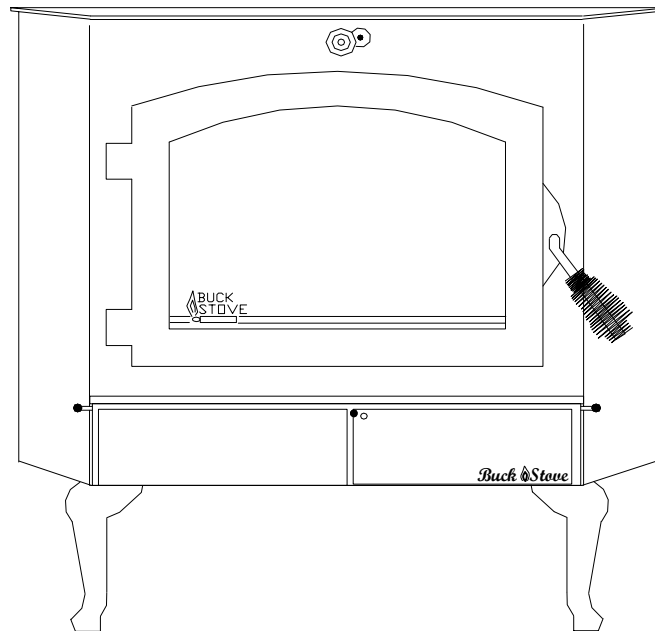


MODEL 80 CATALYTIC WOOD STOVE



FIREPLACE INSERT & FREESTANDING

FEATURES

PREPARATIONS INSTALLATION

OPERATION MAINTENANCE SAFETY

SAFETY NOTICE ■

IF THIS HEATER IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW THE INSTALLATION INSTRUCTIONS. CONTACT THE AUTHORITY HAVE JURISDICTION (SUCH AS MUNICIPAL BUILDING DEPARTMENT, FIRE DEPARTMENT, FIRE PREVENTION BUREAU, etc.) CONSULT BEFORE INSTALLATION TO DETERMINE THE NEED TO OBTAIN A PERMIT. KEEP THESE INSTRUCTIONS FOR FUTURE USE.

TESTED AND LISTED BY:



ITS/WARNOCK HERSEY, MIDDLETON, WI

“MEETS PHASE II EPA STANDARDS”

MANUFACTURED BY NEW BUCK CORPORATION

200 ETHAN ALLEN DRIVE

PO BOX 69

SPRUCE PINE, N.C. 28777

www.buckstove.com

Revised January 2013

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SECTION I

The New Buck Corporation room heater Model 80 is one of the safest and most efficient heating systems available when installed and operated as specified in these instructions and as stipulated on the operation and installation labels affixed to the unit. The unit is designed to burn wood fuel only.

Please read this entire manual before you install and use your new room heater. Failure to follow instructions may result in property damage, bodily injury or even death.

Throughout the manual, you will see this  symbol. This indicates areas of importance regarding safety. Please make a special note of these areas.

Install and use only in accordance with the manufacturer's installation and operating instructions. Do not connect this unit to a chimney flue serving another appliance. This unit is not designed for installation into a Mobile Home.

ROOM HEATER FEATURES

Before attempting to install or operate your heater, it is a good idea to familiarize yourself with the features and operating controls of the unit.

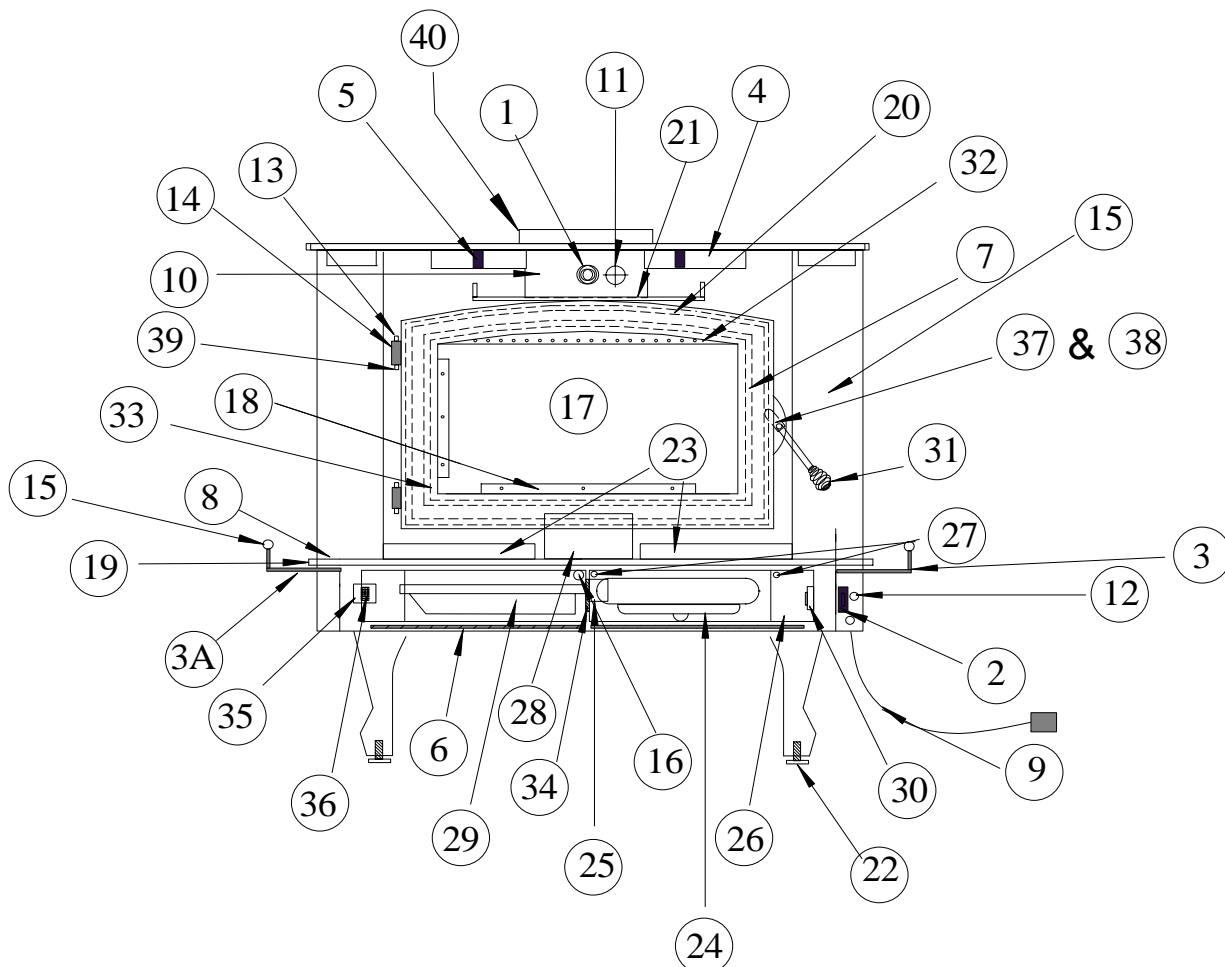


WARNING: Model 80 heater was not designed for fire grates.

NOTE: “Do not use grate or elevate fire. Build wood fire directly on inner bottom of fire box.”

1. **Bypass Damper:** The bypass damper control is located in top center of heater front just under top. It is operated by pushing or pulling the rod. The damper is fully open when the handle is pulled out and fully closed when it is pushed in. The damper must be **open** before the door is opened.
2. **Blower Control:** The blower control (Rheostat) is located at bottom under hearth. This switch controls the variable speed blower. For blower to operate turn switch from “OFF” position to either “LOW”, “MEDIUM” or “HIGH”. When stove temperature reaches 110° blower will automatically come on.
3. **Primary Air Controls:** The primary air intake draft controls are located at the left and right side of the hearth. They are operated by moving in and out to control the amount of primary air entering the firebox.
4. **Warm Air Outlets:** Provides heat extraction from the top of the firebox.
5. **Baffles:** Directs air flow around the unit for maximum heat transfer.
6. **Air Inlet:** Allows cool air near floor to be circulated through blower and back into warm air chamber of heater.
7. **Stand:** Elevates heater above the floor for safety and a neat appearance.
8. **Door:** Provides an “airtight” feature. The door allows a much higher burning efficiency than can be obtained with an open firebox.
9. **Hearth Extension:** Offers protection from spilled ashes and cinders.
10. **Power Cord:** Provides electrical power to operate the blower.
11. **Chimney Connector:** Used to connect unit to chimney or direct connect kit.
12. **Catalysts:** Enables the unit to burn cleanly and efficiently.
13. **Catalyst Monitor:** Hole is located to the right of the damper rod on the front. Remove plug and insert probe provided by manufacturer.
14. **Cover Door:** Conceals blower, blower controls and ash pan.
15. **Airway:** Primary air is directed in such a way as to provide a “sweeping” air wash over the glass to assist in keeping it clean.
16. **Ash Pan:** Provides for easy ash removal.

Model 80 Wood Stove



- | | |
|---|---------------------------------------|
| 1. By Pass Damper & Brass Spring Handle | 21. Lower Heat Shield |
| 2. Blower Control (Rheostat) | 22. Leveling Screws |
| 3. Primary Air Control (Right Side) | 23. Bottom Firebrick |
| 3a. Primary Air Control (Left Side) | 24. Motor |
| 4. Warm Air Outlets | 25. Motor Mount Bracket |
| 5. Baffles (Interior of Stove) | 26. Cover Door |
| 6. Air Inlet | 27. Cover Door Screws |
| 7. Door | 28. Shot Gun Air Box |
| 8. Hearth Extension | 29. Ash Pan |
| 9. Power Cord | 30. Disc Thermostat |
| 10. Catalyst (interior firebox) | 31. Door Handle & Brass Spring Handle |
| 11. Catalyst Probe | 32. Air Wash Screen |
| 12. Automatic / Off / Man. Switch | 33. Glass Gasket |
| 13. Brass Cap | 34. Cover Door Hinge |
| 14. Hinge Block | 35. Magnet Holder |
| 15. Air Control Brass Knobs | 36. Cover Door Magnet |
| 16. Shot Gun Air Control | 37. Door Latch |
| 17. Door Glass | 38. Door Latch Screw |
| 18. Glass Clips | 39. Hinge Pins |
| 19. Hearth Brass | 40. 8" Flue Exit |
| 20. Door Gasket | |

EPA COMPLIANCE STATUS

This manual describes the installation and operation of the New Buck Corporation, Model 80 wood heater. This heater meet the U.S. Environmental Protection Agency's Emission limits for wood heaters sold after July 1, 1992. Under specific test conditions this heater has been shown to deliver heat at rates ranging from approximately 9,000 to 40,300 BTU/hr for the Model 80.

