

2100 MILLENNIUM WOOD STOVE Automatic Combustion Control (ACC)



Owner's Manual Installation and Operation

Model:

21M-ACC

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.

# A 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.



# 

# Fire Risk.

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



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.





# 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 same room as fireplace.
- Alert children and adults to hazards of high temperatures.

# High temperatures may ignite clothing or other flammable materials.

• Keep clothing, furniture, draperies and other flammable materials away.

# NOTE

To obtain a French translation of this manual, please contact your dealer or visit www.quadrafire.com

Pour obtenir une traduction française de ce manuel, s'il vous plaît contacter votre revendeur ou visitez www.quadrafire.com



### and Welcome to the Quadra-Fire Family!

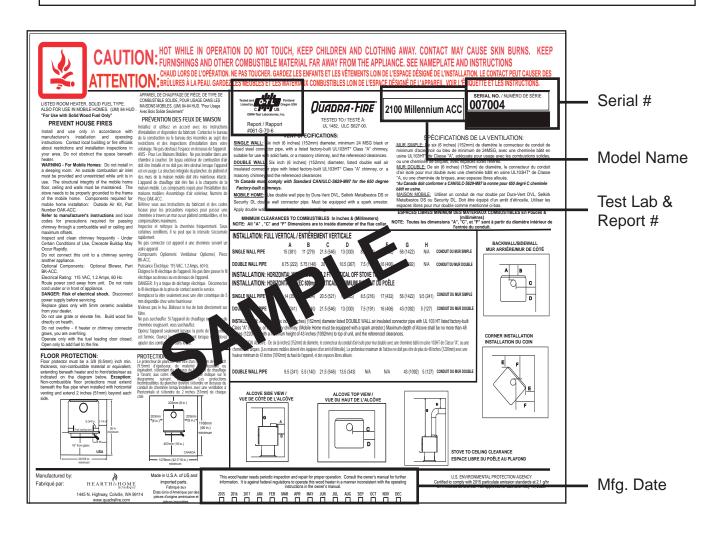
Hearth & Home Technologies welcomes you to our tradition of excellence! In choosing a Quadra-Fire appliance, you have our assurance of commitment to quality, durability, and performance.

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.

# SERIAL NUMBER/ SAFETY LABEL LOCATION: Back of Appliance

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



# 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 <u>could</u> 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**

Appliance Certifications	4
••	
Glass Specifications	
BTU & Efficiency Specifications	4
	•

# Section 2: Getting Started

Α.	Design, Installation & Location	
	Considerations	5
В.	Fire Safety	5
C.	Negative Pressure	6
D.	Flue Draft Considerations	7
Ε.	Venting Systems	7
F.	Tools and Supplies Needed	7
G.	Inspect Appliance & Components	7
Н.	Typical Stove System	8
	Dimensions & Clearances Appliance Dimensions Clearances to Combustibles	
Section 4:	Installation Consideration	
Α.		
В.	Outside Air	12
C.	Blower Installation	13
Section 5:	Chimney Requirements	

	Venting Components	14
В.	Chimney Systems	14-16
C.	Installing Chimney Components	16

- D. Chimney Termination Requirements .. 17
- E. 2-10-3 Rule.....17

# Section 6: Mobile Home.....18

# Section 7: Appliance Set-Up

Α.	Door Handle Assembly	19
Β.	Blower Speed Adjustment	19

# Section 8: Operating Instructions

- A. Overfiring Your Appliance ......20
- B. Wood Selection & Storage ......20
- D. Automatic Combustion Control (ACC)....21

- H. Correct Baffle & Blanket Placement....24
- J. Opacity (Smoke) ......25

# Section 9: Maintaining & Servicing Appliance

- B. General Maintenance & Cleaning ......28
- C. Glass Replacement.....29
- D. Firebrick Replacement ......30
- F. Snap Disc Replacement ......31
- G. Tube Channel Replacement ......32

## 

# Section 11: Reference Material

Α.	Exploded Drawings &	
	Service Parts List	.34
В.	Warranty Policy	.38-39

C. Contact Information ......40



# Listing and Code Approvals

# A. Appliance Certification

Model:	2100 Millennium (ACC)
Laboratory:	OMNI Test Laboratories, Inc.
Report No & Date:	061-S-70-6
Туре:	Listed Room Heater, Solid Fuel Type
Standard:	UL1482 and ULC S627-00 and
	(UM) 84-HUD, Mobile Home
	Approved.

**NOTE:** This installation must conform with local codes. In the absence of local codes you must comply with the **UL1482**, **(UM) 84-HUD and NPFA211** in the U.S.A. and the **ULC S627-00 and CAN/CSA-B365 Installation Codes** in Canada.

The Quadra-Fire 2100 Millennium Wood Stove (ACC) meets the U.S. Environmental Protection Agency's crib wood emission limits for wood heaters sold after May 15, 2015.

This wood heater needs periodic inspection and repair for proper operation. It is against federal regulations to operate this wood heater in a manner inconsistent with operating instructions in this manual.

# **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 with #8 copper ground wire, and use only listed double-wall connector pipe.
- Outside Air Kit, part OAK-ACC must be installed in a mobile home installation.

# C. Glass Specifications

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

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

# **D. BTU & Efficiency Specifications**

EPA Certification #:	664
EPA Certified Emissions:	2.1 grams per hour
*LHV Tested Efficiency:	78.7%
**HHV Tested Efficiency:	72.9 %
***EPA BTU Output:	12,000 to 28,800 / hr.
****Peak BTU/Hour Output:	44,000
Vent Size:	6 inches
Firebox Size:	1.48 cubic feet
Maximum Wood Length:	16 inches
Ideal Wood Length:	16 inches
Fuel	Seasoned Cord Wood

\*Weighted average LHV efficiency using Douglas Fir dimensional lumber and data collected during EPA emissions test.

\*\*Weighted average HHV efficiency using Douglas Fir dimensional lumber and data collected during EPA emissions test.

\*\*\*A range of BTU outputs based on EPA Default Efficiency and the burn rates from the low and high EPA tests, using Douglas Fir dimensional lumber.

\*\*\*\*A peak BTU out of the unit calculated using the maximum first hour burn rate from the High EPA Test and the BTU content of cordwood (8600) times the efficiency.

# 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.

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage.

For assistance or additional information, consult a qualified installer, service agency or your dealer.

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

# **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. If you are not using an existing chimney, place the appliance where there will be a clear passage for a factory-built listed chimney through the ceiling and roof.

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.

# NOTE: Service Space

In order to replace the tube channel a clearance of 17 inches (432mm) is required on the right side of stove in order to remove the tubes with the stove in place.

If space is not available, the stove will have to be disconnected from the chimney to proceed with the tube replacement. **See page 32.** 

# 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.



Asphyxiation Risk.

- DO NOT CONNECT THIS UNIT TO A CHIM-NEY FLUE SERVICING ANOTHER APPLI-ANCE.
- DO NOT CONNECT TO ANY AIR DISTRIBU-TION DUCT OR SYSTEM.

May allow flue gases to enter the house.

# **B. Fire Safety**

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

- 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 CO detector should be installed in the room with the appliance.
- 4. A practiced evacuation plan, consisting of at least two escape routes.
- 5. 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.



# 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.

# **A** WARNING

# Fire Risk.

Do not operate appliance before reading and understanding operating instructions.

Failure to operate appliance properly may cause a house fire.

# C. Negative Pressure

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

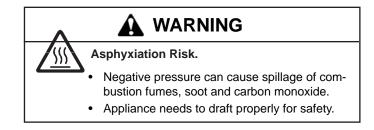
- Preventing negative pressure
- Location of appliance and chimney

**Negative pressure** results from the imbalance of air available for the stove 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

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 combustion 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 duct work and air handler joints and seams taped or sealed.



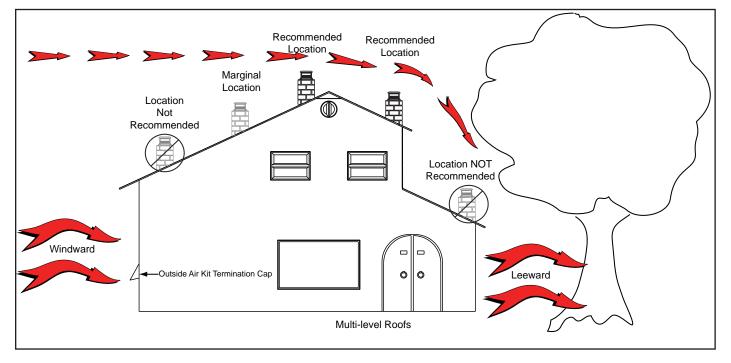


Figure 6.1

# 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 and down drafts.
- Consider the appliance location in order to avoid floor and ceiling attic joists and rafters.

