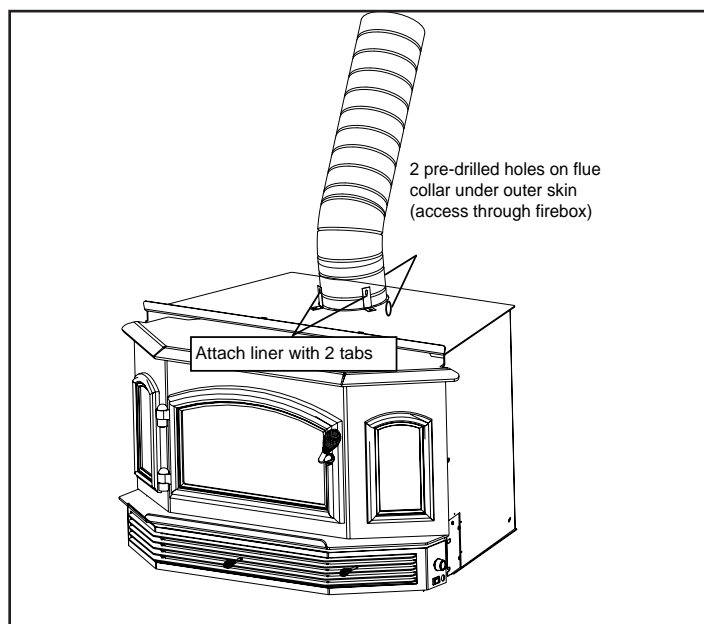


Figure 22.2

NOTE: Tabs are shipped from factory in a flat position. Bend upwards 90 degrees as show in **Figure 22.2**

E. Zero Clearance Adjustable Trim Support

Size: 12" d x 50" w, 2-10" h

Included in Kit:

- (1) Trim top
- (1) Trim front
- (2) Trim sides
- Double-sided tape
- (already installed)

Tools Needed:

- Phillips head screwdriver
- Sheet metal shears
- Measuring tape
- Gloves

1. The 10 screws on each set of scissors will already be loose when shipped. **Figure 23.1.**
2. Expand scissors to desired height. Tighten screws to hold in place using Phillips Head screwdriver. **Figure 23.2.**
3. Measure front and side trims to required height to cover scissors and mark pieces for cutting. Cut excess material from **top** of trim's edge, not bottom. This edge will be sharp; wear gloves to prevent injury to your hands. **Figure 23.2.**
4. Using sheet metal shears, cut trim along the marked edge. The cut edge fits under lip of top trim, so it allows for some variance in your straight edge.
5. The double-sided tape that holds front and side trims to scissors has a particularly powerful bonding adhesive. Adjustments are extremely difficult once trim has adhered to tape. Do a dry run first without removing paper from tape.
6. Place cut edge of trim under top lip and into position on scissors. Place side pieces on first and then front piece. The front piece overlaps side pieces.
7. Once you are satisfied with the positioning, remove trim and set aside.
8. Remove the paper from double-sided tape that is to accept trim side. Align side and then press hard against tape to secure side piece. Repeat for other side. Install front trim piece last.

NOTE: 3/8 inch (9.5mm) thick tile or like material can be cut to size and fit under lip of top trim edge for a decorative touch. **Figure 23.3.**

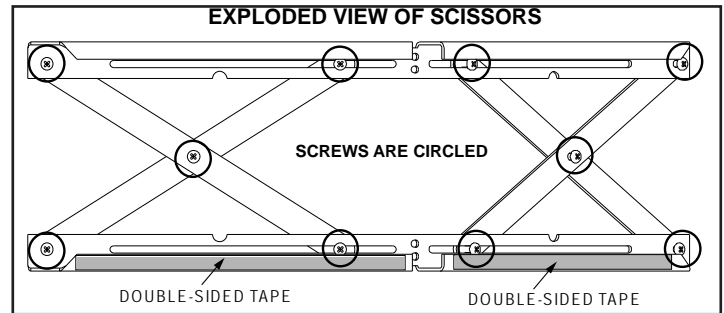


Figure 23.1

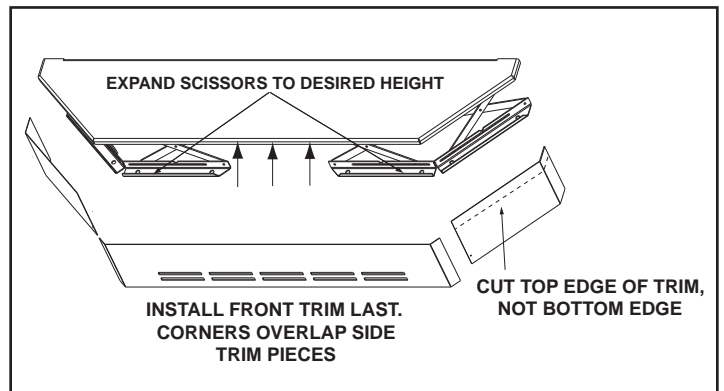


Figure 23.2

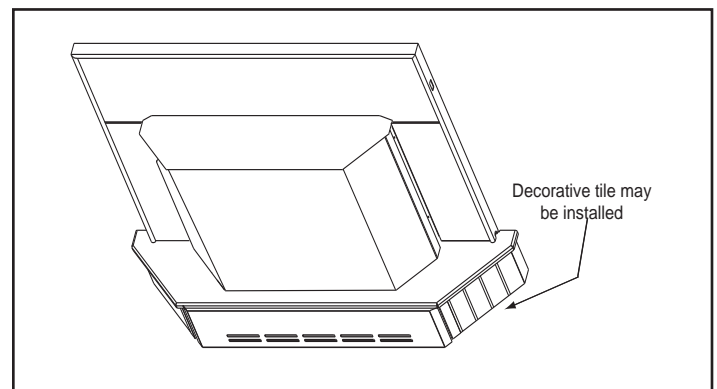


Figure 23.3

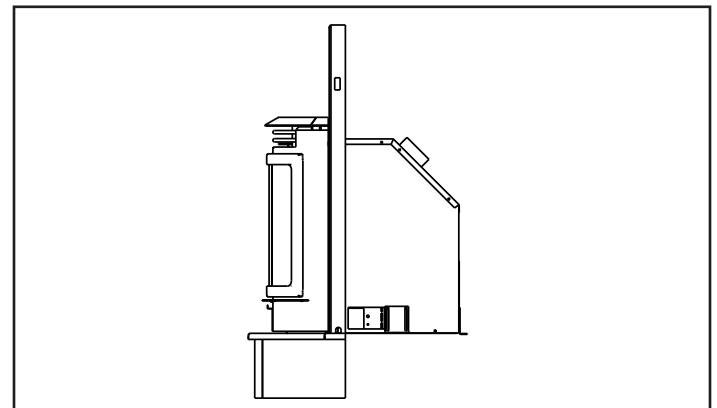
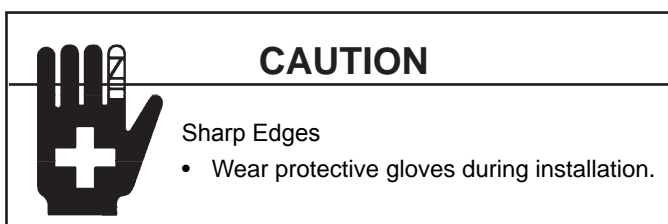


Figure 23.4



8

Operating Instructions



WARNING



Fire Risk

Do not over-fire.

Over-firing may ignite creosote or will damage the stove and chimney.

To prevent over-firing your stove, DO NOT:

- Use flammable liquids
- Overload with wood
- Burn trash or large amounts of scrap lumber
- Permit too much air to the fire

A. Over-Firing Your Appliance

1. Symptoms of Over-Firing

Symptoms of over-firing may include one or more of the following:

- Chimney connector or appliance glowing
- Roaring, rumbling noises
- Loud cracking or banging sounds
- Metal warping
- Chimney fire

2. What To Do if Your Stove is Over-Firing

- Immediately close the door and air controls to reduce air supply to the fire.
- If you suspect a chimney fire, call the fire department and evacuate your house.
- Contact your local chimney professional and have your stove and stove pipe inspected for any damage.
- Do not use your stove until the chimney professional informs you it is safe to do so.

Hearth & Home Technologies WILL NOT warranty stoves that exhibit evidence of over-firing. Evidence of over-firing includes, but is not limited to:

- Warped air tube
- Deteriorated refractory brick retainers
- Deteriorated baffle and other interior components

B. Wood Selection & Storage

Burn only dry seasoned wood. Store wood under cover, out of the rain and snow. Dry and well-seasoned wood will not only minimize the chance of creosote formation, but will give you the most efficient fire. Even dry wood contains at least

15% moisture by weight, and should be burned hot enough to keep the chimney hot for as long as it takes to dry the wood out - about one hour. It is a waste of energy to burn unseasoned wood of any kind.