The Model 80 catalytic solid fuel (wood) burning combination room heater/fireplace stove manufactured by New Buck Corporation complies with :UL 1482 (1996), :UL 1482 (2010) for residential freestanding and masonry fireplace insert installations when constructed and installed in accordance with **ITS** approved documentation.

CATALYST EQUIPPED

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

CATALYST WARRANTY

The combustor supplied with this heater is a 3 cell catalyst with an overall dimension of 2" x 6" x 7". Consult the catalytic combustor warranty also supplied with this heater. All warranty claims should be addressed to:

Applied Ceramics
Customer Service Department
P.O. Box 29664
Atlanta, GA 30359
770-448-6888

See enclosed catalyst warranty for instructions. New Buck Corporation does not handle catalyst replacements. Customer can order direct form Applied Ceramics.

PROPER FUEL SELECTION

This heater is designed to burn natural wood only. Higher efficiencies and lower emissions generally result when burning air dried natural seasoned hardwoods, as compared to softwoods or to green or freshly cut hardwoods.

DO NOT BURN:

Treated Wood	Garbage	Solvents	Trash
Coal	Cardboard	Colored Paper	

Burning treated wood, garbage, solvents, colored paper or trash may result in release of toxic fumes and may poison or render the catalytic combustor ineffective.

Burning coal, cardboard or loose paper can produce soot or large flakes of char or fly ash that can coat the combustor, causing smoke spillage into room and rendering the combustor ineffective.

ACHIEVING CATALYTIC LIGHT-OFF

The temperature in the stove and the gases entering the combustor must be raised to between 500°F to 700°F for catalytic activity to be initiated. This can be determined with the use of a catalyst monitor (TM-20). During the start up of a cold stove a medium to high firing rate must be maintained for about 20 minutes. This ensures that the stove, catalyst, and fuel are all stabilized at proper operating temperatures. Even though it is possible to have gas temperatures reach 600°F within two to three minutes after a fire is started, if the fire is allowed to die down immediately it may go out or the combustor may stop working. If this happens open the damper to raise the temperature to activate the catalyst. Once the combustor starts working, heat generated in it by burning the smoke will keep it working.

ACHIEVING CATALYTIC LIGHT-OFF WHEN REFUELING

During the refueling and rekindling of a cool fire or a fire that has burned down to the charcoal phase, operate the stove at a medium to high firing rate for about 15 minutes to ensure that the catalyst reaches approximately 600° F.

CATALYST MONITORING

It is important to periodically monitor the operation of the catalytic combustor to ensure that it is functioning properly and to determine when it needs to be replaced. A non-functioning combustor will result in a loss of heating efficiency and an increase in creosote and emissions.

This catalytic heater is equipped with the means to install a temperature probe to monitor catalyst operation. Properly functioning combustors typically maintain temperatures in excess of 1000° F. If catalyst temperatures are not in excess of 500° F refer to Catalyst Troubleshooting Section of this owner's manual.



CAUTION AGAINST OVER-FIRING

Do not over-fire this heater.

Attempts to achieve heat output rates that exceed heater design specifications can result in permanent damage to the heater and to the catalytic combustor.

ASH REMOVAL

Whenever ashes build up in the firebox and when fire has burned down and cooled, remove excess ashes. Leave an ash bed approximately 1 inch deep on firebox bottom to help maintain a hot charcoal bed. To remove ashes, ash dump is located at the left inner bottom. By lifting the dump door, place ashes through dump opening. The ashes fall directly into ash pan. The ash pan is located at the left side under the hearth behind cover door.

NOTE: Be sure to turn the room air blower off before removing ashes. Open cover door and slide ash pan out.

NOTE: Fueling and ash removal door (s) must remain closed when in operation.

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, away from all combustible materials, pending final disposal. The ashes should be retained in the closed container until all cinders have thoroughly cooled.

NOTE: Be sure to turn room air blower back on when job is completed.

NOTE: The room heater is not to be connected to any air distribution duct.

CREOSOTE - FORMATION AND NEED FOR REMOVAL

When wood is burned slowly, it produces tar and other organic vapor, which combined with expelled moisture forms creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited this creosote makes an extremely hot fire.

SECTION II

MASONRY INSERT INSTALLATION INSTALLATION OPTIONS

This unit (appliance) may be installed into an all masonry fireplace, built in accordance with the Uniform Building Code and the National Fire Protection Association (NFPA 211).

NOTE: Check with local building officials for any permits required for installation of this stove and notify your insurance company before proceeding with installation.

OPTION A. See Below

At a minimum, a **starter pipe** reaching from the stove flue exit to the base of the existing code approved masonry chimney (flue-liner) and an airtight face seal.

OPTION B. See Page 8.

Direct connection: In accordance with **NFPA-211-9-4.5, Connection to Masonry Fireplaces.** A solid fuel-burning appliance such as a stove or insert shall be permitted to use a masonry fireplace flue where the following conditions are met:

Exception: Listed fireplace accessories shall be permitted to use a masonry fireplace flue.

1. There is a connector that extends from the appliance to the flue liner.
2. The cross-sectional area of the flue is no more than three times the cross-sectional area of the flue collar of the appliance.
3. If the appliance vents directly through the chimney wall above the smoke chamber, there shall be a noncombustible seal below the entry point of the connector.
4. The installation shall be such that the chimney system can be inspected and cleaned.
5. Means shall be provided to prevent dilution of combustible products in the chimney flue with air from the habitable space.

OPTION C. See Page 8.

It may be necessary to **positive connect** this unit to enhance the performance, if any of the following conditions exists:

- | | | |
|-----------------------------|-----------------|---|
| 1. Poor Drawing Flue | 3. Double Flues | 5. Stone Front Fireplace/ or damaged flue liner |
| 2. Oversized Flue (17" x 7) | 4. Ash Dump | 6. Chimney that does not exceed 12' |

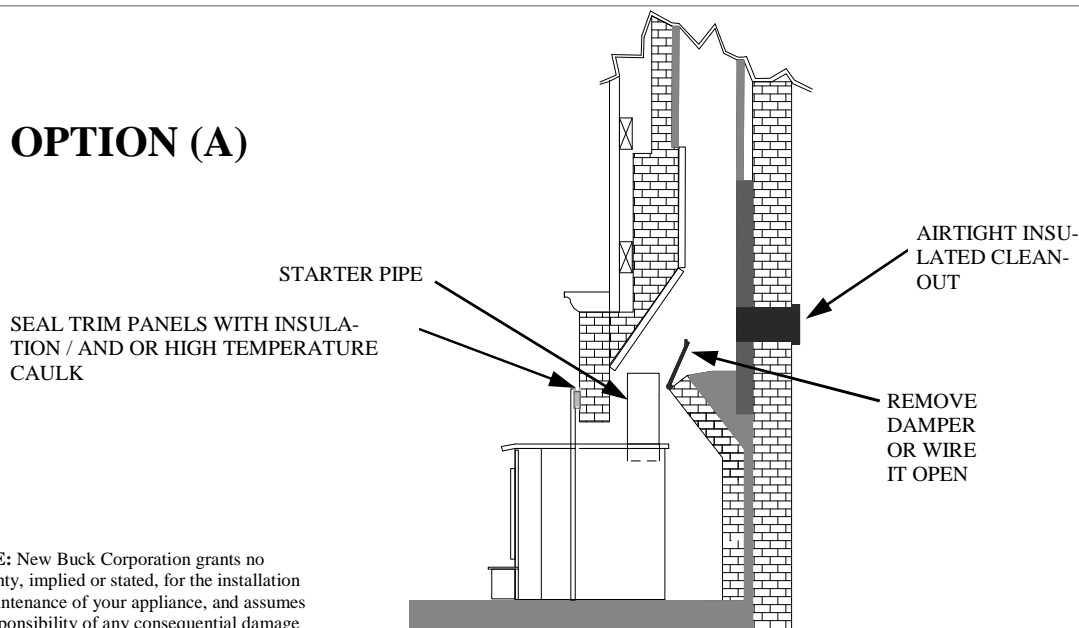
Check with your dealer if any of the above conditions exist, before installing your stove. Proper installation is critical to the performance of the Model 80.

Use Fireplace Kit PAFP80 for installation. An optional oversized fireplace kit is available for larger fireplaces. Check with dealer.

SAFETY NOTICE

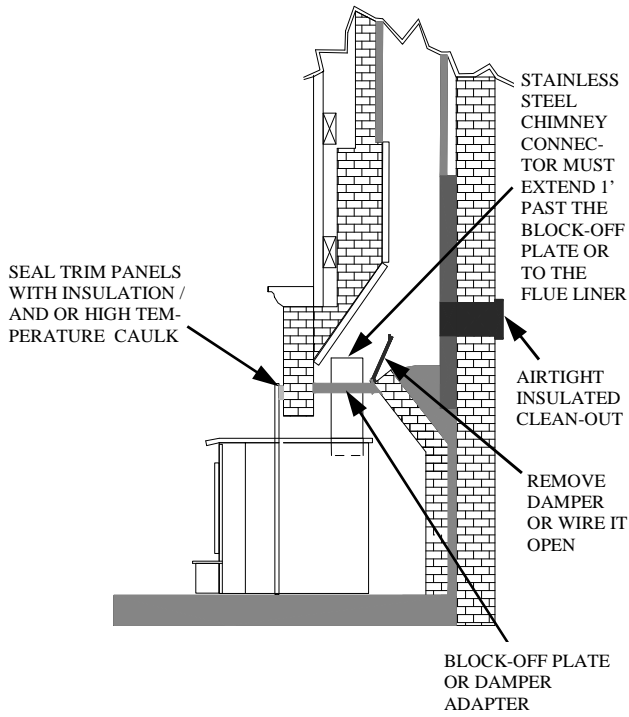
If this appliance is not properly installed, a house fire may result. For your safety, follow the installation directions. Contact local building or fire officials about restrictions and installation inspection requirements in your area.