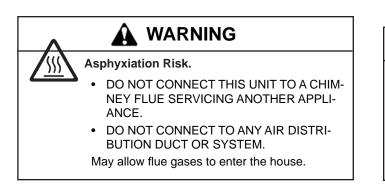
Exterior conditions such as roof line, surrounding trees, prevailing winds and nearby hills can influence stove performance. Your local dealer is the expert in your geographic area and can usually make suggestions or discover solutions that will easily correct your flue problem.

To be sure that your appliance burns properly, the chimney draft (static pressure) should be approximately -.04 inch water column (W.C.) during a low burn and -.10 inch W.C. during a high 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 for individual installations.

# E. Venting Systems

The venting system consists of a chimney connector (also known as stove pipe) and a chimney. These get extremely hot during use. Temperatures inside the chimney may exceed 2000°F (1100°C) in the event of a creosote fire. To protect against the possibility of a house fire, the chimney connector and chimney **must be properly installed and maintained.** An approved thimble must be used when a connection is made through a combustible wall to a chimney. A chimney support package must be used when a connection is made through the ceiling to a prefabricated chimney. These accessories are **absolutely necessary** to provide safe clearances to combustible wall and ceiling material. Follow venting manufacturer's clearances when installing venting system.



# F. 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 Head Screwdriver	Framing Square
Flat Blade Screwdriver	Electric Drill & Bits (1/4")
Plumb Line	Safety Glasses
Level	1/2 in 3/4 in. length, #6 or
Tape Measure	#8 self drilling screws (need 3 per pipe section connection)

# G. Inspect Appliance & Components and Pre-Burn Check List

1.	Place the appliance in a location near the final installation area and follow the procedures below:
2.	Open the appliance and remove all the parts and articles packed inside the Component Pack. Inspect all the parts and glass for shipping damage. Contact your dealer if any irregularities are noticed.
3.	All safety warnings have been read and followed.
4.	This Owner's Manual has been read.
5.	Floor protection requirements have been met.
6.	Venting is properly installed.
7.	The proper clearances from the appliance and chim- ney to combustible materials have been met.
8.	The masonry chimney is inspected by a professional and is clean, or the factory built metal chimney is installed according to the manufacturer's instruc- tions and clearances.
9.	The chimney meets the required minimum height.
10.	All labels have been removed from the glass door.
11.	A power outlet is available nearby if installing optional blower assembly.



# A WARNING

Fire Risk.

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.

# H. Typical Stove Systems

Stove system with masonry chimney consists of:

- Stove
- Chimney Connector (stove pipe)
- Thimble
- Masonry Chimney
- Hearth Pad Floor Protection

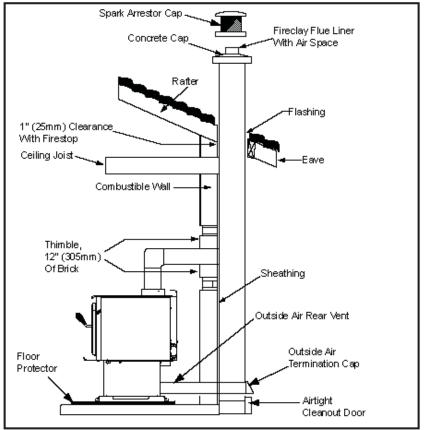


Figure 8.1 Masonry Chimney

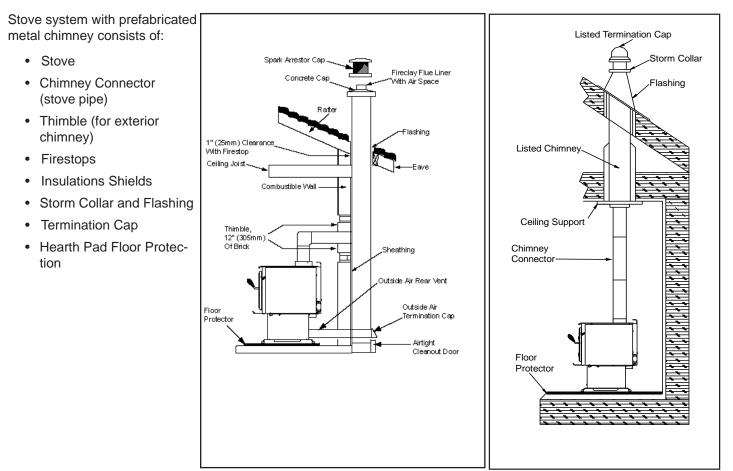


Figure 8.2 Exterior Prefabricated Chimney



# A. Appliance Dimensions

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

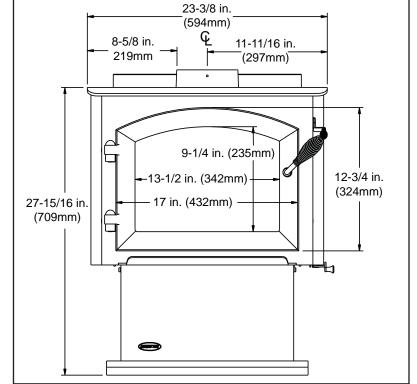


Figure 9.1 Front View

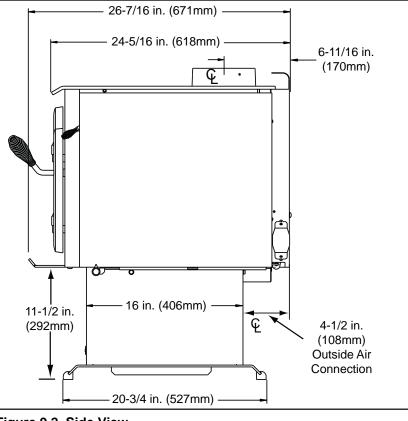
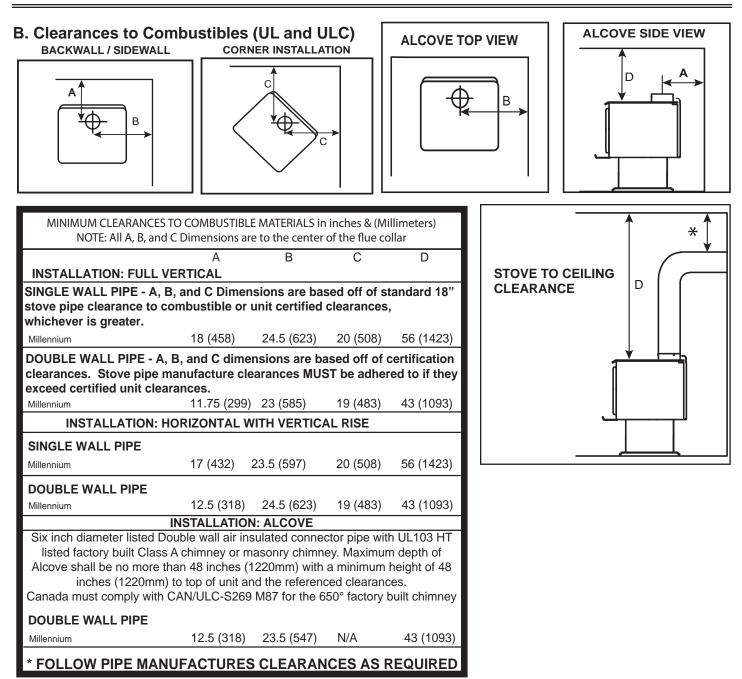
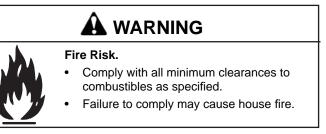


Figure 9.2 Side View



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



## **NOTE: Service Space**

In order to replace the tube channel assembly a clearance of 19 inches (483mm) is required on the right side of stove in order to remove the tubes with the stove in place.

If space is not available, the stove will have to be disconnected from the chimney to proceed with the tube replacement.

# Installation

# A. Hearth Protection Requirements

FLOOR PROTECTION: Floor protector must be non-combustible material, extending beneath heater and to the front. sides and rear as indicated. The floor must be non-combustible or otherwise adequately protected from radiant heat given off by the unit and from sparks and falling embers. A layer of thin brick or ceramic tile over a combustible floor is not sufficient.

In US installations, it is necessary to install a floor protector of a minimum of 3/8 inch (9.5mm) thick metal clad millboard or equivalent a minimum of 16 inches (406mm) in front of glass and 8 inches (203mm) to both sides of the fuel loading door. Open the door and measure 8 inches (203mm) from the side edge of the opening in the face of the appliance. \*See exception.