Dead wood lying on the forest floor should be considered wet, and requires full seasoning time. Standing dead wood can be considered to be about 2/3 seasoned. To tell if wood is dry enough to burn, check the ends of the logs. If there are cracks radiating in all directions from the center, it is dry. If your wood sizzles in the fire, even though the surface is dry, it may not be fully cured.

Splitting wood before it is stored reduces drying time. Wood should be stacked so that both ends of each piece are exposed to air, since more drying occurs through the cut ends than the sides. This is true even with wood that has been split. Store wood under cover, such as in a shed, or covered with a tarp, plastic, tar paper, sheets of scrap plywood, etc., as uncovered wood can absorb water from rain or snow, delaying the seasoning process.

C. Burning Process

In recent years there has been an increasing concern about air quality. Much of the blame for poor air quality has been placed on the burning of wood for home heating. In order to improve the situation, we at Quadra-Fire have developed cleaner-burning woodstoves that surpass the requirements for emissions established by our governing agencies. These woodstoves, like any other appliances, must be properly operated in order to insure that they perform the way they are designed to perform. Improper operation can turn most any wood stove into a smoldering environmental hazard.

1. Kindling or First Stage

It helps to know a little about the actual process of burning in order to understand what goes on inside a stove. The first stage of burning is called the kindling stage. In this stage, the wood is heated to a temperature high enough to evaporate the moisture which is present in all wood. The wood will reach the boiling point of water (212°F) and will not get any hotter until the water is evaporated. This process takes heat from the coals and tends to cool the appliance.

Fire requires three things to burn - fuel, air and heat. So, if heat is robbed from the appliance during the drying stage, the new load of wood has reduced the chances for a good clean burn. For this reason, it is always best to burn dry, seasoned firewood. When the wood isn't dry, you must open the air controls and burn at a high burn setting for a longer time to start it burning. The heat generated from the fire should be warming your home and establishing the flue draft, not evaporating the moisture out of wet, unseasoned wood, resulting in wasted heat.

2. Second Stage


The next stage of burning, the secondary stage, is the period when the wood gives off flammable gases which burn above the fuel with bright flames. During this stage of burning it is very important that the flames be maintained and not allowed to go out. This will ensure the cleanest possible fire. If the flames tend to go out, it is set too low for your burning conditions. The air control located at the upper right hand corner is used to adjust for burn rates. This is called the Burn Rate Air Control. **Figure 21.1.**


3. Final Stage

The final stage of burning is the charcoal stage. This occurs when the flammable gases have been mostly burned and only charcoal remains. This is a naturally clean portion of the burn. The coals burn with hot blue flames.

It is very important to reload your appliance while enough lively hot coals remain in order to provide the amount of heat needed to dry and rekindle the next load of wood. It is best to open the Burn Rate Air and Start-Up Air Controls **before reloading**. This livens up the coalbed and reduces excessive emissions (opacity/smoke). Open door slowly so that ash or smoke does not exit appliance through opening. You should also break up any large chunks and distribute the coals so that the new wood is laid on hot coals.

Air quality is important to all of us, and if we choose to use wood to heat our homes we should do so responsibly. To do this we need to learn to burn our stoves in the cleanest way possible. Doing this will allow us to continue using our wood stoves for many years to come.




WARNING

Fire Risk.

- Do NOT burn with insert door open.

Embers may fall out and start a fire.

D. Building A Fire

Before lighting your first fire in the insert, make certain that the baffle is correctly positioned. It should be resting against the rear support. Refer to **page 28**.


NOTE: Remove all labels from glass front prior to lighting the first fire and refer to plated surfaces care on **page 31**.


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. Place several wads of crushed paper on the firebox floor.
Heating flue with slightly crumpled newspaper before adding kindling keeps smoke to a minimum.
2. Place several wads of crushed paper on the firebox floor.

3. Open Start-Up Air Control (right control) and Primary Air Control (center control under ashlip) fully. **Figure 23.1 on page 23.**
4. 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.
5. Light the paper in the insert. **NEVER** light or rekindle insert with kerosene, gasoline, or charcoal lighter fluid; the results can be fatal.
6. Once the kindling is burning quickly, add several full-length logs 3 inches (76mm) or 4 inches (102mm) 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 from each other to allow adequate air flow between them.
7. When ready to reload the insert, add more logs. Large logs burn slowly, holding a fire longer. Small logs burn fast and hot, giving quick heat.
8. Adjust the Start-Up Air Control and Primary Air Control, maintaining flames above the fuel. The more you close down the Primary Control, the lower and slower the fire will burn. The more you open the Primary Control the more heat will be produced. The Start-Up Air Control (right control) is only used for the first 5 to 15 minutes.

As long as there are hot coals, repeating steps 7 and 8 will maintain a continuous fire.



WARNING




Fire Risk.

Keep combustible materials, gasoline and other flammable vapors and liquids clear of appliance.

- Do NOT store flammable materials in the appliance's vicinity.
- DO NOT USE GASOLINE, 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.
- Combustible materials may ignite.


WARNING



Fire Risk.

- DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.
- Do NOT burn treated wood or wood with salt (driftwood).
- May generate carbon monoxide if burn material other than wood.

May result in illness or possible death.

E. Burn Rates & Operating Efficiency

STARTING FIRE: Open both controls (push in) completely. After a wood load has been burning on high for 5 to 15 minutes or longer for very large pieces, close the Start-Up Air Control (bottom rod) by pulling it out.

HIGH: Leave the Primary Air Control fully open (immediately under the ashcatcher). 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'.

After a wood load has been burning on high for 5 to 15 minutes on High to achieve the following burn rates set the controls as listed below:

MEDIUM HIGH: Close the Primary Air Control to 1.0 inch to 2-1/2 inch (25 to 64mm) open. Start-Up Air is closed.

MEDIUM LOW: Close the Primary Air Control to 3/4 inch to 1.0 inch (19 to 25mm) open. Start-Up Air is closed.

LOW: Gradually close down the Primary Air Control by pulling out making sure to maintain flames in the insert. Start-Up Air is closed. It is very important to maintain flames in your insert during the first few hours of a low burn to avoid excessive air pollution.

For maximum operating efficiency with the lowest emissions, follow these operating procedures:

1. Regardless of desired heat output, when loading insert, burn your Quadra-Fire with both air controls wide open for a minimum of 5 to 15 minutes.
2. Regulate burn rate (heat output) by using the Primary Control (center control under ashlip). The Start-Up Air Control (right control) is mainly for initial start-up and reloading.
3. Heat output settings: Follow burn rate instructions listed below.
4. **Burn only dry, well-seasoned wood.**

| BTU / Hr | Close Start-Up Air | Primary Control |
|-----------------|--------------------|-----------------------|
| Below 10,000 | After 5-15 min | Pull to Stop |
| 10,000 - 15,000 | After 5-15 min | 3/4 in to 1.0 in open |
| 15,000 - 30,000 | After 5-15 min | 1.0 in to 2.5 in open |
| Maximum Heat | After 5-15 min | Fully Open |

These are approximate settings, and will vary with type of wood or chimney draft.



WARNING

Fire Risk

- Do NOT operate with Start-Up Air Control in open position in excess of 15 minutes.
- Risk of extreme temperatures!

Prolonged operation with Start-Up Air Control in open position may cause combustible materials around appliance to exceed safe temperature limits.

NOTE:

- Build fire on brick firebox floor.
- Do NOT use grates, andirons or other methods to support fuel. It will adversely affect emissions.

CAUTION

- Odors and vapors released during initial operation.
- Curing of high temperature paint.
 - Open windows for air circulation.

Odors may be irritating to sensitive individuals.

F. 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.

G. Air Controls

Start-up Air System

The combustion air enters at the rear of the firebox through the rear air tubes. This air supply is controlled by the Start-up Air Control.

Primary Air System

The primary 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 second, third and fourth combustions.

This air is regulated by the Primary Air Control. For more primary air push control "IN", for less air pull control "OUT"..