OPTION (A)



OPTION (B)

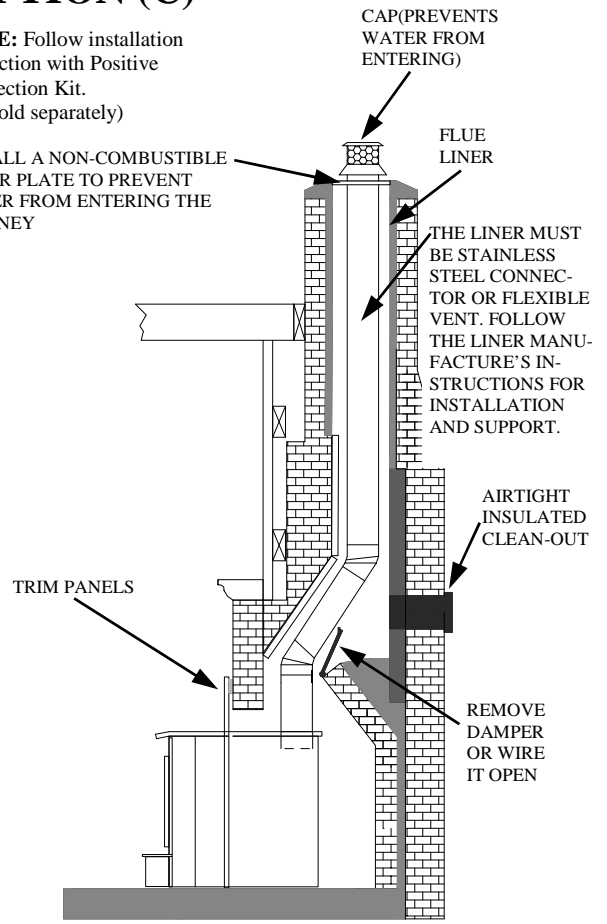
NOTE: Follow installation instruction with Direct Connection Kit. (Kit sold separately)



OPTION (C)

NOTE: Follow installation instruction with Positive Connection Kit. (Kit sold separately)

INSTALL A NON-COMBUSTIBLE COVER PLATE TO PREVENT WATER FROM ENTERING THE CHIMNEY



INSTALLATION (Fireplace Insert)

Minimum Clearances to Combustible Materials (in inches)

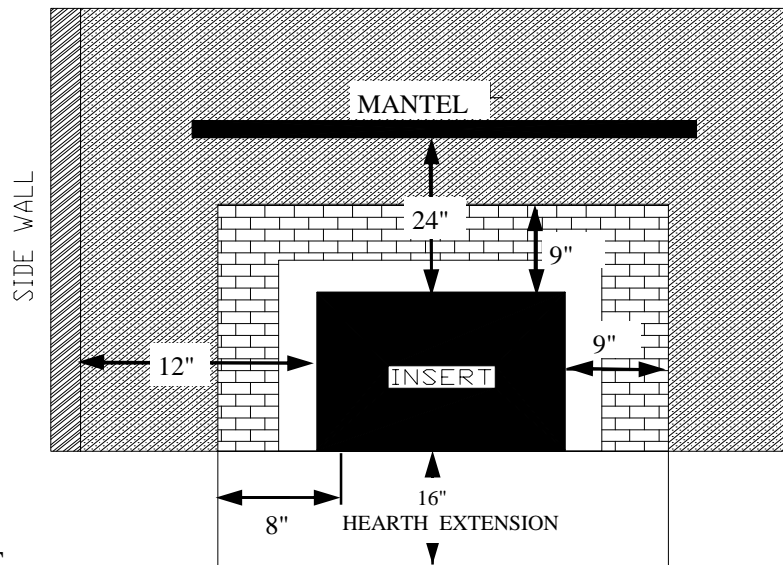


FIGURE 1
FIREPLACE INSERT

MINIMUM CLEARANCES:

The Model 80 Bay Fireplace Insert is intended for installation in accordance with standard for chimneys, fireplaces, vents and solid-fuel burning appliances. **NFPA-211** Code: **NOTE**-This model is not intended for installation into Zero Clearance or pre-fabricated fireplace.

1. The hearth must be of masonry construction and must extend a minimum of 16" in front of the firebox opening and a minimum of 8" to either side of firebox opening.
2. Floor protector must be 3/8" minimum thickness non-combustible material or equivalent.
3. If your fireplace has wood trim above it, the wood trim must be at least 9" above top of the unit and may be a maximum of 1/2" thick.
4. If your fireplace has a wood mantel, mantel or mantel supports must be located at a height of 24" above top of stove.

REQUIRED FIREPLACE DIMENSIONS

Minimum fireplace dimensions:

	Height		Width		Depth
	Min.	Max.	Min.	Max.	Min.
Model 80	23 1/2"	32 1/2"	29"	46"	15 1/2"

POSSIBLE TOOLS NEEDED FOR INSTALLATION

If you decide to install your own stove, there are several hand tools you may need to do the job. If you do not already have them, they are readily available at most hardware stores.

Caulking gun

Large adjustable wrench (may not be needed)

Drop cloths or newspapers

Vacuum cleaner or whisk broom

Flashlight

1 tube of RTV silicone, Code 103 or 106, or high temperature rubber cement rated between 450° F- 600° F.

7/32" drill bit and drill

Socket/Ratchet Set

Insulation (Provided in Trim Kit package)

INSTALLATION PREPARATION

Fireplace:

1. Locate furniture and other materials away from the front of fireplace to allow free access to fireplace.
2. Cover hearth and adjacent floor areas with drop cloths to protect from soiling or marring surface.
3. Remove existing fireplace damper plate.
4. Thoroughly clean fireplace of ashes and soot.
5. Have your existing chimney inspected before inserting this unit. Some chimneys must be relined or replaced before they are safe to use.
6. Check chimney and smoke chamber for excessive buildups of creosote or soot. Also, check for obstructions, such as bird's nests. If chimney is excessively dirty, clean it or have someone clean it professionally **BEFORE** installing or using the room heater.
7. If fireplace has an ash dump or outside air provision, these must be sealed off with metal or tightly packed non-combustible insulation to prevent cold air from entering fireplace chamber.

Heater:

1. Inspect unit for any obvious physical damage.
2. Check primary air draft controls to ensure that they slide freely.
3. Check operation of the damper control to ensure it will open and close properly.
4. Check Manual/Automatic Switch to ensure that motor is working. *Place switch in "MANUAL" position. (Plug in stove.) You cannot check motor in the "AUTOMATIC" position, unless a heat gun is used to heat internal thermostat.

POSITIONING HEATER

When positioning the heater, the following conditions **MUST** be met! (See Figure 2).

1. The front of the damper opening must be positioned **BEHIND** the rear edge of the lintel to ensure proper draft. (See Figure 2).
2. Center the heater in the fireplace opening.

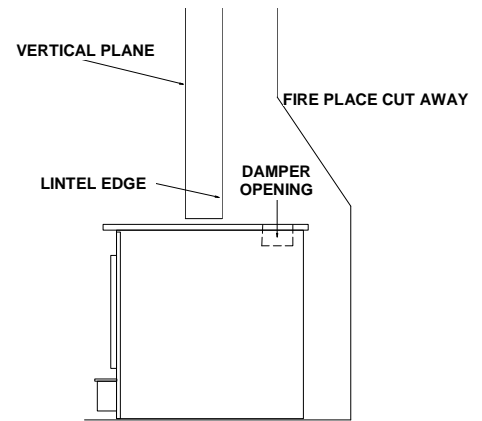


FIGURE 2 POSITIONING

MOUNTING TRIM PANELS

After the unit is positioned, mark the mounting position of the trim panels as follows:

1. Place side trim panels flat against the face of the fireplace. Mark the front edge of the trim panel with a pencil to make a vertical reference line. (See Figure 3).
2. Place top (long) trim panel on top of the unit. The panel should be flat against the outside face of the fireplace, and standing vertically. Mark along the lower edge of the trim panel with a pencil to make a reference line for mounting.
3. Slide the unit out of the fireplace far enough to work behind the trim panel reference lines.
4. Mount the side trim panels. (See Figure 3).
 - a. Position the side trim panel on the reference line.
 - b. Drill mounting holes in center of side trim panel mounting brackets to allow for adjustment in and out if necessary.
 - c. Mount the trim panel using the self-tapping screws provided.
5. Place top trim panel on reference mark. Top trim panel mounting bracket (supplied) must overlap rear lip of top trim panel. Drill mounting holes in top of stove using holes in bracket as guide. Tighten screws.
6. Follow installation procedures in the listed direct connect or positive connect kit you are using and install the heater and connect kit in the fireplace. If not using one of the installation methods shown on Page 8, continue.
7. Slide the unit back into the fireplace. Check to be sure that the trim panels are properly positioned and lie flat against the front of the fireplace. If one or more of the panels is out of position, slide the unit out and reset by loosening the mounting screws and repositioning in the slot.
8. Reinstall the top trim panel by sliding the rear lip of the top trim panel underneath the front lip of the mounting bracket already secured to top of unit.

NOTE: Mount the top trim panel so that it sits in front of the top of the side trim panels.
9. Obtain the brass trim kit provided with insert kit and slip over the top and sides of trim panels. Top ends of brass may need to be trimmed to fit (See Figure 4).
10. Using insulation provided, peel and stick to back of panels overlapping fireplace dimensions by 1" on each side and top. (See Figure 4A).
11. Next using high heat silicone or furnace cement run heavy bead of caulking around where panels meet the stove. (See Figure 4A).
12. Slide the unit back into the fireplace. Check to be sure that the trim panels (and brass) are properly positioned and lie flat against the front of the fireplace. If panels are out of position, slide the unit out and reset by loosening the mounting screws and repositioning in the slot. With bar lift stove up in front. Place insulation across front and the surface of hearth or bottom of fireplace to make complete seal.
13. To check seal of panels, use candle flame and go around the entire area sealed by silicone and insulation. If flame leans toward inside of fireplace, add additional insulation. This ensures an airtight seal.