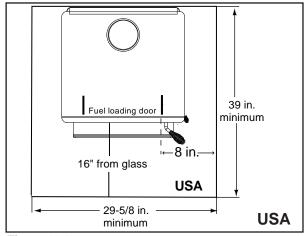
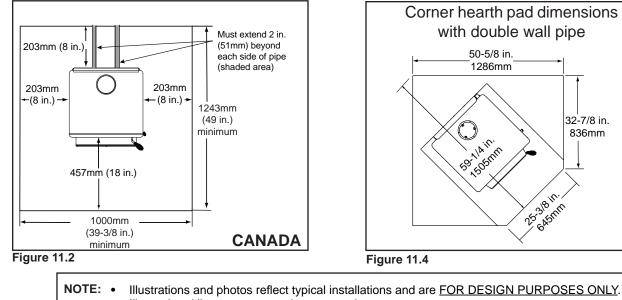


Figure 11.1

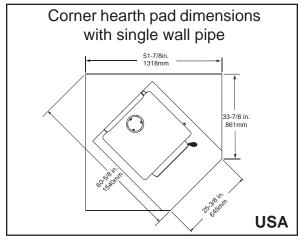


- Illustrations/diagrams are not drawn to scale.
- Actual installation may vary due to individual design preference •
  - Hearth & Home Technologies reserves the right to alter its products.

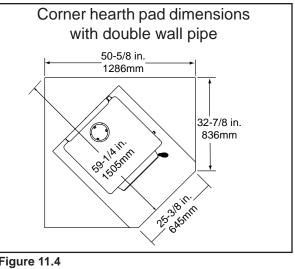
In Canada, similar floor protection must be provided 18 inches (457mm) in front and 8 inches (203mm) from the sides and rear of the stove. \*See exception.

\*EXCEPTION: Non-combustible floor protections must extend beneath the flue pipe when installed with horizontal venting and extend 2 inches (51mm) beyond each side. See Figure 11.4.









# **B.** Outside Air Kit Installation

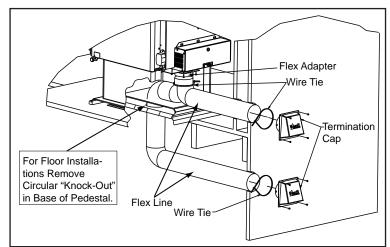
A source of air (oxygen) is necessary in order for combustion to take place. Whatever combustion air is consumed by the fire must be replaced. Air is replaced via air leakage around windows and under doors. In homes that have tightly sealed doors and windows, an outside air source is needed. An optional Outside Air Kit is available.

Included in OAK-ACC: Termination cap, (2) wire ties, flex adapter, and fasteners

Included in SRV7033-041: Cover plate and sealing rope (see Floor Installation Alternative below, Figure 12.2)

### Items Needed for Installation (not supplied)

- 4 inch flex aluminum pipe, or if using alternate material, then it shall be made from durable, non-combustible, heat resistant material up to 350°F. Cut the pipe to the required length for your installation.
- Phillips head screw driver
- Silicone sealant
- Drills and saws necessary for cutting holes through the wall or flooring in your home
- 1. Remove all materials from packing box.
- 2. Using a #2 Phillips screw driver attach the flex adapter to the stove using 4 screws. **Figure 12.1.**
- 3. For floor installations, remove circular "knock-out" in the base of the pedestal. **Figure 12.1**.
- 4. Floor & Rear Installation: Cut a 4 inch (102mm) hole in outside wall or floor to accommodate outside air piping. Use 4 inch (102mm) aluminum metal flex or rigid piping to directly connect outside air to appliance intake. Use the supplied termination cap with a rodent screen. Seal between the wall (or floor) and the pipe with silicone to prevent moisture penetration.







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

# WARNING

Asphyxiation Risk.

Outside air inlet must be located to prevent blockage from:

- Leaves
- Snow or ice
- Other debris

Block may cause combustion air starvation

Smoke spillage may set off alarms or irritate sensitive individuals.



# WARNING

### Asphyxiation Risk.

Length of outside air supply duct shall NOT exceed the length of the vertical height of the exhaust flue.

- Fire will not burn properly
- Smoke spillage occurs when door is opened due to air starvation.
- 5. Floor Installation Alternative: In some instances you may not be able to install the flex pipe as show in Figure 12.1. If that is the case, you will need to order SRV7033-041 which includes a cover plate and sealing rope as shown in Figure 12.2. The goal is to seal the pedestal so no room air can leak into the pedestal and to seal or for cold air infiltration.

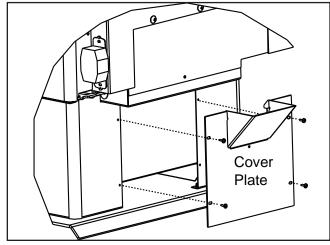


Figure 12.2 - Floor Installation Alternative

# C. Blower (Optional)

- 1. Remove the 3 bolts (1/4"-20 Phillips head) on the outer skin at the bottom rear of appliance.
- 2. Align holes in mounting flange of blower with bolt holes in appliance. Blower should be positioned at bottom of rear outer skin as shown in **Figure 13.1**.
- 3. Re-insert and tighten bolts, securing blower onto outer wall of appliance.
- 4. Place the bracket containing the snap disc and magnet under the bottom left rear corner as shown in **Figure 13.1**.

**See page 25** for detailed operating instructions for the blower and snap disc.

# CAUTION Shock Risk. 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

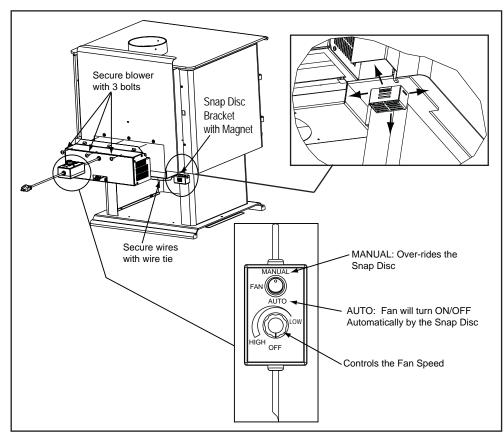


Figure 13.1

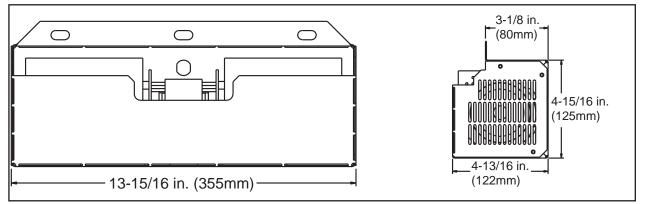


Figure 13.2 - Blower Housing Dimensions



# **Chimney Requirements**

# A. Venting Components

# **Chimney Connector:**

It is also known as flue pipe or stove pipe. The chimney connector joins the stove to the chimney. It must be a 6 inch (152mm) minimum diameter 24 gauge mild steel black or 26 gauge blued steel, or an approved air-insulated double wall venting pipe.

# Thimble:

A manufactured or site-constructed device installed in combustible walls through which the chimney connector passes to the chimney. It is intended to keep the walls from igniting. Site constructed thimbles must meet NFPA 211 Standards. Prefabricated must be suitable for use with selected chimney and meet UL103 Type HT Standards. Follow instructions provided by the manufacturer for manufactured thimbles for masonry chimney and prefabricated chimneys.

# Chimney:

The chimney can be new or existing, masonry or prefabricated and must meet the following minimum requirements specified in Section 5B.

# Spark Arrestor Cap Fireclay Flue Liner Concrete Cap With AirSpace Rafter lashing 1" (25mm) Clearance With Firestop Ceiling Joistave Combustible Wall Thimble, 12" (305mm) Of Brick Sheathing Outside Air Rear Vent Outside Air Floor ermination Cap Protector Airtiaht Cleanout Door Figure 14.1 Prefabricated Exterior Chimney

# B. Chimney Systems

# **Prefabricated Metal Chimney**

- Must be minimum 6 inch (152mm) diameter (ID) high temperature chimney listed to UL 103 HT (2100°F) or ULC S629M.
- Must use components required by the manufacturer for installation.
- Must maintain clearances required by the manufacturer for installation.
- Refer to manufacturers instructions for installation.

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

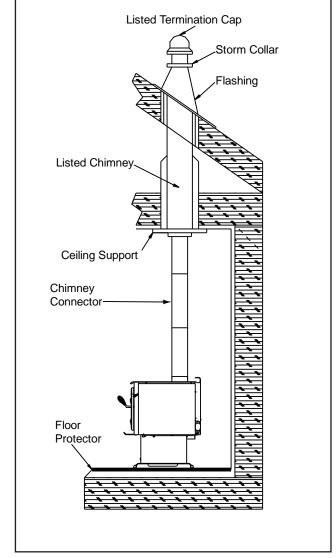


Figure 14.2 - Prefabricated Interior Chimney

# Thimble

Site constructed for masonry chimney installation:

### Components

- A minimum length of 12 inches [305mm] (longer for thicker walls) of solid insulated factory-built chimney length constructed to UL 103 Type HT 6 inch (152mm) inside diameter. Chimney needs to extend a minimum of 2 inches (51mm) from the interior wall and a minimum of 1 inch (25mm) from the exterior wall.
- Wall spacer, trim collar and wall band to fit solid pack chimney selected.
- Minimum 8 inch (203mm) diameter clay liner section (if not already present in chimney) and refractory mortar.