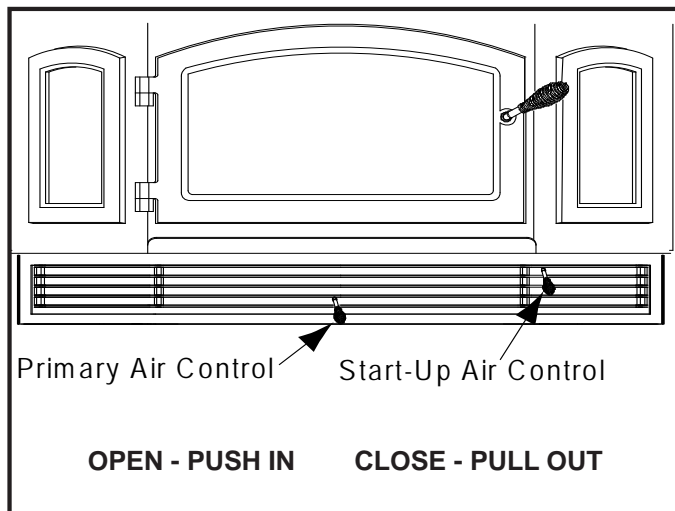


Figure 27.1

H. Blower Operating Instructions

This appliance is equipped with a 125° thermally operated snap disc which will automatically turn the blower on when the insert reaches this temperature.

The snap disc is located at the center of the insert, under the lower grille. There is a manual override switch on the right side of the insert. The blower can be controlled manually by switching this switch to ON and operating the blower with the speed control. **Figure 27.2.**

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 or Medium High 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.
5. The fan is equipped with a rheostat (speed control). 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.

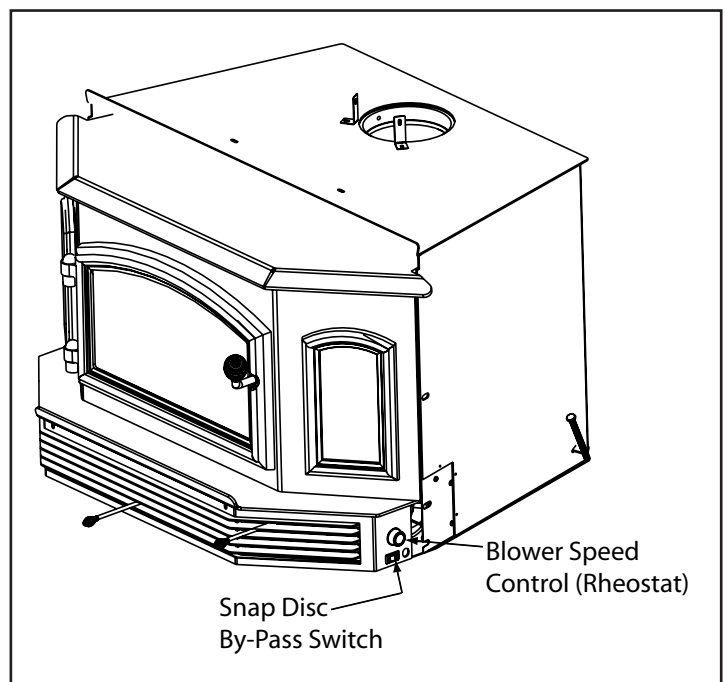


Figure 27.2

I. Correct Baffle & Blanket Placement



WARNING

Fire Risk

Firebox damage due to improper baffle placement is not covered by warranty. Operate the wood burning appliance with the baffle in the correct position only.

Not doing so could result in:

- Reduced efficiency
- Overheating the chimney
- Overheating the rear of the firebox
- Poor performance

Ensure correct baffle placement and replace baffle components if damaged or missing.

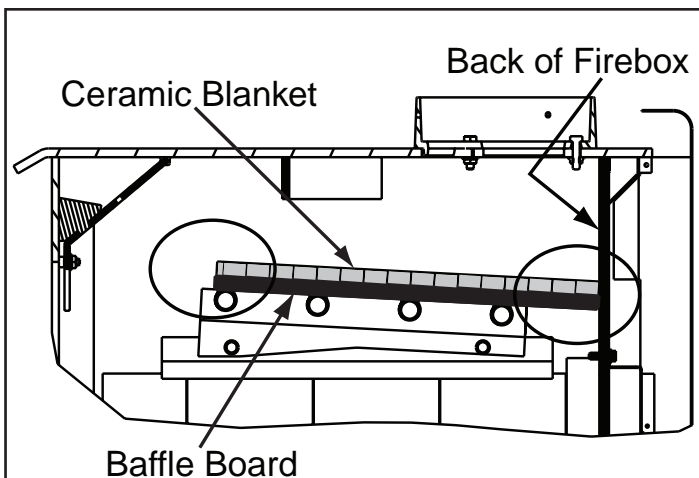
CAUTION

The baffle boards are FRAGILE. Use extreme caution when loading firewood to prevent:

- Cracking, breaking or damaging the baffle boards

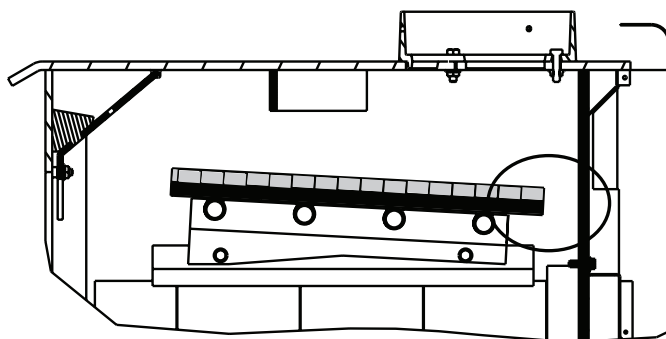
DO NOT operate the stove without baffle boards

CORRECT POSITION

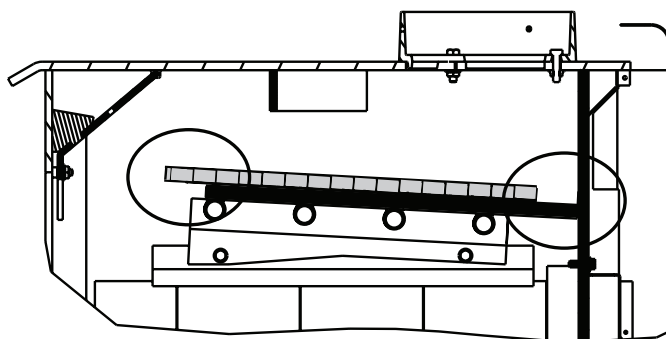


Ceramic Blanket and Baffle Board **MUST** be in contact with the back of the firebox and even with each other in the front.

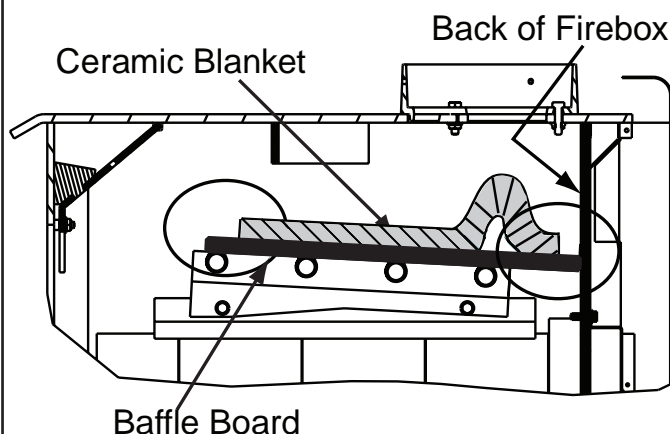
INCORRECT POSITIONS



Ceramic Blanket and Baffle Board are **NOT** in contact with the back of the firebox.



Ceramic Blanket is **NOT** in contact with the back of the firebox and **NOT** even with the Baffle Board in the front.



Ceramic Blanket is bunched up at the back of the firebox and **NOT** even with the Baffle Board in the front.

Figure 28.1

Figure 28.2

J. Frequently Asked Questions

| ISSUES | SOLUTIONS |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Odor from appliance | When first operated, this appliance may release an odor for the first several hours. This is caused by the curing of the paint and the burning off of any oils remaining from manufacturing. |
| Metallic noise | Noise is caused by metal expanding and contracting as it heats up and cools down, similar to the sound produced by a furnace or heating duct. This noise does not affect the operation or longevity of the appliance. |
| Whirring sound | The blower produces a whirring sound which increases in volume as the speed is increased. |

CAUTION

Odors and vapors are released during initial operation.

- Curing of high temperature paint.
- Open windows for air circulation.

Odors may be irritating to sensitive individuals.