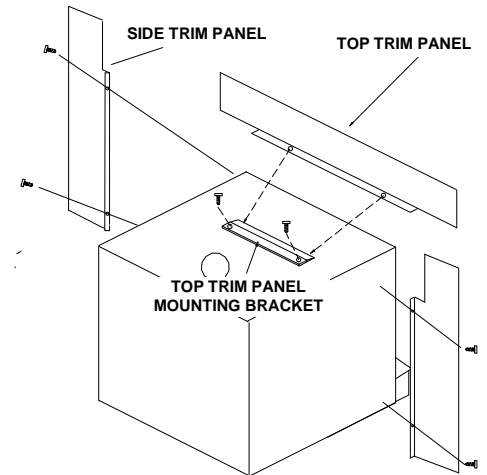


FIGURE 3 MOUNTING TRIM PANELS

FINAL CHECK

1. Recheck specified clearances.
2. Remove all foreign material from firebox area.
3. Open air controls.
Primary Air Controls: The primary draft control is located at right and left side of hearth: to open push in, to close pull out.
Secondary Air Control: The secondary draft control is located at the center bottom of hearth: to open pull out, to close push in.
Damper Bypass Control: The damper bypass control is located at the center top of stove. To close push in, to open pull out. (See Figure 4).
4. Plug power cord into a 115V AC outlet if optional motor is being used. "Do not run cord under unit or in high traffic areas.
5. Place rumpled pieces of newspaper in stove. Light it and close door. Ensure that stove draws properly through the primary draft.

NOTE: "Do not use grate or elevate fire. Build wood fire directly on inner bottom of fire box."

6. Check for smoke leaks around door.
7. Open door and check for smoke escaping from front of stove. Smoking usually indicates a defective or poorly positioned chimney. Some chimneys with a marginal draft can be pre-heated by lighting newspaper and holding it near open damper with a poker or fire tong. Once chimney heats up, a proper draft can usually be obtained.

If a thorough review of Troubleshooting Guide in the rear of manual does not reveal problem, contact your dealer for assistance.

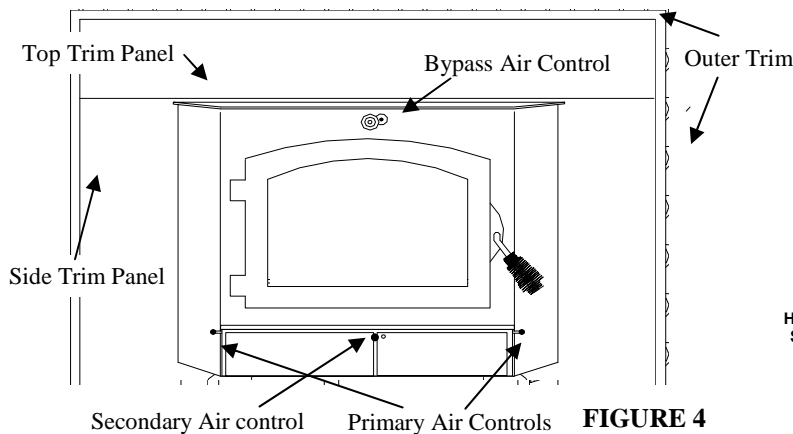


FIGURE 4

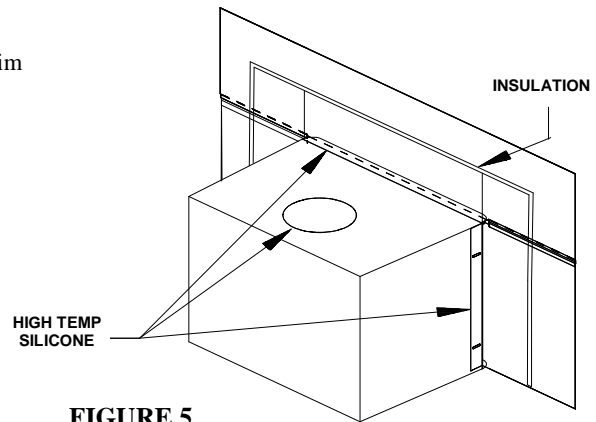


FIGURE 5

CAUTION

THE UNIT IS PAINTED WITH A SPECIALLY FORMULATED HIGH TEMPERATURE PAINT THAT CURES DURING THE FIRST TWO OR THREE FIRINGS. YOU MAY NOTICE A SLIGHT SMOKING EFFECT AND AN ODOR OF BURNING PAINT WHEN YOU BUILD THE FIRST FIRES. THIS IS NORMAL AND IS NOT A CAUSE FOR ALARM. IN SOME CASES, THESE FUMES WILL ACTIVATE A SMOKE ALARM. OPENING A WINDOW NEAR UNIT WILL ALLOW THESE FUMES TO ESCAPE. DO NOT BUILD A LARGE, ROARING FIRE UNTIL THIS CURING IS COMPLETE OR HEATER FINISH MAY BE DAMAGED.

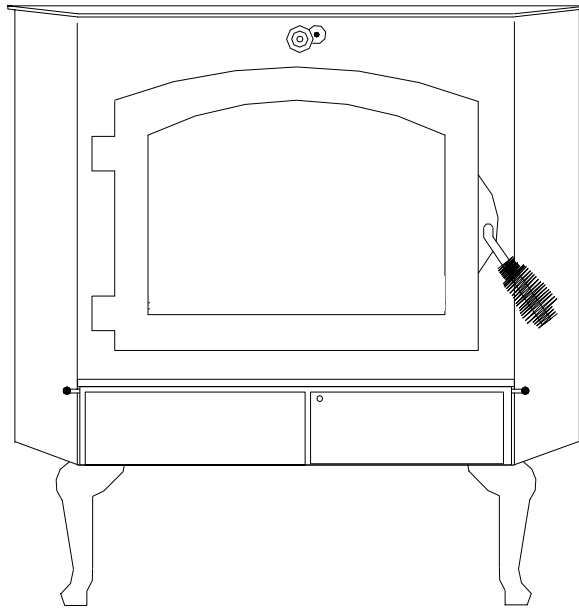
The connector and/or chimney should be inspected at least once a month during heating season to determine if a creosote buildup has occurred.

CAUTION

NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN HEATER. KEEP ALL SUCH LIQUIDS WELL AWAY FROM STOVE WHEN IT IS IN USE. ALL FLUIDS OF THIS TYPE GIVE OFF VOLATILE FUMES AND CAN AND WILL EXPLODE!! DON'T TAKE A CHANCE WITH THE SAFETY OF YOUR HOME AND FAMILY.

SECTION III

RESIDENTIAL FREESTANDING ROOM HEATER INSTALLATION



INSTALLATION PRECAUTION

Extensive field and laboratory testing has shown that catalytic stoves perform best as freestanding stoves when vented into a masonry chimney that include the following:

1. A rain cap is installed on chimney.
2. Height of chimney is at least 15 feet high.
3. Location of chimney is interior (not on an outside wall).

Satisfactory results have been reported with installations other than listed above. However, draft problems are possible if a hot chimney is not maintained.

Use pedestal kit as follows:

Model 80 #4171B



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

MODEL 80

Minimum Clearances

The New Buck Corporation Model 80 must be installed in compliance with instructions contained in this manual.

Clearance from combustible walls and ceilings. (Using single wall chimney connector)

The minimum lateral distance between any part of room heater and combustible wall is shown in Figures 6 and 7.

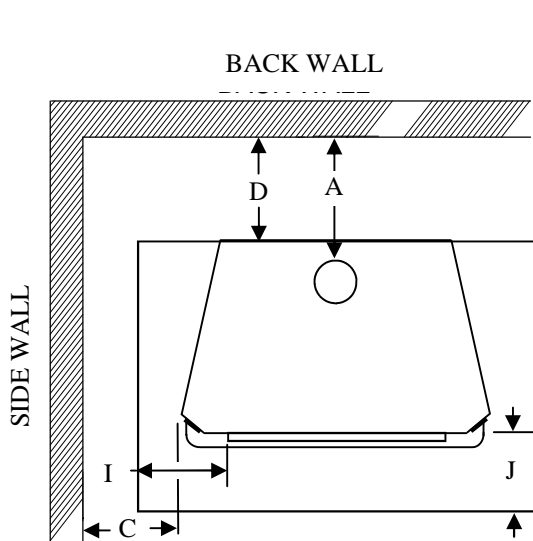


FIGURE 6

MINIMUM CLEARANCES

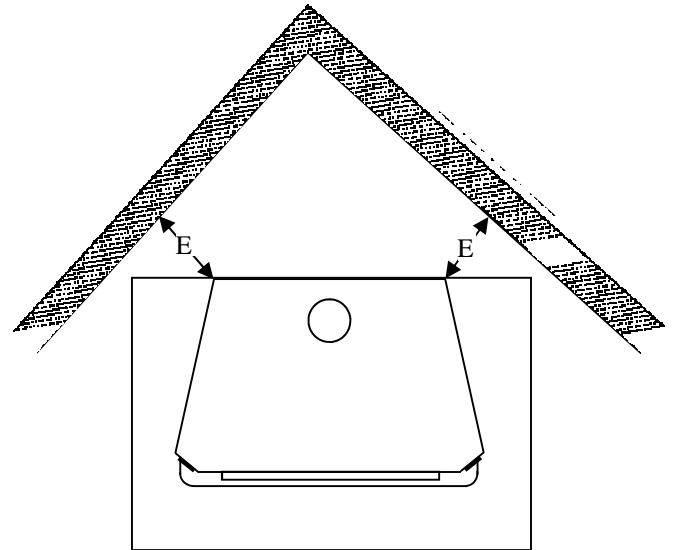


FIGURE 7

	A	B	C	D	E	I	J
--	---	---	---	---	---	---	---

MODEL 80	29"	*18"	25"	26"	20"	8"	16"
----------	-----	------	-----	-----	-----	----	-----

*Chimney connector to ceiling (see page 14).

FLOOR PROTECTION

If a freestanding model is to be installed on a combustible floor, a non-combustible pad must be placed below it to protect floor from burning material from stove. Floor protector must be 3/8" in minimum thickness, non-combustible material or equivalent.