## **Air Clearances**

- Masonry chimney clearance must meet NFPA 211 minimum requirement of 2 inches (51mm) to sheet metal supports and combustibles.
- Minimum of 1 inch (25mm) clearance around the chimney connector.
- Top of wall opening is a minimum of 13-1/2 inches (343mm) from ceiling or 4-1/2 inches (114mm) below minimum clearance specified by chimney connector manufacturer. NFPA 211 minimum vertical clearance of 18 inches (457mm) from chimney connector and ceiling or minimum recommended by chimney connector manufacturer. **Figure 15.1.**

## Instructions:

- 1. Open inside wall at proper height for the chimney connector to entry the masonry chimney. **Figure 15.1**
- 2. Entry hole to masonry chimney must be lined with an 8 inch (203mm) minimum diameter clay liner, or equivalent, secured with refractory mortar.
- Construct a 17 inch x 17 inch (432mm x 432mm) outside dimension frame from 2 x 2 framing lumber to fit into wall opening. Inside opening of frame should be no less than 14 inch x 14 inch (356mm x 356mm). Figure 15.1.
- 4. Attach the wall spacer to the chimney side of the frame.
- 5. Nail the frame into the wall opening. The spacer should be on the chimney side.
- 6. Insert the section of the solid insulated chimney into the outer wall of the masonry chimney.
- 7. Tightly secure the length of the solid insulated chimney with the wall band to the masonry chimney.
- 8. Insert a section of chimney connector into the chimney. Make sure it does not protrude past the edge of the clay chimney liner inside the chimney.
- 9. Seal the end of the chimney connector to the clay liner with refractory mortar.
- 10. Install trim collar around the sold pack chimney section.

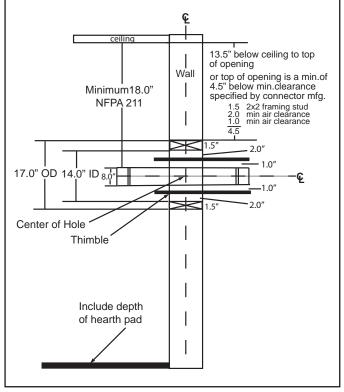
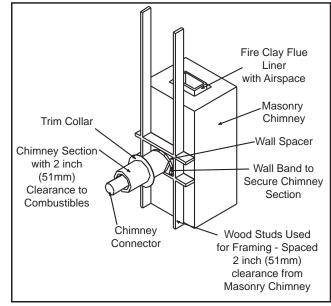


Figure 15.1

# Solid Pack Chimney with Metal Supports as a Thimble



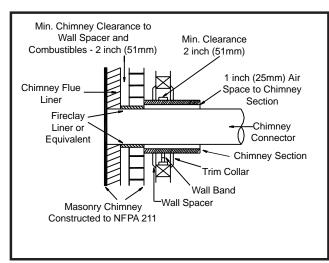
### Figure 15.2

**Fire Risk.** Do NOT pack insulation or other combustibles between spacers. • ALWAYS maintain specified clearances around vent-

- 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.

# Solid Pack Chimney with Metal Supports as a Thimble (Cont'd)

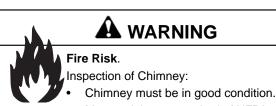




# Chimney Height / Rise and Run

This product was designed for and tested on a 6 inch (152mm) chimney, 14 to 16 feet (420-480cm) high, (includes stove 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 above sea level. It is not recommended to use offsets or elbows at altitudes above 4000 feet above sea level or when there are other factors that affect flue draft.



- Meets minimum standard of NFPA 211
- Factory-built chimney must be 6 inch (152mm) UL103 HT.

	WARNING
--	---------

Asphyxiation Risk.

- DO NOT CONNECT THIS UNIT TO A CHIM-NEY FLUE SERVICING ANOTHER APPLI-ANCE.
- DO NOT CONNECT TO ANY AIR DISTRI-BUTION DUCT OR SYSTEM.

May allow flue gases to enter the house.

# C. Installing Chimney Components

# **Chimney Connector**

## Single wall connector or stove pipe.

This must be at least 24 gauge mild steel or 26 gauge blue steel. The sections must be attached to the appliance and to each other with the crimped (male) end pointing toward the stove. All joints, including the connection at the flue collar, should be secured with 3 sheet metal screws. Make sure to follow the minimum clearances to combustibles. Where passage through the wall, or partition of combustible construction is desired in Canada, the installation shall conform to CAN/CSA-B365.

Factory-built listed chimney connector (vented).

A listed connector (vented) must be used when installing this unit in a mobile home. The listed connectors must conform to each other to ensure a proper fit and seal.

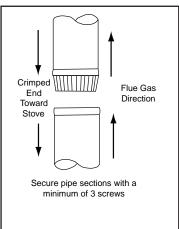


Figure 16.2 Chimney Connector (Stove Pipe)



# WARNING

Follow Chimney Connector Manufacturer's Instructions for Proper Installation.

ONLY use connector:

• Within the room, between appliance and ceiling or wall. Connector shall NOT pass through:

- Attic or roof space
- Closet or similar concealed space
- Floor or ceiling

Maintain minimum clearances to combustibles



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.

# **D.** Chimney Termination Requirements

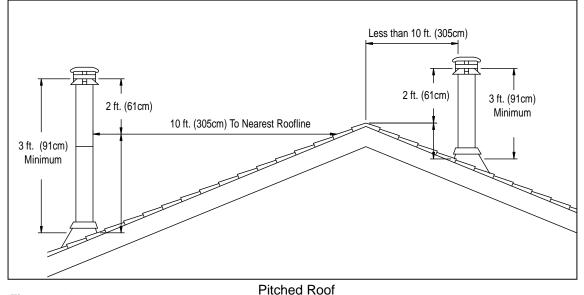
Follow manufacturer's instructions for clearance, securing flashing and terminating the chimney.

- 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

# E. 2-10-3 Rule

### NOTE:

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



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

Figure 17.1

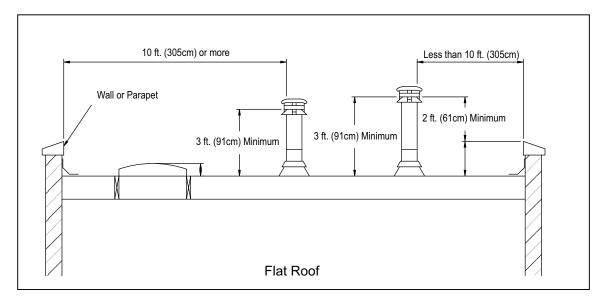


Figure 17.2



# You must use a Quadra-Fire Outside Air Kit Part OAK-ACC and (depending on floor installation, Part SRV7033-041) for installation in a mobile home.

- 1. An outside air inlet must be provided for combustion See **page 12** for installation information.
- Appliance must be secured to the mobile home structure by bolting the pedestal through hearth pad and into floor.
- 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. Appliance must be installed with an approved UL103 HT ventilated chimney connector, UL103 HT chimney, and terminal cap with spark arrestor. Never use a single wall connector (stove pipe) in a mobile home installation. Use only double-wall connector pipe, Dura-Vent DVL, Selkirk metalbestos DS or Security DL double-wall connector or any listed double-wall connector pipe.
- In Canada, this appliance must be connected to a 6 inch (152mm) factory-built chimney conforming to CAN/ULC-629M, 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.

**NOTE:** Offsets from the vertical, not exceeding 45°, are allowed per Section 905(a) of the Uniform Mechanical Code (UMC). Offsets greater than 45° are considered horizontal and are also allowed, providing the horizontal run does not exceed 75% of the vertical height of the vent. Construction, clearance and termination must be in compliance with the UMC Table 9C. This installation must also comply with NFPA 211.

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

- 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.
- 12. Installation shall be in accordance with the Manufacturers Home & Safety Standard (HUD) CFR 3280, Part 24.

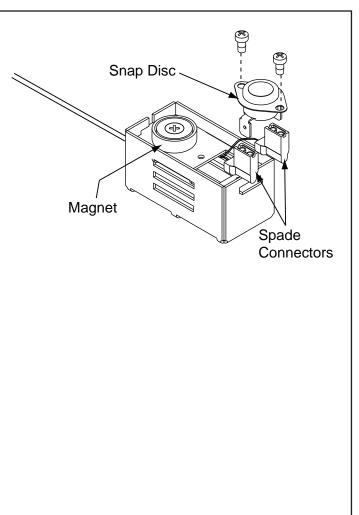


Figure 18.1

# CAUTION

THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL AND CEILING/ROOF MUST BE MAIN-TAINED

Do NOT cut through:

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



Consumes oxygen in the room.