9

Maintaining & Servicing Your Appliance

A. General Maintenance

1. Creosote (Chimney) Cleaning

- **Frequency:** Every 2 months during heating season or as recommended by a certified chimney sweep; more frequently if chimney exceeds or is under 14-16 ft (4.27 to 4.87m) measured from bottom of appliance.
- **By:** Homeowner / Chimney Sweep
- **Task:** Remove all ash from the firebox and extinguish all hot embers before disposal. Allow the appliance to cool completely. If the chimney has a full reline, remove the baffle, ceramic blanket and manifold tubes from the insert before cleaning chimney. Otherwise residue can pile up on top of the baffle and the appliance will not work properly. (See Baffle Removal on **page 32**). Close the door tightly. The creosote or soot should be removed with a brush specifically designed for the type of chimney in use. Clean out fallen ashes from the firebox.

If the insert is a direct connect within a masonry chimney, remove the insert from the fireplace. The creosote or soot can be caught in a large garbage bag secured to the pipe. Clean any remaining debris from fireplace smoke shelf.

It is also recommended that before each heating season the entire system be professionally inspected, cleaned and repaired if necessary. Close the door tightly. The creosote or soot should be removed with a brush specifically designed for the type of chimney in use. Clean out fallen ashes from the firebox.

If the insert is a direct connect within a masonry chimney, remove the insert from the fireplace. The creosote or soot can be caught in a large garbage bag secured to the pipe.



It is also recommended that before each heating season the entire system be professionally inspected, cleaned and repaired if necessary.

Inspection: Inspect the system at the appliance connection and at the chimney top. Cooler surfaces tend to build creosote deposits quicker, so it is important to check the chimney from the top as well as from the bottom.

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 newly-started or a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When



ignited, this creosote creates an extremely hot fire which may damage the chimney or even destroy the house. The chimney connector and chimney should be inspected once every 2 months during the heating season to determine if a creosote or soot buildup has occurred. If creosote or soot has accumulated, it should be removed to reduce the risk of a chimney fire.

| | |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  WARNING | |
|  | <p>Fire Risk. Prevent creosote buildup.</p> <ul style="list-style-type: none"> • Inspect chimney connector and chimney once every two months during heating season. • Remove creosote to reduce risk of chimney fire. • Ignited creosote is extremely HOT. |

3. Disposal of Ashes

- **Frequency:** As necessary
- **By:** Homeowner
- **Task:** 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.

| | |
|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  WARNING | |
|  | <p>Risk of Fire Disposal of Ashes</p> <ul style="list-style-type: none"> • Ashes should be placed in metal container with tight fitting lid. • Do not place metal container on combustible surface. • Ashes should be retained in closed container until all cinders have thoroughly cooled. |

| | |
|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  WARNING | |
|  | <p>Fire Risk.</p> <ul style="list-style-type: none"> • Do not use chimney cleaners or flame colorants in your appliance • Will corrode pipe. |

4. Glass Cleaning

- **Frequency:** As necessary
- **By:** Homeowner
- **Task:** Clean glass with a nonabrasive glass cleaner. Abrasive cleaners may scratch and cause glass to crack. If the deposits on the glass are not very heavy, normal glass cleaners work well. Heavier deposits may be removed by using a damp cloth dipped in wood ashes or by using a commercially available oven cleaner. After using an oven cleaner, it is advisable to remove any residue with a glass cleaner or soap and water. Oven cleaner left on during the next firing can permanently stain the glass and damage the finish on plated metal surfaces.

Quadra-Fire stoves are equipped with ceramic 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 the glass. Inspect glass regularly. If you find a crack or break, immediately put the fire out and return the door to your dealer for replacement of glass before further use.

A portion of the combustion air entering the firebox is deflected down over the inside of the door glass. This air flow “washes” the glass, helping to keep smoke from adhering to its surface. When operated at a low burn rate, less air will be flowing over the glass and the smoky, relatively cool condition of a low fire will cause the glass to become coated. Operating the appliance with the Primary Air Control all the way open for 15-20 minutes should remove the built up coating.

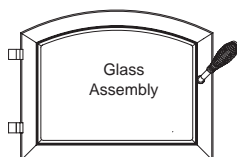
5. Cleaning Plated Surfaces

- **Frequency:** As necessary
- **By:** Homeowner
- **Task:** Clean all the fingerprints and oils from plated surfaces **BEFORE** firing the appliance for the first time. If not cleaned properly before lighting your first fire, the oils can cause permanent markings on the plating. Use warm soapy water and a soft rag, glass cleaner and a paper towel, or vinegar and a paper towel to remove the oils. After the plating is cured, the oils will not affect the finish and little maintenance is required. Wipe clean as needed.

CAUTION

- Do not use polishes with abrasives, it will scratch plated surface.

CAUTION



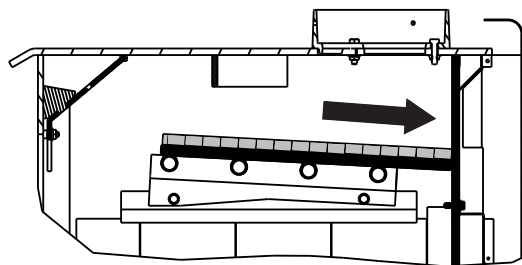
Handle glass assembly with care.

When cleaning glass:

- Avoid striking, scratching or slamming glass.
- Do NOT clean glass when hot.
- Do NOT use abrasive cleaners.
- Use a hard water deposit glass cleaner on white film.
- Use commercial oven cleaner on heavier deposits.
- Remove all residue of oven cleaner or will permanently stain glass on next firing.
- Refer to maintenance instructions.

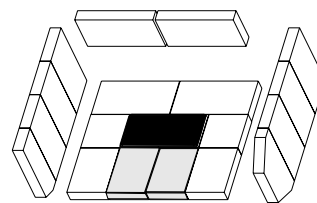
B. Quick Reference Maintenance Guide

BAFFLE & BLANKET PLACEMENT



Baffle and blanket placement is critical to heat output, efficiency and overall life of the unit. Make sure the baffle is pushed all of the way to the back of the firebox and the blanket is laying flat.

**INSPECT FIREBRICKS & ASH GRATE
(AFTER EACH CLEANING)**



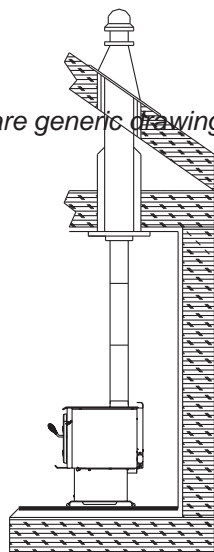
Step Top Models Only

Firebrick is designed to protect your firebox. Replace firebricks that are crumbling, cracked or broken. If you have an optional ash door, check to make sure the door is closing properly.

CHIMNEY & CAP INSPECTION

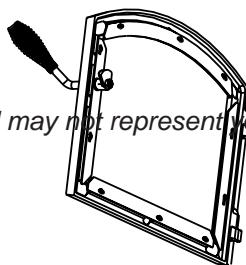
The chimney and chimney cap must be inspected for soot and creosote during the burn season. This will prevent pipe blockage, poor draft, and chimney fires.

Always burn dry wood to help prevent cap blockage and creosote build-up.



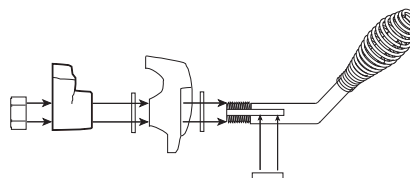
These are generic drawings and may not represent your model.

DOOR & LATCH CHECK



Keeping the door and glass gasket in good shape will maintain good burn times on a low burn setting.

Check the glass frame for loose screws to prevent air leakage.



Check the door latch for proper adjustment. This is very important especially after the door rope has formed to the stove face.

Start the first inspection of your unit after the first 2 months of use, or if performance changes, and adjust your schedule accordingly.

Maintenance is required for safe operation and must be performed to maintain your warranty.

These are generic drawings and may not represent your model.

C. Glass Replacement - Door Assembly

- **Frequency:** As needed
- **By:** Homeowner / Qualified service technician
- **Task:** See the following instructions.
 1. Ensure that the fire is out and the appliance is cool to the touch.
 2. Protect a table or counter top with padding or towels.
 3. Remove the door with the broken glass by lifting the door up and off of the hinges.
 4. Lay door face down on a table or counter making sure the handle hangs over the edge so the door lays flat, on a soft surface.
 5. Remove the screws from each glass retainer and remove the glass. (If screws are difficult to remove, soak with penetrating oil first).
 6. Center the new glass with edges evenly overlapping the opening in the door, (i.e. same space top and bottom, left and right sides).
 7. Replace the glass retainers. Be careful not to cross thread the screws.
 8. Tighten each retainer just a few turns until each is secured. Check again for centering of glass in door frame. Continue to tighten each retainer alternately, a few turns at a time, until the glass is secure. **DO NOT OVERTIGHTEN.**
 9. Replace the door on the appliance.