The unit must be positioned on the pad so that there is a minimum of 16" from front of door opening to front of pad, and a minimum of 8" measured horizontally from sides of fuel loading and ash removal openings to sides of pad.

NOTE: For clearance reductions using wall protectors, refer to the NFPA-211 Code.

TOOLS FOR INSTALLATION

- Drop Cloth
- Electric Drill with 7/32" drill bit
- 1/2" - 9/16" combination wrench
- 3/8" magnetic socket chuck adapter, 3/8" wrench (box or socket) or adjustable wrench
- Socket Set
- Tape Measure
- Pencil
- Level
- Screw Driver

Preparing Stove for Installation

1. Inspect unit for any obvious physical damage.
2. Check primary air draft controls to ensure that they slide freely.
3. Check the operation of bypass damper control to ensure that it will open and close properly.
4. Remove any items from within firebox. Spread a drop cloth on floor behind heater. Next, tilt heater so that back is on drop cloth.
5. Using a tape measure, make a line down 3" from front of heater.
6. Open corresponding box and obtain pedestal. Place pedestal against bottom of heater (angle side to heater) at marked line. Center pedestal left and right and mark screw locations on bottom through outer holes of pedestal mounting angles. Set pedestal aside and drill four 7/32" holes in heater bottom.
7. Obtain four 1/4" self tapping screws and secure pedestal to heater.
8. If you chose legs rather than a pedestal, open box, attach legs to pre-drilled holes in bottom of heater.
9. Reposition heater to upright position.
10. Obtain chimney connector from your dealer. Position on top of stove at flue exit. Position the two "J" bolts in connector using lock washer and nuts provided. Lock in place.

CHIMNEY

Ceiling Exits (using Single Wall Pipe and UL 103 HT type chimney system listed with manufacturer in this section of manual)

The Model 80 is designed for connection to:

- (1) Simpson Duravent (2) Security (3) Selkirk Metalbestos (4) Metal Fab (5) Air Jet, listed as 2100 degree pipe and parts.

Follow the chimney and chimney connector manufacturer's instructions and local building codes for installation through combustible walls or ceilings. This room heater must be converted to (1) a chimney complying with the requirements for Type HT chimneys in the Standard for Chimneys, Factory-Built, Residential, Type and Building Heating Appliance, UL 103, or (2) a code approved masonry chimney with a flue liner.

Caution: Certain installation types require use of certain chimney types. Please follow these instructions exactly.

DETERMINING CHIMNEY LOCATION

1. Suspend a plumb bob from ceiling above unit so that weight is hanging in the center of flue exit. (A small weight on a string will serve as a plumb bob.) Mark ceiling where string is suspended to locate center of chimney.
2. After locating center of hole, install ceiling support box, chimney or chimney connector, flashing and rain cap per chimney manufacturer's instructions and local building codes for installation through combustible walls or ceilings.

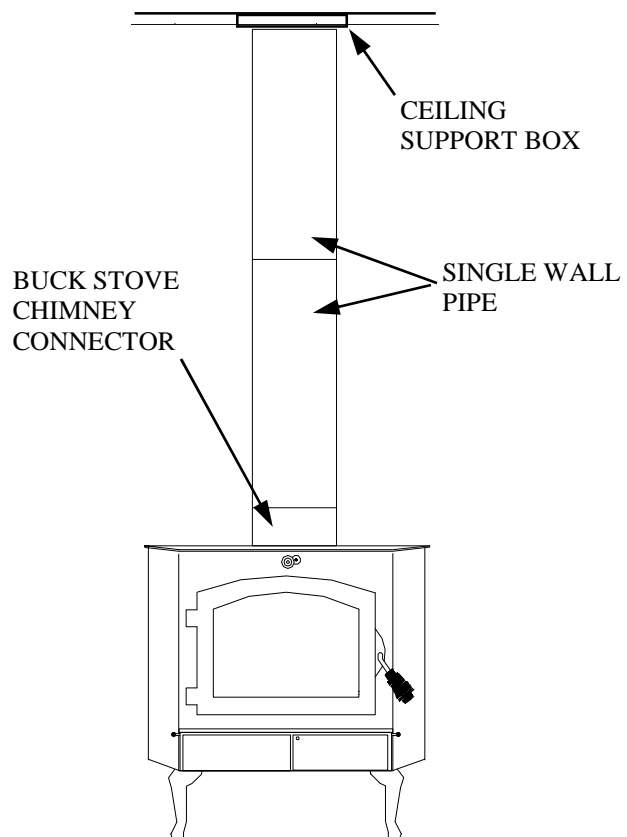


FIGURE 8

- Now connect stove to ceiling support box by using #24 ga. minimum blued or black steel chimney pipe. (Do not use galvanized pipe.) Connect each section so crimped end faces downward, and secure each section to each other using at least three (3) sheet metal screws or rivets. (See Figure 8)

Wall Exit Into Metal Tee-Box

- Mark the plumb line on the wall directly behind center of heater. (See Figure 9)

NOTE: When using #24 ga. min. blue or black steel pipe, maintain 18" between pipe and ceiling.

- Place vertical portion of heater pipe and elbow in position and project a point onto plumb line level with the center of elbow.
- Measure up so there will be at least 1/4" rise per foot of horizontal connector pipe, maintaining clearances to ceiling as noted in Figure 10. This will give you center of hole for chimney penetration.
- After locating center of penetration, install tee-box and chimney as per chimney manufacturers' specifications and local building codes for installation through combustible walls or ceilings.

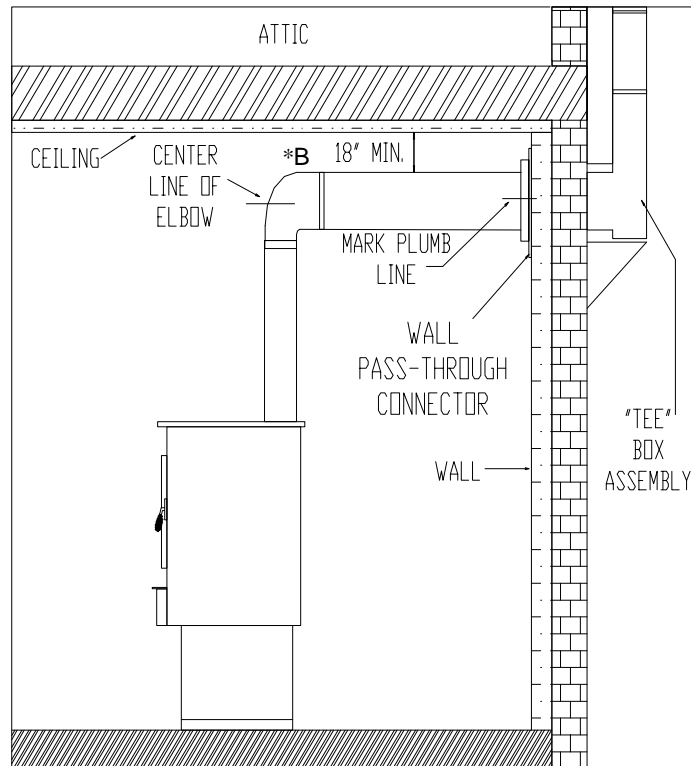


FIGURE 9

- Connect chimney collar to tee-box using #24 ga. minimum blued or black steel connector pipe. **DO NOT USE GALVANIZED PIPE.** Connect each section so the crimped end faces downward, and secure each section to each other using at least three steel sheet metal screws or rivets.

Wall Exit Into Masonry (using single wall pipe)

- Before connecting the Model 80 to a masonry chimney, determine that masonry fireplace wall pass-through connector thimble meets the NFPA-211 Code and local building codes and is a minimum of 18" from ceiling. If connector thimble does not meet these codes, the pass-through connector must be modified. Connectors may pass through walls or partitions constructed of combustible material if connector is:
 - either listed for wall pass-through or is routed through a device listed for wall pass-through and is installed in accordance with conditions of the listing.
 - selected or fabricated in accordance with conditions and clearances as stated in tables 5-7 of the 1988 NFPA 211 Code. Any unexposed metal that is used as part of a wall pass-through system and is exposed to flue gases shall be constructed of stainless steel or other equivalent material that will resist corrosion, softening, or cracking from flue gases at temperatures up to 1800° F.

In addition, a connector to a masonry chimney shall extend through the wall to inner face or liner but not beyond, and shall be firmly cemented to masonry.

EXCEPTION: A thimble may be used to facilitate removal of chimney connector for cleaning, in which case thimble shall be permanently cemented in place with high-temperature cement.

2. Once through-the-wall thimble codes are met, simply connect chimney pipe to wall pass-through connector using #24 ga. minimum, blued or black steel pipe as follows:
 - (a) Maintain 1/4" rise per foot (horizontal length) from appliance to the chimney.
 - (b) Each section of pipe should fit into section below or into the opening on stove, for drip free operation.
 - (c) Secure each section to each other using at least three (3) sheet metal screws or rivets.
 - (d) Use three (3) screws to connect pipe to New Buck Corp. Chimney Connector.

Ceiling Exit—Close Clearance

1. Suspend a plumb bob from ceiling above unit so that weight is hanging in center of lue exit. (A small weight on a string will serve as a plumb bob.) Mark ceiling where string is suspended to locate the center of chimney hole.
2. After locating center of hole, install the ceiling support box, chimney or chimney connector, flashing, and rain cap.
3. Next, install a New Buck Corp. Chimney Connector to flue of heater.
4. Install Double Wall Connector and chimney system per manufacturer's list of tested pipes

Caution: Because of high efficiency and low flue gas temperature, freestanding catalytic heaters connected to masonry chimneys with oversized flue lines may encounter drafting problems.