# Appliance Set-Up

# A. Door Handle Assembly

- 1. Install washer on door handle shaft.
- 2. Slide door handle through door.
- 3. Install second washer(s) as shown in Figure 19.1.
- 4. Install key in groove.
- 5. Align groove in latch cam with key; slide latch cam over shaft
- 6. Install locknut but do not overtighten, the handle needs to move smoothly.
- Install spring handle turning in a counter-clockwise motion to <u>required</u> 2 inch (51mm) clearance location on door handle rod. Figure 19.1.

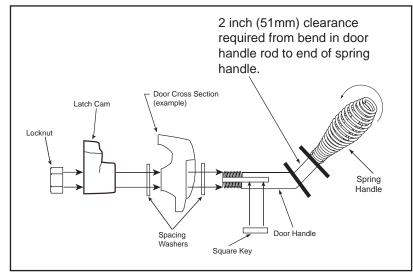
# CAUTION

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

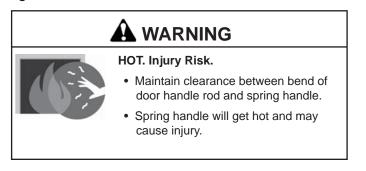
# B. Adjusting The Blower Speed Control

The blower speed control for this unit is adjusted at the factory, and normally does not require further adjustment.

- **NOTE:** When the speed control is turned clockwise, it will click on to high speed. Continue to turn the speed control clockwise to decrease the speed. At full clockwise, the blower should blow gently, but should not stop.
- 1. With the appliance plugged in, turn the speed control knob to slow (full clockwise).
- 2. With a small screwdriver, adjust the blower speed by turning the adjustment mechanism through the hole on the side of the speed control.
- 3. Adjust the speed so the blower runs slowly, but does not stop. Turn clockwise to slow the blower and counterclockwise to increase the speed.









# **Operating Instructions**

WARNING

# A. Over-Firing Your Appliance

# 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

# 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 ٠
- 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

# B. Wood Selection & Storage (Cont'd)

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 <u>Burn Rate Air Control</u>. **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.

# D. Automatic Combustion Control (ACC)

Typically, when you build a fire, you open the air controls fully and monitor the fire to prevent it from going into an overfire situation and/or burning your wood up too quickly before you shut down the air controls to the desired burn rate. With the Automatic Combustion Control (ACC) system, you do not have to continually monitor the fire. Once you set the ACC system it will control the fire for you. Follow the instructions below to learn how to operate your stove with ease.

# E. Air Controls

# 1. Start-Up Air Control

The Start-Up Air Control has two primary functions. The first function is to activate the Automatic Combustion Control system (ACC). This function is performed by sliding the control all the way back until it stops at the "HI" indicator on the label and then pulling forward to the front of the stove until it stops. This activates the ACC system and opens the front air channel and allows air to enter the front of the stove for approximately 25 minutes. The front air channel gradually shuts down until it is completely closed at the end of the 25 minutes. The fire is now controlled by the air supplied by the Burn Rate Air Control. This function should be performed each time you reload the stove. **Figure 21.1**.

The second function of the Start-Up Air Control is operation of the rear air system. The rear air is used primarily during a High Burn Rate. However, in some instances rear air is desired during normal operation to help with combustion of fuel towards the back of the firebox particularly when burning hardwoods. The rear air is controlled independently from the ACC system. Slide the Start-Up Air Control between the first and third marker as indicated on the label to allow rear air to enter the firebox. **Figure 21.1**.

### 2. Manual Timer Over-Ride

If you need to shut the ACC system off before it shuts itself off after 25 minutes (i.e. overfire situation), reach down to the bottom right rear corner and pull the lever toward you. **Figure 21.2.** 

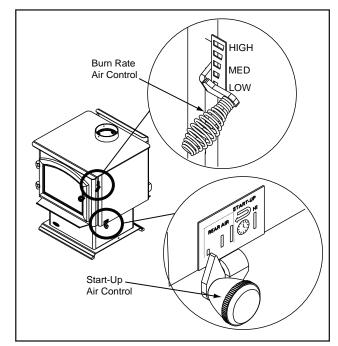
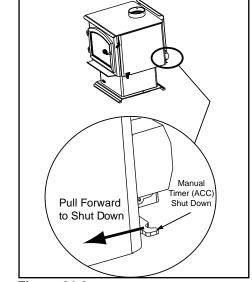


Figure 21.1





# 2. Burn Rate Air Control

This air supply 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 Burn Rate Air Control. There are four settings High, Medium-High, Medium-Low and Low. When the control is raised all the way up it is on the High setting and when pushed all the down it is on the Low setting. **Figure 22.1**.

# F. Burn Rates and Operating Efficiency

This wood heater has a manufacturer-set minimum low burn rate that must not be altered. It is against federal regulations to alter this setting or otherwise operate this wood heater in a manner inconsistent with operating instructions in this manual.

### For maximum operating efficiency

- 1. This appliance has a timer system (ACC) that operates the stove at its maximum efficiency removing any guess work for the homeowner. Follow the instructions below for each burn rate for the Start-Up Air Control and Burn Rate Air Control. **Figure 22.1**.
- 2. Burn dry, well-seasoned wood.

## Burn Rates

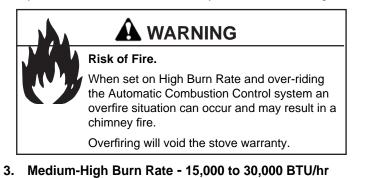
## 1. Starting a Fire and Reloading

Open both controls fully by raising the Burn Rate Air Control all the way up until it stops and slide the Start-up Air Control back until it stops. After loading the stove with wood and starting the fire, set both controls to the desired setting by following the burn rate instructions below.

**NOTE:** These are approximate settings, and will vary with type of wood or chimney draft. Due to altitude and other environmental circumstances, this operational information is a guideline only.

## 2. High Burn Rate - Maximum Heat

Raise the Burn Rate Air Control all the way up until it stops (top marker) to a fully open position. Slide the Start-Up Air Control all the way back until it stops (HI marker) and leave it there. This setting over-rides the timer system (ACC) so you must monitor the fire closely while in this setting.



Raise the Burn Rate Air Control all the way up until it stops (top marker) to a fully open position. Slide the

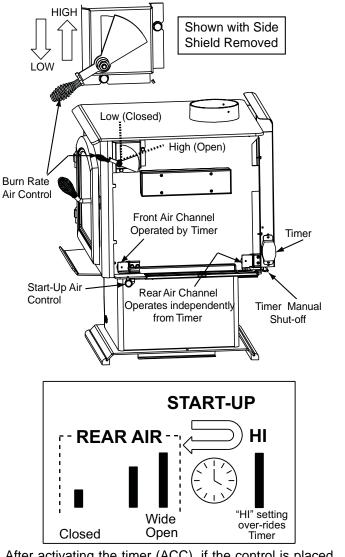
Start-Up Air Control all the way back until it stops (HI marker) and then pull forward until it stops. This activates the timer system (ACC).

### 4. Medium-Low Burn Rate - 10,000 to 15,000 BTU/hr

Raise the Burn Rate Air Control up to the bottom of the middle marker and stop. Slide the Start-Up Air Control all the way back until it stops (HI marker) and then pull forward until it stops. This activates the timer system (ACC).

### 5. Low Burn Rate - Below 10,000 BTU/hr

Leave the Burn Rate Air Control at the bottom marker. Slide the Start-Up Air Control all the way back until it stops (HI marker) and then pull forward until it stops. This activates the timer system (ACC).



After activating the timer (ACC), if the control is placed within the rear air section on the label it will allow rear air to enter the firebox. This will not interfere with the timer gradually closing the front air channel in 25 minutes. If control is set on "HI" it over-rides the timer (ACC).

Figure 22.1

**NOTE:** Operate appliance on High Burn 15 minutes a day to help keep flue/chimney clean.

# G. Building A Fire

Before lighting your first fire in the stove:

- Confirm the baffle is correctly positioned. It should be even with the front tube and resting on all tubes. Figure 23.1.
- 2. Remove all labels from glass.

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. Open the Burn Rate Air and Start-Up Air Controls fully.
- 2. Place several wads of crushed paper on the firebox floor. Heating the flue with slightly crumpled newspaper before adding kindling keeps smoke to a minimum.
- 3. Lay small dry sticks of kindling on top of the paper.
- 4. Make sure that no matches or other combustibles are in the immediate area of the appliance. Be sure the room is adequately ventilated and the flue unobstructed.
- 5. Light the paper in the appliance. NEVER light or rekindle fire with kerosene, gasoline, or charcoal lighter fluid; the results can be fatal.
- 6. Once the kindling is burning quickly, add several fulllength 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. Set the Burn Rate Air Control and activate the timer system (ACC).
- 8. When ready to reload, It is best to fully open both the Burn Rate Air and Start-up Air Controls *before reload-ing*. 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. Large logs burn slowly, holding a fire longer. Small logs burn fast and hot, giving quick heat.
- 9. As long as there are hot coals, repeating steps 6 through 8 will maintain a continuous fire throughout the season.