Quadra-Fire stoves are equipped with ceramic 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 the glass. Inspect glass regularly. If you find a crack or break, immediately put the fire out and return the door to your dealer for replacement of glass before further use.

D. Glass Replacement - Side Window

- **Frequency:** As needed
- **By:** Homeowner / Qualified service technician
- **Task:** See the following instructions.
 1. Open door and remove vertical brick in the bay window area.
 2. Reach inside firebox and loosen 4 hex bolts using a 3/8 inch socket wrench holding the cast in place.
 3. Only remove the 2 bolts, top and bottom on the side closest to the firebox opening. **Figure 33.1.**
 4. Open the side of the window where the bolts have been removed and slide out glass.
 5. Slide new glass in making sure it slides into the cast grooves.
 6. Re-assemble in reverse order. Do not overtighten bolts.

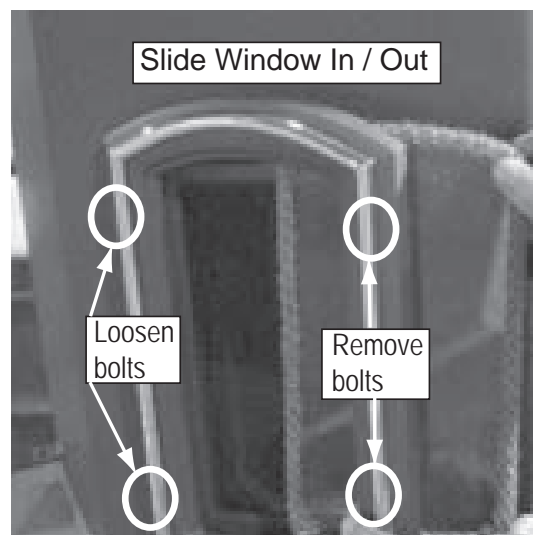
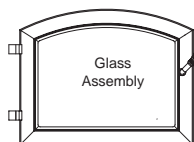


Figure 33.1



WARNING



Handle glass with care.

- Inspect the gasket to ensure it is undamaged.
- Do NOT strike, slam or scratch glass.
- Do NOT operate appliance with glass & door assembly removed.
- Do NOT operate with glass cracked, broken or scratched.



WARNING



Fire or Injury Risk

- Use only glass specified in manual.
- DO NOT REPLACE with any other material.

E. Door Handle Assembly Replacement

- **Frequency:** As needed
- **By:** Homeowner / Qualified service technician
- **Task:** See the following instructions.
 1. Install washer on door handle shaft.
 2. Slide door handle through door.
 3. Install second washer(s) as shown.
 4. Install key in groove.
 5. Align groove in latch cam with key; slide latch cam over shaft
 6. Install locknut.
 7. Install spring handle turning in a counter-clockwise motion to desired location on handle.

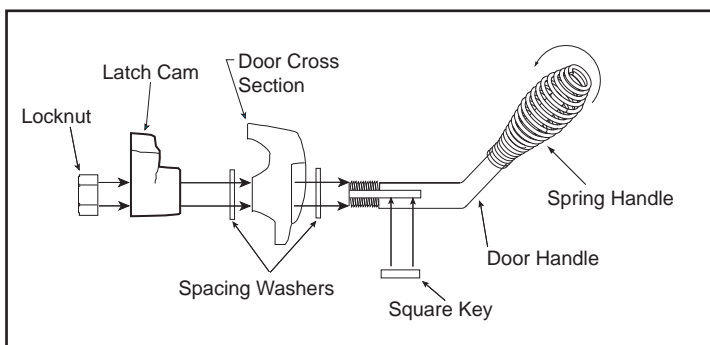


Figure 34.1

CAUTION

- Do NOT overtighten lock nut.
- Door handle needs to move smoothly.

F. Blower Replacement

- **Frequency:** As needed
- **By:** Homeowner / Qualified service technician
- **Task:** See the following instructions.
 1. Remove the panel and trim set. See **pages 21-22** for complete details.
 2. Remove 2 screws on blower housing.
 3. Unhook the wires from the blower.
 4. Slide blower housing out.
 5. Remove 2 screws from blower and remove from housing.
 6. Attach new blower to housing.
 7. Re-assemble in reverse order.

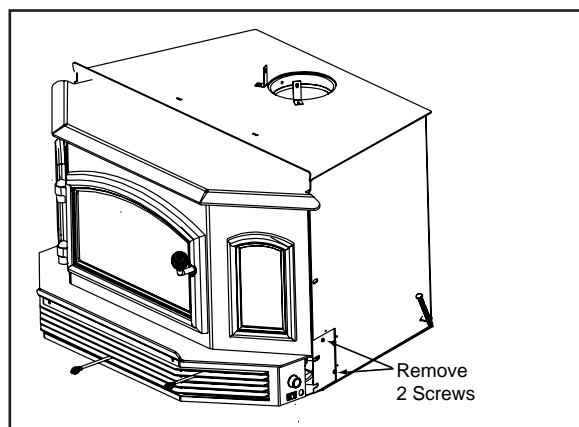


Figure 34.2

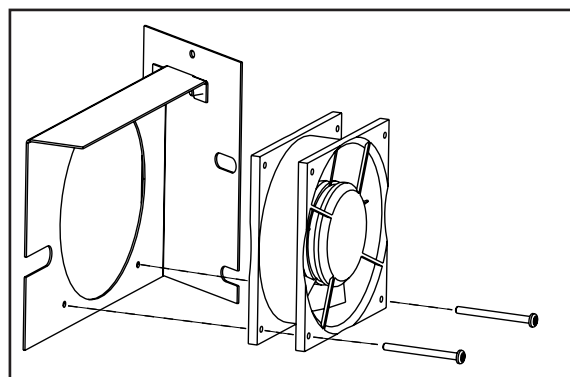


Figure 34.3

G. Firebrick Replacement

- **Frequency:** As needed
- **By:** Homeowner / Qualified service technician
- **Task:** See the following instructions.

The firebox is lined with high quality firebrick, which has exceptional insulating properties. There is no need to use a grate; simply build a fire on the firebox floor. Do not operate appliance without firebrick.

1. Be certain coals are completely cold. Remove all old brick and ash from unit and vacuum out firebox.
2. Remove new brick set from box and lay out to diagram as shown.
3. Lay bottom bricks in unit.
4. Install rear bricks on the top of the bottom bricks. Slide top of bricks under clip on back of firebox wall and push bottom of brick back.
5. Install side bricks. Slide top of brick under clips on side of firebox and push the bottom of the brick until it is flush with the side of the unit.

NOTE: Do not operate unit with any firebrick missing. It will void the warranty.

| Nbr | Brick Size | Qty |
|-----|------------------------------|-----|
| 1 | 9 x 4-1/2 x 1-1/4" | 14 |
| 2* | 9 x 4-1/2 x 1/1/4" with hole | 2 |
| 3 | 9 x 3 x 1-1/4" | 2 |
| 4 | 8-1/2 x 1-3/4 x 1-1/4" | 2 |
| 5 | 3 x 1-3/4 x 1-1/4" | 1 |
| 6 | 9 x 2 x 1-1/4" | 2 |
| 7 | see drawing, Figure 31.2 | 2 |
| 8 | see drawing, Figure 31.2 | 2 |
| 9 | see drawing, Figure 31.2 | 2 |
| 10 | 7-1/2 x 3-1/2 x 1-1/4" | 2 |
| 11 | 9 x 2-1/4 x 1-1/4" | 1 |
| 12 | 8-3/4" X 2-1/4" X 1-1/4" | 2 |

Use Part 832-0550 when ordering individual brick. Provide brick dimension or copy this page, mark the desired brick and take it to your authorized dealer.

* Use Part SRV436-0380 when ordering the 2 bricks with holes.