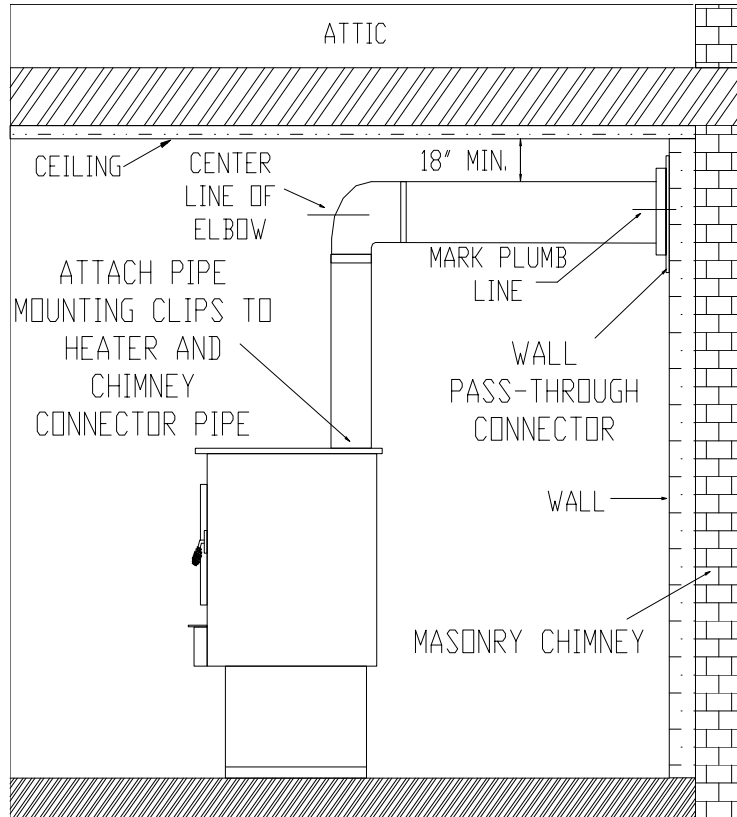


FIGURE 10

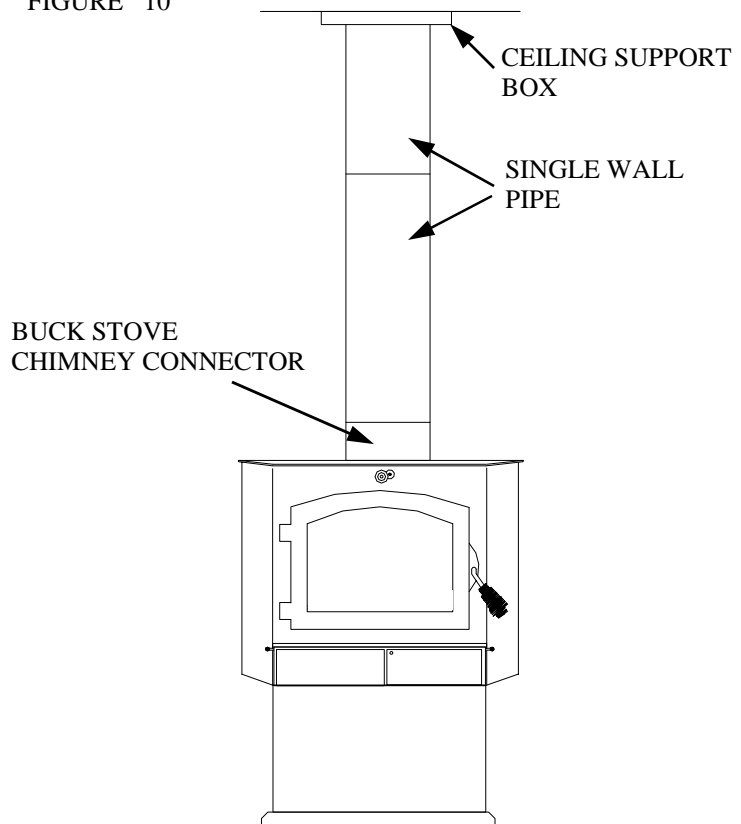
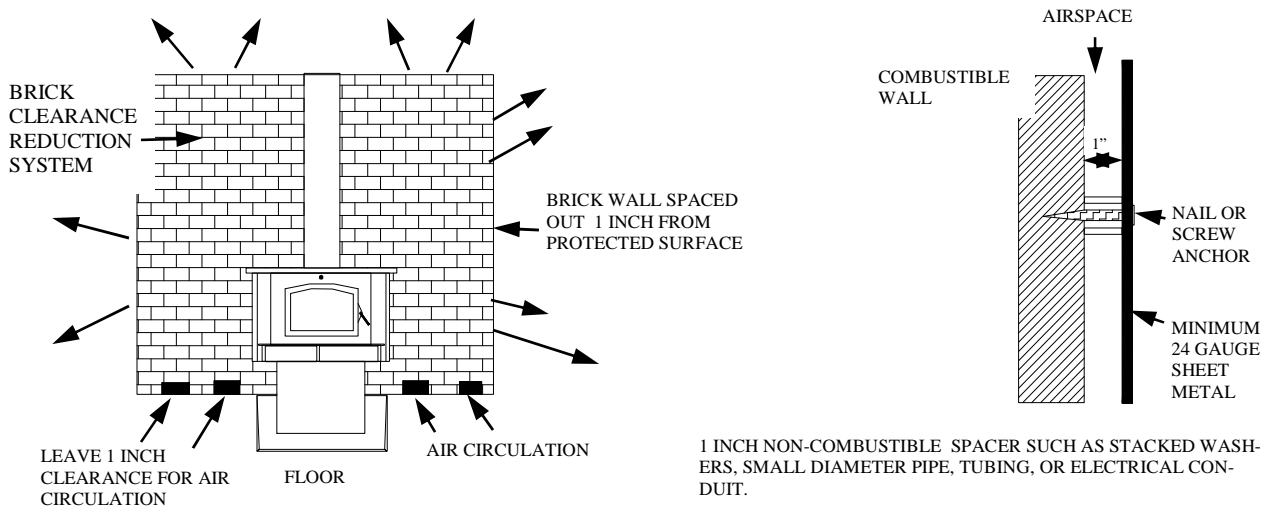


FIGURE 11



BRICK WALLS MAY BE ATTACHED TO COMBUSTIBLE WALLS USING WALL TIES. IF BRICK IS USED, BE SURE FLOOR CAN WITHSTAND THE WEIGHT OF THE BRICK.

DO NOT USE FASTENERS DIRECTLY BEHIND CHIMNEY CONNECTOR OR STOVE

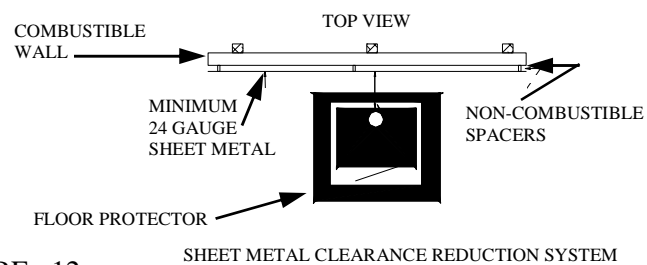
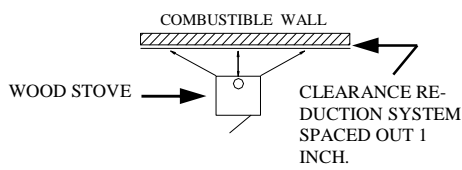


FIGURE 12

ALTERNATIVES FOR WALL PROTECTION

Example: The rear clearance for the Model 80 from page 12 is 26". (Measurement A.) This clearance may be reduced by 66% by using either of the wall protection devices mentioned below.

Tested and Listed Wall Protector

Clearances to combustibles may be reduced if a tested and listed wall protector is installed over a combustible surface when the following condition exist:

1. A dead air space or 1" separates the listed and tested wall protector from the combustible surface.
2. The tested and listed wall protector extends from floor to ceiling with a 1" clearance for air circulation at both the floor and ceiling.
3. The 1" spacers (preferable ceramic rather than metal) must be located at the corners rather than behind the heater or the chimney connector.

Unlisted and Untested Wall Protector

Wall protectors may be constructed of masonry, 24 gauge or thicker sheet metal, or non-combustible 1/2" thick insulation board. Conditions 2 and 3 above must be observed but the air space in condition 1 must be increased to 1 1/2".

FINAL CHECK

1. Recheck specified clearances.
2. Remove all foreign material from firebox area.

3. Open primary air drafts and damper bypass.
4. Plug power cord into a **115 VAC** outlet.
5. Place crumpled pieces of newspaper in stove. Light and close door. Make sure that stove draws properly through primary drafts.
6. Check for smoke leaks around door.
7. Open door and check for smoke escaping from front of stove. Smoking usually indicates a defective or poorly positioned chimney. Some chimneys with a marginal draft can be preheated by lighting newspaper and holding it near open damper with a poker or fire tong. Once chimney heats up, a proper draft can usually be obtained.

If a thorough review of Troubleshooting Guide in the rear of the manual does not reveal your problem, contact your dealer for assistance.

NOTE: The unit is painted with a specially formulated high temperature paint that cures during first two or three firings. You may notice a slight smoking effect and an odor of burning paint when you build the first fires. This is normal and is not a cause for alarm. In some cases, these fumes will activate a smoke alarm. Opening a window near unit will allow these fumes to escape. **DO NOT** build a large, roaring fire until this curing is complete or the heater finish may be damaged.

SECTION IV

WOOD HEATER SAFETY

Certain safety hazards are inherent in any wood heater installation. You should be aware of these so that a safe and proper installation can be made.

1. **FAULTY CHIMNEY:** An older masonry chimney should be thoroughly checked to be sure there are no holes or weak spots which could allow sparks or hot gases to escape.
2. **HEAT CONDUCTION:** Placing combustible materials too close to a heater or chimney can be a fire hazard.

By keeping these particular hazards in mind as you install and use your room heater you can ensure a safe, reliable installation.

- **NOTE: When burning any unit or appliance that combusts fuel for heat, such as coal, oil, wood or natural and (L.P.) liquid petroleum gas. We highly recommend the use of smoke and carbon monoxide detectors in your home.**

The connector and/or chimney should be inspected at least once a month during heating season to determine if a creosote buildup has occurred. Any buildup of soot should be removed to prevent risk of a chimney fire. To remove chimney or chimney connector, remove screws and/or fasteners. Remove pipe and clean with a steel wire brush. Replace chimney or chimney connector and replace screws and/or fasteners.