## NOTE:

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

It will adversely affect emissions.

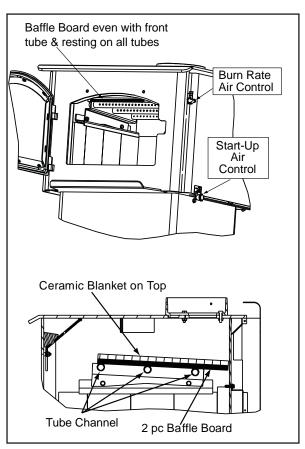


Figure 23.1





- Do NOT burn wet or green wood.
- Store wood in dry location.
- Stack wood so both ends are exposed to air. Wet, unseasoned wood can cause accumulation of creosote.

# H. Correct Baffle & Blanket Placement

 Image: 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.

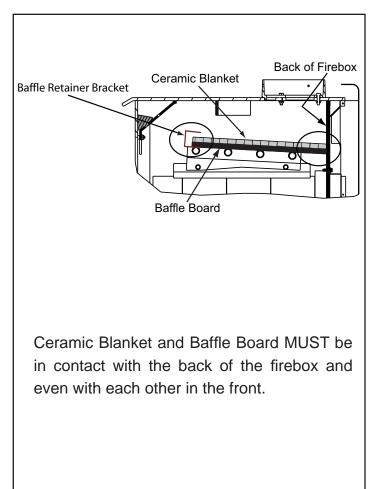
 Not doing so could result in:

 • Reduced efficiency

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

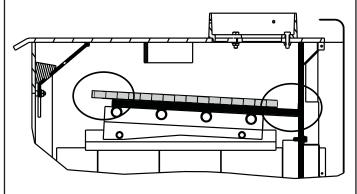
Ensure correct baffle placement and replace baffle components if damaged or missing.

# **CORRECT POSITION**

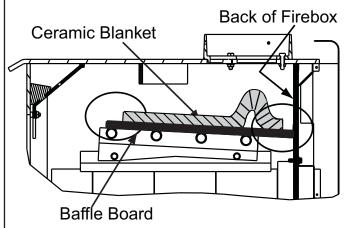


# **INCORRECT POSITIONS**

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 24.2

Page 24

# I. Blower Operating Instructions

**NOTE:** If your Quadra-Fire wood stove is equipped with an optional blower, you should follow these guidelines:

### 1. Initial (cold) start-up and all Burn Settings

The blower can be plugged in and turned on right away. The blower fan is turned on and off by a snap disc. When your stove has reached a certain temperature the blower will turn on and when your stove has cooled down to a certain temperature it will turn off.

**NOTE:** The blower can still be left on at all burn rates even if you have deactivated the snap disc with the manual over-ride knob. **See page 13.** 

2. The blower is equipped with a speed control. Adjust the fan speed by turning the speed control clockwise to "Low" or counterclockwise to "High".

### 3. Snap Disc Location

If you find the blower coming on and off at undesirable temperatures, relocate the snap disc to another location in the designated zone on the back of the appliance. **Figure 25.1.** There is a manual over-ride switch to deactivate the snap disc, if necessary. **See page 13.** 

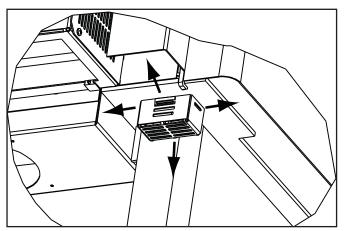
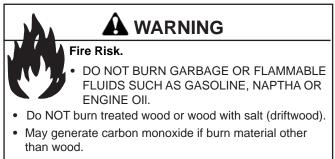


Figure 25.1

# J. Opacity (Smoke)

This is the measure of how cleanly your appliance is burning. Opacity is measured in percent; 100% opacity is when an object is totally obscured by the smoke column from a chimney, and 0% opacity means that no smoke column can be seen. As you become familiar with your appliance, you should periodically check the opacity. This will allow you to know how to burn as nearly smoke-free as possible (goal of 0% opacity).



May result in illness or possible death.



# 

### 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.

# K. 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 o the appliance.	
Whirring sound	If the optional blower has been installed, the blower produces a whirring sound which increases in volume as the speed is increased.	

# CAUTION

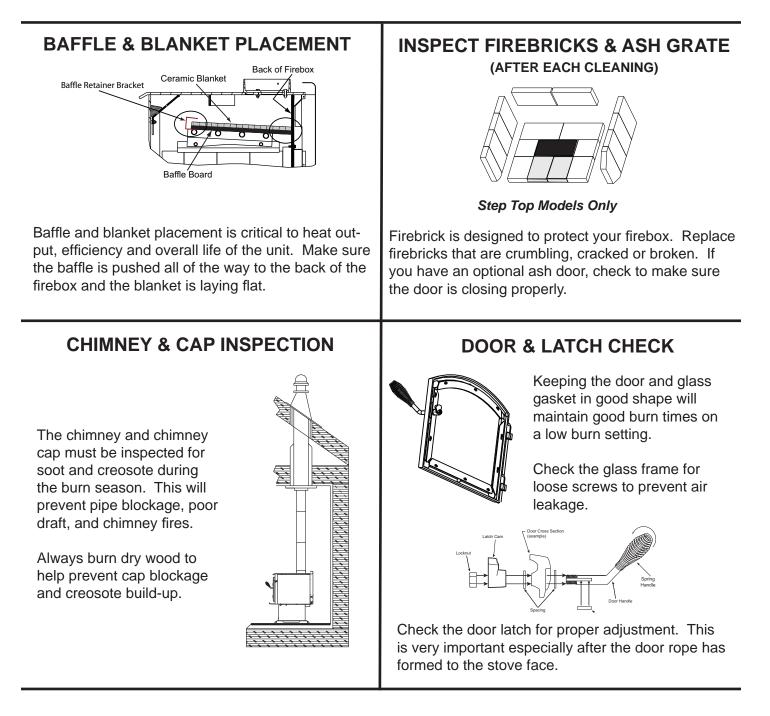
Odors and vapors released during initial operation.

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

Odors may be irritating to sensitive individuals.



# A. Quick Reference Maintenance Guide



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.

# **B. 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. (measured from bottom of appliance)
- By: Certified Chimney Sweep

Remove all ash from the firebox and extinguish all hot embers before disposal. Allow the appliance to cool completely. Disconnect flue pipe or remove baffle and ceramic blanket from appliance before cleaning chimney. Otherwise residue can pile up on top of the baffle and ceramic blanket and the appliance will not work properly. (See Baffle Removal on **page 31**). 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.

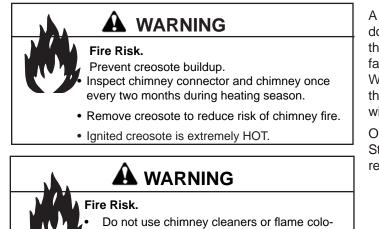
It is also recommended that before each heating season the entire system be professionally inspected, cleaned and repaired if necessary.

**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.

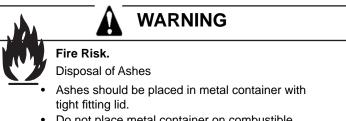


rants in your appliance. Will corrode pipe.

# 2. Disposal of Ashes

- **Frequency:** When ash is within 1-3/4 in. (44mm) of firebox lip
- By: Homeowner

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



- Do not place metal container on combustible surface.
- Ashes should be retained in closed container until all cinders have thoroughly cooled.

# 3. Glass Cleaning

- Frequency: As desired
- By: Homeowner

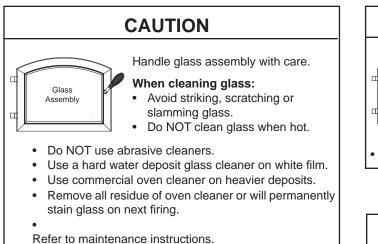
Clean glass with a non-abrasive glass cleaner. Abrasive cleaners may scratch and cause glass to crack. If the deposits on the glass are not very heavy, normal glass cleaners work well. Heavier deposits may be removed by using a damp cloth dipped in wood ashes or by using a commercially available oven 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.

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.

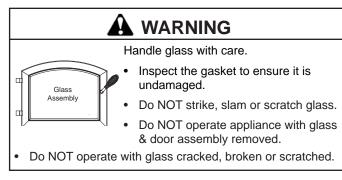
Operating the appliance with the Burn Rate Air Control and Start-Up Air Control all the way open for 15-20 minutes should remove the built up coating.



# C. Glass Replacement

- 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. Protect your hands and wear gloves to prevent injury.
- 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 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. <u>DO NOT OVERTIGHTEN.</u>
- 9. Replace the door on the appliance.