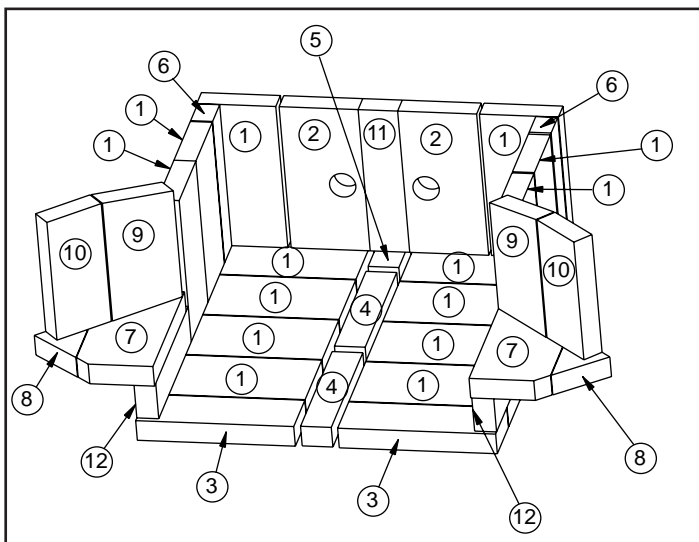


Figure 35.1

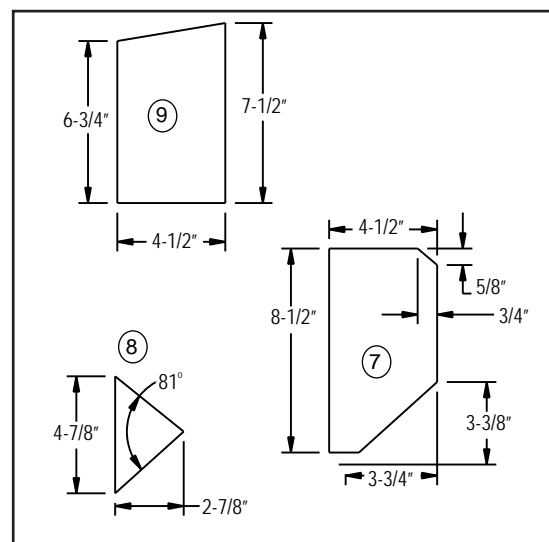


Figure 35.2

H. Baffle Removal

- **Frequency:** As needed
 - **By:** Homeowner / Qualified service technician
 - **Task:** See the following instructions.
1. Remove all ash from firebox, and extinguish all hot embers before disposal into a metal container.
 2. Remove ceramic blanket from above the baffle.
 3. With a 3/16 inch Allen wrench, remove 2 front manifold tube retainer bolts on the air channel under the end of the front tubes. **NOTE:** Soak the bolts with penetrating oil for at least 15 minutes before trying to remove them. **Figure 36.1.**
 4. To remove manifold tubes, slide the tube to one side until one end is out of its hole. Then, while lifting that end of the fiber board baffle, pull tube up over the air channel and out of hole at the other end. It is necessary to remove the first two tubes in order to remove the baffle. **NOTE:** When replacing the manifold tubes, be sure the tube with the larger holes is placed in the front for your insert to operate properly.
 5. Slide fiber board baffle forward to front of stove and straight out through door. **Figure 36.2.**
 6. To install the fiber board baffle, repeat steps 2 through 4 in reverse. Be sure the fiber board baffle and ceramic blanket are pushed back fully into position.

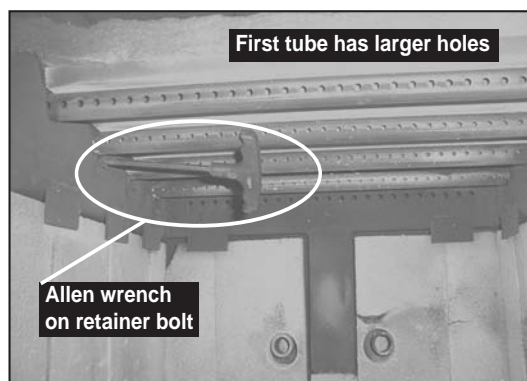


Figure 36.1

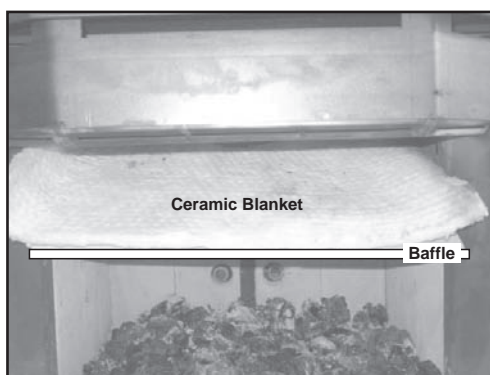


Figure 36.2

10

Troubleshooting

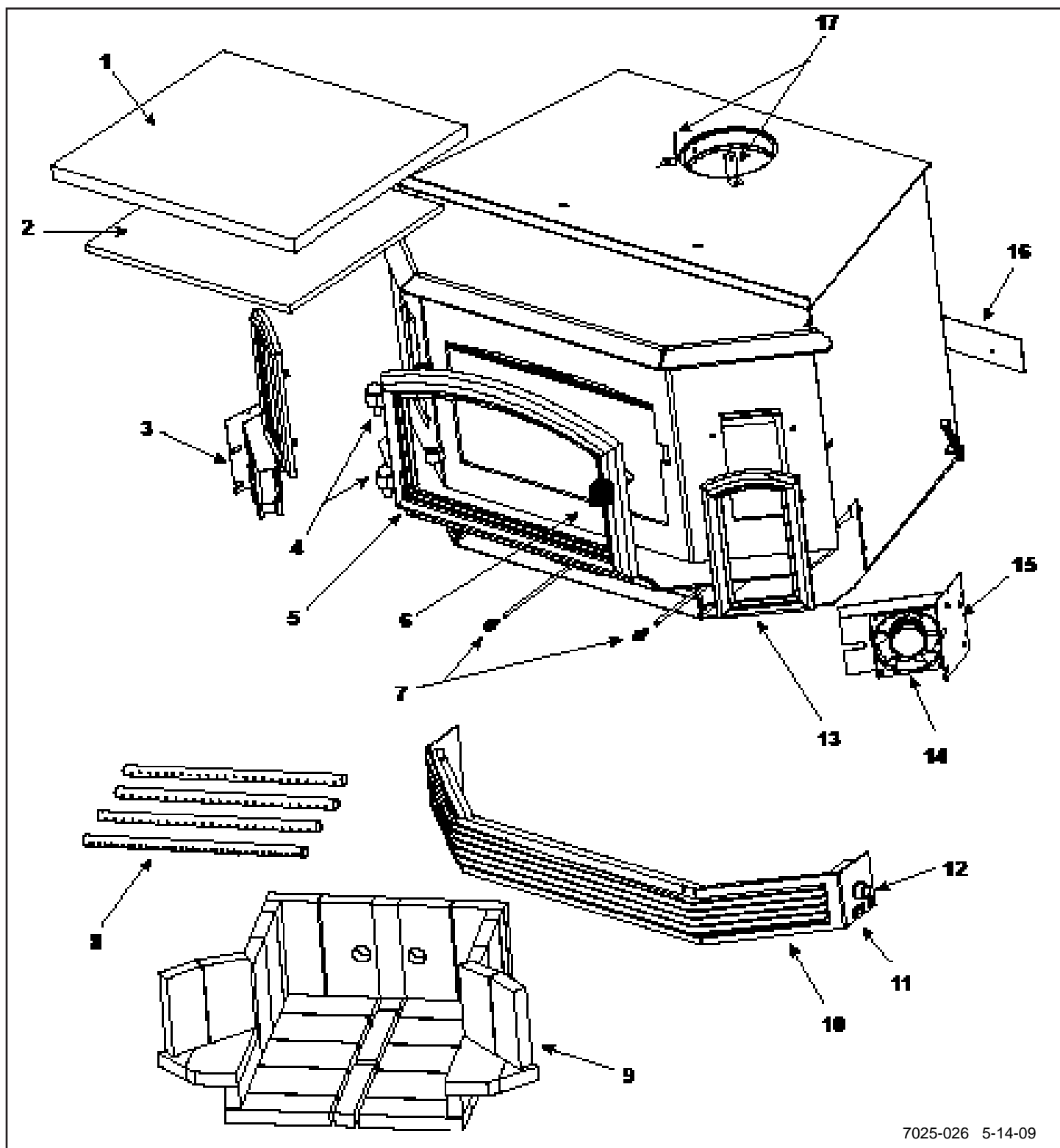
With proper installation, operation, and maintenance your appliance provide years of trouble-free service. If you do experience a problem, this troubleshooting guide will assist a qualified service person in the diagnosis of a problem and the corrective action to be taken.

| Start Fire Problems | Possible Cause | Solution |
|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Can't get fire started Excessive smoke or spillage Burns too slowly Smolders, sizzles | Not enough kindling/paper or no kindling/paper | Use dry kindling, more paper. Arrange kindling & wood for air movement. |
| | Not enough air for fire to ignite | Check for restricted cap/shroud |
| | | |
| | | Check for flue blockage. |
| | | Pre-warm flue before starting fire (refer to starting fire section). |
| | | Check for adequate vent height (refer to chimney assembly section). |
| | | Open window below the appliance towards the wind. |
| | Wood condition is too wet, too large | Use dry, seasoned wood (refer to wood fuel section). |
| | Bed of coals not established before adding wood | Start with paper & kindling to establish bed of coals (refer to starting fire section). |
| Fire burns too fast | Flue blockage such as birds' nests or leaves in termination cap | Have chimney inspected for creosote and cleaned by a certified chimney sweep. |
| | Down draft or negative pressure Competition with exhaust devices | Do not use exhaust fans during start-up (refer to negative pressure section). |
| | | Open window below the appliance towards the wind. |
| | Extremely dry or soft wood | |
| | | Mix in less seasoned wood after fire is established (refer to wood fuel section). |
| | Overdrafting | Check for correct vent height; too much vertical height creates overdrafting. |
| | | Check location of vent termination (refer to chimney |

11

Reference Materials

A. Exploded Drawings



7025-026 5-14-09

Figure 38.1

B. Service Parts & Accessories

IMPORTANT: THIS IS DATED INFORMATION

When requesting service or replacement parts for your appliance please provide model number and serial number. All parts listed may be orderd from an authorized dealer.