CAUTION: NEVER use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid or similar liquids to start or “freshen up” a fire in heater. Keep all such liquids well away from stove when it is in use. All fluids of this type give off volatile fumes and can **WILL EXPLODE!!** Don’t take a chance with the safety of your home and family.

WARNING: Hot while in operation. Keep children, clothing and furniture away from stove. Contact may cause skin burns.

HELPFUL HINTS

CURING THE PAINT ON YOUR HEATER: During the first several firings, burn small fires to cure paint and to prevent damage to finish. It is a good idea to flip the toggle switch to “Manual” position during these first firings so the blower will run continuously. This will allow the paint to cure at a slower rate and creates a better overall finish.



CAUTION: Never remove ashes from your heater with blower running.

TIPS ON FIRE BURNING

GREEN WOOD vs. NATURAL SEASONED HARD WOOD-Green wood has a high moisture content and therefore requires a hotter ignition temperature. Seasoned wood-cut at least one year before use-allows for a quicker, prolonged burn and more complete combustion.

SPLIT WOOD vs. ROUND WOOD-Split wood burns easier and more rapidly, whether it’s seasoned or green. If used after starting a fire, it should be packed tightly to achieve a longer burn.

Round wood burns longer, but requires more effort to start. Inserting a round piece over a bed of red coals with the damper and drafts open will help it catch fire. Round wood should be used to accomplish an all-night burn.

SECTION V

OPERATION

This section of the manual is to help you get maximum efficiency and maximum smoke (particulate) reduction from your Model 80 heater. If you should experience any difficulty or have questions concerning your heater, contact your Model 80 dealer for assistance.

Manufacturer recommendation for peak performance and long catalyst life is to burn seasoned hardwood (wood dried 6-12 months) and place wood from front to back position in the heater.

NOTE: Soft woods such as pine, create more creosote, clogging of chimney, and produce a less efficient burn performance.

Build a fire for maximum efficiency. Model 80 burns wood and extracts heat so efficiently a large fire is not necessary. A large fire not only wastes energy, it usually results in the home being too warm for comfort. The following steps will serve as a guide for operating your stove.

GUIDE TO THE DIFFERENT BURNING QUALITIES OF WOOD

Type of Wood	Ease of Starting	Coaling Qualities	Amount of Sparks
Apple	Poor	Excellent	Few
Ash	Fair	Good	Few
Beech	Poor	Good	Few
Birch	Good	Excellent	Moderate
Cherry	Poor	Excellent	Few
Cedar	Excellent	Poor	Many
Elm	Fair	Good	Very Few
Hemlock	Good	Low	Many
Hickory	Fair	Excellent	Moderate
Locust	Poor	Excellent	Very Few
Maple	Poor	Excellent	Few
Oak	Poor	Excellent	Few
Pine	Excellent	Poor	Moderate

The Main Audubon Society recently charted the heat produced by a wood fire. They noted that the heat produced by a wood fire varies greatly with the kind of wood burned. Beech is considered the best wood for a fire. A cord of well-seasoned Beech will produce as much heat as 169 gallons of fuel oil; Sugar Maple and Red Oak produce as much heat as 166 gallons of fuel oil; followed by White Ash 154; American Elm 130; White Birch 124; and White Pine 94.

BUILDING A FIRE:

1. Place the “Manual/Off/Automatic” switch in “Automatic” position for thermostat control operation. Turn rheostat knob clockwise (it will click from “Off” position to “On”) so you can vary the speed of motor.
2. Open door.
3. While looking inside firebox, operate damper bypass plate in and out observing the movement. This should operate freely and close completely. Open damper bypass.
4. Open the air controls on each side of stove (pull out).
5. Twist 4 or 5 pieces of non-colored newspaper in a roll and place on floor of the firebox.

The Model 80 Bay is not designed for use with grates, andirons or other methods of supporting fuel.

NOTE: “Do not use grate or elevate fire. Build wood fire directly on inner bottom of fire box.”

3. Lay several pieces of dry kindling on top of newspaper.
4. Place three or four small pieces of firewood, 2-3" in diameter, on top of kindling.
5. Light newspaper, close and latch door. Don't leave fire unattended at this point. The draft should start quickly. If not, it may be necessary to preheat the chimney to get draft started. To do this, open the door and add newspaper to top rear of wood. Light or let this paper ignite and allow to burn while holding door slightly open. Do not leave stove unattended with door open! Once draft has started, close and lock door. A direct connect (option) usually solves this problem. Check with your dealer.
6. After embers and a coal bed have been established, load heater with natural seasoned hard wood, **placing it from front to rear**. DO NOT BUILD A LARGE ROARING FIRE! Initially, build 2-3 small fires in order to cure the paint on your stove.
7. Within the 20 minute time frame, you can begin to add your wood. Remember—DO NOT FILL firebox during your first 2 to 3 fires!
8. Once your fire is burning well, **and probe reached 600°** close the bypass damper (push in). Gradually close the primary air controls (push in). You will have to experiment with primary air controls to accommodate your draft. If you close them too soon, your fire may die down too quickly and go out. Close them gradually, a little at a time, until you can close completely.

NOTE: If optional blower is being used on the Model 80. Your stove is equipped with a automatic thermostat. When stove gets hot enough, thermostat will activate the room air blower. Set fan speed according to desired heat output.

NOTE: When refueling or removing ashes turn “OFF” room air blower. Be sure to turn room air blower back on when finished.

NOTE: Do not run power cord underneath heater or in walk way or heavy traffic areas.

NOTE: THE FUELING DOOR MUST REMAIN CLOSED DURING OPERATION.

BURN RATES

- A. **Low Burn Rate:** Set primary air controls (both) almost closed - leave open about 1/8". Set the rheostat for fan control between the low to medium speed. This burn rate is the most desired and most efficient, but can only be achieved after a fire has been established and burning on its own controlled air. Close bypass damper (push in).
- B. **Medium-Low Burn Rate:** Partially close primary air controls (push halfway in). Close bypass damper (push in). Set rheostat for fan control halfway between low and high.
- C. **Medium-High Burn Rate:** Set primary air controls almost fully open. Close the bypass damper. Set rheostat for fan control between medium position and high position.
- D. **High Burn Rate:** Set primary air controls wide open. Have damper closed. Set rheostat for fan control all the way on high. USE CAUTION! Close shotgun air control after 5 minutes.
- E. **Wood Loading:** During refueling, open (pull out) bypass damper to allow smoke in the firebox to escape - wait a few seconds, slowly add wood. Immediately close door and bypass damper. Open primary air control wide open for 2 minutes to charge wood. After most of wood has burned and if you are not planning on reloading immediately, it may be necessary to open damper bypass, then door and rake wood and coals into a pile near the front center of firebox. (Be certain wood chunks are pulled out of rear corners.) Close door and damper bypass. This step will assure continued combustion and thorough burning of the wood.

You will have to experiment with fire rate until you find the particular setting for heating your home. Chimney drafts, tightness of house, doors, windows, insulation in house and atmospheric conditions all influence which setting you must have, so it may take several firings to learn the setting necessary for your installation. Heating capacity is based on BTU output and the conditions listed above. These conditions will affect the heating capability of your heater.

Although the catalytic stoves decrease ash residue, routine removal of excess ash is still necessary.

SECTION VI

PREVENTIVE MAINTENANCE / PARTS REPLACEMENT

Disassembly Inspection and Catalytic Replacement

The catalysts in your stove are designed for many years of use. If after several years of use, the efficiency of stove decreases or if a notable amount of smoke is observed, the catalysts may need to be replaced. See Catalyst Warranty prior to replacement.

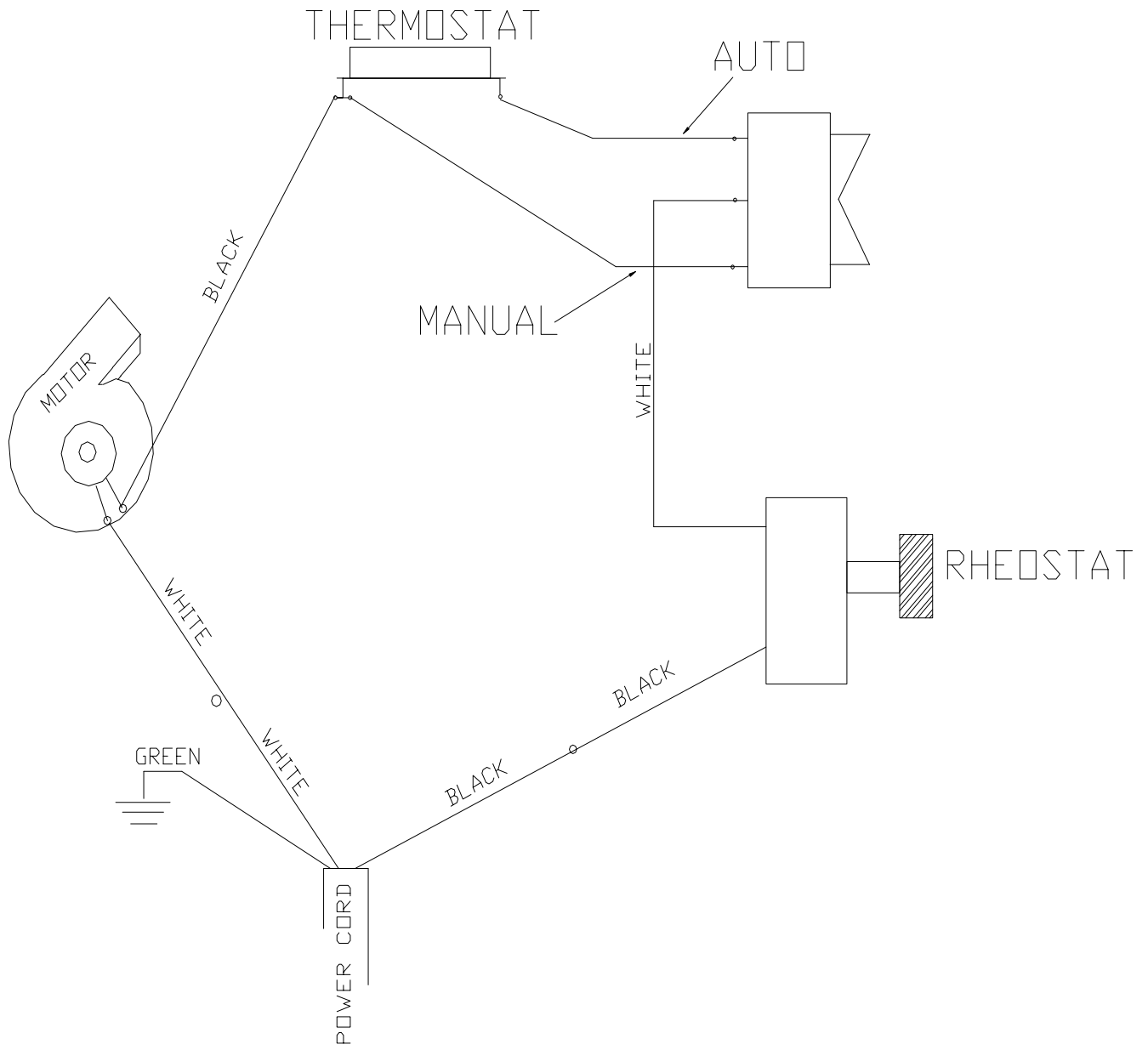
CATALYST REPLACEMENT (Off-Season Replacement Recommended)