Quadra-Fire stoves are equipped with ceramic super heatresistant 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. Firebrick Replacement

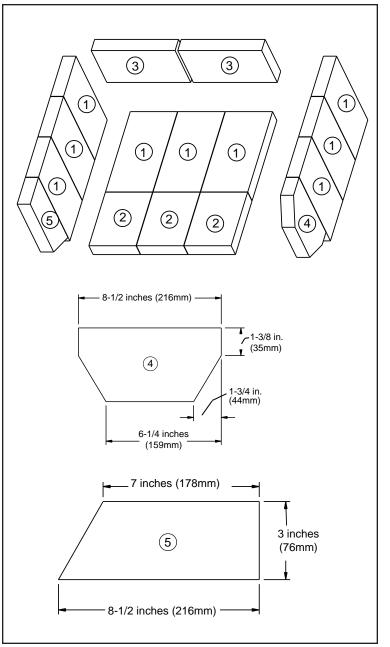
Replace the firebrick if they become crumbly and/or if there is a 1/4 inch (6.35mm) gap between the bricks.

Inspect the firebrick after each ash removal.

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. After the coals have completely cooled, remove all old brick and ash from unit and vacuum firebox.
- 2. Remove new brick set from box and lay out to diagram 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.

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.





No.	Brick Size	Qty
1	9 x 4-1/2 x 1-1/4	9
2	6 x 4-1/2	3
3	8 x 4-1/2 x 1-1/4	2
4	Brick with angle (see drawing)	1
5	Brick with angle (see drawing)	1

# E. Baffle Removal

- 1. Remove all ash from the firebox, and extinguish all hot embers before disposal into a metal container.
- 2. The baffle board has 2 pieces. With the ceramic blanket still in place, slide one baffle piece over the top of other one and pull out top piece through the door opening and then remove bottom baffle piece. **Figure 31.1.**
- 3. Remove the ceramic blanket.
- 4. Re-install the baffle pieces one piece at a time. Be sure the baffle boards are even with the front manifold tube and is resting on all tubes. Figure 23.1 on page 23. See Also Correct Blanket & Baffle Position on page 24.
- To re-install the ceramic blanket, it is easier to fold it in half first. Figure 31.2. Place on top of baffle board, open up and flatten and smooth out the blanket. Re-check the baffle board for correct positioning. Figure 23.1 on page 23 and page 24.



Figure 31.1 - Baffle



Figure 31.2 - Ceramic Blanket

# F. Snap Disc Replacement

- 1. Locate the snap disc bracket assembly at the bottom left rear corner of the stove. **Figure 31. 3.**
- 2. A magnet holds the bracket to the stove. Pull the bracket down away from the stove to expose the snap disc.
- 3. Pull the snap disc and spade connectors up and out of bracket as shown in **Figure 31.4.**
- 4. Using a Phillips head screw driver, remove the 2 screws from the snap disc and then remove the snap disc from the spade connectors. Replace with new snap disc and re-connect to spade connectors.
- 5. Push the snap disc and spade connectors back inside bracket and re-attach the bracket to the stove.

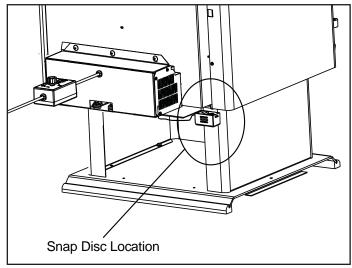


Figure 31.3

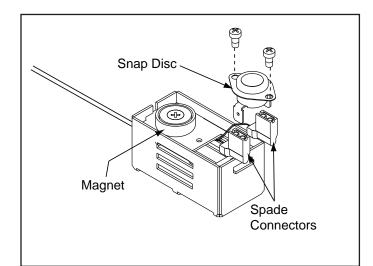


Figure 31.4

# G. Tube Channel Assembly Replacement

# **Removing Tube Channel Assembly**

- 1. Remove the right side shield by removing 2 screws in the back using a Phillips head screw driver.
- 2. Remove 4 screws from channel access cover and remove cover.
- 3. Locate 2 channel nuts inside of chamber and remove using a 7/16 socket wrench. Slide out tube channel assembly.
- **NOTE**: Soak the bolts with penetrating oil for at least 15 minutes before trying to remove them.

## **Replacing Tube Channel Assembly**

- 1. Slide one gasket on each tube first
- 2. Slide the tube channel assembly into side of firebox and insert each tube into the corresponding hole in the tube channel rack starting with the back hole first.
- 3. Make sure tube channel assembly is flush against the side of the stove and secure with channel nuts.
- 4. Re-install channel cover and side shield.

# NOTE: Service Space

In order to replace the tube channel assembly a clearance of 17 inches (432mm) is required on the right side of stove in order to remove the tubes with the stove in place.

If space is not available, the stove will have to be disconnected from the chimney to proceed with the tube replacement.

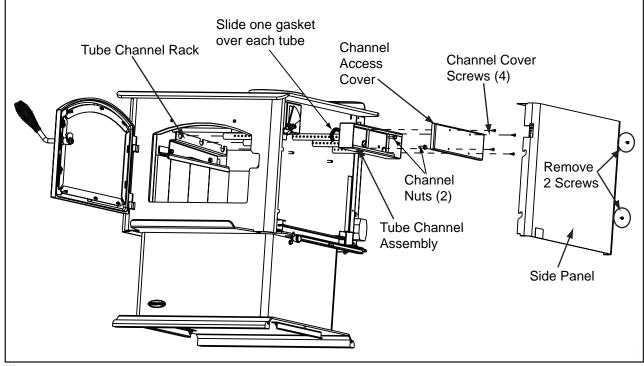


Figure 32.1



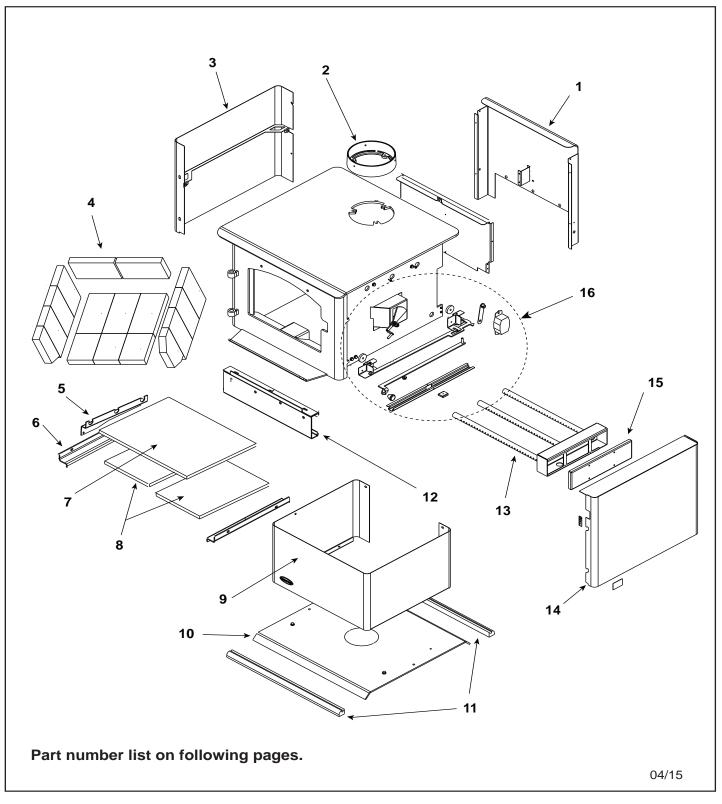
With proper installation, operation, and maintenance your wood stove will provide years of trouble-free service. If you do experience a problem, this troubleshooting guide will assist a qualified service person in the diagnosis of a problem and the corrective action to be taken.

Start Fire Problems	Possible Cause	Solution			
Can't get fire started Excessive smoke or spillage	Not enough kindling/paper or no kindling/paper	Use dry kindling, more paper. Arrange kindling & wood for air movement.			
Burns too slowly Smolders, sizzles	Not enough air for fire to ignite	Check for restricted cap/shroud			
		Open outside air kit (if installed).			
		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).			
	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.			
Fire burns too fast	Extremely dry or soft wood	Mix in hardwood.			
		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 requirements section).			

11

**Reference Materials** 

# A. Exploded Drawings & Service Parts List



# Figure 34.1



# 21M-ACC

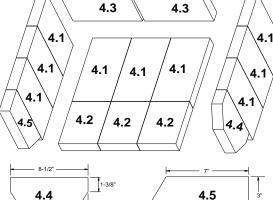
Beginning Manufacturing Date: July 2007 Ending Manufacturing Date: Active

IMPORTANT: THIS IS DATED INFORMATION. When requesting service or replacement parts for your appliance please provide model number and serial number. All parts listed in this manual may be ordered from an authorized dealer.