HOW TO ORDER

To order the entire assembly, order the top line part number only.
To order an individual part from an assembly, order the part(s) listed in the indented portion.



| Item | Description | Comments | Part Number | Stocked at Depot |
|------|------------------------------------|---------------------------------|-------------|------------------|
| 1 | Ceramic Fiber Blanket, 1/2 " Thick | | 832-3390 | Y |
| 2 | Baffle Fiberboard | | SRV438-0320 | Y |
| 3 | Mount, Blower, Left | | SRV430-1184 | |
| 4 | Hinge Pins, 1/2" | Gold | 832-0250 | |
| | | Nickel | 430-5320 | |
| 5 | Door Assembly | Black | DR-27BK | |
| | | Gold | DR-27GD | |
| | | Nickel | DR-27NL | |
| 6 | Spring Handle, 1/2" | Gold | 832-0620 | Y |
| | | Nickel | 250-8330 | |
| 7 | Spring Handle, 1/4" | Gold | 832-0630 | Y |
| | | Nickel | 250-8340 | |
| | Cam Latch | | 430-1141 | |
| | Door Glass Assembly | | 7000-011 | Y |
| | Door Handle Only | | 430-1131 | |
| | Gasket, Glass Tape, 3/4 " | 3/4" x 5 Ft, Dealer Cut to Size | 832-0460 | Y |
| | Glass Frame Set | Qty: 4 Pc | 832-1540 | |
| | Key, Cam Latch | | 430-1151 | |
| | Nut, Keps Lock, 8-32 | Qty: 40 | 226-0060/40 | Y |
| | Nut, Locking Door Handle | Qty: 24 | 226-0100/24 | Y |
| | Rope, Door, 3/4" X 84" | 3/4" x 7 Ft, Dealer Cut to Size | 832-1680 | Y |
| | Trim Ring, Door | Gold Trim | 430-2702 | |
| | | Nickel Trim | 430-5350 | |
| | Washer, Sae, 3/8 (3 Ea) | Qty: 3 | 832-0990 | |
| 8 | Manifold Tube Set | | TUBES-438 | Y |
| | Bushing .064 Od X .375Id | | 438-0370 | |
| | Manifold Clip/Screws (4) | | 832-0661 | Y |
| 9 | Brick Assembly | | BRICK-438 | |
| | Brick, Single | Qty: 1 | 832-0550 | Y |
| | Brick, Uncut, Set Of 6 | Qty: 6 | 832-3040 | Y |
| | Firebrick W/Hole | Qty: 2 | SRV436-0380 | Y |
| 10 | Grill Assembly, Complete Set | Gold | 832-3100 | |
| | | Nickel | 832-3100NL | |
| 11 | Switch, Rocker | | 230-0730 | Y |
| 12 | Knob, Speed Control | Knob Only | 200-2041 | Y |
| | Blower Cord Only | | 832-2410 | Y |
| | Grill Panel Assembly | Frame Only | SRV438-5610 | |

HOW TO ORDER

To order the entire assembly, order the top line part number only.
To order an individual part from an assembly, order the part(s) listed in the indented portion.


**Stocked
at Depot**

| Item | Description | Comments | Part Number | Stocked at Depot |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-------------|---------------------|
| | Louver Assembly Only | Gold | 438-5480 | |
| | | Nickel | 438-5530 | |
| | Louver, Single | Black | 430-3770 | |
| | | Gold | 430-3830 | |
| | | Nickel | 430-5460 | |
| | Nut, Keps Lock, 8-32 | Qty: 40 | 226-0060/40 | Y |
| | Screw, Pan Head Philips 8-32 X 3/8 | Qty: 40 | 225-0500/40 | Y |
| | Screw, Sheet Metal #8 X 1/2 S-Grip | Qty: 40 | 12460/40 | Y |
| | Snap Disc, Ceramic | | SRV230-0960 | Y |
| | Speed Control Only (Rheostat) | | 842-0370 | Y |
| | Wire Harness | | 832-3270 | Y |
| 13 | Window Assembly, Side | Glass, Gold Trim & Frame | 438-5440 | |
| | | Glass, Nickel Trim & Frame | 438-5560 | |
| | Bolt, Window Frame | Qty: 4 | 812-2350 | |
| | Glass, Window | Qty: 1 pc, Lt/Rt Interchangeable | 832-2000 | Y |
| | Nut, Keps Lock, 8-32 | Qty: 40 | 226-0060/40 | Y |
| | Trim Ring, Window | Gold | 430-2721 | |
| | | Nickel | 430-5360 | |
| 14 | Blower, Rodale | Qty: 1 pc, Lt/Rt Interchangeable | 832-3190 | |
| 15 | Mount, Blower, Right | | SRV430-1194 | |
| 16 | Outside Air Cover Plate | | 430-2480 | |
| 17 | Flue Tab | | 438-0010 | |
| | Component Pack (Includes Owners Manual, Warranty Card, Touch-Up Paint, (1) Spring Handle 1/2", (2) 1/4" Spring Handles, (2) Leveling Bolts, 2 Consumer Cards, Epa & Sales Efficiency Cards, "If Fireplace Altered" Label) | For Gold Trim Units | 438-5510 | |
| | | For Nickel Trim Units | 438-5570 | |
| | Spring Handle, 1/2" | Gold | 832-0620 | Y |
| | | Nickel | 250-8330 | |
| | Spring Handle, 1/4" | Gold | 832-0630 | Y |
| | | Nickel | 250-8340 | |
| | Paint Touch-Up | | 7000-304 | |
| | Door Handle Assembly | | 832-0540 | Y |
| | Rear Channel, Outside Air Kit | | 436-7020 | |
| | Upgrade, Door, Nickel | Nickel Spring Handles, Hinge Pins & Logo | UK-DRNL | |

HOW TO ORDER

To order the entire assembly, order the top line part number only.
To order an individual part from an assembly, order the part(s)
listed in the indented portion.


**Stocked
at Depot**

| Item | Description | Comments | Part Number | |
|--------------------|------------------------------------|------------------------------|---------------|---|
| ACCESSORIES | | | | |
| | Adjustable Hearth Support | 12 in x 50 in, 2-10" H | ADJSPT-12 | |
| | Mantle Deflector, 8 Inch | | 831-1530 | |
| | Offset Adapter | | 831-0182 | |
| | Panel & Gold Trim, Ots | 51 in. W x 34 in. H | 831-1461 | |
| | Component Pack Assembly | | 436-5130 | |
| | Logo, Quadra-Fire | Gold | 200-3180 | |
| | Trim Set Only | Gold Trim | 832-2240 | |
| | Panel & Gold Trim, Std | 47 in. W x 31.5 H | 831-1452 | |
| | Component Pack Assembly | | 436-5130 | |
| | Logo, Quadra-Fire | Gold | 200-3180 | |
| | Trim Set Only | Gold Trim | 832-2151 | |
| | Panel & Nickel Trim, Ots | 51 in. W x 34 in. H | SP-51L-NL | |
| | Component Pack Assembly | | 436-5130 | |
| | Logo, Quadra-Fire | Nickel | 200-3240 | |
| | Trim Set Only | Nickel Trim | 430-5420 | |
| | Panel & Nickel Trim, Std | 47 in. W x 31.5 H | SP-51S-NL | |
| | Component Pack Assembly | | 436-5130 | |
| | Logo, Quadra-Fire | Nickel | 200-3240 | |
| | Trim Set Only | Nickel Trim | 430-5410 | |
| FASTENERS | | | | |
| | Avk Rivnut Repair Kit | 1/4-20 & 3/8-16 Rivnut Tools | RIVNUT-REPAIR | Y |
| | Nut, Keps Lock, 8-32 | Qty: 40 | 226-0060/40 | Y |
| | Nut, Locking Door Handle | Qty: 24 | 226-0100/24 | Y |
| | Screw, Machine Screw 1/4-20X5/8 | Qty: 24 | 220-0440/24 | Y |
| | Screw, Pan Head Philips 8-32 X 3/8 | Qty: 40 | 225-0500/40 | Y |
| | Screw, Shc 5/16-18X1/2, 18-8S | Qty: 10 | 220-0170/10 | Y |
| | Screw, Sheet Metal #8 X 1/2 S-Grip | Qty: 40 | 12460/40 | Y |
| | Washer, Sae, 3/8 (3 Ea) | Qty: 3 | 832-0990 | |

C. Warranty Policy
**Hearth & Home Technologies Inc.
LIMITED LIFETIME WARRANTY**

Hearth & Home Technologies Inc., on behalf of its hearth brands ("HHT"), extends the following warranty for HHT gas, wood, pellet, coal and electric hearth appliances that are purchased from an HHT authorized dealer.