1. Spread a drop cloth in front of stove.
2. Open door and clean out any ash.
3. Using penetrating oil, generously lubricate the four (4) bolt threads holding catalyst housing in place. Allow to penetrate.
4. Using a 9/16" wrench or 9/16" socket, loosen the four (4) nuts and remove catalyst housing (drop down) and place in a suitable work area.
5. Using needle nose pliers, grasp the front edge of the stainless steel "can" which houses the catalytic element and pull upward. Reposition pliers to another position and pull upward. Repeat procedure until catalyst can be removed from housing.
6. Using a small putty knife or scraper, remove any gasket that may have adhered to catalyst housing.
7. Now, obtain new catalyst and wrap the stainless steel can with interam gasket and tape ends together using scotch tape or masking tape.
8. Insert new catalyst into catalytic housing and push down until they are seated on top of stainless steel wire mesh supports.
9. Reinstall catalyst housing into stove and secure in place with bolts.
10. The stove is now ready for use.

GASKET REPLACEMENT (Cold Heater)

To replace deteriorated gaskets, the following steps must be taken to ensure proper installation:

1. Obtain proper gaskets and silicone glue from your local dealer.
2. Using pliers, remove any worn and deteriorated gaskets.
3. Using a scraper, wire brush and sand paper or steel wool, clean glue and gasket residue from door frame.
4. Measure and cut gaskets to length. Care should be taken not to stretch gaskets. What you want is a full and loose gasket weave after attached to framing.
5. Obtain the silicone glue and run a 3/16" bead inside the door frame.
6. Obtain gasket(s) and place in gasket channel areas. Use a technique which assures that gasket is applied in a loose like manner. **DO NOT STRETCH GASKETS.**
7. After gasket(s) are applied to glue, use your finger and go over all the gasket gently pressing gasket to channel. Use same pressure against gasket so that final result is an evenly applied gasket.
8. Leave door **open** and allow at least one hour for glue to dry.
9. Once gaskets are checked, heater is ready for use.



SECTION IV

TROUBLESHOOTING

Operation of any wood heater can create problems. While use of a catalytic-combustor equipped stove will substantially lessen some of these problems-such as creosote formation-other traditional wood heater problems may remain.

The following guidelines apply to operation of all wood heaters with problems related to catalytic heater addressed where appropriate.

HEATER RELATED PROBLEMS

Problem	Possible Cause	Solution
1. Sluggish Heater Performance	1. Obstruction in chimney	1. Check for and remove obstruction
	2. Improperly sealed trim kit or direct connect kit	2. Check trim kit gasketing or direct connect kit seal to fireplace and gasket as necessary to seal unit. Gasket under stove if needed. Check seal of direct connect and correct
	3. Manual damper in chimney is closed	3. Open manual damper and wire shut with stainless steel wire or remove damper
	4. Closing bypass or exhaust damper too soon	4. Follow New Buck instructions for proper firing procedures
	5. Poor chimney draft	5. Improper chimney height or wrong size flue being used. Cooler temperatures caused by external chimney.
	6. Combustor is plugged	6. See section in "Combustor Related Problems"
	7. Wet or unseasoned wood being burned	7. Burn dried natural seasoned hard wood
2. High Fuel Consumption	1. Inexperience in catalytic operation	1. Operate stove with desired heat output in mind. Do not be overly concerned with maintaining light-off temperatures
	2. Improper Regulation of draft or inlet air	2. Close inlet air control as much as possible to maintain desired heat output. Check gaskets. Reinstall fiberglass gasketing around doors and glass as necessary
	3. Improper Door Fitting	3. Check door gasket. Check adjustment of door latch.
	4. Combustor not engaged	4. Put combustor in operating position in retrofit or close bypass damper in stove

Problem	Possible Cause	Solution
3. Backpuffing	<ol style="list-style-type: none"> 1. Gusts of wind 2. Hot combustor (Above 1400 ° F) 	<ol style="list-style-type: none"> 1. Install Buck draft inducer 2. Increase the amount of combustion air slowly.
4. Smoke Rollout when heater door is opened	<ol style="list-style-type: none"> 1. Bypass damper is closed, or combustor is in operating position 2. Wind gusts blowing down chimney 3. Opening heater door too fast 	<ol style="list-style-type: none"> 1. Open bypass damper. In retrofit place combustor in bypass position before opening stove door 2. Install Buck draft inducer 3. Wait a few seconds after opening bypass damper before opening heater door to give smoke a chance to exit heater
5. Low Catalytic Temperature	<ol style="list-style-type: none"> 1. Bypass damper is open 2. Light-off not obtained 3. Fuel charge is spent 4. Combustor coated with fly ash or soot 5. Heater dampered down too much 	<ol style="list-style-type: none"> 1. Once light-off temperatures have been reached and unit is stabilized, close bypass damper 2. Follow manufacturer's operating instructions 3. Refuel as necessary for combustor operation 4. See section on "Combustor Related Problems" 5. Ensure that proper air mixture and draft are available for wood pyrolysis to continue

COMBUSTOR-RELATED PROBLEMS

1. Plugging	<ol style="list-style-type: none"> 1. Burning materials that produce a lot of char and fly ash 2. Burning wet, pitchy wood or burning large loads of small-diameter wood with the combustor in the operating position without light-off taking place 	<ol style="list-style-type: none"> 1. Do not burn materials such as garbage, gift wrap or cardboard 2. Burn dried natural seasoned hard wood. Don't place the combustor in the operating position until high temperatures are high enough to initiate light-off. It may be possible to burn the accumulated soot or creosote off by putting the combustor in a partially open-partially closed position after a "hot" fire has been started
2. Catalyst Peeling	<ol style="list-style-type: none"> 1. Extreme temperatures at combustor surface can cause the catalyst to peel. Over-firing and flame impingement are primary cause 	<ol style="list-style-type: none"> 3. If peeling is severe, remove and replace combustor Avoid extreme temperatures.
3. Catalyst Masking	<ol style="list-style-type: none"> 1. Not maintaining light-off temperature 	<ol style="list-style-type: none"> 1. Place combustor in a partially closed position after a "hot" fire has been started to burn soot off

**NEW BUCK CORPORATION (NBC)
“LIMITED WARRANTY” FOR NBC RELATED PRODUCTS**

**PLEASE READ THIS WARRANTY CAREFULLY
PRODUCTS COVERED**

This warranty covers the new heating unit so long as it is owned by the original purchaser, including optional and standard accessories purchased at the same time, subject to terms, limitations and conditions herein set out.

PRODUCTS NOT COVERED

This warranty does not cover the following:
Glass, Refractory material or firebrick, Gaskets.

This Warranty will not cover any damage and/or failure caused by abuse or improper installation of the Products Covered.

WARRANTY TIME PERIODS

(A) Period I

For one (1) year from the date of purchase, NBC will replace or repair, at its option, any part defective in materials or workmanship. The costs of parts only are included. The customer pays any labor or transportation charges required.

Thereafter

(B) Period II

For period after first year from date of purchase and extending for five (5) years as long as related product is owned by original purchaser, NBC will repair or replace, at its option, any part defective in materials or workmanship, with the exception of: electrical motors, wiring, switches and components; optional and standard accessories; and all parts not permanently attached to heating unit. Parts not permanently attached to heating unit are defined as those items designed to be removed from unit, including those removable with common hand tools. The cost of parts only are included. The customer pays any labor or transportation charges required.

PROCEDURE

Should you feel that your **heater** is defective, you should contact any NBC dealer for the name of your nearest authorized heater service representative, who will instruct you on proper procedure, depending on which Warranty Time Period (Period I or Period II) applies.

If for any reason you are dissatisfied with suggested procedures, you may contact us in writing at:

**NEW BUCK CORPORATION
Customer Service Department
P. O. Box 69
Spruce Pine, NC 28777**

CONDITIONS AND EXCLUSIONS

- (A) Replacement of parts may be in the form of new or fully reconditioned parts, at NBC's option.
- (B) There are no other warranties express or implied including warranties of Merchantability, Fitness for Purpose or Otherwise except those warranties expressly stated herein.
- (C) **New Buck Corporation** is not liable for indirect, incidental, or consequential damages in connection with use of product including any cost or expense or providing substitute equipment or service during periods of malfunction or non-use. Some states do not allow exclusion of incidental or consequential damages, so the above exclusion may not apply to you.
- (D) All warranty repairs under this warranty must be performed by an authorized Buck Stove service representative. Repairs or attempted repairs by anyone other than an authorized service representative are not covered under this warranty. In addition, these unauthorized repairs may result in additional malfunctions, the correction of which is not covered by warranty.

OTHER RIGHTS

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

OWNER REGISTRATION CARD

The attached Owner Registration Card must be completed in its entirety and mailed within 30 days from the date of purchase or from the date of installation, if installed by a factory certified installer, to New Buck Corporation, in order for warranty coverage to begin.

PLEASE NOTE: The Owner Registration Card must contain the Authorized Dealer Code Number and the Certified Installer's number (if applicable) for warranty coverage to begin.



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WOODSTOVES

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