ITEM	DESCRIPTION	COMMENTS	PART NUMBER			
1	Convection Air Channel - Retain Originial Serial Number		SRV7039-107			
2	Flue Collar		SRV7000-302	Y		
3	Panel Assembly, Side, Left		SRV7039-003			

# #4 Brick Assembly



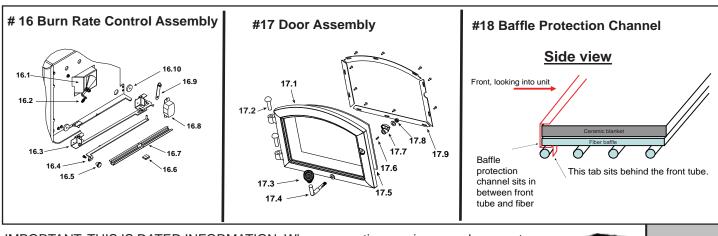
	6-1/4"	8-1/2"		
4	Brick Assembly - Complete Set		SRV7039-007	
4.1	Brick, 9 x 4-1/2 x 1-1/4"	Qty. 9 Req.		
4.2	Brick, 6 x 4-1/2 x 1-1/4"	Qty. 3 Req.		
4.3	Brick, 8 x 4-1/2 x 1-1/4"	Qty. 2 Req.		
4.4	Brick, see diagram	Qty. 1 Req.		
4.5	Brick, see diagram	Qty. 1 Req.		
	Driek Unout	Pkg of 1	832-0550	
	Brick, Uncut	Pkg of 6	832-3040	
5	Tube Support Rack		SRV7039-108	
6	Brick Retainer		7033-149	
7	Ceramic Fiber Blanket, 1/2" Thick		832-3390	Y
8	Baffle Board, 8-1/8 in. W x 13 in. H	Pkg of 2	SRV7039-111	Y
9	Pedestal Riser		7033-207	
10	Pedestal Base		7033-163	
11	Strip, Oak Trim	Pkg of 2	832-0560	
12	Rear Channel Assembly		SRV7039-001	
13	Tube Channel Assembly - Manifold Tubes		SRV7039-004	Y
14	Panel Assembly, Side, Right		SRV7039-002	
15	Tube Channel Top - Access Cover		SRV7039-114	
	Component Pack (Includes Touch-Up Paint, Gold Spring Handles 1/2 In & 1/4 In (1) Each, Trimount Plug, Owners Manual, Warranty Card)		7039-011	

Additional service part numbers appear on following page.

Quadra-Fire **Service Parts** 

# 21M-ACC

Beginning Manufacturing Date: July 2007 Ending Manufacturing Date: Active



IMPORTANT: THIS IS DATED INFORMATION. When requesting service or replacement parts for your appliance please provide model number and serial number. All parts listed in this manual may be ordered from an authorized dealer.



	001	
at	De	po

1 1115 11					
ITEM	DESCRIPTION	COMMENTS	PART NUMBER	1	
16.1	Burn Rate Control Assembly		7039-016		
	Spring Handle, 1/4" Nickel	Dec. 011 00700 40000	250-8340	Y	
16.2	Spring Handle, 1/4" Gold	Pre SN 0070040260	832-0630	Y	
	Spring Handle, 1/4" Black	Post SN 0070040260	SRV7000-614	Y	
16.3	Timer Air Control Assembly		SRV7039-015	Y	
	Rear Air Door Assembly		7037-013	Y	
16.4	Rear Air Control Arm Assembly		SRV7039-006		
16.5	Start-Up Control Knob		7000-343		
16.6	Latch, Magnet - for Air Control		229-0631		
16.7	Air Control Rod Guide		7033-210		
16.8	Timer (Only) Replacement Assembly		SRV480-1940	Y	
16.9	Timer Arm Assembly		7033-034	Y	
16.10	Door Gasket - Front & Rear Air Timer Doors		7033-282	Y	
17.1	Door Assembly	Black	SRV7039-008		
		Gold	832-0250		
17.2	Hinge Pins, 1/2"	Nickel	430-5320		
		Black	7000-606/2		
	pring Handle, 1/2", Nickel		250-8330	Y	
17.3	Spring Handle, 1/2", Gold	Pre SN 0070040260	832-0620	Y	
	Spring Handle, 1/2", Black	Post SN 0070040260	SRV7000-613	Y	
17.4	Door Handle Only		430-1131		
17.5	Glass Assembly - 14-1/8 in. W x 9-13/16 in. H		7000-013	Y	
17.6	Key, Cam Latch		430-1151		
17.7	Cam Latch		430-1141		
17.8	Nut, Locking Door Handle	Pkg of 24	226-0100/24	Y	
17.9	Frame, Glass, Top		GL-FRM-21M		
18	Baffle Protection Channel		SRV7039-144	Y	

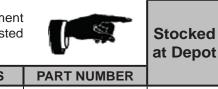
Additional service part numbers appear on following page.



# 21M-ACC

Beginning Manufacturing Date: July 2007 Ending Manufacturing Date: Active

IMPORTANT: THIS IS DATED INFORMATION. When requesting service or replacement parts for your appliance please provide model number and serial number. All parts listed in this manual may be ordered from an authorized dealer.



ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
	Component Pack (Includes Gold Spring Handles (1) 1/2" & (2) 1/4", (2) Gold Hinge Pins, Quadra-Fire Logo	For Black & Gold Doors	436-5350	
	Gasket, Glass Tape	5 FT	832-0460	Y
	Rope, Door, 3/4" X 84"	7 Ft	832-1680	Y
	Paint Touch-Up		812-0910	
	Plug, Trimount, .250"	Pkg of 24	229-0880/24	Y
	Door Handle Assembly		832-0540	Y
		Gold	200-3180	
	Logo, Quadra-Fire	Nickel	200-3240	
	Outside Air Cover Plate Assembly		SRV7033-041	Y
	Label, Burn Rate Air Control		7033-160	
	Label, Start-Up Air Control		7033-166	
	ACCESSORIE	S		
	Blower Assembly		BK-ACC	
	Blower Control Box W/Switch		SRV7000-194	Y
	Blower, Convection		812-4900	Y
	Component Pack		7033-051	
	Snap Disc Bracket Assembly		7033-036	
	Snap Disc, # 1, Convection Blower		SRV230-0470	Y
	Wire Harness (Blower)		7033-262	
	Gasket, Manifold	Pkg of 4	7038-168/4	Y
	Outside Air Kit, Floor & Rear		OAK-ACC	
	Outside Air Collar Assembly		7033-039	
	Outside Air Shield		33271	Y
	Upgrade, Door, Nickel - Handles, Hinge Pins & Logo		UK-DRNL	
	Hinge Pins, 1/2"		430-5320	
	Logo, Quadra-Fire		200-3240	
	Spring Handle, 1/2"		250-8330	Y
	Spring Handle, 1/4"		250-8340	Y
	FASTENERS	•		
	Avk Rivnut Repair Kit - 1/4-20 & 3/8-16 Rivnut Tools		RIVNUT-REPAIR	Y
	Bolt, Hex Head, 1/4-20 X 1	Pkg of 10	25221A/10	Y
	Nut, Ser Flange Small 1/4-20	Pkg of 24	226-0130/24	Y
	Screw, Flat Head Philips 8-32 X 1/2	Pkg of 10	832-0860	Y
	Screw, Sheet Metal #8 X 1/2 S-Grip	Pkg of 40	12460/40	Y
	Washer, 1/4 Sae	Pkg of 24	28758/24	Y
	Washer, Sae, 3/8	Pkg of 3	832-0990	Y

# **B. 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 deale

# WARRANTY COVERAGE:

HHT warrants to the original owner of the HHT appliance at the site of installation, and to any transferee taking ownersh 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 warrant is subject to conditions, exclusions and limitations as described below.

## WARRANTY PERIOD:

Warranty coverage begins on the date of original purchase. 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 f 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.

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

# 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, light bulbs, batteries 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.



# **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, visit our web site at <u>www.quadrafire.com</u>

# 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 heating appliance.							
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) 4593510, 4686807, 4766876, 4793322, 4811534, 5000162, 5016609, 5076254, 5113843, 5191877, 5218953, 5263471, 5328356, 5341794, 5347983, 5429495, 5452708, 5542407, 5601073, 5613487, 5647340, 5688568, 5762062, 5775408, 5890485, 5931661, 5941237, 5947112, 5996575, 6006743, 6019099, 6048195, 6053165, 6145502, 6170481, 6237588, 6296474, 6374822, 6413079, 6439226, 6484712, 6543698, 6550687, 6601579, 6672860, 6688302B2, 6715724B2, 6729551, 6736133, 6748940, 6748942, 6769426, 6774802, 6796302, 6840261, 6848441, 6863064, 6866205, 6869278, 6875012, 6880275, 6908039, 6919884, D320652, D445174, D462436; (Canada) 1297749, 2195264, 2225408, 2313972; (Australia) 780250, 780403, 1418504 or other U.S. and foreign patents pending.