WARRANTY COVERAGE:

HHT warrants to the original owner of the HHT appliance at the site of installation, and to any transferee taking ownership of the appliance at the site of installation within two years following the date of original purchase, that the HHT appliance will be free from defects in materials and workmanship at the time of manufacture. After installation, if covered components manufactured by HHT are found to be defective in materials or workmanship during the applicable warranty period, HHT will, at its option, repair or replace the covered components. HHT, at its own discretion, may fully discharge all of its obligations under such warranties by replacing the product itself or refunding the verified purchase price of the product itself. The maximum amount recoverable under this warranty is limited to the purchase price of the product. This warranty is subject to conditions, exclusions and limitations as described below.

WARRANTY PERIOD:

Warranty coverage begins on the date of installation. In the case of new home construction, warranty coverage begins on the date of first occupancy of the dwelling or six months after the sale of the product by an independent, authorized HHT dealer/ distributor, whichever occurs earlier. The warranty shall commence no later than 24 months following the date of product shipment from HHT, regardless of the installation or occupancy date. The warranty period for parts and labor for covered components is produced in the following table.

The term "Limited Lifetime" in the table below is defined as: 20 years from the beginning date of warranty coverage for gas appliances, and 10 years from the beginning date of warranty coverage for wood, pellet, and coal appliances. These time periods reflect the minimum expected useful lives of the designated components under normal operating conditions.

| Warranty Period | | HHT Manufactured Appliances and Venting | | | | | | | Components Covered |
|------------------|---------|-----------------------------------------|------|--------|----------|------|----------|---------|--------------------------------------------------------------------------------------------|
| Parts | Labor | Gas | Wood | Pellet | EPA Wood | Coal | Electric | Venting | |
| 1 Year | | X | X | X | X | X | X | X | All parts and material except as covered by Conditions, Exclusions, and Limitations listed |
| 2 years | | | | X | X | X | | | Igniters, electronic components, and glass |
| | | X | X | X | X | X | | | Factory-installed blowers |
| | | | X | | | | | | Molded refractory panels |
| 3 years | | | | X | | | | | Firepots and burnpots |
| 5 years | 1 year | | | X | X | | | | Castings and baffles |
| 7 years | 3 years | | X | X | X | | | | Manifold tubes, HHT chimney and termination |
| 10 years | 1 year | X | | | | | | | Burners, logs and refractory |
| Limited Lifetime | 3 years | X | X | X | X | X | | | Firebox and heat exchanger |
| 90 Days | | X | X | X | X | X | X | X | All replacement parts beyond warranty period |

See conditions, exclusions, and limitations on next page.

WARRANTY CONDITIONS:

- This warranty only covers HHT appliances that are purchased through an HHT authorized dealer or distributor. A list of HHT authorized dealers is available on the HHT branded websites.
- This warranty is only valid while the HHT appliance remains at the site of original installation.
- Contact your installing dealer for warranty service. If the installing dealer is unable to provide necessary parts, contact the nearest HHT authorized dealer or supplier. Additional service fees may apply if you are seeking warranty service from a dealer other than the dealer from whom you originally purchased the product.
- Check with your dealer in advance for any costs to you when arranging a warranty call. Travel and shipping charges for parts are not covered by this warranty.

WARRANTY EXCLUSIONS:

This warranty does not cover the following:

- Changes in surface finishes as a result of normal use. As a heating appliance, some changes in color of interior and exterior surface finishes may occur. This is not a flaw and is not covered under warranty.
- Damage to printed, plated, or enameled surfaces caused by fingerprints, accidents, misuse, scratches, melted items, or other external sources and residues left on the plated surfaces from the use of abrasive cleaners or polishes.
- Repair or replacement of parts that are subject to normal wear and tear during the warranty period. These parts include: paint, wood, pellet and coal gaskets; firebricks; grates; flame guides; and the discoloration of glass.
- Minor expansion, contraction, or movement of certain parts causing noise. These conditions are normal and complaints related to this noise are not covered by this warranty.
- Damages resulting from: (1) failure to install, operate, or maintain the appliance in accordance with the installation instructions, operating instructions, and listing agent identification label furnished with the appliance; (2) failure to install the appliance in accordance with local building codes; (3) shipping or improper handling; (4) improper operation, abuse, misuse, continued operation with damaged, corroded or failed components, accident, or improperly/incorrectly performed repairs; (5) environmental conditions, inadequate ventilation, negative pressure, or drafting caused by tightly sealed constructions, insufficient make-up air supply, or handling devices such as exhaust fans or forced air furnaces or other such causes; (6) use of fuels other than those specified in the operating instructions; (7) installation or use of components not supplied with the appliance or any other components not expressly authorized and approved by HHT; (8) modification of the appliance not expressly authorized and approved by HHT in writing; and/or (9) interruptions or fluctuations of electrical power supply to the appliance.
- Non-HHT venting components, hearth components or other accessories used in conjunction with the appliance.
- Any part of a pre-existing fireplace system in which an insert or a decorative gas appliance is installed.
- HHT's obligation under this warranty does not extend to the appliance's capability to heat the desired space. Information is provided to assist the consumer and the dealer in selecting the proper appliance for the application. Consideration must be given to appliance location and configuration, environmental conditions, insulation and air tightness of the structure.

This warranty is void if:

- The appliance has been over-fired or operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals. Over-firing can be identified by, but not limited to, warped plates or tubes, rust colored cast iron, bubbling, cracking and discoloration of steel or enamel finishes.
- The appliance is subjected to prolonged periods of dampness or condensation.
- There is any damage to the appliance or other components due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation.

LIMITATIONS OF LIABILITY:

- The owner's exclusive remedy and HHT's sole obligation under this warranty, under any other warranty, express or implied, or in contract, tort or otherwise, shall be limited to replacement, repair, or refund, as specified above. In no event will HHT be liable for any incidental or consequential damages caused by defects in the appliance. Some states do not allow exclusions or limitation of incidental or consequential damages, so these limitations may not apply to you. This warranty gives you specific rights; you may also have other rights, which vary from state to state. EXCEPT TO THE EXTENT PROVIDED BY LAW, HHT MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY SPECIFIED HEREIN. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO DURATION OF THE EXPRESSED WARRANTY SPECIFIED ABOVE.

QUADRA-FIRE®

CONTACT INFORMATION:

Hearth & Home Technologies
1445 North Highway
Colville, WA 99114
Division of HNI INDUSTRIES

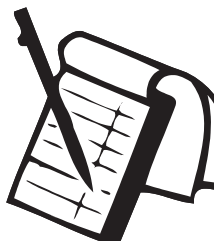
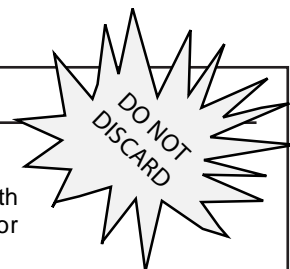
Please contact your Quadra-Fire dealer with any questions or concerns.
For the number of your nearest Quadra-Fire dealer,
please visit our web site at www.quadrafire.com

NOTICE



DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation.



We recommend that you record the following pertinent information for your 5100-I Wood Insert (ACT)

Date purchased/installed: _____

Serial Number: _____ Location on appliance: _____

Dealership purchased from: _____ Dealer phone: _____

Notes: _____

This product may be covered by one or more of the following patents: (United States) 5341794, 5263471, 6688302, 7216645, 7047962 or other U.S. and foreign patents pending.

